

NRC FORM 7 (8-2007) 10 CFR 110		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB: NO. 3150-0027	EXPIRES: 06/30/2009
<b>APPLICATION FOR NRC EXPORT/IMPORT LICENSE, AMENDMENT, OR RENEWAL</b>				Estimated burden per response to comply with this mandatory collection request: 2.4 hours. This submittal is reviewed to ensure that the applicable statutory, regulatory, and policy considerations are satisfied. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0027), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.	
(See Instructions on Page 5)					
<b>PART A. FOR NRC USE ONLY</b>		<input checked="" type="checkbox"/> PUBLIC OR <input type="checkbox"/> NON-PUBLIC		DATE RECEIVED 7-23-08	
LICENSE NUMBER I W 0 2 5		DOCKET NUMBER 11005757		ADAMS ACCESSION NUMBER	
<b>PART B. TO BE COMPLETED FOR ALL LICENSES, AMENDMENTS, RENEWALS OR NOTIFICATIONS</b> (If more space is needed to complete any of the items, use Pages 3-4 first, and then attach additional sheets, if necessary.)					
1. NAME AND ADDRESS OF APPLICANT/LICENSEE  Eastern Technologies, Inc. P.O. Box 409 (Mailing Address) 215 2nd Ave. (Physical Address) Ashford, AL 36312		1a. NAME OF APPLICANT'S CONTACT  Mark Fellows, VP		1b. APPLICANT'S REFERENCE NUMBER  Appl. Dtd. 7/21/08	
		1c. PHONE NUMBER  (334) 899-4351		1d. FAX NUMBER  (334) 899-2310	
		1e. E-MAIL ADDRESS  mfellows@easterntechnologies.com			
2. TYPE OF ACTION REQUESTED (Check One)					
<input type="checkbox"/> EXPORT (Parts B, C, E)		<input checked="" type="checkbox"/> IMPORT (Parts B, D, E)		<input type="checkbox"/> AMENDMENT/RENEWAL Existing License Number:	
		COMBINED EXPORT/IMPORT (Parts B, C, D, E)			
3. CONTRACT NUMBER(S)		4. FIRST SHIPMENT DATE  02/01/2009		5. LAST SHIPMENT DATE  12/31/2009	
				6. PROPOSED EXPIRATION DATE  12/31/2009	
<b>PART C. TO BE COMPLETED FOR EXPORT ONLY OR COMBINED LICENSES, AMENDMENTS, OR RENEWALS</b> (If more space is needed to complete any of the items, use Pages 3-4 first, and then attach additional sheets, if necessary.)					
7. NAME(S) / ADDRESS(ES) OF SUPPLIERS AND/OR OTHER PARTIES TO THE EXPORT		8. NAME(S) / ADDRESS(ES) OF INTERMEDIATE FOREIGN CONSIGNEE(S)		9. NAME(S) / ADDRESS(ES) OF ULTIMATE FOREIGN CONSIGNEE(S)	
7a. FUNCTION(S) PERFORMED/SERVICE(S) PROVIDED		8a. INTERMEDIATE USE(S)		9a. ULTIMATE END USE(S)	
10. DESCRIPTION OF RADIOACTIVE MATERIALS, SEALED SOURCES, NUCLEAR FACILITIES, EQUIPMENT, OR COMPONENTS; FOR NUCLEAR EQUIPMENT INCLUDE TOTAL DOLLAR VALUE OF EQUIPMENT FOR EXPORT			10a. MAX TOTAL VOLUME / ELEMENT WGT (KG), OR TOTAL ACTIVITY (TBq)		10b. MAX ENRICHMENT OR WGT %
					10c. MAX ISOTOPE WGT (KG)
					200 d 7-23-08 RF
11. FOREIGN OBLIGATIONS (BY COUNTRY AND BY PERCENTAGE OF MAXIMUM TOTAL VOLUME)					
NONE					

**NRC FORM 7**  
(8-2007)  
10 CFR 110

**U.S. NUCLEAR REGULATORY COMMISSION**

**APPLICATION FOR NRC EXPORT/IMPORT  
LICENSE, AMENDMENT, OR RENEWAL (Continued)**

LICENSE NUMBER <i>EW025</i>	DOCKET NUMBER <i>11005757</i>	ADAMS ACCESSION NUMBER	<input checked="" type="checkbox"/> PUBLIC OR <input type="checkbox"/> NON-PUBLIC
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**PART D. TO BE COMPLETED FOR IMPORT ONLY, OR COMBINED LICENSES, AMENDMENTS, OR RENEWALS**  
(If more space is needed to complete any of the items, use Pages 3-4 first, and then attach additional sheets, if necessary.)

