

ENCLOSURE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
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)
 PACIFIC GAS AND ELECTRIC COMPANY)
)
)
 Diablo Canyon Power Plant)
 Units 1 and 2)
)

Docket No. 50-275
Facility Operating License
No. DPR-80

Docket No. 50-323
Facility Operating License
No. DPR-82

License Amendment Request
No. 86-03

Pursuant to 10 CFR 50.90, Pacific Gas and Electric Company (PG&E) hereby applies to amend its Diablo Canyon Power Plant (DCPP) Facility Operating License Nos. DPR-80 and DPR-82.

The proposed changes amend the Units 1 and 2 Technical Specifications (Appendix A of the Licenses) to assure that two containment fan cooler units are available assuming a single failure, to revise the maximum positive containment internal pressure, and to revise the maximum containment pressure in the event of a Loss of Coolant Accident.

Information on the proposed changes is provided in Attachments A and B.

These changes have been reviewed and are not considered to involve a significant hazards consideration as defined in 10 CFR 50.92 or an unreviewed environmental question. Further, there is reasonable assurance that the health and safety of the public will not be endangered by the proposed change.

Subscribed to in San Francisco, California this 14th day of February 1986.

Respectfully submitted,

Pacific Gas and Electric Company

By J. D. Shiffer
J. D. Shiffer
Vice President
Nuclear Power Generation

Robert Ohlbach
Philip A. Crane, Jr.
Richard F. Locke
Attorneys for Pacific
Gas and Electric Company

By Philip A. Crane, Jr.
Philip A. Crane, Jr.

Subscribed and sworn to before me
this 14th day of February 1986

Nancy J. Lemaster
Nancy J. Lemaster, Notary Public in
and for the City and County of
San Francisco, State of California
NANCY J. LEMASTER
My Commission Expires APRIL 14, 1986.
CITY AND COUNTY OF
SAN FRANCISCO
My Commission Expires April 14, 1986



Attachments
0707S/0041K



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MAY 11 1977

Attachment A

TECHNICAL SPECIFICATIONS 3.6.2.3 AND 3.6.1.4
AND BASES 3/4.6.1.4 AND 3/4.6.1.6

CONTAINMENT INTERNAL PRESSURE AND FAN COOLER OPERABILITY
TECHNICAL SPECIFICATION CHANGES

A. DESCRIPTION OF AMENDMENT REQUEST

This license amendment request (LAR) proposes to change Technical Specification 3.6.2.3 "Containment Cooling System", to assure two containment fan cooler units are available assuming a single active failure. Presently, the Technical Specification assures three of the containment fan cooler units are available assuming a single active failure. This requires that all five containment fan cooler units be operable.

