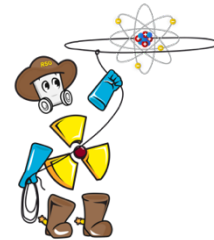


## Becoming a New Radiation Safety Officer (RSO)

### Key Tips and Checklist

#### Introduction

**Welcome!** Congratulations on your assignment as a Radiation Safety Officer (RSO). I'm **Dr. REM**, I will be your guide and help to explain concepts. This document is designed to provide you with essential tips, a comprehensive checklist, and insights into the key responsibilities of your new role. Whether you are just starting or looking to enhance your skills, this resource will guide you through the steps necessary to excel in radiation safety management.



There are two parts in this document. The first part describes what your REGULATOR needs for you to become the RSO. The second part describes what **YOU** need to become the **RSO**.

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### PART I – What does your REGULATOR need for you to become the RSO.

#### Training and Regulatory Compliance

- Review the available training course in radiation protection. Visit [aec-radiation.com](http://aec-radiation.com) to learn about the variety of online training courses.
- Selected the course that best meets your needs and download a copy of the course Syllabus.
- Contact your state regulator to ensure your training course covers the appropriate material for your new role. If you feel it necessary, write a letter to your State Regulator including a copy of the course syllabus for review of your training.

Visit [Radiation Control Programs and Directors \(CRCPD\) at crcpd.Org](http://RadiationControlProgramsandDirectors(CRCPD)atcrcpd.Org) and find the Conference of Radiation Control Program Directors, which provides information on all Agreement States, Licensing States, and federal agencies governing the use of Radioactive Materials and x-ray machines by state.

Here is a sample letter you can use as you wish:



Dear Regulator,  
My name is \_\_\_\_\_. My company will be applying for (or has) a radioactive materials license to handle \_\_\_\_\_. I am planning on taking the \_\_\_\_\_ course from AEC Radiation Safety for the site Radiation Safety Officer (RSO) role. Attached is the syllabus for this training. Please advise on the feasibility of accepting this course for my training requirements when added to my existing experience. Contact me at \_\_\_\_\_ if you have any questions.

Best regards,  
Your Name

- Complete required training in radiation protection.

### Certification

- Obtain your certification after completing the training program.
- Have your request signed by the Plant Manager or an officer of the corporation and submitted with your attached documents.

### Records and Communication

- **Verify Management Approval:** Ensure your appointment as RSO is officially approved by management. Provide a company Table of Organization showing your position in relationship with the plant manager to make decisions regarding radiation protection.
- **Amend the License:** Submit an amendment to your radioactive materials license to reflect your new role. This submittal should be accompanied by your training certificate, resume' to show experience in handling sources and the Table of Organization.
- **Delegate Authority in Writing:** The RSO should delegate in writing responsibilities for emergencies, inspections, and employee concerns to qualified personnel in the plant to respond to regulatory issues in the RSO's absence (vacations, sickness, doctor appointments, etc.)
- **Notify Key Personnel:** Inform staff and security teams about your appointment and responsibilities. Any postings for Notice to Employees and EMERGENCY CONTACT information should be updated immediately upon taking the RSO role.

## **PART II – What do YOU need to become the RSO.**

### **1. RSO Overview**

The RSO plays a critical role in ensuring safety and compliance with radiation regulations. Your duties include:

- Ensuring compliance with all terms of the radioactive materials license.
  - Monitoring personnel exposure and maintaining ALARA (As Low As Reasonably Achievable) standards.
  - Overseeing the safe use, storage, and disposal of radioactive materials.
  - Acting as a liaison with regulatory agencies.
  - Investigating and correcting safety incidents.
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### **2. Checklist to Becoming an RSO - Education and Training**

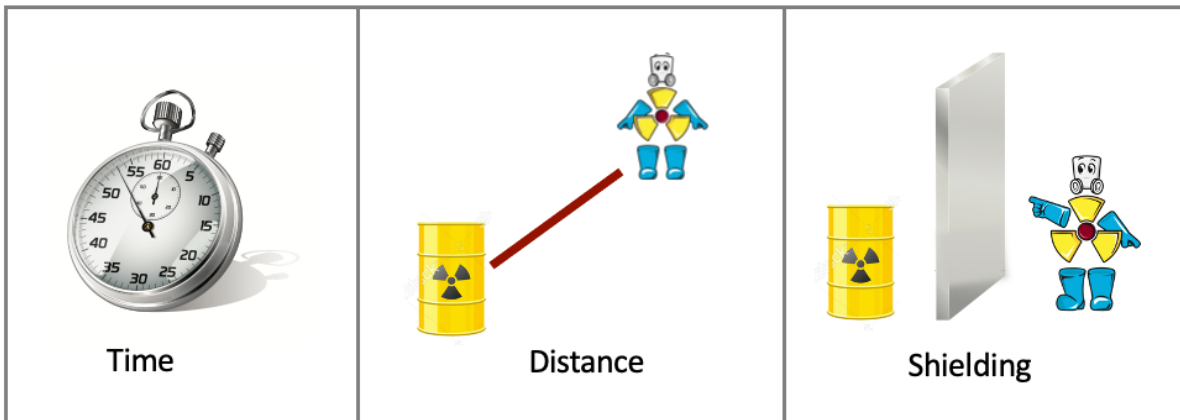
#### **Experience**

- Gain hands-on experience by working under the supervision of an experienced RSO.

