



# Radioactive Materials License

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4/30/2020As stated in the Nuclear Energy and Radiation Act, Revised Code of Washington 70.98, and the Radiation Protection Regulations, chapters 246-220 through 246-254 of the Washington Administrative Code, and in reliance on statements and commitments made by the licensee identified below, a license is issued authorizing the licensee to transfer, receive, possess, and use the radioactive material authorized below; and to use such radioactive material for the purpose(s) and at the place(s) authorized below. **This license is subject to all applicable rules and regulations issued by the State of Washington Department of Health.**

<p><b>1. Licensee Name:</b></p> <p><b>EUROFINS FRONTIER GLOBAL SCIENCES</b></p>	<p><b>3. License Number:</b></p> <p><b>WN-L0160-1 Renewal Amendment No. 19</b></p> <p>Fee Code: 65</p>
<p><b>2. Address:</b></p> <p>5755 8th Street East Fife, Washington 98424</p>	<p><b>4. Expiration Date:</b></p> <p>30 April 2025</p> <p><b>5. Reference Number(s):</b></p> <p>20-04-06, 20-09-35</p>

**6. Radioactive Material (element and mass number).**

**7. Chemical and/or Physical Form.**

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

A. Any radioactive material unless otherwise specified.

A. Aqueous, soil, and/or biological.

A. Not to exceed 3.7 megabecquerels (100 microcuries) for any single nuclide.

Annual Possession Quantity not to exceed 3.7 megabecquerels (100 microcuries).\*

B. Hydrogen-3.

B. Aqueous, soil, and/or biological.

B. 37 megabecquerels (1000 microcuries).

Annual Possession Quantity not to exceed 37 megabecquerels (1000 microcuries).\*

C. Iodine-125.

C. Aqueous, soil, and/or biological.

C. 0.37 megabecquerels (10 microcuries).

Annual Possession Quantity not to exceed 0.37 megabecquerels (10 microcuries).\*

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6. Radioactive Material (element and mass number).	7. Chemical and/or Physical Form.	8. Maximum quantity licensee may possess at any one time.
D. Carbon-14.	D. Liquid. Bound or Unbound.	D. 37 megabecquerels (1000 microcuries).  Annual Possession Quantity not to exceed 37 megabecquerels (1000 microcuries).*
E. Iodine-131.	E. Liquid. Volatile,  or  Liquid, Labeled compounds.	E. 0.37 megabecquerels (10 microcuries).  Annual Possession Quantity not to exceed 0.37 megabecquerels (10 microcuries).*
F. Strontium-89.	F. Liquid.	F. Not to exceed 7.4 megabecquerels (200 microcuries).  Annual Possession Quantity not to exceed 7.4 megabecquerels (200 microcuries).*
G. Strontium-90.	G. Liquid.	G. Not to exceed 7.4 megabecquerels (200 microcuries).  Annual Possession Quantity not to exceed 7.4 megabecquerels (200 microcuries).*

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H. Yttrium-90.	H. Liquid.	H. Not to exceed 7.4 megabecquerels (200 microcuries).  Annual Possession Quantity not to exceed 7.4 megabecquerels (200 microcuries).*
I. Cesium-137.	I. Liquid.	I. Not to exceed 7.4 megabecquerels (200 microcuries).  Annual Possession Quantity not to exceed 7.4 megabecquerels (200 microcuries).*

\* Annual Possession Quantity as defined in WAC 246-247-030(5).

In addition to the restrictions in Item 6 and the possession limits in Item 8, the Licensee must further restrict their possession of licensed material to quantities below the limits specified in WAC 246-235-075 for establishing decommissioning financial assurance.

## CONDITIONS

9. Authorized Use.
  - A - I. Radionuclides may occur incidental to chemical analysis of environmental samples of water, soil, biological tissue, and other environmental media potentially containing radioactive materials.
10. Radioactive materials must be stored and/or used at 5755 8th Street East, Fife, Washington 98424.



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11. The licensee must comply with the provisions of chapter 246-220 WAC, "Radiation Protection – 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 Material – Licensing Applicability"; chapter 246-235 WAC, "Radioactive Materials – Specific Licenses"; chapter 246-246 WAC, "Radiation Protection – Radiological Criteria for Decommissioning"; chapter 246-247 WAC, "Radiation Protection - Air Emissions"; chapter 246-249 WAC, "Radioactive Waste – Use of the Commercial Disposal Site"; and chapter 246-254 WAC, "Radiation Protection – Fees."
12. The Radiation Safety Officer for this program is Patrick Garcia-Strickland.  
  
