

January 26, 1979

SECY-78-596A

## COMMISSIONER ACTION

For: The Commissioners  
From: James R. Shea, Director  
Office of International Programs  
Thru: Executive Director for Operations *JR*  
Subject: PROPOSED LICENSE TO EXPORT LOW ENRICHED URANIUM TO INDIA (APPLICATION XSNM-1222) (U)  
Purpose: (U) To provide the staff's recommendations on this application.  
Discussion:

(U) SECY-78-596 forwarded an initial staff analysis of the principal issues involved in the Commission's consideration of this application under the Atomic Energy Act (the Act), as amended by the Nuclear Non-Proliferation Act (NNPA) of 1978. The staff has deferred making its recommendation until this time in order to assess further the complex issues involved in this case and to take into account additional staff analyses, recent briefings and other submissions by the Executive Branch, the record of proceedings related to the previous Indian LEU export (XSNM-1060), and the written comments submitted in the proceedings ordered by the Commission on December 8, 1978.

NOTE: Except where specifically indicated otherwise, all of the views in this paper are those of the NRC staff.

act:

Shea, IP (492-7886)  
Oplinger, IP (492-7866)  
Peterson, IP (492-8155)

SECURITY INFORMATION

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(Date of Event)

Classified By: J. R. Shea

James R. Shea

Discussion: (U) General  
(continued)

IP has identified four fundamental issues which remain to be resolved in connection with the Commission's decision on the pending application. These are:

1. Whether NRC's assessment of whether the NNPA's Section 127 criteria are met should take into consideration the future application of these criteria;
2. Whether the Section 127 criteria are met;
3. Whether the scope of the Commission's "common defense and security" finding as required by Section 57 of the Act can properly encompass the broad policy issues considered by the Executive Branch in formulating its judgments, or, alternatively, whether the Commission's scope is limited to those factors which have a direct bearing on the Commission's findings that the Section 127 criteria are met;
4. Whether the proposed export is inimical to the common defense and security.

(U) 1. Prospective Application of Section 127 Criteria

There is no clear legislative direction nor established Commission policy on this issue. It can be argued on the one hand that the prospective application of the criteria is not a proper subject for Commission consideration in connection with its assessment as to whether the Section 127 criteria are met ( and can be considered as a relevant factor only under the Commission's common defense and security finding pursuant to Section 57 of the Act). This view is supported by the fact that none of our current agreements for cooperation provide for explicit assurances that they would apply indefinitely in the future and the provisions of Section 404 of the NNPA in which enduring commitments would be an objective of new and re-negotiated agreements for cooperation rather than a requirement of the immediately applicable criteria.

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(U) On the other hand, various considerations (detailed in SECY-78-596) argue for concluding that the NNPA criteria could be largely vitiated if only the current applicability of the criteria is considered (especially with respect to criteria 2 and 5). Furthermore, Section 126(a)(2) of the AEA provides for Commission findings on whether the criteria are met to be based on a "reasonable judgment of the assurances provided and other information available" (emphasis supplied).

2. Section 127 Criteria Determination

(U) If the Section 127 criteria are applied currently only, there is little doubt that the proposed export meets all of the criteria. If they are applied prospectively, considerable uncertainties are raised regarding the duration of the assurances that the criteria will continue to be met. The following discussion assumes prospective application of the criteria.

(U) With respect to Criteria 1 (safeguards), Criteria 4 (retransfers), and 5 (reprocessing), the relevant Indian assurances are contained in the US-Indian Agreement for Cooperation signed on August 8, 1963. These assurances were discussed in detail in SECY-78-596. Their principal weakness is that the continued viability of the Agreement itself is contingent on continued U.S. supply of enriched uranium for the Tarapur Atomic Power Station (TAPS). Unless an exception by the President is granted, the United States will be able to maintain that supply after March 10, 1980 only if India accepts full-scope safeguards as required by Section 128 of the Act. While the U.S. continues to seek actively to obtain Indian agreement to full-scope safeguards and it is encouraging that the Indians have agreed to participate in an international group examining full-scope safeguards issues, serious doubts still remain as to whether India will accept full-scope safeguards in the foreseeable future. Should the United States as a consequence find it necessary to terminate fuel supply, Indian assurances under the Agreement may lapse.

