

State of Washington
Radioactive Materials License

Page 1 of 2



License Number: WN-I0393-1

Amendment No. 35

Perma-Fix Northwest Richland, Inc.
2025 Battelle Boulevard
Richland, Washington 99354

Attention: Curt Cannon
Radiation Safety Officer



In accordance with amendment request information referenced in License Condition 42.AH, Radioactive Materials License Number WN-I0393-1 is amended as follows:

License Conditions 13, 16, and 30 are amended to read:

13. Radioactive material shall be used by, or under the direct supervision of Timothy A. Burckhard, Scott Call, Curt N. Cannon, Dakin Utley, Canyon Hoopes, Michael S. McCargar, Joe Schroeder, Andy Senter, Dave Ellingson, Marshall Lane, Rhonda Coughren, John Mullen, Craig Clipper, Felipe Uvalle, Mike Richardson, Nick Janshen, and/or **Mindie Strobbe**.
16. Radioactive material shall be stored outside only within the dedicated bermed storage yard at the southeastern corner of the facility and in the three-sided covered storage area immediately north of and attached to Building 8 (Safglas). Temporary placement of packages (e.g., staging of packages around processing buildings) for a period not exceeding 24 hours is not considered storage. Packaging made of cardboard, fiberboard, or wood, or that contain liquids, shall not be stored outside. Drummed material, packaged in closed metal containers, shall be stored outside only on the concrete pad area within the storage yard and covered with a moisture barrier (e.g., enclosed shed or tarps). Other package types will have their receipt markings inspected every six months and re-marked as necessary.

In the event that building freezer capacity is exceeded, a portable refrigerated trailer shall be used to keep radioactive waste (e.g., animals) frozen for employee health and safety. **When in use**, the portable trailer will be stored adjacent to Building #15 (dock area), or north of Building #1 (near the fuel tank) to minimize the distance fuel is transferred.

Contaminated articles and equipment may be stored outside buildings and uncovered if the contamination is fixed or meets WAC 246-232-140, Schedule D limits for removable contamination. All other equipment and articles shall be covered.

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License Number: WN-I0393-1

Amendment No. 35

30. Waste shipments shall not be accepted at the facility unless accompanied by the following (a single shipment shall consist of not more than one vehicle or one tractor with legal trailer(s) attached **if transported by road, or train if transported by rail**):
- A. Shipment manifest approved by DOH, Office of Radiation Protection, Waste Management Section.
 - B. Washington State Patrol or Washington State Utilities and Transportation Commission vehicle inspection certificate, or a current visible Washington State 90-day vehicle inspection seal. **Rail shipments are required to have a current railroad safety inspection performed on transport cars.**
 - C. Properly executed current DOH Form RHF-31.
 - D. Upon departmental request, other permits or documentation required under this license, or state or federal law or regulation.

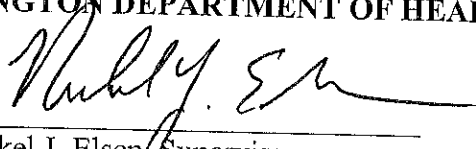
License Condition 42.AH is added:

42. AH. Letter and attachment dated July 31, 2010, RE: add/delete authorized users, change storage location definition for refrigerator trailer, add receipt by rail, approval for removal of guard shack (building 11).

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: 14 Oct. 2010

By


Mikel J. Elsen, Supervisor
Waste Management Section

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Radioactive Materials License



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License Number: WN-I0393-1

Amendment No. 34

Perma-Fix Northwest Richland, Inc.
2025 Battelle Boulevard
Richland, Washington 99354

Attention: Curt Cannon
Radiation Safety Officer

received
[Signature] 5/6/2010

In accordance with amendment request information referenced in License Condition 42.AG, Radioactive Materials License Number WN-I0393-1 is amended as follows:

License Conditions 6, 7, and 8, subitems G-J, and License Conditions 9.G-J and 42.AG are added:

6.G.	Americium-241.	7.G.	Solid form (Philotechnics drums containing Dry Active Waste).	8.G.	1.506 curies (55.722 GBq) total.
6.H.	Cesium-137.	7.H.	Solid form (Philotechnics drums containing Dry Active Waste).	8.H.	40 microcuries (1.48 MBq) total.
6.I.	Strontium-90.	7.I.	Solid form (Philotechnics drums containing Dry Active Waste).	8.I.	533.676 millicuries (19.746 GBq) total.
6.J.	Americium-241.	7.J.	3 sources, serial numbers 802-1, 802-2, 802-3 (Philotechnics).	8.J.	2.5 curies (92.5 GBq) total.

9.G-J. Philotechnics waste to be stored onsite awaiting ultimate disposition. Removal of any of this material reduces License Conditions 6-8, subitems G-J to include only the remaining material. The authorized use for this material is storage, transfer, or other process specifically approved by the department.

