NRC FORM 7 U.S. NUCLEAR REGULATORY COMMISSION					N APPROVED BY OMB: NO. 3150-0027 EXP						5: ) r
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3	APPLIC	CANT'S NAME A	ND ADDRE	SS			4. SUPPLIE	R'S NAME		ESS	
a. NAME Battelle Energ	iy Alllian	nce LLC. (BEA)	)				(Complete i	f applicant	ls not sup	olier)	
<ul> <li>b. STREET ADDRESS 2525 North Fi</li> </ul>	(Facility Si remont A	iite) Avenue			a. NAME						
c. CITY Idaho Fails			d. state ID	e. ZIP CODE 83415-5102	b. STREET	ADDRE	SS				
t. TELEPHONE NUMBE (208) 526-395	R 57	g. FAX (208) 526-5	5432	h. E-MAIL vkubiak@inl.gov	c. CITY				d. STATE	e, ZIP CC	1
5. FIRST SHIPN SCHEDULE	5. FIRST SHIPNIENT 6. FIN/ SCHEDULED SC		SHIPMENT 7. APPLICANT'S DULED DELIVER		DNTRACTUAL 8. PROPOSED DATE EXPIRATIO		) LICENSE 9. IN DATE		. CONTRACI'N		
			•	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 conduct						
b. STREET ADDRESS	(Facility Sil	ito)			part of a collaborative effort between the U.S. Departm						
BP 17171, 30207 Bagnois sur Ceze					<ul> <li>Energy and the French CEA at the Phenix Reactor, if will involve two metallic fuel pins and two nitride fuel p</li> </ul>						
Marcoule France					11a. DATE REQUIRED						
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April 06, 2006

CCN 204601

11 In the 22

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 Avigonon, 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

Deputy Director, Office of International Programs April 06, 2006
CCN 204601 Page 2

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.)

2006 APR 1 1 MI 11: 22 RECEIVED OIP

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

XSNM03449

## 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	Total Np	<0.500	Np	<1.00%	U-235	<0.500	Grams	
Value \$1.00	Total U	< 0.500	υ	<1.00%	U-238	<0.500		
	Total Pu	10.710	Pu	48.18%	Np-237	<0.500		
	Total Am	2.677	Am	12.04%	Pu-238	0.005		
	Total Zr	8.924	Zr	39.98%	Pu-239	8.839		
	ł		ł		Pu-240	1.768		
	Total Alloy	22.230			Pu-241	0.061		
					Pu-242	0.037		
			1		Am-241	2.677		
Fuel Pin #2: U-29Pu-4Am-2Np-30Zr	Total Np	0.514	Np	2.00%	U-235	0.018	Grams	
Value \$1.00	Total U	8.992	ן <del>מ</del>	35.02%	U-238	8.990		
	Total Pu	7.451	Pu	29.01%	Np-237	0.514		
	Total Am	1.027	Am	4.00%	Pu-238	0.004		
	Total Zr	7.708	Zr	30.01%	Pu-239	6.150		
			1		Pu-240	1.229		
(	Total Alloy	25.680	1		Pu-241	0.042	ł – – – – – – – – – – – – – – – – – – –	
	1		}		Pu-242	0.025	1	
			<u> </u>		Am-241	1.027		
Fuel Pin #3: (U0.50,Pu0.25,Am0.15,Np0.10)N	Total Np	2.468	Np	9.43%	0-235	0.025	Grams	
Value \$1.00	Total U	12.314	U	47.07%	0-238	12.314		
	Total Pu	6.174	Pu	23.60%	Np-237	2.468		
	Total Am	3.706	Am	14.17%	Pu-238	0.001	{	
	Total Zr	<0.500	25	<1.00%a	Pu-239	5.791		
	Total Allow	26160	}		Pu-240	0.374	}	
	Total Alloy	20.100			Pu-241	0.000		
					Am_241	3 706		
Fuel Din #4: (Du0 50 Am0 50)N 36.00 (7-N	Total Na	<0.500	No	<1.00%	11.235	<0.500	Crame	
Value \$1.00	Total II	<0.500		<1.00%	11-238	<0.500	Grans	
- and \$1.99	Total Pu	7 085	Pn	30.22%	Nn.237	<0.500		
	Total Am	7.005	Am	30.20%	Pu-238	0.001		
{	Total 7r	7.313	Zr	31.25%	Pu-239	6.646		
)			<b></b>	51.2070	Pu-240	0.430		
	Total Allov	23,400	1		Pu-241	0.007		
			1		Pu-242	0.002	1	
					Am-241	7.088		

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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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