March 11, 2013

Portland State University
Scott Jaqua, RSO
Radiation Safety Office
PO Box 751
Portland, Oregon 97207

Reference: License Number ORE-90156
Amendment Number 59
Docket Number 12-1023

Dear Mr. Jaqua:

Enclosed is the Radioactive Materials License Renewal that you requested. This renewal is issued based on information supplied per renewal application dated February 5, 2013.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors you may notify this office, (971) 673-0504, so that we can provide appropriate corrections.

Should you have questions concerning this licensing action, please do not hesitate to contact this office.

Sincerely,

Todd Carpenter, Manager
Radioactive Materials Licensing Program
todd.s.carpenter@state.or.us

Enclosure

[If you wish this information in an alternate format, please contact Nancy Curry at (971) 673-0504]
RADIOACTIVE MATERIALS LICENSE

Pursuant to Section 274 of the Atomic Energy Act of 1954 as amended, Oregon Administrative Rules for the Control of Radiation and in reliance on statements and representations made by the Licensee referred to below, this license is hereby issued authorizing the Licensee to transfer, receive, possess and use radioactive material(s) designated below. This license is subject to all applicable rules, regulations, and orders now in effect by the OHA PUBLIC HEALTH DIVISION and all conditions specified below.

In accordance with renewal application dated February 5, 2013, Oregon Radioactive Materials License ORE-90156 is amended in its entirety to read as follows:

<table>
<thead>
<tr>
<th>Licensee</th>
<th>3. License Number</th>
<th>4. Expiration Date</th>
<th>5. License Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland State University</td>
<td>ORE-90156</td>
<td>March 31, 2023</td>
<td>Academic Broad Scope B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Radioactive materials (element and mass number)</th>
<th>7. Chemical and/or physical form</th>
<th>8. Maximum quantity licensee may possess at any one time</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. As specified in OAR 333-102-0900(1)(b) of the Oregon Rules for the Control of Radiation</td>
<td>A. Any</td>
<td>A. As specified in OAR 333-102-0900(1)(b) of the Oregon Rules for the Control of Radiation.</td>
</tr>
<tr>
<td>B. Any radioactive material obtained through neutron activation</td>
<td>B. Irradiated geologic samples</td>
<td>B. 37 MBq (1 millicurie total).</td>
</tr>
<tr>
<td>C. Cesium-137</td>
<td>C. Sealed sources</td>
<td>C. Four sources not to exceed 5 microcuries each.</td>
</tr>
<tr>
<td>D. Cesium-137</td>
<td>D. Sealed sources</td>
<td>D. Four sources not to exceed 10 microcuries each.</td>
</tr>
<tr>
<td>E. Cesium-137</td>
<td>E. Sealed source (Beckman Scintillation Model LS 6500; LS 6000)</td>
<td>E. Two sources not to exceed 30 microcuries each.</td>
</tr>
<tr>
<td>F. Uranium-238</td>
<td>F. Chemical compounds and ore</td>
<td>F. 906 grams.</td>
</tr>
<tr>
<td>G. Nickel-63</td>
<td>G. Sealed source (Shimadzu Mode ECD-9/14/17/2014)</td>
<td>G. One source not to exceed 0.37 GBq (10 millicuries).</td>
</tr>
</tbody>
</table>
6. Radioactive materials (element and mass number)

H. Nickel-63

7. Chemical and/or physical form

H. Sealed sources (Agilent Technologies Models 19233, 19235; 19235A; G1223A; G1533A; G1224A; G2397A electron capture detectors)

8. Maximum quantity licensee may possess at any one time

H. Seven sources not to exceed 0.56 GBq (15 millicuries) each.


A., B., D., and F. Research and development as defined in OAR 333-100-0005(118) of the Oregon Rules for the Control of Radiation.

C. To be used in classroom instruction.

E. To be used as components of the Beckman LS 6000 and LS 6500 scintillation counters.

G. To be used in Shimadzu Model GC17A gas chromatograph.

H. To be used in and Agilent/Hewlett Packard Model 5890 and 6890 gas chromatographs.

CONDITIONS

10. Radioactive material shall be used only at the licensee's facilities located at:

1. Science and Research and Teaching Center (SRTC), 1719 SW 10th Avenue, Portland, Oregon 97201.

2. Science Building I (SBI), 1025 SW Mill Street.

3. Cramer Hall, 1721 SW Broadway.


11. This license is subject to and void without an annual validation certificate. Insofar as the licensee has submitted the proper fee prior to the expiration of a validation certificate, such existing validation certificate shall not expire until the issuance of a new validation certificate for the then current fiscal year.
12. A. The Radiation Safety Officer for the activities authorized by this license is Scott Jaqua.

B. The Assistant Radiation Safety Officer for the activities authorized by this license is Chuck Cooper.

13. Radioactive material shall be used by, or under the supervision of, individuals designated by the Radiation Safety Committee.


15. Insofar as the licensee restricts the possession of radioactive material to quantities below the minimum limit specified in Appendix B to Part 30, required by 10 CFR 30.35, the licensee is not required to provide financial assurance pursuant to OAR 333-102-0200(6).

16. The licensee shall not use radioactive material in or on human beings or in field applications where activity is released except as provided otherwise by specific conditions of this license.

17. Experimental animals administered radioactive materials or their products shall not be used for human consumption.

18. The licensee shall ensure that radioactive material used in open form does not result in a total effective dose equivalent (TEDE) that exceeds the limits in 10 CFR Part 20 Table 1, Appendix B to 20.1001 to 20.2401.

19. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed radioactive material to quantities below the limits specified in 10 CFR 30.72, "Schedule C, Quantities of Radioactive Materials Requiring Consideration of the Need for an Emergency Plan for Responding to a Release", which require consideration of the need for an emergency plan for responding to a release of licensed material.

20. The licensee is authorized to collect leak test samples for analysis by persons specifically licensed by OHA Public Health Division, U.S. Nuclear Regulatory Commission or another Agreement State to perform such services.

21. Except as specifically provided otherwise by this license, the licensee shall conduct its program in accordance with statements, representations and procedures contained in the documents, including any enclosures listed below. The Oregon Rules for the Control of Radiation shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the rules.
(21.) A. Renewal application dated February 5, 2013, signed by Mark Systsma, Associate Vice President for Research.

Date: March 11, 2013

FOR OHA PUBLIC HEALTH DIVISION

By

Todd S. Carpenter, Manager
Radioactive Materials Licensing Program