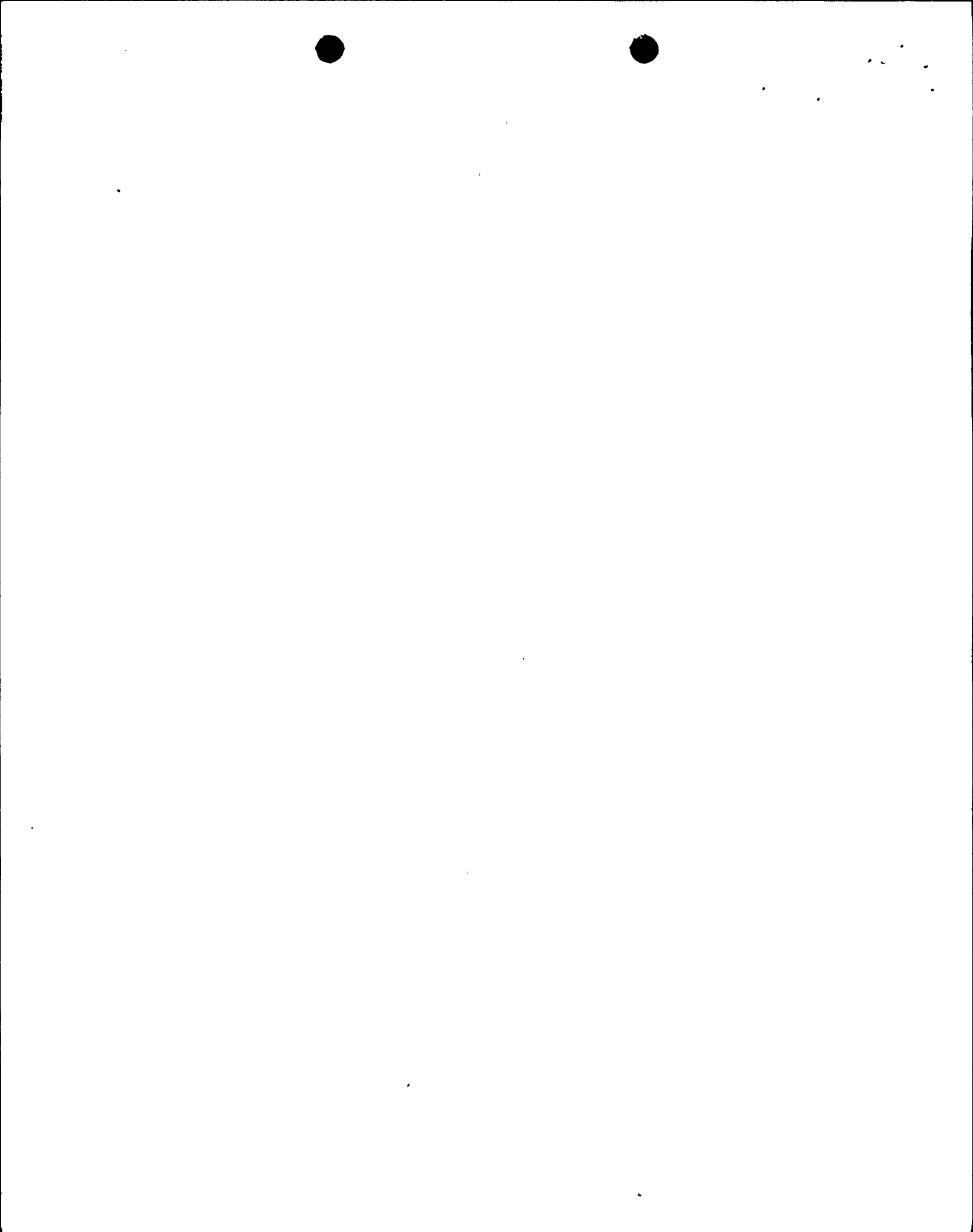
This LAR also proposes to revise Technical Specification 3.6.1.4, "Internal Pressure," and its Bases to change the maximum positive containment internal pressure from +0.3 psig to +1.2 psig and to change the maximum pressure of 46.91 psig to 46.65 psig in the event of a loss-of-coolant accident (LOCA). In addition, this LAR proposes to revise Bases 3/4.6.1.6, "Containment Structural Integrity," to change the maximum containment pressure in the event of a LOCA from 46.91 psig to 46.65 psig. These changes are based on the most recent containment analysis performed by Westinghouse.

Changes to the Technical Specifications of Operating License Nos. DPR-80 and DPR-82 are noted in the revised copy of the applicable Technical Specifications (Attachment B).

B. JUSTIFICATION

The double-ended pump suction break analysis which results in the highest calculated peak containment pressure was recently performed by Westinghouse using the original LOCA Mass and Energy Release Model described in the FSAR Update, Appendix 6.2B. This recent analysis takes credit for heat sinks that were not included in the previous analysis. The heat sinks modeled in the recent analysis are given in Tables 1 through 3. The containment heat sinks act as a passive heat removal system and provide the major source of heat removal from the containment atmosphere early in the transient.

Also, the updated initial conditions (Table 4) and the containment safety features (Table 5) were revised. The latest analysis uses a containment initial pressure of 16 psia, whereas the previous analysis used 15.1 psia, and the number of operating fan coolers was changed from 3 to 2. Based on a review of the previous analysis described in the FSAR Update, Appendix 6.2B, the maximum safety injection flow was used since it would result in the highest containment peak pressure.



