NRC FORM 7 (02-2016) 10 CFR 110

U. S. NUCLEAR REGULATORY COMMISSION

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

(See Instructions on Pages 4 and 5)

APPROVED BY OMB: NO. 3150-0027 EXPIRES: 11/30/2018

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PART A. FOR NRC USE ONLY	☑ PUBLIC OR ☐ NON-PUBLIC	DATE RECEIVED
		MAR 28 2016
LICENSE NUMBER	DOCKET NUMBER	ADAMS ACCESSION NUMBER
IW033	11006229	

PART B. TO BE COMPLETED FOR ALL LICENSES, AMENDMENTS, RENEWALS, OR CONSENT REQUESTS

(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	1a. NAME OF APPLICANT'S CONTACT	1b. APPLICANT'S REFERENCE NUMBER
Perma-Fix Northwest Richland, Inc. (PFNW) 2025 Battelle Blvd. Richland, WA 99354	Curt Cannon	N/A
	1c. PHONE NUMBER: (509) 375-5061	1d. FAX NUMBER: (509) 375-0613
	1e. E-MAIL ADDRESS: ccannon@perma-fix.com	

2. TYPE OF ACTION REQUESTED *(Check One)*

☐ EXPORT (Parts B, C, E) ☑ IMPORT (Parts B, D, E) ☐ AMENDMENT/RENEWAL Current License Number: _____ ☐ CONSENT REQUEST (Parts B, C) Current License Number: _____

3. CONTRACT NUMBER(S)	4. FIRST SHIPMENT DATE	5. LAST SHIPMENT DATE	6. PROPOSED EXPIRATION DATE
N/A	April 1, 2016	March 31, 2021	March 31, 2021

PART C. TO BE COMPLETED FOR EXPORT 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	8. NAME(S) / ADDRESS(ES) OF INTERMEDIATE FOREIGN CONSIGNEE(S)	9. NAME(S) / ADDRESS(ES) OF ULTIMATE FOREIGN CONSIGNEE(S)
7a. FUNCTION(S) PERFORMED/SERVICE(S) PROVIDED	8a. INTERMEDIATE USE(S)	9a. ULTIMATE END USE(S)

10. DESCRIPTION OF RADIOACTIVE MATERIALS, SEALED SOURCES, NUCLEAR FACILITIES, EQUIPMENT, OR COMPONENTS; FOR NUCLEAR EQUIPMENT INCLUDE TOTAL DOLLAR VALUE OF EQUIPMENT FOR EXPORT	10a. MAX TOTAL VOLUME / ELEMENT WGT (KG), OR TOTAL ACTIVITY (TBq)	10b. MAX ENRICHMENT OR WGT %	10c. MAX ISOTOPE WGT (KG)

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

NRC FORM 7
(02-2016)
10 CFR 110

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IW033	11006229		

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 PARTIES TO IMPORT

The Active Collection Bureau Limited
Socorro House, Liphook Way
20/20 Business Park
Maidstone, Kent ME16 0LQ

Contact Person: Miles Warren
Contact Phone: +44 1622 356700
Contact Email: milesw@acb.co.uk

13. NAME(S) / ADDRESS(ES) OF INTERMEDIATE CONSIGNEE(S)

N/A

14. NAME(S) / ADDRESS(ES) OF ULTIMATE U. S. CONSIGNEE(S)

Perma-Fix Northwest Richland, Inc. (PFNW)
2025 Battelle Blvd.
Richland, WA 99354

Contact Person: Curt Cannon
Contact Phone: 509-375-5061
Contact Email: ccannon@perma-fix.com

12a. NRC EXPORT LICENSE NUMBER(S) *(if applicable)*

Associated export license applied for with this import application.

13a. LICENSE NUMBER(S) / EXPIRATION DATE(S)

N/A

14a. LICENSE NUMBER(S) / EXPIRATION DATE(S)

WN-10393-1 / May 31, 2016
License will be under timely renewal until new license is issued.

13b. INTERMEDIATE USE(S)

N/A

14b. ULTIMATE END USE(S)

N/A

15. DESCRIPTION OF RADIOACTIVE MATERIALS, SEALED SOURCES, NUCLEAR FACILITIES

Radium luminised dials, these radioactive materials are made up of a basic construction of a brass, aluminium or mild steel case supporting a similar metal dial face with moving indicators. Numbers and pointers on these dials and indicators are painted with a luminised radium paint. See Attachment 1 for additional import information.

