TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

June 2, 1981

Director of Nuclear Reactor Regulation
Attention: Ms. E. Adensam, Chief
Licensing Branch No. 4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Ms. Adensam:

In the Matter of the Application of	)	Docket Nos. 50-327
Tennessee Valley Authority	)	50-328

As required by the Sequoyah Nuclear Plant unit 1 operating license (DPR-77) item 2.C(22)D(3)(b) and the draft Sequoyah unit 2 operating license, we are enclosing 20 copies of a report to address the hydrogen environment items in the Sequoyah Nuclear Plant Safety Evaluation Report and the hydrogen control measures research program.

The enclosed report is a nonproprietary version. We will submit the proprietary pages under separate cover.

If you have any questions, please get in touch with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Sworn to and subscribed before me
this 2nd day of June 1981
Bryant M. Lowery
Notary Public
My Commission Expires 4/4/82

Enclosure (20)

P

8106110129

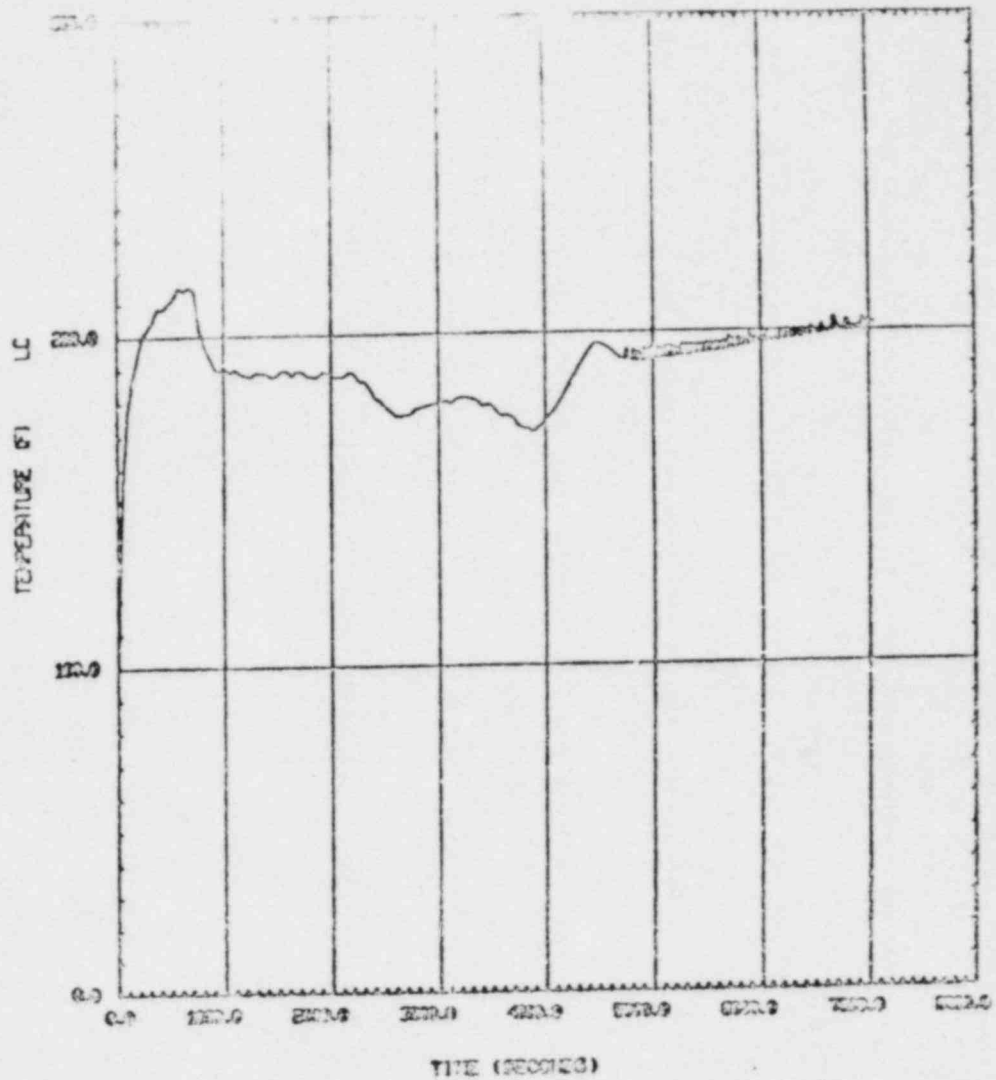


FIGURE 2.1-1

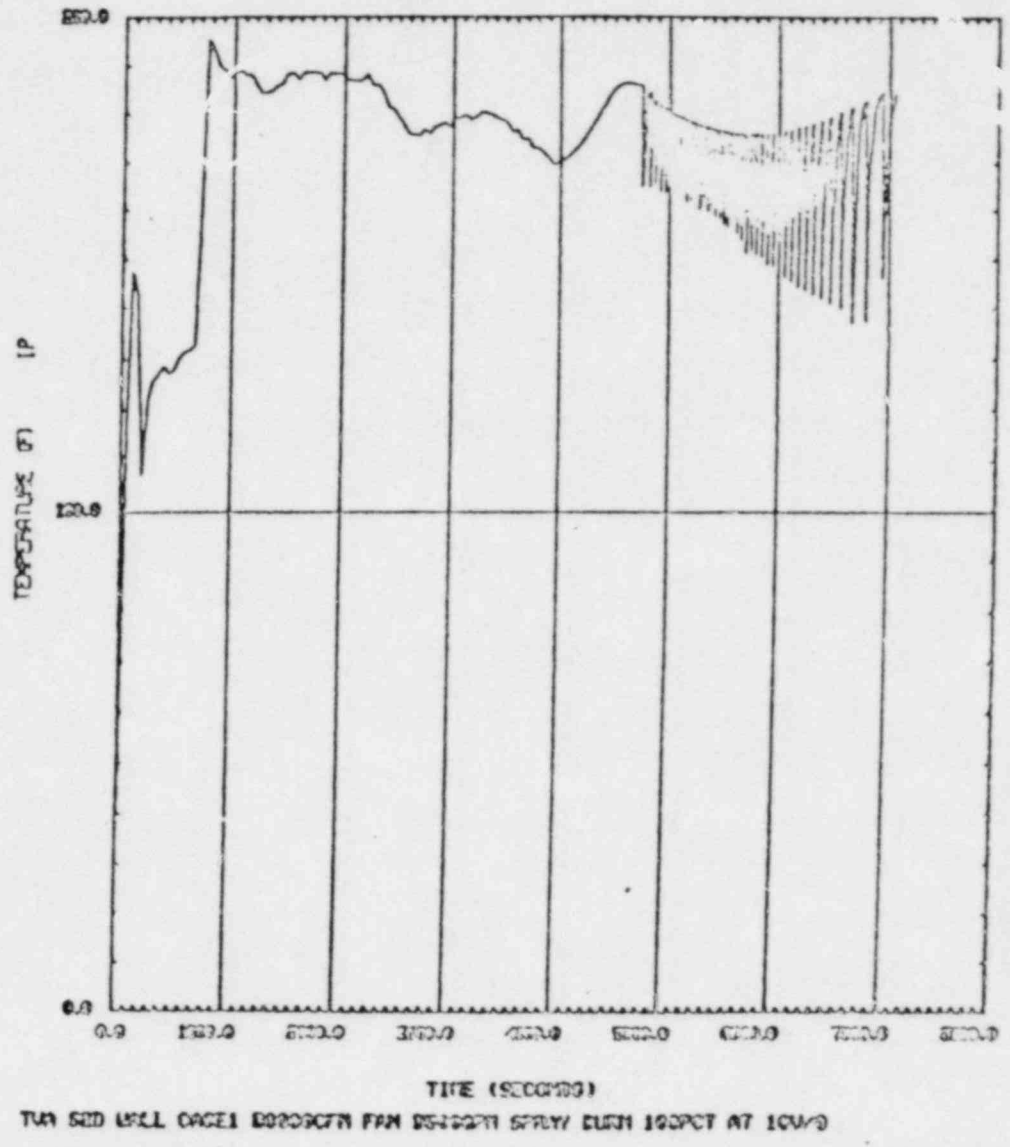


FIGURE 2.1-2

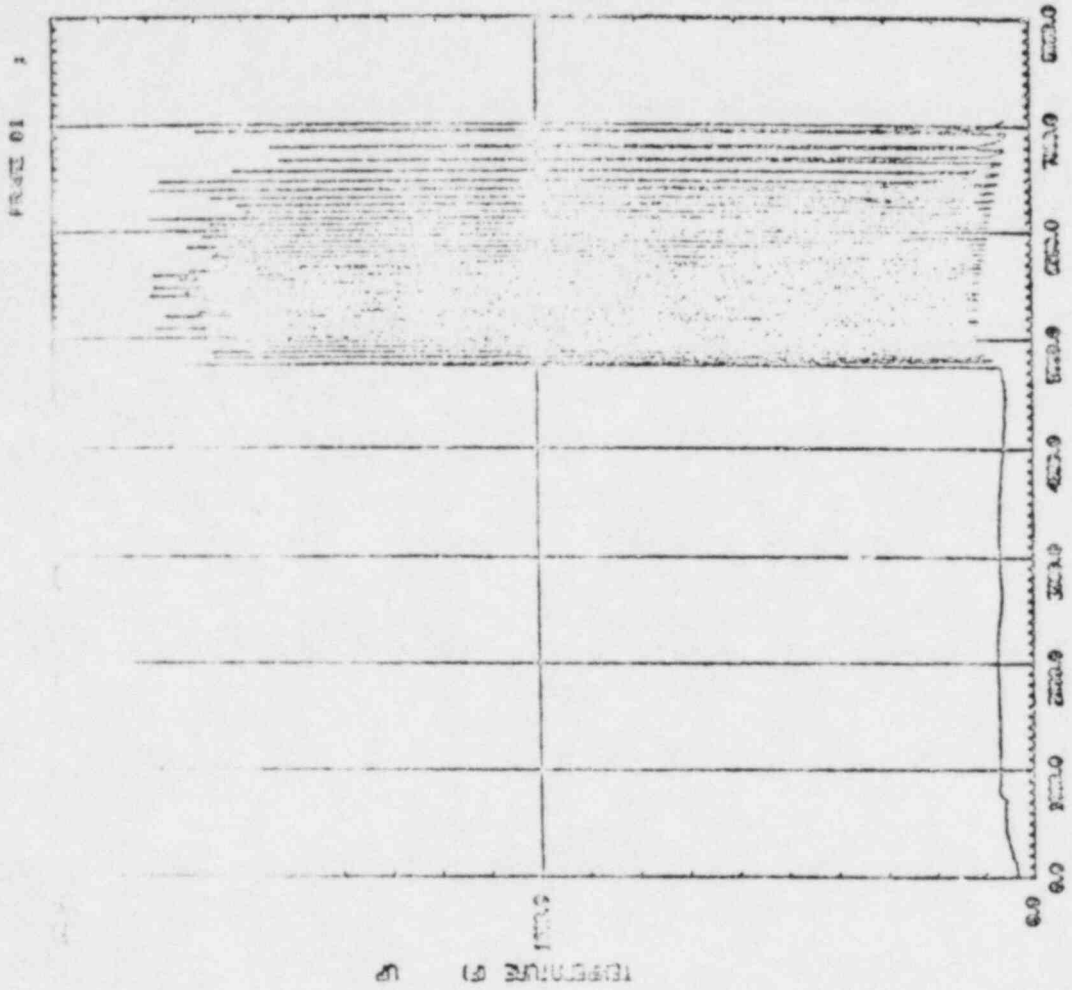


FIGURE 2.1-3

READY-

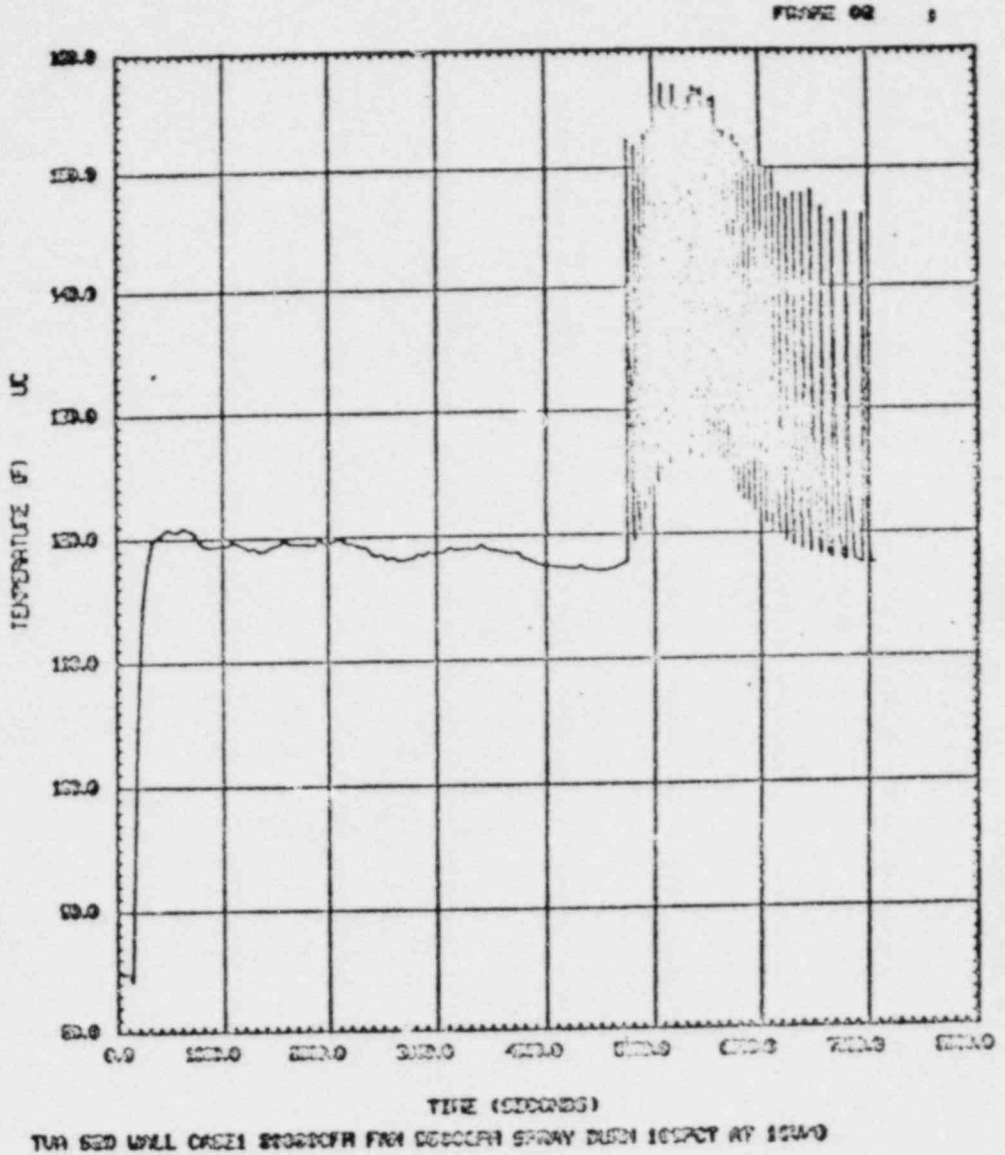
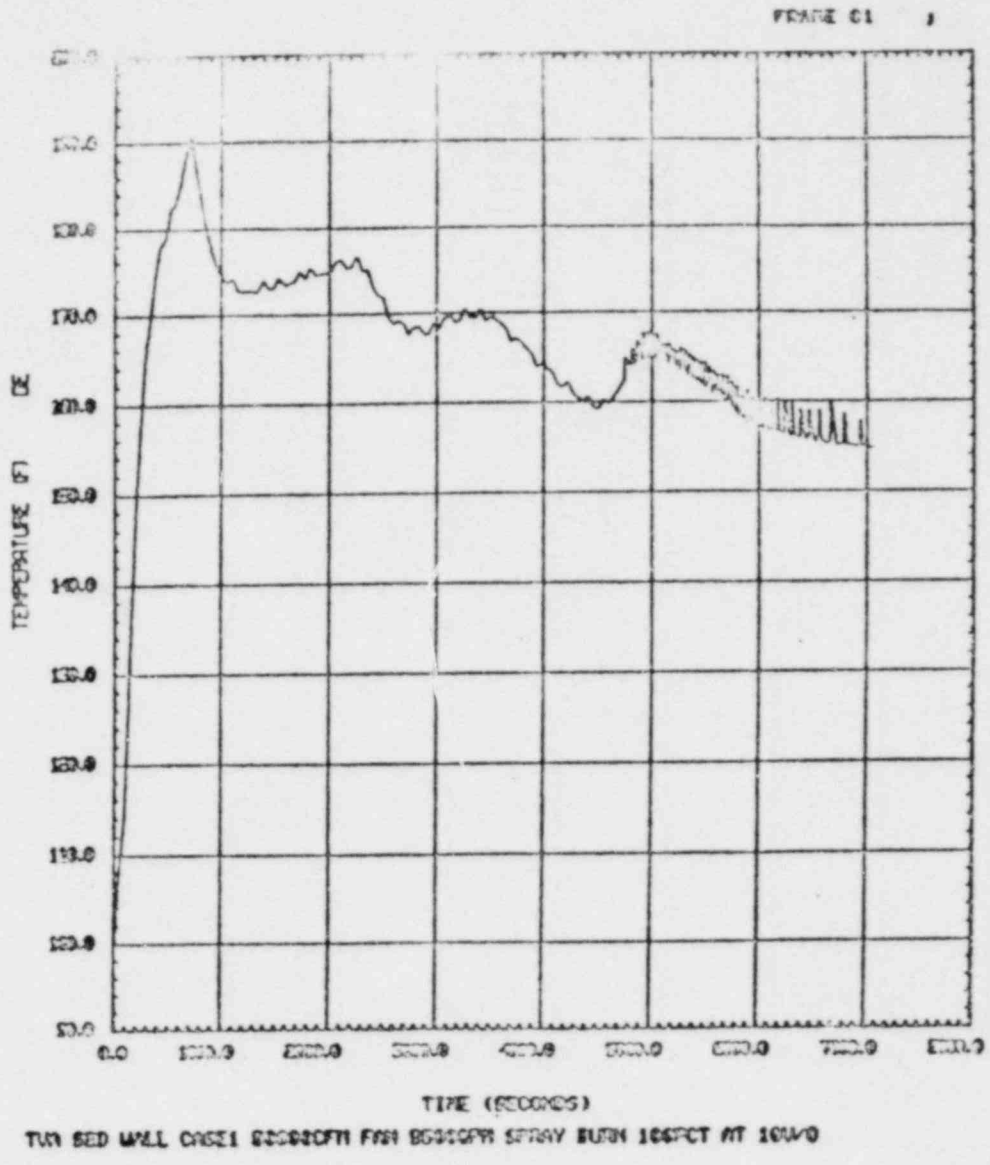


