



United States Department of State
Washington, D.C. 20520

PDR
DCS/DEA
NMSS/DFC3
DOE/OR
NAC/NMMS
T. Rothscheld

XR166
11005024

BUREAU OF POLITICAL-MILITARY AFFAIRS

July 6, 1998

MEMORANDUM FOR CARLTON R. STOIBER
NUCLEAR REGULATORY COMMISSION

Enclosed is an Executive Branch analysis covering the proposed export to Thailand of a 10 Megawatt thermal TRIGA research reactor for the Ongkharak Nuclear Research Center, operated by the Office of Atomic Energy for Peace under the Ministry of Science, Technology and Environment. In accordance with the Atomic Energy Act, as amended by the Nuclear Non-Proliferation Act of 1978, the analysis explicitly addresses whether the requirements of Section 126, 127 and 128 are met.,

The Executive Branch, on the basis of its review of this case, has concluded that the requirements of the Atomic Energy Act, as amended, have been met and that the proposed export would not be inimical to the common defense and security of the United States. Thailand continues to adhere to the provisions of the 1974 U.S.-Thailand Agreement for Cooperation.

Therefore, the Executive Branch recommends issuance of the requested export license.

Richard J. K. Stratford
Director

Office of Nuclear Energy Affairs

Enclosure: analysis.

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XPORT

EXPORT LICENSE APPLICATION ANALYSIS

XR166

Destination: Thailand

Transaction: General Atomics (GA) has applied for authorization to export to Thailand one light water cooled and moderated, heavy water and beryllium reflected, pool type low enriched uranium (LEU) fueled, TRIGA research reactor with a maximum thermal output of 10 Megawatts. The reactor will be used for the production of medical isotopes by the Ongkharak Nuclear Research Center operated by the Office of Atomic Energy for Peace under the Ministry of Science, Technology and Environment.

Date of Application: March 6, 1998

1. Applicable Agreement for Cooperation

The proposed export will be subject to the terms and conditions of the Agreement for Cooperation Between the Government of the United States of America and the Government of the Kingdom of Thailand Concerning Civil Uses of Atomic Energy which entered into force on June 27, 1974. This was confirmed by a letter from the Thailand Office of Atomic Energy for Peace dated July 6, 1998, a copy of which is attached.

Thailand has adhered to all provisions of that Agreement for Cooperation.

2. Extent to Which Export Criteria Are Met

A. Section 127 Criteria

As provided in Section 127 of the Atomic Energy Act, as amended, 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 U.S.-Thailand Agreement for Cooperation, and to any special nuclear material used in or produced through the use thereof."

Thailand is a party to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and has concluded an agreement with the International Atomic Energy Agency to maintain safeguards on all its peaceful nuclear activities which entered into force on May 16, 1974.

Therefore, it is the Executive Branch view that criterion (1) is met.

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 a non-nuclear weapon state party to the NPT, Thailand is precluded from acquiring, developing or manufacturing nuclear explosive devices for any purpose.

It is therefore the Executive Branch view that criterion (2) is met.

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."

The Executive Branch has assessed the physical security measures maintained by the Government of Thailand with respect to nuclear material and determined that they are adequate for the material covered by this license application.

The most recent visit to Thailand of a U.S. nuclear physical protection team was in April 1995. The team found that the physical protection measures maintained in Thailand met the standards for appropriate levels of protection set forth in IAEA document INFCIRC/225/Rev.3.

Assurances regarding maintenance of physical protection of nuclear materials in Thailand were provided in a letter from the Thailand Office of Atomic Energy for Peace' dated July 6, 1998, a copy of which is attached to this analysis.

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 X (3) of the 1974 U.S.-Thailand Agreement for Cooperation provides that:

"No material, including equipment or devices, transferred to the Government of the Kingdom of Thailand or to authorized persons under its jurisdiction pursuant to this Agreement, or the superseded Agreement will be transferred to unauthorized persons or beyond the jurisdiction of Government of the Kingdom of Thailand except as the Commission (i.e. the U.S. Government) 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 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."

Article VIII E. of the 1974 U.S.-Thailand Agreement for Cooperation provides that:

"Special nuclear material produced through the use of material transferred to the Government of the Kingdom of Thailand or to authorized persons under its jurisdiction pursuant to this Agreement will be transferred to any other nation or group of nations or group of nations, provided that such nation or group of nations has an appropriate agreement for cooperation with the Government of the United States of America or guarantees the use of special nuclear material for peaceful purposes under safeguards acceptable to the Parties."