(U) To recognize this is not to require that India agree now to accept full-scope safeguards as a condition of U.S. supply during the "grace period" before

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Section 128 becomes effective. This clearly would be contrary to the intent of the NNPA. During the interim negotiating period before full-scope safeguards are required, India could comply with section 127 requirements by providing the U.S. with explicit supplementary assurances that those provisions of the Agreement relative to Criteria 1, 4, and 5 are not contingent upon continued U.S. supply.

(U) In the absence of such assurances, it appears likely that India would no longer consider itself bound by the Agreement if U.S. supply is cut off. It does not, however, automatically follow that India would then take actions proscribed by the criteria. With respect to Criterion 1, it is probable that India will maintain IAEA safeguards on the TAPS reactors even assuming a U.S. cut-off, despite Article VI of the Agreement, in which India has emphasized, "in contrast to the position of the United States," that its safeguards obligations with respect to equipment and devices "in any case ensue from the safeguards on fuel." In similar circumstances following the termination of Canadian nuclear cooperation, India elected to maintain safeguards on the Rajasthan reactors. Moreover, it is unlikely that India will be able to fuel the TAPS reactors without outside assistance in the near term, and any existing alternative fuel supplier would, under the Nuclear Supplier Guidelines, require that IAEA safeguards be maintained.

(U) The continued safeguarding of U.S. supplied fuel is not nearly as certain, however, in view of U.S. unwillingness to make the required safeguardability determination on India's Prefere reprocessing plant, which was built primarily to reprocess Tarapur spent fuel. If U.S. fuel is cut off, India may feel free to reprocess spent fuel at the unsafeguarded Prefere facility (and thus also violate criterion 5). This view is supported by Prime Minister Desai's statement in March 1978 (see p. 11 of SECY-78-596) indicating

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his view that "If they say no, once I hear that, then all ways are open to us, even the processing of the used thing." Return of U.S. spent fuel would eliminate this concern regarding criteria 1 and 5.

- (U) On the other hand, the decision to reprocess without U.S. approval could be viewed as a final "worst case" option and not likely to occur if other more acceptable options are available. For instance,

Indian ultimatum to reprocess could force a resolution of the return of spent fuel issue. Finally, if further progress is made in expanding Tarapur's spent fuel storage capacity, India could also unilaterally defer any reprocessing plans. Any of these alternative courses of action would not violate criteria 1 and 5.

- (U) With respect to Criterion 2, (no explosive use) the basic Indian assurance is contained in the September 17, 1974 letter from Dr. Homi Sethna to Dr. Ray, which said in part:

- (U) "The Government of India would like to reassure the Government of the United States of America that the special nuclear material that has been or is hereafter made available for, or used, or produced in the Tarapur Atomic Power Station located at Tarapur will be devoted exclusively to the needs of that Station unless our two Governments hereafter specifically agree that such material be used for other purposes."



Discussion:  
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(U) It is far from certain that India would share this interpretation if U.S. supply were to break down. The September 17 letter was part of an exchange of correspondence which began with Dr. Ray's letter of June 19, 1974 to Dr. Sethna, discussing the terms which the U.S. understood would govern the first shipment of U.S. fuel to TAPS following the Indian nuclear explosion of May, 1974. The June 19 letter stated the U.S. understanding that the use for nuclear explosives of "any material or equipment subject to U.S. Agreements for Cooperation . . . is precluded" (emphasis supplied). Sethna responded on July 10, 1974, rejecting the U.S. interpretation, and elaborating on the Indian understanding of the obligations of both parties with respect to material which "the U.S. Atomic Energy Commission has contracted to sell to the Government of India" (emphasis supplied) under Article II of the Agreement for Cooperation. Sethna's reply also drew attention to the U.S. right under the Agreement to repurchase nuclear material produced at Tarapur. On September 16, 1974, Dr. Ray again wrote to Sethna "concerning shipments of enriched-uranium fuel and other material to Tarapur" (emphasis supplied), suggesting simply a written assurance that "the special nuclear material that has been, or is hereafter made available for, or used or produced in, the Tarapur Atomic Power Station will be devoted exclusively to the needs of that station unless the two Governments hereafter specifically agree that such material be used for other purposes." As noted above, the Indians then accepted this.

(U) In light of this history, there is room for doubt that India would accept the interpretation that Dr. Sethna's September 17 letter was intended to cover non-US fuel, or special nuclear material produced therefrom. Particularly in circumstances where U.S. fuel supply had terminated, it is at least equally possible that India would take the position that the entire Sethna/Ray exchange was a discussion of conditions governing the use of fuel supplied by the U.S. under the U.S./Indian Agreement for Cooperation, and in no way extended to materials supplied by another supplier should the United States fail to meet its Article II obligations. Here again, the question could be clearly resolved through a supplementary understanding. (It should be noted that the attached OELD analysis points out that the final assurance from the Indians in the Sethna/Ray exchange was stated in terms applicable to fuel from any source.)

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(U) In this connection, we note that Prime Minister Desai publicly stated in April 1978 in Parliament that should the U.S. breach the Agreement, "we will then be free to do whatever we like to do." On at least two subsequent occasions, Prime Minister Desai has made public statements indicating that the use of nuclear energy for mining might be considered, and that in certain circumstances (such as if nuclear devices of a solely peaceful character could be developed), a nuclear explosion "is never debarred."

(U) It is possible that these Desai statements represent nothing more than the efforts of a hard-pressed political leader to contain his opposition, and/or that Desai consciously set conditions for the use of nuclear explosives which he knew would be virtually impossible to meet. But statements of this kind cannot be lightly dismissed, and U.S. law does not leave room even for conceivably benign explosions: Criterion 2 requires a finding that no U.S. nuclear exports "will be used for any nuclear explosive device or for research on or development of any nuclear explosive device." Balancing the above-referenced Desai statements, on the other hand, are several of his earlier statements that India had no intentions to develop nuclear explosives. In addition, there is no current evidence of Indian plans to develop and test further nuclear explosive devices. Also, even if India had no intentions to develop nuclear explosives, it is not clear that there would be a significant incentive to utilize the high burn-up plutonium available from Tarapur because of Indian access to better quality plutonium from indigenous sources and facilities (unless a sizable nuclear explosive program were planned).. With respect to criterion 4, it is clear that Indian compliance with this criterion and criteria 1 and 5 is equally dependent on the continuance in force of the Agreement. In contrast to criteria 1 and 5, however, there are no explicit indications that India might choose to violate criterion 4 and retransfer U.S. supplied material without U.S. approval.

3. Scope of the Commission's Common Defense and Security Finding

(U) This issue has been addressed to some extent by individual Commissioners in connection with the review of previous Tarapur fuel exports, but the Commission itself has made no formal decision concerning the matter. If the Commission concludes that the Section 127 criteria

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are met, the subsequent common defense and security finding will rest heavily on the Commission's conclusions regarding the proper scope of the considerations which affect the common defense and security finding. Section 126.a(2) of the Act provides that the Commission may not issue a license until it "finds, based upon a reasonable judgment of the assurances provided and other information available to the Federal Government, including the Commission, that the criteria in Section 127 of this Act, or their equivalent, and any other applicable statutory requirements, are met" (emphasis supplied). The "other applicable statutory requirements" in the Tarapur case are in the Act, namely (1) that the export be pursuant to an agreement for cooperation and (2) that the export not be found either inimical to the common defense and security or constituting an unreasonable risk to the health and safety of the U.S. public. These latter requirements are, therefore, clearly separated from the Section 127 criteria insofar as the Commission's review responsibilities are concerned. Furthermore, the legislative history of the NNPA supports the conclusion that Congress intended the Commission to consider all relevant nonproliferation-related issues in making its independent licensing determinations.

