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**REPORT TO THE JOINT COMMITTEE
ON ATOMIC ENERGY
CONGRESS OF THE UNITED STATES** RELEASED

Further Comments On
Atomic Energy Commission's
Proposed Arrangement For The
Liquid Metal Fast Breeder Reactor
Demonstration Project B-164105

**BY THE COMPTROLLER GENERAL
OF THE UNITED STATES**

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APRIL 30, 1976



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D C 20548

B-164105

The Honorable Melvin Price, Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Chairman:

This report is in response to your request of April 6, 1973, as modified in subsequent meetings with your office, that the General Accounting Office review certain aspects of the Atomic Energy Commission's (AEC's) revised proposed cooperative arrangement for designing, constructing, and operating the liquid metal fast breeder reactor demonstration project authorized by Public Law 91-273, as amended by Public Law 92-84.

On August 11, 1972, AEC submitted to the Joint Committee a Memorandum of Understanding describing the proposed arrangement. On January 26, 1973, AEC submitted certain documents to the Joint Committee describing changes to the proposed arrangement and related contracts which we reviewed at the Joint Committee's request. We submitted our report on "Proposed Changes to the Atomic Energy Commission's Arrangement for Carrying out the Liquid Metal Fast Breeder Reactor Demonstration Project" (B-164105, Feb. 27, 1973) to the Joint Committee in which we expressed several concerns over the revised proposed arrangement.

On February 28, 1973, the Joint Committee held a hearing on the revisions to the proposed arrangement. As a result of the hearing, the Committee requested the project participants--AEC, the Tennessee Valley Authority, the Commonwealth Edison Company, the Project Management Corporation, and the Breeder Reactor Corporation--to jointly comment on the issues raised in our report. AEC was also asked to identify the specific contract changes which would be made as a result of the points raised in our report and to respond to several questions raised by the Joint Committee. AEC submitted its response to the Joint Committee on April 9, 1973.

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Although we consider certain of the proposed changes to the project contracts to be appropriately responsive to the concerns expressed in our report and by the Committee, there are still several matters that concern us. These matters are discussed in the appendix.

Because of time limitations, we did not obtain AEC's formal comments on this report, but the contents were generally discussed with AEC representatives during our review. As agreed with your office, we have not obtained comments from the Project Management Corporation, the Tennessee Valley Authority, the Commonwealth Edison Company, and the Breeder Reactor Corporation.

We are sending a copy of this report today to the Vice Chairman of your Committee. As agreed with your office, we are sending copies to the Chairman, Atomic Energy Commission. We do not plan to distribute this report further unless you agree or publicly announce its contents.

Sincerely yours,

A handwritten signature in black ink, appearing to read "James B. Aronson". The signature is written in a cursive style with a large initial "J".

Comptroller General
of the United States

COMMENTS ON ATOMIC ENERGY COMMISSION'S RESPONSE
TO CONCERNS EXPRESSED BY GAO AND THE JOINT COMMITTEE
REGARDING THE PROPOSED ARRANGEMENT FOR THE LIQUID METAL
FAST BREEDER REACTOR DEMONSTRATION PROJECT

INTRODUCTION

The Atomic Energy Commission (AEC) plans to enter into a cooperative agreement with certain electric utilities and other organizations for the design, construction, and operation of the Nation's first liquid metal fast breeder reactor plant. On August 11, 1972, AEC submitted to the Joint Committee a Memorandum of Understanding describing the basis of a cooperative arrangement among AEC, the Tennessee Valley Authority (TVA), the Commonwealth Edison Company, the Project Management Corporation (PMC), and the Breeder Reactor Corporation (BRC). PMC was created in March 1972 to administer the contracts for the design, construction, and operation of the plant. BRC was created at the same time to collect contributions from various electric utilities and to remit the collected funds to PMC to carry out the project.

The memorandum showed that the demonstration plant was to cost an estimated \$699 million. Under the memorandum, AEC will contribute about \$92 million in direct assistance and will provide assistance estimated at about \$330 million in research and development, services, facilities, equipment, and special nuclear materials. The utility companies are expected to contribute about \$254 million, and reactor manufacturers are expected to contribute about \$20 to \$40 million. In addition, TVA will make available some of its land on the Clinch River, near Oak Ridge, Tennessee, available for constructing and operating the plant and for the necessary transmission links to the plant switchyard. If at any time it appears that additional resources are required to effectively continue the project, AEC will seek the necessary legislative authorization and funds.

