

NRC FORM 7 (8-2007) 10 CFR 110	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 3150-0027	EXPIRES: 06/30/2009						
APPLICATION FOR NRC EXPORT/IMPORT LICENSE, AMENDMENT, OR RENEWAL (See Instructions on Page 5)		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.							
PART A. FOR NRC USE ONLY		<input type="checkbox"/> PUBLIC OR <input type="checkbox"/> NON-PUBLIC							
LICENSE NUMBER		DOCKET NUMBER							
LICENSE NUMBER		ADAMS/ACCESSION NUMBER							
PART B. TO BE COMPLETED FOR ALL 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.)									
1. NAME AND ADDRESS OF APPLICANT/LICENSEE EnergySolutions 1560 Bear Creek Rd Oak Ridge, TN 37831		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> 1a. NAME OF APPLICANT'S CONTACT Philip Gianutsos </td> <td style="width: 50%; vertical-align: top;"> 1b. APPLICANT'S REFERENCE NUMBER ---N/A--- </td> </tr> <tr> <td style="vertical-align: top;"> 1c. PHONE NUMBER 865 220-1478 </td> <td style="vertical-align: top;"> 1d. FAX NUMBER 865 220-1668 </td> </tr> <tr> <td colspan="2" style="vertical-align: top;"> 1e. E-MAIL ADDRESS pgianutsos@energysolutions.com </td> </tr> </table>		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	
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2. TYPE OF NRC LICENSE REQUESTED (Check One) <table style="width: 100%;"> <tr> <td style="width: 25%;"><input type="checkbox"/> EXPORT (Parts B, C, E)</td> <td style="width: 25%;"><input checked="" type="checkbox"/> NOTIFICATION OF EXPORT OF INCIDENTAL RADIOACTIVE MATERIAL (PART C,E)</td> <td style="width: 25%;"><input type="checkbox"/> IMPORT (Parts B, D, E)</td> <td style="width: 25%;"><input type="checkbox"/> COMBINED EXPORT/IMPORT (Parts B, C, D, E)</td> <td style="width: 20%;"><input type="checkbox"/> AMENDMENT/RENEWAL Existing License Number:</td> </tr> </table>				<input type="checkbox"/> EXPORT (Parts B, C, E)	<input checked="" type="checkbox"/> NOTIFICATION OF EXPORT OF INCIDENTAL RADIOACTIVE MATERIAL (PART C,E)	<input type="checkbox"/> IMPORT (Parts B, D, E)	<input type="checkbox"/> COMBINED EXPORT/IMPORT (Parts B, C, D, E)	<input type="checkbox"/> AMENDMENT/RENEWAL Existing License Number:	
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3. CONTRACT NUMBER(S) RWSA dated 10/17/07		4. FIRST SHIPMENT DATE 1/5/08							
5. LAST SHIPMENT DATE 12/31/08		6. PROPOSED EXPIRATION DATE ---N/A---							
PART C. TO BE COMPLETED FOR EXPORT 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.)									
7. NAME(S) / ADDRESS(ES) OF SUPPLIERS AND/OR OTHER PARTIES TO THE EXPORT EnergySolutions 1560 Bear Creek Rd Oak Ridge, TN 37831		8. NAME(S) / ADDRESS(ES) OF INTERMEDIATE FOREIGN CONSIGNEE(S) ---NONE---							
9a. LIST FUNCTIONS PERFORMED/SERVICE PROVIDED Empty, reusable containers provided by EnergySolutions to Bruce Power.		9b. INTERMEDIATE USE(S) ---NONE---							
9c. ULTIMATE END USE(S) The containers are for use by Bruce Power for packaging of operational, outage, and refurbishment wastes. A licensed Canadian broker (Monserco) will receive and eventually return ship the containers to Oak Ridge, TN, as authorized by IW017.		9d. ULTIMATE END USE(S) Bruce Power Inc. Building B10, 177 Tie Road Municipality of Kincardine R.R #2 Tiverton, Ontario NOG 2T0 Contact: Kurt Wigle Ph: 519-361-2673 ext. 3745							
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 24 cargo containers (average of 2 per month) will be shipped to Bruce Station. The nominal 8'x8'x20' cargo containers each weigh approximately 5500 kgs (12,000 pounds) and contain empty metal boxes for waste packaging. Incidental radioactive material is present as contamination on the interior surfaces of the cargo container 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).		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> 10a. MAX TOTAL VOLUME/ELEMENT WGT (KG), OR TOTAL ACTIVITY (TBq) Total for 24 containers: Approx 0.01 TBq (0.3 Ci) of byproduct material Approx 0.07 kgs of source material < 0.01 grams of SNM (Pu) </td> <td style="width: 50%; vertical-align: top;"> 10b. MAX ENRICHMENT OR WGT % No enriched U </td> </tr> <tr> <td colspan="2" style="vertical-align: top;"> 10c. MAX ISOTOPE WGT (KG) Total for 24 containers: PU-238 1.2E-9 PU-239 1.5E-6 PU-240 1.6E-9 PU-241 1.9E-9 PU-242 1.9E-6 </td> </tr> </table>		10a. MAX TOTAL VOLUME/ELEMENT WGT (KG), OR TOTAL ACTIVITY (TBq) Total for 24 containers: Approx 0.01 TBq (0.3 Ci) of byproduct material Approx 0.07 kgs of source material < 0.01 grams of SNM (Pu)	10b. MAX ENRICHMENT OR WGT % No enriched U	10c. MAX ISOTOPE WGT (KG) Total for 24 containers: PU-238 1.2E-9 PU-239 1.5E-6 PU-240 1.6E-9 PU-241 1.9E-9 PU-242 1.9E-6			
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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

DOCKET NUMBER

ADAMS ACCESSION NUMBER

☐ PUBLIC OR ☐ NON-PUBLIC

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)

-----N/A-----

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

17. ADDITIONAL

INFORMATION

PROVIDED ON PAGES 3, 4,
AND/OR ON SEPARATE
SHEETS?