#### 4. Inimicality Finding

- (U) If the section 127 criteria are applied prospectively and the Commission still finds them to be met, the license could still be denied on inimicality grounds. However, such a denial would presumably be based on adverse factors other than those affecting the Commission's determinations on the section 127 criteria. With respect to the Tarapur export, no such factors are readily apparent.
- (U) On the other hand, if the section 127 criteria are not applied prospectively and the Commission finds they are met, the license could be denied on inimicality grounds which are based on factors affecting the continued application of the section 127 criteria. These adverse factors could be balanced, however, by broader policy considerations related to the common defense and security which may favor issuance of an export license.



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## 5. Broader Policy Considerations

(U) The staff has been conscious, in considering the difficult issues posed by this application, of the importance which the Executive Branch attaches to continuing U.S. fuel supply to India at least during the "grace period" before the full-scope safeguards requirement of the Act comes into effect. We do not dispute the view of the Executive Branch that current negotiations to achieve the important goal of full-scope safeguards should be given every chance to succeed, and that issuance of the Tarapur export license could increase these chances. Nevertheless, NRC must still make its own judgment regarding whether the criteria of Section 127 are met.

(U) If the Commission cannot make a finding that the Section 127 criteria are met, the Act still provides a mechanism for consideration of these broader policy issues through referral of the application to the President as was done with respect to the previous Tarapur fuel export (XSNM-1060).

## 6. Section 128

(U) Because the date when Section 128 takes effect has now drawn closer than during the Commission's consideration of XSNM-1060, the staff has also examined the question of India's need for the material covered by XSNM-1222 in the light of Section 128 of the Act. OPE's memorandum of January 16, 1979 to the Commissioners provides a detailed analysis of the current fuel requirements for the Tarapur reactors. This analysis shows that, if recent fuel usage rates continue, TAPS I could continue operation until February 1982, and TAPS II until August 1981, without the additional material covered by this application. Approval of XSNM-1222 at the present time would meet reactor requirements which will not arise until 17-23 months after the full-scope safeguards requirement of Section 128 of the Act becomes effective. Even assuming higher use rates, approval would provide India with fuel not required for reactor operations until 8-23 months after the full-scope cut-off date.

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- (U) Thus, the effect of approval would be to provide a stockpile of material which will permit India to avoid the full-scope requirement for an additional period of 15 months without affecting current reactor operations. In this respect, the case is similar to XSNM-844 (see SECY 78-416B) involving advance shipments of reload fuel to Spain for stockpiling and use well after Section 128 becomes effective. What distinguishes the two applications, in this respect, is that Spain has no operational requirement for advance shipment, whereas the Tarapur fuel must be fabricated in India. To be specific, operation of TAPS could be affected (assuming a high use rate of 70 subassemblies per refueling) if the license is not approved in time to permit shipment from the U.S. by November, 1979. We note that referral of the case to the President, the course followed in XSNM-1060, is not likely to delay shipment beyond that time.

(U) The application of Section 128 thus may involve considerations of the rate of fuel use. Recent experience indicates that the lower rate of 56 subassemblies per refueling is likely to be sufficient, which would mean that the material covered by XSNM-1222 would provide a stockpile not needed before March 10, 1980 for reactor operation, and which would reduce Indian incentives to accept full-scope safeguards.

(U) The amount of stockpiling involved would not be large, however, would be consistent with past U.S. supply practices for TAPS, and there is still uncertainty about use rates.

