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FAX TRANSMISSION

DATE: DEC. 3, 1996

TO: NUCLEAR REGULATORY COMMISSION

FAX NO: 301-415-2395

ATTN: MS. BETTY L. WRIGHT *lm*
EXPORT/IMPORT LICENSING OFFICER
OFFICE OF INTERNATIONAL PROGRAMS

TOTAL PAGES INCLUDING

COVER PAGE: 8

FROM: MITSUBISHI INTERNATIONAL CORP. - Pittsburgh Office

FAX NO: (412) 355-0164

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CONTACT: FRED ANGELONE

SUBJECT: RETRANSFER OF U.S. (IE, WESTINGHOUSE) ZIRCONIUM MATERIAL
FROM JAPAN TO ENGLAND AND/OR FRANCE

DEAR MS. WRIGHT,

AS YOU ARE AWARE, MIC-PITTSBURGH (AND OUR MC/TOKYO OFFICE)
REPRESENT/EXPORT WESTINGHOUSE MADE ZIRCONIUM MATERIAL (E.G., TREX)
TO JAPAN FOR ~~MNF~~ IN JAPAN.

RECENTLY, MHI & MNF ARE CONSIDERING TO EXPORT FUEL ASSEMBLIES (PARTS
FABRICATED BY MNF) FROM JAPAN TO THE U.K. AND/OR FRANCE (WHICH WOULD
INCLUDE SOME U.S.A. ZIRCONIUM MATERIAL).

IN THIS REGARD, WE HAVE RECVD TODAY THE ATTACHED QUESTIONS CONCERNING
THIS MATTER TO ENSURE THAT ALL PARTIES ARE IN FULL COMPLIANCE.

AS SUCH, WE KINDLY REQUEST YOUR CONSIDERATION TO THE ATTACHED
AND LOOK FORWARD TO YOUR DIRECTION ACCORDINGLY.

THANK YOU IN ADVANCE FOR YOUR USUAL FINE COOPERATION, AS IT IS HIGHLY
APPRECIATED.

REGARDS,

FRED ANGELONE,
MIC PITTSBURGH

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12月 3日 (月) 23:48 4305#

発信:三菱商事(株) 原子燃料部

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To whom it may be concerned at Nuclear Regulatory Commission

Dear sirs.

We are requested to check with you by a Japanese fuel fabricator who is internally studying about the export of "Zirconium Alloy No.4 Tubes" (ZRY-4 FINAL TUBES for short) to United Kingdom and/or France which will be manufactured from Zirconium Alloy No.4 Tube Reduced Extrusions (ZRY-4 TREX for short) to be imported from U. S. A.

Concerning the descriptions, please refer item 1. below.

We have checked with 10 CFR but still have the following questions. It would be grateful if you would respond to them at your earliest convenience.

1. Description

(1) ZRY-4 TREX to be imported to Japan from U. S. A.

① Chemical composition

| <u>Alloying Elements</u> | <u>Composition Range (%)</u> |
|--------------------------|------------------------------|
| Tin | 1.20 - 1.45 |
| Iron | 0.18 - 0.24 |
| Chromium | 0.07 - 0.13 |
| Iron + Chromium | 0.28 - 0.37 |
| Oxygen | 0.1000 - 0.1500 |
| Carbon | 0.0100 - 0.0160 |
| Silicon | 0.0080 - 0.0120 |
| Zirconium | balance |

② Dimensions

There are two types.

(A) Outer diameter, 31.75 mm, Wall thickness, 5.08 mm

Length range of multiples 2.480 mm ~ 3.800 mm

(B) Outer diameter, 31.75 mm, Wall thickness, 5.08 mm

Length range of multiples 2.370 mm ~ 3.980 mm

(2) ZRY-4 FINAL TUBES with plug on one side

① Chemical composition

same as above (1)①

② Dimensions

There are two types.

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(A) Outer diameter. 9.525 mm
Inner diameter. 9.5 mm
Length. 4.000 mm

(B) Outer diameter. 12.24 mm
Outer diameter. 10.9 mm
Outer diameter. 11.43 mm
Wall thickness. 0.848 mm
Length. 3.894 mm
4 holes of 2.32 mm diameter bored by every 90 degrees from the center of inside of the tube. As to outer diameter, there are 3 different dimensions in one tube.