On January 26, 1973, AEC submitted to the Joint Committee an amendment to the memorandum and two proposed contracts--one between PMC and BRC, and one among AEC, PMC, TVA, and Commonwealth. At the request of the Joint Committee, we reviewed

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the changes to the proposed arrangement and submitted a report to the Joint Committee on February 27

The following sections contain our comments on AEC's response to the concerns expressed in our report and concerns of the Joint Committee expressed during a hearing on February 28, regarding the proposed arrangement for carrying out the liquid metal fast breeder reactor demonstration project.

MANAGEMENT STRUCTURE
AND RESPONSIBILITIES

The proposed contract among AEC, PMC, TVA, and Commonwealth provides for two management structures an interim arrangement to operate until AEC obtains legislation to place two of its officials or employees on the PMC Board of Directors and another arrangement to operate after AEC gets representation on the board. Under the interim arrangement, the PMC board will consist of five members--two representing TVA, two representing Commonwealth, and one representing BRC.

Until AEC obtains membership on the PMC board, the contract empowers the project steering committee, established by PMC, to manage the project. The steering committee is composed of one PMC board director representing TVA, one PMC board director representing Commonwealth, and an AEC representative. After AEC gets membership on the PMC board, the steering committee will become the executive committee of the board and PMC will have the responsibility and authority to manage the project.

Provisions for resolving matters
referred to the heads of AEC,
TVA, and Commonwealth

The proposed contract provides that a majority decision of the steering committee would be final unless a steering committee or PMC board member referred the matter to the PMC board. A majority decision of the PMC board would be final unless the AEC member of the steering committee or any PMC board member referred the matter to the heads of AEC, TVA, and Commonwealth for unanimous resolution.

Section 2.3.5 of the revised proposed contract provides that the heads of AEC, TVA, and Commonwealth will attempt to resolve any matter referred to them within 30 days of referral. In the event the heads are unable to unanimously agree on a matter within the 30-day period, matters of the following types will be referred to AEC for binding resolution under the conditions provided in section 2.3.6.

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- 1 Matters under consideration that would significantly affect previously agreed upon overall project cost estimates.
2. Matters under consideration that are of such a nature as to significantly affect continuance of the project.

Area of concern

The proposed contract does not state (1) who will decide whether a matter meets the above conditions, (2) whether the matter under consideration must satisfy both conditions, and (3) how disagreements among the heads would be settled on matters which do not meet these conditions.

Therefore, if the heads cannot unanimously agree on matters referred to them and the proposed contract is not clarified to resolve the above questions, the project could possibly, as pointed out in our previous report, be terminated pursuant to the termination criteria in the proposed contract.

AEC "binding resolution" may not be binding on the parties

Section 2.3.6 of the proposed contract states that "no decision of the AEC shall in any way alter the rights and obligations of any of the parties under the Principal Project Agreements." Other sections, particularly 2.1 and 2.4, authorize PMC to manage the project and to take certain specific actions. In addition, appendixes D and F of the proposed contract require that TVA and Commonwealth provide a variety of services to the project. Some of the actions taken by the parties could be affected by an AEC decision made pursuant to section 2.3.5. In this case, the parties could assert that they have the right or obligation to take these actions. Therefore, section 2.3.6 could have the effect of negating AEC's powers under section 2.3.5.

Legality of limiting the authority of PMC board

Under the proposed contract, any action on or resolution of a matter by the PMC board may be referred by any board

member or any member of the steering committee to the heads of AEC, TVA, and Commonwealth for unanimous resolution. In addition, the contract provides that if a matter which cannot be resolved by the heads within 30 days is referred to AEC for resolution, AEC's decision "will be binding upon the parties and shall be implemented by appropriate action."

According to AEC officials, the parties to the proposed contract do not believe that the provisions for referring disputed decisions of the PMC board to the heads of AEC, TVA, and Commonwealth for unanimous resolution present any legal problem with respect to the authority of the PMC board to manage the demonstration project.

