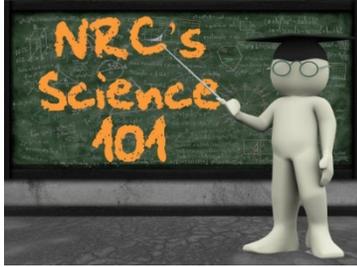


The Nuclear Regulatory Commission's Science 101: What Do You Know?



How much do you know about radiation, nuclear energy and the U.S. Nuclear Regulatory Commission?

Test your knowledge with these 10 questions. See the answers at the bottom. No cheating!

1. What is the basic building block of matter?
2. What is "background radiation"?
3. What is a chemical?
4. What does a nuclear power plant make?
5. What does nuclear fuel start with?
6. What is a Geiger counter?
7. What is atomic number 94?
8. Why is spent fuel put in a pool?
9. What are PWRs and BWRs?
10. What is the U.S. Nuclear Regulatory Commission?

Answers:

1. The atom!
2. The natural radiation that is always present in the environment, including radiation from the sun, stars and the earth itself. The typical average exposure in the U.S. from background radiation is about 310 millirems per year.
3. Any substance that has a defined composition. In other words, a chemical is always made up of the same “stuff.”
4. Electricity.
5. Uranium ore.
6. The Geiger counter is an instrument sensitive enough to detect ionization (radiation).
7. Plutonium is a radioactive, metallic element discovered in 1940 by scientists studying the process of splitting atoms. Plutonium is created in a nuclear reactor when uranium atoms, specifically uranium-238, absorb neutrons.
8. Spent fuel is very hot and radioactive, and put in pools when it's taken out of the reactor. These pools contain an enormous quantity of water—enough to cover the fuel by about 20 feet. The water cools the fuel and shields workers at the plant from radioactivity.
9. Both are types of nuclear power plants -- pressurized water reactor and boiling water reactor.
10. An independent federal government agency responsible for regulating the commercial use of nuclear materials.

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