The results of the revised double-ended pump suction break case show a peak containment pressure of 46.65 psig for an 80 second spray pump delay time after the high-high containment pressure setpoint is reached. This is below the containment design pressure of 47 psig. The containment pressure and temperature transients are shown in Figures 1 and 2. Therefore, maximum positive containment internal pressure specified in Technical Specification 3.6.1.4 can be changed from +0.3 psig to +1.2 psig. Also, Technical Specification 3.6.2.3 can be revised to assure two containment fan cooler units are available assuming a single active failure.

C. SAFETY EVALUATION

PGandE has evaluated the hazards considerations involved with the proposed amendment focusing on the three standards set forth in 10 CFR 50.92(c) as quoted below:

"The Commission may make a final determination, pursuant to the procedures in 50.91, that a proposed amendment to an operating license for a facility involves no significant hazards considerations, if operation of the facility in accordance with the proposed amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any previously evaluated; or
- (3) Involve a significant reduction in a margin of safety."

The following evaluation is provided for the significant hazards consideration standards.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed reduction in the required number of operable fan coolers and the increase in allowable maximum positive containment internal pressure are based on the Westinghouse containment analysis for Diablo Canyon. This analysis utilized updated containment initial conditions, updated assumed containment safety features, and the additional heat sinks that have been added inside containment. Therefore, this change does not involve an increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The most recent analysis updated containment initial conditions and assumed containment safety features as well as the additional heat



sinks added inside containment. The changes in the required number of operable fan coolers and the maximum positive containment internal pressure are based on the results of the analysis of a previously analyzed accident. Therefore, no new or different kind of accident has been created.

3. Does the change involve a significant reduction in a margin of safety?

The latest containment analysis shows a decrease in the maximum containment internal pressure in the event of a LOCA. The previous analysis determined the peak pressure to be 46.91 psig, whereas the latest analysis determined the peak pressure to be 46.65 psig. Therefore, there is no significant reduction in the margin of safety associated with reducing the number of fan coolers from 3 to 2 and increasing the maximum positive containment internal pressure from +0.3 psig to +1.2 psig.

D. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

In conclusion, based on the above safety evaluation, PGandE submits that the activities associated with this LAR satisfy the significant hazards consideration standards of 10 CFR 50.92(c) and, accordingly, a no significant hazards consideration finding is justified.

E. ENVIRONMENTAL EVALUATION

The proposed changes will not affect the environmental analyses in the FSAR Update, Environmental Report, or Final Environmental Impact Statement. Therefore, there are no unreviewed environmental questions involved.

