



DEPARTMENT OF STATE

Washington, D.C. 20520

RECEIVED
U.S. NRC

BUREAU OF OCEANS AND INTERNATIONAL
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

1978 DEC 20 PM 4 35

December 19, 1978

EXPORT/IMPORT
AND
INTERNATIONAL SFGRDS

XSNM01344
11000062

MEMORANDUM FOR JAMES R. SHEA
NUCLEAR REGULATORY COMMISSION

Enclosed is an Executive Branch analysis covering a license application for the export of low-enriched uranium to Switzerland. In accordance with P.L. 95-242, the analysis explicitly addresses how the requirements of Section 126 a.(1) of the Atomic Energy Act are met, including the specific criteria of Sections 127 and 128, as well as certain additional factors, envisaged by Section 126 a.(1).

The Executive Branch, on the basis of its review of this application, has concluded that the requirements of the Atomic Energy Act and P.L. 95-242 have been met and that the proposed export would not be inimical to the common defense and security of the United States. Moreover, Switzerland has adhered to the provisions of its Agreement for Cooperation with the United States. Therefore, the Executive Branch recommends issuance of the required export license.

Louis V. Nosenzo
Deputy Assistant Secretary

7901020073

EXPORT LICENSE APPLICATION ANALYSIS

XSNM01344

Country: Switzerland

Transaction: Export of 411.22 kilograms U-235 contained in 11,583.75 kilograms uranium enriched to a maximum of 3.55 percent U-235 in the form of uranium hexafluoride

Applicant: Transnuclear, Inc.

Applicant Reference: 234 SD/1 78-189/01

Date of Application: July 11, 1978

Purpose of Export

This low-enriched uranium will be shipped to Reaktor Brennelement Union GmbH (RBU), Hanau, The Federal Republic of Germany, for conversion into uranium dioxide and fabrication of fuel elements for the nuclear power reactor Beznau II, located at Doettingen, Switzerland. One kilogram of the material will be shipped to Nuclear Audit and Testing Co. (NATCO) of Vienna, Virginia for testing. Shipments of the material are scheduled to begin in February 1979.

Beznau II is a 350 megawatt electric pressurized water reactor, owned and operated by the Nordostschweizerische Kraftwerke AG (NOK) of Baden, Switzerland. It began regular commercial operation in March 1972.

Ref.: 651.513 NOK - MR/ho

August 21, 1978

Colonel Vance H. Hudgins
Director
Division of Politico-Military
Security Affairs
Office of International
Security Affairs
U.S. Department of Energy
Washington, D.C. 20545

Re: Export License Application XSNM-1344

Dear Colonel Hudgins:

Reference is made to your letter of August 16, 1978.

This letter serves as official confirmation that

- a) The transfer of the material, as identified on the license application, will be subject to all of the terms and conditions of the Agreement for Cooperation, which entered into force on August 8, 1966, as amended, concerning the civil uses of atomic energy between the Government of the United States and the Government of Switzerland;
- b) The ultimate consignee, the Nordostschweizerische Kraftwerke AG, in Baden, is authorized by my Government to receive and possess the material;
- c) Physical security measures will be maintained with respect to this material so as to provide, at a minimum, a level of protection comparable to that set forth in IAEA INFCIRC/225/Revision 1.

7901020076

Sincerely yours,

R. E. Mueller

R.E. Mueller
Energy Counselor

DELEGATION OF THE COMMISSION OF THE EUROPEAN COMMUNITIES

July 20, 1978
JM/mc

Mr. Vance H. Hudgins
Assistant Director for Politico-
Military Security Affairs
Division of International Security Affairs
Department of Energy
Washington, D.C. 20545

Subject: Transnuclear Inc. application RBU 234 SD/1
78-189/01 dated July 11, 1978 for Switzerland
XSNM01344

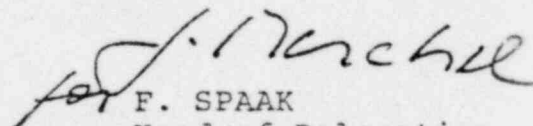
Dear Mr. Hudgins:

We certify that the material mentioned in this application, namely 411.22 Kg of U-235 contained in 11583.75 Kg of U plus 1.0 Kg of U containing .0355 Kg of U-235 and the transfer of this material will be subject to all terms and conditions of the Additional Agreement for Cooperation, dated July 25, 1960, as amended.

