



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

MAY 12 1981

Docket No.: 50-341

APPLICANT: Detroit Edison Company

FACILITY: Fermi 2

SUBJECT: SUMMARY OF APRIL 28, 1981 OL REVIEW MEETING REGARDING REASSESSMENT
OF SEISMIC STRUCTURAL MARGIN

The purpose of the meeting was to hear applicant's results for the reassessment of structures and components to withstand a Safe Shutdown Earthquake (SSE). The following is a list of the enclosures:

- Enclosure 1 is a list of attendees,
- Enclosure 2 is an agenda,
- Enclosure 3 is a handout used in the meeting, and
- Enclosure 4 is an FSAR index for seismic qualification of equipment and structures.

The applicant is using a seismic response spectrum for the reassessment that meets the criteria outlined in our March 27, 1981 meeting.

The sequence of events for the plant cooldown is shown on Page 1 of Enclosure 3. Systems and equipment required to achieve cold shutdown is listed on Pages 2, 3 and 4 of Enclosure 3.

Applicant said they plan to sample systematically the app. 3500 pipe hangers for evaluation. All hangers were designed to a 90% yield strength criteria for the design basis earthquake loads. Therefore, the margin is designed to be the same for all, so that a few having the least margin cannot be selected. Applicant stated that load combinations varied for different components and structures. (Enclosure 4, which references FSAR sections for various structures and components, was subsequently provided.)

The staff in Structural Engineering Branch requested that for critical elements of the structures, the stresses for loss-of-coolant accident loads should be provided as well as the stresses for the earthquake loads. These LOCA stresses will be useful in the staff's judgment of the margin to accommodate the earthquake loads.

The staff in Equipment Qualification Branch requested that information needed to assess seismic qualification be included in the reassessment submittal.

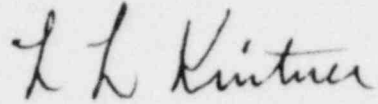
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Detroit Edison Company

- 2 -

The applicant plans to submit its results on May 12, 1981 and meet with the staff on May 19, 1981 to discuss them.

A handwritten signature in cursive script, reading "L L Kintner".

L. L. Kintner, Project Manager
Licensing Branch No. 1
Division of Licensing

Enclosures:
As stated

cc: See next page

Mr. Harry Tauber
Vice President
Engineering & Construction
Detroit Edison Company
2000 Second Avenue
Detroit, Michigan 48226

cc: Eugene B. Thomas, Jr., Esq.
LeBoeuf, Lamb, Leiby & MacRae
1333 New Hampshire Avenue, N. W.
Washington, D. C. 20036

Peter A. Marquardt, Esq.
Co-Counsel
The Detroit Edison Company
2000 Second Avenue
Detroit, Michigan 48226

Mr. William J. Fahrner
Project Manager - Fermi 2
The Detroit Edison Company
2000 Second Avenue
Detroit, Michigan 48226

Mr. Larry E. Schuerman
Detroit Edison Company
3331 West Big Beaver Road
Troy, Michigan 48064

David E. Howeli, Esq.
21916 John R
Hazel Park, Michigan 48030

Mr. Bruce Little
U. S. Nuclear Regulatory Commission
Resident Inspector's Office
6450 W. Dixie Highway
Newport, Michigan 48166

Dr. Wayne Jens
Detroit Edison Company
2000 Second Avenue
Detroit, Michigan 48226

Enclosure 1

Detroit Edison Company - NRC

April 28, 1981

Detroit Edison Company

F. E. Gregor
J. H. Casiglia
W. M. Street

S&L

R. A. Witt
M. Valathur
P. R. Olson
M. Hassaballa

GE

R. L. Smith
Cedric Child

NRC Staff

C. P. Tan
P. T. Kuo
D. Terao
J. P. Knight
J. Kimball
Arnold Lee
L. L. Kintner

ENCLOSURE 2

NRC - EDISON MEETING

April 28 - 1:30 P.M.

SEISMIC REEVALUATION

Agenda

- New Earthquake Sequence of Events
- Shutdown and Cooldown with LOPA
- Identification of Systems and Components
- Representative Systems/Component Selection
 - Piping Systems
 - Hangers/Supports
 - Equipment - Pumps, Valves, Vessels
 - Load Evaluation on Nozzles, Supports
 - Small Piping Design Standard
 - Cable Tray Hanger Evaluation
 - Reactor Vessel and Critical Internals
 - Suppression Pool
 - Electrical and Control Panels, Racks
 - HVAC Ducting and Supports
 - Power Systems (AC/DC)
 - Underground Piping, Ducts
- Methods of Evaluation
 - Spectra Comparison
 - Actual Reanalysis
 - Margin Determination and Comparison
- Acceptance Criteria Discussion, Conservatism
- Documentation of Results
- Schedule of Submittals and Working Meetings
- NRC - Questions (MEB, EOP)

ENCLOSURE 3

SHUT-DOWN COOL DOWN SEQUENCE OF EVENTS

- a). SER-Quake Causes Loss of Offsite Power.
- b). LOPA Initiates Isolation and Scram Via CRD.
- c). HPCI & RCIC Start Automatically.
- d). HPCI Trips on High Level or Manually by Operator.
- e). SRV's May Open on Springs (High Pressure).
- f). Operator Opens SRV's on M.S. Line B to Aid Depressurization.
- g). RPV is depressurized to 95 PSIG using SRV & RCIC in Torus Suction Mode.
- h). RHR SD Cooling Mode Initiates - RCIC Trips.
- i). RHR/SDC Cools RPV to < 200F.

