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APR 7 1977

Docket No. 50-346

MEMORANDUM FOR: Roger S. Boyd, Director, Division of Project Management, Office of Nuclear Reactor Regulation

FROM: Dudley Thompson, Acting Director, Division of Field Operations, Office of Inspection and Enforcement

SUBJECT: TOLEDO EDISON COMPANY, DAVIS-BESSE I, DOCKET NO. 50-346

We have been informed by our Region III Office, based on the results of their inspection results, that construction and preoperational testing of the subject facility have been completed in substantial agreement with docketed commitments and regulatory requirements, with the exceptions listed in the enclosures. The Office of Inspection and Enforcement has no further items which would preclude issuance of an operating license to permit facility operation up to its full design rating (or alternate operating limitations as appropriate). It is recommended that the operating license be conditioned with the information contained in the enclosures.

We have reviewed the licensee's preparations for implementation of the Quality Assurance Program for Operations, and have found that they meet the requirements of 10 CFR 50, Appendix B, as specified in the licensee's Quality Assurance Program (Chapter 17 of the FSAR), which was reviewed by the Office of Nuclear Reactor Regulation.

Original signed by
D. Thompson

Dudley Thompson, Acting Director
Division of Field Operations
Office of Inspection and Enforcement

See page 2 for enclosure
and distribution list

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Enclosures:
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B. Items to be completed before exceeding 200°F
C. Items to be completed before exceeding 280°F
D. Items to be completed before hot standby
E. Items to be completed before criticality
F. Items to be completed before power operation

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ENCLOSURE A

Items to be completed before fuel loading:

1. Preoperational Test Completion

   As of March 24, 1977, the status of 94 Preop tests identified as being required for fuel loading is as follows:

   a. Thirty-seven tests have been completed and approved.

   b. Thirty-two tests have been completed and are in the review chain.

   c. Twenty-five tests are either in progress or yet to be started.

   A select number of these require review by the inspectors subsequent to the licensee's review.

2. Diesel Generator Sequencer - SFAS Wiring

   Modifications to controls necessary to prevent interruption of sequencing when the SFAS is manually initiated have been installed but remain to be tested.

3. Diesel Generator Panel Temperatures

   Modifications and testing have been completed to direct the Diesel Generators units discharge temperature away from the panels. Licensee is awaiting certification from vendor that high panel temperatures did not damage electrical relays.

4. Diesel Generator Sequencer Out-of-Phase

   This item is awaiting an engineering study to determine the potential for the sequencers getting out-of-phase and the resulting consequences of the out-of-phase condition.

5. Safety Related Listing of System and Components

   The licensee is to develop a list of safety related activities including components, systems, and operations which fall under the cognizance of the Toledo Edison Quality Assurance Program. This information is to be included in controlled documents prior to fuel loading.

6. Power Ascension Test Review

   Of the 5 test procedures required to be completed prior to fuel loading, two have been completed, two are in progress, and one has been cancelled. The latter cancelled test is the Loose Parts Monitor. The resolution of this cancelled test has been forwarded to IE:HQ for action on March 17, 1977.

7. System Modification Review

The licensee has committed to review all proposed and completed systems revisions to assess whether or not system retesting is required. Approximately 220 of the 370 field changes and startup revision notices have been completed. The review indicated to date that 15 of the revisions would require system retest, six of which will require retest prior to fuel loading.

8. Penetration 29 Resolution

Manual normally opened bypass valves have been installed around the containment isolation valves for the Decay Heat suction line thus requiring a different containment boundary for penetration #29. This item will require NRR review.

9. Infrared Detectors

The FSAR states that infrared detectors will be installed in areas such as the emergency diesel generator rooms. The licensee has installed smoke detectors instead. This discrepancy must be resolved by the licensee.

10. Instrument Ground Grid System

During preop testing it was determined that the acceptance criteria could not be attained due to ground currents between the instrument and station ground systems. The licensee's testing technique was not sufficiently precise enough to define the problem. The licensee has obtained more precise testing equipment and is currently rerunning the test.

11. Preoperational Test Deferral

The licensee has submitted a request for partial relief on twenty-five preoperational tests required to be completed prior to fuel loading in accordance with Chapter 14 of the FSAR. NRR is currently reviewing the request. The licensee is still committed to review and approve the sections of these tests not contained in the relief request.