<p>12. NAME(S) / ADDRESS(ES) OF FOREIGN SUPPLIERS AND/OR OTHER PARTIES TO IMPORT</p> <p><b>Eletronuclear Angra 1 Nuclear Power Plant Almirante Alvaro Alerto Nuclear Center Rod. Rio Santos, km 522 Pr. De Itaorna CEP23900-000. Brazil</b> <span style="float: right;">+</span></p>	<p>13. NAME(S) / ADDRESS(ES) OF INTERMEDIATE CONSIGNEE(S)</p> <p><b>All Material will be shipped directly to: Eastern Technologies, Inc. 215 2nd Ave. Ashford, AL 36312</b></p>	<p>14. NAME(S) / ADDRESS(ES) OF ULTIMATE CONSIGNEE(S)</p> <p><b>All Material will be shipped directly to: Eastern Technologies, Inc. 215 2nd Ave. Ashford, AL 36312</b></p>	
<p>12a. NRC EXPORT LICENSE NUMBER(S) (if applicable)</p> <p><b>NA</b></p>	<p>13a. LICENSE NUMBER(S) / EXPIRATION DATE(S)</p> <p><b>947 / 12/31/2013 State of AL RAD License</b></p>	<p>14a. LICENSE NUMBER(S) / EXPIRATION DATE(S)</p> <p><b>947 / 12/31/2013 State of AL RAD License</b></p>	
<p>15. DESCRIPTION OF RADIOACTIVE MATERIALS, SEALED SOURCES, NUCLEAR FACILITIES</p> <p><b>See Attachment</b></p>	<p>15a. MAX TOTAL VOLUME / ELEMENT WGT (KG), OR TOTAL ACTIVITY (TBq)</p> <p><b>See Attachment</b></p>	<p>15b. MAX ENRICHMENT OR WGT %</p> <p><b>NA</b></p>	<p>15c. MAX ISOTOPE WGT (KG)</p> <p><b>See Attachment</b></p>
<p>16. FOREIGN OBLIGATIONS (BY COUNTRY AND BY PERCENTAGE OF MAXIMUM TOTAL VOLUME)</p> <p><b>NA</b></p>			

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**PART E. TO BE COMPLETED FOR ALL LICENSES, AMENDMENTS, OR RENEWALS**

<p>17. ADDITIONAL INFORMATION PROVIDED ON PAGES 3, 4, AND/OR ON SEPARATE SHEETS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p>	<p>17a. COPIES OF RECIPIENTS' AUTHORIZATIONS PROVIDED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p>
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**18. CERTIFICATION:** I, the applicant's authorized official, hereby certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, and that all information provided is correct to the best of my knowledge.

<p>18a. PRINT NAME AND TITLE OF AUTHORIZED OFFICIAL</p> <p><b>Mark Fellows / Vice President</b></p>	<p>18b. SIGNATURE -- AUTHORIZED OFFICIAL</p> <p><i>Mark Fellows</i></p>	<p>18c. DATE</p> <p><i>7/21/08</i></p>
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NRC FORM 7  
(8-2007)  
10 CFR 110

U.S. NUCLEAR REGULATORY COMMISSION

**APPLICATION FOR NRC EXPORT/IMPORT  
LICENSE, AMENDMENT, OR RENEWAL (Continued)**

LICENSE NUMBER <i>IWO25</i>	DOCKET NUMBER <i>11005757</i>	ADAMS ACCESSION NUMBER	<input checked="" type="checkbox"/> PUBLIC OR <input type="checkbox"/> NON-PUBLIC
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ADDITIONAL INFORMATION (Reference applicable block numbers from page 1 and/or page 2 for each entry)

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Attachment

IWO25  
11005757

Part D.

