

February 2, 1978

UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20545

SECY-78-71

CONFIDENTIAL
INFORMATION REPORT

For: The Commissioners

From: James R. Shea, Director
Office of International Programs

Thru: Executive Director for Operations *MR. LUG.*

Subject: EXECUTIVE BRANCH VIEWS ON INTERNATIONAL
SAFEGUARDS AND REPROCESSING QUESTIONS

Purpose: To inform the Commission of Executive Branch response
to questions posed by Commissioners Gilinsky and
Bradford.

Discussion:

In connection with their concurrences in the issuance of licenses for the export of low enriched uranium to Japan, Sweden, and Switzerland, Commissioners Gilinsky and Bradford requested information from the Executive Branch on several international safeguards and reprocessing matters (see Mr. Chilk's memorandum at Appendix C and my letter to State at Appendix B).

State's response to the questions is at Appendix A. The response includes, as attachments, copies of State's December 5 and December 19 memoranda dealing with retransfers for reprocessing, a summary of reprocessing retransfer approvals since October 1976, and the approval letters setting forth the conditions on the disposition of recovered plutonium.

Some main points of the Executive Branch's response are summarized below:

Contact:-
M.A. Guhin
492-7866

SUBJECT TO GENERAL DECLASSIFICATION SCHEDULE OF
EXECUTIVE ORDER 11652 AUTOMATICALLY DOWNGRADED
AT TWO YEAR INTERVALS AND DECLASSIFIED ON DEC. 31

1984

(Insert year)

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- o The Executive Branch knows of no significant problems in implementation of IAEA safeguards and consequent corrective steps which are specific to these countries (as distinct from generic problems for given facility types and related improvement programs).
- o State believes that the effectiveness to date of IAEA safeguards must be viewed within the main conclusion of the SSIR: namely that "in none of the 41 States in which inspections were carried out was there any diversion of a significant quantity of safeguarded material."
- o In the Executive Branch's view and from an overall standpoint, the generic aspects of the effectiveness of the Agency's safeguards system and generic desirable improvements are particularly important.
- o The Japanese-IAEA NPT Safeguards Agreement and a new national system of nuclear material accountancy and control have recently been approved by the Diet and are expected to alter substantially the interaction between the IAEA and Japan's national system in this area.
- o IAEA safeguards in Switzerland are also expected to change substantially when an NPT-type safeguards agreement is brought into force either this year or in 1979.

With respect to retransfers for reprocessing matters, the Executive Branch response (1) forwards its understandings with respect to the reprocessing contracts between these countries (Japan, Sweden and Switzerland) and COGEMA and BNFL and (2) notes Sweden's recent announcement on restricting exports for reprocessing during the INFCE.

The response also notes that:

- o It is not known whether any of the material to be exported under Licenses XSNM-462 (Amendment 1), 1112, 1146, 1148 and 1152, would be subject to

reprocessing contracts between these countries and BNFL and COGEMA.

- o The generic approach of the Executive Branch in responding to retransfer requests for reprocessing, as outlined in the attached memorandum, has been substantively approved by the Executive Branch agencies concerned with non-proliferation issues (including the NSC staff).
- o The US has made clear to all parties involved in long-term reprocessing contracts with COGEMA and BNFL that the US will continue to consider retransfers for reprocessing on a case-by-case basis and that there should be no presumption of such approvals over the life of these contracts.

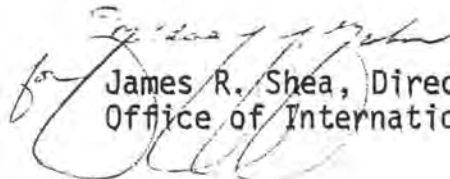
NMSS has reviewed the State response and has provided the views below:

- o NMSS does not believe the Executive Branch has provided the information requested concerning the effectiveness of IAEA safeguards in Japan, Switzerland and Sweden. The Executive Branch has simply stated that it is aware of no significant implementation problems but has not provided information to support a conclusion that no problems exist in these countries. To our knowledge the US is not receiving, on a current basis, information that would permit the Executive Branch to reach a conclusion that no implementation problem exists in any particular country.
- o Although the SSIR concluded that there has not been any diversion of any significant quantity of safeguarded material from a facility subject to IAEA safeguards, NMSS believes that it is apparent from other information in the SSIR that the IAEA did not have sufficient quantitative safeguards information to technically support this conclusion.

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I have thanked Mr. Nosenzo for his response and indicated that it will be forwarded for the Commission's information promptly.


for James R. Shea, Director
Office of International Programs

- Enclosures: *in BP*
1. Appendix A - State letter with attachments dtd 1/20/78
 2. Appendix B - Shea letter to State dtd 12/20/77
 3. Appendix C - Chilk memorandum to EDO dtd 12/14/77

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APPENDIX A

STATE LETTER WITH ATTACHMENTS DTD 1/20/78



DEPARTMENT OF STATE

Washington, D.C. 20520

BUREAU OF OCEANS AND INTERNATIONAL
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

January 20, 1978

Mr. James R. Shea
Director
Office of International Programs
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Shea:

In your letter of December 20, 1977, you raised six questions related to Executive Branch recommendations for the issuance of slightly-enriched uranium export licenses to Japan, Switzerland and Sweden. The first two of these covered the effectiveness of IAEA safeguards and the latter four dealt with reprocessing matters. I believe that it would simplify my response if the questions were consolidated into these two categories.

Safeguards

The Executive Branch knows of no significant problems in implementation of IAEA safeguards and consequent corrective steps which are specific to these countries (as distinct from generic problems for given facility types and related improvement programs). In broad prospective, I believe that the effectiveness to date of Agency safeguards must be viewed within the main conclusion of the IAEA's Special Safeguards Implementation Report (GOV/1842) that "...the Secretariat has concluded that in none of the 41 states in which inspections were carried out was there any diversion of any significant quantity of safeguarded material..." Although this conclusion is based on IAEA inspection efforts during 1976, the conclusion also is supported by experience in previous years.

From an overall standpoint, the generic aspects of effectiveness of the Agency's safeguards system in facility types or fuel cycle operations, and generic desirable improvements, related to these facilities, are of particular

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importance. For example, effectiveness at any specific type of facility will be determined primarily by the basic safeguards approach for that facility type including, among other things, the state of the relevant safeguards technology and the availability of competent manpower and of instrumentation capable of carrying out its designed task.

It should also be noted that past experience is not necessarily a particularly useful indicator for the future. In a general context, GOV/1842 indicates that by far the greater part of the IAEA's safeguards experience to date has been for research facilities and light-water power reactors. The Agency recognizes that it will increasingly be faced in the future with safeguarding bulk handling facilities, such as fuel fabrication and reprocessing plants, which present significantly more challenging safeguards problems. It is in these latter areas that US and IAEA safeguards research and development efforts are being increasingly focused.

More specifically, the Japanese-IAEA NPT Safeguards Agreement has recently been ratified by the Diet and is just entering into force. A complete set of facility attachments for its implementation is now in preparation, which are expected to result in substantially different safeguards measures being applied at some Japanese facilities than those under the prior INFCIRC/66-type provisions. Relatedly, the Diet also has approved a new national system of nuclear material accountancy and control so that the interaction between the IAEA and Japan's national system in this area probably will be substantially altered. Because of Japan's extensive nuclear program, the complexity of applying IAEA safeguards is considerably greater than for Sweden or Switzerland.

Sweden and Switzerland, as well as Japan, are parties to the NPT. However, IAEA safeguards in Switzerland still are being carried out under INFCIRC/66-type safeguards arrangements; these measures also are expected to change substantially when an NPT-type safeguards agreement is brought into force either this year or in 1979.

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Reprocessing

It is not possible to directly relate these export licenses to "recent reprocessing contracts between these countries" (Japan, Switzerland and Sweden) and the British (BNFL) and French (COGEMA). It is our understanding that relatively short-term contracts for the reprocessing of the Muehleberg and Oskarshamn-I fuel were executed with COGEMA and BNFL, respectively, some time ago. It is not known whether any of the material to be transferred under these applications would be subject to such contracts, however.