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Radioactive Materials License

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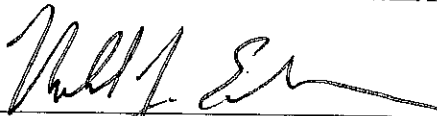
License Number: WN-I0393-1

Amendment No. 34

- 42.AG. Letter and attachment dated February 8, 2010, RE: request to increase possession limit of americium-241, and extend the facility storage termination date of Philotechnics drums containing contaminated materials; letter and attachment dated March 1, 2010, Re: request to extend facility storage termination date of Philotechnics sources containing americium-241.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: April 27, 2010

By 
Mikel J. Elsen, Supervisor
Waste Management

RECEIVED
2/1/2010

State of Washington
Radioactive Materials License



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License Number: WN-I0393-1

Amendment No. 33

Perma-Fix Northwest Richland, Inc.
2025 Battelle Boulevard
Richland, Washington 99354

Attention: Curt Cannon
Radiation Safety Officer

In accordance with amendment request information referenced in License Condition 42.AD, Radioactive Materials License Number WN-I0393-1 is amended as follows:

License Condition 13 is amended to read:


- 13. Radioactive material shall be used by, or under the direct supervision of Timothy A. Burckhard, Scott Call, Curt N. Cannon, Dakin Utley, Canyon Hoopes, Michael S. McCargar, Joe Schroeder, Andy Senter, Dave Ellingson, Marshall Lane, Rhonda Coughren, John Mullen, Craig Clipper, Felipe Uvalle, Mike Richardson, **Nick Janshen**, and/or **Anthony Rowe**.

License Condition 42.AF is added:

- 42.AF. Letter and attachments dated December 30, 2009, RE: request to add authorized users to License Condition 13 and change LLOM description. Letter from Sean Murphy to Curt Cannon dated January 21, 2010, RE: WN-I0393-1 Amendment 33 changes LLOM section 2.2.8 description to allow respiratory equipment cleaning in building 8, room 16.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: January 26, 2010

By: 
Mikel Elsen, Supervisor
Waste Management Section



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Radioactive Materials License

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License Number: WN-I0393-1
Amendment No. 32

Perma-Fix Northwest Richland, Inc.
2025 Battelle Boulevard
Richland, Washington 99354

Attention: Curt Cannon
Radiation Safety Officer

In accordance with amendment request information referenced in License Condition 42.AE, Radioactive Materials License Number WN- I0393-1 is amended as follows:

License Conditions 6.F, 7.F, 8.F, and 9.F are amended to read:

- | | | |
|-------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------|
| 6. Radioactive Material
(element and mass number). | 7. Chemical and/or Physical
Form. | 8. Maximum quantity licensee
may possess at any one time. |
| 6.F. Any radioactive material. | 7.F. Check and calibration
sources in any form. | 8.F. Total activity not to
exceed 0.1 Curie (3.7×10^9
Bequerels). |

9.F. For use as check and calibration sources.

License Conditions 6.G, 7.G, 8.G, and 9.G are deleted.

License Condition 42.AE is added:

42.AE Letter dated February 5, 2009 from Perma-Fix Northwest. Re: add check sources to allowed inventory of check sources.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: February 9, 2009

By


Mikel J. Elsen, Supervisor
Waste Management Section

received
1-30-09



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Radioactive Materials License

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License Number: WN-I0393-1
Amendment No. 31

Perma-Fix Northwest Richland, Inc.
2025 Battelle Boulevard
Richland, Washington 99354

Attention: Curt Cannon
Radiation Safety Officer

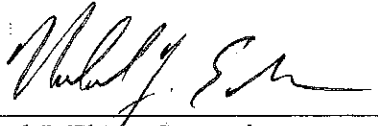
Radioactive Materials License Number WN- I0393-1 is administratively amended as follows:

License Condition 44 is added:

- 44. The licensee must comply with the initial inventory reporting requirement in 10 CFR 20.2207(h) for nationally tracked sources by the dates imposed in that paragraph. The licensee must also comply with the reporting requirements for transactions involving nationally tracked sources in 10 CFR § 20.2207. This section includes the requirement to report any manufacture, transfer, receipt, disassembly, or disposal of a nationally tracked source, otherwise allowed by this license, by the close of the next business day after the transaction. A nationally tracked source, as defined in 10 CFR § 20.1003, refers to a sealed source containing a quantity equal to or greater than Category 1 or Category 2 levels of any radioactive material listed in Appendix E to 10 CFR Part 20 - "Nationally Tracked Source Thresholds."

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: January 26, 2009

By 
Mikel J. Elsen, Supervisor
Waste Management Section

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Radioactive Materials License



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License Number: WN-I0393-1

Amendment No. 30

Perma-Fix Northwest Richland, Inc.
2025 Battelle Boulevard
Richland, Washington 99354

Attention: Curt Cannon
Radiation Safety Officer



In accordance with amendment request information referenced in License Condition 42.AD, Radioactive Materials License Number WN-I0393-1 is amended as follows:

License Condition 13 is amended to read:

13. Radioactive material shall be used by, or under the direct supervision of Timothy A. Burckhard, Scott Call, Curt N. Cannon, Dakin Utley, Canyon Hoopes, Michael S. McCargar, Joe Schroeder, Andy Senter, Dave Ellingson, Marshall Lane, Rhonda Coughren, John Mullen, Craig Clipper, Felipe Uvalle, and/or Mike Richardson.

