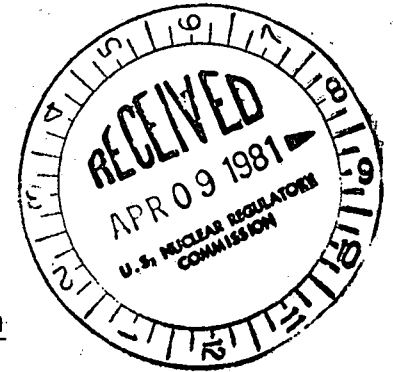




Commonwealth Edison
 One First National Plaza, Chicago, Illinois
 Address Reply to: Post Office Box 767
 Chicago, Illinois 60690

March 30, 1981



Paul O'Connor, Project Manager
 Operating Reactors
 U.S. Nuclear Regulatory Commission
 Washington, D.C. 20555

Subject: Dresden 2
 SEP Topic III-6, Seismic Design Consideration
 NRC Docket 50-237

Reference(a): R.F. Janecek Letter of March 13, 1981 to
 Dennis M. Crutchfield

In response to reference (a) item 1, Commonwealth Edison had John A. Blume and Associates prepare the attached figure and tables in response to a staff request for additional information on the Reactor-Turbine Building junction. Tables 1 and 2 list the nodal masses and element properties for the Reactor and Turbine Building, respectively. Tables 3 and 4 summarize the shear forces, overturning moments and torsional moments in various members of the Reactor and Turbine Building, respectively. Table 5 provides the axial and shear forces, and in-plane moments for the Reactor-Turbine Building slab. Figure 1 is the same dynamic model as used by LLL.

With respect to Item 5 of reference (a), Commonwealth Edison will provide the staff with a "road map" of how the analysis was done along with simplified sketch of the reactor internals showing the general layout. In addition, additional extracts of the original B&W stress report on the vessel will be provided along with the attachment details of the vessel to the concrete pedestal. The above listed information or a schedule for when the information will be submitted will be sent to the staff by April 24, 1981.

Please address any questions you may have concerning this matter to this office.

One (1) signed original and thirty-nine (39) copies of this transmittal have been provided for your use.

A035
3
1/1

Very truly yours,

Robert F. Janecek

Robert F. Janecek
 Nuclear Licensing
 Administrator
 Boiling Water Reactors

810 4090 467

P

NPS/sb/1861B
 Attachments
 cc: Dresden Region 3 Inspection

TABLE 1
SUMMARY OF NODAL MASSES

Node Number*	Mass, k-sec ² /ft
Reactor Building	
1	55.16
2	27.64
3	10.22
4	1,028.50
5	1,008.70
6	1,203.60
7	1,072.20
8	2,011.20
Turbine Building	
9	111.09
10	10.30
11	11.86
12	2,225.90

* Refer to Figure 1

TABLE 2
SUMMARY OF ELEMENT PROPERTIES

Element Number	Axial Area (ft ²)	Shear Area, ft ²		Moment of Inertia, ft ⁴	
		N-S	E-W	@ N-S	@ E-W
Reactor Building					
1	-	3.0	3.9	10,000,000	10,000,000
2	-	4.0	4.8	10,000,000	10,000,000
3	-	4.5	7.2	10,000,000	10,000,000
4	5,640	1,915.0	3,100.0	53,900,000	6,160,000
5,6	5,900	2,359.0	2,939.0	58,340,000	6,608,900
7,8	4,480	1,751.0	2,416.0	35,700,000	6,858,900
9	4,900	1,997.0	2,570.0	39,500,000	7,917,000
10	8,480	4,159.0	4,151.0	63,206,000	16,500,000
Turbine Building					
11	-	10,000,000	8.0	10,000,000	128
12	-	10,000,000	12.8	10,000,000	128
13	-	10,000,000	13.8	10,000,000	128
14	6,622	2,314	2,711.0	170,080,000	20,100,000

* Refer to Figure 1

TABLE 3
SUMMARY OF STRUCTURAL RESPONSES
REACTOR BUILDING

Element* Number	Node* Connectivity	Shear, kips (E-W)	Overturing Moment K-ft @ N-S	Torsional Moment K-ft, @ Vertical
1	1	1,100	0	**
	2	1,100	22,278	**
2	2	1,406	22,278	**
	3	1,406	40,052	**
3	3	1,465	40,052	**
	4	1,465	58,985	**
4	4	22,292	58,985	**
	5	22,292	543,170	**
5	5	40,446	543,170	**
	34	40,446	1,102,700	**
6	34	39,919	1,102,700	4,176
	6	39,919	1,308,900	4,176
7	6	57,872	1,308,900	4,176
	35	57,872	1,791,900	4,176
8	35	30,577	1,791,900	424,290
	7	30,577	2,272,200	424,290
9	7	41,297	2,272,200	424,290
	8	41,297	3,428,500	424,290
10	8	51,367	3,428,500	424,290
	37	51,367	5,740,000	424,290

