

<b>NRC FORM 7</b> (8-2007) 10 CFR 110		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>		<b>APPROVED BY OMB: NO. 3150-0027</b>		<b>EXPIRES: 06/30/2009</b>	
<b>APPLICATION FOR NRC EXPORT/IMPORT LICENSE, AMENDMENT, OR RENEWAL</b> (See Instructions on Page 5)							
<b>PART A. FOR NRC USE ONLY</b>		<input type="checkbox"/> PUBLIC OR <input type="checkbox"/> NON-PUBLIC		DATE RECEIVED <b>10-21-09</b>			
LICENSE NUMBER		DOCKET NUMBER		ADAMS ACCESSION NUMBER			
<b>PART B. TO BE COMPLETED FOR ALL 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.)							
1. NAME AND ADDRESS OF APPLICANT/LICENSEE <b>EnergySolutions</b> <b>1560 Bear Creek Rd</b> <b>Oak Ridge, TN 37831</b>		1a. NAME OF APPLICANT'S CONTACT Philip Gianutsos		1b. APPLICANT'S REFERENCE NUMBER ---N/A---			
		1c. PHONE NUMBER 865 220-1478		1d. FAX NUMBER 865 220-1668			
		1e. E-MAIL ADDRESS pgianutsos@energysolutions.com					
2. TYPE OF NRC LICENSE REQUESTED (Check One) <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 18%;"> <input type="checkbox"/> EXPORT (Parts B, C, E)         </div> <div style="width: 18%;"> <input checked="" type="checkbox"/> NOTIFICATION OF EXPORT OF INCIDENTAL RADIOACTIVE MATERIAL (PART C,E)         </div> <div style="width: 18%;"> <input type="checkbox"/> IMPORT (Parts B, D, E)         </div> <div style="width: 18%;"> <input type="checkbox"/> COMBINED EXPORT/IMPORT (Parts B, C, D, E)         </div> <div style="width: 18%;"> <input type="checkbox"/> AMENDMENT/RENEWAL Existing License Number:         </div> </div>							
3. CONTRACT NUMBER(S) RWSA dated 10/17/07		4. FIRST SHIPMENT DATE 1/27/09		5. LAST SHIPMENT DATE 12/31/09		6. PROPOSED EXPIRATION DATE ---N/A---	
<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  <b>EnergySolutions</b> <b>1560 Bear Creek Rd</b> <b>Oak Ridge, TN 37831</b>		8. NAME(S) / ADDRESS(ES) OF INTERMEDIATE FOREIGN CONSIGNEE(S)  ---NONE---		9. NAME(S) / ADDRESS(ES) OF ULTIMATE FOREIGN CONSIGNEE(S)  <b>Bruce Power Inc.</b> <b>Building B10, 177 Tie Road,</b> <b>Municipality of Kincardine</b> <b>R.R #2</b> <b>Tiverton, Ontario NOG 2T0</b> <b>Contact: Kurt Wigle</b> <b>Ph: 519-361-2673 ext. 3745</b>			
7a. LIST FUNCTIONS PERFORMED/SERVICE PROVIDED  Empty, reusable containers provided by EnergySolutions to Bruce Power.		8a. INTERMEDIATE USE(S)  ---NONE---		9a. ULTIMATE END USE(S)  The containers are for use by Bruce Power for packaging of radioactive material. A licensed Canadian broker (Monserco) will eventually return the containers to Oak Ridge, TN, as authorized by IW017.			
10. DESCRIPTION OF RADIOACTIVE MATERIALS, SEALED SOURCES, NUCLEAR FACILITIES, EQUIPMENT, OR COMPONENTS; FOR NUCLEAR EQUIPMENT INCLUDE TOTAL DOLLAR VALUE OF EQUIPMENT FOR EXPORT  Up to 90 cargo containers will be shipped to consignees listed in the Additional Information Sheet. The cargo containers consist of nominal 8'x8'x20' cargo containers each weighing approximately 5500 kgs (12,000 pounds) and containing empty metal boxes for waste packaging. Incidental radioactive material is present as contamination on the interior surfaces of the cargo containers and metal boxes. The contamination is predominantly byproduct material, with traces of source and special nuclear material. All radioactive material is in the form of solid metal oxides. See attached page for quantities of Appendix L materials. Several Appendix P radionuclides will be present, with each shipment << 0.1% of the Category 2 limit (calculation is also presented in attachment)		10a. MAX TOTAL VOLUME/ ELEMENT WGT (KG), OR TOTAL ACTIVITY (TBq)  Total for 90 containers:  Approx 0.044 TBq (1.19 Ci) of byproduct material.  Approx 0...241 kgs of source Material  < 0.02 grams of SNM (Pu)		10b. MAX ENRICHMENT OR WGT %  No enriched U		10c. MAX ISOTOPE WGT (KG)  Total for 90 containers:  PU-238 4.45E-9 PU-239 5.48E-6 PU-240 5.87E-9 PU-241 7.20E-9 PU-242 7.27E-6	
11. FOREIGN OBLIGATIONS (BY COUNTRY AND BY PERCENTAGE OF MAXIMUM TOTAL VOLUME)  -----NONE-----							

