

NOV 19 1973

DOCKET NO: 50-286

APPLICANT: Consolidated Edison Company of New York, Inc.

FACILITY: Indian Point Nuclear Generating Unit 3

SUMMARY OF MEETING HELD ON OCTOBER 30, 1973 TO DISCUSS THE INDIAN POINT 3 TECHNICAL SPECIFICATIONS, THE STATUS OF THE DIESEL COOLING CONCERN, AND A NEW PROBLEM - TURBINE OVERSPEED

A meeting was held in Bethesda, Maryland on October 30, 1973 between the AEC and Consolidated Edison Company of New York, Inc. Westinghouse and WEDCO also attended the meeting. The purpose of the meeting was to talk about the Indian Point 3 technical specifications, the status of the diesel cooling concern, and a new problem concerning turbine overspeed.

Various sections of the technical specifications were reviewed and agreed upon. A draft of the technical specifications was forwarded to the AGRS on October 31, 1973.

Several months ago the staff informed Consolidated Edison that breaks in the nuclear service water header could result in insufficient diesel cooling since all three diesels are connected to a common nuclear service water inlet line. Consolidated Edison is still working on the diesel cooling problem. A hydraulic code has been used to calculate flow rates through the diesels for various break locations, with several other locations yet to be calculated. These computer runs are based on the assumption that the operating procedures for Indian Point 3 will be rewritten to require that one of the three diesels be switched from the nuclear header to the conventional header as part of the transformation from the injection phase of the LOCA to the recirculation phase. The break in the nuclear service water system is then assumed to occur with two diesels on the nuclear header and the third diesel on the conventional header.

Initial results for the selected break locations are encouraging in that it appears sufficient flow passes through the diesels to permit adequate cooling.

By placing one of the three diesels on the conventional header when entering the recirculation phase, and then assuming a break in the nuclear header, service water will actually back flow through the two diesels still on the nuclear header, thereby cooling the diesels. This backflow path will cause the water that enters the two diesels on the nuclear header to be preheated since this same backflow water must first cool the containment fan coolers and the third diesel. The staff has requested that the applicant determine if this preheated diesel inlet water could damage the lube oil system or the diesel water jacket.

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Should the analysis indicate that acceptable flows and temperatures exist for all break locations, the staff will require that the code be verified by tests. This would be done by putting the service water header into several configurations and then comparing the measured flow against the calculated flow.

Consolidated Edison also discussed the turbine overspeed problem. The turbine on Indian Point 3 is one of six domestic nuclear facility turbines that have been constructed without interceptor valves between the high pressure turbine exhaust and the low pressure turbine. The other nuclear plants include Point Beach 1 and 2, San Onofre 1, Haddam Neck, and Indian Point 2.

During the recent turbine trip tests at Indian Point 2 it was discovered that the turbine overspeed was greater than previously calculated. Because the Indian Point 2 and 3 turbines are essentially identical, an extrapolation of the Indian Point 2 tests to the Indian Point 3 power level indicated an overspeed of 136% at 1.5 inches of mercury and a trip set point of 106%.

The design overspeed is 132%, as discussed in Appendix 14A of the Indian Point 3 FSAR. Overspeeds can be reduced by design modifications and by lowering the turbine trip set points. Too low a turbine trip set point would cause operational problems.

Consolidated Edison plans to modify the Indian Point 3 turbine to extract more steam from the moisture separators and to route this steam to the condenser through dump valves. The applicant does not expect to have a firm design for about three months and it is doubtful if the design modifications will be completed by the projected fuel loading date.

The applicant has proposed and the staff has accepted the use of technical specification limits to reduce the power level and/or trip set point until the modifications are installed.

These design modifications will be verified by a turbine trip test after the modifications have been made. A special report on the test will be required. Additional test data will be available from the Indian Point 2 50% and 100% load rejection tests and the premodification 50% and 100% load rejection tests on the Indian Point 3 turbine. These tests will serve to show the effect on the design modifications and will help verify the computer code that calculates the maximum turbine overspeed. (A 100% load rejection turbine overspeed test does not test the turbine to 132%, as this is not practical. A computer code is used to calculate the turbine overspeed for the test conditions and for those degraded conditions that could lead to the design limit overspeed.)

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The proposed technical specification that relates power level to turbine set point and the number of operable dump valves is attached. These curves will be verified by the test data. A list of attendees is also attached.