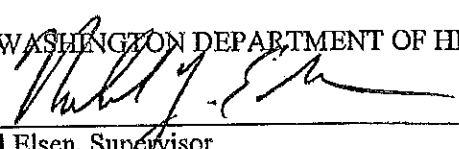
License Condition 42.AD is added:

- 42.AD. Letter and attachments dated October 3, 2008, RE: request to add authorized users to License Condition 13.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: October 28, 2008

By: _____


Mikel Elsen, Supervisor
Waste Management Section

CORRECTED

State of Washington
Radioactive Materials License

received
[Signature]
9/22/08

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License Number: WN-I0393-1

Amendment No. 30 29

Perma-Fix Northwest Richland, Inc.
Curt Cannon, Radiation Safety Officer
2025 Battelle Blvd.
Richland, Washington 99354

Attention: Curt Cannon
Radiation Safety Officer

NOTICE OF TIMELY RENEWAL

In accordance with WAC 246-235-050, your application received August 11, 2008, and additional information received September 9, 2008, are considered adequate as a timely request for renewal. Therefore, your existing license number, as shown above, will not expire until the department has made a final determination regarding the application.

The reviewer assigned to your license is Sean Murphy, who can be reached by phone at 509-943-6626, or by email at sean.murphy@doh.wa.gov. If you have any questions regarding this renewal, please contact either myself at 360-236-3241, or Sean Murphy.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: September 12, 2008

By: _____

[Signature]
Mikel Elsen
Waste Management Section

State of Washington
Radioactive Materials License



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License Number: WN-I0393-1

Amendment No. 29

CORRECTED COPY

Perma-Fix Northwest Richland, Inc.
2025 Battelle Boulevard
Richland, Washington 99354

Attention: Curt Cannon
Radiation Safety Officer

received
[Signature] 7/28/08

In accordance with amendment request information referenced in License Condition 42.AC, Radioactive Materials License Number WN-I0393-1 is amended as follows:

License Condition 13 is amended to read:

13. Radioactive material shall be used by, or under the direct supervision of Timothy A. Burckhard, Scott Call, Curt N. Cannon, Dakin Utley, Canyon Hoopes, Michael S. McCargar, Joe Schroeder, Andy Senter, Dave Ellingson, Marshall Lane, Rhonda Coughren, John Mullen, Craig Clipper, and/or Felipe Uvalle.

License Condition 42.AC is added:

42.AC. Letter and attachment dated June 11, 2008, RE: request to add authorized users to License Condition 13.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: July 17, 2008

By: *[Signature]*
Mikel Elsen, Supervisor
Waste Management Section

COPY #3

State of Washington
Radioactive Materials License



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License Number: WN-I0393-1

Amendment No. 29

Perma-Fix Northwest Richland, Inc.
2025 Battelle Boulevard
Richland, Washington 99354

received
[Signature]
7/21/08

Attention: Curt Cannon
Radiation Safety Officer

In accordance with amendment request information referenced in License Condition 42.AC, Radioactive Materials License Number WN-I0393-1 is amended as follows:

License Condition 13 is amended to read:

13. Radioactive material shall be used by, or under the direct supervision of Timothy A. Burckhard, Scott Call, Curt N. Cannon, Dakin Utley, Canyon Hoopes, Michael S. McCargar, Joe Schroeder, Andy Senter, Dave Ellingson, Marshall Lane, Rhonda Coughren, John Mullen, Craig Clipper, and/or Filipe Uvalle.

License Condition 42.AC is added:

- 42.AC. Letter and attachment dated June 11, 2008, RE: request to add authorized users to License Condition 13.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: July 17, 2008

By: *Mikel Elsen*
Mikel Elsen, Supervisor
Waste Management Section

COPY

State of Washington
Radioactive Materials License

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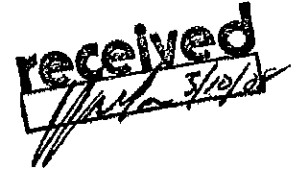


License Number: WN-I0393-1

Amendment No. 28

Perma-Fix Northwest Richland, Inc.
2025 Battelle Boulevard
Richland, Washington 99354

Attention: Curt Cannon
Radiation Safety Officer



In accordance with amendment information referenced in License Condition 42.AB,
Radioactive Materials License Number WN-I0393-1 is administratively amended as follows:

License Conditions 42.AB and 43 are added:

42.AB. Administrative amendment; RE: adding new IC requirements for fingerprinting and criminal history checks.

43. Effective 4 April 2008:

The licensee shall comply with the requirements described in the Administrative Amendment to this license and the document (NRC ORDER EA-07-305, with attachments, dated 5 December 2007) entitled "Fingerprinting and Criminal History Records Check Requirements for Unescorted Access to Certain Radioactive Material". Those requirements listed in the U.S. Nuclear Regulatory Commission Order (implemented in accordance with the due dates given in the "Timeline Attachment" to the 5 March 2008 Administrative Amendment cover letter), shall be instituted as required as part of the licensee's Trustworthiness and Reliability component of the Increased Controls requirements.

