

- Uranium
 - Plutonium
 - Tritium
 - Thorium
- b. Discuss the nuclear explosive safety implications of the following:
- LiH and LiD
 - Fogbank
 - Beryllium
 - UH₃
 - Plutonium hydride
- c. Discuss the safety and toxicity issues associated with weapon and process materials as listed in the existing current Weapon Safety Specifications for weapons in the stockpile. Discuss the protocols for handling the components of nuclear weapons and trainers during NES reviews.

3. Nuclear explosive safety study personnel must have knowledge of the internal design of nuclear explosives.

Supporting Knowledge and/or Skills

- a. Describe, in general terms, the basic design and working principles of implosion and gun-type devices.
- b. Describe the basic design of a thermonuclear weapon using a secondary.
- c. Explain the following nuclear explosive concepts and terminology:
- Initiation
 - Boosting
 - Alpha (Neutron Multiplication)
- d. Discuss the function, purpose, and design of the following systems and components:
- Arming
 - Fusing
 - Firing
 - High explosives
 - Fissionable material
 - Fissile material - primary and secondary
 - Detonators
 - Boosting device
 - Neutron generators

4. Nuclear explosive safety study personnel must have knowledge of nuclear detonation safety design concepts.

Supporting Knowledge and/or Skills

- a. Describe the following nuclear detonation safety design concepts: