BDR

GA Technologies

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Refer To: IEL-4096

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SAN DIEGO, CALIFORNIA 92138
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1 July 1983

OFFICE OF
INTERNATIONAL
PROGRAMS

XR-143
11003250
TRIGA Mark I
Algeria

Mr. James Zimmerman, Assistant Director
Export/Import & International Safeguards
Office of International Programs
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Application for Utilization Facility Export License.

Dear Mr. Zimmerman:

This application is made pursuant to 10 CFR 110 for a license to export a TRIGA Mark I research reactor to Algeria. The export of the initial loading of reactor fuels, an expected 70 elements containing approximately 14.1 kg uranium enriched less than 20% in U-235, will be the subject of a separate application. The AmBe startup, other radioactive sources and certain fission chambers, will be exported under the general license provisions of 10 CFR 110.

The applicant is GA Technologies Inc. (GA), a California corporation wholly owned by Gulf Oil Corporation, whose address is shown above. The applicant is engaged in the development, manufacture and marketing of reactors, nuclear fuels and systems.

The applicant conducts its business principally at San Diego, California. It is not owned, controlled or dominated by any alien, foreign corporation or foreign government within the meaning of the Atomic Energy Act of 1954 as amended and of NRC's regulations. In making this application, GA is not acting as agent or representative of any other person.

The purchaser of the reactor is the COMMISSARIAT AUX ENERGIE NOUVELLES of the government of ALGERIA. The reactor will be located at the headquarters of the above whose address is:

Franz Fanon B.P. 1017
Alger-Gare
Algiers, Algeria

The ultimate consignee, the specific individual to our knowledge is unnamed as yet, is expected to be an official within the Commissariat.

The reactor will be used for research and training in nuclear science and medical and industrial isotope production. It is our understanding such activities will be accomplished pursuant to IAEA agreement.

The reactor being exported is a TRIGA Mark I with a nominal steady state power of 250 kW with pulsing capability. The TRIGA Mark I is a below-ground, water filled, pool type reactor. The reactor core will consist of standard TRIGA fuel elements that are stainless steel or incoloy clad and utilizes an alloy of uranium zirconium hydride for the fuel material. The nominal enrichment of the uranium will be 19.9%. The reactor core may be surrounded by a graphite reflector containing a "Lazy Susan" sample irradiator.

The total value of all the reactor facility items and fuels for initial operation will be approximately five million dollars.

We expect to begin construction and design of the reactor fuels and components by January 1984.

We expect to ship the fuels by July 1984, the reactor tank by October 1984, with all remaining components by December 1984, with start up to begin shortly thereafter.

The commodities exported under the requested license consists of 10 CFR 110, Appendix A, equipment and materials listed by category in the attachment.

Certain other items for temporary use in the reactor assembly, checkout and start-up will require export under this license and will be reimported under the general license of 10 CFR 110.11.

We request the timely issuance of utilization facility export license authorizing the export of a TRIGA Mark I Research Reactor to Algeria. We request the license have a validity period through 1986 to accommodate possible schedule slippage during the construction and start-up of the reactor and permit any replacement of components which may fail during the warranty period.

Very truly yours,

William R Mowry

William R. Mowry
Licensing Administrator

WRM:hc

Attachment: Typical Major Component
& Equipment List for
TRIGA Mark I.

ATTACHMENT

Typical Major Component and
Equipment List for TRIGA Mark I

Appendix A Category	Description	Quantity
(a)(1)	Reactor Tank	1 ea.
(a)(2)	Fuel Handling Tool	1 ea.
(a)(3)	Control Rods, including 3 Fueled Follower type to be exported as fuel elements	5 ea.
(a)(4)	Not applicable	
(a)(5)	Not applicable	
(a)(6)	Not applicable	
(a)(7)	Graphite Reflector Assembly & Core Support Structure	1 ea.
	Core Grid Plates	1 set
	Control Rod Guide Tubes	5 ea.
(a)(8)	Control Rod Drive Assemblies	5 ea.
	Instrumentation System, including linear, log, period, reactivity computer, logic and interlock channels, fission chambers, etc.	1 ea.
(a)(9)	Tank Top cover & Bridge Assembly	1 ea.
	Lazy Susan	1 ea.
	Area Radiation Monitoring system	1 ea.
	Pneumatic Sample Transfer System & Central Thimble	1 ea.
	Dummy Graphite Elements	36 ea.
	Reactor pool water purification system	1 ea.
	Reactor pool water cooling system	1 ea.
(a)(10)	Miscellaneous sub parts and spares for the above	