12. Flow Splitter

Resolution of representative particulate sampling characteristics of vent stack sampler (i.e., isokinetic flow at splitter) and orientation of charcoal filter assembly. This work is in progress (March 17) and is scheduled for completion by fuel loading.

13. Completion of Other Preoperational Tests

Completion of preoperational test procedures - radiation protection, radwaste, radiation monitors, ventilation (see FSAR Table 14-1, - except as specified in the licensee's relief requests dated February 22, 1977 and March 2, 1977. None of these procedures had been completed as of March 4, 1977.

14. Control Rod Drive System

The licensee's rod drop test does not conform to Regulatory Guide 1.68 with respect to rod trip time testing. The licensee has been informed of NRR's position and is evaluating further action.

15. NSS Heat Balance

The licensee's test procedure calls for adjusting flow instrumentation readings if the mismatch between reactor and turbine power exceeds one percent. The licensee is reviewing this method to determine if there is a conflict with Technical Specifications calibration requirements.

16. Records and Document Control

The licensee's corrective actions relative to records and document control inadequacies identified in Inspection Report 50-346/76-06 remain to be reviewed. This item is scheduled for review during the week of April 4, 1977.

17. Physical Protection

Reinspection of physical protection items noted during the inspection on August 4-6, 1976, were conducted during March 15-18, 1977. The following outstanding items must be resolved or completed before the licensee's physical protection plan can be considered operational:

a. All security type alarms identified in the security plan must be installed, functional and tested.

b. All openings to vital areas must be secured with formidable barriers and where applicable, with adequate locking devices.

c. The security plan must be revised to specifically identify all Vital Area doors.

d. All security training required by the security plan must be completed and adequately documented.

e. A Clear area must be maintained on each side of the protected area perimeter fence.

f. The locking devices for vital area portals must be changed upon turnover of vital areas from Construction to Operations.

g. All Physical Protection related communications equipment must be installed, functional and tested.

18. Emergency Planning

The inspection requirements in this subject area pertaining to offsite Agencies, Facilities, Equipment, Procedures, Tests, and Drills have been completed. The following outstanding items are being resolved with the licensee, and this activity is not expected to impact adversely on the IE recommendation for issuance of the O.L.

a. Items to be completed prior to fuel loading.

(1) A recently received letter of agreement shall be entered into Appendix C of the Emergency Plan and a list detailing the letters of agreement updated.

(2) Periodic testing procedures for supplied breathing air and those communications not related to security shall be developed and implemented.

(3) The station public address testing shall be completed in order to determine the adequacy of the quantity and quality of the system coverage in order to assure that personnel are made aware of emergency conditions. (This item may be modified dependent upon NRR action on the licensee's relief request of February 22, 1977.)

(4) Documentation of the completion of general orientation training for all station personnel, contractor personnel, and consultant support groups stationed on the site shall be available for review.

(5) Changes in Administrative Procedures, Emergency Procedures, and Health Physics Procedures discussed with a licensee representative during a previous inspection, shall be made.

(6) Clarification of the response to a fire alarm and/or the use of an additional emergency classification for local emergencies, where limited response is required, shall be made in the emergency plan and the FSAR. Retraining of personnel for the required response shall be performed.

19. Valve Yoke Failure

This item was reviewed with B&W during the past week. Based on this inspection it was determined that supplemental information would have to be provided to substantiate the seismic qualifications of the valve assemblies. Inspection of the stem replacement and seismic support installation remains to be completed.

20. Large and Small Pipe Hangers and Anchors

As of March 25, 1977, approximately 200 hangers and anchors remain to be inspected and accepted prior to fuel load for safety related systems. The acceptability of the exceptions, if any, must be reviewed.

21. Electrical - Firebarriers and Separation Between Redundant Class 1E and Non Class 1E Circuits

Criteria for fire barriers and separation between redundant Class 1E and non class 1E circuits within enclosures and between cable trays, wireways has been accepted by NRR and this matter is currently being examined. Final inspection by IE staff is awaiting the completion of the work. Criteria for separation of metal conduits containing class 1E cables is still being reviewed by NRR. This item is to be accepted by NRR and the work completed by the licensee before final review can be completed by regional staff.

During an inspection on March 23-25, 1977, it was determined that the licensee did not test fire barriers in accordance with ASTM E-119, which are representative of the installation at the Davis-Besse site. This item is being transmitted to IE:HQ for resolution.