The generic approach of the Executive Branch in responding to retransfer requests for reprocessing, including those from Japan, Sweden and Switzerland, during the INFCE period is outlined in my multiple addressee memoranda of December 5 and 19, 1977. (Although copies of both of these memoranda previously were made available to you, they are also enclosed [Annex A and B, respectively] for your convenience.) This approach has been substantively approved by the Executive Branch agencies concerned with non-proliferation issues, including NSC staff. As you are aware, under existing procedures the Executive Branch consults with the NRC prior to taking action on any MB-10 reprocessing retransfer request.

The Japanese utilities recently have completed the negotiation of long-term reprocessing contracts with BNFL and COGEMA, covering the period 1982-1990. It is our understanding that the contract with COGEMA has been signed but will not formally enter into force until (a) Notes Verbale have been exchanged between the French and Japanese Governments and (b) the utilities and COGEMA have obtained the necessary approvals from the Governments of Japan and France, respectively. These actions were to have taken place within ninety days after contract execution, but we are not aware whether they have been completed. It is our understanding that the parallel reprocessing contract with BNFL will not be signed until after the formal report of the U.K. Board of Inquiry on the Windscale reprocessing expansion has been issued. This is expected to take place in the early spring of this year.

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We also understand that certain Swedish utilities have entered into long-term contracts with COGEMA and, possibly, BNFL, in order to meet requirements of Swedish law that firm commitments must be made for disposition of spent fuel in order for these nuclear power plants to continue operation.

We have made clear to all of the parties involved in such long-term reprocessing contracts that the United States will continue to consider retransfers for reprocessing on a case-by-case basis and that there should be no presumption of such approvals over the life of these contracts. We believe the parties fully understand, therefore, that the financial commitments implied by entering into such contracts are at the risk of the participants. Relatedly, the Government of Sweden recently has announced that in deference to U.S. policy no license for export of spent fuel for reprocessing will be granted during the INFCE period "unless compelling reasons come up."

These developments, we believe, show that our efforts to discourage reprocessing and utilization of plutonium are well understood by the countries involved and that these efforts are having an impact on the reprocessing policies and plans of other nations.

A summary of MB-10 reprocessing retransfer approvals since October 1976, including the conditions on disposition of recovered plutonium, is enclosed as Annex C.

I hope that you find this information responsive to your inquiry.

Sincerely,

Louis V. Nosenzo
Louis V. Nosenzo

Deputy Assistant Secretary

Enclosures

As stated.

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DEPARTMENT OF STATE

Washington, D.C. 20520

BUREAU OF OCEANS AND INTERNATIONAL
ENVIRONMENTAL & SCIENTIFIC AFFAIRS

5 DEC 1977

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MEMORANDUM

TO: ACDA - C. Van Doren
PM/NPP - G. Oplinger
L/OES - R. Bettauer
EUR/RPE - W. Salisbury
DOE/IA - N. Sievering
DOE/ISA - V. Hudgins
NSC - J. Tuchman

FROM: OES/NET - Louis V. Nosenzo

SUBJECT: Pending Retransfers to the UK or France for
Reprocessing

Current Situation

Three MB-10 applications are currently pending for United States approval of retransfer of US-origin irradiated fuel elements for storage and eventual reprocessing in the UK.

1. Zorita (Spain): Twenty-two assemblies to the UK; request dated September 22, 1977.

2. Beznau I (Switzerland): Twenty-seven assemblies to UK; request dated January 11, 1977.

3. Oskarshamn I (Sweden): Ninety-seven assemblies to the UK; request dated January 7, 1977.

4. In addition, we anticipate that we will soon receive another request for the transfer of up to 127 irradiated fuel assemblies from the Santa Maria de Garona Nuclear Power Plant in Spain to the UK in order to meet the requirement for storage capacity to permit a full-core discharge.

Each of the three countries involved have regulations requiring sufficient storage capacity at each site to accommodate a full-core discharge. Other pertinent data

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on these requests is attached. Table I summarizes the current and anticipated future spent fuel situation at all four facilities. The following should be noted:

(a) The Beznau pool currently cannot accommodate a full-core discharge. In addition, the Swiss have indicated, last spring, that a full-core discharge is necessary to repair the reactor's emergency cooling system;

(b) Without United States approval of pending MB-10s, none of the reactor pools will be capable of meeting their state regulations to accommodate a full core after the next reactor discharge--three of which occur in the spring of 1978. All would still have room, however, to accommodate two to four additional scheduled reactor discharges;

(c) United States approval of pending MB-10s would accommodate the next discharge at all four sites, and meet the requirement to maintain space for a full-core discharge, but fall short of accommodating a subsequent discharge; and,

(d) The Spanish and Swiss have indicated plans to expand pool capacity at the Zorita, Garona and Beznau facilities. With the exception of Zorita, United States approval of pending MB-10s should provide sufficient space to allow for expansion at the other three sites. At Zorita, the Spanish have indicated the pool would have to be emptied (this would require transfer of an additional 20 assemblies beyond the current request, resulting from the next discharge scheduled for February 1978).

United States Policy/Strategy Considerations

In its partial response of April 5, 1977 to PD/NSC-8, the NSC Ad Hoc Group on Non-Proliferation recommended, with respect to retransfer requests for reprocessing in France and UK of US-origin spent fuel, that US approval be granted only when:

-- both the fuel owner and reprocessor are generally cooperative in non-proliferation and evaluation efforts;

-- the United States is provided a veto on retransfer of produced plutonium;

-- a need exists, e.g., in terms of requirement for fuel movement due to fuel storage capacity limitations; and,

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-- no commitment is implied for long-term continuation of approvals.

In his consideration of this recommendation, the President "...decided that a clear showing of need should be a strict prerequisite to granting United States approvals," and "with a stronger presumption against approval of such requests" than was implied in the recommendation.

Based on this and subsequent decisions, our longer-term strategy with regard to disposition of foreign spent fuel has been to:

1. Seek funding in the FY-1978 and 1979 budget to allow for an assessment of spent fuel requirements and to initiate a program to assist countries in expanding interim storage capacity.

Status: Monies have been appropriated and authorized for FY-1978 and assessment teams are in the process of visiting United States customers abroad to ascertain spent fuel requirements. Technical teams will then be sent (as was done at Tarapur) to assist United States customers in expanding existing pool capacities and in building additional capacity (e.g., Spain's plan for interim centralized storage of spent fuel);

2. Expand United States interim storage capacity and provide for a limited amount of long-term storage to accommodate needs of foreign customers as well as domestic utilities until international repositories could be established.

Status: The US policy on storage of foreign spent fuel in the United States has been announced. Required environmental impact statements are being written and DOE is taking steps, working with industry, to expand interim storage and has a major program underway for development of long-term storage facilities by 1985;

3. Work through INFCE to develop, over the long-term international regional repositories.

Status: This is part of the work under INFCE Group 7 and United States efforts will be used to support early development of international repositories.

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4. In the interim, approve MB-10s only when there is a clear showing of need.

Status: In conformance with this strategy, two requests for reprocessing approval have been approved:

-- Garona (Spain): Eighty-one assemblies to UK. (An extension to the original approval was granted for 63 assemblies as noted in the attachment);

-- Tsuruga (Japan): Forty-two assemblies to UK.

In both cases, a clear need was established based on the need to ensure sufficient storage capacity at each reactor site to accommodate a full-core discharge as required by regulations in both countries.

Recommended Action

In view of the above, approval of the pending MB-10s for Switzerland and Spain (including the anticipated MB-10 for Garona) appears justified and consistent with previous actions on Garona and Tsuruga; therefore, their prompt approval by the DOE is recommended. With regard to the Swedish request, there is not the same operational urgency for its approval as is the case for Spain and Switzerland. Thus, we recommend that action on it be deferred until at least the spring of 1978 unless future political events dictate earlier reconsideration.

There is a sense of urgency, particularly with regard to the Spanish and Swiss cases, if we are to permit them to comply with their safety regulations. Clear need for these actions has been reinforced by strong political approaches by all three countries seeking US approval. In the case of Switzerland, a demarche was made to Ambassador Smith in September. In the case of Spain, the Ambassador raised this matter with the Secretary in mid-November.

