

Regulatory Docket File

September 19, 1975

Mr. Benard C. Rusche, Director Office of Nuclear Reactor Regulation U.S. Nuclear Regulatory Commission

Washington, D.C. 20555

DOCKETED Saloject:
USNRC
LP26 1975

Dresden Station Units 2 and 3 Quad-Cities Station Units 1 and 2

Proposed Change to Operating Licenses
DPR-19, DPR-25, DPR-29, and DPR-30

NRC Docket Nos. 40-237 50-249,

50-254, and 50-265

ear Mr. Rusche:

Approval of a proposed change to Appendix A of DPR-19, DPR-25, DPR-29, and DPR-30 is requested pursuant to Part 50.59 of 10 CFR 50.

The proposed change will eliminate license requirements for jet pump flow indication and bring the current Technical Specification in conformance with the proposed Standard Technical Specifications.

Flow indications are worthwhile but not a necessity. Comparison of the data with a normal relationship or pattern provides the indication necessary to detect an inoperable jet pump. Agreement of indicated core flow with established core plate AP to core flow relationship provides the most assurance that recirculation flow is not bypassing the core through inoperable jet pumps.

This proposed change to the Technical Specifications has received Onsite and Offsite Review and approval and is indicated on the attached revised pages 91 and 99 for Dresden Units 2 and 3 and 120 and 141 for Quad-Cities Units 1 and 2.

Response to this request is needed by January 2, 1976. Three (3) signed originals and 37 copies of this proposed change and modification are provided for your use.

Att.

Very truly yours,

SUBSCRIBED and SWORN to before me this 19 day of leathynber, 1975.

R. L. Bolger

Assistant Vice President

Notary Public

10252

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Deceived W/Lir Dated 9-19-75

DRESDEN STATION UNITS 2 AND 3 TECHNICAL SPECIFICATIONS

Revised pages: 91 and 99.

4.6 SURVEILLANCE REQUIREMENT

F. Structural Integrity

The structural integrity of the primary system boundary shall be maintained at the level required by the original acceptance standards throughout the life of the plant

G. Jet Pumps

1. Whenever the reactor is in the Startup/Hot Standby or Run modes, all jet pumps shall be operable. If it is determined that a jet pump is inoperable, an orderly shutdown shall be initiated and the reactor shall be in a Cold Shutdown condition within 36 hours.

F. Structural Integrity

The nondestructive inspections listed in Table 4.6.1 shall be performed as specified. The results obtained from compliance with this specification will be evaluated after 5 years and the conclusions of the evaluation will be reviewed with the AEC.

G. Jet Pumps

- 1. Whenever there is recirculation flow with the reactor in the Startup/Hot Standby or Run modes, jet pump operability shall be checked daily by verifying that the following two conditions do not occur simultaneously:
 - a. The recirculation pump flow differs by more than 10% from the established speed-flow characteristics.
 - b. The indicated total core flow is mor than 10% greater than the core flow value derived from established core plate A p-to-core flow relationship.
- 2. Additionally, when operating with one recirculation pump with the equalizer valves closed, the diffuser to lower plenum differential pressure shall be checked daily, and the differential pressure of any jet pump in the idle loop shall not vary by more than 10% from established patterns.

G. Jet Pumps - Failure of a jet pump nozzle assembly hold down mechanism, nozzle assembly and/or riser increases the cross sectional flow area for blowdown following the postulated design basis double-ended recirculation line break. Therefore, if a failure occurs, repairs must be made to assure the validity of the calculated consequences.

A break in a jet pump decreases the flow resistance characteristic of the external piping loop causing the recirculation pump to operate at a higher flow condition when compared to previous operation.

Comparison of the data with a normal relationship or pattern provides the indication necessary to detect an inoperable jet pump.

Agreement of indicated core flow with

established core plate Δ p-to-core flow relationships provides the most assurance that recirculation flow is not bypassing the core through inoperable jet pumps. This bypass flow is reverse with respect to normal jet pump flow. The indicated total core flow is a summation of the flow indication for the twenty individual jet pumps. The total core flow measuring instrumentation sums reverse jet pump flow as though it were forward flow. Thus the indicated flow is higher than actual core flow by at least twice the normal flow through any backflowing pump.

A nozzle-riser system failure could also generate the coincident failure of a jet pump body; however, the converse is not true. The lack of any substantial stress in the jet pump body makes failure impossible without an initial nozzle riser system failure.



QUAD-CITIES STATION UNITS 1 AND 2 TECHNICAL SPECIFICATIONS

Revised pages: 120 and 141.

3.6 LIMITING CONDITION FOR OPERATION

F. Structural Integrity

The structural integrity of the primary system boundary shall be maintained at the level required by the original acceptance standards throughout the life of the plant

G. Jet Pumps

1. Whenever the reactor is in the Startup/Hot Standby or Run modes, all jet pumps shall be operable. If it is determined that a jet pump is inoperable, an orderly shutdown shall be initiated and the reactor shall be in a Cold Shutdown condition within 36 hours.

4.6 SURVEILLANCE REQUIREMENT

F. Structural Integrity

The nondestructive inspections listed in Table 4.6.1 shall be performed as specified. The results obtained from compliance with this specification will be evaluated after 5 years and the conclusions of the evaluation will be reviewed with the AEC.

G. Jet Pumps

- 1. Whenever there is recirculation flow with the reactor in the Startup/Hot Standby or Run modes, jet pump operability shall be checked daily by verifying that the following two conditions do not occur simultaneously:
 - a. The recirculation pump flow differs by more than 10% from the established speed-flow characteristics.
 - than 10% greater than the core flow value derived from established core plate p-to-core flow relationship.
- 2. Additionally, when operating with one recirculation pump with the equalizer valves closed, the diffuser to lower plenum differential pressure shall be checked daily, and the differential pressure of any jet pump in the idle loop shall not vary by more than 10% from established patterns.

Jet Pumps - Failure of a jet pump nozzle assembly hold down mechanism, nozzle assembly and/or riser increases the cross sectional flow area for blowdown following the postulated design basis double-ended recirculation line break. Therefore, if a failure occurs, repairs must be made to assure the validity of the calculated consequences.

A break in a jet pump decreases the flow resistance characteristic of the external piping loop causing the recirculation pump to operate at a higher flow condition when compared to previous operation.

Comparison of the data with a normal relationship or pattern provides the indication necessary to detect an inoperable jet pump.

Agreement of indicated core flow with established core plate Δ p-to-core flow relationships provides the most assurance that recirculation flow is not bypassing the core through inoperable jet pumps. This bypass flow is reverse with respect to normal jet pump flow. The indicated total core flow is a summation of the flow indications for the twenty individual jet pumps. The total core flow measuring instrumentation sums reverse jet pump flow as though it were forward flow. Thus the indicated flow is higher than actual core flow by at least twice the normal flow through any backflowing pump.

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