

**POLICY ISSUE
NOTATION VOTE**

SECY-01-0033

March 2, 2001

FOR: The Commissioners
FROM: Janice Dunn Lee, Director
Office of International Programs
SUBJECT: PROPOSED RENEWAL OF THE SECTION 123 AGREEMENT FOR PEACEFUL NUCLEAR COOPERATION WITH MOROCCO

- **PURPOSE:**
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 - *Nuclear Program*
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- **CONCLUSION:**
- **COORDINATION:**
- **RECOMMENDATION:**

PURPOSE:

To advise the Commission of the staff's review of the proposed Agreement renewal and recommend Commission concurrence in a letter from the Chairman to the President recommending approval.

BACKGROUND:

The existing U.S.-Morocco nuclear cooperation agreement, signed in May 1980, will expire in May 2001. The U.S. company General Atomics (GA) is constructing a research reactor in Morocco which is due to become operational in July 2002. GA expects to deliver the fuel by the end of this year. The Atomic Energy Act (AEA) of 1954, as amended, requires U.S. reactor and reactor fuel exports to be subject to the terms of a Section 123 Agreement and is a prerequisite for completion of the reactor project.

The Department of State (DOS) has forwarded for Commission review and concurrence the proposed Protocol to renew the existing Agreement and the text of the existing Agreement. The review package also includes the accompanying Nuclear Proliferation Assessment Statement (NPAS), the Circular 175 Action Memorandum of Law, and additional minutes and side letters to the Agreement. These materials and draft Executive Branch transmittal and decision memoranda are contained in the [Attachments](#). The Classified Annex to the NPAS is being forwarded to the Commission under separate cover.

The DOS respectfully requests Commission action on this matter by March 16, 2001.

DISCUSSION:

The Provisions of the Proposed Agreement

The text of the proposed renewal is standard language used in several Agreements after 1978.

Nuclear Program

In July 2002 the Moroccan National Centre for Nuclear Energy, Sciences and Technology (CNESTEN) is scheduled to operate its first research reactor, a turnkey installation supplied by GA. The reactor is a TRIGA Mark II research reactor with a power level of 2000 kW(t), with the capability of being upgraded to 3,000 kW(t). The reactor will use low-enriched uranium (LEU) fuel. In addition to the TRIGA research reactor, extensively equipped laboratories and all associated support systems, structures, and supply facilities are also being supplied by GA. The research center will be used for the production of radioisotopes for medical, industrial and environmental uses, metallurgy and chemistry, implementation of nuclear analytical techniques such as neutron activation analysis and non-destructive examination techniques, as well as for carrying out basic research programs in solid state and reactor physics.

Morocco has no nuclear power reactors but is investigating the possibility of using small nuclear reactors for sea water desalination and district heating. France and China are willing to provide Morocco with nuclear reactors for this purpose but the project has been delayed because of unresolved environmental concerns.

Non-Proliferation Assessment

Morocco has complied with its international safeguards obligations since signing the Nuclear Non-Proliferation Treaty in 1970. The International Atomic Energy Agency has not indicated any safeguards violations in Morocco in its annual Safeguards Implementation Reports.

Morocco's compliance in these matters does not yet involve significant nuclear materials or the operation of any reactor or nuclear fuel-cycle facility.

Legal Assessment

The legal analysis contained in the Circular 175 Action Memorandum of Law ([Attachment A](#) ) concludes that the relevant provisions of the Atomic Energy Act (AEA) and the Nuclear Non-Proliferation Act (NNPA) have been satisfied. Staff review of the analysis confirms the DOS conclusion that the proposed extension of the Agreement satisfies all the legal requirements specified by the AEA and the NNPA, in particular regarding perpetuity of full-scope safeguards and U.S. consent rights. Again, these provisions are in line with other Section 123 Agreements concluded with other countries.

Physical Protection and Threat Assessment

The proposed Agreement extension updates the provisions relating to physical protection of nuclear materials by requiring that Morocco's protection measures be consistent with current IAEA recommendations (INFCIRC/225/Rev.4), as well as any future revisions of the IAEA recommendations. While not a prerequisite for the approval of the Agreement extension, the inclusion of the updated language emphasizes the expectation by the U.S. of a high standard of physical protection in Morocco and the opportunity for close bilateral cooperation in this area, including U.S.-Morocco physical protection assessment visits.