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U.S. NUCLEAR REGULATORY COMMISSION

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

LICENSE NUMBER	DOCKET NUMBER	ADAMS/ACCESSION NUMBER	<input type="checkbox"/> PUBLIC OR <input type="checkbox"/> NON-PUBLIC
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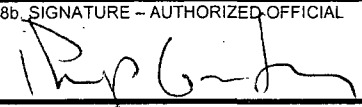
**PART D. TO BE COMPLETED FOR IMPORT ONLY, OR COMBINED LICENSES, AMENDMENTS, OR RENEWALS**

(If more space is needed to complete any of the items, use Pages 3-4 first, and then attach additional sheets, if necessary.)

12. NAME(S) / ADDRESS(ES) OF FOREIGN SUPPLIERS AND/OR OTHER PARTIES TO IMPORT  -----N/A-----	13. NAME(S) / ADDRESS(ES) OF INTERMEDIATE CONSIGNEE(S)  -----N/A-----	14. NAME(S) / ADDRESS(ES) OF ULTIMATE CONSIGNEE(S)  -----N/A-----
12a. NRC EXPORT LICENSE NUMBER(S) (if applicable)  -----N/A-----	13a. LICENSE NUMBER(S) / EXPIRATION DATE(S)  -----N/A-----	14a. LICENSE NUMBER(S) / EXPIRATION DATE(S)  -----N/A-----
	13b. INTERMEDIATE USE(S)  -----N/A-----	14b. INTERMEDIATE USE(S)  -----N/A-----
15. DESCRIPTION OF RADIOACTIVE MATERIALS, SEALED SOURCES, NUCLEAR FACILITIES  -----N/A-----	15a. MAX TOTAL VOLUME/ ELEMENT WGT (KG), OR TOTAL ACTIVITY (TBq)  -----N/A-----	15b. MAX ENRICHMENT OR WGT %  -----N/A-----
		15c. MAX ISOTOPE WGT (KG)  -----N/A-----

16. FOREIGN OBLIGATIONS (BY COUNTRY AND BY PERCENTAGE OF MAXIMUM TOTAL VOLUME)

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

17. ADDITIONAL INFORMATION PROVIDED ON PAGE 3 AND/OR ON SEPARATE SHEETS?	17a. COPIES OF RECIPIENTS' AUTHORIZATIONS PROVIDED?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<b>18. CERTIFICATION:</b> 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.	
18a. PRINT NAME AND TITLE OF AUTHORIZED OFFICIAL  Philip Gianutsos, CHP Radiation Safety Officer	18b. SIGNATURE - AUTHORIZED OFFICIAL  
	18c. DATE  Oct 19, 2009

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ADDITIONAL INFORMATION (Reference applicable block numbers from page 1 and/or page 2 for each entry)

For blocks 10, 10a-10c:

Activity is scaled from current empty container isotopic distribution and is representative of containers to be exported.