15a. MAX TOTAL VOLUME / ELEMENT WGT (KG), OR TOTAL ACTIVITY (TBq)

Total Activity 0.09 TBq

15b. MAX ENRICHMENT OR WGT %

N/A

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)

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 Title10, 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

Tammy Monday
Vice President, Waste Services
Sales and Business Development

18b. SIGNATURE – AUTHORIZED OFFICIAL

18c. DATE

03/21/2016

MAR 28 2016 Rec'd SF

NRC FORM 7
(02-2016)
10 CFR 110

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

See Attachment 1 for additional import information.

MAR 28 2016 Rec'd SE

ATTACHMENT 1

ADDENDUM TO PART 110 IMPORT APPLICATION

It is Perma-Fix's intention to import radioactive material for thermal processing, shredding and grouting to provide a final waste form acceptable for land disposal in the originating country.

Reference: 10 CFR 110.32 (a)
Name and Address of Applicant:

Perma-Fix Northwest Richland, Inc. (PFNW)
2025 Battelle Blvd.
Richland, WA 99354

Contact Person: Curt Cannon
Contact Phone: 509-375-5061
Contact Email: ccannon@perma-fix.com

Reference: 10 CFR 110.32 (b)
Name and Address of Supplier of the Material:

The Active Collection Bureau Limited
Socorro House
Liphook Way
20/20 Business Park
Maidstone, Kent ME16 0LQ

Contact Person: Miles Warren
Contact Phone: +44 1622 356700
Contact Email: milesw@acb.co.uk

Reference: 10 CFR 110.32 (c)
Country of Origin:

England

Reference: 10 CFR 110.32 (d)
Ultimate Consignee:

Perma-Fix Northwest Richland, Inc. (PFNW)
2025 Battelle Blvd.
Richland, WA 99354

Contact Person: Curt Cannon
Contact Phone: 509-375-5061
Contact Email: ccannon@perma-fix.com

Reference: 10 CFR 110.32 (e)
Dates of Proposed First and Last Shipments:

First Shipment: April 1, 2016
Last Shipment: March 31, 2021
The first shipment will not begin until the proposed export license associated with this application is issued.

Reference: 10 CFR 110.32 (f)
Description of the Material:

There is a single waste stream to be imported. Radium bearing material (not sealed sources) from luminised devices.

Radium Dials

Radium luminised dials come in all dimensions and activities.

These radioactive materials are made up of a basic construction of a brass, aluminium or mild steel case supporting a similar metal dial face with moving indicators. Numbers and pointers on these dials and indicators are painted with a luminised radium paint. Typically Radium chloride in a zinc sulphide mixture.

Dimensions range from approximately 2" up to about 10".

Radium activities range from a few kBq (micro Curies) to 1 MBq (milli Curies) each.

Weights range from a few 100 grams (0.5 lbs) to approximately 500 Kg (1.1 Lbs).

The dials will be packaged in plastic liners each overpacked in 55 gallon steel drums. The 55 gallon drums will contain a plastic liner with the radium dials inside. The dials and associated components will be immobilised with heat treated wood and other suitable packaging materials.

PFNW recognizes that it must at all times keep the total amount of material possessed at our facility consistent with the possession limits in the Radioactive Materials License. The chemical and physical form of the radium will be in forms suitable for transport under US DOT regulations and consistent with the limitations in our radioactive materials license (WV-10393-1).

It is expected the imports will involve numerous shipments during the term of the license.

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Reference: 10 CFR 110.32 (f)(1)

(1) Maximum quantity of material in grams or kilograms (terabequerels or TBq for byproduct material) and its chemical and physical form.

Nature of radioactive waste: radium luminous dials and dial debris.

Physicochemical characteristics: solid

Main radionuclides: Ra-226

Maximum alpha activity per shipment (GBq): 5 (1 GBq Ra-226 plus 4 GBq daughters)

Maximum alpha activity per package (GBq): 0.25 (0.05 GBq Ra-226 plus 0.2 GBq daughters)

Maximum beta/gamma activity per shipment (GBq): 4

Maximum beta/gamma activity per package (GBq): 0.2

Total alpha activity (GBq): 50 (10 GBq Ra-226 plus 40 GBq daughters)

Total beta/gamma activity (GBq): 40

Total number of packages: 200

Total net mass of shipment (kg): 50,000

Total gross mass of shipment (kg): 57,000

Description of consignment: metal drums (^{m3}): 0.2, ISO transport container (m^3): 33.9

Type of package: IP2 (0.2 m^3 metal drums within ISO transport container)

Chemical and Physical Form: The radioactively contaminated materials are made up of a basic construction of a brass, aluminium or mild steel case supporting a similar metal dial face with moving indicators. Numbers and pointers on these dials and indicators are painted with a luminised radium paint. Typically radium chloride in a zinc sulphide mixture.

