



Environmental Science and Protection Technicians

CA and DOL – Environmental Science and Protection Technicians O*Net Code: 19-4042.00

Apprenticeship Competencies. Related and Supplemental Instruction are not paid (compliance). On-the-job-training are paid hours. Apprenticeships span one year. Compliance allows completion in more than six months and less than one year in cases of demonstrated progress.

Competency Check List

Demonstrates Fundamentals: Apprentice can perform the task with some coaching.

Proficient in Task: Apprentice performs task properly and consistently.

Completion Date: Date apprentice completes final demonstration of competency.

Competencies:

1. Collect samples of gases, soils, water, industrial wastewater, or asbestos products to conduct tests on pollutant levels or identify sources of pollution.
2. Record test data and prepare summaries or charts that interpret test results.
3. Prepare samples for testing and analysis. Discuss test results and analyses with team members.
4. Weigh, analyze, or measure collected sample particles, such as lead, coal dust, or rock, to determine concentration of pollutants.
5. Calibrate microscopes or test instruments.
6. Maintain files, such as hazardous waste databases, chemical usage data, personnel exposure information, or diagrams showing equipment locations.
7. Support set up of equipment or stations to monitor and collect pollutants from sites, such as smokestacks, manufacturing plants, or mechanical equipment.
8. Monitor emission control devices to ensure they are operating properly and comply with state and federal regulations.
9. Learn about amounts and kinds of chemicals to use in destroying harmful organisms or removing impurities from purification systems.
10. Project Management Software —Microsoft Teams: Utilize Microsoft Teams and Outlook to schedule and attend meetings, collaborate with team members, manage project tasks, and track progress.
11. Spreadsheet software — Microsoft Excel: Use Microsoft Excel to analyze data, create spreadsheets, and perform calculations.
12. Utilize Geographic Information Systems (GIS) to communicate and share data.

13. Utilize graphics, photo imaging, or mapping software to communicate and share information.
14. Utilize public and private databases and artificial intelligence to gather information related to pollution and conservation.
15. Analyzing Data or Information — Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
16. Organizing, Planning, and Prioritizing Work — Developing specific goals and plans to prioritize, organize, and accomplish your work.
17. Making Decisions and Solving Problems — Analyzing information and evaluating results to choose the best solution and solve problems.
18. Communicating with Supervisors, Peers, or Subordinates — Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
19. Establishing and Maintaining Interpersonal Relationships — Developing constructive and cooperative working relationships with others.
20. Communicating with People Outside the Organization — Communicating with people outside the organization, representing the organization to customers, the public, government, or other external sources.

ARTICLE IV Related Instruction

Apprentices shall satisfactorily complete prescribed courses of related and supplemental instruction, which will not be less than 144 hours per year. Related and supplemental instruction (RSI) will be provided by Open Source Agriculture Apprenticeship.

Time spent in related and supplemental instruction may not be compensated.

Approximate RSI time by Category:

Environmental Science and Protection Skills	40 Hours
Microsoft Office Suite	20 Hours
Technology	30 Hours
Communication	20 Hours
Analysis	20 Hours
Operations	20 Hours

Employers consistently ask for skills in the business - O*Net also list essential communication, technology, and communication competencies. Please refer to O*Net for their detailed lists.

Typically, Open Source Ag and partner Bayha Group provide RSI and collaborate with employers for on-the-job training.