Relevant Export-Licensing Actions To Date

- In October 1991, NRC issued license XR158 to GA to export a TRIGA Mark II reactor to Morocco. (The case was presented to the Commission for approval in SECY-91-188.) The license is scheduled to expire on May 15, 2001. GA has shipped the reactor tank, graphite reflector assembly and some other components of the TRIGA Mark II facility to Morocco under XR158. Remaining reactor mechanical components, reactor cooling system components and remaining fuel handling equipment will not be ready for shipment to Morocco before the May 15, 2001, license expiration date. The remaining shipments of equipment will require a new authorization by the NRC to extend the expiration date of the current license.
- In November 1991, NRC issued license XSNM02644 to GA to export 17.091 kg of 19.95% enriched uranium to Morocco for use as fuel in the TRIGA reactor. The license was amended in November 1993 to increase the total amount to 19.008 kg. The license is scheduled to expire on May 15, 2001. However, GA no longer intends to use this license for supplying fuel to Morocco. Instead, GA in 1995 entered into a joint venture with CERCA in France under which CERCA would manufacture TRIGA fuel for the worldwide market.
- Following GA's change in plans, in September 1995, NRC issued license XSNM02879 to GA to export 245.0 kg of 19.9% enriched uranium to France for fabrication of TRIGA fuel elements for use in EURATOM and other countries yet to be determined. This material has been shipped and GA now intends to submit a request to DOE to retransfer a portion of the material to Morocco. Prior to approving this request, DOE will consult with the Commission as required under the Nuclear Non-Proliferation Act.
- A small number of fabricated TRIGA fuel plates now held by Penn State University are expected to be shipped by GA to France later this year to be included in the fuel for the research reactor in Morocco. This will require a new export authorization by the NRC.

As noted, new NRC export authorizations and a U.S. Government decision to approve the retransfer of U.S.-origin fuel from France to Morocco will be required this year to complete the TRIGA research reactor project. The retransfer decision, pursuant to Section 131 of the Atomic Energy Act, will require findings in respect to the application of IAEA safeguards in Morocco and Morocco's ability to meet its physical protection obligations under the U.S.-Morocco Agreement for Cooperation. At that time, the Executive Branch will be in a position to provide an updated assessment of Morocco's physical protection program which will be made available for NRC review prior to approval of the retransfer request.

CONCLUSION:

The proposed Agreement text satisfies statutory requirements and provides a useful basis for future NRC export licensing authorizations involving major reactor components or nuclear fuel. Morocco has carried out its obligations as a non-nuclear weapon State party to the Nuclear Non-Proliferation Treaty and appears to be a reasonable partner for the U.S. in matters of expanded peaceful nuclear cooperation.

COORDINATION:

The Office of the Executive Director for Operations concurs. The Office of the General Counsel has no legal objection.

RECOMMENDATION:

Staff recommends that the Commission approve the draft letter to the President ([Attachment I](#)) to be dispatched to the Department of State.

/RA/

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Attachments:

- A. Memorandum of Law 
- B. Circular 175 
- C. Draft Letter from SecState to the President 
- D. Presidential Determination 
- E. Draft Transmittal Letter to Congress 
- F. The Protocol 
- G. Unclassified NPAS 
- H. Text of the Original Agreement 
- I. Draft Chairman Letter

ATTACHMENT I

Draft Letter:

The President
The White House
Washington, DC 20500

Dear Mr. President:

In accordance with the provisions of Section 123 of the Atomic Energy Act, as amended, the Nuclear Regulatory Commission has reviewed the proposed Agreement for Cooperation with Morocco and supporting draft documents. It is the view of the Commission that the proposed Agreement includes all of the provisions required by Section 123 of the Atomic Energy Act, as amended. The Commission therefore recommends that you make the requisite statutory determination, approve the Protocol to extend the current Agreement, and authorize its execution.

Because physical protection measures have not been fully implemented at the site of the TRIGA reactor now under construction in Morocco, the Commission recommends that the U.S. conduct a physical protection assessment visit prior to approving the transfer of U.S.-origin fuel to the reactor.

Respectfully,

Richard A. Meserve
Chairman
Nuclear Regulatory Commission