Questions

- 1- We would like to confirm whether U.S. origin ZRY-4 TREX described above is stipulated as 'Zirconium tubes, i.e., zirconium metal and alloys in the forms of tubes..... in a nuclear reactor' in (6) of appendix A to part 110-illustrative list of nuclear reactor equipment under NRC export licensing authority and to be exported to Japan in accordance with NRC General License 10 CFR 110.26.
- 2- On the other hand, Trigger list of London Guideline (INFCIRC/254/Rev.1/Mod.3 Nov. 1994) includes 'zirconium tubes' in 1.6. of ANNEX B. And London Guideline requires 'formal governmental assurance prior to export' in article 2 of part 1. We would like to know whether 'zirconium tubes' which are made in U.S.A. are categorized as London Guideline Part-1. If it is categorized, we would like you to advise us of procedure of governmental assurance for export of ZRY-4 TREX to Japan.
- 3- We would like to know whether ZRY-4 FINAL TUBES which are fabricated by Japanese manufacturer and consists of materials which are made in U.S.A. are categorized as (6) in appendix A to part 110-illustrative list of nuclear reactor equipment under NRC export licensing authority. Or may we understand that ZRY-4 FINAL TUBES can be exported from Japan without U.S. regulation because they are recognized as Japanese origin?
- 4- Even in case that ZRY-4 FINAL TUBES are exported to United Kingdom and/or France from Japan by Japanese fabricator and above items are recognized as U.S. origin, we understand that ZRY-4 FINAL TUBES are able to be exported from Japan to United Kingdom and/or France under NRC General License 10 CFR

12月.3日(月) 23:49 4305#

発信:三菱商事(株) 原子燃料部

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110.6 which stipulates 'Retransfer of any nuclear equipment... requires authorization by the Department of Energy, unless, the export to the destination is authorized a special or an exemption from licensing requirements.' However, we found that 10 CFR 110.42 (2) stipulates 'No such equipment or materials will be retransferred... without the prior consent of the United States.' So, we would like you to clarify whether export of ZRY-4 FINAL TUBES from Japan are authorized without any regulation and wish you to advise us of procedures for the authorization.

○ロバート・バイデン・バーニー

二 NRC/NRC/234/Rev. 1/Part 1
Annex
Attachment

GUIDELINES FOR NUCLEAR TRANSFERS

第1項

保障措置及び輸出規制に係わる以下の基本原則が、平和利用のため原子力資材等の非核兵器国への移転に適用されるべきでない。これに開き、供給国は輸出リガー・リストを定め、また、合意した。ついで、合意した。

第2項 核爆発の禁止

供給国は、いかなる核爆発装置に用いられる用途をも明確に除くとの受領国からの公的政府レベルの協約があつた場合のみ、トリガー・リストに明記されている品目の移転を許可できる。

第3項 核物質防護

(a) 合意されたトリガー・リストに上り特定されたすべての核物質及び施設は、無許可の使用及び処理を防ぐため、効果的

1. The following fundamental principles for safeguards and export controls should apply to nuclear transfers to any non-nuclear-weapon State for peaceful purposes. In this connection, suppliers have defined an export trigger list and agreed on common criteria for transfers.

Prohibition on nuclear explosion

2. Suppliers should guarantee transfer of items identified in the trigger list only upon receipt of government assurances from recipients that such transfers will be used for peaceful purposes only.

Physical protection

2. (a) All nuclear materials and facilities identified by the export trigger list should be placed under effective physical protection to prevent unauthorized use and handling. The levels of physical protection to be ensured in relation to the type of material, equipment and facilities, have been agreed by suppliers, taking account of international recommendations.

1.3. Complete search method

flexible reaction capacity of operators: so as to maintain a consistent and stabilizing factor chain reaction, including the energy reaction, the three being defined as reaction with a design-provided maximum rate of production of plutonium not exceeding 100 grams per year.

CONCLUSIONS AND

A "business manager" handles all relations the business with its labor community in the market segment. The equipment which can be used at power in the core, and the components which normally contain or serve to direct outward with or control from primary sources of the market work.

It is not intended to establish a reaction which would necessitate the ingestion of medication to produce significant more than 150 grams of poliovirus per year. However, an organism which would excrete a significant amount of poliovirus, regardless of the capacity for poliovirus production, was not considered as "very virulent".

DISCUSSION

[illegible]

1.2. Reaction products transfer

Model reactions, i.e. reactions using an as yet non-labeled pure enantiomer, which are especially designed or prepared to contain the core of a nuclear reactor as defined in paragraph 1.1, above and are capable of withstanding the operating pressure of the primary vessel.