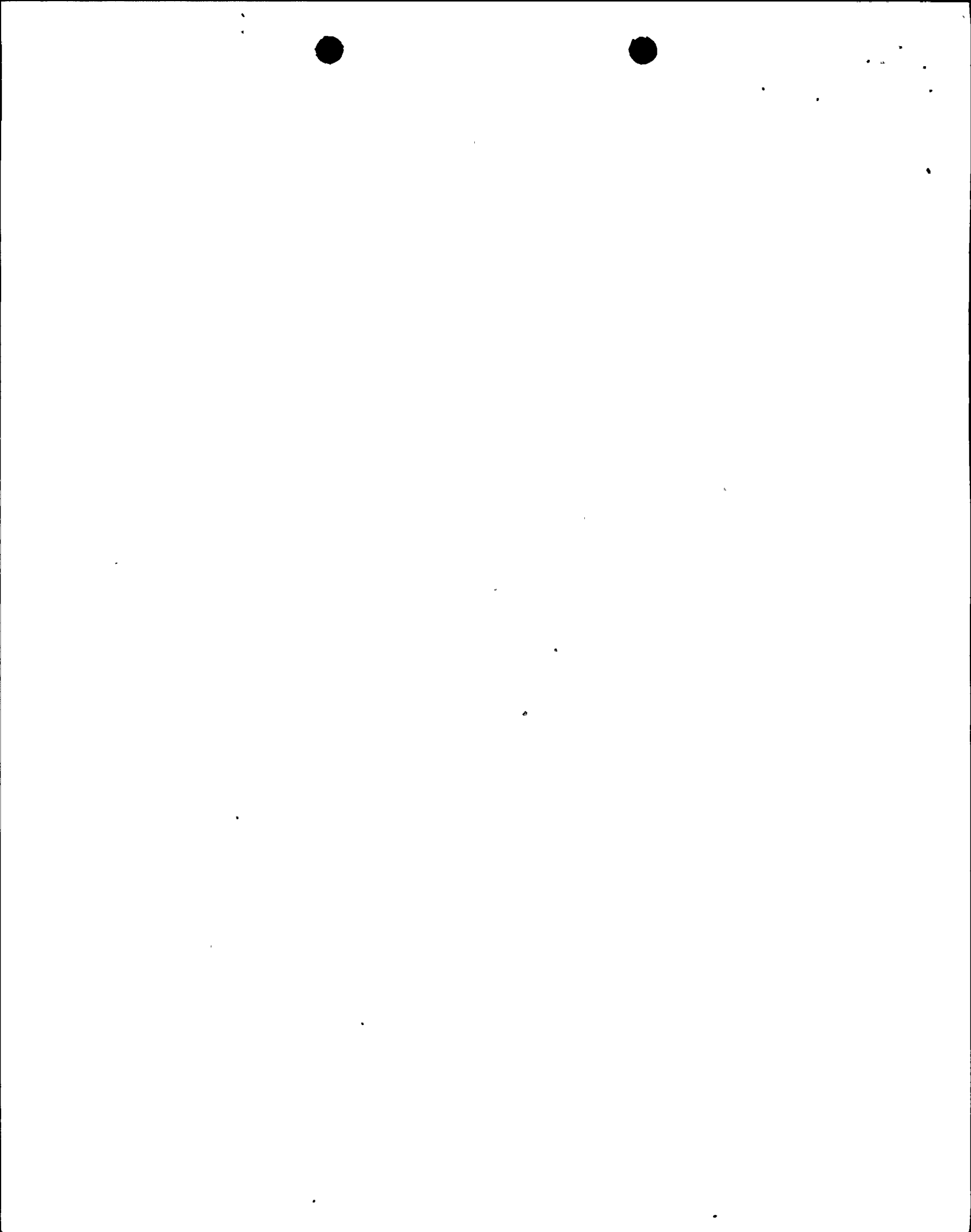


Table 1
STRUCTURAL HEAT SINKS

<u>Heat Sink</u> (inches)	<u>Material</u>	<u>Weight</u> (kips)	<u>Area</u> (ft ²)	<u>Thickness</u>
1. Annulus Steel-Structural Steel	Carbon	953	41,269	0.565
Grating	Carbon	78	21,900	0.088
2. Class I Platform-Structural Steel	Carbon	87	9,634	0.22
Grating	Carbon	28	7,700	0.088
3. Class II Platform-Steel & Grating	Carbon	89	21,307	0.102
4. Ventilation (HVAC) System	Carbon	53	18,424	0.071
5. Polar Crane & Dome Service Crane (including Mods, Hook, Block & Cable)	Carbon	685	23,682	0.708
6. Conduit and Trays	Carbon	155	30,000	0.127
7. Rupture Restraints	Carbon	316	10,004	0.773
8. Containment Liner Plate	Carbon	1386	90,560	0.375
9. Equipment Hatch & Personnel Locks	Carbon	91	1,391	1.596
10. NSSS Equipment Supports	Carbon	857	19,111	1.098
11. Embeds	Carbon	187	6,141	0.745
12. Containment Penetrations	Carbon	28	720	0.96
13. Fuel Transfer Canal (Stainless Steel)	Stainless	52	8,852	0.144
14. Other Misc. Stainless Steel Structures	Stainless	23	857	0.654
15. Reactor Missile Shield Structure	Carbon	33	1,248	0.642
16. Concrete Floors @ 140'-0 & Below	Concrete	-	21,867	12
17. Concrete Floors @ 91'-0 (2'-0 thick)	Concrete	-	13,012	24
18. Concrete Walls Below El. 140'-0	Concrete	-	43,803	12
19. Concrete Walls Above El. 140'0	Concrete	-	14,295	12

NOTES: (1) - Steel density is 490 lb/ft³.