In support of the overall United States strategy, however, the United States should, in approving the requests, strongly urge both countries to implement their plans for expansion of current pool capacities. This

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would include, in the case of Zorita, a willingness on the part of the United States to approve a subsequent MB-10 for transfer so as to empty the pool shortly after the next discharge to permit emplacement of high-density racks. We should also offer to send technical teams, in the near future, to the three reactor sites to assist them in planning and expediting expansion of existing capacity.

The Swedish case is less urgent from an operational point of view. The next discharge that would result in violation of Swedish requirements for space for a full-core discharge is not scheduled until September 1978. The urgent need, if one exists, in this case is the linkage between US action on the MB-10 and continued operation of the Swedish power reactor program. As noted in the attachment, Swedish law requires that utilities be able to demonstrate environmentally-sound plans for long-term disposition of spent fuel resulting from reactor operations. A US decision not to approve the pending MB-10 would very likely cause the shutdown of existing facilities and block construction of any new plants, pending resolution of the waste disposition question. We have had a number of bilateral conversations with the Swedes on this matter, who generally wish to support US policies and we have offered some potential solutions. The Government has been unable to respond because of internal disputes concerning appropriate solutions within the coalition Government over the nuclear issue.

Because there is no operational urgency in this case, I recommend that we delay a decision until next spring and, in the interim, attempt to work a solution whereby we informally suggest to the Swedish Government to expand capacity at the Oskarshamn I site to buy more time to permit other solutions to emerge--in particular, long-term disposal of Swedish spent fuel in US repositories pending establishment of international repositories. As in the case of Spain and Switzerland, we would, of course, offer to send a technical team to assist them in pool expansion plans.

A similar approach would be followed, where appropriate, with regard to other foreign reactor sites identified by the current DOE assessment effort as having near-term spent fuel storage problems and/or where US technical support teams can assist recipient countries in expanding existing storage capacities.

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Your clearance/comments on the above recommended approach is requested by COB December 8. Please contact Dixon Hoyle at 632-4101.

Attachment

As stated.

cc: T/D - L. Scheinman
S/AS - G. Smith

DBH 12/11/66
Drafted: OES/NET:LVNosenzo:sk/DBHoyle:pab
ext. 24360

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FACILITY	Assemblies in Core	Total Pool Capacity	Assemblies in Pool	Residual Pool Capacity	Residual Pool Capacity with Core Discharge	Date of Next Discharge and Assemblies to be Discharged	Residual Pool Capacity	Residual Pool Capacity with Core Discharge	Requested Transfers (MB-10s)	Residual Pool Capacity after Retransfer	Residual Pool Capacity after Retransfer with Core Discharge	Assemblies in Pool after Retransfer
ZORITA (Spain)	69	92	22	70	1	2/78 20	50	-19	22	72	3	20
GARONA (Spain)	400	620	208 ¹	412 ¹	12 ⁺	4/78 80	332	-68	127 ²	459 ²	59 ²	161
BEZNAU (Switzerland)	121	163	49	114	-7	Spring 1978 20	94	-27	27	121	0	42
OSKARSHAMN I (Sweden)	448	795	261	534	86	9/78 106	428	-20	97	525	77	270

1. Assumes 63 assemblies, currently in storage but approved for shipment, are transferred to UK
2. Assumes that Spain will

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PERTINENT DATA

. Zorita (Spain): Twenty-two assemblies to the UK; request dated September 22, 1977. In a memorandum from the Spanish Energy Counselor dated September 28, the following points were made regarding this case:

(a) because of cask availability, these fuel elements can be moved only in November 1977 or will have to be transferred in April or May 1978;

(b) the next scheduled discharge is February 1978. If all elements are not removed, there will not be enough room in the pool for the discharge of the full core in case of emergency;

(c) Spanish regulations require sufficient room in the reactor pool to provide for discharge of a full core at all times;

(d) studies are being carried out to increase the capacity of the pool. If the capacity is to be increased, it would be necessary to empty the pool prior to increasing capacity.

Beznau I (Switzerland): Twenty-seven assemblies to the request dated January 11, 1977. Pertinent data on this includes:

(a) at present, there is insufficient space in the spent

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fuel pool for the emergency discharge of the entire core. Swiss regulations require sufficient room in the reactor pool to provide for discharge of a full core at all times;

(b) problems which have developed with the reactor emergency cooling system will probably require full-core discharge. The Swiss had hoped to perform this work over the summer of 1977. United States failure to approve the MB-10 has prevented performance of this repair;

(c) the Swiss indicated plans to expand the pool capacity in late summer following repair of the cooling system. This has been held up pending completion of the repair of the cooling system;

(d) the next scheduled discharge is the spring of 1978. In lieu of US approval of the current MB-10, the pool storage problem will be further aggravated.

Oskarshamn I (Sweden): Ninety-seven assemblies to the US; request dated January 7, 1977. Pertinent data on this situation is:

(a) Swedish regulations also require sufficient room in reactor pools at all times to permit a full-core discharge;

(b) the next discharge is scheduled for September 1978. In the absence of US approval of the MB-10 request, the anticipated discharge will leave insufficient room for a full-core discharge;

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(c) current Swedish regulations require that utilities demonstrate plans for long-term disposition of spent fuel resulting from reactor operations. United States failure to approve the current pending MB-10 would very likely effectively block any further operations of existing plants or construction of new plants, pending resolution of the waste disposition question.

. Garona (Spain): Pertinent data on this situation includes:

(a) in August 1977 we received a request to approve the retransfer for eventual reprocessing of 191 irradiated fuel assemblies for that reactor;

(b) we approved retransfer of 81 assemblies earlier this year. An extension was granted in November with regard to 63 assemblies which remained unshipped upon expiration of the period of the original approval, largely because shipping casks were not available;

(c) the next reactor discharge is scheduled for April 1978 and, even if the above 63 assemblies are transferred, the next discharge would not leave sufficient space in the reactor pool for a full-core discharge.

We, therefore, anticipate request for retransfer of the remaining 127 assemblies of the original request for retransfer of 191 assemblies. The Spanish have also indicated plans for

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pansion of the Garona pool to increase spent fuel capacity.
like Zorita, this would not require that the pool be emptied.

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DEPARTMENT OF STATE

Washington, D.C. 20520

BUREAU OF OCEANS AND INTERNATIONAL
ENVIRONMENTAL & SCIENTIFIC AFFAIRS

December 19, 1977

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MEMORANDUM

TO: ACDA - C. Van Doren
PM/NPP - G. Oplinger
L/OES - R. Bettauer
EUR/RPE - W. Salisbury
DOE/IA - N. Sievering
DOE/ISA - V. Hudgins
NSC - J. Tuchman

FROM: OES/NET - Louis V. Nosenzo

SUBJECT: Pending Retransfers to the UK or France for
Reprocessing

Based on comments received, the general approach to reprocessing retransfer requests proposed in my memorandum of December 5 on the above subject appears to be acceptable. The purpose of this memorandum is to clarify certain details and to describe our action plan for proceeding.

It is the consensus that U.S. willingness to approve retransfers for reprocessing should not only be based on a showing of clear need but also upon a demonstrated and serious effort by the requestor and/or his Government to implement relatively near-term spent fuel disposition plans which are dependent neither on reprocessing nor return of fuel to the United States. Such plans may include (a) reracking of storage basins with high-density, neutron-absorbing racks, (b) movement of fuel among storage basins of various reactors to optimize overall utilization, or (c) provision of new fuel storage capacity, including away-from-reactor central storage. Generally, these plans cannot be implemented immediately, but we should expect to obtain some sort of commitment to proceed and steady progress toward completion or an explanation which is acceptable to us as to why this is not possible.

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Further, it appears to be the overall feeling that having obtained such a commitment or acceptable explanation, it would be preferable for us to give such approvals as may be required prior to the time that alternative spent fuel disposition plans can be implemented in a manner which minimizes the appearance of continued U.S. acquiescence in requests for reprocessing retransfers. This will be done by having the approvals cover justified retransfer requirements within the framework of the mutually agreed upon spent fuel disposition plan and in a way which minimizes the possible need for extensions or reapprovals in the event that changes in fuel discharge or transport plans make it impossible to make the actual spent fuel retransfer at the time originally contemplated.