- (15) The material to be imported is used protective clothing and associated products which will be generated at the Angra 1 Nuclear Power Plant during a major play refurbishment outage (e.g.; steam generator replacement) during the first quarter of 2009. Used protective clothing and related items will be transported in 40' sealand containers. Typically such a container of material will have a total activity ranging from less than one (1) millicurie to one-hundred (100) millicuries of corrosion activation products and mixed fission products. The total activity present in any given shipment is dependent on the levels of contamination present on the clothing. The activation products, such as Co-60 and Mn-54 typically comprise the predominate radionuclides. The used protective clothing products are in a solid form and are fabricated from polyvinyl alcohol (PVA). The radioactive contaminants are typically in the form of small, solid particulate metal oxides

The total amount of radioactivity that can be received at the ETI facility per the facility license issued by the State of Alabama is 2.5 Curies for isotopes with atomic number 1 to 83 and 20 millicuries for isotopes with atomic number 84- to 101 (except source or special nuclear material). The facility limits on total activity applies to material received from all sources. ETI currently receives similar material from about 50% of the commercial nuclear power plant sites in the U.S. and manages the material to stay well below the limits on total activity. The material to be imported from Brazil will not add appreciably to the total amount of radioactive material currently managed at the ETI facility at any given time.

- (15a) The material to be imported is used protective clothing and associated products which will be generated at the Angra 1 Nuclear Power Plant during a major play refurbishment outage (e.g.; steam generator replacement) during the first quarter of 2009. Used protective clothing and related items will be transported in 40' sealand containers. Typically such a container of material will have a total activity ranging from less than one (1) millicurie to one-hundred (100) millicuries of corrosion activation products and mixed fission products. The total activity present in any given shipment is dependent on the levels of contamination present on the clothing. The activation products, such as Co-60 and Mn-54 typically comprise the predominate radionuclides. The used protective clothing products are in a solid form and are fabricated from polyvinyl alcohol (PVA). The radioactive contaminants are typically in the form of small, solid particulate metal oxides

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number 84- to 101 (except source or special nuclear material). The facility limits on total activity applies to material received from all sources. ETI currently receives similar material from about 50% of the commercial nuclear power plant sites in the U.S. and manages the material to stay well below the limits on total activity. The material to be imported from Brazil will not add appreciably to the total amount of radioactive material currently managed at the ETI facility at any given time.

- (15c) The material to be imported is used protective clothing and associated products which will be generated at the Angra 1 Nuclear Power Plant during a major play refurbishment outage (e.g.; steam generator replacement) during the first quarter of 2009. Used protective clothing and related items will be transported in 40' sealand containers. Typically such a container of material will have a total activity ranging from less than one (1) millicurie to one-hundred (100) millicuries of corrosion activation products and mixed fission products. The total activity present in any given shipment is dependent on the levels of contamination present on the clothing. The activation products, such as Co-60 and Mn-54 typically comprise the predominate radionuclides. The used protective clothing products are in a solid form and are fabricated from polyvinyl alcohol (PVA). The radioactive contaminants are typically in the form of small, solid particulate metal oxides

The total amount of radioactivity that can be received at the ETI facility per the facility license issued by the State of Alabama is 2.5 Curies for isotopes with atomic number 1 to 83 and 20 millicuries for isotopes with atomic number 84- to 101 (except source or special nuclear material). The facility limits on total activity applies to material received from all sources. ETI currently receives similar material from about 50% of the commercial nuclear power plant sites in the U.S. and manages the material to stay well below the limits on total activity. The material to be imported from Brazil will not add appreciably to the total amount of radioactive material currently managed at the ETI facility at any given time.

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July 7, 2008

Deputy Director  
Office of International Programs  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Re: Application for License for Import of Radioactive Material

Dear Deputy Director:

Pursuant to 10 CFR Part 110, Paragraph 110.31, I am writing to submit an Application for a License to Import Radioactive Material. My company, Eastern Technologies, Inc. (ETI), desires to provide PVA protective clothing and associated dissolving and decontamination services for the used clothing in support of an upcoming steam generator replacement outage at the Angra 1 Nuclear Power Plant in Brazil. We would perform these services at our facility in Ashford, Alabama which is licensed by the State of Alabama to perform such services. We currently provide similar processing services to approximately 50 percent of the U.S. commercial nuclear power plant sites at our Ashford, Alabama facility. Additionally, we have previously applied for and have received a specific license to import radioactive material in the form of used PVA protective clothing from the Laguna Verde Nuclear Power Plant in Mexico (reference NRC License No. IW016).

