



## **How to Begin a Career as a Radiation Protection Technician in the Nuclear Power Industry**

To begin a career as a Radiation Protection (RP) Technician, you must learn and demonstrate the knowledge and skills required to perform some basic radiation protection tasks. The BHI Energy training program is designed to help you gain the knowledge and skills to get started.

This training program requires a significant amount of self-study. Typically, candidates who have limited or no RP experience will invest at least 60 to 100 hours of personal time to be successful. Candidates with this level of commitment usually develop into excellent RP Technicians in the nuclear industry. Candidates who successfully complete the training program will then be qualified for and can apply to openings for BHI Energy RP Technician positions.

Employment in the nuclear power industry requires candidates to have unescorted access into nuclear power plants. Unescorted access requires:

- Successful drug and alcohol testing
- A background investigation
- Psychological testing
- Minimum 18 years of age
- Have a high school diploma

BHI Energy provides training materials and facilitates hands on training at no cost to you. You are responsible for any travel expenses required to participate in the training. If you are interested in pursuing this career path, continue reading below.

### ***How do I enroll in the training?***

- Each candidate should have a sponsor who recommends you for enrollment in the training. A sponsor will initially discuss with you in more detail the requirements of the training program and ensure that you understand and can make the commitment required to be successful. Your sponsor will monitor the progress of your self-study and arrange for you to take the proctored exams required for qualification.
- Once a sponsor has agreed to help you or if you are unable to find a sponsor send an email to [rptraining@bhienergy.com](mailto:rptraining@bhienergy.com) and provide the following information:
  - Full name
  - E-mail address
  - Phone number
  - Address
  - If you have any experience with BHI or at a nuclear plant
  - Sponsor's name & job title

### ***Who can be a sponsor?***

A sponsor is normally a Manager or Director employed by BHI Energy. A utility supervisor or manager at a nuclear power plant where BHI Energy provides RP services may also serve as a sponsor.



### ***How many proctored exams are there?***

You will need to complete seven (7) proctored exams. The topics for each exam are listed below.

1. **Junior Fundamentals (63 questions):** Atomic structure, nuclear interactions, radiation characteristics and interactions, biological effects from radiation, and monitoring and controlling human exposure to radiation.
2. **Operate Survey Instruments (30 questions):** Detector theory, instrument characteristics, pre-use inspections, and interpretation of readings.
3. **Radiation and Contamination Surveys (35 questions):** Survey techniques and documentation.
4. **Radiological Air Sampling (30 questions):** Conditions needing an air sample, setup and operation of air samplers, and sample analysis.
5. **Post Low Level Hazards (25 questions):** Types of postings, criteria for posting, posting methods, and labeling radioactive materials.
6. **Respond to Personnel Contamination (25):** Survey requirements, types and causes of contamination, and records.
7. **Control of Radioactive Material (30 questions):** Requirements to move and store radioactive material.

### ***What kind of training materials will I receive?***

You will be authorized to view training materials on rise.com which is an online training platform with interactive courses designed to teach the knowledge required to perform basic RP tasks. After you have been approved by BHI Energy to take the training, you will be sent an email from rise.com inviting you to register. After you register with your username and password, you will be able to access your My Learning page.

### ***How should I prepare and take the exams?***

When you access your My Learning page, you will see the courses assigned to you. You must work the courses in the following order and make an 80% on the quiz before you can proceed:

1. RP Training Program Description
2. Atomic Structure and Interaction
3. Radiological Health Effects
4. Radiological Measurements
5. Radiation Protection Practices and Limits
6. Radiological Aspects of Nuclear Plants

Once you have mastered the learning objectives in these courses, you should request a proctored Junior Fundamentals exam from your sponsor. This should be completed as soon as possible.

After you have successfully completed the Junior Fundamentals exam, you will be assigned the courses for the Jr Task Qualification Learning Path, these courses are for the initial procedures that you will be qualified. The courses may be work in any order.

- RP 02.01, Operate Portable Instruments
- RP 02.02, Radiation & Contamination Surveys
- RP 02.03, Radiological Air Sampling
- RP 02.04, Post Low Level Hazards



- RP 02.06, Personnel Contamination Monitoring
- RP 02.07, Control Rad Material

You can request a proctored exam from your sponsor after you have mastered the objectives in each eLearning course. You can take the exams one at a time or take multiple exams at one time depending on how confident you are that you understand the material.

If you are unable to complete the proctored exams, you may be given the opportunity to complete the exams at Lawrenceville.

Please make sure you are well prepared before you take an exam. You will be allowed only one additional attempt if you fail an exam. You must study to close the knowledge gaps identified from the initial exam failure to ensure you are successful with the second attempt. Consult your sponsor to ensure the knowledge gaps have been closed. You will not be able to continue with the training if you fail an exam twice.

### ***How do I complete the qualification process?***

After you have successfully completed all the exams, you will participate in hands-on training for each of the topics listed above (excluding Junior Fundamentals). You will be provided an opportunity to learn how to operate actual instruments and equipment. You will also be able to practice the tasks that you will be expected to perform. To complete task qualification, you will have to be observed performing each task independently and correctly without any coaching by an instructor. This is referred to as a performance evaluation. Hands-on training and performance evaluations can be completed during a one-week class in Lawrenceville, Georgia. These classes will be scheduled as needed during the summer of 2023.

### ***What is the next step in this career path?***

Once you have completed the process explained above, you will be qualified to work as a Task Only Junior Technician. This will allow you to perform productive work at a nuclear power plant and assist other technicians. You need to be assertive to see, learn, and experience as many work activities as possible in a nuclear power plant to understand how RP provides support to protect workers. You need to gain the experience to help you complete the remaining three junior qualifications listed below.

1. Control Access to High Radiation Areas
2. Control HEPA Vacuums and Ventilation Equipment
3. Perform Low Risk Radiological Job Coverage

Each of these qualifications also requires completion of an exam and a performance evaluation. When you are ready to complete these qualifications, please send an email to [rptraining@bhienergy.com](mailto:rptraining@bhienergy.com) for guidance on where you can complete the exams and performance evaluations. Once you have completed these qualifications, you will be a fully qualified Junior Technician.

After you have worked as a Junior Technician for a couple of years, you should be eligible to become a Senior RP Technician and complete the six senior task qualifications.