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 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylvania 05000387
 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylvania 05000388
 AUTH. NAME AUTHOR AFFILIATION
 CURTIS, N.W. Pennsylvania Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 SCHWENCER, A. Licensing Branch 2

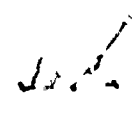
SUBJECT: Submits addl info re proposed 42-inch Transco pipeline.
 Analysis of steel structure showed that time for steel to reach 1,000 F is in excess of 60 S, while estimated burn time of gas cloud order of magnitude less.

DISTRIBUTION CODE: B001S COPIES RECEIVED: LTR 1 ENCL 0 SIZE: 2
 TITLE: Licensing Submittal; PSAR/FSAR Amdts & Related Correspondence

NOTES: 1cy NMSS/FCAF/PM, LPDR 2cys. 05000387
 1cy NMSS/FCAF/PM, LPDR 2cys. 05000388

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	NRR LB2 LA	1 0	PERCH, R. 01	1 1
INTERNAL:	ELD/HDS4	1 0	IE FILE	1 1
	IE/DEPER/EPB 36	3 5	IE/DEPER/IRB 35	1 1
	IE/DQASIP/QAB21	1 1	NRR/DE/AEAB	1 0
	NRR/DE/CEB 11	1 1	NRR/DE/EHEB	1 1
	NRR/DE/EQB 13	2 2	NRR/DE/GB 28	2 2
	NRR/DE/MEB 18	1 1	NRR/DE/MTEB 17	1 1
	NRR/DE/SAB 24	1 1	NRR/DE/SGEB 25	1 1
	NRR/DHFS/HFEB40	1 1	NRR/DHFS/LQB 32	1 1
	NRR/DHFS/PSRB	1 1	NRR/DL/SSPB	1 0
	NRR/DSI/AEB 26	1 1	NRR/DSI/ASB	1 1
	NRR/DSI/CPB 10	1 1	NRR/DSI/CSB 09	1 1
	NRR/DSI/ICSB 16	1 1	NRR/DSI/METB 12	1 1
	NRR/DSI/PSB 19	1 1	NRR/DSI/RAB 22	1 1
	NRR/DSI/RSB 23	1 1	REG FILE 04	1 1
	RGN1	3 3	RM/DDAMI/MIB	1 0
EXTERNAL:	ACRS 41	6 6	BNL (AMDTS ONLY)	1 1
	DMB/DSS (AMDTS)	1 1	FEMA-REP DIV 39	1 1
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NOTES:		3 3		

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DATE	TIME	LOCATION	PERSONNEL	ACTIVITIES
1	10:00	Room 101	John Doe	Meeting
2	11:00	Room 102	Jane Smith	Training
3	12:00	Room 103	Bob Johnson	Work
4	13:00	Room 104	Alice Brown	Meeting
5	14:00	Room 105	Charlie White	Work
6	15:00	Room 106	Diana Green	Meeting
7	16:00	Room 107	Frank Black	Work
8	17:00	Room 108	Grace King	Meeting
9	18:00	Room 109	Henry Lee	Work
10	19:00	Room 110	Ivy Hill	Meeting
11	20:00	Room 111	Jack King	Work
12	21:00	Room 112	Karen White	Meeting
13	22:00	Room 113	Liam Hill	Work
14	23:00	Room 114	Mia King	Meeting
15	00:00	Room 115	Noah Hill	Work
16	01:00	Room 116	Olivia King	Meeting
17	02:00	Room 117	Peter Hill	Work
18	03:00	Room 118	Quinn Hill	Meeting
19	04:00	Room 119	Rachel Hill	Work
20	05:00	Room 120	Sam Hill	Meeting
21	06:00	Room 121	Tina Hill	Work
22	07:00	Room 122	Uma Hill	Meeting
23	08:00	Room 123	Victor Hill	Work
24	09:00	Room 124	Wendy Hill	Meeting
25	10:00	Room 125	Xavier Hill	Work
26	11:00	Room 126	Yvonne Hill	Meeting
27	12:00	Room 127	Zoe Hill	Work
28	13:00	Room 128	Adam Hill	Meeting
29	14:00	Room 129	Bella Hill	Work
30	15:00	Room 130	Carl Hill	Meeting
31	16:00	Room 131	Dora Hill	Work
32	17:00	Room 132	Eugene Hill	Meeting
33	18:00	Room 133	Fiona Hill	Work
34	19:00	Room 134	George Hill	Meeting
35	20:00	Room 135	Helen Hill	Work
36	21:00	Room 136	Ivan Hill	Meeting
37	22:00	Room 137	Jane Hill	Work
38	23:00	Room 138	John Hill	Meeting
39	00:00	Room 139	Karen Hill	Work
40	01:00	Room 140	Liam Hill	Meeting
41	02:00	Room 141	Mia Hill	Work
42	03:00	Room 142	Noah Hill	Meeting
43	04:00	Room 143	Olivia Hill	Work
44	05:00	Room 144	Peter Hill	Meeting
45	06:00	Room 145	Quinn Hill	Work
46	07:00	Room 146	Rachel Hill	Meeting
47	08:00	Room 147	Sam Hill	Work
48	09:00	Room 148	Tina Hill	Meeting
49	10:00	Room 149	Uma Hill	Work
50	11:00	Room 150	Victor Hill	Meeting
51	12:00	Room 151	Wendy Hill	Work
52	13:00	Room 152	Xavier Hill	Meeting
53	14:00	Room 153	Yvonne Hill	Work
54	15:00	Room 154	Zoe Hill	Meeting
55	16:00	Room 155	Adam Hill	Work
56	17:00	Room 156	Bella Hill	Meeting
57	18:00	Room 157	Carl Hill	Work
58	19:00	Room 158	Dora Hill	Meeting
59	20:00	Room 159	Eugene Hill	Work
60	21:00	Room 160	Fiona Hill	Meeting
61	22:00	Room 161	George Hill	Work
62	23:00	Room 162	Helen Hill	Meeting
63	00:00	Room 163	Ivan Hill	Work
64	01:00	Room 164	Jane Hill	Meeting
65	02:00	Room 165	John Hill	Work
66	03:00	Room 166	Karen Hill	Meeting
67	04:00	Room 167	Liam Hill	Work
68	05:00	Room 168	Mia Hill	Meeting
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70	07:00	Room 170	Olivia Hill	Meeting
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72	09:00	Room 172	Quinn Hill	Meeting
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96	09:00	Room 196	Noah Hill	Meeting
97	10:00	Room 197	Olivia Hill	Work
98	11:00	Room 198	Peter Hill	Meeting
99	12:00	Room 199	Quinn Hill	Work
100	13:00	Room 200	Rachel Hill	Meeting