### **3. Core Themes and Techniques to Understand**

#### **ALARA Principles**

- **Time:** Minimize time spent near radiation sources.
- **Distance:** Maintain a safe distance from sources.
- **Shielding:** Use appropriate shielding materials to reduce exposure.



## Refresher Training

- Conduct regular training as required by license conditions or when procedures change.

## Emergency Preparedness

- Develop and train staff on contingency procedures.
- When applying for the radioactive materials license, different types of **EMERGENCIES** are to be anticipated. These include (but are not limited to): Fire, Loss, Spills, Theft and Injury.
- Procedures for response to each of these EMERGENCIES are to be prepared.
- Personnel are to be trained in these contingencies.

## 4. Record-Keeping and Compliance

### Logbook Management

- Maintain the license, all amendments and backup documents that support the request for the respective amendment.
- Regulatory inspection results.
- Maintain up-to-date records of all license support documents, such as, the inventory, leak tests, instrumental calibrations, shutter check, training certificates surveys and contamination control swipes, annual reviews, source transfers, and personnel monitoring.



- Archive older records after inspections. All records older than the last inspection can be archived except for training records of existing personnel and most recent records of equipment status, such as calibrations and leak tests.

### Inspection Readiness

- Ensure all records are accessible and complete for unannounced inspections.
- Ensure your DELEGATION OF AUTHORITY is posted with key personnel including the gate guard. This provides for a smooth transition of inspector accessibility in your absence.
- Make sure those people on your delegation list know the location of the logbook and documents and the location of the radiation sources in the plant. If the person does not know where all the sources are in the plant, identify a resource person that can assist.
- Ensure older records are archived to prevent time consuming searching for documents. Remember, you want the inspector to see quickly what is needed and not to spend excess time sorting and searching. It looks unprofessional.

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## 5. Facilities Management Best Practices

- **Storage Security:** Secure radioactive materials to prevent unauthorized access. The storage location must be approved by the license. Normally, this location is identified via a drawing during the original license application or renewal. If this location changes, it requires an amendment to be submitted to the regulator for approval.
- **Inventory Control:** Keep detailed records of material locations. Inventory forms are available on the AEC website. The specific items required are as approved by the regulator. Also, the frequency of the inventory is determined as a Condition in the license. This inventory should be signed and dated by the RSO.
- **Visitor Management:** Restrict access to facilities for unauthorized personnel. Some facilities may want visitors or infrequent people (truck drivers, contractors) review and sign a Right-To-Know orientation.
- **Annual ALARA Review:** Regularly assess compliance with safety standards and regulations. This requirement is performed by the RSO and can be supported by assistant site RSOs or consultants. A formal checklist is submitted to the regulator for approval upon initial license issuance or renewals.

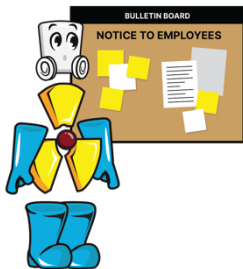
All facilities with a radioactive materials license must have a **Notice to Employees**.

- The RSO is required to post the Notice to Employees. It is mandatory and should be posted where employees can easily find it, such as the company bulletin board.
- Regulators may even require multiple languages, if appropriate.
- The Notice to Employees tells employees where to find information about radiation activities at the site.
- If the employee is not satisfied with the information, they can contact the regulatory agency.
- It is recommended to have some type of Right-To-Know training to include radiation sources at the plant during initial employee orientations.

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## Additional Resources

- [Conference of Radiation Control Program Directors \(CRCPD\)](#)
- AEC's [Training Programs](#)
- Download a copy of the [RSO DUTIES](#)
- Resources and Documents from [AEC's Website](#)




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## Other Radiation Hazards on Site

The RSO is responsible for all company employee radiation exposures. One source of potential exposures is from NON-DESTRUCTIVE TESTING or NDT using radiation sources to:

- "X-ray" welds on site during construction or equipment change-outs. These are high activity radiation sources up to 100 curies of Ir-192 use in unshielded exposure modes. Areas are to be roped off and employee entrance prohibited during these times. Here are some features of this type of activity: Performed by outside licensed Industrial Radiographer (IR) contractors;
- May be from out-of-state which would require RECIPROCITY approval from your regulatory agency to enter your site;
- Will be inspected directly by your regulator not affecting your site compliance status;
- Have specific requirements by regulators to have on site, such as:
  - License
  - Reciprocity approval
  - O&E Manual

- Survey instruments
  - Radiation hazard tape and postings
  - Assistant Radiographer (AU) if unable to see the entire boundary during testing. Usually a minimum of an 8-hour trained person and maybe a company person attached to the radiographer during this treatment. The job is to walk the perimeter to ensure personnel do not enter the High Radiation Areas
  - Purchasing personnel at the plant can control through the Purchase Order the requirements of IR operations.
  - Site RSO is responsible for making sure personnel are properly notified to prevent unnecessary personnel exposures. (AEC has an INFORMATION FORM for site RSOs during INDUSTRIAL RADIOGRAPHY OPERATIONS. (This form can be downloaded and customized for your company's use).
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## Conclusion

Becoming a Radiation Safety Officer is a rewarding and impactful role. With the right training, resources, and preparation, you can ensure safety and compliance at your site. Visit [aec-radiation.com](http://aec-radiation.com) to explore our full range of online courses and document resources and take the next step in your radiation safety journey.