

# APPLICATION FOR LICENSE TO EXPORT NUCLEAR MATERIAL AND EQUIPMENT

(See Instructions on Reverse)

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 Management Branch (T-6 E8), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [infocollect@nrc.gov](mailto:infocollect@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.

1. APPLICANT'S USE		a. DATE OF APPLICATION 03/20/2006		b. APPLICANT'S REFERENCE BEA0003		2. NRC USE		a. DOCKET NUMBER 1005619		b. LICENSE NUMBER XSNM03449			
3. APPLICANT'S NAME AND ADDRESS						4. SUPPLIER'S NAME AND ADDRESS (Complete if applicant is not supplier)							
a. NAME Battelle Energy Alliance LLC. (BEA)						a. NAME							
b. STREET ADDRESS (Facility Site) 2525 North Fremont Avenue						b. STREET ADDRESS							
c. CITY Idaho Falls			d. STATE ID		e. ZIP CODE 83415-5102		c. CITY			e. ZIP CODE			
f. TELEPHONE NUMBER (208) 526-3957		g. FAX (208) 526-5432		h. E-MAIL vkubiak@inl.gov									
5. FIRST SHIPMENT SCHEDULED		6. FINAL SHIPMENT SCHEDULED		7. APPLICANT'S CONTRACTUAL DELIVERY DATE		8. PROPOSED LICENSE EXPIRATION DATE		9. CONTRACT NO.					
						12/31/2006		None					
10. ULTIMATE FOREIGN CONSIGNEE						11. ULTIMATE END USE (Include plant or facility name)							
a. NAME Michael Masson, DRCP, CEA-Marcoule (Atalante Building)						Irradiation testing of experimental fuels will be conducted as part of a collaborative effort between the U.S. Department of Energy and the French CEA at the Phenix Reactor. Tests will involve two metallic fuel pins and two nitride fuel pins.							
b. STREET ADDRESS (Facility Site) BP 17171, 30207 Bagnois sur Ceze						11a. DATE REQUIRED							
c. CITY Marcoule			d. COUNTRY France			13. INTERMEDIATE END USE							
12. INTERMEDIATE FOREIGN CONSIGNEE						13a. DATE REQUIRED							
a. NAME						15. INTERMEDIATE END USE							
b. STREET ADDRESS (Facility Site)						15a. DATE REQUIRED							
c. CITY			d. COUNTRY France										
14. INTERMEDIATE FOREIGN CONSIGNEE													
a. NAME													
b. STREET ADDRESS (Facility Site)													
c. CITY			d. COUNTRY										
16. COM CODE		17. DESCRIPTION (Include chemical and physical form of nuclear material; give dollar value of nuclear equipment and components)				18. MAX. ELEMENT WEIGHT		19. MAX. WT. %		20. MAX. ISOTOPE WEIGHT		21. UNIT	
		Fuel Pin #1, Pu-12Am-40Zr Fuel Pin #2, U-29Pu-4Am-2NP-30Zr Fuel Pin #3, (U0.50, Pu0.25, Am0.15, Np0.10)N Fuel Pin #4, (Pu0.50,Am0.50)N-36wt%ZrN				See Attached				See Attached			
22. FOREIGN OBLIGATIONS BY COUNTRY AND PERCENTAGE (Use separate sheet if necessary)													
Foreign obligations include a transfer of like material (see attached explanation) from Atalante Facility at CEA-Marcoule.													
23. ADDITIONAL INFORMATION ON CONSIGNEES, END USES, AND PRODUCT DESCRIPTION (Use separate sheet if necessary)													
Fuel pin details included with application.													
24. The applicant certifies that this application is prepared in conformity with Title 10, Code of Federal Regulations; and that all information in this application is correct to the best of his/her knowledge.													
25. AUTHORIZED OFFICIAL				a. SIGNATURE				b. TITLE Export Compliance Coordinator					

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April 06, 2006

CCN 204601

Deputy Director, Office of International Programs  
U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, Maryland 20852

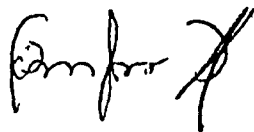
SUBJECT: Request to Export Fuel Pins to the French Phenix Reactor in Support of Department of Energy Work

Dear Deputy Director:

Attached please find an application and supporting documentation to export two metallic fuel pins and two nitride fuel pins to the Phenix fast reactor located at the CEA-Marcoule site near Avignon, France. These fuel pins will be irradiated as part of the FUTURIX-FTA test of experimental fuels to be conducted as a collaboration between the United States Department of Energy and the French Commissariat à L'Energie Atomique (CEA).