(2) - This table updates information provided in Table 6.2B-27 of the DCPD FSAR Update (Revision 2, September 20, 1985).



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Table 2
MECHANICAL HEAT SINKS

<u>Equipment</u>	<u>Initial Temp. (°F)</u>	<u>Total Area (ft²)</u>	<u>Thickness (inches)</u>
1. Fan Coolers	120	7,750	1.68
2. Accumulators	120	3,650	1.92
3. RCP Motors	200*	1,610	6.99

* Reactor coolant pump motor temperature determined from average static temperatures (°F) as determined from RTD readings.

NOTES: (1) All material is carbon steel with a density of 490 lb/ft³.

(2) This table updates information provided in Table 6.2B-27 of the DCCP FSAR Update (Revision 2, September 20, 1985).



Table 3

PIPING HEAT SINKS

<u>Item</u>	<u>Material</u>	<u>Weight (kips)</u>	<u>Area (ft²)</u>	<u>Thickness (inches)</u>
1. S/G Snubbers	Carbon	64.0	522.4	3.0
2. Large Bore Pipe Supports	Carbon	488.4	15,947.0	0.75

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- NOTES: (1) All material is carbon steel with a density of 490 lb/ft³.
(2) This table updates the information provided in Table 6.2B-27 of the DCPD FSAR Update (Revision 2, September 20, 1985).



Table 4

INITIAL CONTAINMENT CONDITIONS

1.	Conservatively low estimate of containment net free volume, ft ³	2.55 x 10 ⁶
2.	Containment initial pressure, psia	16.0
3.	Containment temperature, °F	120
4.	Range of refueling water storage tank temperature (MAX/MIN), °F	100/60
5.	Range of outside containment temperature, (MAX/MIN), °F	100/40
6.	Spray pump flow, gpm	2,600
7.	Refueling water storage tank volume, gal	350,000

NOTE: This table updates the information provided in Table 6.2B-25 of the DCPD FSAR Update (Revision 2, September 20, 1985).



Table 5

CONTAINMENT SAFETY FEATURES UTILIZED FOR CONTAINMENT
PRESSURE ANALYSIS DOUBLE-ENDED PUMP SUCTION LOCA

SPRAY SYSTEM	
Number of Spray Trains	2
Number of Spray Trains Operating in Analysis	1
Spray Flow Rate per Spray Train, gpm	2,600
FAN COOLERS	
Number of Fan Coolers	5
Number of Fan Coolers Operating in Analysis	2
EMERGENCY CORE COOLING SYSTEM	
Number of ECCS Trains	2
Number of ECCS Trains Operating in Analysis	2 MAX SI
ASSUMED INITIATION TIMES	
<u>System</u>	<u>Time After Accident, sec</u>
Safety Injection	25
Spray ¹	80
Fan Coolers ¹	48
Recirculation ²	1,656 MAX SI

¹Time after the high-high containment pressure setpoint is reached.

²Assumes instantaneous changeover to recirculation at time when RWST is empty.

NOTE: (1) This table updates the information provided in Table 6.2B-26 of the DCPD FSAR Update (Revision 2, September 20, 1985).