Radiological Content		
Activity Nuclide	20' empty seavan MBq	mCi
AC-228	3.428E-03	9.265E-05
AG-110	4.473E-01	1.209E-02
AM-241	1.196E-01	3.233E-03
BI-214	1.613E-03	4.359E-05
C-14	5.238E-01	1.416E-02
CE-144	5.811E-02	1.571E-03
CM-243	7.371E-03	1.992E-04
CM-244	6.537E-03	1.767E-04
CO-58	7.509E+00	2.029E-01
CO-60	6.693E+01	1.809E+00
CR-51	1.254E+00	3.388E-02
CS-134	4.553E-01	1.231E-02
CS-137	5.194E+00	1.404E-01
EU-152	1.694E-03	4.579E-05
FE-55	2.471E+02	6.679E+00
FE-59	8.129E-01	2.197E-02
H-3	1.041E+02	2.815E+00
I-125	4.277E-01	1.156E-02
MN-54	1.750E+01	4.731E-01
NB-95	1.325E+00	3.582E-02
NI-59	1.530E+00	4.136E-02
NI-63	2.112E+01	5.709E-01
PM-146	9.435E-04	2.550E-05
PU-238	3.111E-02	8.409E-04
PU-239	1.398E-01	3.777E-03
PU-240	5.550E-04	1.500E-05
PU-241	2.961E-01	8.003E-03
PU-242	1.166E-02	3.150E-04
SB-125	6.725E-01	1.818E-02
SN-113	3.013E-02	8.144E-04
SR-90	3.474E-01	9.389E-03
TC-99	3.722E-02	1.006E-03
TH-230	1.613E-03	4.359E-05
TH-234	3.239E-01	8.753E-03
TL-208	7.052E-04	1.906E-05
U-233	4.130E-02	1.116E-03
U-234	1.547E+00	4.181E-02
U-235	1.494E-03	4.037E-05
U-236	6.487E-02	1.753E-03
U-238	3.323E-02	8.980E-04
ZN-65	9.696E+00	2.621E-01
ZR-95	4.480E-01	1.211E-02
Total	4.903E+02	1.325E+01

	TBq	Ci
Single Seavan	4.903E-04	1.325E-02
90 20' seavans	4.412E-02	1.19E=00

Special Nuclear Material & Source Material		
	20' seavan	
	SNM (gms)	SM (kgs)
PU-238	4.946E-08	
PU-239	6.093E-05	
PU-240	6.522E-08	
PU-241	8.003E-08	
PU-242	8.077E-05	
TH-230		2.076E-09
TH-234		3.806E-13
U-233	1.151E-04	
U-234	No	6.743E-06
U-235	Enriched	
U-236	Uranium	2.697E-05
U-238		2.641E-03
Total	2.570E-04	2.675E-03

kg source material X90 2.410E-01

U enrichment 6.882E-03

APPENDIX P EVALUATION

nuclide	App P, Cat 2 limit		1 empty 20' sealand (fraction of limit)
	20' activity, MBq	MBq	
AM-241	1.196E-01	6.000E+05	1.994E-07
CM-244	6.537E-03	5.000E+05	1.307E-08
CO-60	6.693E+01	3.000E+05	2.231E-04
CS-137	5.194E+00	1.000E+06	5.194E-06
PU-238	3.111E-02	6.000E+05	5.186E-08
SR-90	3.474E-01	1.000E+07	3.474E-08
shipment of 2 20' seavans, sum of fractions			4.572E-04

# ENERGYSOLUTIONS

Commercial Processing Division, 1560 Bear Creek Road Oak Ridge, TN 37831 865 481-0222

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October 19, 2009

Mr. Scott Moore  
Deputy Director - Office of International Programs  
US Nuclear Regulatory Commission  
Mail Stop 4E21  
Washington, DC 20555

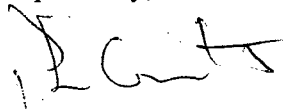
Dear Mr. Moore:

In accordance with instructions in 10 CFR 110.4 we are providing the attached amended NRC Form 7 as notification of EnergySolutions intent to export empty containers to Bruce Power Station in Ontario, Canada. EnergySolutions previously notified the commission of the intent to export up to 50 empty containers. The attached NRC Form 7 increases the number of empty containers from 50 to 90.

These are reusable containers dedicated to radioactive materials shipments and the interiors are surficially contaminated, albeit at very low levels. The containers are being exported under the General License for Export provisions of 10 CFR 110.-21(e), 22(a), and 23(c) for Special Nuclear Material, Source Material, and By-Product Material. The loaded containers will subsequently be collected by Monserco (a licensed Canadian broker) and eventually shipped to EnergySolutions Oak Ridge, TN processing facility as authorized by IW017.

Contact me if additional information or clarification is required.

Respectfully,



Philip Gianutsos, CHP  
Radiation Safety Officer  
Commercial Processing Division

Attachments:  
NRC Form 7

cc: Mr. Tim Ryder, Monserco