

Job Title **Protective Systems Electrical Engineer (R&D Engineer 2/3)**
Location **Los Alamos, NM, US**
Organization **AOT-OPS/Accelerator Operations**

What You Will Do

This position will be filled at either the R&D Engineer 2 or R&D Engineer 3 level, depending on the skills of the selected candidate. Additional job responsibilities (outlined below) will be assigned if the candidate is hired at the higher level.

This position is to become a member of the Protective Systems Team in the Accelerator Operations Group (AOT-OPS) at the LANSCE Accelerator Facility division of the Los Alamos National Laboratory.

R&D Engineer 2 (\$79,600 - \$133,100)

The successful candidate will be required to:

- Provide maintenance and design support for major personnel and equipment protection systems and alarms at the LANSCE Accelerator Facility.
- Ensure these systems remain compatible with changes and upgrades to the accelerator complex such as the ongoing LANSCE Risk Mitigation Project.
- Complete a formal Qualification Program in order to demonstrate proficiency regarding the systems for which the team is responsible.
- Work closely with technicians and engineers from our own and other Maintenance Support teams across the facility.
- After qualification provide on-call support during accelerator operational periods on a rotating basis with other team members.
- Participate in the design, testing, and implementation of supported systems for the MaRIE project on the LANSCE mesa.
- Produce materials for technical reports, documents (including drawings and schematics), and presentations.
- Participate in the generation of code and network design for our Allen Bradley and Compact Rio PLC systems.
- Participate in team system installation activities, which can include working outdoors and ladder climbing.
- Occasionally work in high radiation/contamination areas. Team members are monitored by a rigorous dosimetry program.
- Ability to stand rotating on-call, working after hours if required.

R&D Engineer 3 (\$86,400 - \$148,200)

In addition to the duties outlined above, the (higher level title) will be required to:

- Take the lead in designing, planning, and executing R&D projects, particularly in support of MaRIE. Will include schedule development, cost estimates, and project status reports.
- Interact and collaborate effectively with internal and external colleagues, at the team, group, division, and laboratory levels.
- Provide technical leadership and mentoring to team members. Become a Subject Matter Expert for at least two of our systems.
- Ability to stand rotating on-call, working after hours if required.

What You Need

Minimum Job Requirements:

- Demonstrated and current design experience as an electrical engineer in both analog and digital circuitry.
- Demonstrated experience with in depth knowledge of PLC and relay-based interlock system design.
- Demonstrated experience with formality of operations and the ability to follow detailed procedures.
- Ability to complete a formal qualification program consisting of oral and manipulative examinations.
- Demonstrated experience with a major CAD or ECAD Program such as AutoCad and/or Mentor Graphics.
- Experience in writing and reviewing technical documents such as IWD's, system operating procedures, engineering design changes, and/or work permits.
- Demonstrated ability to work in a team environment.

Additional Job Requirements for R&D Engineer 3: In addition to the Job Requirements outlined above, qualification at the R&D Engineer 3 level requires:

- Ability to manage multiple projects, set priorities, and create detailed action plans.
- Experience providing technical direction to technologists, technicians, and junior engineers.
- Project management experience including schedule development, cost estimates, and project status updates.

Desired Skills:

- Extensive PLC experience, including formal training in Allen-Bradley networks, ladder logic, and PanelView interface control is desirable.
- Knowledge of Compact Rio applications and LabView programming familiarity is a plus.
- Ability to translate electronic design projects to drawings and system/circuit description documents.

Education:

R&D Engineer 2:

A minimum of a Bachelor of Science in electrical engineering from an accredited college or university.

R&D Engineer 3:

Typical requirement is an advanced degree from an accredited college or university. Master of Science in electrical engineering preferred.

Essential Job Functions:

Color discrimination, peripheral vision, depth perception, reading vision, ability to speak, ability to discriminate speech, ability to smell, ability to hear in a normal range (500 to 3000 htz), sitting, standing, walking, climbing stairs, climbing ladders, bending, stooping, crouching, kneeling, crawling, twisting the trunk or back, balancing, reaching overhead, reaching horizontally, reaching down, applying torque with hands or arms, gripping with the hands, pressing with hands or arms, pushing with hands or arms, pulling with hands or arms, typing or keyboarding, fine motor control, use of both hands, use of both arms, use of both legs, use of both feet, lifting 30+ pounds, carrying 30+ pounds

Notes to Applicants:

For full consideration, applicants must submit a comprehensive cover letter that addresses each of the key requirements of the position.

Additional Details:

Clearance: Q (Position will be cleared to this level). Applicants selected will be subject to a Federal background investigation and must meet eligibility requirements* for access to classified matter.

*Eligibility requirements: To obtain a clearance, an individual must be at least 18 years of age; U.S. citizenship is required except in very limited circumstances. See DOE Order 472.2 for additional information.

Pre-Employment Drug Test: The Laboratory requires successful applicants to complete a pre-employment drug test and maintains a substance abuse policy that includes random drug testing.

Regular position: Term status Laboratory employees applying for regular-status positions are converted to a regular status only with approval of the cognizant Principal Associate Director.

Equal Opportunity: Los Alamos National Laboratory is an equal opportunity employer and supports a diverse and inclusive workforce. All employment practices are based on qualification and merit, without regards to race, color, national origin, ancestry, religion, age, sex, gender identity, sexual orientation or preference, marital status or spousal affiliation, physical or mental disability, medical conditions, pregnancy, status as a protected veteran, genetic information, or citizenship within the limits imposed by federal laws and regulations. The Laboratory is also committed to making our workplace accessible to individuals with disabilities and will provide reasonable accommodations, upon request, for individuals to participate in the application and hiring process. To request such an accommodation, please send an email to applyhelp@lanl.gov or call 1-505-665-5627.

Where You Will Work

Located in northern New Mexico, Los Alamos National Laboratory (LANL) is a multidisciplinary research institution engaged in strategic science on behalf of national security. LANL enhances national security by ensuring the safety and reliability of the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction, and solving problems related to energy, environment, infrastructure, health, and global security concerns.

The Protective Systems Team supports the Accelerator Operations and Technology (AOT) Division, within the Operations Group (AOT-OPS). The team is responsible for Personnel Safety and Machine Protection Systems including Radiation Security System (RSS), Personnel Access Control Systems (PACS and EPACS), Run Permit (RP) and Fast Protect (FP). Sub-systems include Current Limiters (XL), Allen-Bradley PLC's, Activation Protect (AP) spill monitors, Current Monitors (CM), and Hardware Transmission Monitors (HWTM).

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