DISCLAIMER NOTE

[illegible]

1.3. Fischer's β -elimination and Buchwald's reaction

Idiosyncratic equipment necessary to design or prepare for use any or sensing tool is a critical factor as outlined in paragraph 1.1, where a capsule of air-hand operation or coupling to directly supported processing or equipment features to allow comparison of hand building operations with

as those in which the history of or access to the hotel is not readily available.

!A **Proactive marketing**

Products separately classified or prepared for the control of the reaction rate in a polymer reaction are defined in paragraph 1.1. above.

ESSENTIALLY MORE

the two books. In addition to the material already cited, the papers in the second book include 7 papers separately.

1.8. Powder properties tests

These results are especially of interest for use in certain field experiments and the primary mode of use in a reactor are discussed in paragraph 1.1. Some of the operating parameters in excess of 5.1 MPa are given.

1A Description of

Zirconium metal and alloys in the form of sheets or assemblies of sheets, and in quantities exceeding 500 kg in any period of 12 months, especially designed or prepared for use in a nuclear installation as mentioned in paragraph 1, 1. above, and in which the volume of hafnium for zirconium is less than 150 per cent by weight.

1.3. Primary control purposes

Purposely designed or prepared for circulating liquid metal as primary coolant for nuclear reactors as defined in paragraph 1.8. above.

2. Non-radiation materials for reactors

2.1. *Procedures and heavy metal*

Distilled, heavy water (deuterium oxide) and dry gaseous deuterium compound in which the ratio of deuterium to hydrogen atoms exceeds 1:2000 for use in a nuclear reactor as defined in paragraph 1.1, above in quantities exceeding 250 kg of deuterium alone for any one recipient country in any period of 12 months.

2.2. Nuclear graph

Crigable having a partly level surface. From 8 parts per million boron equivalent and with a density greater than 1.65 g/cm³ in quantities amounting 3-10% kg per m² must be for any one nuclear reactor in any period of 12 months.

General Licenses

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Office of Export Licensing at the address listed in § 771.2(h). (See § 774.3 for more information on reexport authorizations.) Such request shall comply with all applicable provisions of the Export Administration Regulations covering export directly from the United States to the proposed destination. The request shall also be supported by any documents that would be required in support of an application for export license for shipment of the same commodities directly from the United States to the proposed destination. The Office of Export Licensing will advise the exporter of its decision.

(2) Use of validated license. An outstanding validated export license may also be used to dispose of commodities or software covered by General License G-TEMP provided that the outstanding license authorizes direct shipment from the United States of the same commodity or software to the same new ultimate consignee in the new country of destination.

(3) Use of a Permissive Reexport. As defined in § 774.2.

(4) Authorization to retain abroad beyond one year. If the exporter wishes to retain a commodity(ies) or software abroad beyond the 12 months authorized in § 771.22(b), he shall request such authorization by submitting Form BXA-699F, Request for Reexport Authorization, 90 days prior to the expiration of the 12 month period. The request shall be sent to the Office of Export Licensing at the address listed in § 771.22(c)(2) and should include the name and address of the exporter, the date the commodities or software were exported, a brief product description, and the justification for the extension. If the Office of Export Licensing approves the extension request, the exporter will receive authorization for a one-time extension not to exceed six months. The Office of Export Licensing normally will not allow an extension for commodities or software that have been abroad more than 12 months, nor will a second six month extension be authorized. Any request for retaining the commodities or software abroad for a period extending 18 months must be made in accordance with the requirements of paragraph (d)(1) of this section.

(a) Records

In accordance with the provisions of § 787.13, the exporter shall retain and make available for inspection, upon demand, by the Bureau of Export Administration all records of each export under this general license as well as the Customs Entry Number or any other evidence of the disposition of the commodities exported, i.e., freight bills or commercial invoices.

Export Administration Regulations

§ 771.23

GENERAL LICENSE GFW, LOW LEVEL
EXPORTS TO CERTAIN COUNTRIES

(a) Scope

A general license designated GFW is established authorizing exports of certain low level commodities subject to national security controls. In most cases, these commodities have performance characteristics that permit the United States to approve exports to controlled countries with only notification to other COCOM governments.

(b) Eligible countries

Shipments of eligible commodities may be made to any destination in Country Groups T or V except the People's Republic of China, Iran and Syria.

