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No. 97-133  
RELEASE

FOR IMMEDIATE

1997)

(Monday, September 15,

NRC AMENDS OPERATING LICENSE OF WATTS BAR TO PERMIT  
LIMITED PRODUCTION OF TRITIUM FOR DEPARTMENT OF ENERGY

The Nuclear Regulatory Commission staff has amended the license of the Tennessee Valley Authority's Watts Bar nuclear power plant to allow a limited amount of tritium to be produced for the Department of Energy.

Under the terms of the license amendment, four special assemblies, each holding eight rods containing lithium, will be loaded into the Watts Bar commercial reactor, near Spring City, Tenn., during its current refueling outage.

As the reactor operates, these rods will soak up excess neutrons, converting some of the lithium they contain into tritium. After 18 months inside the reactor, the rods will be removed from the reactor and stored in the spent fuel pool. Then they will be placed in shipping casks and shipped by DOE to a facility in Richland, Washington, for examination. About one ounce of tritium is expected to be produced during the demonstration test but will not be used in any weapons.

The United States has not produced tritium -- a radioactive form of hydrogen used in the fusion stage of nuclear weapons -- since 1988, when DOE closed a special production facility at the Savannah River plant, near Aiken, S.C. Current, short-term tritium needs are being met by recycling tritium from dismantled nuclear weapons.

DOE is responsible for establishing the capability to produce tritium by the end of 2005, in accord with a Presidential directive. DOE is considering plans to produce tritium in commercial light-water reactors, either by purchasing a reactor for its use, or by contracting with private industry at an existing NRC-licensed facility. Under the terms of a joint DOE/NRC Memorandum of Understanding of May 22, 1996, NRC is providing assistance to DOE in assessing and resolving technical and licensing issues involved in using commercial reactors for this purpose.

The NRC staff held a public meeting in Sweetwater, Tenn., on August 7 to provide a review and opportunity for public comment on the proposed demonstration test at Watts Bar. TVA submitted its license amendment request to the NRC staff on April 30. According to DOE, the primary purpose of the Watts Bar demonstration is to build confidence among prospective licensees, who may contract with DOE to produce tritium.

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