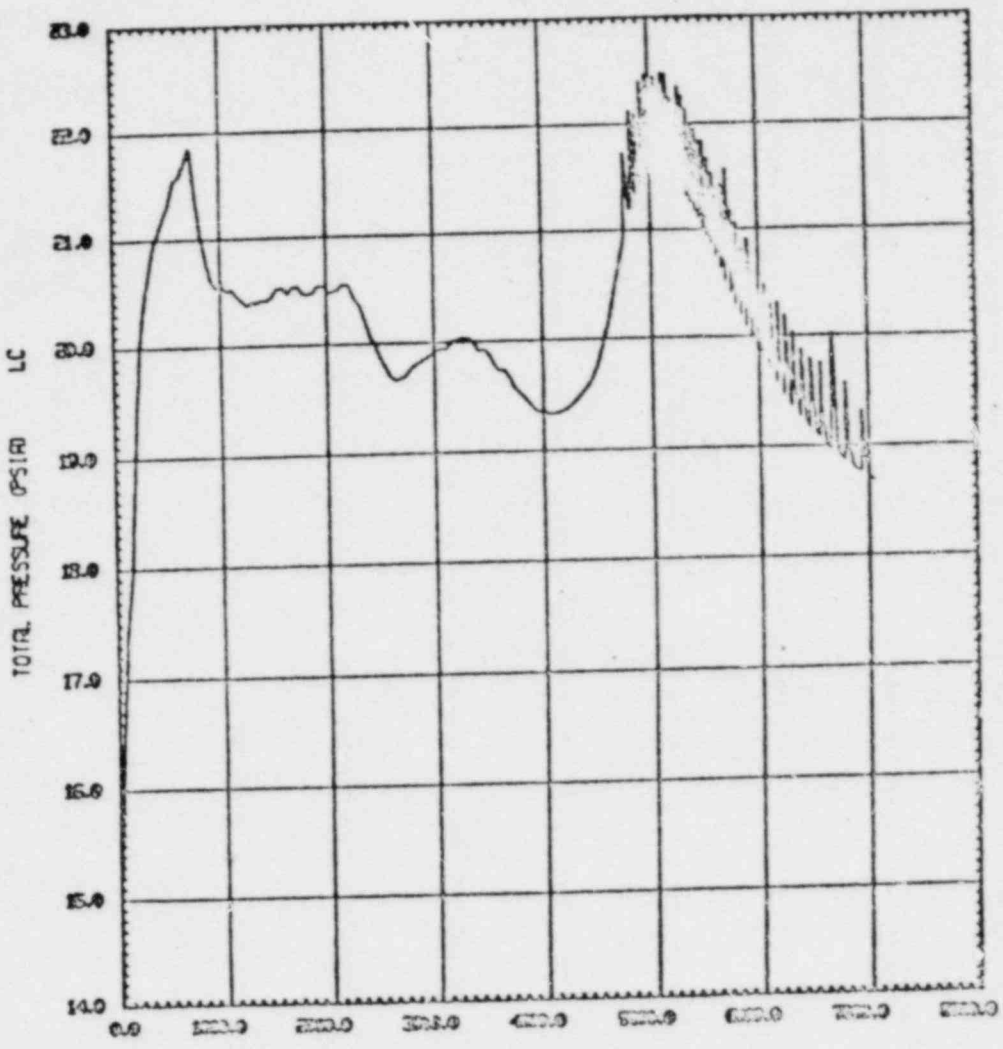
FIGURE 2.1-4



TWO SIDED WALL CASE1 [illegible] FAN [illegible] SPRAY BURN 100FCT AT 10W/D

FIGURE 2.1-5

READY-



TWA 52D WALL CASE1 80000CFM FAN DESIGN SPEED RUSH 100PCT AT 100/0

FIGURE 2.1-6

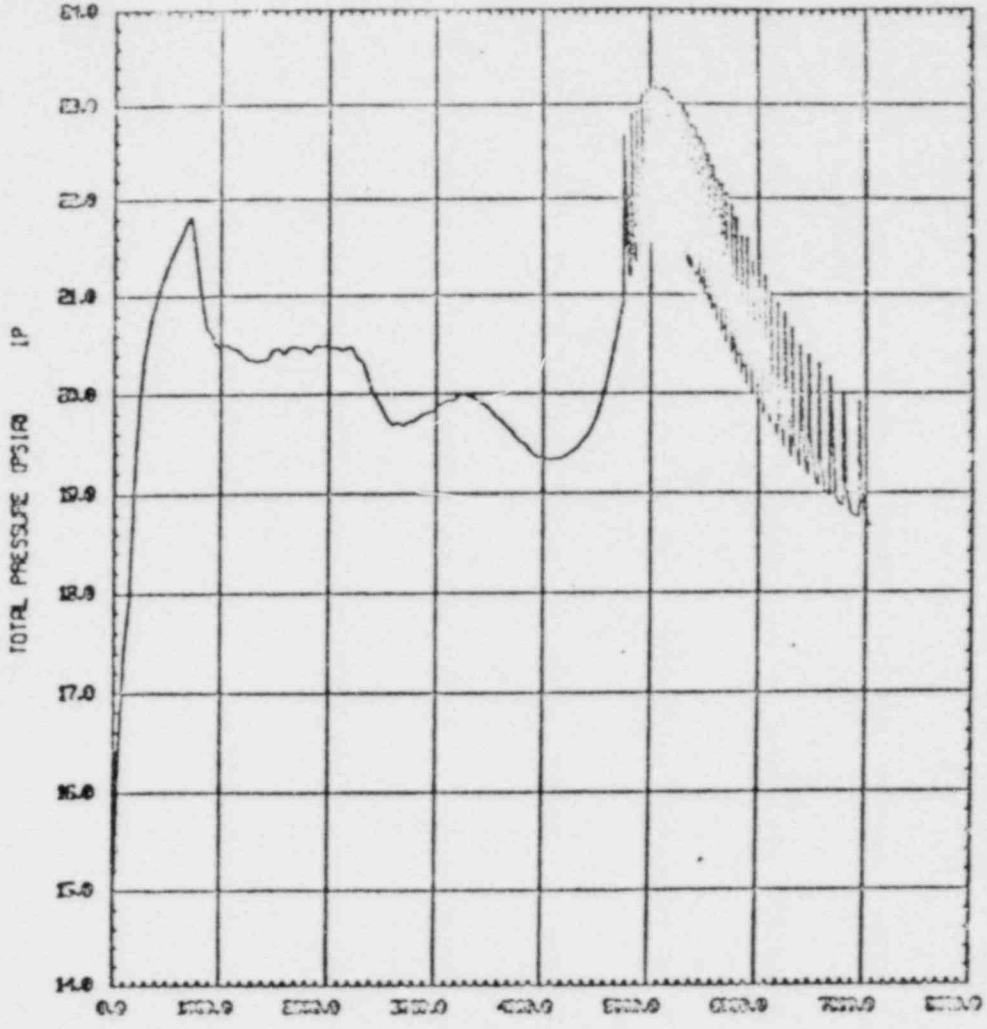
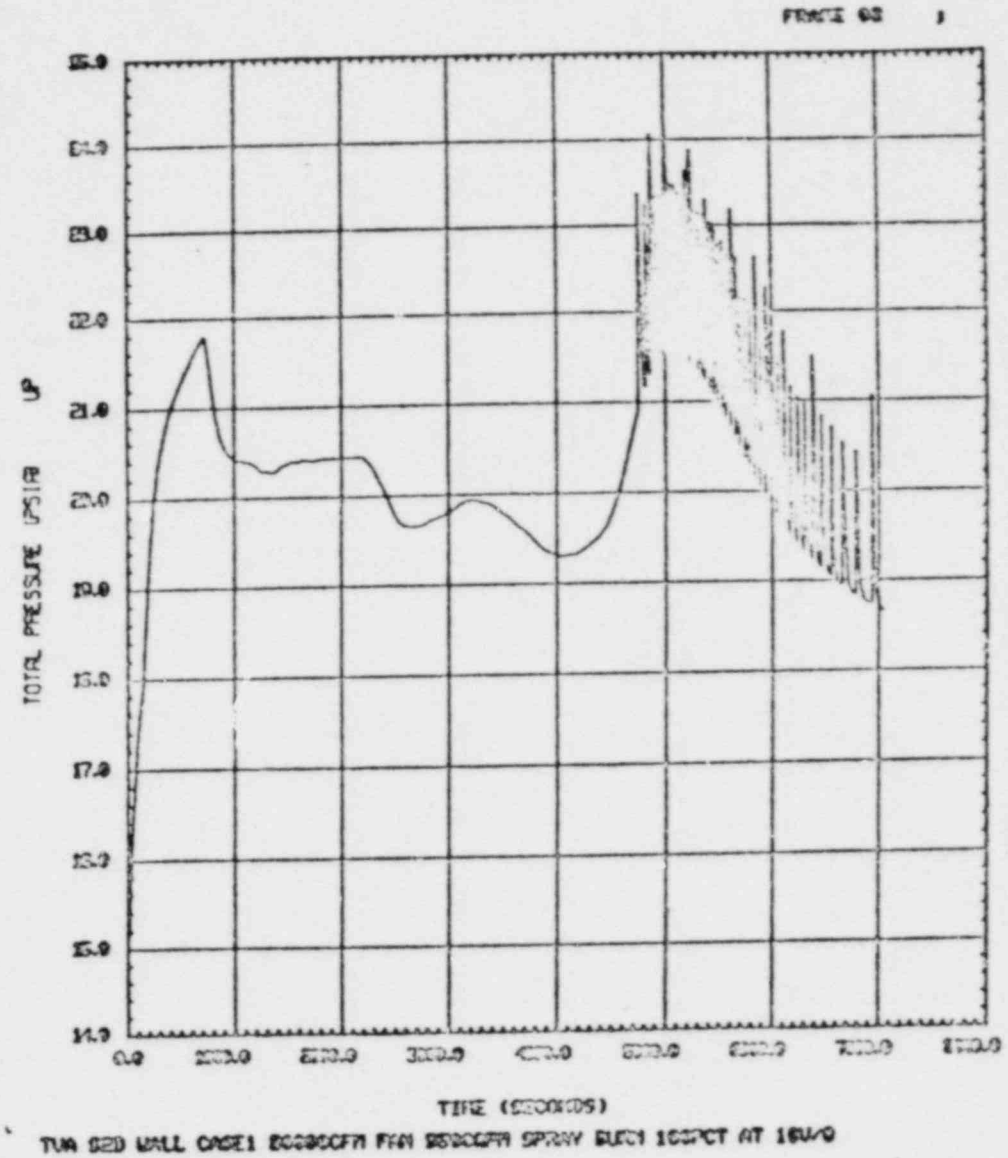


FIGURE 2.1-7

READY-



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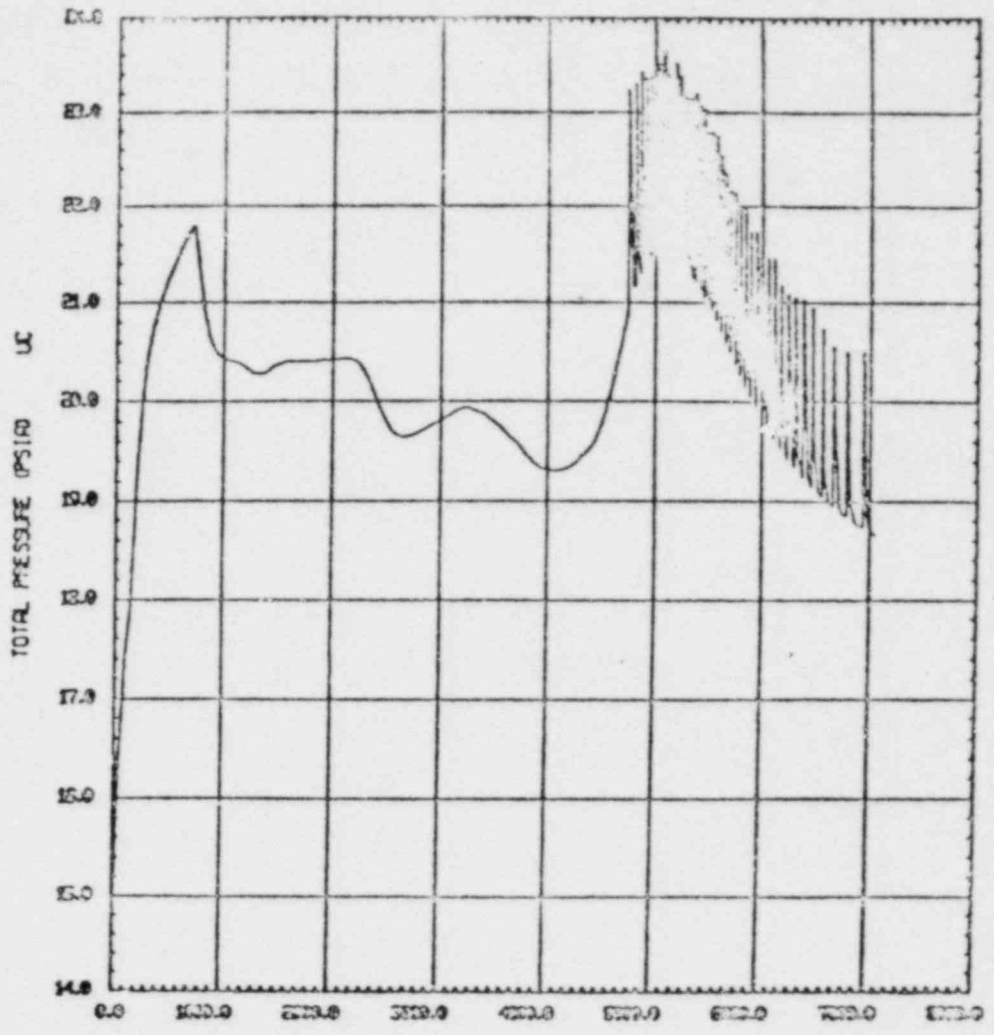