☒ YES ☐ NO

17a. COPIES OF RECIPIENTS'
AUTHORIZATIONS PROVIDED?

☐ YES ☒ NO

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.

18a. PRINT NAME AND TITLE OF AUTHORIZED OFFICIAL

Philip Gianutsos, CHP Radiation Safety Officer

18b. SIGNATURE - AUTHORIZED OFFICIAL

Philip Gianutsos

18c. DATE

1/3/2008

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

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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, 1 empty seavan (conservative calc @ DOT Empty limit)

	MBq	mCi
AC-228	3.4280E-03	9.2648E-05
AG-110	4.4727E-01	1.2088E-02
AM-241	1.1961E-01	3.2327E-03
BI-214	1.6128E-03	4.3589E-05
C-14	5.2383E-01	1.4158E-02
CE-144	5.8112E-02	1.5706E-03
CM-243	7.3711E-03	1.9922E-04
CM-244	6.5367E-03	1.7667E-04
CO-58	7.5089E+00	2.0294E-01
CO-60	6.6934E+01	1.8090E+00
CR-51	1.2537E+00	3.3883E-02
CS-134	4.5530E-01	1.2305E-02
CS-137	5.1943E+00	1.4039E-01
EU-152	1.6944E-03	4.5795E-05
FE-55	2.4714E+02	6.6795E+00
FE-59	8.1292E-01	2.1971E-02
H-3	1.0415E+02	2.8147E+00
I-125	4.2768E-01	1.1559E-02
MN-54	1.7504E+01	4.7307E-01
NB-95	1.3255E+00	3.5824E-02
NI-59	1.5302E+00	4.1356E-02
NI-63	2.1123E+01	5.7089E-01
PM-146	9.4351E-04	2.5500E-05
PU-238	3.1113E-02	8.4089E-04
PU-239	1.3976E-01	3.7774E-03
PU-240	5.5501E-04	1.5000E-05
PU-241	2.9611E-01	8.0030E-03
PU-242	1.1655E-02	3.1500E-04
SB-125	6.7254E-01	1.8177E-02
SN-113	3.0134E-02	8.1442E-04
SR-90	3.4740E-01	9.3892E-03
TC-99	3.7218E-02	1.0059E-03
TH-230	1.6128E-03	4.3589E-05
TH-234	3.2386E-01	8.7530E-03
TL-208	7.0518E-04	1.9059E-05
U-233	4.1301E-02	1.1162E-03
U-234	1.5469E+00	4.1807E-02
U-235	1.4937E-03	4.0371E-05
U-236	6.4871E-02	1.7533E-03
U-238	3.3227E-02	8.9803E-04
ZN-65	9.6963E+00	2.6206E-01
ZR-95	4.4796E-01	1.2107E-02
Total	4.9025E+02	1.3250E+01

	TBq	CI
Single Seavan	4.903E-04	1.325E-02
24 Seavans	1.177E-02	3.180E-01

Special Nuclear Material & Source Material (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		2.08E-09
TH-234		3.81E-13
U-233	1.151E-04	
U-234	6.743E-03	6.74E-06
U-235	1.835E-02	1.84E-05
U-236	2.697E-02	2.70E-05
U-238	2.641E+00	2.64E-03
Total	1.861E-02	2.693E-03

kg source mat x24: 6.464E-02

U enrichment: 6.882E-03

APPENDIX P EVALUATION

nuclide	activity, MBq	App P, Cat 2 limit (expressed in MBq)	1 empty sealand (fraction of limit)
AM-241	1.1961E-01	6.00E+05	1.9935E-07
CM-244	6.5367E-03	5.00E+05	1.3073E-08
CO-60	6.6934E+01	3.00E+05	2.2311E-04
CS-137	5.1943E+00	1.00E+06	5.1943E-06
PU-238	3.1113E-02	6.00E+05	5.1855E-08
SR-90	3.4740E-01	1.00E+07	3.4740E-08

shipment of 2 seavans, sum of fractions 4.5721E-04

SNM total for 24 seavan containers

1.187E-06
1.462E-03
1.565E-06
1.921E-06
1.938E-03

2.762E-03

No enriched Uranium
Not special nuclear material

6.167E-03 total SNM, grams



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

January 3, 2008

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

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1/7/08

Dear Mr. Moore:

In accordance with instructions in 10 CFR 110.4 and following a brief call with Mr. Dembek earlier today, we are providing the attached NRC Form 7 as notification of EnergySolutions' intent to export empty waste containers to Bruce Power Station in Ontario, Canada.

These are reusable containers dedicated to radioactive materials shipments and the interior surfaces 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,

A handwritten signature in black ink, appearing to read "Philip Gianutsos".

Philip Gianutsos, CHP
Radiation Safety Officer
Commercial Processing Division

Attachments:
NRC Form 7

cc: Mr. Stephen Dembek, USNRC
Mr. Mark Ledoux, EnergySolutions
Mr. Tim Ryder, Monserco