

Other Safety Evaluations and Work Authorizations

Some types of work activity hazards may require EHS evaluation or special authorizations. The WPC Activities will reference or attach the additional analyses, controls, or authorizations, which may include:

- **Chemical Hazards** may require industrial hygiene evaluations for work involving toxic or flammable chemicals or gasses, or cryogenics with the potential to cause oxygen deficiencies.
- **Electrical Work** may require a Qualified Electrical Worker with specialized equipment and training. Electrical equipment that is not approved by a Nationally Recognized Testing Laboratory must be inventoried and inspected. Work requiring **Lockout/Tagout** requires special training. If sources of energy must be locked out, an approved LOTO procedure is usually required for the equipment. **See ES&H Manual Chapter 8 Electrical Safety Program, Chapter 14 Electrical Equipment Safety, Chapter 18 Lockout/Tagout Program**, and the **Electrical Safety Manual** for further information. Contact the **Electrical Safety Advocate** about work authorization requirements.
- **Radiation Safety** The Radiation Protection Group provides several types of **Radiological Work Authorization (RWA)** for work with radioactive materials or sources of prompt radiation. If you plan to work with radioactive materials or equipment that may produce radiation, contact the **Health Physicist** assigned to your building to find out what type of authorization you need. **Non-ionizing radiation** such as RF, microwaves, ultraviolet light, or class 3b or 4 lasers may require evaluation by EHS Subject Matter Experts.
- **Hot Work Permits** are issued by the LBNL Fire Marshall's office for work with sources of ignition.
- **Penetration Permits** are issued by Facilities Division for work that requires penetrating a structural surface (wall, floor, ceiling) or ground where there may be hidden utilities.
- **Subcontractor Job Hazards Analyses (SJHAs)** are required when non-LBNL vendors or service providers will provide hands-on work at LBNL, such as setting up or testing equipment.
- **Engineering Safety Notes** may be required for approval of pressure systems; for example, pressure systems that are (1) assembled from a combination of mixed, commercially-available components and/or (2) designed, assembled and installed by LBNL personnel; and vacuum systems with glass view ports operating at >3 psig MAWP. See EHS Manual Chapter 7 Pressure Safety, Work Process A Pressure Safety Process Flow Chart.
- **Environmental Permits** may be required for discharges of chemicals to air, storm water, or sanitary sewer; storage of chemicals >55 gallons or in tanks; waste treatment; or significant changes to a building or operations that could impact the environment. See **Environmental** hazards listed in the WPC Activity Manager under the Hazards and Controls tab.

- **Export Control** restrictions may apply where equipment, software, or technology is shared with people who are not United States citizens.
- **Travel to or from the Lab during the COVID-19 pandemic** will require special approval from EHS and Division management. Travel to the Lab from an area with a higher COVID-19 case rate than Alameda County requires a 14-day quarantine or a Quarantine Equivalency Plan. Controls and work authorizations are documented through a WPC Activity (for employees or Affiliates) or a Subcontractor Job Hazards Analysis (for personnel who do not have an LBNL employee ID). The requirements are detailed in EHS Manual Chapter 46. See your Division Safety Coordinator for assistance. In addition, employee business travel may require COO/DOE approval.