FIGURE 2.1-9

READY-

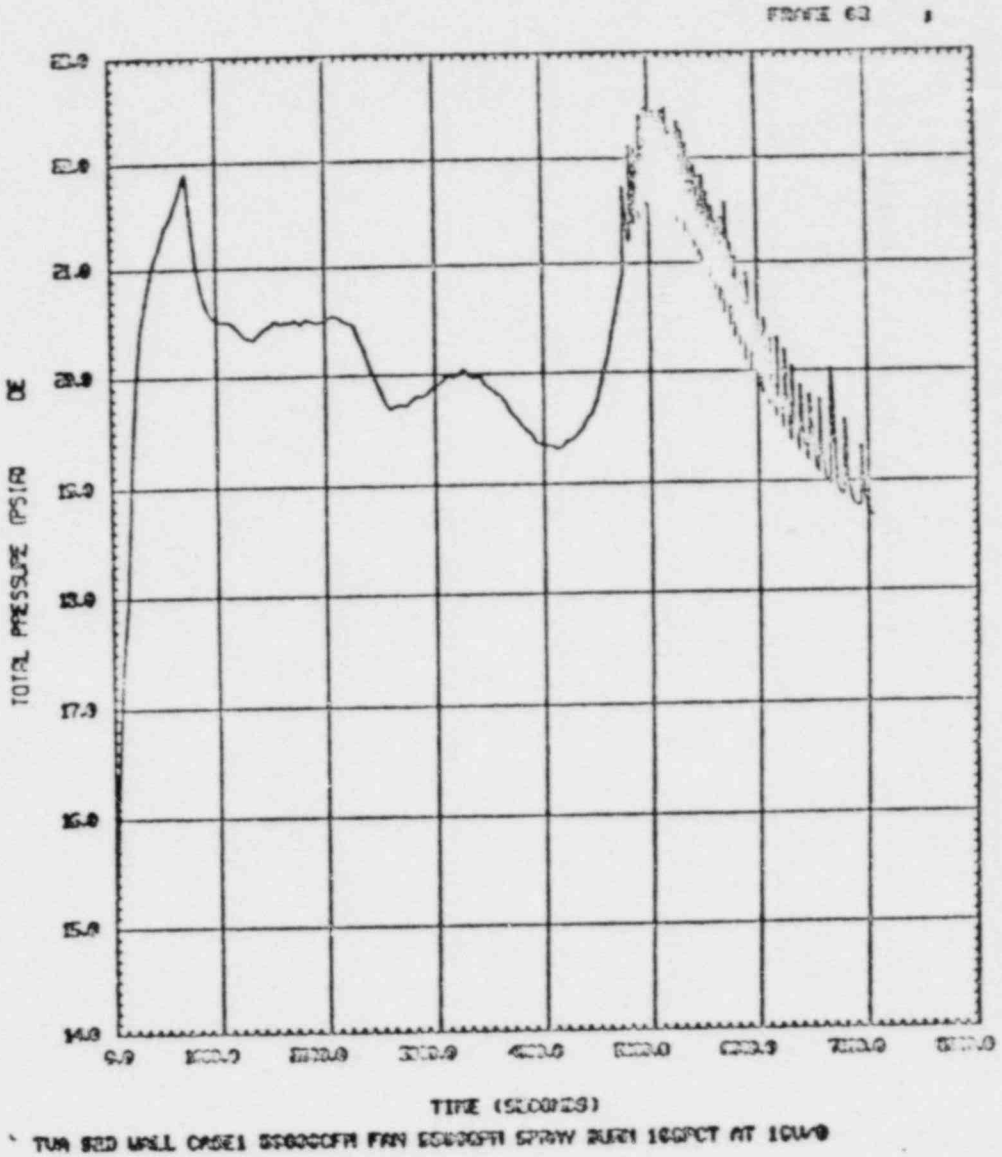


FIGURE 2.1-10

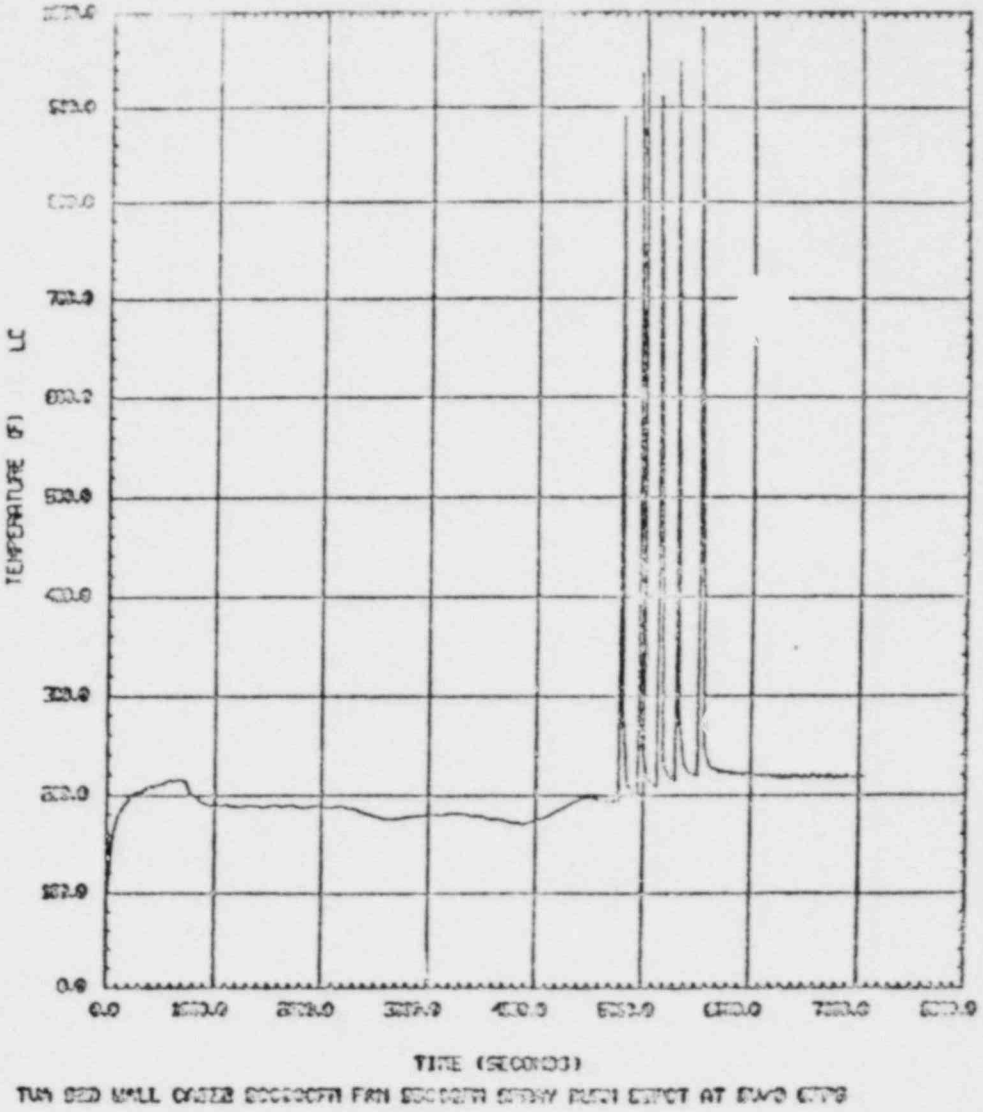


FIGURE 2.1-11

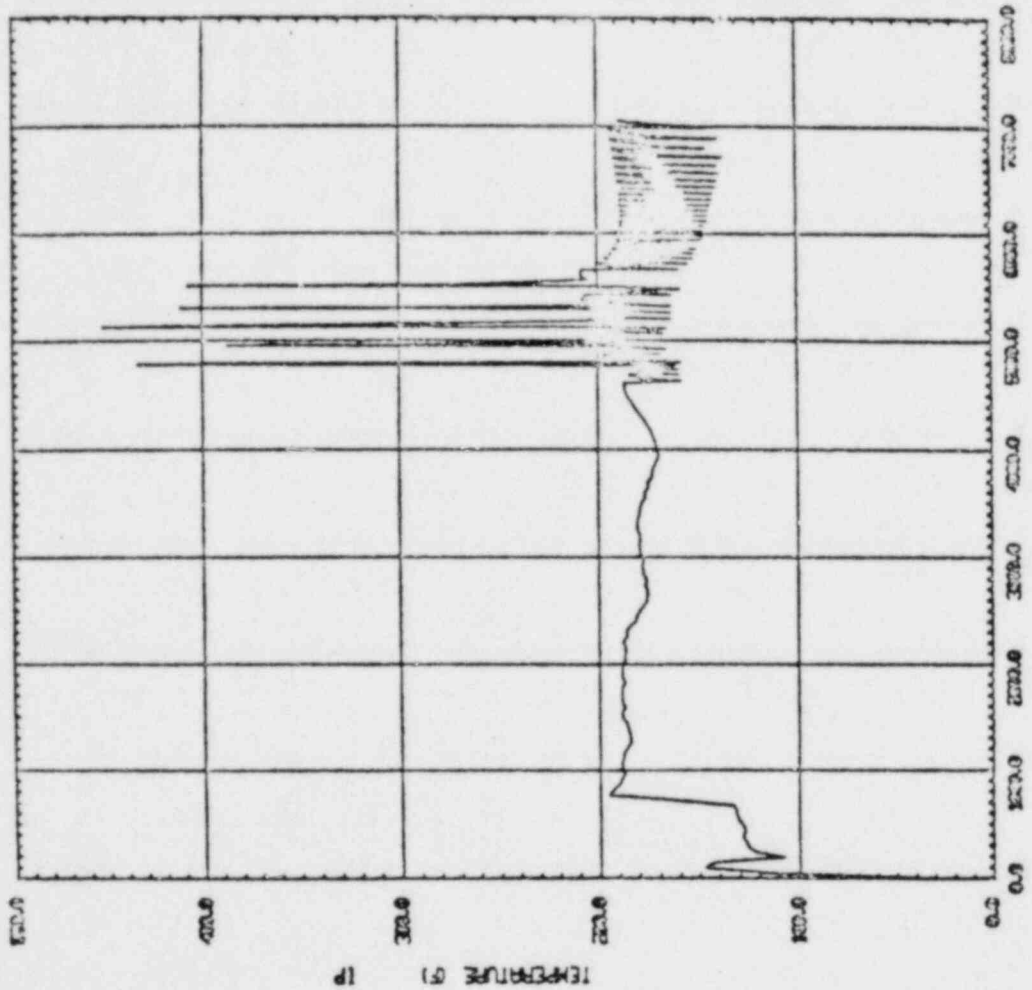


FIGURE 2.1-12