Area of concern

There are, however, recognized legal principles which require corporation directors to act in the best interests of the corporation and prohibit their entering into any agreement by which they abrogate their independent judgment in managing the corporation. Therefore, we believe that with respect to matters relating to the project which could be considered internal to PMC, it is at least theoretically questionable whether the referral provisions could be enforced.

Need to modify PMC bylaws

As mentioned above, AEC will attempt to obtain the necessary legislation to permit two of its officials or employees to serve on the PMC board. In this respect, section 2.1 of the proposed contract provides that, when such legislative authority is obtained, PMC shall appropriately revise its articles of incorporation and bylaws and the parties shall change the subject contract to reflect the change in the composition of the PMC board.

Area of concern

PMC was incorporated in the District of Columbia on March 13, 1972. Under the laws of the District of Columbia, a corporation may not by agreement divest itself of control over its internal functions.

The District of Columbia Code provides under 29-1019 that the number of directors and their terms and manner of

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election or appointment shall be established by the corporate charter or bylaws. The code also provides under 29-1013 that the bylaws may be amended only by the board of directors, unless there are other provisions in the bylaws or the corporate charter, and under 29-1035 that the corporate charter may be amended by the board of directors and the members or by the board alone when there are no voting members

The current PMC bylaws provide for five directors--two each representing TVA and Commonwealth and one representing BRC. Article III, section 2 of the bylaws provides that no amendment of the bylaws which would have the effect of "diluting or otherwise adversely affecting the representation or voting rights" of Commonwealth, TVA, or BRC shall be effective except upon unanimous vote of the board of directors. Thus, it would be possible for any one director to prevent enlarging the board to allow AEC representation.

It is questionable, therefore, whether in advance of amending its bylaws the PMC Board of Directors could be required to elect or appoint to the board two AEC officials or employees. We believe that it would be more appropriate for the PMC board to make the necessary changes in its bylaws, to allow for AEC representation, prior to the signing of the proposed contract We also believe that the section of the bylaws referred to above concerning the dilution of voting rights should be amended, prior to the signing of the proposed contract, to include AEC in the event it obtains membership on the PMC board.

RESPONSIBILITIES FOR TECHNICAL SUPERVISION
OF THE NUCLEAR STEAM SUPPLY SYSTEM

In our February 27 report, we expressed concern over the possibility that AEC's approvals on matters pertaining to the nuclear steam supply system might not be binding because PMC could, under the contract, disapprove significant AEC decisions on such matters. This concern was reiterated by the Joint Committee during its hearing on February 28.

In response to these concerns, the parties changed the proposed contract among AEC, PMC, TVA, and Commonwealth to provide that certain of the contract parties would be assigned lead roles over various aspects of the demonstration project. Specifically, lead roles have been assigned to (1) AEC for the plant's nuclear steam supply system, (2) PMC for the balance of the plant and integrating overall project activities, and (3) TVA for operating and maintaining the plant. The contract provides that the party having the lead role is responsible to the steering committee for taking appropriate initiative such as planning and implementing action in carrying out its activities.

The proposed contract states that AEC's lead role shall include responsibility for guidance and direction, planning, review and approval of such matters as (1) the reactor manufacturer's and architect-engineer's design work for the nuclear steam supply system to insure compliance with PMC's plant design specifications, (2) the technical adequacy of component and system design, fabrication techniques, and quality assurance plans and procedures, (3) the reactor manufacturer's and architect-engineer's compliance with PMC's nuclear steam supply system schedules and budgets, (4) technical aspects of subcontractor procurement actions, (5) technical aspects of installation, construction, and testing through the demonstration period of the nuclear steam supply system, and (6) development of and assistance in implementing procedures for testing, operating, maintaining, and demonstrating the nuclear steam supply system through the contract period.

The nuclear steam supply system includes the nuclear reactor, the steam generation system, and any other equipment and structures for providing steam for the steam turbine.

