



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUN 21 1980

Docket Nos.: 50-247
50-286
50-295
50-304

LICENSEES: Consolidated Edison Company of New York
Power Authority of the State of New York
Commonwealth Edison Company

FACILITIES: Indian Point, Units 2 and 3
Zion, Units 1 and 2

SUBJECT: SUMMARY OF TECHNICAL PRESENTATION MEETING ON JUNE 18, 1980,
WITH CONSOLIDATED EDISON COMPANY OF NEW YORK (CON ED), POWER
AUTHORITY OF STATE OF NEW YORK (PASNY), AND COMMONWEALTH EDISON
COMPANY (CECo) TO PRESENT THEIR CURRENT VIEWS ON DEGRADED
COOLING/CORE MELT ACCIDENT SEQUENCES.

Following the series of five technology exchange meetings on Zion/Indian Point (Z/IP), the utilities wished to present a summary of their current results on dominant accident scenarios and related probabilistic studies. (These studies are reported in "An Evaluation of the Residual Risk from the Indian Point and Zion Nuclear Power Plants," Report #36A75, OPS, February 1980.) The subject meeting was therefore arranged and held in the Holiday Inn, Bethesda, on June 18. In part, this meeting was organized to fulfill the goal expressed at the bottom of page 3 of the meeting report for Technology Exchange Meetings 1 and 2:

"To give the utilities the opportunity to present the accident sequences they feel dominate the Z/IP risk as opposed to the sequences presently being considered by the NRC staff."

Dr. Dee H. Walker of OPS and Dr. Robert Henry of Fauske Associates gave the principal presentations. Their view-graphs are attached, and a few notes on their presentations are as follows:

Accident Sequence Identification

The rationale for deleting the TKQ and TKQM sequences is that OPS has concluded that they do not lead to core melt for the Z/IP configurations. Although TML has been deleted, TMLB' (loss of all ac power) has been retained. Sequences added are the "HF" sequences because the containment spray recirculation is not separate from the ECCS recirculation as it was in WASH-1400.

Summary of WASH-1400 Differences

The probability of containment failure, given a steam explosion scenario had been taken as 10^{-2} . This is reduced to 10^{-3} or 10^{-4} due to more recent analyses of steam explosion phenomena. Operator error probabilities are reduced by taking credit for the Shift Technical Advisor. The diesel generator common

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mode failure probability is reduced by two orders of magnitude because of the presence of five diesel systems.

Initiating Event Summary

The IP-2 and Zion labels are reversed for the item "Loss of Offsite Power (T)."

Suggested Sequences for Design

OPS suggests omitting from consideration the AB-burn sequences as having very low probability, and the S₂C sequences because of the highly reliable containment spray injection. They believe that TMLB' and TMLB'' have a low enough probability to be eliminated as sequences, but they may have some value for systems evaluation, and thus are not being dropped from current studies.

Subsequent discussions were too preliminary to indicate the NRC degree of acceptance of these deletions. The staff has never considered AB-burn as a sequence which dominates risk for Z/IP. It has been used to envelope challenges to the containment and to the mitigation features being considered. NRC is continuing its evaluation of the TMLB' sequences.

Phenomenology in Reactor Cavity

Dr. R. Henry of Fauske and Associates presented an analysis of the tendency for fuel debris to be swept out of the reactor cavity. His conclusion is that the escaping steam from the blowdown would have sufficient velocity to disperse the fuel fragments widely. The relationship between the high steam velocities he predicts and the associated containment pressure spike should be evaluated based on his proposed scenario.

An outline of the probabilistic studies being performed by Pickard, Lowe and Garrick was presented by Mr. George Klopp. (These studies were reported more fully at a following meeting on June 25, and are scheduled for completion in the late summer.)

Agenda, attendance list and view-graphs are attached.

John K. Long
Reactor Systems Branch
Division of Systems Integration

Enclosures:
As stated

Attendance List - June 18, 1980

Jim Meyer	NRC/NRR
Dee H. Walker	OPS - Washington
Ed Reeves	NRC/NRR
John Olshinski	NRC/NRR
Peter Cybulskis	Battelle - Columbus
James Leas	UCS
Jan B. Van Erp	ANL
Raymond Alcouffe	LASL
Garry Thomas	NSAC/EPRI
Miles C. Leverett	NSAC/EPRI
Waheed Sayed	Power Authority of State of N.Y.
James F. Davis	" " " "
S. S. Iyer	" " " "
Pedro J. Franceschi	Con. Ed. N. Y.
Louis F. Liberatori	Con. Ed. N. Y.
Bill Bennett	Con. Ed. N.Y.
Don Paddleford	Westinghouse
S. Acharya	NRC/NRR
T. E. Fenstermacher	NRC/NRR
R. K. Frahm	NRC/NRR
G. Quittschreiber	ACRS
R. A. Bari	BNL
A. J. Buslik	BNL
P. M. Williams	NRC/NRR
T. P. Speis	NRC/NRR
E. R. Schmidt	NUS
P. F. Riehm	NRC/NRR
Karl J. Toth	NUS
O. Akalin	NRC/NRR
Rick Sherry	NRC/RES
Jeffrey Nibert	NRC/RES
Mel Silberberg	NRC/RES
Walter A. Von Rieseemann	Sandia Labs
Er-Ping Chen	" "
M. H. Fontana	ORNL
L. N. Rib	NRC/RES
L. Soffer	NRC/NRR
Armand A. Lakner	NRC/NRR
D. E. Bessette	NRC/ARCS
W. F. Kortier	Westinghouse
Marty Oper	Westinghouse
Dennis C. Richardson	Westinghouse
B. W. Washburn	DOE/LASL
John Yevick	DOE
D. Louis Peoples	Commonwealth Edison Co.
D. K. Goeser	Westinghouse
M. S. Medeiros, Jr.	NRC/SD
G. T. Klopp	Commonwealth Edison
Jim Martin	PAS/RES/NRC
Mat Taylor	PAS/RES/NRC
Ray DiSalvo	NRC/RES
John Long	NRC/NRR
David A. Aldrich	Sandia
Roger M. Blond	NRC/PAS
Nancy B. Willoughby	Bechtel
Bob Radlinski	Bechtel

Michael J. Hitchler
Jay D. Dunkleberger
Dennis C. Bley
Gary Boyd
R. D. Piccent
L. O'ishan

Westinghouse
NYS Energy Office
Pickard, Lowe & Garrick, Inc.
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