

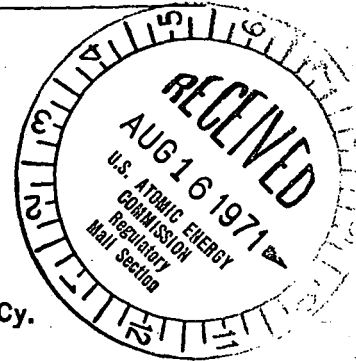
Commonwealth Edison Company

ONE FIRST NATIONAL PLAZA ★ CHICAGO, ILLINOIS

Address Reply to:

POST OFFICE BOX 767 ★ CHICAGO, ILLINOIS 60690

August 12, 1971



Dr. Peter A. Morris, Director
Division of Reactor Licensing
U.S. Atomic Energy Commission
Washington, D.C. 20545

Regulatory

File Cy.

Subject: Proposed Modification No. 71-3 to the Safety Analysis Report, DPR-25, AEC Dkt 50-249, to eliminate steam separator-dryer tests on Dresden Unit 3

Dear Dr. Morris:

Pursuant to 10 CFR 50.59, Commonwealth Edison Company requests that the Safety Analysis Report (SAR) to License DPR-25 be revised to eliminate the requirement to perform the steam separator-dryer measurements on Dresden Unit 3. Attached hereto is a revised page 13.8-1 of the SAR for Dresden Units 2 and 3.

Also, pursuant to 10 CFR 50.59, an appropriate Safety Analysis Report in support of this revision to the SAR to DPR-25 is attached. We have reviewed this report, and in our opinion, the requested modification does not increase the hazards already analyzed in the existing SAR. Specifically, there is (1) no increase in the probability of, or (2) no increase in the possible consequences of, or (3) no creation of a credible probability of an accident or malfunction different from accidents previously evaluated in the SAR. Therefore, the margin of safety as defined in the basis for any technical specification is not reduced.

Proposed Modification No. 71-3 has been reviewed and approved by Commonwealth Edison's Nuclear Review Board.

In addition to three signed originals, 77 copies of the proposed modification are also provided.

Very truly yours,

Byron Lee Jr.
Byron Lee, Jr.

Assistant to the President

SUBSCRIBED and SWORN to
before me this 12th day
of August, 1971.

Patricia A. Nelson
Notary Public

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13.8 STARTUP AND POWER TEST PROGRAM

13.8.1 General Requirements: The startup and power test program is performed to assure that the plant is capable of operating safely and satisfactorily. Systems and components, which cannot be fully checked out in pre-operational test phase, are tested at power during this phase of the unit startup to confirm reactor parameters and characteristics determined by an extensive program of analysis and tests executed prior to initial fuel loading. The nuclear characteristics of fuel, control rods and control curtains are calculated with methods which are continuously compared with results of experiments in the Vallecitos Atomic Laboratory's critical facilities, including measurements of similar or identical components. In addition, startup tests and operating data from other boiling water reactors in commercial operation and other measurements throughout the nuclear industry are used to confirm the applicability of the analytical methods.

The tests listed in 13.8.3, 13.8.4 and 13.8.5 will be conducted on Dresden Unit 2 and the results will be considered in preparing the specific tests to be performed in Unit 3.

* Tests which are unnecessary for Unit 3 are: 13.8.3g, Control Rod Sequence; 13.8.5s, Calibration of Rods; 13.8.5u, Rod Pattern Exchange and 13.8.4k, 13.8.5v, Steam Separator-Dryer Measurements. Tests which will be modified depending on the Unit 2 results, to collect a limited amount of data are: 13.8.3c, Radiation Measurements; 13.8.3d, Vibration Measurements; 13.8.3h, SRM Performance, 13.8.5h, Recirculation Jet Pumps and 13.8.5t, Axial Power Distribution.

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13.8.2 General Procedures: The startup procedures will be written, with individual detailed sub-sections.

13.8.3 Fuel Loading and Tests at Atmospheric Pressure: The initial fuel loading and critical testing are performed at near-zero power, and at atmospheric pressure, with the reactor pressure vessel open. The following tests are performed during this phase of the startup program:

- a. Chemical and Radiochemical tests are conducted to establish water conditions prior to initial operation and to maintain these throughout the test program. Chemical and radiochemical checks are made at primary coolant, off-gas exhaust, waste and auxiliary system sample locations. Base or background radioactivity levels are determined at this time for use in fuel assembly failure detection and long range activity buildup studies.
- b. Control Rod Drive System tests are performed on all drives prior to fuel loading to assure proper operability and to measure and adjust operating speeds. Drive line friction and scram times are determined for all drives at zero reactor pressure. Functional testing of each drive is performed with dummy fuel just prior to and then following the fuel loading in each cell.
- c. Radiation Measurements are made prior to nuclear operation to establish base levels in the plant and the nearby environs.

Safety Analysis Report
Deletion of Dresden Unit 3
Start-Up Testing of
Steam Separator-Dryer

The steam separator-dryer test was conducted in accordance with start-up test procedure #31 on Dresden 2. The purpose of this test was to verify the adequacy of the design of steam separator and dryer. The design bases for dryer-separator are: moisture carryover to the turbine shall not be greater than 0.002 weight fraction and steam carryunder to the jet pumps shall not be greater than 0.01 weight fraction. The results of the test indicated the maximum moisture carryover to the turbine is 0.000002 weight fraction and the maximum steam carryunder to the jet pumps is 0.004 weight fraction. These tests demonstrated by orders of magnitude the adequacy of the separator-dryer design.

The effects of moisture carryover and steam carryunder are not safety related. Moisture carryover to the turbine may cause turbine blade erosion and increased turbine contamination due to deposition of water soluble radioactive isotopes. Excessive steam carryunder would reduce jet pump efficiencies and core inlet subcooling. Although the above effects are significant to efficient operation of the facility they in no way relate to public health and safety.

Deletion of the steam separator-dryer testing from the Dresden 3 start-up test program is requested because (a) the equipment is identical to Dresden 2 and (b) the Dresden 2 testing demonstrated the adequacy of this equipment to meet the design

bases. The dryer and separator are static equipment; therefore no significant variation in performance are predicted for Dresden 3. Since the performances of the dryer and separator are not safety related, it is concluded the test can be deleted without further safety analysis.