By 3 July 2008, the licensee shall provide under oath or affirmation, to the state of Washington Department of Health and to the Nuclear Regulatory Commission, a certification that the Trustworthiness and Reliability Official is deemed trustworthy and reliable by the licensee as required in paragraph B.2 of the U.S. Nuclear Regulatory Commission (NRC) Order EA-07-305, published in the Federal Register on December 13, 2007 [72 FR 70901].

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License Number: WN-I0393-1

Amendment No. 28

All fingerprints obtained by the licensee pursuant to this requirement must be submitted to the NRC for transmission to the U.S. Federal Bureau of Investigation (FBI). Additionally, the licensee's submission of fingerprints shall also be accompanied by a certification, under oath and affirmation, of the trustworthiness and reliability of the licensee's Trustworthiness and Reliability Official as required by paragraph B.2 of NRC Order EA-07-305.

The licensee shall complete implementation of the fingerprinting requirements by 1 October 2008. The licensee shall notify the state of Washington Department of Health and the U.S. Nuclear Regulatory Commission when they have achieved full compliance with the requirements described in the NRC Order. The notification shall be made within twenty-five (25) days after full compliance has been achieved.

The licensee shall notify the state of Washington Department of Health and the U.S. Nuclear Regulatory Commission within 24 hours if the results from a criminal history records check indicate that an individual is identified on the FBI's Terrorist Screening Data Base.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: March 5, 2008

By: *Mikel Elsen*
Mikel Elsen, Supervisor
Waste Management Section

State of Washington Radioactive Materials License

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License Number: WN- I0393-1
Amendment Number 27

Pursuant to the Nuclear Energy and Radiation Control Act, RCW 70.98, and the Radiation Control Regulations, chapters 246-220 through 246-255 WAC, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules and regulations promulgated by the State of Washington Department of Health.

1. Licensee Name: <p style="text-align: center;">Perma-Fix Northwest Richland, Inc. (formerly: Pacific EcoSolutions, Inc.)</p>	3. License Number: <p style="text-align: center;">WN-I0393-1 is amended in its entirety to read as follows:</p>
2. Address: <p style="text-align: center;">2025 Battelle Boulevard Richland, Washington 99354</p>	4. Expiration Date: <p style="text-align: center;">September 15, 2008</p>
5. Reference Number(s):	

6. Radioactive Material (element and mass number).

A. Any radioactive material Atomic Numbers 1-83.

7. Chemical and/or Physical Form.

- A.1. Solid form (contamination, as received or possessed, on articles or in waste form or incorporated into re-useable items leased to others in the course of business).**
- 2. Liquid form (containing contamination as received or possessed or in waste form).**

8. Maximum quantity licensee may possess at any one time.

- A. 360 curies (13.3 TBq) total, not to exceed the following individual isotope activity limits:**
- Cobalt 60 – 40 curies (1.48 TBq),
 - Strontium 90 – 4 curies (148 GBq),
 - Niobium 94 – 7.5 curies (277.5 GBq),
 - Cadmium 113m – 2 curies (74 GBq),
 - Iodine 129 – 500 millicuries (18.5 GBq),
 - Europium 154 – 2 curies (74 GBq), and
 - Lead 210 – 100 millicuries (3.7GBq).

#3

State of Washington
Radioactive Materials License

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License Number: WN- I0393-1
Amendment Number 27

- | | | |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.B. Special Nuclear Material. | 7.B.1. Solid form (contamination, as received or possessed, on articles or in waste form).

2. Liquid form (containing contamination as received or possessed or in waste form). | 8.B. Not to exceed unity formula quantities as specified in WAC 246-220-010 under the definition "Special nuclear material in quantities not sufficient to form a critical mass". |
| C. Source material. | C. 1. Solid form (contamination, as received or possessed, on articles or in waste form).

2. Liquid form (containing contamination as received or possessed or in waste form). | C. 5,000 kilograms total (1.67 curies if U-238). |
| D. Any other radioactive material, Atomic Numbers 84-103, except Special Nuclear Material and source material. | D. 1. Dry packaged radioactive material and/or waste.

2. Liquid form (containing contamination as received or possessed or in waste form). | D. 1 curie (37 GBq) total, except as specified in License Condition 9.D. |
| E. Radioactive material Atomic Numbers 1-83. | E. Dry packaged radioactive material/waste. | E. 50 curies (1.85 TBq). |
| F. Cesium 137. | F. Sealed source (Isotope Products Laboratories Model #HEG-137). | F. No single source to exceed 30 millicuries (1.11 GBq). |
| G. Cesium 137. | G. Sealed source (Amersham Model CDC.800). | G. No single source to exceed 25 millicuries (925 MBq). |

CONDITIONS

9. Authorized use.

All uses shall be in accordance with Low Level Operations Manual and in accordance with approved procedures as described in License Condition 22, and must meet the financial surety restrictions as described in License Condition 23. This material shall be onsite for no longer than one (1) year from date of receipt.

