



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 must 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.
- You are responsible for finding and getting acquainted with your sponsor. If you are having difficulty finding a sponsor, send an email to rptraining@bhienergy.com to request assistance in locating a sponsor.
- Once a sponsor has agreed to help you, send an email to rptraining@bhienergy.com to request the training materials. Be sure to include the name of your sponsor. We will be in contact with your sponsor to align strategies and expectations for you to be successful.

Who can be a sponsor?

A sponsor is normally a utility supervisor or manager at a nuclear power plant where BHI Energy provides RP services. A Manager or Director employed by BHI Energy 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 listed by Learning Path. You will see two Learning Paths: RP Jr Fundamentals and RP Jr Task Qualification. You should start on the courses listed in the RP Jr Fundamentals Learning Path and then request a proctored Junior Fundamentals exam from your sponsor as soon as you have mastered the learning objectives in these courses.

BHI Energy also schedules online quizzes and discussions to supplement your self-study for the Junior Fundamentals exam if you need help in understanding the material. If you want to participate in this online training, send a request to rptraining@bhienergy.com. Online classes are limited to 20 students. Each online class consists of 6 two hour sessions over 2 weeks.

The 2022 schedule for on-line classes is shown below.

1. May 16-27
2. May 30-June 10
3. June 13-24

After you have successfully completed the Junior Fundamentals exam, you should then start on the courses listed in the Jr Task Qualification Learning Path. You should sequence your preparation as shown in the above list. 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.



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 have to 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.

The 2022 schedule for these classes is shown below.

1. June 27 – July 1
2. July 18 – July 22
3. July 25 – July 29
4. Aug 29 – Sept 2

If your sponsor is sponsoring a group of 6 or more candidates who have completed the exams, the hands-on training may be held at a different location and time if the sponsor can provide the facilities and equipment equivalent to that used in Lawrenceville.

If you are already employed by BHI Energy at a nuclear power plant, your sponsor may elect for you to complete exams and perform the hands-on training at your place of employment as the work schedule allows.

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 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 task qualifications required to work as a Senior Technician.