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DEPARTMENT OF STATE

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AIRGRAM

INCO-URANIUM 17 ISR-ARG

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ARA	EUR	FE
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NEA	CU	INR
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SECRET

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HANDLING INDICATOR

TO : Amembassy BUENOS AIRES
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 VIENNA FOR IAEA

This document consists of 5 pages

No. 1 of 10 Copies, Series A

OCT 9 7 40 PM '64

FROM : Department of State

DATE:

SUBJECT : ISRAELI PURCHASE OF ARGENTINE URANIUM

REF : Buenos Aires' A-230

Referenced airgram indicates that under an agreement between Israel and Argentina 80 tons of U₃O₈ will be sold to Israel. Embassy is requested to obtain as much information as possible on the end use of this uranium in Israel. Embassy is also requested to ascertain as quickly as possible whether the agreement provides for the application of safeguards to the projects being furthered or making use of this uranium and if so what the provisions of these arrangements are. In the event Argentina is not requiring the application of safeguards, approach should be made to appropriate high level Argentine officials along the lines of the enclosed text of an Aide Memoire. Although the Department would prefer that a formal approach be made, the Embassy at its discretion may informally present the information contained in the proposed Aide Memoire and the additional information mentioned below. The Embassy is requested to make the approach, if it is necessary, as soon as possible so that the outcome of the approach can be reported to the Department in advance of the meeting of the Working Group to Review the IAEA Safeguards System, which will convene October 21 in Vienna.

It should be emphasized in the strongest possible terms that if this sale is consummated without safeguards, it would represent a most serious breach in the efforts the U. S. and other western suppliers have made over the last ten years to assure that significant atomic assistance provided to other countries for peaceful purposes is appropriately safeguarded.

The Israeli Government has already agreed to accept bilateral safeguards and moreover they have agreed to let their agreement for cooperation expire next April with the idea that the responsibility for applying safeguards will be administered thereafter by the IAEA and Israel will obtain its future fuel requirements from the IAEA. In view of this and

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In Out

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FORM 4-63 DS-323

GROUP 1
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 declassification

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the factors mentioned in the draft Aide Memoire and the significance of natural uranium for the production of plutonium, as set forth in enclosure 2, it is hoped that the Argentines can be convinced that they should require IAEA safeguards as a first preference on the natural uranium they will sell to Israel; alternatively, if this does not appear feasible, we are of strong opinion that bilateral safeguards rights consistent with IAEA safeguards should be obtained.

RUSK

Enclosures:

1. Draft Aide Memoire to Argentine Government on Safeguards.
2. Technical Basis for IAEA Safeguards on Natural Uranium.

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AIDE MEMOIRE

Information has recently come to the attention of the Government of the United States that the Government of Argentina is selling or is planning to sell 80 tons of uranium oxide to the Government of Israel.

As the Government of Argentina is aware, it has long been the established policy of the United States to take whatever steps appear to be necessary to assure that significant nuclear assistance being provided to other countries for their civilian programs is subjected to appropriate safeguards and controls to permit an independent verification that the assistance being provided is being put only to peaceful use. We have long felt that adherence to such a policy is essential if we are to minimize a proliferation throughout the world of the capability to build nuclear weapons. To this end the United States took an active role in the formulation of the International Atomic Energy Agency in assuring that the IAEA would have the requisite rights and obligations to (a) apply effective safeguards to the assistance the Agency provides, and (b) take on the safeguards responsibilities in bilateral agreements between the member states at the request of these states. Moreover, pending the wide spread application of the IAEA safeguards system, we have obtained bilateral safeguards rights in our agreements for cooperation which have been fashioned after those rights accorded to the IAEA in Article XII of the Statute of the Agency. We have welcomed the sustained support we have received from the Government of Argentina in pursuing the foregoing policy objectives.

As a basic element in the over-all effort to assure that significant atomic assistance is being provided only for peaceful purposes and as the Government of Argentina is aware, the United States also has endeavored to maintain a common position with the other leading western suppliers of atomic materials that none of the suppliers would permit the transfer of significant quantities of nuclear materials or significant amounts of equipment to other countries without the application of safeguards equivalent to those administered by the IAEA. The United States is of the strong belief that the maintenance of a common front in the application of safeguards by all suppliers of atomic material or equipment is a key element in the ultimate success of the policy of non-proliferation. Accordingly, it is for this reason that we are seriously concerned to learn that the Government of Argentina has arranged to sell 80 tons of uranium oxide to the Government of Israel without requiring the inspection and reporting which are provided for in the referenced IAEA Safeguards Documents.

The United States is of the opinion that the application of IAEA safeguards can be facilitated since Israel has already indicated a willingness to accept IAEA safeguards in connection with the U. S.-Israel Agreement for Cooperation for Civil Uses of Atomic Energy. Alternatively, if the application of IAEA safeguards does not appear feasible, it is hoped that bilateral safeguards which are consistent with IAEA safeguards will be obtained.

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SECRETPage 4 of Airgram to BUENOS AIRESTECHNICAL BASIS FOR IAEA SAFEGUARDS ON NATURAL URANIUM

Under the provisions of the Agency Safeguards Document, quantities of natural uranium in excess of ten tons are subject to safeguards, assuming of course a valid safeguards agreement exists. The basis for application of safeguards to natural uranium is set forth below.

Theoretically, it is possible to design a reactor which could produce two kilograms of plutonium a year with a fuel loading of about three tons of natural uranium. A distinction must be made, however, between what is theoretically possible and what is practically possible or likely. Realistically, one would not expect that a country which could obtain only three tons of uranium without safeguards would make the investment required to utilize it for military purposes or would construct a reactor especially designed to produce the greatest quantity of plutonium. On the contrary, a country with a developing atomic energy program would most likely be constrained to utilize more than three tons of natural uranium for research and testing and in small, militarily insignificant reactors before embarking on a military program.

In setting a limit on the supply of natural uranium without safeguards, a balance must be struck between the objective of permitting sufficient material to be free of safeguards if used only for research purposes and the risk inherent in the material. It was felt that the figure of ten tons represented a proper compromise between these objectives.

From available data on the world's reactors, it is seen that ten tons of natural uranium could be used to operate a reactor of approximately 200 thermal megawatts and produce a total of at least 18 kilograms of plutonium. It appears to be accepted in the unclassified literature that a nuclear weapon probably requires less than 5.8 kilograms of plutonium (the critical mass of a plutonium metal sphere in a normal uranium shell). On this basis, ten tons of natural uranium implies a potential total of at least three nuclear weapons. However, it must be recognized again that this represents a maximum potential. In order for a nation to utilize the unsafeguarded uranium in a military program, the fuel fabrication, reactor, and chemical processing plants could not be subject to safeguards. A nation would require considerable technical ability, or else unsafeguarded foreign assistance, to construct such a production chain, as well as the money (\$20-40 million) and time (5-8 years). In view of these barriers, the provision of ten tons of uranium without safeguards would not seem to constitute an undue risk.

In the development of Agency safeguards, a majority of the countries taking part felt that it was necessary to differentiate between source and special fissionable materials. This would recognize that source materials are more readily obtainable than fissionable material and are less directly adaptable to a military effort.

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It has long been recognized that a combination of political and technical considerations is necessary in the development of a workable safeguards system. Therefore, though an exemption of ten tons of natural uranium cannot be completely justified from a purely technical point of view, the other considerations enumerated led to acceptance of the ten ton limit.

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