* Refer to Figure 1

** Were not calculated in 1979 LLL analysis and hence were not calculated in latest URS/Blume analysis.

TABLE 4
SUMMARY OF STRUCTURAL RESPONSES
TURBINE BUILDING

Element* Number	Node* Connectivity	Shear, kips (E-W)	Overturing Moment, k-ft @ N-S	Torsional Moment, k-ft @ Vertical
11	9	1,914	0	0
	10	1,914	41,158	0
12	10	2,040	41,158	0
	11	2,040	82,037	0
13	11	2,133	82,037	0
	12	2,133	123,530	0
14	12	45,745	123,530	2,985,700
	38	45,745	2,199,100	2,985,700

* Refer to Figure 1

TABLE 5
SUMMARY OF STRUCTURAL RESPONSES
REACTOR-TURBINE BUILDING SLAB

Element* Number	Node* Connectivity	Axial force, kip	Shear, kip (E-W)	Inplane Moment, k-ft, @ Vertical axis
16	64	0.157	27,304	801,350
	12	0.157	27,304	2,985,700
61	35	**	**	**
	64	**	**	**

* Refer to Figure 1

** Were not calculated in 1979 LLL analysis and hence were not calculated in the latest URS/Blume analysis.

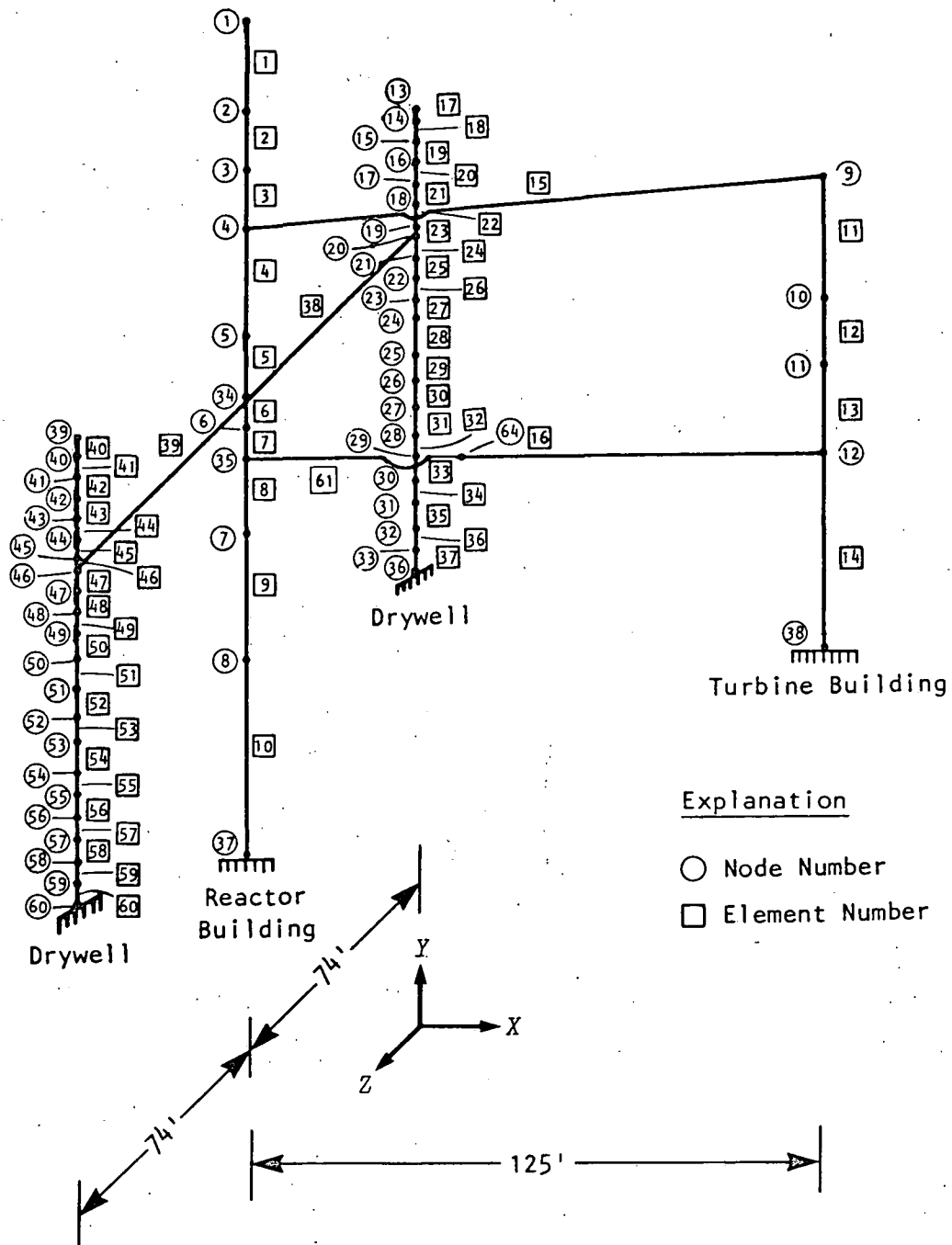


FIGURE 1 LLL THREE-DIMENSIONAL MATHEMATICAL MODEL, RTBC