Performance of these services will require that we import the used protective clothing and related supplies from the Angra 1 Nuclear Power Plant in Brazil to our facility in Alabama. A license for importation of radioactive material will be necessary to demonstrate ETI's ability to deliver the services requested.

To facilitate your review of our license application, the information required pursuant to 10 CFR Part 110, Paragraph 110.32, "Information required in license application for specific license," is included in Attachment 1 to this letter. Our current radioactive material license issued by the State of Alabama, is included in Attachment 2 to this letter. This license authorizes ETI to collect, launder and decontaminate launderable items, collect and treat polyvinyl alcohol based (e.g., dissolvable) items, and to manage associated decontamination waste.

I have also enclosed a check in the amount of \$9800.00 for payment of the license application fee as required by 10CFR Part 110, Paragraph 110.31(b) and the fee schedule in 10CFR Part 170, Paragraph 170.31, Category 15.B.

**Eastern Technologies, Inc.**  
P.O. Box 409 ♦ 215 Second Avenue ♦ Ashford, AL 36312  
334-899-4351 ♦ 800-467-0547  
www.OREX.com ♦ www.easterntechnologies.com

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If you have any questions regarding this application or require additional information, please contact Mr. Douglas Kay, our company technical contact for this project, at 817-559-0506. You may also contact me at 334-899-4351 or at the address listed below.

Sincerely,



Mark Fellows  
Vice-President  
Eastern Technologies, Inc.  
P.O. Box 409  
Ashford, AL 36312

Attachments  
Enclosure

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## ATTACHMENT 1

### §110.32 Information required in an application for a specific license/NRC Form 7.

- (a) Name and address of applicant.

Eastern Technologies, Inc.  
Attn: Mark Fellows, Vice-President  
P. O. Box 409 (Mailing Address)  
215 2<sup>nd</sup> Ave. (Physical Address)  
Ashford, Alabama 36312

- (b) Name and address of supplier of equipment or material.

Eletronuclear  
Angra 1 Nuclear Power Plant  
Almirante Alvaro Alberto Nuclear Center  
Rod. Rio Santos, km 522  
Pr. De Itaorna  
CEP 23900-000  
Brazil

- (c) Country of origin of equipment or material, and any other countries that have processed the material prior to its import into the U.S.<sup>1</sup>

Country of Origin - Brazil

- (d) Names and addresses of all intermediate and ultimate consignees, other than intermediate consignees performing shipping services only.

All material will be shipped directly to:  
Eastern Technologies, Inc.  
215 2<sup>nd</sup> Ave.  
Ashford, AL 36312

- (e) Dates of proposed first and last shipments.

It is anticipated that the first shipment of material for import will occur in mid to late first quarter 2009. Shipments should be completed by December 31, 2009. It is also anticipated that 10 to

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*(Note: This is meant to include all obligations attached to the material, according to the definition of obligations in §110.2. Licensees must keep records of obligations attached to material which they own or is in their possession.)*

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12 shipments will occur during this time and will be scheduled to support the operational needs of the Angra 1 Nuclear Power Plant.

(f) Description of the equipment or material including, as appropriate, the following:

(1) Maximum quantity of material in grams or kilograms (curies for byproduct material) and its chemical and physical form.

The material to be imported is used protective clothing and associated products which will be generated at the Angra 1 Nuclear Power Plant during a major plant refurbishment outage (e.g., steam generator replacement) during the first quarter of 2009. Used protective clothing and related items will be transported in 40' sealand containers. Typically such a container of material will have a total activity ranging from less than one (1) millicurie to one-hundred (100) millicuries of corrosion activation products and mixed fission products. The total activity present in any given shipment is dependent on the levels of contamination present on the clothing. The activation products, such as Co-60, Co-58, and Mn-54, typically comprise the predominate radionuclides. The used protective clothing products are in a solid form and are fabricated from polyvinyl alcohol (PVA). The radioactive contaminants are typically in the form of small, solid particulate metal oxides.

