

ANS Issues a Response to an Inquiry on ANSI/ANS-18.1-2020, *Radioactive Source Term for Normal Operation of Light Water Reactors* (Nuclear News, June 2023)

The ANS Standards Committee received an inquiry on ANSI/ANS- 18.1-2020. The inquiry and response are provided below. Some editorial changes have been made for clarity.

Inquiry: In Table 2, “Parameters used to describe the reference pressurized water reactor (PWR) with U-tube steam generators,” a term for the “weight of water in reactor coolant system” (WP) is defined. Can you please clarify if this value includes the mass of coolant in the pressurizer? And if so, what is the nominal percent fill of the pressurizer (i.e., 50% = half full of coolant)?

I currently assume that this value does not include the pressurizer. Please confirm if my assumption is correct.

Response: The WP, in fact, does include the coolant in the pressurizer (see [NUREG-0017, Revision 2, Section 3.2.2.3 p. 3-11](#)). The term “WP” is intended to represent the mass of all the water in the primary coolant system at operating temperature and pressure. This would include whatever water is in the pressurizer while the reactor is operating. For a standard Westinghouse PWR under steady-state operating conditions, approximately 60% of the pressurizer volume is occupied by water and 40% by steam. However, this value could vary between various plant designs.