22. Mixing of Protective and Control Circuits within RPS & SFAS Cabinets (Internal Cabinet Wiring in Conflict with IEEE 279)

Test results must be reviewed and accepted by NRR prior to fuel load relative to mixing of protective and control circuits within RPS and engineered safeguard cabinets. NRR is concerned that grounding, shorting, application of high voltage and/or electromagnetic and radio frequency noise may degrade the class IE system. We understand that NRR will impose the appropriate MODE restrictions regarding the resolution of this item.

23. Reactor Vessel Internals

The licensee is currently making repairs in accordance with the March 10, 1977 NRR meeting. The licensee's current completion date for the repairs is April 1, 1977.

24. Diesel Generator Sequencer - Anti Pump

"Modifications to insure that the sequencer is available whenever a loss of offsite power occurs..." Final report pursuant to 50.55(e) has been received. Item remains to be reviewed by regional staff.

25. CCW Surge Tank Instrument Interchanges

This change is stated to be complete by the licensee. The item must be reviewed by IE:III.

26. Removed Valves

Thirteen small valves were removed from safety related systems because of internal leakage. Applicable code which governs the hydrostatic pressure for retesting the systems is in question pending response from the authorized inspector.

27. Motor Control Center Electrical Stabs

The licensee has identified a problem with alignment of the MCC electrical stabs. This item will be reviewed during the next inspection.

Enclosure B

Items to be completed prior to Mode 5 (Exceeding 200°F)

1. Surveillance Tests

The licensee has 38 surveillance procedures out of a total of 141 remaining to be completed and approved. Surveillance procedures with an interval greater than quarterly must be developed in a timely fashion to permit their adequate review prior to implementation.

2. Electrical Reinspection - System Interactio.

The Engineering Inspection Reports document a number of conditions adverse to "system interaction considerations". This relates to a failure of a non safety related system which could adversely interact with and lead to the failure of a safety related system. The licensee has determined that none of these EIRs impact on fuel loading. Further review is required to determine by what mode the remainder of the approximately 274 items must be completed.

Enclosure C

Items to be completed prior to Mode 4 (Prior to exceeding 280°F)

1. High Pressure Injection Pump Modification

The licensee must provide documentation to establish that the modification work for the pumps is in accordance with the SAR and the specification requirements. In addition, the licensee must demonstrate by testing that the modification solves the pump bearing temperature problem.

2. HVAC System

Adequate corrective action relative to deficiencies in HVAC welding was not provided. Reinspection and rework is in progress.

In addition, the licensee has yet to provide documentation that the damper motor operators are seismic qualified.

Enclosure D

Items required to be completed to Mode 3 (Hot Standby)

None identified.

Enclosure E

Items required to be completed prior to Mode 2 (Criticality)

1. Communications

   Six additional speakers shall be installed in containment pursuant to an issued Startup Field Report.

2. Core Flood Tank

   The licensee's evaluation of the pressurization of the core flood tank using nitrogen for the condition where there is a large vapor space needs to be reviewed to determine if the subsequent temperature reduction could cause the temperature-pressure limitation for the tank to be exceeded.

3. Waterproof Trench Cover

   The licensee has committed to provide a periodic test procedure to assure periodic retesting of the leak tightness of the water proof trench cover installed over DH 11 and DH 12 in the containment.

Enclosure F

Items to be completed prior to Mode 1 (Power Operation)

1. Emergency Planning

   a. A permanent supplied air cascade charging system shall be installed.

   b. An isolation emergency plan implementing procedure to cope with weather conditions which require personnel to remain at the station for undetermined periods shall be developed. This procedure shall also address provisions for transportation of emergency personnel to the station when needed during these periods.

   c. Pursuant to a telephone conversation with a licensee representative on February 23, 1977, it is our understanding that the following topic will be studied for incorporation into the Emergency Plan Implementing Procedures. These topics relate to those areas where there is a high degree of inaccessibility:

(1) Evacuation of personnel to minimize exposure to a hazard.

( ) Personnel accountability to assist the person in charge of emergency response actions to account for missing persons.

(3) Reentry into previously evacuated areas for the purposes of saving lives, search and rescue of missing and injured persons. Safety equipment to be worn depending on areas or conditions shall be addressed.