With respect to the question of increasing capabilities for spent fuel disposition, the following situation exists with regard to MB-10 retransfer requests presently under consideration:

Beznau -- In order to perform work on the emergency core cooling system, the entire core must be discharged, which requires the transfer of 27 elements to BNFL in order to provide sufficient space. Following this work, the Swiss have indicated that new racks would be installed provided that the licensing authorities issued the necessary permit. However, a thorough evaluation of seismic risks must be undertaken before authorization can be considered.

Zorita -- Studies are being carried out to install a new high-density storage system; however, it will be necessary to have the pool completely empty (22 assemblies presently in pool plus 20 to be discharged from reactor in February 1978) before the installation of these new racks could begin.

Garona -- The reactor operator has gone out for international tenders for reracking the pool, which would increase its capacity (over and above a full-core discharge capability) by over 200 percent. However, there is no indication of the time required to accomplish such reracking.

Oskarshamn-I -- There appears to be no need to authorize spent fuel retransfers from this reactor until at least mid-1978. In fact, although we have received no MB-10 request to date, the spent fuel storage situation at Oskarshamn-II (which has a small basin) probably will

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become critical first -- perhaps by the spring of 1978. We have been informally advised that pool reracking is planned at both Oskarshamn reactors, although the schedule for such reracking presently is not clear. Further, the utility's management is participating in a group preparing and submitting for Swedish Government approval plans for a large, central spent fuel storage facility which would be completed by late 1983, at the earliest. At the same time, we have been informed that transfers between the two Oskarshamn reactor storage basins are not feasible, since there are no casks available to the utility for such transfers.

With this background in mind, we plan to take the following actions in each of the present cases:

Beznau -- Approve the present retransfer request for 27 assemblies upon obtaining a commitment that the reactor operator will proceed expeditiously with pool reracking upon obtaining the necessary Swiss licensing authorization. Hopefully, we could agree upon a tentative schedule to complete this reracking following the time that such authorization is granted.

Zorita -- Approve the present request for retransfer of 22 assemblies, with the clear understanding that subsequent approvals will be contingent upon specific steps being taken by the utility to rerack its storage basin. If the utility is able and prepared to do so at the time of the scheduled February 1978 discharge, we would be willing to approve now retransfer of the additional 20 assemblies to be discharged so that firm arrangements can be made in the near future for clearing the pool to permit reracking to begin as soon as these assemblies have been adequately cooled for shipment.

Garona -- As indicated in my memorandum of December 5, we do not actually have at present a specific request for retransfer; however, since the prior request was only approved in part, we expect such a request for the unapproved balance momentarily. In this situation, we would advise the utility, through the Spanish Government, that our favorable consideration of the anticipated request is contingent upon receiving firm plans for early implementation of a program to augment existing spent fuel storage capabilities. If such a plan is received, we would be prepared to approve retransfer of the number of spent fuel assemblies.

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are essential to successful completion of the program (presumably if plans for reracking could be implemented in early 1978, this could vary between 68 assemblies, if only full core discharge capability is needed following the April 1978 discharge, and 288 if the pool must be completely emptied for reracking).

Oskarshamn-I -- We have informally advised a senior official of the Swedish Embassy that we plan no immediate action on this retransfer since there appears to be no urgent need, but will consider it on the same basis as Zorita and Beznau when such need arises. We also asked whether this position would pose any serious political problems for the Swedish Government. The Swedish official has promised to solicit his Government's reactions. In the interim, we will try to obtain additional information on plans for reracking the Oskarshamn reactors' storage pools.

In each case any approvals will, of course, be contingent upon meeting all other U.S. criteria for reprocessing retransfers, including the U.S. right of approval over transfers of recovered enriched uranium and plutonium. As requests for reprocessing retransfers are received in the future, they will be analyzed within the context of both need and the requestor's longer-term plans for spent fuel disposition and a recommendation will be made for appropriate action, subject to the concurrence of your agency.

In view of the urgency of the Zorita and Beznau requests, would you please provide any comments on the action plan to Dixon Hoyle (632-4101) by December 22.

cc: T/D - L. Scheinman
S/AS - G. Smith
NRC - J. Shea

Drafted: OES/NET/EIC:DHoyles:pab

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(A)

UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

December 30, 1976

Mr. Fernand Spaak, Head
Delegation of the Commission
of the European Communities
Suite 707 M Street, N.W.
Washington, D.C. 20037

Dear Mr. Spaak:

Your letter of October 13, 1976 to Mr. James Garrett requested approval of the transfer of one-hundred twenty-three (123) irradiated fuel elements from the Muhleberg Reactor in Switzerland to France for reprocessing.


The U.S. Government is currently in the process of developing plans and procedures for implementation of the Nuclear Policy Statement of October 28, 1976. As you know, this statement expresses our concern about the proliferation risks of reprocessing and the accumulation of separated plutonium resulting from such operations. The statement foresees early and broad consultations on a bilateral and multilateral basis to address these and related questions, including importantly the provision of fuel assurances to countries sharing our non-proliferation objectives and policies. It is possible that prior to the actual reprocessing of the fuel that is the subject of your October 13 letter, the consultations we anticipate will lead, in part, to new fuel supply arrangements including appropriate means for dealing with irradiated fuel and could also establish an international storage regime for reactor products. These arrangements could be appropriate for the disposition of the irradiated fuel which is the subject of your request.



Nevertheless, we recognize the urgent need for approval of the request in your letter of October 13 in order to avoid serious consequences for the operation of the Muhleberg Reactor. Accordingly, and without prejudice to U.S. action on future requests of this nature, we are approving this particular request with the understanding that the conditions set out in your letter of December 2, 1976 pertaining to the fuel elements from the J. Cabrera Reactor in Spain are equally applicable to this request, namely, that any use or transfer of recovered special nuclear material shall require U.S. approval. We would appreciate your confirmation to this effect.

In the event, however, that the consultations referred to above lead to international agreement on new fuel supply arrangements including reprocessing or other disposition of irradiated fuel we would expect to consult with the parties concerned to determine whether these new arrangements should be applicable to the fuel which we have approved for transfer.

Sincerely,



Nelson F. Sievering, Jr.
Assistant Administrator
International Affairs

Enclosures:

1. RTD/EU(SD)-19 (2 cys)
2. SER-1 (4cys)

cc w/encl. 1:

- C. Favre, Scientific Counselor
Embassy of Switzerland
- M. Chauvin, Atomic Energy Attache,
Embassy of France

OF SWITZERLAND
BERNISCHE BOTSCHAFT
EMBADE DE SUISSE

WASHINGTON D.C. 20008,
2200 Cathedral Avenue N.W.
Telephone 462-1311/7

.513 BKW
or

September 22, 1977

Nelson Sievering, Jr.
Assistant Administrator for
International Affairs
Energy Research and
Development Administration
Washington, D.C. 20545

BY HAND
== =====

Transfer of irradiated fuel elements
Bernische Kraftwerke AG (BKW),
Switzerland, to United Reprocessors,
La-Hague, France

Mr. Sievering:

Reference is made to your approval dated December 30, 1976,
re transfer from Bernische Kraftwerke AG (BKW), Switzer-
land to United Reprocessors of 123 irradiated fuel assemblies
from Bielefeld BWR Power Plant for reprocessing at the plant of
La-Hague, France.

MB-10 from RTD/EU(SD)-19 indicates, the Uranium and
Plutonium recovered by reprocessing have been sold by BKW to
Essen (FRG). The contract mentioned on the MB-10
indicates that STEAG, Essen, may use this special
material in the SNR and THTR reactors (FRG), or, in
case of construction delays, possibly for recycling in other

European reactors. Since the form was initiated in September 1976, the concerned research and development programs have evolved, and BKW has informed the Swiss Federal Office of Energy that STEAG has slightly modified its utilization plan. As of today, the situation appears to be the following:

According to the computations of the reactor operator, the 119 irradiated assemblies actually transferred to Cap-la-Hague under the authorization form MB-10 RTD/EU(SD)-19 contain 117,9 kg Plutonium. Considering a 3% reprocessing loss, 114,35 kg Plutonium remain.

