

<b>NRC FORM 7</b> (07-2019) 10 CFR 110		<b>U. S. NUCLEAR REGULATORY COMMISSION</b>		<b>APPROVED BY OMB: NO. 3150-0027</b>		<b>EXPIRES: 02/28/2022</b>	
		<b>APPLICATION FOR NRC EXPORT OR IMPORT LICENSE, AMENDMENT, RENEWAL, OR CONSENT REQUEST(S)</b> (See Instructions on Pages 4 and 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 Information Services Branch (T-6 A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to <a href="mailto:Infocollects.Resource@nrc.gov">Infocollects.Resource@nrc.gov</a> , 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.	
<b>PART A. FOR NRC USE ONLY</b>		<input checked="" type="checkbox"/> Public <b>OR</b> <input type="checkbox"/> Non-Public		Date Received 07/08/2021 JMS			
License Number XW028		Docket Number 11006420		Adams Accession Number			
<b>PART B. TO BE COMPLETED FOR ALL LICENSES, AMENDMENTS, RENEWALS, OR CONSENT REQUESTS</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 Perma-Fix Northwest of Richland, Inc. 2025 Battelle Blvd. Richland, WA 99354			1a. Name of Applicant's Contact Curt Cannon		1b. Applicant's Reference Number N/A		
			1c. Office Telephone Number (509) 375-7052		1d. Office Facsimile Telephone Number (509) 375-0613		
			1e. Applicant's E-mail Address ccannon@perma-fix.com				
2. Type of Action Requested (Check one)		<input checked="" type="checkbox"/> Export (Parts B, C, E)		<input type="checkbox"/> Amendment/Renewal		Current License Number:	
		<input type="checkbox"/> Import (Parts B, D, E)		<input type="checkbox"/> Consent Request (Parts B, C)		Current License Number:	
3. Contract Number(s)				4. First Shipment Date 12/1/2021	5. Last Shipment Date 12/1/2025	6. Proposed Expiration Date 12/1/2026	
<b>PART C. TO BE COMPLETED FOR EXPORT 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 U. S. Suppliers and/or other U. S. Parties to the Export Diversified Scientific Services, Inc. 657 Gallaher Road Kingston, TN 37763 Contact person: Kenyon Mee Contact phone: (865) 376-8704 Contact email: <a href="mailto:kmee@perma-fix.com">kmee@perma-fix.com</a>  Perma-Fix of Florida 1940 NW 67th Place Gainesville, FL 32653 see page 3 for contact information			8. Name(s)/Address(es) of Intermediate Foreign Consignee(s) N/A		9. Name(s)/Address(es) of Ultimate Foreign Consignee(s) Nordion (Canada) Inc. 447 March Road Ottawa, ON, Canada K2K1X8 Contact person: Wendy Wright Contact phone: (613) 963-2453 Contact email: <a href="mailto:wwright@bwxt.com">wwright@bwxt.com</a>		
7a. Function(s) Performed/Service(s) Provided Thermal treatment of waste with return to Canada			8a. Intermediate Use(s) N/A		9a. Ultimate End Use(s) Storage and disposal in Canada		
10. Description of Radioactive Materials, Sealed Sources, Nuclear Facilities, Equipment, or Components; for Nuclear Equipment include Total Dollar Value of Equipment for Export  The material consists of liquid waste generated from medical isotope and radiopharmaceuticals production. Radionuclides potentially present in the waste include: Cd-115, Co-60, Cr-51, Cu-64, In-115m, K-42, Mo-93m, Mo-99, Nb-91m, Nb-92m, Nb-95, Nb-95m, Nb-96, Re-188, Sb-122, Sb-124, Ta-182, Ta-183, Tc-99m, W-185, W-187, W-188, Y-89m, Zr-89				10a. Maximum Total Volume/Element WGT (KG), or Total Activity (TBq)  The maximum volume will be 1,379,102 kg and 3.99 TBq	10b. Max Enrichment or WGT%  No special nuclear material is involved in this project	10c. Max Isotope WGT (KG)  No special nuclear material is involved in this project	
11. Foreign origin (or obligations by country and, if known, by percentage of maximum total volume) 100% of the incoming volume will be from Canada							

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(07-2019)  
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U. S. NUCLEAR REGULATORY COMMISSION

**APPLICATION FOR NRC EXPORT OR IMPORT  
LICENSE, AMENDMENT, RENEWAL, OR CONSENT REQUEST(S) (Continued)**

License Number <b>XW028</b>	Docket Number <b>11006420</b>	Adams Accession Number	<input checked="" type="checkbox"/> Public <b>OR</b> <input type="checkbox"/> Non-Public
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**PART D. TO BE COMPLETED FOR IMPORT 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 Foreign Parties to Import	13. Name(s)/Address(es) of Foreign or U. S. Intermediate Consignee(s)	14. Name(s)/Address(es) of Ultimate U. S. Consignee(s)	
12a. NRC Export License Number(s) (if applicable)	13a. License Number(s) / Expiration Date(s)	14a. License Number(s) / Expiration Date(s)	
	13b. Intermediate Use(s)	14b. Ultimate End Use(s)	
15. Description of Radioactive Materials, Sealed Sources, Nuclear Facilities	15a. Maximum Total Volume/ Element WGT (KG), or Total Activity (TBq)	15b. Max Enrichment or WGT%	15c. Max Isotope WGT (KG)

16. Foreign obligations (By country and by Percentage of Maximum Total Volume)

**PART E. TO BE COMPLETED FOR ALL LICENSES, AMENDMENTS, RENEWALS OR CONSENT REQUEST(S)**  
(If more space is needed to complete any of the items, use Pages 3-4 first, and then attach additional sheets, if necessary.)

