

**RHF-IGC**  
**Application for**  
**Radioactive Material License**  
**Gas Chromatograph**

**INSTRUCTIONS** — Complete all items in this application for a new license or the renewal of an existing license. Use supplemental sheets where necessary. Item 19 must be completed on all applications. Mail original copy to: Washington State Department of Health, in accordance with the directions contained in the application cover letter. Upon approval of this application, the applicant will receive a State of Washington Radioactive Material License issued in accordance with the general requirements contained in Washington State Department of Health, Radiation Protection Division, Radiation Control Regulations, and the Washington Nuclear Energy and Radiation Control Act, Chapter 70.98 RCW.

<b>1a. Name and Mailing Address of Applicant</b> (Institution, Firm, individual owner, etc.) INCLUDE ZIP CODE	<b>1b. Street Address(es) at which Radioactive Material will be used</b> (if different than 1a.) INCLUDE ZIP CODE		
<b>2. Person to Contact Regarding this Application</b>		<b>Telephone No.</b>	
<b>3. This is an Application for:</b> (Check appropriate item) a. <input type="checkbox"/> New License*      b. <input type="checkbox"/> Renewal of License No. _____			
<b>4a. Individual Users</b> (Name of individuals who will use or directly supervise use of Radioactive Material.)	<b>4b. Training and Experience</b> (Check one or more)  <input type="checkbox"/> Appendix "A" completed and attached for RSO and each user  <input type="checkbox"/> Training Previously Filed under License # _____		
<b>5a. Radiation Safety Officer (RSO)</b> (Name of person designated as Radiation Safety Officer.)  (Include Training Certificates)	<b>5b. Duties of Radiation Safety Officer</b> (check one)  <input type="checkbox"/> Signed and dated Appendix "B" Duties Attached, or <input type="checkbox"/> Equivalent Duties Attached		
<b>6. Radioactive Material</b> (Element and Mass number of each.)  a. _____ _____	<b>7. Sealed Source Manufacturer and Model Number</b>  a. _____ _____	<b>8. Activity of Each Source</b>  a. _____ _____	
b. _____ _____	b. _____ _____	b. _____ _____	
c. _____ _____	c. _____ _____	c. _____ _____	
<b>9. Device and Use Description</b> (Make lettering correspond to lettering in items 6, 7, and 8 above).			
<b>Manufacturer of Device</b>	<b>Detector Cell Model No.</b>	<b>No. of Devices</b>	<b>Use</b>
a.			
b.			
c.			
<b>10. Is This a Portable Device?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No			

11. **Radiation Detection Instruments**

List radiation detection instruments possessed.

MANUFACTURER	MODEL #	RANGE
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

12. **Calibration of Survey Instruments** (mandatory for all survey instruments possessed). (Check One)

- No radiation detection instruments possessed. N/A
  - Calibration will be done annually and after each repair.
- (Check One)
- Applicant will do own survey instrument calibrations. (Attach methods and procedures).
  - Calibration will be done by calibration service agency.

Name, Address, and License Number of Calibration Service

Name \_\_\_\_\_

Address \_\_\_\_\_

License Number \_\_\_\_\_

13. **Personnel Monitoring**

- No personnel monitoring.
- Thermoluminescent dosimeters (TLD) used, at least quarterly exchanges.
- Film badges used, at least quarterly exchanges.

Name and Address of Badge or TLD Supplier

Name \_\_\_\_\_

Address \_\_\_\_\_

14. **Facilities and Equipment**

- Facilities and storage diagram attached.

15. **Leak Test Program** (check one)

- Applicant will contract with approved outside consultant to do leak tests.  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- Applicant will do leak tests using approved leak test kit, mailing leak tests to kit manufacturer for counting.  
Manufacturer name, address  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- Applicant will do own leak test including counting. Detailed procedures attached.

16. **Waste Disposal**

- Detector Cell(s) containing radioactive sealed sources will be returned to manufacturer, or transferred to an authorized licensee or licensed waste broker for disposal.

17. **Radiation Protection Program and Emergency Procedures**

- Signed and dated Appendix C. completed and attached, or
- Equivalent Radiation Protection Program and Emergency Procedures attached.

18. **License Fee Required** (see Chapter 246-254 WAC)

- a. License fee category \_\_\_\_\_
- b. License fee enclosed \$ \_\_\_\_\_  
(see enclosed schedule to determine fee)

**Item 19 - Certificate**

The applicant and any official executing this certificate on behalf of the applicant named in Item 1, certify that this application is prepared in conformity with Washington State Department of Health, Division of Radiation Protection regulations and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

\_\_\_\_\_  
(TYPE OR PRINT NAME OF CERTIFYING OFFICIAL)

By: \_\_\_\_\_  
(SIGNATURE)

\_\_\_\_\_  
(TITLE OF CERTIFYING OFFICIAL)

Date: \_\_\_\_\_

**RHF-1GC Appendix A  
Training and Experience  
Authorized User or Radiation Safety Officer**

<b>7. Resume' of Radiation Work Experience / Gas Chromatograph Experience</b>		
<b>Dates of Employment</b>	<b>Employer / Address</b>	<b>Job Title / Duties</b>