These articles give the U.S. approval rights over the retransfer from Thailand of U.S.-supplied material, equipment and devices (i.e. utilization facilities) or special nuclear material produced through the use of such material or facilities.

Therefore it is the Executive Branch view that criterion (4) is met.

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 VIII C. of the 1974 U.S.-Thailand Agreement for Cooperation requires a joint determination of the parties to the Agreement prior to the reprocessing, or alteration in form or content of any irradiated fuel elements containing fuel material received from the United States of America pursuant to the Agreement.

As no joint determination under Article VIII 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.

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 export does not involve the transfer of sensitive nuclear technology. Criterion (6) is, therefore, not applicable.

B. Section 128 Criterion

Section 128 (1) of the Atomic Energy Act, as amended, 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."

Since Thailand is a party to the NPT and has entered into an agreement with the IAEA to maintain safeguards on all of its peaceful nuclear activities, it is the view of the Executive Branch that this criterion is met.

3. Additional Factors

The Executive Branch believes the framework of commitments, assurances, and safeguards is adequate for the purposes of this export.

4. Inimicality Judgment

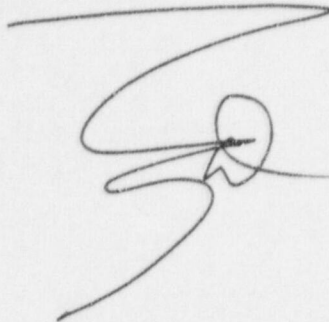
It is the judgment of the Executive Branch that the proposed export will not be inimical to the common defense and security and that the requested license should be issued.

XR166 -- EXECUTIVE BRANCH ANALYSIS FOR EXPORT TO THAILAND OF A 10
MW TRIGA REACTOR

Drafted:PM/NE:RDeLaBarre
07/06/98 Delaba~1/NRC/THAIANLY.DOC

Clearances:

PM/NE:RStratford
PM/NE:JDooley
ACDA:MGoodman
DOD:MJohnson
DOE:RGoorevich
EAP/BCLTV:CRich
L/PM:DKaye

A large, stylized handwritten signature in black ink, likely belonging to R. DeLaBarre, is positioned to the right of the clearance list.

FROM : SC&TECH(OSTC) WASH. DC USA.

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OAEF

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OFFICE OF ATOMIC ENERGY FOR PEACE
THANON VIBHAVADI KANGST, CHATUCHAK
BANGKOK-10900, THAILAND

OUR REF NO. 8804/31M

6 July B.E. 2541 (1998)

Subject : Application for a license (XR166) to export a 10 Megawatt thermal TRIGA research reactor for the Ongkharak Nuclear Research Center in Thailand

Dear Ms. Dedik,

We are writing with reference to your letters, dated 29 April and 24 June 1998 addressed to the Minister-Counsellor, Office of Science and Technology, Washington, concerning the application for a license (XR166) to export a 10 Megawatt thermal TRIGA research reactor for the Ongkharak Nuclear Research Center in Thailand.

The Office of Atomic Energy for Peace, Ministry of Science, Technology and Environment would like to confirm that:

- a. The transfer of the material, light water cooled and moderated, heavy water and beryllium reflected, pool type, LEU fueled TRIGA non-power reactor with a maximum thermal output of 10 Megawatts, will be subject to all the terms and conditions of the Agreement for Cooperation Between the Government of the United States of America and the Government of the Kingdom of Thailand Concerning Civil Uses of Atomic Energy, which entered into force on June 27, 1974;
- b. The ultimate consignees, the Office of Atomic Energy for Peace, Ministry of Science, Technology and Environment, are authorized by the Government of Thailand, to receive and possess the material; and
- c. an appropriate level of physical protection will be maintained on the material in the reactor, set forth in IAEA document INFCIRC/225/Rev.3

Thank you for your co-operation.

Yours sincerely,

(Mr. Kriengsak Bhadrakom)
Secretary-General

Ms. Trisha Dedik
Director
Nuclear Transfer and Supplier Policy Division
Office of Arms Control and Nonproliferation
Department of Energy
Washington, DC 20585
U.S.A.