The total amount of radioactivity that can be received at the ETI facility per the facility license issued by the State of Alabama is 2.5 Curies for isotopes with atomic number 1 to 83, and 20 millicuries for isotopes with atomic number 84 to 101 (except source or special nuclear material). The facility limits on total activity applies to material received from all sources. ETI currently receives similar material from about 50% of the commercial nuclear power plant sites in the U.S. and manages the material to stay well below the limits on total activity. The material to be imported from Brazil will not add appreciably to the total amount of radioactive material currently managed at the ETI facility at any given time.

(2) For enriched uranium, the maximum weight percentage of enrichment and maximum weight of contained U-235.

N/A

- (3) For nuclear equipment, total dollar value.

N/A

- (4) For nuclear reactors, the name of the facility and its design power level.

N/A

- (5) For proposed exports or imports of radioactive waste, and for proposed exports of incidental radioactive material -- the volume, classification (as defined in §61.55 of this chapter), physical and chemical characteristics, route of transit of shipment, and ultimate disposition (including forms of management) of the waste.

A typical shipment of used protective clothing and related products shipped in a 40' sealand will comprise up to 2080 ft<sup>3</sup> of material with a mass ranging from about 5,000 lbs to 11,000 lbs depending on the amount loaded and the efficiency of packing the sealand container. If similar material were being transported for land disposal, it would be classified as Class A as defined in 10CFR Part 61, Paragraph 61.55. The physical and chemical characteristics of the material are the same as described in (f)(1), above.

Shipments may be via highway and/or water with the exact routing to be established prior to each shipment.

The used protective clothing and related items will be received at the ETI facility located in Ashford, Alabama under the radioactive materials license issued to ETI by the State of Alabama. This license authorizes ETI to collect and treat (i.e., dissolve) polyvinyl alcohol (PVA) based items and manage associated decontamination wastes. Residual waste associated from the decontamination process become ETI's secondary waste and is sent by ETI to a third party, licensed waste processor and are ultimately disposed of at the Energy Solutions Clive, Utah radioactive waste disposal site. This secondary waste includes decontamination process filters and residual components from dissolvable products. The volume of secondary waste material typically ranges from 0% to 2% of the incoming material volume, depending on the type of products used. For example, processing of PVA coveralls will yield about 2% secondary material such as

zippers, elastic and hook and loop material. Other PVA products such as wipes, mops, sheeting, bags and scrubs are fully dissolved and result in virtually no secondary material requiring disposal.

- (6) For proposed imports of radioactive waste -- the industrial or other process responsible for generation of the waste, and the status of the arrangements for disposition, e.g., any agreement by a low-level waste compact or State to accept the material for management purposes or disposal.

The proposed imports originate at a nuclear power generation facility and will be generated during a major plant refurbishment outage. The imports are comprised of used protective clothing and related decontamination supplies.

As stated above, ETI will dissolve and decontaminate the material and the residual materials resulting from the decontamination process are considered secondary waste and are shipped by ETI to a third party waste processor for final processing and disposal. This secondary waste is ultimately disposed of at the Clive, Utah radioactive waste disposal site.

It should be noted that ETI's existing U.S. customers do not manifest and track similar material shipped to ETI as radioactive waste since our processes are licensed as "decontamination processes." Appendix G to 10 CFR Part 20 states that "Decontamination Facility" means a facility licensed under a Commission or Agreement State license whose primary purpose is decontamination of equipment or materials to accomplish recycle, reuse, or other waste management objectives, and for purposes of this part is not considered to be a consignee for LLW shipments. The proposed material to be imported from Brazil will be received and dispositioned in the same fashion as material from our current customers.

- (7) Description of end use by all consignees in sufficient detail to permit accurate evaluation of the justification for the proposed export or import, including the need for shipment by the dates specified.

ETI will be the consignee for this material and will receive the material for decontamination. PVA products will be treated to dissolve the PVA material. The dissolved PVA is subsequently decontaminated and released to the environment in accordance with regulatory limits incorporated in the ETI license.

Shipments will occur periodically during 2009 and will be scheduled to support the operational needs of the Angra 1 Nuclear Power Plant. It is anticipated that 10 to 12 shipments may be required.