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Limitations on AEC's lead role for the nuclear steam supply system

Various sections of the proposed contract have a limiting effect on AEC's lead role for the nuclear steam supply system. Specifically

- Section 2 3.6 could negate AEC binding decisions, including decisions relating to the nuclear steam supply system, provided for under section 2.3.5. (See page 4.)
- Section 2.4.7 states that PMC has the authority to modify the application of standards compiled by AEC's Division of Reactor Development and Technology and other standards. (See page 8.)
- Section 4.1.7 provides that AEC will notify PMC of significant decisions regarding the nuclear steam supply system and will obtain PMC's approval thereof (See page 9.)
- Section 2.3.2 provides that each party's lead role activities will be subject to the review and approval of the steering committee pursuant to procedures to be adopted by the steering committee. (See page 10.)
- Section 2.3.5 limits the work a lead party may perform on a matter being considered by the heads of AEC, TVA, and Commonwealth to the scope of work previously approved by the steering committee. (See page 10.)

PMC may modify application of AEC standards

Our February 27 report stated that, under the proposed contract (section 2.4.7), PMC has the authority to modify standards compiled by AEC's Division of Reactor Development and Technology and other standards to be used in developing the nuclear steam supply system. During hearings held on February 28, the Joint Committee expressed the belief that, in view of AEC's technical expertise, AEC should have final approval over all matters relating to the nuclear steam supply system

In a letter dated April 9, 1973, to the Joint Committee responding to these concerns, the parties to the proposed contract stated that PMC had the authority to modify the application of standards but not to modify a standard itself. They further stated that modifications would either be changes needed to improve the standards for project application or waivers of the standards as needed to achieve project objectives.

Area of concern

We recognize that the contract authorizes PMC to "modify the application of standards" and that modifying the application of standards would not necessarily change the standards as they apply to projects other than the breeder reactor project. The proposed contract does not state, however, who would decide whether (1) modifications would, in fact, improve the standards for project application or (2) waivers of the standards would, for example, achieve cost and schedule goals consistent with adequate safety and reliability objectives.

In our opinion, PMC's authority to modify the application of such standards could limit AEC's lead role activities for the nuclear steam supply system. In view of AEC's experience with reactor standards and its responsibility for the nuclear steam supply system, we believe PMC's modifications of the application of reactor standards should not become effective without specific AEC approval.

PMC approval required over significant AEC decisions on the nuclear steam supply system

With respect to the nuclear steam supply system, section 4.1.7 of the proposed contract, although modified to some extent in response to the Joint Committee's concern, still provides that AEC must notify PMC of significant decisions respecting its activities and must obtain PMC's approval thereof.

Therefore, it is still possible that PMC could disapprove significant decisions relating to the nuclear steam supply system which AEC has made and thereby limit AEC's lead role activities for the nuclear steam supply system.

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If PMC disapproved a significant AEC decision relating to the nuclear steam supply system, AEC's recourse would be to refer the matter to the steering committee, the PMC board, and to the heads of AEC, TVA, and Commonwealth for unanimous resolution.

Other limitations

Certain sections of the proposed contract seem to place additional limitations on AEC's lead role for the nuclear steam supply system.

Under section 2.3 5 of the proposed contract, AEC decisions to continue work on matters appealed to the heads for resolution--including matters relating to the nuclear steam supply system--are limited to the scope of work previously approved by the steering committee. Therefore, even though AEC has the lead responsibility for activities relating to the nuclear steam supply system, it does not have unlimited authority to continue work on such activities pending resolution of a disagreement by the heads of AEC, TVA, and Commonwealth.

In addition, section 2.3.2 of the proposed contract states that

"Subject to the terms of this contract PSC [steering committee] shall establish procedures which will ensure that its business is conducted in an orderly manner, and that all significant Project matters are brought before PSC for decision with the opportunity for appropriate consideration. Such procedures shall include recognition of the lead roles of AEC (paragraph 4.1.7), the PMC Organization (paragraph 4.1.8) and TVA (paragraph 4.2) and shall further recognize that the party with the lead role is responsible to PSC for taking appropriate initiative such as planning and implementing action in carrying out its lead role activities subject to review and approval pursuant to procedures adopted by PSC. As a general rule each of the participants will look to the lead organization for information pertaining to its respective areas of responsibility."