Further we certify that RBU, Hanau, West Germany, and NATCO, Vienna, Virginia, for the sampling material only, as intermediate consignees, are authorized by EURATOM to receive and possess this material pursuant to the aforementioned Agreement for Cooperation.

The material will be used in the RBU facilities for the conversion of UF₆ to UO₂ and for the manufacture of fuel for the reactor Beznau II. Upon completion of the fuel fabrication, the material will be transferred to Switzerland.

Sincerely yours,


F. SPAAK
Head of Delegation

cc: Mr. Robert DeLabarre, State Department
Ms. Janice Dunn, NRC
Ms. Vicki Matson, Transnuclear Inc.

7901020079

EXPORT LICENSE APPLICATION ANALYSIS

1. Applicable Agreement for Cooperation

The material covered by the export license applications is subject to all of the terms and conditions of the Agreement for Cooperation Between the United States and Switzerland as amended. This fact has been confirmed by letters from the Embassy of Switzerland, copies of which follow the description of the transaction. The Agreement, as amended, entered into force on August 8, 1966.

Switzerland has adhered to all provisions of this agreement with the United States.

The intermediate transfer of low-enriched uranium to the Federal Republic of Germany for conversion and for the manufacture of fuel elements is subject to all of the terms and conditions of the Additional Agreement for Cooperation between the United States and the European Atomic Energy Community (EURATOM), as amended. This was confirmed in a letter from the Delegation of the Commission of the European Communities, a copy of which is enclosed.

The European Atomic Energy Community has adhered to all provisions of this agreement with the United States.

2. Extent to Which Export Criteria Are Met

A. Section 127 Criteria

As provided in Section 127 of the Atomic Energy Act, the following criteria govern exports for peaceful nuclear uses from the United States of source material, special nuclear material, production or utilization facilities, and any sensitive nuclear technology:

Criterion (1)

"IAEA safeguards as required by Article III(2) of the Treaty will be applied with respect to any such material or facilities proposed to be exported, to any such material or facilities previously exported and subject to the applicable Agreement for Cooperation, and to any special nuclear material used in or produced through the use thereof."

Switzerland is a Party to the Treaty on the Non-Proliferation of Nuclear Weapons and deposited its instrument of ratification on March 9, 1977. Switzerland has not yet concluded an NPT safeguards agreement with the IAEA pursuant to INFCIRC/153. IAEA safeguards are applied in Switzerland to all materials or facilities proposed to be exported, as well as to any such material or facilities previously exported pursuant to the U.S.-Switzerland agreement for cooperation and to any U.S.-supplied special nuclear material used in or produced through the use thereof under a trilateral U.S.-Switzerland-IAEA safeguards agreement based on INFCIRC/66 Rev./2, which entered into force on February 28, 1972.

Therefore, it is the Executive Branch view that criterion (1) is met with respect to Switzerland.

Safeguards in the European Community including the FRG were described fully in the Executive Branch analysis for the FRG forwarded to the Commission in license application No. XSNM-1241 on December 8, 1978. There has been no material change in circumstances for the Community, including the FRG, regarding criterion (1) since that submission.

Criterion (2)

"No such material, facilities, or sensitive nuclear technology proposed to be exported or previously exported and subject to the applicable Agreement for Cooperation, and no special nuclear material produced through the use of such materials, facilities, or sensitive nuclear technology, will be used for any nuclear explosive device or for research on or development of any nuclear explosive device."

As non-nuclear-weapons state (NNWS) party to the Nuclear Non-Proliferation Treaty (NPT), Switzerland has pledged not to develop nuclear explosive devices for any purpose. This pledge applies to any material, facilities and sensitive nuclear technology previously exported to Switzerland by the US and subject to the US-Switzerland Agreement for Cooperation and to special nuclear material used in or produced through the use thereof.

Since this pledge will apply to the proposed export and to any special nuclear material produced through its use, it is the view of the Executive Branch that criterion (2) is met with respect to Switzerland.

European Community, including FRG, commitments not to use the proposed export, or any special nuclear material produced through its use, for development of any nuclear explosive device were discussed under Criterion (2) in the Executive Branch analysis for license application XSNM-1241 submitted December 8, 1978. There has been no material change in circumstances regarding criterion (2) for the Community including the FRG since that submission.