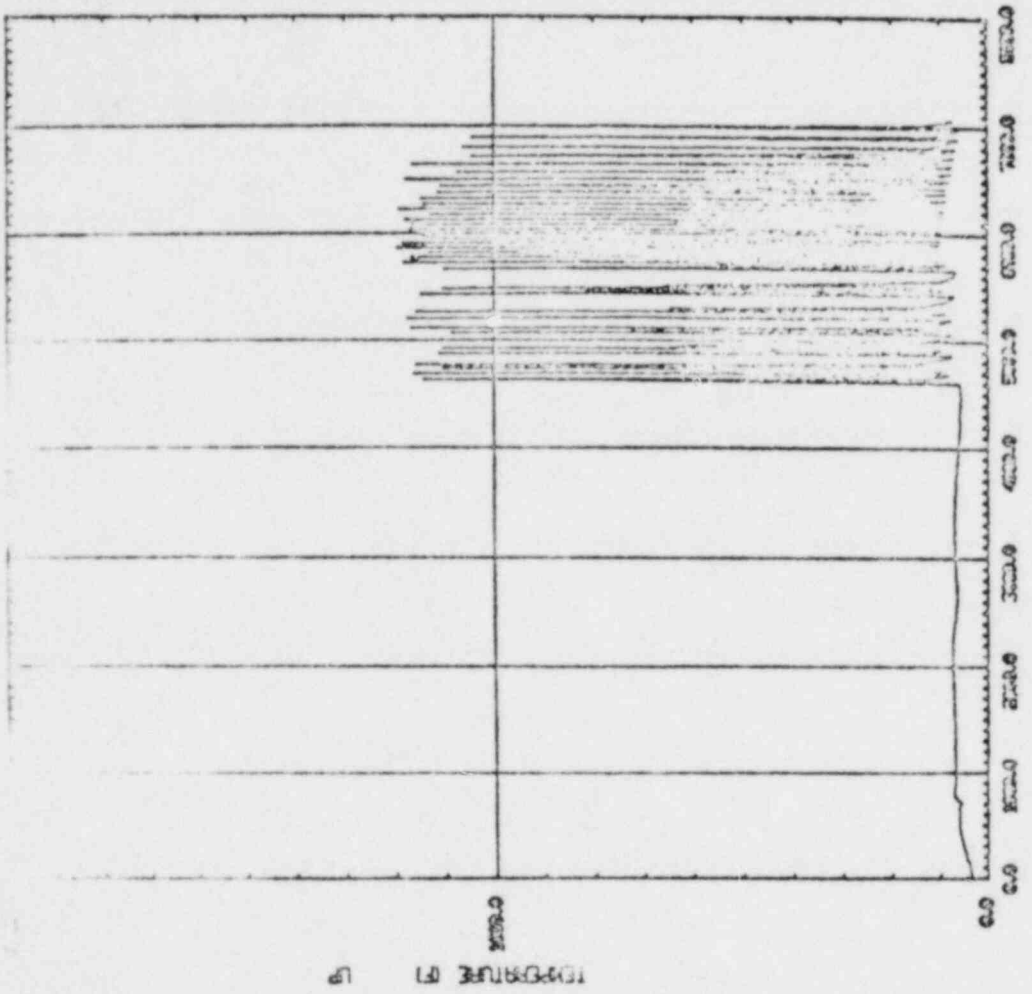


FIGURE 2.[illegible]-13

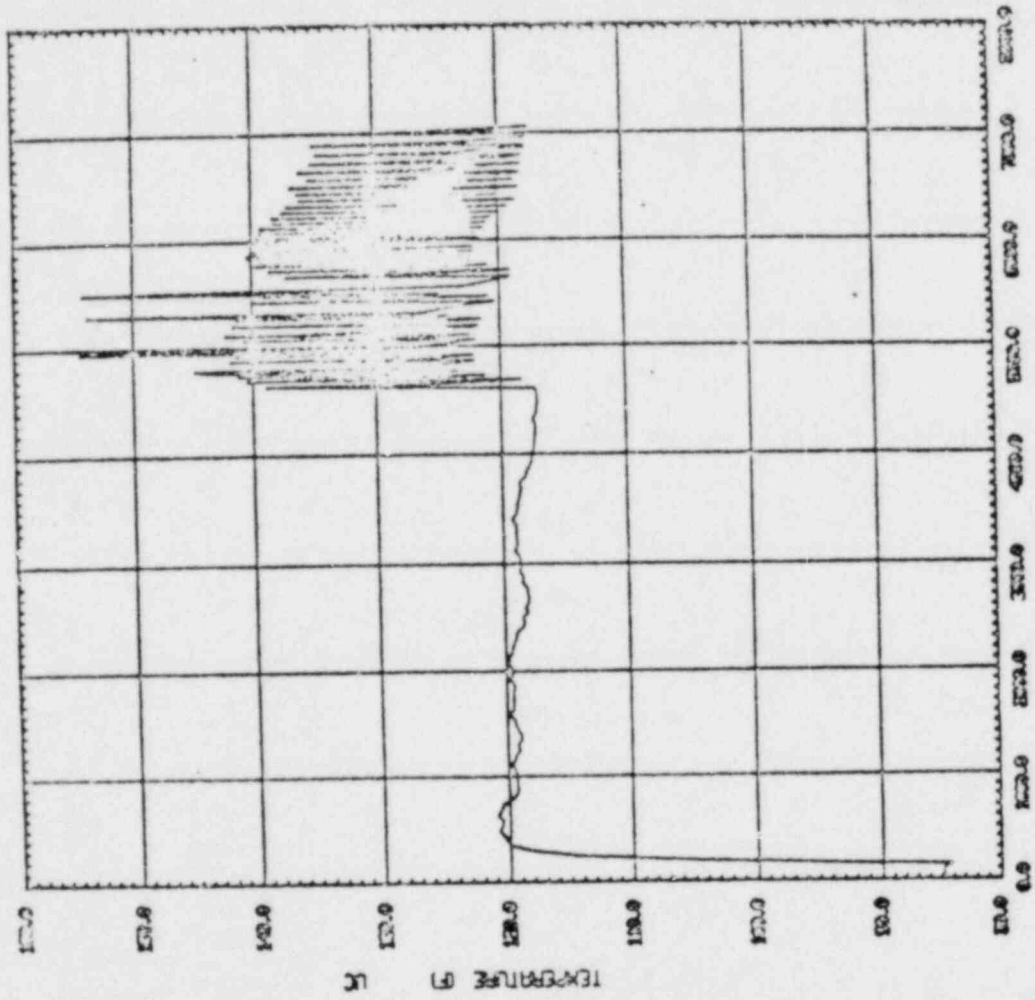


FIGURE 2.1-14

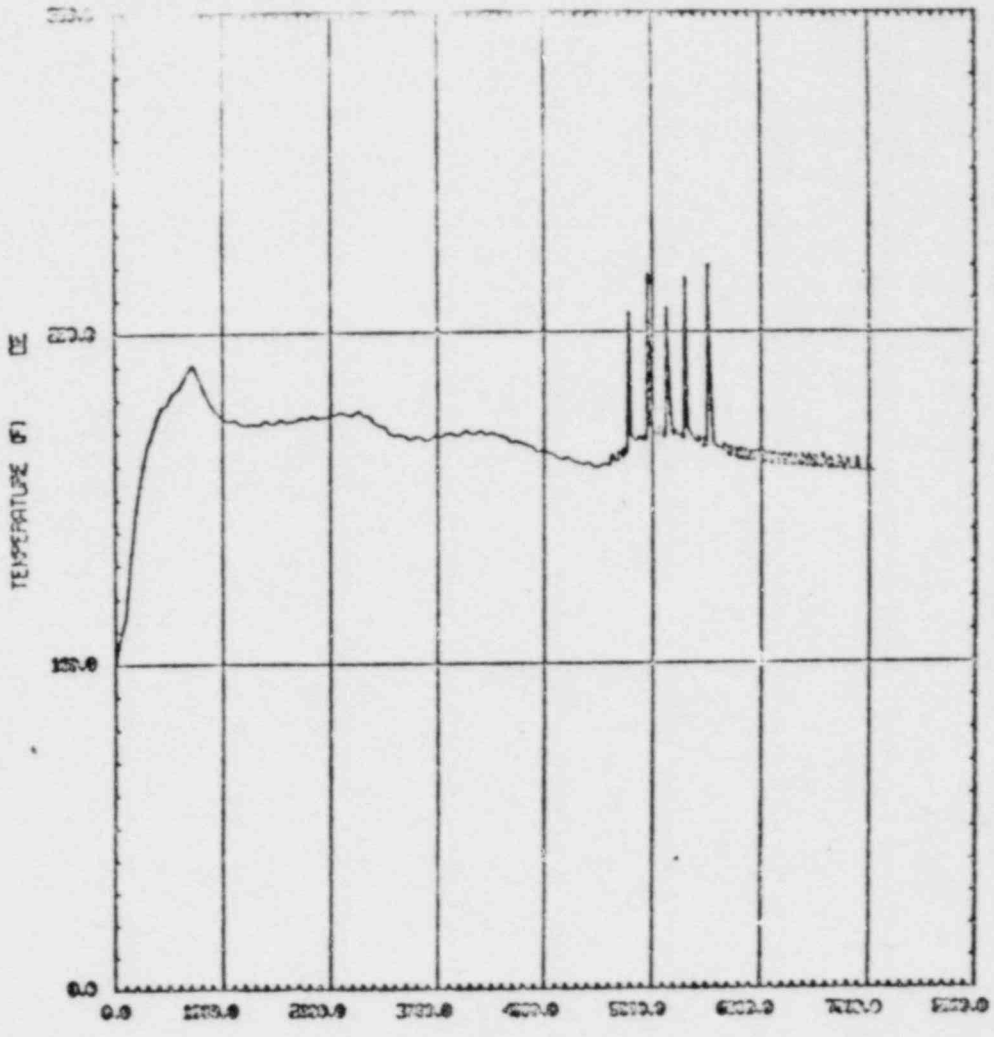


FIGURE 2.1-15

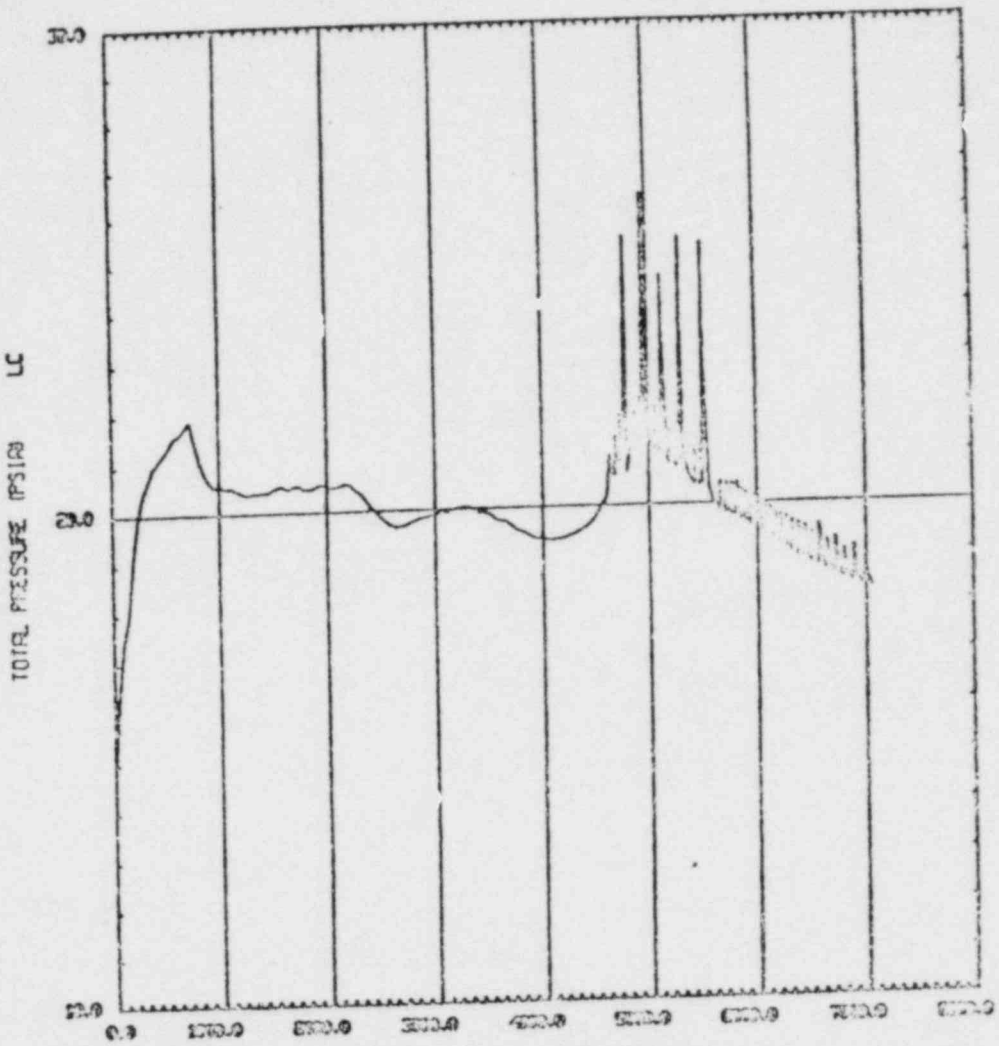