State of Washington
Radioactive Materials License

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License Number: WN- I0393-1
Amendment Number 27

9. A-D
- (1) For overpacking of dry waste, excluding explosive or highly flammable materials.
 - (2) Incidental to volume reduction of equipment, scrap material, or waste.
 - (3) Incidental to decontamination of equipment or scrap material.
 - (4) For brokered wastes and materials.
 - (5) For storage prior to processing or shipment.
 - (6) Incidental to decontamination of equipment, articles, or facilities at offsite locations. A detailed work plan shall be submitted to the department in writing at least one week in advance of the planned work, and the project shall not begin until written approval is received from DOH.
 - (7) For solidification and/or absorption of liquid waste.
 - (8) For segregation, stabilization, encapsulation, and treatment.
 - (9) For vitrification/thermal treatment of radioactive solids and liquids.
 - (10) **For use in the development of new techniques for treating radioactive material or waste in order to reduce the volume of waste that must be disposed. A detailed work plan shall be submitted to the department in writing at least one month in advance of the planned work, and the project shall not begin until written approval is received from DOH.**
- D.
- (1) Any container in which the activity of the diffuse waste is greater than 100 millicuries, departmental approval will be required prior to receipt of the waste.
 - (2) Any container in which the activity of the diffuse waste is greater than 10 millicuries, Perma-Fix Northwest Richland, Inc. will institute Low Level Operating Procedure 104 (Non-Routine Operational Planning).
 - (3) Any container or package that contains a discrete source (sealed or otherwise) with activity greater than 10 millicuries, departmental approval will be required prior to receipt or prior to processing for material already on site including LLR06-059.

State of Washington
Radioactive Materials License

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License Number: WN- I0393-1

Amendment Number 27

9. E. To be stored for decay. Processing of this material shall be as described in LLOP 226 "Processing Store for Decay Material." No material containing isotopes with half-lives greater than 170 days may be stored under this license condition. This material shall be stored for no longer than five years from the date of receipt without written permission from the department.
- F. To be used in an Isotope Products Laboratories Model #CD-10-1 Beam Calibration Device for checking response on dose rate instrument.
- G. To be used in a J.L. Shepherd & Associates Model 423 dosimeter calibrator.
10. Radioactive material shall be received, stored, and processed at 2025 Battelle Boulevard, Richland, Washington, 99354.
11. The licensee shall comply with the provisions of chapter 246-220 WAC, "General Provisions"; chapter 246-221 WAC, "Radiation Protection Standards"; chapter 246-222 WAC, "Radiation Protection -- Worker Rights"; chapter 246-231 WAC, "Packaging and Transportation of Radioactive Material"; chapter 246-232 WAC, "Radioactive Materials -- Licensing Applicability"; chapter 246-235 WAC, "Radioactive Materials -- Specific Licenses"; chapter 246-247 WAC, "Radiation Protection -- Air Emissions"; and chapter 246-249 WAC, "Radioactive Waste -- Use of the Commercial Disposal Site."
12. The Radiation Safety Officer for this program shall be Curt N. Cannon. He shall be assisted by dedicated staff that includes (1) a Radiological Engineer, (2) Health Physics Manager, and (3) a Dosimetry Control Clerk.
13. Radioactive material shall be used by, or under the direct supervision of Timothy A. Burckhard, Scott Call, Curt N. Cannon, Dakin Utley, Canyon Hoopes, Michael S. McCargar, Joe Schroeder, **Andy Senter**, **Dave Ellingson**, **Marshall Lane**, **Rhonda Coughren**, and/or, **John Mullen**.
14. The licensee shall maintain, and follow the Emergency Plan, dated December 2006, as specifically approved by the department. Changes to the Emergency Plan shall be approved, in writing, by the department prior to implementation.
15. The transport of licensed material by the licensee, or the delivery of licensed material to a carrier for transport, shall be in accordance with chapter 246-231 WAC "Packaging & Transportation of Radioactive Material."

State of Washington
Radioactive Materials License

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License Number: WN- I0393-1
Amendment Number 27

16. Radioactive material shall be stored outside only within the dedicated bermed storage yard at the southeastern corner of the facility and in the three-sided covered storage area immediately north of and attached to Building 8 (Safglas). Temporary placement of packages (e.g., staging of packages around processing buildings) for a period not exceeding 24 hours is not considered storage. Packaging made of cardboard, fiberboard, or wood, or that contain liquids, shall not be stored outside. Drummed material, packaged in closed metal containers, shall be stored outside only on the concrete pad area within the storage yard and covered with a moisture barrier (e.g., enclosed shed or tarps). Other package types will have their receipt markings inspected every six months and re-marked as necessary.

In the event that building freezer capacity is exceeded, a portable refrigerated trailer shall be used to keep radioactive waste (e.g., animals) frozen for employee health and safety. The portable trailer will normally be stored adjacent to Building #15 (dock area). If needed, with radioactive waste inside, the trailer may be moved north of Building #1 (near the fuel tank) to minimize the distance fuel is transferred. When not in use, the trailer shall be stored at the Building 15 dock area.

Contaminated articles and equipment may be stored outside buildings and uncovered if the contamination is fixed or meets WAC 246-232-140, Schedule D limits for removable contamination. All other equipment and articles shall be covered.