17. Additional Information provided on pages 3, 4, and/or separate sheets? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	17a. Copies of Recipient's Authorizations Provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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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.

18 a. Applicant Name and Title Authorized Official Richard Grondin, EVP of Waste Treatment Operations	18 b. Signature <b>Richard Grondin</b> Digitally signed by Richard Grondin Date: 2021.07.02 07:47:39 -07'00'	18c. Date 2021.07.02
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**APPLICATION FOR NRC EXPORT OR IMPORT  
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License Number <b>XW028</b>	Docket Number <b>11006420</b>	Adams Accession Number	<input checked="" type="checkbox"/> Public <b>OR</b> <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)

**Block 7: contact information for Perma-Fix of Florida**

Contact name: Randy Self

Contact phone: (352) 395-1368

Contact email: rself@perma-fix.com



July 1, 2021

Mr. David Skeen  
Deputy Director  
Office of International Programs  
U.S. Nuclear Regulatory Commission 11555 Rockville Pike,  
Rockville, MD 20852  
Subject: Application for a Specific License to Export Radioactive Waste to Canada

Dear Mr. Skeen,

Perma-Fix Northwest Richland, Inc. submits this application for a Specific License to export radioactively contaminated waste from the United States to Canada. The source of the waste is Nordion (Canada) Inc., located in Ottawa, Ontario, Canada. Incoming waste to the United States consists mainly of radioactively contaminated liquid generated from medical isotope and radiopharmaceuticals production. The treated waste that will be exported consists mainly of thermal treatment residual (ash) and some non-combustible metal.

The purpose of the export application is to allow treated waste that is attributable to the Canada source to be exported back to the country of origin in appropriate shipping containers.

The primary facility that will receive, treat, and export the treated waste will be Perma-Fix Northwest (PFNW) located in Richland, WA. Two alternative locations are also able to receive and process the waste: Diversified Scientific Services, Inc. (DSSI) located in Kingston, TN, and Perma-Fix of Florida (PFF), located in Gainesville, FL. All three facilities possess appropriate licenses and permits to receive and process the waste.

The appropriate application is attached. If you need additional information, please feel free to call me at (509) 375-7026.

Sincerely,

A handwritten signature in black ink, appearing to read 'R Grondin', is written over a light gray signature line.

Richard Grondin, Executive Vice President, Waste Treatment Operations  
Perma-Fix Environmental Services Inc.  
2025 Battelle Blvd  
Richland, WA 99354  
[rgrondin@perma-fix.com](mailto:rgrondin@perma-fix.com)

Attachments:

- 1) Supplemental information
- 2) Export application NRC Form 7



## Attachment 1

Supplemental information for PFNW Application to export treated radioactive waste to Canada (NRC Form 7)

### Radioactive Material Licenses of the parties involved:

- 1) Perma-Fix Northwest Radioactive Material License: WN-I0393-1, issued by the State of Washington Department of Health.
- 2) Diversified Scientific Services, Incorporated Radioactive Material License: R-73014-H24 issued by the Tennessee Department of Environment and Conservation, Division of Radiological Health.
- 3) Perma-Fix of Florida Material License: 2598-1 issued by the State of Florida Department of Health Bureau of Radiation Safety.

The activity level for all the radioactive contaminants for the waste exported under this license will not at any time exceed the PFNW, DSSI or PFF domestic possession limits as found in their State Licenses.

### Description of the waste included (NRC Form 7, Part C.10, 10a, 10b, 10c.)

#### **Incoming waste to the United States (imported)**

The incoming waste to the United States from Canada will consist mainly of radioactively contaminated liquid generated from medical isotope and radiopharmaceuticals production.

The waste will be treated by thermal processing, stabilization/solidification. The maximum quantity imported will not exceed 1,379,102 kg. The table below represents the expected isotopic activity of the waste imported in the US. No Special Nuclear Material will be present:

Isotope	Total Activity (TBq)
cd-115	3.26E-03
co-60	4.82E-01
cr-51	8.36E-01
cu-64	5.35E-07
in-115m	3.55E-03
k-42	5.71E-08
mo-93m	1.42E-17
mo-99	7.35E-01
nb-91m	3.26E-03
nb-92m	4.59E-01
nb-95	3.14E-03
nb-95m	3.13E-04
nb-96	1.06E-06
re-188	1.33E-02

sb-122	1.72E-01
sb-124	2.74E-01
ta-182	2.44E-02
ta-183	7.12E-02
tc-99m	7.08E-01
w-185	1.86E-01
w-187	5.89E-03
w-188	1.32E-02
y-89m	0.00E+00
zr-89	1.82E-03
Total activity	3.99 TBq

**Outgoing treated waste (exported):**

The waste stream exported to the consignee in Canada will be a solid form and consist of residual ash and residual metal or non-combustible material that cannot be recycled. If any incoming waste is determined to be non-conforming and cannot be treated at either PFNW, DSSI or PFF, this waste stream may be returned in its original state or form. The final destination of the treated waste and /or any non-conforming waste will be the Nordion (Canada) Inc., facility located at 447 March Road, Ottawa, ON, Canada, for interim storage and / or final disposal.

The maximum quantity of waste returned or exported will not exceed 1,379,102 kg since the treatment process involves thermal treatment and volume reduction. The maximum isotopic activity returned will be 3.99 TBq.

**Route of Transit:**

The treated waste will be transported via highway from United States locations in Richland, WA, Kingston, TN, or Gainesville, FL to Ottawa, ON, Canada.