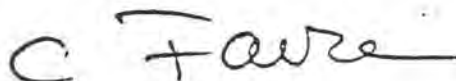
The following use of the Plutonium is foreseen:

- a) 12 kg Plutonium \pm 5% to the Swiss Federal Institute for Reactor Research (EIR), Wuerenlingen, to be used in the framework of its research project on development of a high temperature gas cooled reactor. The recovered Plutonium will be converted into $PU O_2$ and stored at Cap-la-Hague, France, pending shipment to AEE, Winfrith (UK), for fabrication into coated particles. Then it will be transferred to EIR, Wuerenlingen, for use there. This later transfer will be subject to U.S. transfer approval under the usual MB-10 procedure and Euratom export authorization.

- b) 70 kg Plutonium \pm 10% to ENEL (Rome). The Plutonium will go from Cap-la-Hague to the CEA facilities at Cadarache (France) for conversion and fabrication. Then it will be used for the fast breeder reactor in Creys-Malville (Super Phénix).
- c) The remaining amount, estimated to be 32-35 kg Plutonium will be used by RWE, Essen, in the SNR fast breeder in Kalkar (FRG). The Plutonium will be processed by Alkem, Hanau (FRG), or by Belgonucléaire, Dessel (Belgium).

Sincerely yours,

The Scientific Counselor:



Dr. Christian Favre

Copy to:

Ambassador Fernand Spaak,
Head, Delegation of the Commission
of the European Community
Washington, D.C. 20037
for his files concerning the
MB-10 RTD/EU(SD)-19

DEC 23 1977

Christian Favre
Scientific Counselor
Embassy of Switzerland
Cathedral Avenue, N.W.
Washington, D.C. 20008

Dr. Favre:

It is acknowledged of your letter of September 22, 1977, describing proposed disposition of the plutonium recovered from the 119 irradiated assemblies which were the subject of the U.S. authorization on MB-10 RTD/EU(SU)19, issued in December, 1976.

Our understanding that the material in question is now physically located in France, to which it was transferred pursuant to the authorization referred to above.

In the circumstances, we have decided to consent to the plutonium disposition described in your letter, which we are gratified to note now includes use for recycle in light water reactors. We understand you will notify us if it appears that the situation set forth in the letter may change. Also, we note that you understand that the transfer of the 12 kg of recovered plutonium for use at Wuerenlingen, Switzerland, will be subject to U.S. approval under the MB-10 procedure. In order to avoid difficulties in the future, it is suggested that the U.S. be consulted before any commitments are entered into with respect to reprocessing of U.S.-origin spent nuclear fuel and the disposition of recovered materials.

Sincerely,

Nelson F. Sievering, Jr.
Deputy Assistant Secretary
for International Affairs

D. Hoyle, State Dept.
D. Shiller

December 30, 1976

Mr. Fernand Spaak, Head
Delegation of the Commission
of the European Communities
Suite 767
2100 M Street, N.W.
Washington, D. C. 20037

Dear Mr. Spaak:

Your letter of August 24, 1976, to Mr. James Garrett requested approval of the transfer of thirty-two (32) irradiated fuel elements from the J. Cabrera Reactor in Spain to the United Kingdom for reprocessing.

The U.S. Government is currently in the process of developing plans and procedures for implementation of the Nuclear Policy Statement of October 28, 1976. As you know, this statement expresses our concern about the proliferation risks of reprocessing and the accumulation of separated plutonium resulting from such operations. The statement foresees early and broad consultations on a bilateral and multilateral basis to address these and related questions, including importantly the provision of fuel assurances to countries sharing our non-proliferation objectives and policies. It is possible that prior to the actual reprocessing of the fuel that is the subject of your August 24 letter, the consultations we anticipate will lead, in part, to new fuel supply arrangements including appropriate means for dealing with irradiated fuel and could also establish an international storage regime for reactor products. These arrangements could be appropriate for the disposition of the irradiated fuel which is the subject of your request.

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Nevertheless, we recognize the urgent need for approval of the request in your letter of August 24 in order to avoid serious consequences for the operation of the Cabrera reactor. Accordingly, and without prejudice to U.S. action on future requests of this nature, we are approving this particular request subject to the understanding set out in your letter of December 2, 1976 that any use or transfer of recovered special nuclear material shall require U.S. approval.

In the event, however, that the consultations referred to above lead to international agreement on new fuel supply arrangements including reprocessing or other disposition of irradiated fuel we would expect to consult with the parties concerned to determine whether these new arrangements should be applicable to the fuel which we have approved for transfer.

Sincerely,

Original signed by
Nelson F. Sievering, Jr.

Nelson F. Sievering, Jr.
Assistant Administrator
International Affairs

Enclosures:

1. RTD/EU (SP)-6 (2 cys)
2. SER-1 (4 cys)

cc w/encl 1:

Industrial Counselor, Embassy of Spain
J. Gaunt, Atomic Energy Attache
British Embassy

See previous yellow for concurrences

Seen and Cleared by:
NSC - Dr. Elliott 1/2/77
OES/DOS - Mr. Kratzer 1/2/77

Redrafted AIA

NFSievering, Jr.
12/30/76

Read to & Cleared: DA - Mr. Fri
1/2/77

OIPI JHelfrich					
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February 11, 1977
MG/aks

Mr. Nelson F. Sievering, Jr.
Assistant Administrator
for International Affairs
Energy Research and Development
Administration
Washington, D. C. 20545

Subject: Transfer of irradiated fuel elements from third countries to the Community for reprocessing.

Dear Mr. Sievering:

On the above subject, I refer to your letters of December 30, 1976. They deal with three different cases in which, according to the terms and conditions of the EURATOM-US Agreement for Cooperation and the Additional Agreement for Cooperation as amended, the foreign governments and Community have applied for the US transfer authorization to the Community under the normal MB-10 procedure.

These cases are:

1. AG/1129 for a transfer from the Union Electrica (Spain) to BNFL of 32 fuel elements of the Cabrera Power Station.
2. AG/1168 for a transfer by Japan Atomic Power Company to BNFL of irradiated fuel elements containing approximately 7000 kg of U with an enrichment of 1.2% and 42 kg of Pu containing 74% of fissile Pu of the Tsuruga Power Plant.
3. AG/1074/1 for a transfer from Bernische Kraftwerke to United Reprocessors of 123 fuel elements of the Muehleberg Power Station containing 23,114.906 kg of U with 266.182 kg U-235 and 159.087 kg Pu to be reprocessed by COGEMA (France).

Mr. Nelson F. Sievering, Jr.

February 11, 1977
MG/aks

In these cases, the US authorization for transfer and reprocessing has been granted on December 30, 1976 by MB-10 forms:

RTD/EU(SP)-6 for Cabrera AG/1129
RTD/EU(JA)-16 for Tsuruga AG/1168
RTD/EU(SD)-19 for Muehleberg AG/1074/1.

The Commission of the European Communities is fully aware of the concern of the US Administration, expressed already in the nuclear policy statement of October 28, 1976, about the proliferation risks of reprocessing, and the accumulation of separated plutonium resulting from such operations.

In implementing the agreement with the IAEA, the Commission of the European Communities has adopted and published new safeguards regulations; furthermore, the individual Member States apply strict measures of physical protection to their facilities appropriate to the specific circumstances.

It is our understanding that any transfer of the recovered materials from the Community to a third country is subject, in accordance with the terms of the EURATOM-US Agreement for Cooperation, to prior US authorization.

The Japanese and Spanish customers, to which the fuel belongs, have not yet decided upon the final use they want to make of the uranium and plutonium recovered after reprocessing. Pending their final instructions, the recovered materials will be stored in the Community; in the specific cases of the Cabrera and Tsuruga fuel it will be the facility where the fuel is reprocessed.