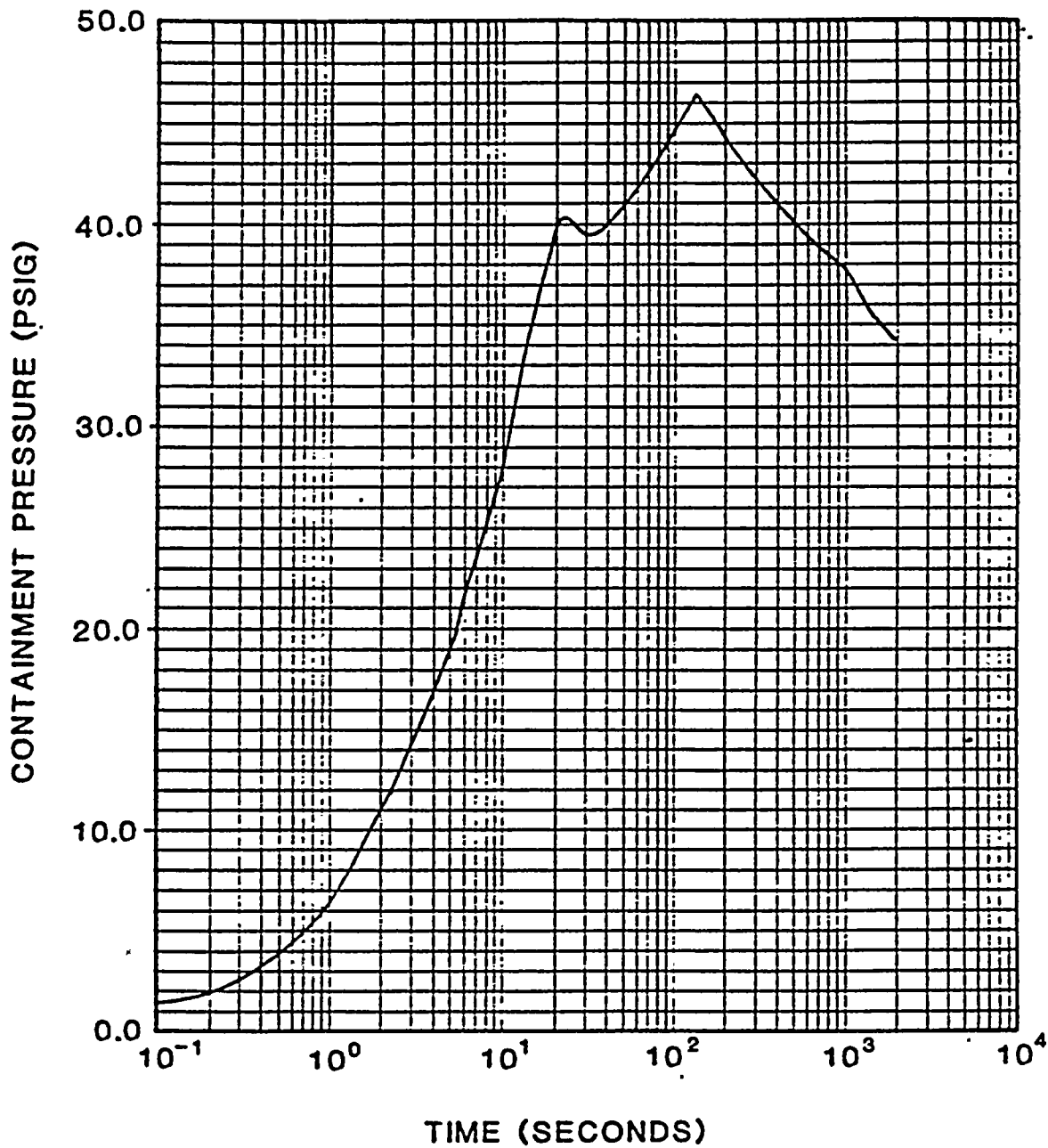


FIGURE 1. LOCA Pressure Transient
With 80 Second Spray Pump Delay

NOTE: (1) This figure replaces information provided in Figures 6.2B-1 through 6.2B-8 of the DCPD FSAR Update (Revision 2, September 20, 1985).