- Transient Ends -

MAIN SYSTEMS LISTING

- 1). RCIC
- 2). Nuclear Boiler (M.S.L. B + 3 SRV)
- 3). RHR - Div II (SDC)
- 4). CRD

AUXILIARY (SUPPORT) SYSTEMS LISTING

- 1). RHR SW - Div I
- 2). Diesel Gens - Div I
- 3). Diesel Fuel Oil & Lube Oil - Div I
- 4). EECW Div I
- 5). EESW Div I
- 6). Control Air - Div I
- 7). Control Center HVAC - Air Side - DIV I
- 8). Control Center HVAC - Water Side - DIV I
- 9). Drywell Cooling - 4-2 Speed Fans Only
- 10). Small Piping - Report SL-3159
- 11). Diesel Generator Ventilation - Div I
- 12). Torus
- 13). DGSW - DIV I

GENERIC ESSENTIAL EQUIPMENT LISTING

Equipment

Drywell Coolers

Room Coolers

Elect Tray

Elect Conduit Hangers

I & C Tubing

MCC's

Switchgear

Relay Room & Control Room Racks

Batteries & Chargers

Diesel Generators

Underground Elect Ducts

Underground QAI Pipe (RHR Complex)

MOV Operators

Pumps & Motors - Non GE

Control Center Ceiling & Lights

NSSS EQUIPMENT LISTING

I. RPV and Internals

Key Vessel & Internal Components per FSAR Table 3.7-11

II. Piping in Drywell Main Steam Lines A and B

Snubbers

MSIV's - Inside

SRV's

HPCI

RCIC

Recirculation - Suction and Discharge

Valves

Pump and Motor

RHR Supply Line

RHR Return Line

Snubbers

III. Floor Mounted Equipment

Hydraulic Control Units

RHR Pumps and Motors

RCIC Equipment

Representative Panels and Racks

ENCLOSURE 4

Response to Info. Request on Seismic

Reevaluation Per Meeting 4/28/81

Qualification of Seismic Category I Equipment and Structures

<u>Component</u>	<u>Qualification Procedure</u>	<u>FSAR Reference</u>
Electrical & Instrumentation	Envelope of NS & EW + V Simultaneously (by analysis)	3.10.1.3.3.7
Cable Trays	SRSS of H & V Along Principal AXIS	3.10.2.2
Piping (Subsystems)	SRSS of NS-EW-V	3.7.3.6.7
Mechanical Equipment	SRSS of NS-EW-V	3.7.3.16.2
G.E. Supplied	IEEE 344-1971	3.10.1.2
Structure	SRSS of NS-EW and V	3.7.2.1.2.2
Buried Duct and Piping	Forces Due to Wave Propagation in Rock and Soil	3.7.2.1.3.1

MEETING SUMMARY DISTRIBUTION

MAY 12 1981

Docket File
NRC PDR
Local PDR
TIC/NSIC Tera
N. Hughes
LP#1 Reading
H. Denton
E. Case
D. Eisenhut
R. Purple
B. J. Youngblood
A. Schwencer
F. Miraglia
J. Miller
G. Lainas
R. Vollmer
J. P. Knight
R. Bosnak
F. Schauer
R. E. Jackson
Project Manager L. L. Kintner
Attorney, OELD
M. Rushbrook
OIE (3)
ACRS (16)
R. Tedesco



G. Lear
V. Noonan
S. Pawlicki
V. Benaroya
Z. Rosztoczy
W. Haass
D. Muller
R. Ballard
W. Regan
D. Ross
P. Check
Chief, Power Systems Branch
O. Parr
F. Rosa
W. Butler
W. Kreger
R. Houston
Chief, Radiological Assessment Branch
L. Rubenstein
T. Speis
W. Johnston
J. Stolz
S. Hanauer
W. Gammill
T. Murley
F. Schroeder
D. Skovholt
M. Ernst
R. Baer
C. Berlinger
K. Kniel
G. Knighton
A. Thadani
D. Tondi
J. Kramer
D. Vassallo
P. Collins
D. Ziemann

NRC Participants:

C. P. Tan, P. T. Kuo
D. Terao, J. P. Knight,
J. Kimball, Arnold Lee,
L. L. Kintner

bcc: Applicant & Service List