At the time of our review, the steering committee had not developed the procedures mentioned in section 2.3.2 and, therefore, we have no basis for determining whether or not such procedures may limit AEC's lead role activities for the nuclear steam supply system.

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Under the proposed contract, the parties having lead role responsibilities do not have unfettered control over their respective areas of responsibility. With respect to AEC's lead role for the nuclear steam supply system, it seems clear that AEC's role is subject to PMC's review and approval and that AEC's activities in this area are limited to those for which the steering committee's prior approval has been obtained.

In view of AEC's expertise and experience in designing and constructing nuclear power reactors and AEC's open-ended risk under the contract, it seems desirable that AEC have the right to make decisions on all matters relating to the nuclear steam supply system without having to obtain PMC approval.

Under the contract, PMC is responsible for integrating the remainder of the demonstration plant with the nuclear steam supply system. PMC should be able to carry out its responsibilities under the contract through monitoring AEC activities, and should PMC question any AEC decision pertaining to the nuclear steam supply system, it could, when necessary, exercise its appeal rights under the contract.

ALLOWABLE COST PRINCIPLES

Our February 27 report noted that the allowable cost principles contained in the proposed contract applied only to the use of the initial \$92 million to be provided by AEC. We stated that it did not appear that these principles would apply to funds provided by BRC from utility contributions or to any subsequent funds AEC may provide to the project. We expressed the belief that the parties to the proposed contract should consider the desirability of adopting AEC's cost principles and making them applicable to all funds received or expended for the project.

Ambiguity as to future funding
of certain unallowable costs

The proposed contract has been changed to make AEC's cost principles, with certain exceptions, applicable to the expenditure of all project funds. Two of these exceptions relate to items that are allowable under the contract cost principles only to the extent that they are not paid from the initial \$92 million to be provided by AEC. These two cost items are

1. Interest, fees, and other charges for loans obtained by PMC, and
2. Certain costs incurred by PMC of the kind normally recovered by a contractor from his fee but which are not allowable under AEC's cost principles.

If additional AEC funds are required to complete the project, the proposed contract does not specifically prohibit the use of these additional AEC funds to pay these costs. Although AEC has informed us that it does not intend that such additional funds would be made available to pay for such costs, we believe it is desirable to clarify the contract to remove this ambiguity.

Arrangements for funding
unallowable costs

The proposed contract (section E-13.2.14) allows PMC to incur costs and be reimbursed from project funds--other than AEC funds--for costs which are unallowable under

section E-13.3 of the contract's cost principles. Under the contract, PMC must incur such costs in good faith. In addition, not more than \$250,000 a year during the term of the contract will be available for defraying such costs and these costs cannot be paid from the \$92 million to be provided by AEC.

This provision was not contained in the contract previously proposed by the parties. According to the proposed contract, this provision was included in view of the fact that PMC is a nonprofit corporation which is not receiving any fee or management allowance for its role in the management of the project.

Area of concern

For certain unallowable costs specified in section E-13.3 of the contract, PMC has the authority to charge certain of these costs against any project funds at its discretion. For example, section 13.3.17 of appendix E cites as unallowable "Foreign travel, except as PMC may otherwise specifically approve." (underscoring supplied)

The effect of exceptions of this type in the unallowable costs provisions of appendix E-13.3 is to permit certain unallowable costs to be charged either to (1) the \$250,000 allowance which excludes use of AEC funds or (2) general project funds which include use of AEC funds. Therefore, under this situation, PMC could incur unallowable costs in excess of the \$250,000 limitation provided for under section E-13.2.14.

If the parties consider the \$250,000 to be a reasonable annual allowance for the types of unallowable costs which PMC should be reimbursed for under normal business practices, we question the need for PMC's additional authority to also charge such costs, at its discretion, against general funds which include funds provided by AEC.

With regard to the \$250,000 allowance for costs which would not be allowable under the contract's cost principles, we believe that, in the interest of promoting prudent business management and assisting in controlling such expenditures, it would be desirable for the parties to establish appropriate policies governing the incurrence and reimbursement of the various types of costs chargeable to the \$250,000

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allowance which could reasonably be anticipated under normal business practices. On April 17, 1973, in a communication to officials of TVA and Commonwealth, AEC recognized the need for actions along these lines.