(c) Eligible commodities

The commodities eligible for export under this general license are identified in the "GFW" paragraphs under the Requirements heading of the entries on the Commerce Control List. The "GFW" paragraph in most of these entries will identify which commodities are eligible by referring exporters to the appropriate Advisory Notes in the Commerce Control List that provide administrative exceptions treatment for Country Groups OWY and the People's Republic of China. The Advisory Notes that apply specifically to Country Group W or the People's Republic of China or that provide favorable consideration treatment are not applicable for determining GFW eligibility. The GFW paragraphs in certain entries include eligibility criteria that are either broader or more restrictive than the parameters contained in the appropriate Advisory Notes. When this occurs, the eligibility criteria in the GFW paragraphs take precedence. In addition to any restrictions contained in the GFW paragraphs or the appropriate Advisory Notes, shipments of eligible commodities are subject to the prohibitions contained in § 771.2(c).

(d) Special provision

In addition to the general license designation GFW, the Export Control Classification Number, which in this case identifies a commodity that is eligible to be shipped under General License GFW, shall be shown in parentheses immediately below the Schedule B Number on the SED.

→ § 771.24

GENERAL LICENSE GNSG

(a) Scope

A general license designated GNSG is established authorizing exports to eligible countries of commo-

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12月4日(火) 0:00 4305#

発行:三菱商事(株) 販子部

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ties, software, and technology described in paragraph (c) of this section. Exports may be made under General License GNSG only when intended for use or consumption within the importing country, reexport among and consumption within eligible countries, or reexport in accordance with other provisions of the Export Administration Regulations (15 CFR parts 730-799).

(b) Eligible countries

The countries that are eligible to receive exports under this general license are Australia, Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, the Federal Republic of Germany, Greece, Hungary, Ireland, Italy, Japan, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Russia, the Slovak Republic, Spain, Sweden, Switzerland, and the United Kingdom. Canada is also a member of the Nuclear Suppliers Group, but generally there is no license requirement for shipments to Canada (see § 770.3).

(c) Eligible commodities, software, and technology

The commodities, software, and technology that are eligible for export under this General License GNSG are indicated in the GNSG paragraph under the Requirements heading for each entry on the CCL that contains eligible items. Entries that contain no eligible items do not have a GNSG paragraph. Items that are subject to the missile technology controls described in § 778.7 are not eligible for General License GNSG. Items controlled for national security reasons (i.e., entries that end in the code letter "A") are not eligible for shipment under General License GNSG to Bulgaria, the Czech Republic, Poland, Romania, Russia, or the Slovak Republic. All shipments under General License GNSG are subject to the prohibitions contained in § 771.2(c), except that the prohibitions in § 771.2(c)(2) do not apply to Russia for commodities, software, and technology controlled by entries that do not end in the code letter "A".

(d) Restrictions on items re-directed enroute

Items exported under the provisions of this section may not be re-directed enroute to a new country of destination without prior authorization from the Office of Export Licensing, U.S. Department of Commerce, unless the new ultimate country of destination is also a GNSG-eligible country.

(e) Export clearance

(1) Shipper's Export Declaration. When making a shipment that contains items eligible for General License GNSG, the exporter must place the general

license symbol "GNSG" in the appropriate space on the SED.

(2) Destination Control Statement. In accordance with § 786.6, the exporter is required to enter an appropriate Destination Control Statement on all commercial documents (e.g., the bill of lading, the airway bill, and the commercial invoice) covering an export from the United States under General License GNSG. In using the destination control statements listed in § 786.6(d), Statement Nos. 1 and 2 may be completed to show the eligible countries listed in paragraph (b) of this section, instead of an individual country of destination, and Statement No. 2 may be completed to show distribution or resale in the eligible countries listed in paragraph (b) of this section.

(f) Recordkeeping requirements

Records of transactions involving exports under General License GNSG must be maintained in accordance with the recordkeeping requirements of § 787.13.

§ 771.25

GENERAL LICENSE OCT

(a) Scope

A general license designated OCT is established, authorizing exports to eligible countries of all "A" level commodities except those excluded in the OCT paragraphs under the Requirements heading for each entry in the CCL. Exports may be made under General License OCT only when intended for use or consumption within the importing country, reexport among and consumption within eligible countries, or reexport in accordance with other provisions of the Export Administration Regulations.

(b) Eligible countries

The countries that are eligible to receive exports under this general license are Australia, Austria, Belgium, Denmark, Finland, France, the Federal Republic of Germany, Greece, Hong Kong, Ireland, Italy, Japan, Korea (Republic of), Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey and the United Kingdom. (Canada is also a COCOM member, but generally there is no license requirement for shipments to Canada (see § 770.3).)

(c) Eligible exports

The commodities eligible for export under this General License OCT are all "A" level commodities except those specifically excluded in the "OCT" paragraphs under the Requirements heading for each

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