Your particular attention is, however, invited to the case AG/1074/1 of the Muehleberg fuel. As the MB-10 form RTD/EU(SD)-19 indicates, the uranium and plutonium recovered after reprocessing have been sold already by Bernische Kraftwerke to STEAG (Germany). The contract, concluded on June 30, 1975, specifies that the recovered uranium will be used for re-enrichment and the plutonium for the fueling of the SNR project at Kalkar (German, Belgian, Dutch breeder prototype); it covers the materials recovered in the years 1977-1983.

Mr. Nelson F. Sievering, Jr.

February 11, 1977
MG/aks

As the Additional Agreement for Cooperation, as amended, provides in Article I-E that the Community has the right to retain after reprocessing special nuclear materials of US origin delivered by third countries, it is the understanding of the Commission of the European Communities that your letters of December 30, 1976 do not intend to restrict Community rights and consequently the use and transfer of such materials within the Community.

Finally, it is the understanding of the Commission of the European Communities that any new policy in the field of reprocessing the US government might establish after the consultations anticipated in your letter, would not impair commercial transactions entered into previously.

Sincerely yours,

Fernand Spaak
Head of Delegation

(E)

MAY 19 1977

Mr. Fernand Spaak, Head
Delegation of the Commission
of the European Communities
Suite 707
2100 M Street, NW
Washington, D.C. 20037

Dear Mr. Spaak:

This is in reply to your letter of February 11, 1977, concerning my three letters to you of December 30, 1976, in relation respectively to the Spain/United Kingdom, Japan/United Kingdom, and Switzerland/France transfers of irradiated fuel elements for reprocessing.

As stated in my letters of December 30, 1976, the U.S. Government has become increasingly concerned about the proliferation risks of reprocessing and the accumulation of separated plutonium resulting therefrom. As you know, our policy in this regard is still under review. However, we recognized the urgent need for a solution to the immediate problems faced by the three nuclear power plants in question and endeavored to resolve their problems without also prejudicing our position on future requests of a similar nature.

Accordingly, we decided that approval of the transfers and reprocessing would resolve the problem for the three power plants involved and the reprocessors, and that establishment of a special condition relating to the recovered special nuclear material would protect the integrity of the U.S. position during the present period and prior to final establishment of our future policies.

Therefore, the condition "that any use or transfer of recovered special nuclear material shall require U.S. approval" was included as part of the three transfer approvals. The intent of this condition, which was spelled out in my letter of March 17, 1977, concerning the Garona power reactor, was to require prior U.S. approval with respect to facilities in which any subsequent

ANNEX C

REPROCESSING RETRANSFERS

<u>Reactor</u>	<u>Reprocessing Facility</u>	<u>Date of Approval</u>	<u>Number of Assemblies</u>	<u>Disposition of Recovered Plutonium</u>	<u>Other Comments</u>
1. Muhleberg (Switzerland)	COGEMA (France)	12/30/76	123	Use or transfer requires U.S. approval (A). Subsequently, specific approval granted for certain fast breeder research and development use within European Community (B).	
2. J.Cabrera (Spain)	BNFL (UK)	12/30/76	32	Use or transfer requires U.S. approval (C).	U.S. approval rights over intra-Community retransfers not accepted by European Community (D), (E) Currently in process of clarification. (J)
3. Tsuruga (Japan)	BNFL (UK)	12/30/76	7 (MTU)	Use or transfer requires U.S. approval (F).	Same as for J. Cabrera
4. Garona (Spain)	BNFL (UK)	3/17/77	81	Requires U.S. approval of facilities where any alteration, use or storage of plutonium might occur (G), (E).	Verbally, EC has advised that disposition of this plutonium--as well as that from Cabrera and Tsuruga--should be decided within the context of international deliberations in the INFCE.
5. Tsuruga (Japan)	BNFL (UK)	9/16/77	42	Japan's intention is for return to Japan when available; any such transfer would have to be approved by USG at that time (H).	
6. Garona (Spain)	BNFL (UK)	10/23/77	191 requested 63 approved	See prior Garona approval (Item 4).	Approval was granted only for extension in time of assemblies which remained unshipped upon expiration of the prior approval (I).

General Footnote: No recovered plutonium will be available from BNFL reprocessing

Mr. Fernand Spaak

-2-

MAY 10 1977

In the last paragraph of your letter, you raised the issue of whether, if the consultations referred to in my letter of December 30, 1976, lead to international agreement on new fuel supply arrangements including reprocessing or other disposition of irradiated fuel, such new arrangements would be mandatorily applicable to the fuel approved for transfer on December 30. Please be assured that the U.S. will not revoke the December 30 approvals, although it would be possible, of course, for the U.S. and the parties concerned to agree that new arrangements should become applicable.

Sincerely,

Original signed by
Nelson F. Sievering, Jr.

Nelson F. Sievering, Jr.
Assistant Administrator
International Affairs

✓

DO DO

December 30, 1976

Mr. Fernand Spaak, Head
Delegation of the Commission
of the European Communities
Suite 707 M Street, N.W.
Washington, D.C. 20037

Dear Mr. Spaak:

Your letter of December 17, 1976 to Mr. James Garrett requested approval of the transfer of seven tonnes of irradiated fuel from the Tsuruga Reactor in Japan to the United Kingdom for reprocessing.

The U.S. Government is currently in the process of developing plans and procedures for implementation of the Nuclear Policy Statement of October 28, 1976. As you know, this statement expresses our concern about the proliferation risks of reprocessing and the accumulation of separated plutonium resulting from such operations. The statement foresees early and broad consultations on a bilateral and multilateral basis to address these and related questions, including importantly the provision of fuel assurances to countries sharing our non-proliferation objectives and policies. It is possible that prior to the actual reprocessing of the fuel that is the subject of your December 17 letter, the consultations we anticipate will lead, in part, to new fuel supply arrangements including appropriate means for dealing with irradiated fuel and could also establish an international storage regime for reactor products. These arrangements could be appropriate for the disposition of the irradiated fuel which is the subject of your request.

Nevertheless, we recognize the need for approval of the request in your letter of December 17 in order to avoid serious consequences for the operation of the Tsuruga Reactor. Accordingly, and without prejudice to U.S. action on future requests of this nature, we are approving this particular request with the understanding that the conditions set out in your letter of December 2, 1976 pertaining to the fuel elements from the J. Cabrera Reactor in Spain are equally applicable to this request, namely, that any use or transfer of recovered special nuclear material shall require U.S. approval. We would appreciate your confirmation to this effect.

In the event, however, that the consultations referred to above lead to international agreement on new fuel supply arrangements including reprocessing or other disposition of irradiated fuel we would expect to consult with the parties concerned to determine whether these new arrangements should be applicable to the fuel which we have approved for transfer.

Sincerely,

Original signed by
Nelson F. Sievering, Jr.

Nelson F. Sievering, Jr.
Assistant Administrator
International Affairs

Enclosures:

1. RTD/EU(JA)-16 (c cys)
2. SER-1 (4 cys)

cc w/encl 1:

Kazuo Suzuki, Embassy of Japan
J. Gaunt, Atomic Energy Attache
British Embassy

See previous letter for enclosure

AIA

Redrafted: NFSievering

XX3X77 12/30/76

OIPI
GHeiffrich

9

MAR 17 1977

Mr. Fernand Spask, Head
Delegation of the Commission
of the European Communities
Suite 707
2100 M Street, NW
Washington, D.C. 20037

Dear Mr. Spaak:

On January 12, 1977, you requested approval for the transfer of eighty-one (81) irradiated fuel elements from the Garona power reactor in Spain to the UK for eventual reprocessing now scheduled for March 1979 by BNFL at Windscale.

As stated in my letter of December 30, 1976 to you approving the transfer from Spain to the UK of irradiated fuel elements from the J. Cabrera Reactor for reprocessing, the U.S. Government has become increasingly concerned about the proliferation risks associated with reprocessing and the accumulation of separated plutonium resulting therefrom. Our policy in this regard is still under review so that we do not yet have a definitive position as to the conditions under which the U.S. would approve requests for transfer of irradiated fuel for reprocessing.

