

Chapter 21

Answer Key

1. b. Encapsulation, or the sealing off of disintegrating asbestos, is an alternate method of asbestos control that may be preferable to removal in certain circumstances.
2. c. Capping is the process of laying two to four feet of soil over the top of a landfill site that is full from compacting topsoil onto the waste and then planting grass on it to enhance the landfill's aesthetic value and prevent erosion.
3. c. Federal government regulations establish guidelines for owners of public and commercial buildings to test for asbestos containing materials. The removal process, though, requires state licensed technicians and specially sealed environments.
4. d. Lead was used as a pigment and drying agent in alkyd oil-based paint that is common on doors, window, and other woodwork. The federal government estimates that lead is present in about 75 percent of all private housing built before 1978.
5. b. In the 1970's, many homeowners had urea-formaldehyde foam insulation installed in their homes to conserve energy.
6. c. HUD issued the Lead-Based Paint Hazard Reduction Act of 1992 that requires disclosure of the presence of any known lead-based paint hazards to potential buyers or renters.
7. c. Radon can cause health problems and evidence suggests that it may be a cause of lung cancer.
8. d. The risk of radon increases as it builds up in an enclosed space because of inadequate ventilation. Energy efficient homes and buildings with practically airtight walls and windows may increase the potential for radon gas accumulation. Once radon accumulates in a basement, efficient heating and ventilation systems can rapidly spread the gas throughout the building.
9. a. Carbon monoxide is difficult to detect because it is odorless and colorless. Carbon monoxide can be quickly absorbed by the body causing lack of oxygen resulting in dizziness, nausea, and even death.

10. b. The federal underground storage tank program is regulated by the EPA. The regulations apply to tanks that contain hazardous substances or liquid petroleum products and that store at least 10 percent of their volume underground.
11. c. The electromagnetic fields produced by high voltage lines, as well as by secondary distribution lines and transformers, are suspected of causing cancer, hormonal changes, and behavioral abnormalities. There is considerable controversy and conflicting evidence about whether EMF's pose a health hazard.
12. a. According to the EPA, approximately 40 percent of the approximately 3 million to 5 million underground storage tanks that exist in the United States are leaking.
13. d. Liability under the Superfund is considered to be strict, joint and several, and retroactive. Strict liability means that the owner is responsible to the injured party without excuse. Joint and several liability means that each of the individual owners is personally responsible for the total damages. If only one of the owners is financially able to handle the total damages, that owner must pay the total and collect the proportionate shares from the other owners whenever possible. Retroactive liability means that the liability is not limited to the current owner but includes people who have owned the site in the past.