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July 3, 1980

Mr. Harold R. Denton, Director
 Office of Nuclear Reactor Regulation
 U. S. Nuclear Regulatory Commission
 Washington, DC 20555

Subject: Byron Station Units 1 and 2
Braidwood Station Units 1 and 2
 Response to NRC Request for
 Additional FSAR Information
 NRC Docket Nos. 50-454, 50-455,
 50-456 and 50-457

Reference (a): B. J. Youngblood letter to D. L. Peoples dated
 June 16, 1980

Dear Mr. Denton:

Per a request received in Reference (a), Commonwealth Edison hereby transmits the drawings and information listed in the attachment to this letter.

These drawings were selected with the concurrence of R. E. Lipinski of your staff and representatives of the Idaho National Laboratory. The structure and component drawings contained in this submittal are those of the Byron Station Auxiliary Building and Containment Building. A list of these drawings will be added to the FSAR with a subsequent amendment.

One (1) signed original and thirty-nine (39) copies of this letter are transmitted for your use. As previously agreed, seven (7) sets of drawings are being transmitted under separate cover for NRC Staff's use, and one (1) copy is being transmitted directly to Idaho National Laboratory. Except for information requested in Item 1a, one copy of the free field time history in the form of a computer tape is being provided for each.

Very truly yours,

Robert F. Naughton

William F. Naughton
 Nuclear Licensing Administrator
 Pressurized Water Reactors

LR&LIST
Bo01
3/1

DRWS
Bo25
3/17

Two RWS

Attachment

cc: C. Obenchain
 1761A

8007160 559

ATTACHMENT

BYRON/BRAIDWOOD INDEPENDENT STRUCTURAL ANALYSIS

1. For the Auxiliary Building

a. Free field design (SSE & OBE) time history

Enclosed is a magnetic tape containing the free field design time histories for the horizontal and the vertical direction.

The tape is a 9 track, 1600 bpi unlabeled tape. It contains one file in IBM EBCDIC format with record and block sizes of 80 and 1600 characters, respectively.

The acceleration time history data is in 4(F6.3, F12.6) format of T(I), ACC(I). We have also provided you with a complete listing of the tape.

The time histories are normalized to a maximum ground acceleration of 1g and they are to be scaled for use in the analysis.

The scale factors for each excitation are as follows:

1)	OBE Vertical	0.1069
2)	OBE Horizontal	0.102
3)	SSE Vertical	0.238
4)	SSE Horizontal	0.228

b. Drawings defining structural framing (reinforced concrete beams and columns, steel girders, beams, and columns, composite beams) for column line 25 from column line I to column line Q and column line 18 from column line L to column line W

Enclosed are microprints of the structural and architectural drawings as listed.

c. Dead and live loading for the above listed framing

Enclosed are microprints of the mechanical and electrical loading drawings as listed. The following minimum loading applies:

Fixed equipment load = 100 psf

Piping = 50 psf

Raceways = 30 psf

The floor live load for normal loading conditions is 200 psf. The floor live load for seismic loading conditions is 50 psf.

- d. A complete structural drawing list for the Auxiliary Building and Containment

Enclosed is the complete structural and architectural drawing list.

- e. General structural drawing notes, Drawings S-497 and S-1141

These drawings are included under Item 1(b).

- f. Structural drawings defining floor slabs and beams at El. 439'-0" and 401'-0" from column line 23 to column line 26 and from column line N to column line Q

These drawings are included under Item 1(b).

- g. Dead and live loading for the floors described above.

This loading is included under Item 1(c).

2. For the Containment Building

- a. Prestress loads (F lbs/tendon)

Tendon Group	Effective prestress force at 40 years kips/tendon)
Dome	1192
Hoop	1065
Vertical	1223

- b. Normal Thermal effects and loads (T_o)

$$T_{int} = 120^{\circ}F$$

<u>Location</u>	<u>$T_{exterior}$</u>
General	110 ^o F summer 0 ^o F winter
Below Grade	Approximately 100 ^o F at basemat wall junction, linear to 80 ^o F at El. 396' to general value at grade, El. 401' year round
Basemat	Approximately 80 ^o F year round

- c. Normal pressure loads (P_v)

$$P_o = \pm 3 \text{ psi}$$

- d. Abnormal thermal effects and loads (T_a)

See Sargent & Lundy EMD file #000842 and 001642 for all data. (attached)

- e. Abnormal design pressure load (P_a)

$$P_a = 50 \text{ psi}$$

For time history to determine phase relationship between P_a and T_a , see EMD reports and FSAR Figures 6.2-1, 2, and 3.