In addition, the contract does not specifically state whether any remaining part of the \$250,000, may be carried over to the next year. AEC officials told us that the parties did not intend that unexpended portions of each year's funds be carried over to the following year. We believe it desirable to modify the contract language to clearly reflect this intent.

Deviation from AEC cost principles concerning allowability of litigation costs

The proposed contract deviates from AEC cost principles in that it allows all litigation costs related to obligations under the contract. Section E-13.2.7 indicates that litigation expenses shall be allowable costs. Section E-13 3.12 makes unallowable the costs of prosecuting claims against or contesting actions of the United States, but only insofar as they are unrelated to obligations under the contract.

However, under AEC procurement regulation (AECPR) 9-7.5006-9(e)(16), all costs incurred in connection with prosecuting claims against, or contesting actions of the United States are unallowable. Furthermore, under AECPR 9-7 5006-9(d)(4) and AECPR 9-7.5006-50, only the expense of litigation specifically approved by the AEC contracting officer is allowable. The cost of defending an action would not be allowable, however, if such cost would have been compensated by insurance which the contractor failed to obtain although it was required to do so.

Thus, under the proposed contract, the cost of litigation against the United States and the cost of prosecuting and defending all other claims and actions related to the contract would be allowable, whether or not AEC approved such litigation and whether or not PMC obtained insurance to cover such cost.

Clarification needed concerning interest
from investment of utility contributions

Section 7.3 of the contract states that the allowable cost principles in appendix E will apply to PMC's use of all project funds. The contract is not clear, however, as to whether interest earned from the investment of utility contributions would be considered part of project funds.

Section 1.1.13 defines project funds as "all funds made available to PMC including proceeds from loans and contributions to the project." While this definition of project funds could be interpreted to include the interest earned by investing utility contributions, the contract does not specifically state that such interest would be considered project funds subject to the contract's cost principles. It is our understanding that the parties to the contract intended that earned interest would be included as part of project funds and subject to the contract's cost principles. We believe the contract should be clarified to indicate this intent.

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INDEMNITY PROVISIONS

AEC has changed the language of the indemnity provisions back to the more narrow provisions initially proposed, so that AEC would indemnify the other parties against claims, liabilities, and those expenses incurred in connection with such claims and liabilities. Language has also been added specifically excluding indemnification for any unallowable cost. However, the possible risk to the Government is still extensive, since the indemnity provisions appear to cover any allowable expenses incurred in good faith even though incurred negligently and even though project funds are insufficient to meet such expenses.

Section E-13.2.15 provides that claims, liabilities, and associated expenses, including claims asserted against PMC by TVA and Commonwealth, may be paid so long as PMC certifies that they are just and reasonable and properly allowable under section E-13.2. Under AEC's cost principles, such certifications would be made by AEC's contracting officer. If PMC certifies costs which the AEC contracting officer would not certify in the same circumstances, it is still possible that the Government would have to indemnify PMC for costs which would not be considered allowable under AEC's interpretation of its cost principles. In addition, the Government would have to indemnify PMC for costs even though negligently incurred since the indemnification provision excludes claims resulting from the willful misconduct or bad faith of certain officers mentioned in the contract, but does not exclude claims resulting from negligent acts. We believe that AEC should be represented on the body within PMC which would certify costs to provide AEC a greater degree of control.

INDEPENDENCE OF LICENSING REVIEW

The proposed contract (app. D, sec. 8.4) provides that AEC shall assist, "as appropriate", PMC and TVA in applying for all permits and licenses necessary for constructing and operating the breeder reactor plant. Our February 27 report pointed out that, under this provision, AEC regulatory personnel could possibly review the application during the licensing process and defend it before a hearing or review body, such as the Atomic Safety and Licensing Board. We expressed concern over the possibility of the regulatory

organization participating in the hearing or review body and also assisting PMC in applying for project permits and licenses. We stated that such assistance by the regulatory organization might be inconsistent with AEC's responsibility to independently review license applications to insure the health and safety of the public.