FIGURE 2.1-16

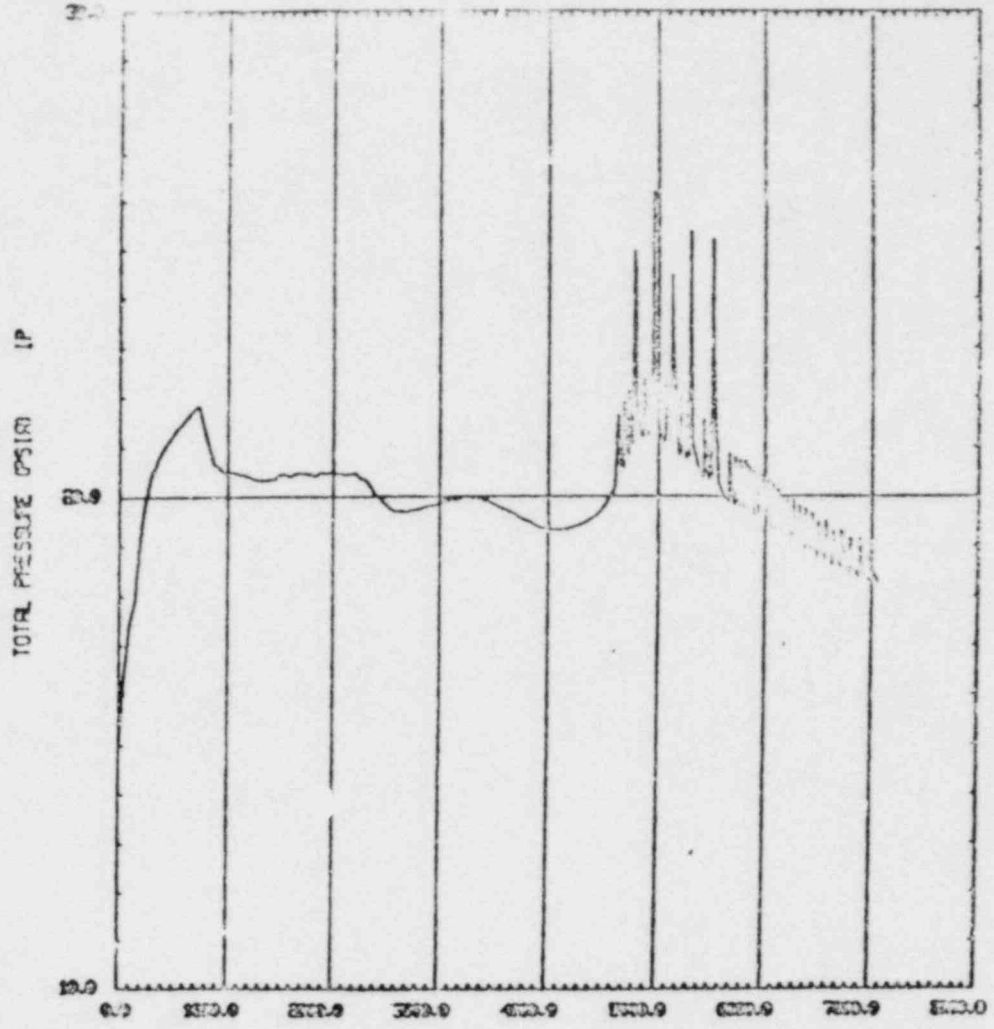


FIGURE 2.1-17

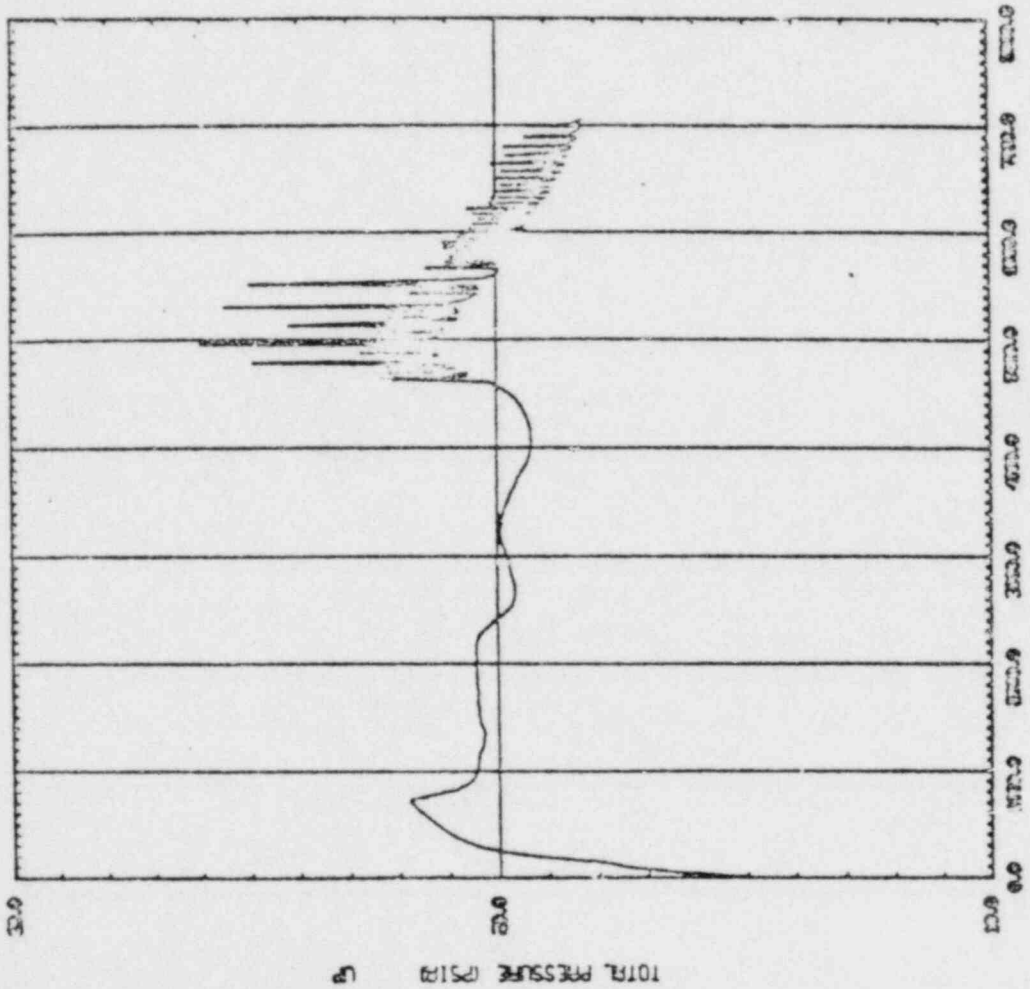


FIGURE 2.1-18

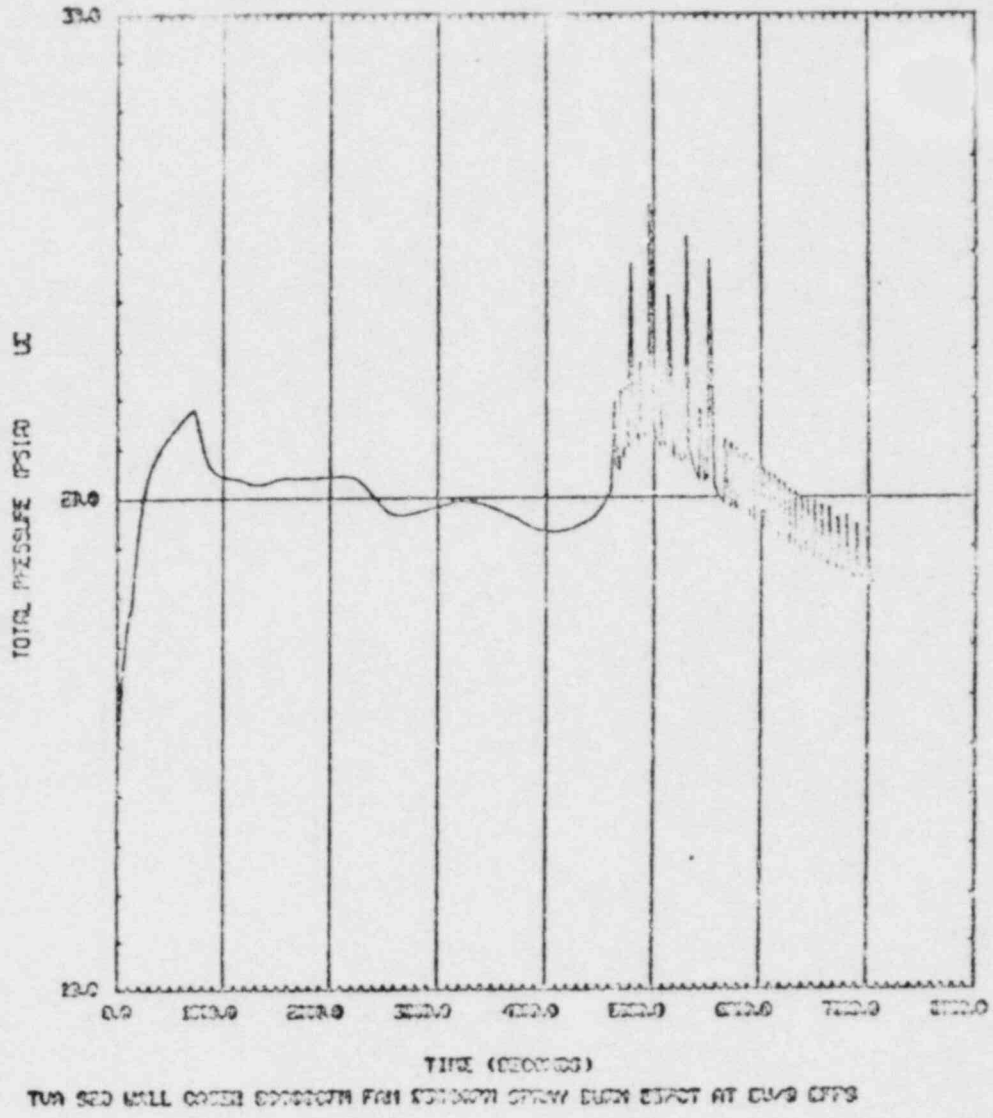


FIGURE 2.1-19

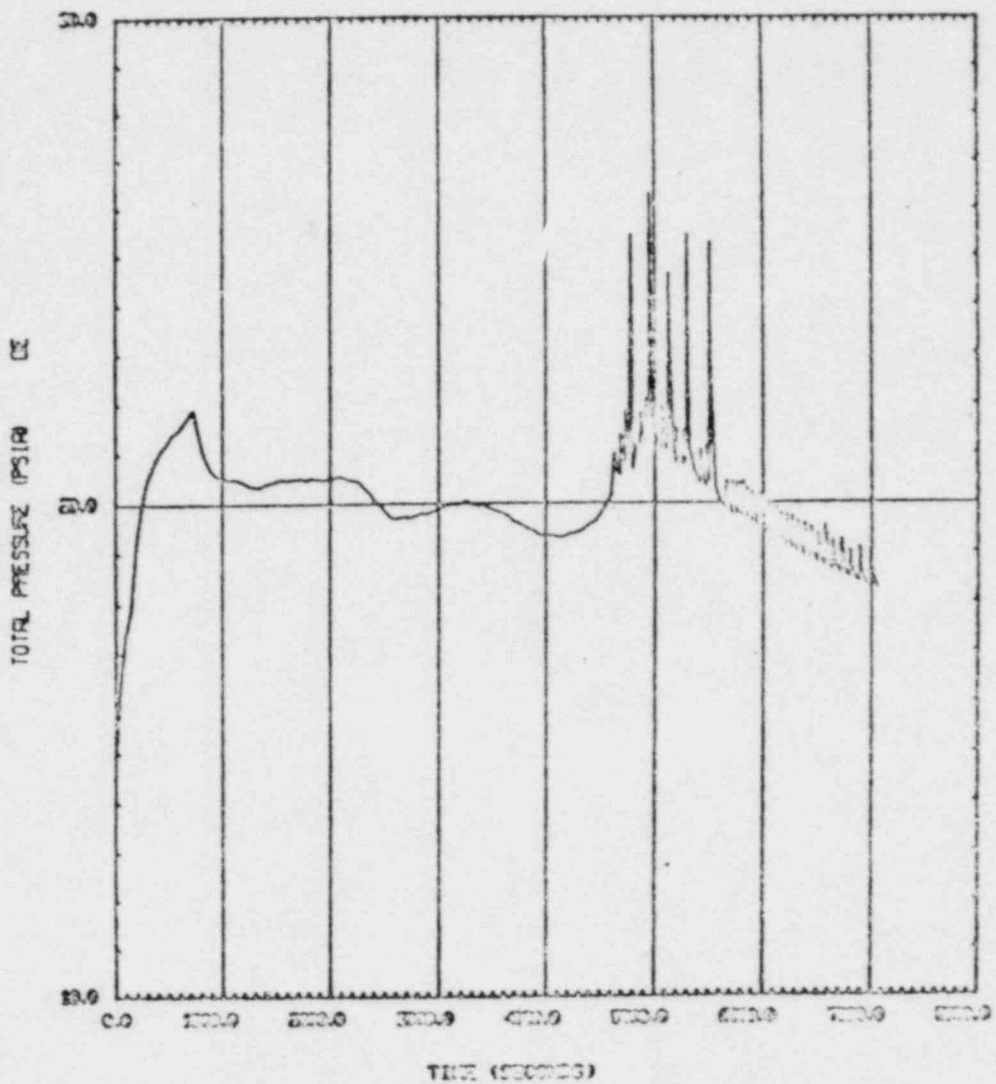