**Duties of the Radiation Safety Officer for Gas Chromatograph Licenses**

1. Make sure that all uses of radiation are 1) conducted safely, 2) adhere to the conditions of the license and regulations, and 3) result in exposures to personnel which are as low as reasonably achievable (ALARA).
2. Act as liaison agent with regulatory authorities, be available for assistance in inspection and audits, and notify the department:
  - A. In writing before making any change which would render the Application for Radioactive Materials License or Radioactive Materials License no longer accurate.
  - B. Immediately in the event of any radiation accident or incident.
  - C. Within five days of any positive sealed source leak test result.
  - D. Within 30 days in a report stating remedial action taken after accident or incident.
3. Be familiar with all applicable regulations and regulatory guides, and assure that license applications are properly filled out and are submitted on time.
4. Perform, or cause to be performed (e.g., by manufacturer, consultant, or qualified employee), appropriate surveys, using appropriate, operable, calibrated instruments.
5. Make sure all leak tests are performed on time.
6. Establish and maintain record systems for leak tests, surveys, receipt and use records, and (if personnel dosimetry is required) for personnel dosimetry reports.
7. Provide a personnel dosimetry program when required. Advise individual radiation workers of each high exposure report, and conduct a survey to determine the cause of all overexposures so as to preclude reoccurrence. Perform a quarterly review of occupational exposure to authorized users and workers to determine that the exposures are within the limits established by the ALARA program. Annually apprise each radiation employee of annual accrued dose (if dosimetry program is required).
8. Maintain a current inventory of the types, quantities, and locations of all radioactive material possessed, making sure the total amount possessed never exceeds amounts for which licensed.
9. Post conspicuously "Notice to Employees" RHF-3 and notices of items of noncompliance resulting from department inspections.
10. Make sure that radioactive shipments are properly packaged and labeled according to DOT requirements, and that shipments are accompanied by proper shipping papers.
11. Instruct workers who work or may work in or about the vicinity of the gas chromatographs of all applicable radiation safety rules and procedures 1) initially, 2) with addition of new personnel, and 3) with each change in the radiation safety program.
12. Apprise management of the status of the radiation safety program and management's responsibility for maintaining an adequate radiation safety program.
13. Take charge in all emergency situations (loss, theft, fire, explosion, etc.) to make sure correct emergency procedures are carried out, including notification of the State of Washington per Chapter 246-221 WAC. Also evaluate the circumstances that led to the emergency to reduce the chance of future problems.
14. Assure that radioactive materials are only used by, or under the supervision of, individuals authorized by the license.
15. Assure that radioactive materials are properly secured against unauthorized removal.
16. Assure that gas chromatographs are properly vented when applicable.
17. Perform other duties as required to be in compliance with Title 246 WAC.

Approved by \_\_\_\_\_ Date \_\_\_\_\_

**Radiation Protection Program for Gas Chromatographs**

The following Radiation Protection Program will be followed at all times. A copy of these procedures shall be maintained in the licensee's radioactive materials license file, and copies shall be posted for users of the gas chromatographs.

1. Only authorized users shall use or supervise the use of radioactive material.
2. The licensee shall not open a source containing radioactive material.
3. No one shall be permitted to touch or handle directly any unshielded sources.
4. The operator shall never unnecessarily expose himself or herself to an unshielded source.
5. Security of sources shall be maintained at all times.
6. If any malfunction of the radioactive source occurs, immediately notify the Radiation Safety Officer.
7. The Radiation Safety Officer shall maintain the following publications: State of Washington Department of Health Title 246 WAC, Rules and Regulations for Radiation Protection and Washington State Department of Health, Radiation Emergency Handbook.
8. Gas chromatographs and radioactive materials storage areas shall be posted with CAUTION RADIOACTIVE MATERIALS signs. Form RHF-3, Notice to Employees, shall be posted in a conspicuous place wherever individuals work in or frequent any portion of a restricted area. Authorized users shall be responsible for posting the above also at all field locations.

**Standard Emergency Procedures for Gas Chromatographs**

Loss, Theft, Fire, Explosion, or Vehicle Accident

Follow the procedures outlined in the Washington State Department of Health Radiation Emergency Handbook. Principally this shall include:

1. Secure the area around the accident. Keep unauthorized persons away. Alert people in vicinity of the presence of radioactivity and a possible hazard.
2. Do not leave the site. Send a helper or onlooker to notify the following:
  - A. Radiation Safety Officer: \_\_\_\_\_
  - B. Work Phone: \_\_\_\_\_ Home Phone: \_\_\_\_\_
  - C. Local Fire Department (where applicable): \_\_\_\_\_
3. The Radiation Safety Officer in turn must immediately notify State of Washington Radiation Protection (206) 682-5327, which is (206) N-U-C-L-E-A-R and other local authorities as indicated.
4. The radiation worker should inform emergency workers of the potential radiation hazard, should help keep the area secure, and should explain to the emergency personnel the location of the radioactive device and the extent of the possible hazard. In no case should the radiation worker leave the site until qualified experts arrive, unless, of course, the operator is seriously injured or incapacitated, and must be removed from the site by emergency personnel.

Alternate Names and Telephone Numbers Designated by Radiation Safety Officer:

_____	_____
_____	_____
_____	_____

Approved by \_\_\_\_\_ Date \_\_\_\_\_