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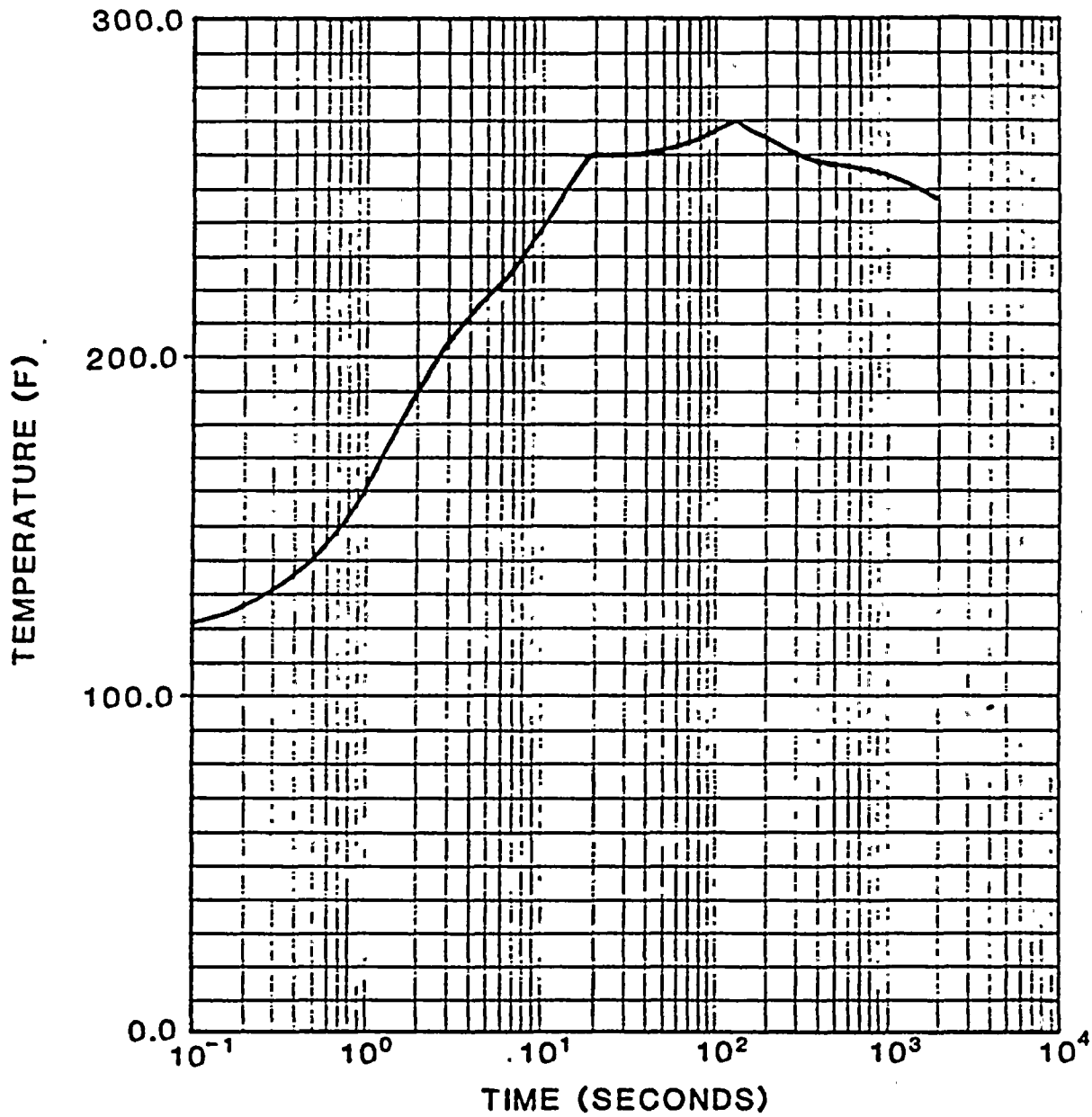


FIGURE 2. LOCA Temperature Transient
With 80 Second Spray Pump Delay

NOTE: (1) This figure replaces information provided in Figures 6.2B-1 through 6.2B-8 of the DCCP FSAR Update (Revision 2, September 20, 1985).



Attachment B

REVISED TECHNICAL SPECIFICATIONS
AND BASES

REMOVE

3/4 6-13
3/4.6-7
B 3/4 6-1
B 3/4.6-2

INSERT

3/4 6-13
3/4 6-7
B 3/4 6-1
B 3/4 6-2