In commenting on this matter, AEC indicated to the Joint Committee that it would not consider providing PMC and TVA with any assistance which could jeopardize AEC's independence in reviewing license applications. While we do not question AEC's intentions in this regard, we feel that it would be preferable to substitute more specific language for "as appropriate."

AEC'S RESPONSIBILITIES FOR DISPOSING OF
DEMONSTRATION PLANT UPON PROJECT TERMINATION

The Joint Committee expressed concern as to whether the language in the proposed contract insures that the parties to the contract could not require AEC to remove the entire plant if the project is terminated and the plant is decommissioned. Section 10.2.2 of the proposed contract provides that

" * * * AEC shall, except as AEC and TVA otherwise agree to, effect such decommissioning, removal, dismantling, and other disposal measures, at its own expense, as AEC considers safe, environmentally suitable, advisable, and reasonable, and which will not affect TVA's use of the remaining portions of the tract described in Appendix A in any more adverse manner than said portions would have been effected by operation of the Plant during the demonstration period."

Subject to these criteria, removal of the plant would require AEC agreement. Although AEC and TVA could agree that AEC would remove the entire plant at AEC expense, it would not appear that AEC would be required to do so directly by this provision.

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PROJECT FINANCING

The Joint Committee expressed concern over why it was necessary for AEC to make the entire \$92 million of authorized assistance available at the outset of the project when the utilities will be contributing their share of the costs at the rate of about \$25 million per year, with the first installment to be made available for use upon the execution of the project contracts. In response to this concern, the AEC Chairman, in a letter dated April 9, 1973, to the Joint Committee stated that

"The plan for financing the Project contemplates investing the unused utility contributions in appropriate high grade securities for the purpose of earning interest to be applied against project costs. Also the utility industry was committing itself to firm irrevocable pledges and insisted on a similar gesture or action on the part of the Government. Making the \$92 million available at the outset and not subject to the appropriation of funds during the progress of the Project meets this requirement. The contract provides that the Government funds will be drawn down by PMC under a letter of credit only as needed to meet current needs and that PMC will utilize these funds in an efficient, reasonable and prudent businesslike manner."

AEC had only three utility contribution agreements available for our review. Our review of these agreements showed that one of the conditions set forth in the agreements between BRC and the electric utilities is that the utilities will make their annual installment payments only after BRC has certified to them that the project agreements have been executed obligating AEC to put its funds into the project. In addition, section 7.4 of the proposed contract among AEC, PMC, TVA, and Commonwealth states that the funds to be provided by AEC pursuant to section 4.1.1 (\$92 million) will promptly be provided by the Commission either by

1. Issuing a letter of credit for withdrawals by PMC as required for current needs for allowable costs, or

- 2 Furnishing PMC in advance of its need therefor, portions or all of such amount, for PMC's utilization for allowable costs.

We interpret these provisions to mean that AEC may have to make available to PMC the entire \$92 million at the outset. Therefore, if AEC does not make the entire \$92 million unconditionally available to PMC at the outset for PMC's use in carrying out its activities under the terms of the proposed contract, it appears that the electric utilities might not be obligated to make their payments.

It should also be pointed out that, in accordance with the proposed contract between PMC and BRC, PMC cannot use the utility contribution agreements as security or collateral for loans, lines of credit, or other forms of financing until, among other things, the following conditions have been met.

1. AEC shall have paid or made available at least \$92 million for the project.
2. Construction of the liquid metal fast breeder reactor demonstration plant shall have begun.

If termination occurs before the start of construction, it is possible that the amount of funds contributed by the utilities at that time would not be sufficient to cover their share of the project costs pursuant to section 11.5 of the proposed contract among AEC, PMC, TVA, and Commonwealth. If such a situation occurs, PMC could not use the utility contribution agreements as collateral to secure loans to satisfy their obligations for sharing project costs.

Therefore, we believe AEC should consider the desirability of either (1) requesting BRC to negotiate a change to the utility contribution agreements to provide for acceleration of any future payments the electric utilities may be obligated to make under their contribution agreements to satisfy their obligation under section 11.5 or (2) modifying the proposed contract among AEC, PMC, TVA, and Commonwealth to allow the use of utility contributions to reimburse AEC if AEC assumes the utilities' share of costs at termination.