FIGURE 2.1-20

READY-

FRAME 02

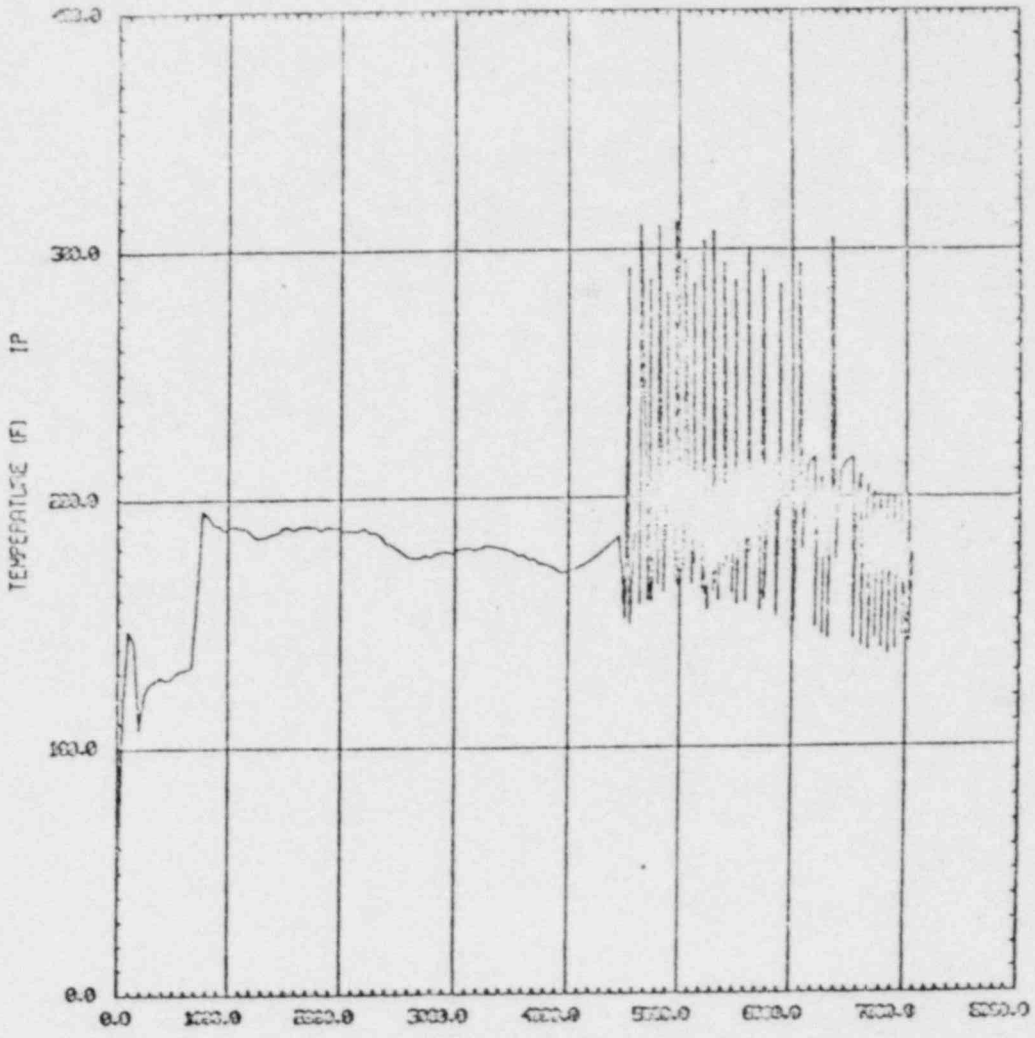


FIGURE 2.1-22

READY-

FRAME 93

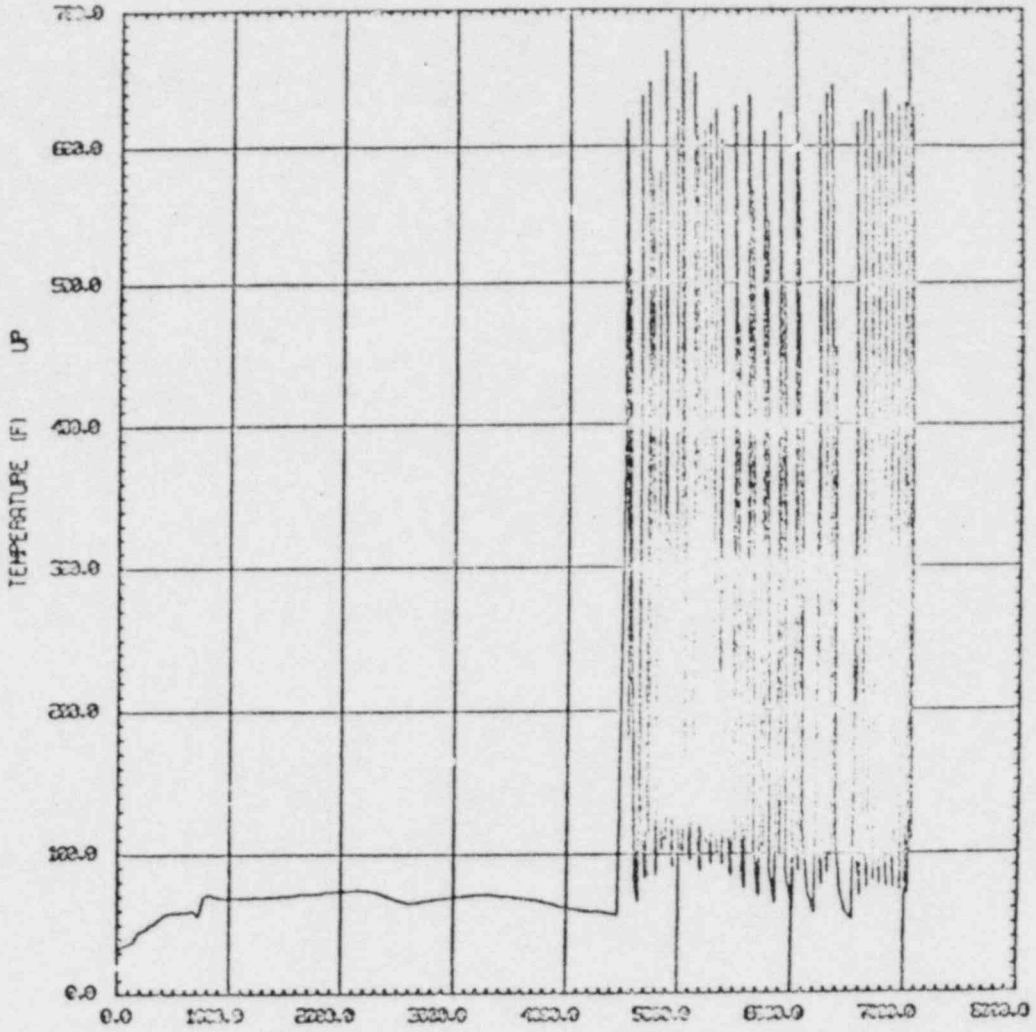
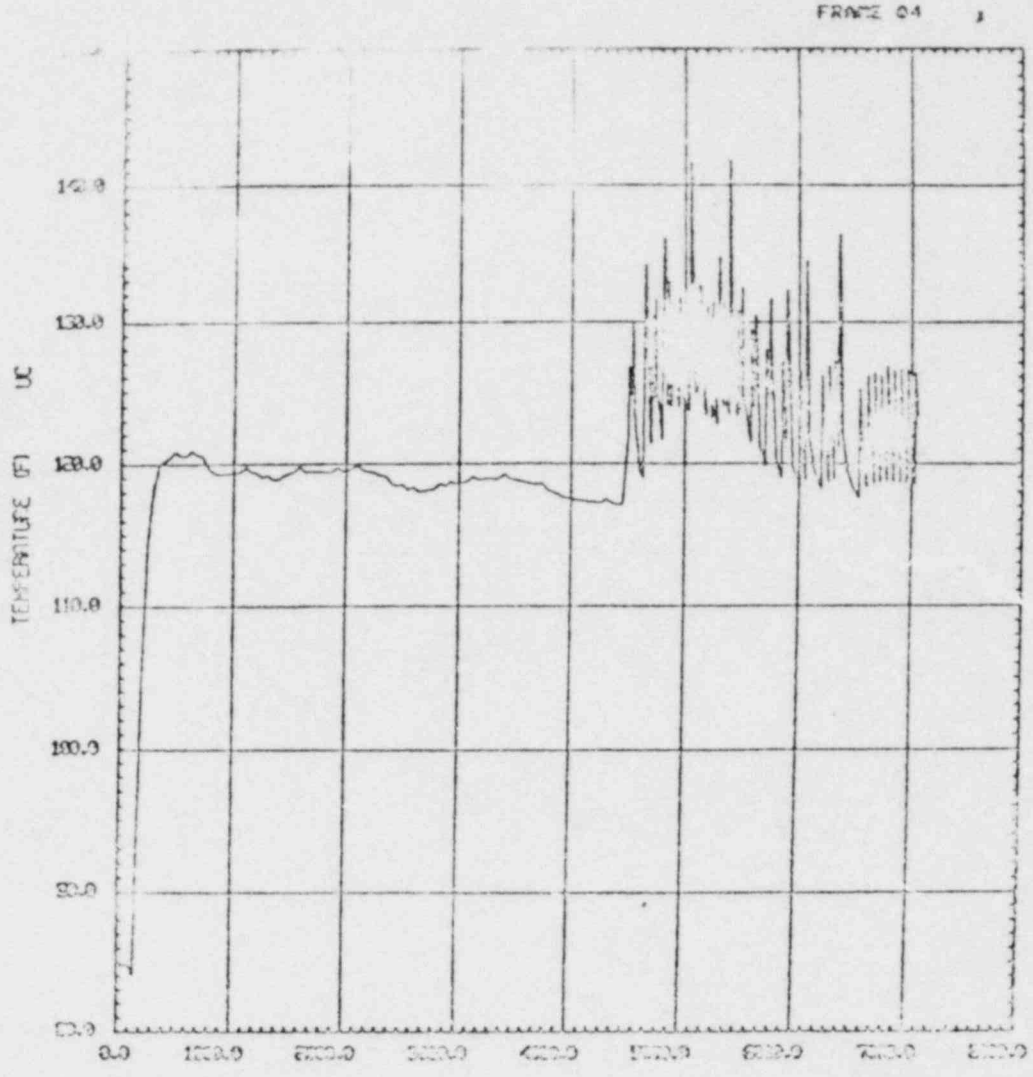