17. The licensee shall conduct an iodine bioassay program in accordance with the criteria set forth in the Washington State Department of Health, Office of Radiation Protection Regulatory Guide 8.20, "Bioassay Program Criteria for I-125 and I-131."
18. The licensee shall conduct a bioassay program as described in the Low Level Operations Manual, Section 4.4, "Personnel Monitoring/Bioassay." Tritium monitoring shall meet the criteria set forth in the ANSI N.13.14-1999 "Internal Dosimetry Program for Tritium Exposure-Minimum Requirements."
19. The licensee shall maintain records of receipt, storage, and transfer of all radioactive material authorized by this license. These records shall be kept for inspection at 2025 Battelle Boulevard, Richland, Washington, 99354.
20. The licensee shall notify DOH, Office of Radiation Protection, Waste Management Section of each incoming shipment of radioactive waste, using the Radioactive Material Receipt Record form prior to offloading.

State of Washington
Radioactive Materials License

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License Number: WN- I0393-1
Amendment Number 27

21. The licensee shall conduct an environmental monitoring program capable of detecting the potential contribution of radioactive material from the facility to the environment. The program shall include collection of samples and analyses as described in the Low Level Operations Manual, Section 5.3, "Environmental Monitoring" in LLOP 212-217, and as subsequently revised per requirements of the Environmental Radiation Section of the Office of Radiation Protection.

At a minimum, the annual report shall include a comprehensive analysis, with statistical trend analyses and discussions of all anomalous results and actions taken, of all sample results, radionuclide usage, and the annual wind rose for the facility. The report shall also include a detailed description of events in which contaminants were released to the restricted/ unrestricted environment (outside of buildings) during the preceding year. The quantity and concentration of each principal contaminant released shall also be reported. The report shall be submitted in general accordance with the department's document entitled "Recommended Content and Format for Annual Environmental Reports". Deviations in the reporting format must be approved by the department. In addition, the licensee shall report immediately any environmental monitoring results in excess of reporting levels specified in the Low-Level Operations Manual (LLOM).

Two copies of the annual (calendar year) environmental report shall be submitted to the department no later than June 30 of each year. As a supplement to the annual report, one aerial photograph of the entire facility, taken within the calendar year of the report, will be submitted to the department. In addition to the two hard copies, the annual report will be submitted in an electronic format.

22. Approved procedures shall be contained in the Low Level Operations Procedures (LLOP). New or revised procedures shall be reviewed and approved as described in LLOP 102, "Revisions to Operational Procedures." Departmental approval of new or revised procedures shall constitute incorporation by reference of those procedures.

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License Number: WN- I0393-1
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23. The licensee shall have and maintain a Washington State Office of Radiation Protection-approved financial surety arrangement adequate to cover decommissioning of the facility and disposal of all radioactive material possessed under this license. This arrangement is described in the DOH Surety Review for Pacific EcoSolutions, Inc. (PECOS) dated April 2007. The basis for the financial estimates shall be reviewed and adjusted as necessary annually, following approval by the department. This review shall be provided to the department by March 1 of each year. A written verification that limits are not exceeded shall be submitted to the department's Waste Management Section by the tenth day of each month, for the previous calendar month. No change to the amount of surety is allowed without prior departmental approval. **The licensee shall obtain and have in place a standby trust agreement acceptable to the department by August 13, 2007.**
24. For radioactive material, the possession limit shall not exceed limits specified in Item 8 of this license. A written verification that limits are not exceeded shall be submitted to DOH, ORP, Waste Management Section by the 10th day of each month, for the previous calendar month.
25. An air emissions monitoring program shall be conducted according to the procedures described in the Low Level Operations Manual and in LLOP 212, "Air Monitoring." An analysis of annual dose from emissions using the EPA's COMPLY program or an approved equivalent program shall be performed and submitted to the department within 60 days of the issuance of this license and annually thereafter. Two copies of the annual (calendar year) report shall be submitted no later than June 30 of each year.
26. A.
 - (1) Each sealed source containing licensed material, other than hydrogen 3, with a half-life greater than thirty days and in any form other than gas, shall be tested for leakage and/or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a sealed source received from another person shall not be put into use until tested.
 - (2) Notwithstanding the periodic leak test required by this condition, any licensed sealed source is exempt from such leak tests when the source contains 100 microcuries (3.7 megabecquerels) or less of beta and/or gamma-emitting material, or 10 microcuries (370 kilobecquerels) or less of alpha-emitting material.

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26. B. The test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently mounted or stored, on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries (or becquerels) and maintained for inspection by the department.
- C. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be disposed in accordance with department regulations, or to be decontaminated and repaired by persons specifically authorized by the department, the NRC, or an Agreement State to perform such services. A report shall be filed within five days of the test with the department, describing the equipment involved, the test results, and the corrective action taken.
27. The licensee shall conduct a physical inventory every six months (not to exceed six months) as described in LLOP 229, "Source Control and Inventory," to account for all sealed sources received and possessed under the license. The records of the inventories shall be maintained for three years from the date of the last inspection by the department.
28. The licensee shall establish in every contractual obligation relating to radioactive materials the ability to return radioactive materials, processed or unprocessed, to the prior licensed possessor.
29. Radioactive waste shall be packaged in such a manner that waste containers received at the facility do not show:
- A. Significant deformation.
 - B. Loss or dispersal of contents.
 - C. An increase in the external radiation levels as recorded on the manifest, within instrument tolerances.
 - D. Degradation due to rust or other chemical action that results in a loss of container integrity.