Reference: 10 CFR 110.32 (f)(2)

(2) For enriched uranium, the maximum weight percentage of enrichment and maximum weight of contained Uranium 235.

N/A - No enriched uranium is present.

Reference: 10 CFR 110.32 (f)(3)

(3) For nuclear equipment, the name of the facility and its total dollar value.

N/A – These items are no longer of use therefore there is no dollar value.

Reference: 10 CFR 110.32 (f)(4)

(4) For nuclear reactors, the name of the facility, its design power level and its total dollar value.

N/A – These items are not from nuclear reactors.

Reference: 10 CFR 110.32 (f)(5)

(5) For proposed exports or imports of radioactive waste, the volume, physical and chemical characteristics, route of transit of shipment, classification (as defined in 61.55 of this chapter) if imported or exported for direct disposal at part 61 or equivalent Agreement State licensed facility, and ultimate disposition (including forms of management or treatment) of the waste.

The volume and physical and chemical characteristics are referenced in previous sections.

Route of Shipments – The waste will enter the United States at the US Port in Norfolk, Virginia and terminate at the PFNW facility located in Richland, Washington. The transportation of the waste within the US will be by truck primarily along interstate highways. Once treated and DOT compliantly packaged, the waste will be shipped from PFNW to the US Port in Norfolk, Virginia by truck primarily along interstate highways. ACB will manage the Atlantic crossing from Liverpool Docks, UK to Norfolk and the return from Norfolk to Liverpool.

Classification – None of the waste generated during treatment/processing will be disposed of in the US therefore classification does not apply.

Ultimate disposition – Upon receipt at our PFNW facility, the devices will be received in our fully licensed facility and inspected to ensure the waste meets the parameters specified in the approved waste profile sheet. The plastic liners will be removed from the 55 gallon steel drums and then placed in the BPU for thermal processing. The residuals (non-combustibles and ash) will be shredded together and then conditioned with grout to ensure a homogenous waste matrix with an activity concentration less than 200 Bq/g. The final waste form will be returned in 55 gallon drums to the returned to ACB's facility at Maidstone, UK for storage and disposal at a later date.

Reference: 10 CFR 110.32 (f)(6)

(6) For proposed imports of radioactive waste, the industrial or other process responsible for generation of the waste, and the status of the arrangements for disposition, including pertinent documentation of these arrangements.

ACB will obtain authorization to import waste back to the UK upon concurrence from the US NRC that these import/export applications are approved. No shipments will commence until ACB has obtained their required regulatory approval.

ACB is authorized by the UK Environment Agency to accumulate and dispose of radioactive waste.

Upon receipt of the returned waste ACB will characterize the materials again before forwarding to the preferred disposal facility. The ultimate facility for indefinite disposal will be determined by ACB.

Reference: 10 CFR 110.32 (f)(7)

(7) Description of the end use by all consignees in sufficient details to permit accurate evaluation of the justification for the proposed export or import, including the need for shipment by the dates specified.

These devices were used in the UK for most of the 20th Century. Currently there is no use for these devices so they are in intermediate storage at various sites across the UK. The UK's disposal sites WAC, require waste streams to be homogenized therefore, these devices in their current intact configuration are not acceptable for land disposal. The devices need to be processed and conditioned to provide a homogenized final waste form necessary to meet the UK disposal facilities WAC. PFNW approach to manage this waste offers this service. In summary, the following key findings justify the need for this import/export license:

1. Long-term storage is not a disposal solution,
2. Incineration in the UK is not currently an option,
3. The PFNW facility is fully licensed and permitted to receive, store and process this waste stream, and
4. The processed/conditioned waste will meet the homogeneity and activity WAC for UK disposal facilities.

The dates specified are needed because the dials have no current path in the UK and storing the devices at various locations across the UK has risks that need to be eliminated.

Reference: 10 CFR 110.32 (g)

(1) For proposed exports of Category 1 quantities of material listed in Table 1 of Appendix P to this part, pertinent documentation that the recipient of the material has the necessary authorization under the laws and regulations of the importing country to receive and possess the material.

The amount of Radium 226 imported per shipment is below the levels in Categories 1 and 2 of Appendix P of Part 110.

(2) For proposed exports of Category 2 quantities of material listed in Table 1 of Appendix P to this part, pertinent documentation that the recipient of the material has the necessary authorization under the laws and regulations of the importing country to receive and possess the materials. This documentation must be provided to the NRC at least 24 hours prior to shipment.

N/A

(3) Pertinent documentation shall consist of a copy of the recipient's authorization to receive and possess the material to be exported or a confirmation from the government of the import country that the recipient is so authorized. The recipient authorization shall include the following information:

N/A