Criterion (3)

"Adequate physical security measures will be maintained with respect to such material or facilities proposed to be exported and to any special nuclear material used in or produced through the use thereof. Following the effective date of any regulations promulgated by the Commission pursuant to Section 304(d) of the Nuclear Non-Proliferation Act of 1978, physical security measures shall be deemed adequate if such measures provide a level of protection equivalent to that required by the applicable regulations."

It is the judgment of the Executive Branch that Switzerland and the FRG have established physical security measures which, as a minimum, meet those recommended in the IAEA's INFCIRC/225/Rev.1, "The Physical Protection of Nuclear Material".

On August 7, 1978, U.S. Embassy Bern reported that competent Swiss nuclear security authorities confirmed orally that Swiss policy is to maintain a level of physical security for nuclear activities which either meets or exceeds INFCIRC/225/Rev 1 requirements.

Moreover, on November 16, 1978, the Swiss Federal Department provided a note to U.S. Embassy, Bonn, which, inter alia conveyed the following assurance: "Swiss policy provides for standards of physical protection for nuclear power plants above those in IAEA document INFCIRC/225/Rev 1, which standards have been reached for power plants presently operational. Nevertheless, improvements will be made on site protective arrangements."

In addition, Switzerland and the FRG also are members of the Nuclear Suppliers Group and, as such, have agreed to levels of protection consistent with INFCIRC/225/Rev. 1, to be ensured with respect to nuclear materials and equipment and facilities containing these materials, which are detailed in transmission of the Nuclear Suppliers Guidelines to the IAEA.

As reported to the Commission by Department of State letter dated October 26, 1978, the Government of the Federal Republic of Germany on October 17, 1978 provided the following generic assurance in the form of an Aide Memoire to the U.S. Embassy at Bonn:

"The Federal Government confirms it will -- as in the past -- protect all deliveries of nuclear materials and installations supplied by the United States as well as all

materials which are utilized or produced in connection with the exploitation of these materials or installations by physical safeguarding standards at least equalling those published in IAEA INFCIRC/254. This physical safeguarding will be carried out pursuant to the London guidelines."

As the levels of protection called for in the Supplier Guidelines were derived directly from INFCIRC/225/Revision 1 and were specifically designed to achieve levels of protection consistent with the physical protection measures in INFCIRC/225/Revision 1, it is the judgment of the Executive Branch that this assurance meets the requirements set forth by the Commission under 10 CFR Section 110.43, established pursuant to Section 304(d) of the Nuclear Non-Proliferation Act of 1978.

The Executive Branch concluded that the Swiss and West German physical protection systems, equipment and procedures for the fixed site facilities, and the procedures and equipment for transportation security adequate to physically protect the material requested in these license applications.

Therefore, it is the view of the Executive Branch that criterion (3) is met.

Criterion (4)

"No such materials, facilities, or sensitive nuclear technology proposed to be exported, and no special nuclear material produced through the use of such material, will be retransferred to the jurisdiction of any other nation or group of nations unless the prior approval of the United States is obtained for such retransfer. In addition to other requirements of law, the United States may approve such retransfer only if the nation or group of nations designated to receive such retransfer agrees that it shall be subject to the conditions required by this section."

Article IX A. (3) of the 1966 U.S. - Switzerland Agreement for Cooperation, as amended in 1974, stipulates that: "No material, including equipment and devices, transferred to the Government of Switzerland or authorized persons under its jurisdiction pursuant to this Agreement or the superseded Agreement will be transferred to unauthorized persons or beyond the jurisdiction of the Government of Switzerland except as the Commission may agree to such a transfer to the jurisdiction of another nation or group of nations, and then only if, in the opinion of the Commission, the transfer of the material is within the scope of an Agreement for Cooperation between the Government of the United States of America and the other nation or group of nations."

Insofar as special nuclear material produced in these reactors is concerned, Article VII Bis E. provides that: "No special nuclear material produced through the use of material transferred to the Government of Switzerland or to authorized persons under its jurisdiction, pursuant to this Agreement or the superseded Agreement, will be transferred to the jurisdiction of any other nation or group of nations, except as the Commission may agree to such a transfer."

