

# NRC INSPECTION MANUAL

DQASIP

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## INSPECTION PROCEDURE 61728

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### INDEPENDENT MEASUREMENT OF RCS LEAK RATES FOR A PWR

PROGRAM APPLICABILITY: 2515

#### 61728-01 INSPECTION OBJECTIVES

01.01 Independently verify that the reactor cooling system (RCS) leak rates for a PWR are within the limiting conditions for operation (LCOs).

01.02 Verify that the licensee's calculational technique for determining RCS leaks rates is adequate.

#### 61728-02 INSPECTION REQUIREMENTS

02.01 Create or update the plant parameter list needed for independent calculation of identified and unidentified RCS leak rates for a PWR.

02.02 Run the RCSLK8 option for calculating leak rates.

02.03 Where the intent is to verify the adequacy of the licensee's calculational technique, compare the results obtained in Section 02.02, above, to the results of the licensee's analysis when applied to the same set of data. If the inspector's and the licensee's identified and unidentified leaks rates differ by more than 0.2 gpm, determine the cause and take appropriate action.

#### 61728-03 INSPECTION GUIDANCE

03.01 Hardware and software needed to accomplish this inspection are:

- a. Osborne 1 portable computer and double density drives,
- b. Prowriter printer or equivalent (optional),
- c. RCSLK8 PROGRAM diskette.

Before running the program, the inspector should assure that the plant parameter list is correct. When running the program for the

first time for a specific reactor, the inspector will have to create a plant parameter list file using the option in RCSLK8 for storing plant parameters. Values of plant parameters can be corrected by running the option in RCSLK8 which was written for that purpose. For additional guidance, see NUREG-0986, "RCSLK8 User's Guide."

03.02 LCOs in standard technical specifications require that identified and unidentified leak rates be limited to less than 10 gpm and 1 gpm, respectively. The corresponding surveillance specification requires (during steady state operation) that these leak rates be determined at intervals of 72 hours or less by using the water inventory method. Monitoring and limiting the unidentified leak rate provides assurance that a through-wall crack would be detected and the reactor would be shut down before the crack grows to the critical length.

03.03 RCSLK8 can be run:

- a. Simultaneously with a test being performed by the licensee,
- b. Independently using operating data read from plant instrumentation by the inspector, and
- c. Independently using operating data from the licensee's records.

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