Pennsylvania Power & Light Company

Two North Ninth Street • Allentown, PA 18101 • 215 / 770-5151

Norman W. Curtis
Vice President-Engineering & Construction-Nuclear
215/770-7501

FEB 21 1984

Director of Nuclear Reactor Regulation
Attention: Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
ADDITIONAL INFORMATION REGARDING THE
PROPOSED TRANSCO PIPELINE

ER 100450
PLA-2080

FILE 841-2

Docket Nos. 50-387
50-388

REFERENCE: Letter, PLA-1738, N.W. Curtis to A. Schwencer, July 7, 1983.

Per discussions between PP&L and Mr. A. Sinisgalli of your staff, we are providing additional information (see Ref. 1) regarding the 42" Transco Pipeline.

In analyzing the delayed ignition of the gas cloud, we considered the Reactor Building construction above elevation 818' (metal siding on unprotected structural steel) to be the limiting case, because under fire conditions the steel would be damaged in minutes, whereas all other major buildings have walls and roofs constructed with a minimum of 7 inches of reinforced concrete. The NRC, (Reference FSAR Questions 281.27) recognizes 7 inches of reinforced concrete to have a 3 hour fire resistance rating.

The analysis of the steel structure assumed a 10 BTU/hr - ft²°F value for heat transfer, which translates to a heat flux of:

$$10 \text{ BTU/hr} - \text{ft}^2 \text{ } ^\circ\text{F} \times (2000^\circ\text{F} - 100^\circ\text{F}) = 19,000 \text{ BTU/hr} - \text{ft}^2.$$

The analysis showed that the time for the steel to reach 1000°F (the temperature where fire codes assume steel failure) is in excess of 60 seconds, while the estimated burn time of the gas cloud in the area exposing the building was an order of magnitude less.

In comparison, NUREG CR 3330 indicates that when the heat flux is 1400 Kilowatts/M² there is reason for concern since there will be some damage to reinforced concrete after a 0.2 hr. exposure. This converts to:

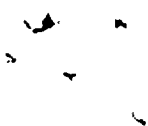
$$1400 \text{ Kilowatts/M}^2 \times 1.135 \text{ BTU/hr-ft}^2 = 1,589 \text{ BTU/hr} - \text{ft}^2.$$

Kilowatts/M²

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PDR ADOCK 05000387
P PDR

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FEB 21 1984


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SSES PLA- 2080
ER 100450 FILE 841-2
Mr. A. Schwencer, Chief

In our analysis a much larger heat flux was used, and some damage such as loss of metal siding, concrete spalling, etc. would be expected. However, no damage to equipment necessary to accomplish and maintain safe shutdown would result.

If you have any additional questions, please contact Mr. R. Sgarro at (215) 770-7855.

Very truly yours,



N. W. Curtis
Vice President-Engineering & Construction-Nuclear

cc: R. L. Perch - USNRC
A. A. Sinisgalli - USNRC

11/11/54

Dear Mr. [Name]:
I have your letter of [Date] regarding [Subject].
I am sorry that I cannot give you a more definite answer at this time.
The matter is still under consideration and I will contact you again as soon as a final decision has been reached.

I appreciate your interest in [Subject] and your patience.
If you have any further questions, please do not hesitate to contact me.
Sincerely,
[Name]

Very truly yours,
[Name]

[Address]
[City, State, Zip]