## 7. Developments Since XSNM-1060

- (U) Since the current proposed export is in many respects similar to the material exported pursuant to export license application XSNM-1060 (which was approved by the President after the Commission failed to approve issuance of an export license), it may be helpful to highlight the significant developments which have occurred since XSNM-1060 was considered by the Commission in April, 1978.
- (U) Of major interest in this regard are the recent statements by the Indian Prime Minister concerning India's policy on peaceful nuclear explosives as discussed elsewhere in this paper and in SECY-78-596. A more recent development is the agreement between India and the U.S. in late 1978 to establish an international committee

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to study IAEA safeguards implementation matters. This development could significantly facilitate India's agreement to adopt full-scope safeguards, although it is too early to form any firm judgments on this point.

- (U) Finally, the passage of time since XSNM-1060 is in itself an important development insofar as it relates to the impending March 10, 1980 deadline for full-scope safeguards. The fuel covered by XSNM-1060 was clearly needed in India before March 10, 1980. This need has not been clearly established with respect to XSNM-1222.

NMSS Technical Review

- (U) NMSS has not received any information regarding the State System of Accounting and Control in India. Accordingly, NMSS is unable to make any determination regarding the capabilities of India's system to support the effective application of IAEA safeguards.
- (U) In addition, NMSS has not received any information concerning IAEA implementation activities and problems other than that included in the 1976 SSIR and 1977 SIR documents and the letter from State to Chairman Hendrie dated December 19, 1978. NMSS conclusions based upon this information is reflected in Table V of the memorandum to Commissioner Gilinsky dated November 29, 1978, the additional analysis provided for Commissioner Kennedy on December 21, 1978 and the memorandum to Commissioner Ahearne dated January 3, 1979. The main conclusion of the NMSS examinations is that the available information on IAEA implementation is not sufficient to permit NMSS to evaluate the effectiveness of IAEA safeguards in India.
- (U) With respect to physical security, NMSS has reviewed the program in India and found it adequate for the purpose of this export.

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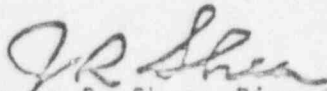
Conclusions

- (U) The IP staff is in agreement that criterion 3 is met and that criterion 6 is not applicable to this case. However, the IP staff is divided on the question of whether a finding can be made that the proposed export meets criteria 1, 2, 4 and 5.
- (U) The IP staff agrees that the factors entering into these determinations present persuasive arguments on both sides of the issue of whether or not the criteria are met and that the final decision is a close one.
- (U) Some IP staff, (which may submit additional views on this matter), believe that a confident determination that criteria 1, 2, 4 and 5 are met cannot be made, and therefore the application should be referred to the President for consideration. The Director, IP, on the other hand, believes that, on balance, and taking all factors into account, there is sufficient basis for concluding that the criteria are met for this license. All IP staff believe that, if the criteria are determined to be met, assessment of all considerations involved leads to a conclusion that all additional statutory requirements are met, in particular that the export is not inimical to the common defense and security.

Recommendation:

- (U) OIP recommends that the Commission:
  1. Note the varying views of IP staff members on this proposed export.
  2. Find that the criteria of the NNPA are, on balance, met for this application and that the export will not be inimical to the common defense and security.
  3. Approve issuance of this license.
  4. Promptly forward this case to the President for decision if the Commission should be unable to make a finding that the statutory provisions are satisfied.

- Coordination: (U) ELD's comments are attached.
- (U) NMSS views on physical protection adequacy and the effectiveness of IAEA safeguards to deter and detect diversion in India are as stated above.

  
James R. Shea, Director  
Office of International Programs

Enclosure:  
OELD Views on Proposed License  
to Export Low Enriched Uranium  
to India (U)

Commissioners' comments should be provided directly to the Office of the Secretary by c.o.b. Friday, February 2, 1979.

Commission Staff Office comments, if any, should be submitted to the Commissioners NLT January 31, 1979, with an information copy to the Office of the Secretary. If the paper is of such a nature that it requires additional time for analytical review and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

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