Original signed by
H. Specter

H. Specter, Project Manager
Pressurized Water Reactors
Branch No. 1
Directorate of Licensing

Attachments:

1. Proposed Technical Specification
2. Attendance List

cc: See page 4

OFFICE➤	PWR-1 <i>HB</i>	PWR-1 <i>HB</i>			
SURNAME➤	HSpecter:cls	DBVassallo			
DATE➤	11/19/73	11/19/73			

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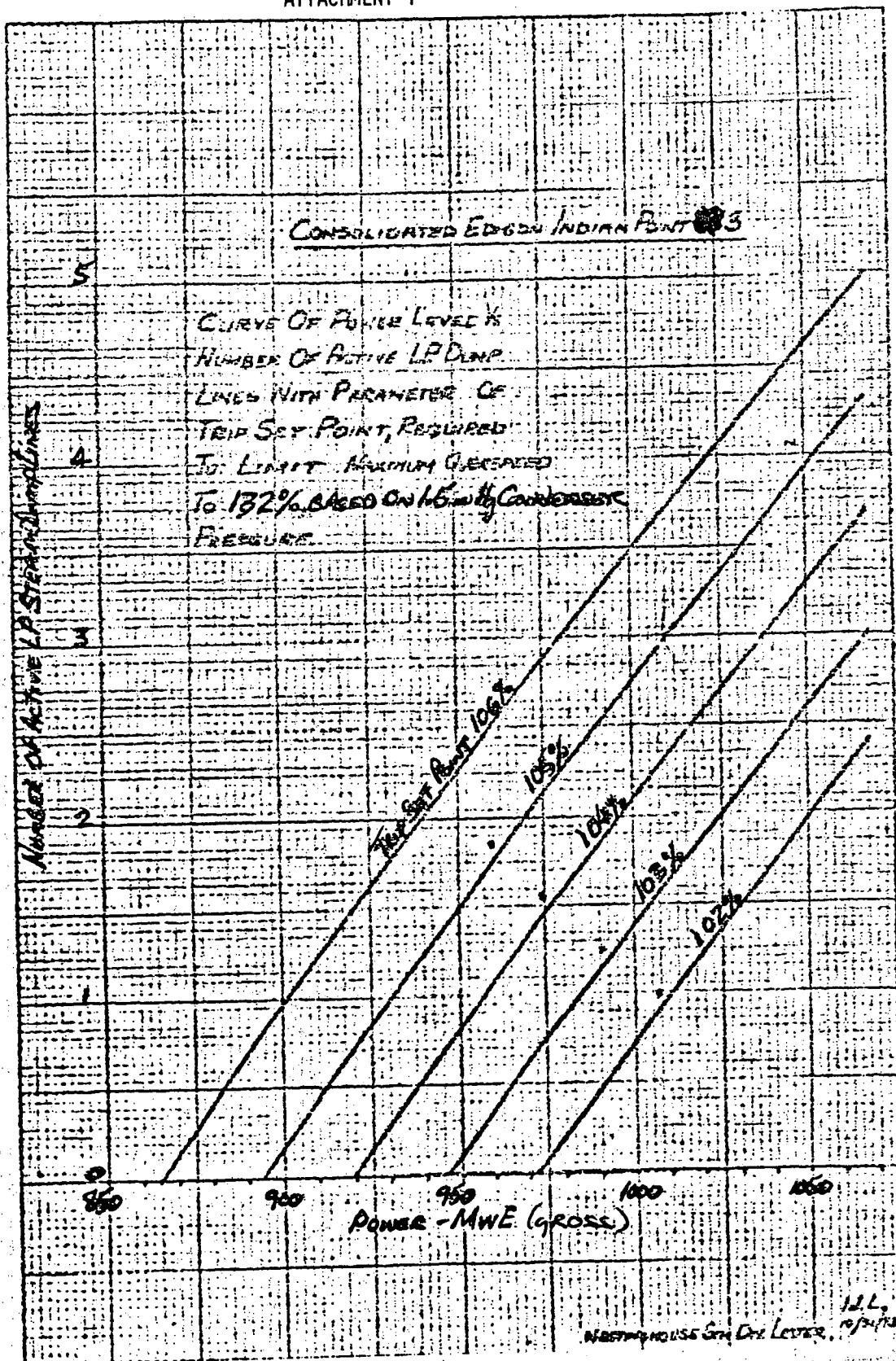
SAFETY FIRST

ATTENTION:- H. CLARK / J. DAHLHEIMER.