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30. Waste shipments shall not be accepted at the facility unless accompanied by the following (a single shipment shall consist of not more than one vehicle or one tractor with legal trailer(s) attached):
- A. Shipment manifest approved by DOH, Office of Radiation Protection, Waste Management Section.
 - B. Washington State Patrol or Washington State Utilities and Transportation Commission vehicle inspection certificate, or a current visible Washington State 90-day vehicle inspection seal.
 - C. Properly executed current DOH Form RHF-31.
 - D. Upon departmental request, other permits or documentation required under this license, or state or federal law or regulation.
31. Radioactive waste shipments shall not be accepted at the facility if waste onsite exceeds a combined net weight of:
- 5,000,000 pounds prior to September 1, 2004
 - 4,500,000 pounds prior to September 1, 2005
 - 4,000,000 pounds prior to September 1, 2006
 - 3,500,000 pounds prior to September 1, 2007
 - 3,250,000 pounds prior to September 1, 2008 and thereafter.
32. Waste or material received before Allied Technology Group filed for Chapter 11 bankruptcy (February 4, 2002) is considered to be "legacy" waste/material due to the length of time it has been on site, and it shall be removed from the facility before September 1, 2008. The schedule for removal of this waste is as follows:
- By September 1, 2004, legacy waste/material onsite shall not exceed 4,000,000 net pounds. Included in the 4,000,000 pounds is ATG-originated legacy waste which total weight of unprocessed waste not prepared for disposal shall not exceed 1,200,000 pounds.
 - By September 1, 2005, legacy waste/material onsite shall not exceed 3,000,000 net pounds. Included in the 3,000,000 pounds is ATG-originated legacy waste which total weight of unprocessed waste not prepared for disposal shall not exceed 900,000 pounds.

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- By September 1, 2006, legacy waste/material onsite shall not exceed 2,000,000 net pounds. Included in the 2,000,000 pounds is ATG-originated legacy waste which total weight of unprocessed waste not prepared for disposal shall not exceed 600,000 pounds.
- By September 1, 2007, legacy waste/material onsite shall not exceed 1,000,000 net pounds. Included in the 1,000,000 pounds is ATG-originated legacy waste which total weight of unprocessed waste not prepared for disposal shall not exceed 300,000 pounds.
- By September 1, 2008, all legacy waste/material shall be removed from site.

Commencing September 2, 2008, DOH, Waste Management approval of all incoming waste/material will be required if all legacy waste is not removed by September 1, 2008.

In the event the above schedule is not met, the difference between the actual weight onsite and the required number (from the schedule above) shall be subtracted from the total weight allowed onsite per Condition 31 until compliance is obtained. **The licensee shall also submit to the department, for approval, a written detailed corrective action plan including why the waste removal goals for the scheduled date were not met and the corrective actions that will be implemented, with implementation dates, to assure the waste removal goal for the next scheduled date will be met. This report shall be submitted within 60 days after the removal goal schedule date. In any event, all of the waste/ material shall be removed from the facility prior to September 1, 2008.**

Example: If onsite legacy waste weight is 3,518,000 lbs on September 1, 2005 (518,000 pounds over the September 1, 2005 value), then the total allowed site weight (per Condition 31) would be reduced to 3,982,000 pounds.

33. The licensee shall not receive animal carcasses and other materials that need refrigeration unless onsite cold storage (i.e., <32 °F) is available for all packages requiring cold storage. The licensee will maintain such packages in cold storage until thermal processing. Animal carcasses that are not to be processed (i.e., only overpacked for disposal per a licensed disposal site requirement) thermally, may be stored without refrigeration in metal DOT 7A packages or equivalent.

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34. The licensee is exempt from WAC 246-221-160(3) (3-hour survey requirement), provided the requirements of the Low Level Operations Manual (LLOM) and DOH-approved Low Level Operating Procedures (LLOP's) are adhered to.
35. The licensee will begin decommissioning of the facility within twelve months of ceasing operations involving radioactive material, in accordance with applicable regulations.
36. The licensee shall comply with the requirements set forth in Order dated November 29, 2005, signed by Gary Robertson, Director, Office of Radiation Protection, and made a part hereof by this reference. The licensee shall comply with any new requirements issued subsequent to date of original Order.
37. The licensee shall notify the department in writing 30 days prior to any changes in the licensee corporate structure, and shall notify the department with the appointment of a new Site Manager or RSO.
38. Reference to the "department" in this license shall mean the Department of Health or successor agency.
39. By June 30 of each year, the licensee shall submit a copy of its financial report or a certified financial statement and Security and Exchange Commission (SEC) Form 10K.
40. The licensee shall have all licensee generated waste removed from the site within 12 months of date of closure of the waste container. The licensee shall document, and mark the container with the date of closure, and the waste container shall be tracked from this date of closure.
41. The licensee shall conduct and document in a written report the annual review of the ALARA (As Low As Reasonably Achievable) Program. At a minimum, the annual ALARA review and written report shall include a:
 - A. Detailed description of changes in the ALARA Program that were implemented during the review period,
 - B. Comprehensive analysis, with statistical trends, discussion of all anomalous results, actions taken, and comparison to ALARA goals for individual (worker) doses and facility (collective) doses,
 - C. Comprehensive analysis, with statistical trends, and comparison to ALARA goals for the duration of time licensee generated waste remained onsite,