However, we recognize the urgent need for approval of the transfer requested in your January 12, 1977 letter to avoid serious consequences for the operation of the reactor as delineated in the letter of the same date from Mr. Gallego of the Spanish Embassy to Mr. Helfrich. Accordingly, we are approving this transfer of the 81 irradiated Garona fuel elements to the UK for reprocessing on the condition that prior U.S. approval will be obtained with respect to facilities in which any subsequent alteration, use or storage (other than storage at Windscale) of any resulting separated plutonium might occur. In this regard I note your letter of February 11, 1977 in which you raised certain questions about the restrictions contained in my letter of December 30, 1976 applying to the disposition of recovered plutonium. This matter is under review and we will be responding to it by separate correspondence.

When separated from enclosures, handle this document:

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~~CONFIDENTIAL~~

Mr. Fernand Spaak

-2-

We would like to stress that this approval is intended as an interim accommodation pending a final decision on the overall U.S. policy as to disposition of irradiated fuel and is without prejudice to that decision. Also, in this instance as well as in the case of the Cabrera fuel reprocessing approval, should future broad consultations lead to international agreement on new fuel supply arrangements including reprocessing or other disposition of irradiated fuel we would expect to consult with the parties concerned to consider whether these new arrangements should be applicable to the fuel which we have approved for transfer.

Sincerely,

Nelson F. Sievering, Jr.
Assistant Administrator
International Affairs

Enclosures:

1. Dept. of State Action Memo
dtd 3-3-77
 2. Dept. of State Telegram
dtd 2-26-77
 3. Dept. of State Telegram
dtd 2-9-77
 4. Dept. of State Telegram
dtd 1-24-77
 5. Dept. of State Telegram
dtd 1-14-77
- cc: M. Gallego, Embassy of Spain

bcc:

- A. Giambusso, D/AIA
G. Helfrich, OIPI:DIR
J. Vanderlyn, OIRDP:DIR
N. Sievering, Jr. (2 cys)
R. Fulner, OROO

6. MB-10 FORMS - RTD/EU (SP)-7
7. SER-1 FORMS

~~CONFIDENTIAL~~

OIPI:MS <i>PC</i>	ISA <i>PC</i> <i>31</i>	OGC <i>classow</i>	OIPI:DIR <i>AL</i>	D/AIA	AIA <i>CD</i>
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(H)

UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

SEP 16 1977

112

Kazuo Suzuki
1st Secretary (Scientific)
Embassy of Japan
100 Massachusetts Avenue, NW.
Washington, D.C. 20008

Dear Mr. Suzuki:

This is in reference to the MB-10 retransfer approval document which you received on July 25, 1977, for the transfer of 42 spent fuel bundles (containing 8.3 MTR) from JAPCO's Tsuruga Power Station to British Nuclear Fuels Ltd. (BNFL).

As you are aware, it is current U.S. policy to approve retransfers of foreign-origin spent fuel for reprocessing only on a case-by-case basis upon clear showing of vital need for such retransfer. In this instance, we have prepared to approve the retransfer based upon the statement contained in the letter of August 22, 1977, from Mr. S. Shimoyama of JAPCO to G. F. Helfrich indicating that removal of this spent fuel is necessary to maintain operation of the Tsuruga Power Station and the detailed analysis presented in support of this conclusion. The present approval should not be considered in any way to set a precedent for U.S. action on future retransfer requests for reprocessing; each must be considered on its individual merits.

Furthermore, this approval is conditioned upon the following understandings:

- That if prior to actual reprocessing the International Fuel Cycle Evaluation leads to international agreement on new fuel supply arrangements including reprocessing or other disposition of irradiated fuel, the parties will consult to determine whether the new arrangements should be applicable to this Tsuruga Fuel. Please be assured that the U.S. will not revoke this approval, although it would be possible, of course, for the parties concerned to agree that new arrangements should become applicable.
- That this spent fuel is to be retained by BNFL until such reprocessing and that, thereafter, the produced plutonium will be returned to Japan and the recovered uranium either returned to Japan or sent to the U.S. for reenrichment. In accordance with applicable agreements for cooperation, such transfers would, at that time, have to be approved by the Government of the United States.

Kazuo Suzuki

2

SEP 16 1977

- That JAPCO is prepared to expeditiously examine and to advise ERDA of its conclusions on possible measures for expanding the pool storage capacity for Tsuruga fuel.

request your confirmation of the above understandings; it is our hope that the latter two are consistent with the information furnished JAPCO. Upon receipt of your confirmation we will sign and return an attached copy of the JB-10.

Sincerely,

Original signed by
Nelson F. Sievering, Jr.

Nelson F. Sievering, Jr.
Assistant Administrator
International Affairs

Euratom Washington Liaison
Office
UK Embassy - J. Gaunt

(1)

~~CONFIDENTIAL~~

OCT 28 1977

r. Martin Gallego
ndustrial Counselor
mbassy of Spain
700-15th Street, N.W.
ashington, D.C. 20009

ear Mr. Gallego:

his is in reference to the MB-10 retransfer approval
ocument which was signed by Dr. M. L. Rodriguez of
EN-Spain on June 30, 1977 and by you on August 30, 1977
transmitted to this office with your letter of August
2, 1977) for the transfer of 191 spent fuel assemblies
containing 36,320,666 grams of uranium with 1% enrich-
ent in U-235) from the Garona power plant in Spain to
ritish Nuclear Fuels Ltd. (BNFL).

s you are aware, the current U.S. policy is to approve
etransfers of U.S.-origin spent fuel for reprocessing
ily on a case-by-case basis upon a clear showing of
ltal need for such retransfer. In this instance, it
as been concluded that on review of your letter of
ugust 22, 1977, and discussions with BNFL the immediate
roblems in which the Garona power station finds itself
an be temporarily alleviated through the extension from
eptember 17, 1977 to March 17, 1978 of the previously
proved MB-10 (RTD/EU(SP)-7) of 81 spent fuel assemblies
o BNFL. It is noted that 63 spent fuel assemblies from
his approval still remain to be shipped to BNFL. Accord-
gly, the U.S. hereby approves this extension. This
pproval for extension is not to be considered in any way
o set a precedent for U.S. action on future retransfer
equests for reprocessing; each must be considered on its
individual merits.

urthermore, this extension of approval is conditioned
on the following understandings:

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(Insert proper classification)

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IE					

OCT 28 1977

-) That if, prior to actual reprocessing, the International Fuel Cycle Evaluation leads to international agreement on new fuel supply arrangements, the parties will consult to see whether such arrangements should be applicable to this Garona fuel. Please be assured that the U.S. will not revoke this approval, although it would be possible, of course, for the parties concerned to agree that new arrangements should become applicable.

That prior U.S. approval will be required with respect to facilities in which any subsequent alteration, use or storage (other than at the reprocessing site) of any resulting plutonium might occur.

That JEN of Spain is prepared to expeditiously examine and to advise the U.S. Department of Energy of its conclusions on possible measures for expanding the pool storage capacity for Garona fuel.

request your confirmation of the above understandings. are also requested to provide this office with completed copies of the SER-1 form (attached) within 30 days after actual shipment of the spent fuel assemblies. Please note instructions provided on the back of the SER-1 form.

to the remaining 128 spent fuel assemblies included in the most recent retransfer request, it is suggested that after further review of your situation concerning these spent fuel assemblies you find it necessary that they also be retransferred to BNFL, that a new MB-10 retransfer request be submitted to DOE. Please be assured that we will continue to consider requests for retransfers of spent fuel for reprocessing on the same basis as outlined above. You are reminded that such requests should be submitted to this office no later than three (3) months

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

Mr. Martin Gallego

-3-

OCT 28 1977

before actual transfer is to be made in order that we may have sufficient time to review the matter and, if necessary, further consult with you.

Sincerely,

Original signed by
Nelson F. Sievering, Jr.

Nelson F. Sievering, Jr.
Office of the Assistant Secretary
for International Affairs

enclosure:
ER-1 Form

cc: Mr. F. Spaak, EURATOM Washington
Liaison Office
Mr. J. Gaunt, British Embassy

cc: N. Sievering, IA (2)
A. Giambusso, IA
P. Brush, GC
V. Hudgins, ISA
J. Haycock, DSS
R. Fulner, OROO

GD
P. Brush
10/28/77

~~CONFIDENTIAL~~

DE	IA	IA	ISA	IA	IA	IA
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BUREAU OF OCEANS AND INTERNATIONAL
ENVIRONMENTAL & SCIENTIFIC AFFAIRS

January 10, 1978

Mr. Nelson Sievering
Deputy Assistant Secretary
International Programs
Department of Energy
Washington, D.C.