5954-952-2177

WEDCO

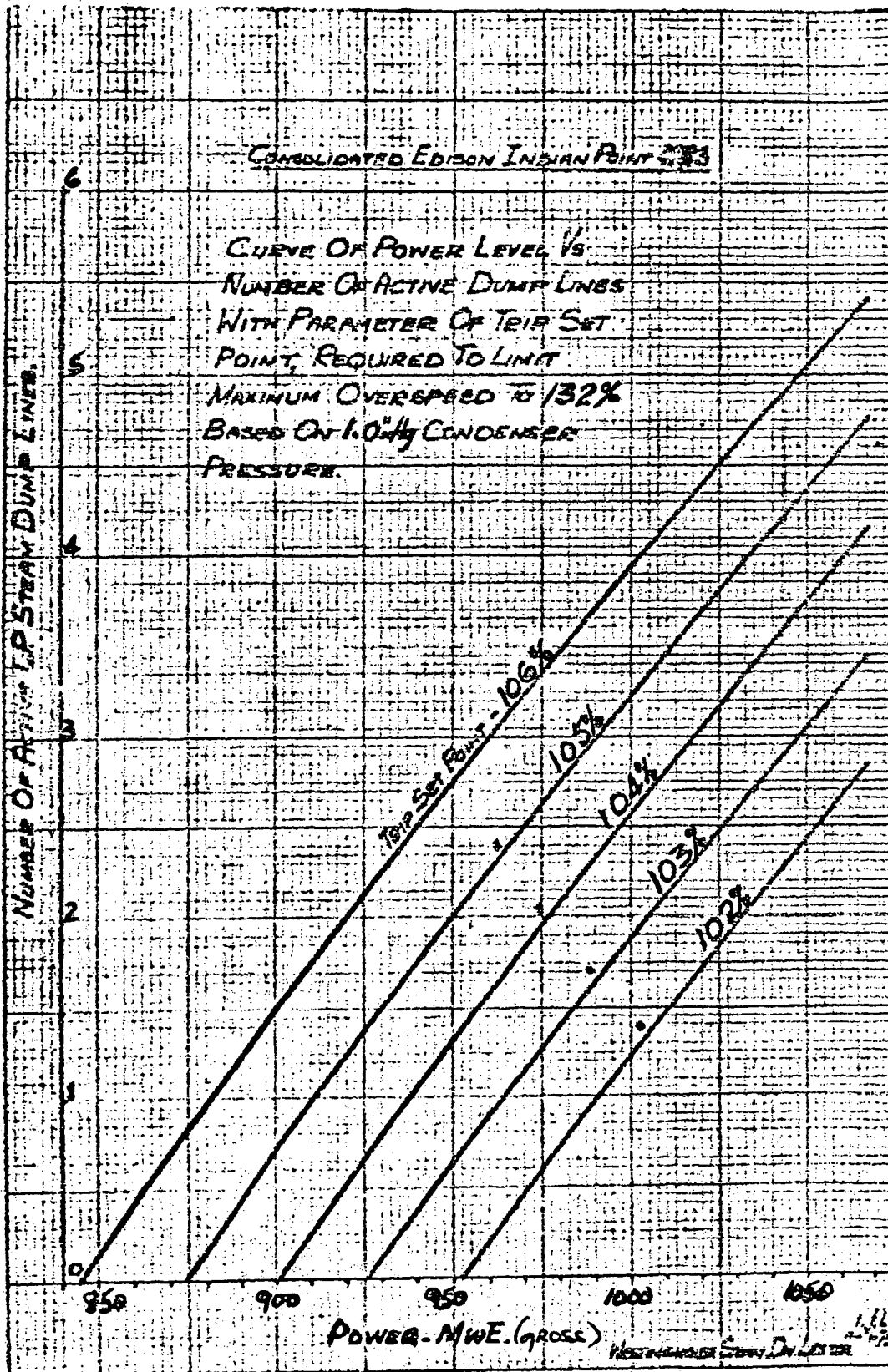
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12. L.
10/24/73

ATTENTION : CLARK / J DAHLHEIMER :
 WEXCO.

8-412-256-4565



ATTACHMENT 2

ATTENDANCE LIST

MEETING WITH CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

OCTOBER 30, 1973

CONSOLIDATED EDISON

John J. Grob
John Horvah
Richard P. Remshaw
Steven H. Cantone
Salvatore Sulla

WEDCO

Harry Clark
Joseph A. Dahlheimer

Westinghouse

Ivor J. Lewis

AEC

Herschel Specter
D. B. Vassallo
Kazimieras M. Campe
Ken G. Hoge
L. J. Connery
M. Dunenfeld

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cc: Docket
AEC PDR
Local PDR
RP Reading
L Reading
PWR-1 Reading
PWR-1 File
R. W. Klecker
RO (3)
V. Benaroya
C. Long
R. Vollmer
J. Kastner
D. Ross
G. Lainas
T. Ippolito
W. Houston
J. Knight
S. Pawlicki
L. Shao
B. Grimes
W. Gammill
R. Ballard
P. Fine
T. Novak
M. Spangler
R. Tedesco
V. Stello
R. Maccary
H. Denton
R. DeYoung
V. Moore
D. Skovholt
D. Muller
W. R. Butler
J. F. Stolz
R. A. Clark
R. E. Ireland
D. B. Vassallo
K. Kniel
K. Goller
A. Schwencer
R. F. Schemel
D. L. Ziemann
P. L. Collins
G. W. Knighton
G. Dicker
B. J. Youngblood
W. H. Regan, Jr.
J. Hendrie

OGC
J. Lee
H. Specter
K. M. Campe
K. G. Hoge
L. J. Connery
M. Dunenfeld
R. Denise
R. F. Fraley, ACRS (16)