



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NOV 27 1974

DOCKET NO. 50-286

APPLICANT: Consolidated Edison Company of New York, Inc. (Con Ed)

FACILITY: Indian Point 3

SUMMARY OF MEETING HELD ON NOVEMBER 6, 1974

A meeting was held in Bethesda, Maryland on November 6, 1974 with Con Ed representatives to discuss two outstanding technical items in the staff's review of the Indian Point 3 operating license application. The two items discussed were the design of the low pressure steam dump system (LPSDS) proposed by Con Ed to assure that the turbine will not exceed the design overspeed value of 133% and the revised results of Con Ed's analysis of the effects of postulated breaks in the service water systems on diesel generator cooling during the recirculation phase following a LOCA.

As a result of the meeting, the staff will evaluate the information gained in the meeting concerning the LPSDS design and formulate its position regarding the system. With regard to the service water system break analysis Con Ed will update the FSAR as soon as possible to include the information presented at the meeting. Con Ed must acquire one further bit of information requested by the staff from the diesel manufacturer. The staff requested that this information be provided by December 1, 1974. An attendance list is enclosed.

DISCUSSION

Low Pressure Steam Dump System

Periodic Testing - Con Ed indicated that testing of the actuation logic would be accomplished by checking electrical continuity to the solenoid and in a separate test the valve would be actuated to assure that it is operable. Periodic testing of valve opening times was not proposed by Con Ed, though the valve supplier would verify that the valve opening times conformed to the design specification (0.35 to 0.45 seconds). Con Ed was requested to investigate the feasibility of periodically testing valve opening times.

Valve Position Alarms and Indication - Con Ed indicated that valve indication would be provided in the control room by colored lights for the motor operated isolation valves and the dump valves. An alarm will be initiated in the control room when any of the isolation valves leave the open position.

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Identification of Electrical Components - Con Ed indicated that no special identification of the electrical components was anticipated, however, separation of actuation channels would be provided and that at present the cables associated with the actuation channels were in new trays by themselves in the turbine building.

Loss of Instrument Air to the Valves - The dump valves are actuated by a solenoid valve which relieves air provided from the instrument air system so that a mechanical spring may drive the valve open. Loss of the instrument air system will not cause the valves to open because the valve design is such that once air is supplied to close the valve only the solenoid opening can relieve the air from the chamber. Con Ed stated that one valve failing to open during power operation would have only a minimal effect on normal turbine operation.

Solenoids - The "A" and "B" channel solenoids are energized to open from separate safety related buses.

Tech Spec Curves - Con Ed representatives indicated that the tech spec curves, which define power level limits as a function of dump lines available for a given condenser backpressure and overspeed trip set point, were developed from a detailed computer code which simulated the turbine system. The code has been verified by comparing actual test results from a number of Westinghouse turbines with the code predictions.

Effects of Loss of Condenser Vacuum - Con Ed representatives indicated that a loss of off-site power simultaneous with a turbine trip was not a concern. They indicated that actuation of the LPSDS during this event would have only a small transient effect on the condenser vacuum decay and that the increase in condenser pressure would not be excessive in this case.

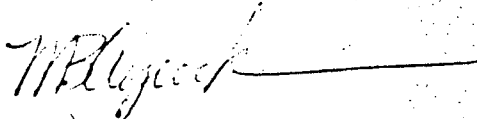
SERVICE WATER SYSTEM BREAK ANALYSIS

Con Ed representatives explained that in order to assure cooling to the component cooling water heat exchangers for all postulated breaks a revised service water system lineup will be used. However, with the new lineup, for one of the postulated breaks, flow to two of the diesel generators fell below the diesel manufacturers previously indicated required flow of 400 gpm.

Because of this result Con Ed asked the diesel manufacturer to verify that the diesels would operate with the reduced flow in the recirculation mode. The manufacturer indicated that with the reduced load on the diesel during the recirculation mode (the 400 gpm requirement was based on a fully loaded diesel), the diesel could operate indefinitely at flows as low as 300 gpm. We requested that Con Ed expand the FSAR text to include the basis for the diesel manufacturer's conclusions.

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One other situation was explored concerning flow to the diesels. Following one of the postulated breaks, the cooling water would flow through one of the diesels and then backflow through the remaining two diesels at a rate of 400 gpm. This backflow would enter the diesels at elevated temperatures pick up heat from the hotter jacket water first then enter the lube oil coolers. This sequence of events may have an adverse effect on the performance of these two diesels. Con Ed indicated that they would ask the diesel manufacturer to evaluate this. We requested that this information be provided by December 1, 1974.



M. B. Aycock, Project Manager
Light Water Reactors Project Branch 1-1
Directorate of Licensing

Enclosure:
Attendance list

ENCLOSURE 1
ATTENDANCE LIST
NOVEMBER 6, 1974 MEETING
CONSOLIDATED EDISON COMPANY
INDIAN POINT 3
DOCKET NO. 50-286

Con Ed

John J. Grob, Jr.
R. Remshaw
John Horvath
Thomas Klein
J. Curry
A. F. Jaffi

WEDCO

H. Clark
J. A. Dahlheimer

Westinghouse

Ivor V. Lewis
G. Zlatkowski

United Engineers

R. S. Wolfe
M. F. Chamow
G. C. Duerr
J. E. Sosnowsky

AEC

M. B. Aycok
D. F. Fischer
D. F. Thatcher
L. J. Connery
R. J. Giardina

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