STRUCTURAL DRAWINGS

DRAWING	REV.	DATE	DRAWING	REV.	DATE
S-470	S	3/31/80	S-670	H	10/21/77
S-471	D	9/13/76	S-671	J	1/20/78
S-472	B	9/17/76	S-673	V	3/2/79
S-473	C	2/3/77	S-675	AA	4/1/80
S-474	B	9/7/76	S-678	J	2/22/78
S-475		12, 4/75	S-679	Z	4/22/80
S-476	M	9/22/77	S-682	V	2/13/80
S-477	D	5/12/80	S-690	AB	3/13/80
S-479	F	10/1/76	S-691	AM	4/1/80
S-480	F	8/26/76	S-693	M	4/1/80
S-481	F	11/10/77	S-696	AR	1/23/80
S-482	E	7/10/78	S-697	AL	12/11/79
S-484	D	2/18/77	S-700	U	3/12/80
S-485	C	1/13/78	S-704	N	10/5/79
S-486	D	11/10/77	S-705	M	3/16/78
S-487	C	6/14/77	S-706	P	12/11/79
S-488	B	5/3/76	S-707	N	3/31/78
S-489	N	4/11/78	S-717	Y	4/1/80
S-490	H	10/12/76	S-718	AH	4/1/80
S-493	G	3/28/78	S-720	AA	5/30/78
S-494	C	3/28/78	S-721	AJ	1/23/80
S-496	S	1/14/80	S-728	Y	2/5/80
S-497	T	5/1/79	S-729	W	7/20/79
S-653	E	10/21/77	S-731	V	12/7/78
S-654	J	10/5/79	S-732	T	7/2/79
S-655	E	8/31/76	S-747	V	2/20/80
S-656	D	5/1/78	S-748	AA	10/30/79
S-657	E	11/23/77	S-751	W	4/22/80
S-658	E	11/23/77	S-752	S	9/22/77
S-659	D	11/23/77	S-754	J	8/18/77
S-660	D	12/10/76	S-756	H	4/25/78
S-661	D	7/9/76	S-767	R	4/1/80
S-662	B	11/8/76	S-772	R	5/26/77
S-667	D	1/26/77	S-774	M	4/17/78
S-668	C	1/26/77	S-776	R	12/7/78

DRAWING	REV.	DATE	DRAWING	REV.	DATE
S-777	G	3/31/78	S-1551	H	7/10/78
S-793	E	2/17/78	S-1566	N	12/11/79
S-797	K	5/18/77	S-1567	M	12/21/77
S-798	J	12/10/76	S-1568	Z	4/1/80
S-1141	P	10/30/79	S-1569	AB	3/13/80
S-1145	E	4/22/77	S-1571	N	7/2/79
S-1149	J	1/24/79	S-1572	AA	1/14/80
S-1286	Y	9/20/79	S-1616	Z	4/1/80
S-1287	G	12/13/77	S-1617	M	3/13/80
S-1293	AK	4/22/80	S-1629	P	2/5/80
S-1294	AG	12/11/79	S-1630	F	4/22/80
S-1297	AD	3/13/80	S-1632	R	2/13/80
S-1302	AN	4/22/80	S-1633	K	4/1/80
S-1303	AN	2/13/80	S-1634	K	12/11/79
S-1306	T	12/11/79			
S-1310	AB	2/5/80	S-1338-BY	E	5/1/78
S-1314	V	4/1/80	S-1565-BY	N	12/4/79
S-1318	AG	4/22/80			
S-1321	Z	4/22/80	S-1338-BR	A	10/28/77
S-1324	AA	3/13/80	S-1565-BR	G	10/14/79
S-1326	W	12/11/79			
S-1327	P	11/7/79			
S-1332	J	11/13/78			
S-1333	U	4/1/80			
S-1335	S	12/11/79			
S-1341	M	4/11/78			
S-1342	K	5/1/79			
S-1354	V	3/28/79			
S-1363	C	6/30/78			
S-1364	B	7/5/77			
S-1365	C	12/21/77			
S-1446	AA	1/4/80			
S-1447	R	5/12/80			
S-1448	G	5/12/80			
S-1550	L	4/12/79			

ARCHITECTURAL DRAWINGS

DRAWING	REV.	DATE	DRAWING	REV.	DATE
A-207	V	2/11/80	A-262	U	4/3/80
A-208	W	2/3/80	A-263	U	3/12/80
A-210	U	2/11/80	A-267	W	5/2/80
A-219	K	2/11/80	A-268	W	5/2/80
A-220	R	4/3/80	A-271	T	4/3/80
A-223	S	4/3/80	A-275	N	3/12/80
A-229	U	2/11/80	A-278	L	2/11/80
A-232	P	3/12/80	A-280	L	5/2/80
A-234	P	2/11/80	A-282	T	2/11/80
A-238	U	4/3/80	A-283	P	2/11/80
A-239	P	3/19/80	A-287	F	1/23/79
A-242	L	9/13/79	A-288	D	2/11/80
A-246	C	3/2/79	A-318	N	5/2/80
A-253	Z	5/2/80	A-319	F	5/2/80
A-254	AA	5/2/80	A-226	J	2/11/80
A-257	U	2/11/80	A-230	Y	5/2/80
A-260	P	10/8/79	A-251	M	1/31/80

MECHANICAL LOADING SET

DRAWING	REV.	DATE
M-23-1	C	3/17/75
M-23-2	C	3/17/75
M-23-3	B	4/10/74
M-23-4	C	3/17/75
M-23-5	B1	9/15/75
M-23-6	B	4/10/74
M-23-7	C	3/17/75
M-23-8	C	3/17/75
M-23-9	B	4/10/74
M-23-10	B	4/10/74
M-23-11	A	4/10/74
M-23-12	A	4/10/74
M-23-13	C	3/17/74

ELECTRICAL LOADING SET

DRAWING	REV.	DATE
6/20ES-37	5	12/5/79
6/20ES-38	6	12/5/79
6/20ES-39	6	12/5/79
6/20ES-40	6	12/5/79
6/20ES-41	6	12/5/79
6/20ES-42	7	12/5/79
6/20ES-43	4	12/5/79
6/20ES-121	3	3/22/77
6/20ES-122	4	12/5/79
6/20ES-123	4	12/5/79
6/20ES-125	2	11/6/75
6/20ES-285	1	3/25/77