Alternate Radiation Safety Officer for this program is Lily-Anna Lacount.
13. Radioactive material must be used by or under the supervision of Patrick Garcia- Strickland and/or Lily-Anna Lacount.
14. All individuals working directly with radioactive materials or frequenting radioactive materials use areas shall receive training commensurate with their duties and responsibilities before beginning work or frequenting the area and at least annually thereafter. At a minimum training shall include: health protection considerations of individuals and potential offspring; procedures to minimize exposure; purposes and functions of protective devices; company radioactive material work procedures; applicable state regulations and the conditions of this license. Documentation indicating the individuals trained, subjects, and dates shall be maintained for inspection by the Department.
15. The radioactive materials authorized in this license shall not be used in animals, human beings or in products distributed to the public.
16. The licensee is not required to conduct personnel dosimetry or a bioassay program. This is in accordance with the criteria set forth in chapter 246-221 WAC.
17. The licensee shall maintain security and control of all radioactive materials received and possessed under the license in accordance with WAC 246-221-150. Materials shall be secured from or controlled in a manner which will prevent unauthorized access or removal from the place of storage.

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18. The licensee shall maintain a documented running inventory of all unsealed radioactive materials received, possessed, used, transferred, and disposed of under the license. The records shall include radionuclides, activities, and disposition. Records shall be maintained for inspection by the Department.
19. Surveys for contamination shall be performed and recorded to prevent the spread of contamination, determine appropriate personal protective equipment, meet release criteria, transportation regulations, and demonstrate the effectiveness of emission controls.
  - A. Surveys for contamination shall be performed and recorded weekly in designated radioactive materials use areas when radioactive materials are being used, or after each use if use is sporadic.
  - B. Storage areas, including waste storage, shall be surveyed monthly, unless no material is being used. If radioactive materials are not being used, but are in storage only, then storage areas may be surveyed quarterly.
  - C. Surveys shall include a direct survey done with an appropriate survey instrument and a wipe survey counted with an appropriate instrument, except for low energy beta emitters. Low energy beta emitters, such as Hydrogen-3, Sulfur-35 and Carbon-14, require a wipe survey counted with a liquid scintillation counter or other appropriate system.
  - D. Contamination is considered above regulatory limits as stated in the removable wipe limits found in WAC 246-232-140 Schedule D. If contamination is above regulatory limits, the area shall be decontaminated, surveyed, and documented until contamination is no longer present.
  - E. Wipe analysis results used for decommissioning or free release of equipment or facilities shall be converted to disintegrations per minute (dpm) using the nuclide specific efficiency. Contamination is considered above regulatory limits in accordance with the removable wipe limits found in WAC 246-232-140 Schedule D.
  - F. These records shall be maintained for three years as required in WAC 246-221-230.

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20. Survey instruments shall be calibrated annually, but shall not exceed an interval of thirteen months, by persons specifically authorized by the Department, the U.S. Nuclear Regulatory Commission, or an Agreement State to perform such services.
21. All hoods used for storage and/or use of radioactive material must have a flow rate that meets the manufacturer's specifications, with the hood sash at the specified working height. Hood flow rates must be checked annually. A record of the annual flow-rate check must be maintained for inspection by the Department.
22. The Radiation Safety Officer must perform an annual review of the radiation safety program for adherence to the conditions of the license, Title 246 WAC and ALARA concepts. A record of this audit must be maintained for inspection by the Department.
23. The licensee's emergency procedures shall follow those outlined in the Washington State Radiation Emergency Handbook revised May 2014, or subsequent revisions, or other procedures specifically approved by License Condition.
24. In the event the licensee chooses to terminate, move, or vacate, the authorized use location, the licensee shall follow the applicable requirements in WAC 246-221-270, WAC 246-232-060, chapter 246-246 WAC, and WAC 246-247-080.
25. The licensee must respond in the manner, and within the period, specified to any and all Department correspondence necessary to keep the license and related information current.

Where the licensee has submitted proposed corrective action, such action must be fully implemented in a timely manner, unless the Department has subsequently modified the licensee's proposed corrective action.

26. To assure the facility remains in compliance with chapter 246-247 WAC, "Radiation Protection - Air Emissions:"
  - A. The potential-to-emit dose to the maximally exposed individual must be evaluated every calendar year using the actual Annual Possession Quantity (yearly throughput) for each radionuclide. A Radioactive Air Emissions License is required if the dose from the COMPLY Code or CAP88-PC Code is 0.1 mrem/yr or greater from all nuclides.

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26. B. This COMPLY code or CAP88-PC code calculation may be performed annually and submitted to the Department by June 30 for the previous calendar year's emissions. If the parameters used for the code have not changed during the calendar year evaluation period the calculation is not required. If the calculation is not performed, the licensee is required to send the Department a statement that they have not exceeded the Annual Possession Quantity for each nuclide listed on the license. Both types of annual reports may be submitted by email to AIRRichland@doh.wa.gov, or by mail to 309 Bradley Boulevard, Suite 201, Richland, Washington, 99352.
- C. The Licensee must maintain these records for five (5) years as required in WAC 246-247-080(8).
- D. The licensee must notify the Department if there is a potential or actual increase in air emissions or other modification as defined in WAC 246-247-030(16).
27. Except as specifically provided by this license, the licensee must 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. The Department's "Rules and Regulations for Radiation Protection" must govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations.
- A. Application and attachments dated 1 April 2020 and update version dated 25 September 2020.
- B. Email and attachments on 27 September 2020. RE: Supplemental info.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: 29 September 2020

By:   
 Raj K Maharjan, MS  
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