

LICENSING CHECKLIST FOR KRYPTON-85 LEAK TEST SYSTEMS

This checklist is intended for those applicants wishing to obtain licensure (or renewal) for utilization of Krypton-85 in leak test systems. Include the information specified below on form RH 2050 or attachments thereto. General information can be found in the guide, form RH 2051.

Item 3

- a. Nuclide: Krypton-85
- b. Form: Gas
- c. Possession Limit: number of curies

Item 4, Proposed Use

To be used in a DEF Co. Model 123 for leak testing components and for storage in Department of Transportation approved shipping containers.

Item 5, Radiation Safety Officer and Users

Name the radiation safety officer and other supervisory users who will be or have been trained to operate the unit in the manual mode. The licensee must keep a list of automatic mode users to be maintained for inspection. Submit form RH 2050A for each supervisory user only.

Item 6, Radiation Detection Instruments

Include the range(s) and the type of meter (i.e., GM or ion chamber).

Item 7, Calibration Procedures

Specify the authorized service company and frequency of calibrations.

Item 8, Personnel Monitoring

- a. Type (film badge, TLD)
- b. Radiation Detected (beta, gamma)
- c. Exchange Frequency
- d. Who will be assigned dosimeters?

Item 9, Facilities and Equipment

- a. Diagram of dedicated room, including location of KR-85 unit. Also, show where Department of Transportation storage containers are located (if applicable).
- b. Specify radiation levels of adjacent uncontrolled areas for storage/use locations in a. above.
- c. Describe the ventilation system to include:
 1. Flow rates at the unit and on the roof (final flow rate).
 2. Stack height (at least seven feet above roof).
 3. Roof diagram showing exhaust and nearest fresh air intake.
 4. Confirm the KR-85 unit ventilation is completely separate from all other systems.

Item 10, Radiation Safety Program

- a. Radiation Safety Officer Duties and Responsibilities
- b. Training Program
 1. Automatic mode personnel: submit an outline and specify records will be maintained for inspection.
 2. Refresher training for supervisory users every two years by manufacturer or other specifically licensed service company.
 3. Receipt survey procedures and retention of such records.
 4. Operating Procedures
 - i. Monthly surveys and records maintained.
 - ii. Inventory control-sampling procedures.
 - iii. Automatic mode and manual mode standard operating procedures (include gas loading).
 - iv. Who will provide repair?
- e. Emergency Procedures
 1. Prevention of further loss of gas.
 2. Call down list with individuals and phone numbers.

Item 11, Effluent and Environmental Monitoring

- a. Specify the setting of the stack monitor such that unexpected releases will trigger the alarm.
- b. Provide a calculation of expected concentrations released on a routine basis, based on flow rates and inventory sampling. Commit to performing this calculation on a monthly basis to assure the average annual concentration requirements are met.

Item 12, Waste Disposal

- a. During routine maintenance, describe how contaminated oil drained from the unit will be disposed of.
- b. How are parts (of the unit) which have become contaminated (values, o-rings, etc.) disposed of?
- c. Components tested in the unit cannot be released for uncontrolled use unless the surface dose rates does not exceed twice natural background. Provide:
 1. Survey procedures for all “leakers” in a low background area.
 2. Procedures for handling “hot” components”
 - Bake under vacuum
 - Destroy to let gas out
 - Dispose of as radwaste
 3. Confirmation that “hot” components will not be recoated or reworked such that Kr-85 is trapped within.

Item 13, Decommissioning and Decontamination

- a. Thirty-day notification required pursuant to Section 30298.
- b. If unit will be relocated within California, request a Department of Transportation waiver and describe how the unit will be prepared for transport, number of curies, and complete description of new facility (if same license).
- c. If unit has less than one curie, and dose rates do not exceed 0.5 mR/hr, shipping can be done under “Limited Quantity” pursuant to 49 CFR 173.421.
- d. If unit is to be released for unrestricted use, all contaminated parts must be placed in container for disposal as radioactive waste.