If additional information is required, please contact the undersigned at (208) 526-3957.

Sincerely,



Vernon Robert Kubiak, Empowered Official  
Export Compliance and Licensing

vrk

Enclosures

1. NRC Form 7, Application for License to Export Nuclear Material and Equipment

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Deputy Director, Office of International Programs  
April 06, 2006  
CCN 204601  
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Attachments:

1. Letter of Explanation
2. Agreement between the Department of Energy of the United States of America and the Commissariat a L'Energie Atomique of France for Cooperation in Advanced Nuclear Reactor Science and Technology
3. Remittance for Application for License

cc: D.E. Coburn, INL, MS 3406 (w/o Att.)  
J. J. Grossenbacher, INL, MS 3695 (w/o Att.)  
L. A. Sehlke, INL, MS 3810 (w/o Att.)

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ENCLOSURE 1 TO THE BATTELLE ENERGY ALLIANCE  
REQUEST TO EXPORT FUEL PINS TO THE FRENCH  
PHENIX REACTOR IN SUPPORT OF DEPARTMENT OF  
ENERGY WORK

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## ATTACHMENT TO NRC FORM 7, APPLICATION FOR LICENSE TO EXPORT NUCLEAR MATERIAL AND EQUIPMENT

Block 17. DESCRIPTION (Include chemical and physical form of nuclear material; give dollar value of nuclear equipment and components)	Block 18. MAX. ELEMENT WEIGHT	19. MAX. WT. %	20. MAX. ISOTOPE WEIGHT	21. UNIT
Fuel Pin #1: Pu-12Am-40Zr Value \$1.00	Total Np <0.500 Total U <0.500 Total Pu 10.710 Total Am 2.677 Total Zr 8.924  Total Alloy 22.230	Np <1.00% U <1.00% Pu 48.18% Am 12.04% Zr 39.98%	U-235 <0.500 U-238 <0.500 Np-237 <0.500 Pu-238 0.005 Pu-239 8.839 Pu-240 1.768 Pu-241 0.061 Pu-242 0.037 Am-241 2.677	Grams
Fuel Pin #2: U-29Pu-4Am-2Np-30Zr Value \$1.00	Total Np 0.514 Total U 8.992 Total Pu 7.451 Total Am 1.027 Total Zr 7.708  Total Alloy 25.680	Np 2.00% U 35.02% Pu 29.01% Am 4.00% Zr 30.01%	U-235 0.018 U-238 8.990 Np-237 0.514 Pu-238 0.004 Pu-239 6.150 Pu-240 1.229 Pu-241 0.042 Pu-242 0.025 Am-241 1.027	Grams
Fuel Pin #3: (U0.50,Pu0.25,Am0.15,Np0.10)N Value \$1.00	Total Np 2.468 Total U 12.314 Total Pu 6.174 Total Am 3.706 Total Zr <0.500  Total Alloy 26.160	Np 9.43% U 47.07% Pu 23.60% Am 14.17% Zr <1.00%	U-235 0.025 U-238 12.314 Np-237 2.468 Pu-238 0.001 Pu-239 5.791 Pu-240 0.374 Pu-241 0.006 Pu-242 0.002 Am-241 3.706	Grams
Fuel Pin #4: (Pu0.50,Am0.50)N-36wt%ZrN Value \$1.00	Total Np <0.500 Total U <0.500 Total Pu 7.085 Total Am 7.088 Total Zr 7.313  Total Alloy 23.400	Np <1.00% U <1.00% Pu 30.28% Am 30.29% Zr 31.25%	U-235 <0.500 U-238 <0.500 Np-237 <0.500 Pu-238 0.001 Pu-239 6.646 Pu-240 0.430 Pu-241 0.007 Pu-242 0.002 Am-241 7.088	Grams

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## Explanation of Block 22, Foreign Obligations and Percentages

Two TN-BGC1 containers with the four fuel pins from the Idaho National Laboratory (INL) will be shipped to the Atalante facility located at the Marcoule Site (just outside of Avignon, France). The four fuel pins will be irradiated in the Phenix reactor, also at the Marcoule Site.

Atalante is an IAEA safeguarded facility. When the shipment of the two TN-GBC1 containers arrives at the Marcoule Site, Commissariat à l'Energie Atomique (CEA) will transfer the U.S. obligations associated with the shipment to like materials already contained within the Atalante facility.

This will free up the U.S. obligations from the four experimental fuel pins shipped, and allow the pins to be loaded into the Phenix reactor for testing.

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