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41. D. Review of the facility layout, plant operations, new system installations, and operating procedures against ALARA goals to determine if modifications to systems, the facility, or procedures and practices are required to ensure compliance with ALARA goals, including reduction in exposure and reduction in the duration of time licensee generated waste remains onsite,
- E. New ALARA goals for individual (worker) doses, facility (collective) doses, and the acceptable duration of time licensee generated waste may remain onsite, and
- F. Specific recommendations including implementation plans for changes in systems, the facility, or procedures and practices that are deemed necessary to achieve compliance with ALARA goals including the reduction of exposure and the reduction in the duration of time licensee generated waste remains onsite.

The written ALARA reports shall be maintained by the licensee. A copy of the report shall be submitted to the department no later than June 30 of each year for the previous calendar year's operations.

42. Except as specifically provided by this license, the licensee shall possess and use radioactive material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in the documents listed below, which are incorporated by reference into this license, and the department's "Rules and Regulations for Radiation Protection." The department's "Rules and Regulations for Radiation Protection" shall govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations. Except as provided in License Condition 22, any change to the documents listed below shall require departmental approval in the form of an amendment to this license.
- A. Application and attachments dated October 29, 1993.
- B. Letter and attachments dated June 2, 1994, RE: Response to Comments on Application Materials.
- C. Revised Application and attachments dated August 31, 1994, and June 30, 1994.
- D. 1995 Surety and Decommissioning Plan dated February 15, 1995.
- E. Allied Technology Group, Incorporated's Emergency Plan dated July 30, 1997.

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42. F. Letters and attachments dated January 25, 1999; February 2 1999; and March 4, 1999.
- G. Letter dated September 30, 1999, with ATG Richland's Operation Manual dated October 5, 1998.
- H. ATG, Richland Operations Procedure (AROP) #101, dated March 9, 2000.
- I. Letters dated March 27 and April 27, 2000, RE: License amendment request and response to DOH letter:
- J. Letter dated July 18, 2000, RE: Request to possess 20 Ci of Ra-226.
- K. DOH's letter dated March 5, 2001, RE: Administrative changes to ATG amendment.
- L. DOH's letter dated April 3, 2001, RE: Implementing the March 5, 2001 letter with the exception of the RHF-31 clause.
- M. DOH's letter dated April 6, 2001, RE: Clarifying DOH's April 3, 2001 letter.
- N. Letter dated August 20, 2001, RE: License amendment request for removal of time restrictions from Condition 9, and adding weight limits to license.
- O. Letter dated September 17, 2001.
- P. Letter dated May 15, 2002; RE: License amendment request for changes to Conditions 12, 13, and 16, add animal carcasses storage requirement, relief from WAC 246-221-160 (3), remove Condition 31, AROM changes, and AROP 102 changes.
- Q. ATG Richland's Operations Manual dated June 14, 2002.
- R. ATG, Richland Operations Procedure (AROP) #102 dated June 14, 2002.
- S. Letters dated June 19 and July 28, 2003, RE: Change company name, add process, add users, add new condition regarding waste onsite when ATG shut down.
- T. Letter to Sean Murphy dated August 3, 2005, RE: LLOM change description of process exhaust for BPU, add dry acid scrubber.

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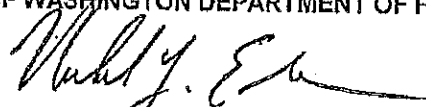
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42. U. Letters dated December 15, 2005 and January 24, 2006, signed by Curt Cannon, Radiation Safety Officer (Change in Corporate Structure).
- V. PEcoS Operational Procedure (LLOP) #102 dated May 23, 2006.
- W. Letter dated May 30, 2007 regarding transfer of license from Pacific EcoSolutions, LLC to Perma-Fix Northwest, Inc.
- X. Letter and attachment dated April 14, 2005 from DOH, RE: Notice of Correction regarding East Gate installation; Letter dated May 11, 2005 from PEcoS, RE: response to Notice of Correction regarding East Gate installation; Letter dated May 24, 2005 from DOH, RE: response to PEcoS letter dated May 11, 2005; Letter dated June 11, 2005 from PEcoS; RE: response to DOH letter dated June 11, 2005; Letters from DOH dated June 13 and July 2005, RE: response to PEcoS letter dated June 11, 2005; Letter dated August 12, 2005 from PEcoS, RE: updated facility diagram showing East Gate.
- Y. Letter dated June 21, 2007 from DOH, RE: DOH approval of PEcoS Emergency Plan dated December 2006.
- Z. LLOP/MWOP #101 rev. 2 dated August 22, 2007, and LLOP/MWOP #102 rev. 6 dated June 25, 2007.
- AA. Letter and attachments dated August 31, 2007 from Perma-Fix Northwest, RE: amendment request for licensee name change, increased possession limit, removal/addition of authorized users, changes to various License Conditions.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: October 5, 2007

By


Mikel J. Elsen, Supervisor
Waste Management Section