Dear Mr. Sievering:

It is my understanding that the issue of U.S. approval rights over the retransfer and/or utilization within the European Community (EC) of recovered enriched uranium and plutonium remains unresolved with the EC and the UK with respect to spent fuel retransfers for the Japanese Tsuruga and Spanish J. Cabrera reactors (MB-10's approved December 30, 1977) and the Spanish Garona reactor (MB-10 approved March 17, 1977).

Subsequently, this issue appears to have been pragmatically resolved, insofar as retransfers to BNFL are concerned, in the September 1977 retransfer approval for the Japanese Tsuruga reactor. Further, a similar approach had been found acceptable for the Spanish Garona reactor in its August 1977 request for the transfer of 191 spent fuel assemblies. (This approach apparently was not implemented by DOE, however, when it was decided only to grant an extension of the original approval for transfer of 81 assemblies.)

In these cases, the generic approach has been to have the transferor and/or the EC advise us that, in effect, the former retains control over the fuel and the recovered products and, concurrently, to have the transferor inform that he will authorize no subsequent disposition of the fuel or products without explicit U.S. approval.

The acceptance of this pragmatic approach by the U.K. and by Japan and Spain in each of these latter cases appears to open the way for resolution of this same issue with respect to the earlier MB-10 approvals (i.e., initial Tsuruga, Cabrera, and Garona retransfers). We therefore suggest that the DOE now approach the Japanese and the Spanish and

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request a "clarification" of the earlier record to show that in each of these earlier cases they also have the right to determine the ultimate disposition of recovered uranium and plutonium from the spent fuel involved and that they will obtain U.S. approval prior to exercising this right. Since in all of these cases the fuel is to be reprocessed by BNFL -- from whom recovered material will not be available prior to 1987 at the earliest -- we anticipate that there should be no difficulty in obtaining such undertakings.

In this regard, we believe that agreement on language along the following lines should be sought:

"The U.S.-origin spent fuel for which U.S. approval for retransfer to BNFL has been obtained and any uranium or plutonium derived from its ultimate reprocessing will be retained by BNFL unless otherwise mutually agreed by BNFL and the transferor with the prior consent of the United States."

Sincerely,

Louis V. Nosenzo
Deputy Assistant Secretary

/D - L. Schienman
UR/RPE - W. Salisbury
/OES -- R. Sloan
CDA - C. Van Doren

after: OES/NET/EIC:DHoyle:pab
ext: 24101

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APPENDIX B

SHEA LETTER TO STATE DTD 12/20/77

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DEC 20 1977

Mr. Louis V. Nosenzo
Deputy Assistant Secretary for Nuclear
Energy and Energy Technology Affairs
Room 7830
Department of State
Washington, D.C. 20520

Dear Mr. Nosenzo:

The Commission recently completed its review of proposed exports of low enriched uranium to Japan, Switzerland, and Sweden, as listed below, and concurred in the staff's recommendations that the licenses be issued: XSNM-462, Amendment No. 1 (S-712); XSNM-1112 (S-658); XSNM-1152 (S-729); XSNM-1146 (S-721); and XSNM-1148 (S-723).

In connection with their concurrences in issuance of these export licenses, Commissioners Gilinsky and Bradford have requested the following:

1. Any significant information the Executive Branch may have on the effectiveness of past or prospective implementation of IAEA safeguards in Japan, Sweden, and Switzerland.
2. Any information on steps being taken by the Executive Branch, the IAEA, and Japan, Sweden, and Switzerland to correct deficiencies, if any.
3. The views of the Executive Branch on recent reprocessing contracts between these countries and the British or French, the status of such contracts, and their relationship to U.S. efforts to discourage reprocessing and the utilization of plutonium.
- i. A summary of all MB-10 decisions on spent fuel from these countries since October 1976 with special regard to conditions imposed in each case on future disposition of plutonium derived from that fuel.
- i. A statement of the policy of the Executive Branch with regard to future MB-10 requests from these countries and with regard to subsequent disposition of plutonium after reprocessing in the U.K. or France.

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Original signed by
James R. Shea

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6. Any information on current plans for the storage and ultimate disposal of the spent fuel resulting from these exports.

It is recognized that some of the points raised in items 3, 4, 5, and 6 may be covered in the draft memorandum you recently supplied on pending retransfers to the U.K. or France for reprocessing, which is still under review.

The NRC staff has been asked to provide a paper on the above matters for the Commissioners by January 6, 1978. It would be appreciated if the requested information could be provided in time to enable us to meet this date.

Sincerely,

Original signed by
James R. Shea

James R. Shea, Director
Office of International Programs

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APPENDIX C

CHILK MEMORANDUM TO EDO DTD 12/14/77



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

December 14, 1977

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RETARY

MEMORANDUM FOR: Lee V. Gossick, Executive
Director for Operations

FROM: Samuel J. Chilk, Secretary

SUBJECT: INTERNATIONAL SAFEGUARDS OF LOW ENRICHED URANIUM (LEU) EXPORTS

Reference is made to the following Commission staff papers pertaining to the export of LEU and the recent Commissioner approval thereof: SECY-77-541 (XSNM-462, Amendment No. 1), SECY-77-562 (XSNM-1112), SECY-77-577 (XSNM-1152), SECY-77-597 (XSNM-1146), SECY-77-599 (XSNM-1148).

In connection with his concurrence in issuance of the export licenses contained in the reference staff papers, Commissioner Gilinsky provided the following comments:

"Recent information on IAEA safeguards implementation made available to the Commission (the SSIR) together with the ONMSS qualification as to its ability to attest to the adequacy of international safeguards have put the Commission in an awkward position in regard to their review of export license applications. I think the Commission has got to look into the safeguards situation further. Nevertheless, with respect to certain countries, including Japan, I am reluctant to defer action on the license applications presently before us, which are part of a continuing series of individual license applications, while the Staff is obtaining information from the Executive Branch which I regard as important to our evaluation of nuclear fuel exports. As I have requested in several previous concurrences on LEU exports, the Executive Branch should provide the Commission with a statement on the effectiveness of safeguards, a subject which they have not dealt with heretofore. With respect to exports of low enriched fuel to Japan, I would specifically like to have the following:

- (a) any significant information the Executive Branch may have on the effectiveness of past or prospective implementation of IAEA safeguards in Japan;
- (b) any information on steps being taken by the Executive Branch, the IAEA, and Japan to correct deficiencies, if any;
- (c) the views of the Executive Branch on recent Japanese reprocessing contracts with the British and French; the status of such contracts, the relationship to U.S. efforts to discourage reprocessing and the utilization of plutonium;

- (d) a summary of all MB-10 decisions on spent Japanese fuel since October 1976 with special regard to conditions imposed in each case on future disposition of plutonium derived from that fuel;
- (e) a statement of the policy of the Executive Branch with regard to future MB-10 requests from Japan and with regard to subsequent disposition of plutonium after reprocessing in the U.K. and France.

Some of the points raised in (c), (d) and (e) may be covered in a recently supplied State memorandum, Pending Retransfers to the U.K. or France for Reprocessing, which I am reviewing."

(NOTE: All of the foregoing comments apply identically to Switzerland and Sweden.)

In connection with his concurrence in issuance of the same export licenses, Commissioner Bradford agreed with Commissioner Gilinsky's comments and added the following item to the aforementioned request for information:

"(f) Current plans for the storage and ultimate disposal of the spent fuel resulting from this export."

Both Commissioners assume "that a response will be forthcoming soon." It is requested that a paper which addresses the Commissioners' comments be forwarded through the Office of the Secretary by c.o.b. January 6, 1978.

erman Hendrie
issioner Gilinsky
ssioner Kennedy
ssioner Bradford
l Counsel
or, Policy Evaluation
or, International Programs