These articles give the U.S. an unqualified approval right over the retransfer of material from Switzerland supplied by the U.S. or produced through the use of such material and allow retransfers only if it is determined to be within the scope of an agreement for cooperation with the recipient country. This right would apply to irradiated fuel because it contains U.S.-supplied material.

Therefore, it is the Executive Branch view that, in regard to U.S.-supplied material and material produced through use of U.S. material, criterion (4) is met with respect to Switzerland.

In regard to the Community including the FRG, U.S. rights were described in the Executive Branch analysis for license application XSNM-1241 submitted December 8, 1978. There has been no material change in circumstances regarding criterion (4) for the Community, including the FRG, since that submission.

Criterion (5)

"No such material proposed to be exported and no special nuclear material produced through the use of such material will be reprocessed, and no irradiated fuel elements containing such material removed from a reactor shall be altered in form or content, unless the prior approval of the United States is obtained for such reprocessing or alteration."

Article VII Bis C. of the U.S. Switzerland Agreement for Cooperation provides that: "When any special nuclear material received from the United States of America requires reprocessing, or any irradiated fuel elements containing fuel material received from the United States of America are to be removed from a reactor and are to be altered in form or content, such reprocessing or alteration shall be performed in facilities acceptable to both Parties upon a joint determination that the provisions of Article X may be effectively applied."

As no joint determination under Article VII Bis C. can be made without the agreement of the United States, and since the facilities to be used must be acceptable to the U.S. as one of the Parties, it is the view of the Executive Branch that criterion (5) is met with respect to Switzerland.

EURATOM is expressly exempted from Criterion (5) by virtue of Section 126 (a)2 of the Act for a period of two years from March 10, 1978, since the Department of State notified the Nuclear Regulatory Commission on July 20, 1978, that EURATOM has agreed to negotiations with the United States as called for in Section 404(a) of the Nuclear Non-Proliferation Act of 1978. However, this exemption in no way derogates from the rights which the United States has under the US-EURATOM Agreements for Cooperation.

Criterion (6)

"No such sensitive nuclear technology shall be exported unless the foregoing conditions shall be applied to any nuclear material or equipment which is produced or constructed under the jurisdiction of the recipient nation or group of nations by or through the use of any such exported sensitive nuclear technology."

The proposed exports do not involve the transfer of sensitive nuclear technology. Criterion (6) is, therefore, not applicable.

B. Section 128 Criterion

Section 128 a.(1) of the Atomic Energy Act establishes the following additional criterion: "As a condition of continued United States export of source material, special nuclear material, production or utilization facilities, and any sensitive nuclear technology to non-nuclear-weapon states, no such export shall be made unless IAEA safeguards are maintained with respect to all peaceful nuclear activities in, under the jurisdiction of, or carried out under the control of such state at the time of the export."

Switzerland is a Party to the NPT and, thus, has agreed to accept IAEA safeguards with respect to all its peaceful nuclear activities. All peaceful nuclear activities of that country are currently subject to IAEA safeguards.

Therefore it is the Executive Branch view that this criterion is met with respect to Switzerland.

All non-nuclear-weapon state members of the European Community have agreed to accept IAEA safeguards on all their nuclear activities.

Therefore it is the Executive Branch view that this criterion is met with respect to the non-nuclear-weapon member states of the Community.

As France and the United Kingdom are nuclear weapons states, this criterion is not applicable to them.

3. Additional Factors

A. Safeguards Implementation

The IAEA Secretariat has noted in its Special Safeguards Implementation Report that with regard to nuclear material subject to IAEA safeguards, while some deficiencies exist in the system, no diversion of a significant quantity of nuclear material was detected in any of the 45 states in which inspections were carried out. Although recognizing the need to correct existing deficiencies in safeguards implementation, the Executive Branch has no reason to believe that the IAEA Secretariat's report is not valid. In the light of this and other factors associated with the proposed export, the Executive Branch believes the framework of commitments, assurances and safeguards is adequate for the purpose of this export.

B. Special Non-Proliferation and Other Foreign Policy Considerations

None.

4. Inimicality Judgment

Based on review of the proposed export, it is the judgment of the Executive Branch that the proposed export will not be inimical to the common defense and security, and that the license should be issued.