FIGURE 2.1-23

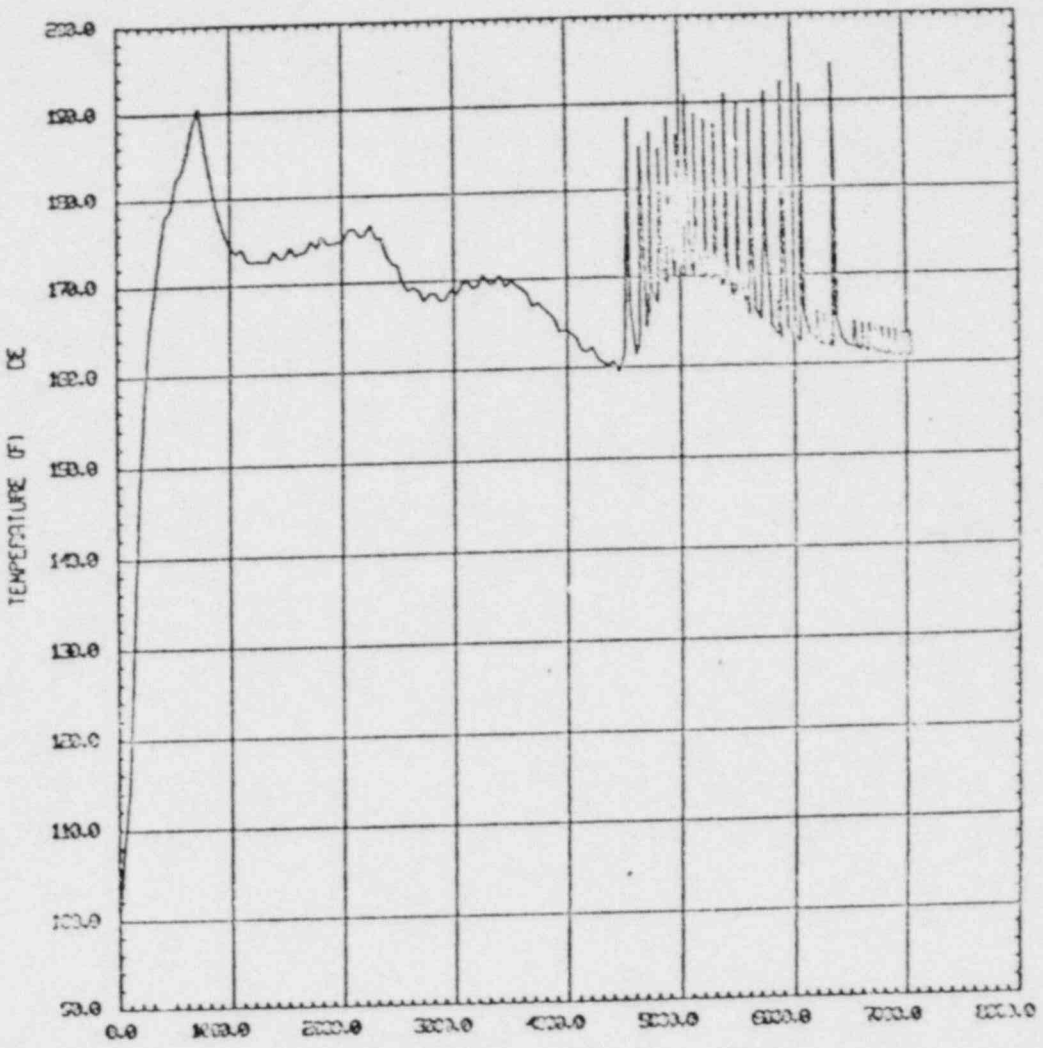


TVA SQD WALL CASE3 BOOSTER FAN BOOSTER SPRAY BURN GAFCT AT 60/0 GFPS

FIGURE 2.1-24

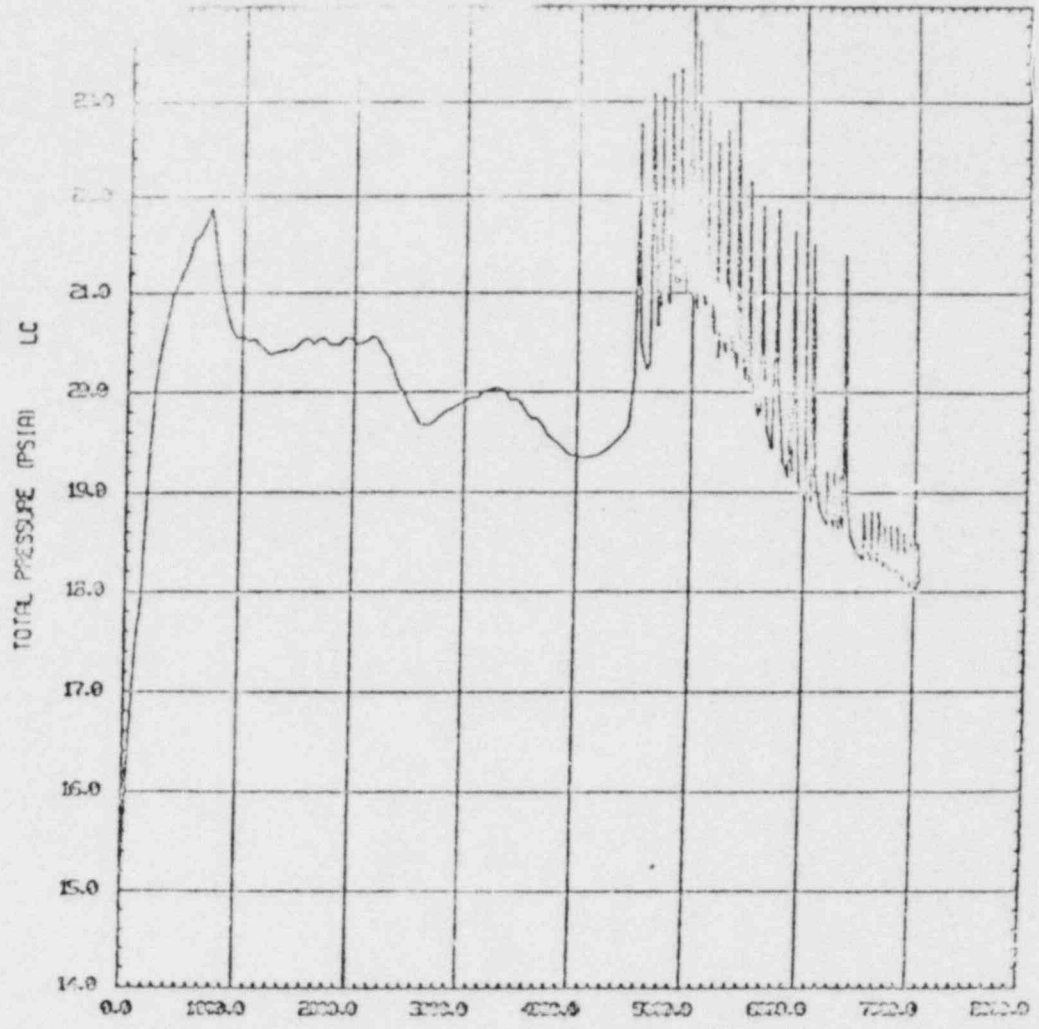
READY-

FRAME 05



TWO SIDED WALL CASES SCOOPOFF FAN SCOOPOFF SPRAY BURN SPOT AT 60/3 GPS

FIGURE 2.1-25



TVA 52D WALL CASE3 88000CFM FAN 55000TH SPRAY DUEN 60PCT AT 6V/0 CFPS

FIGURE 2.1-26

READY-

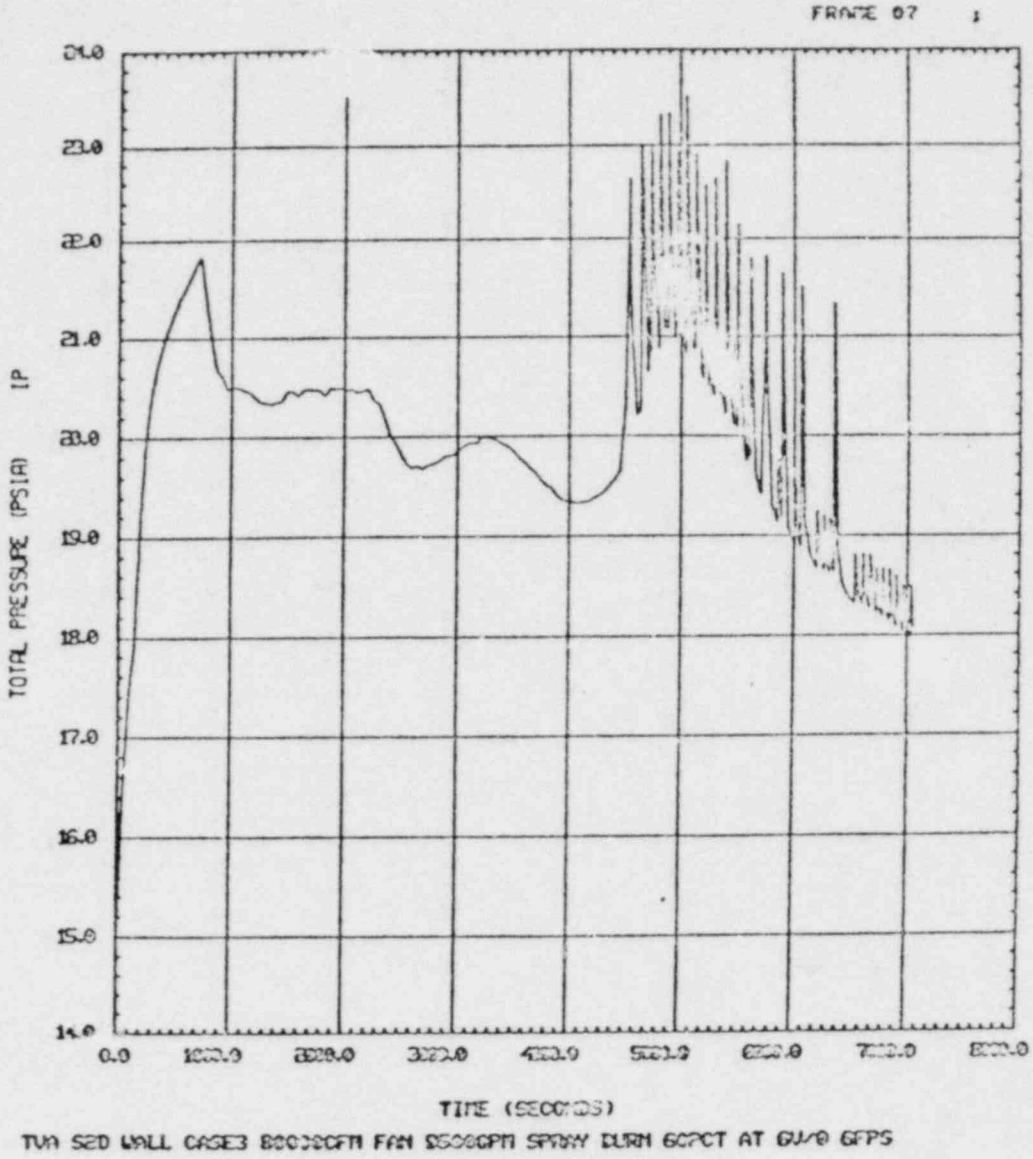
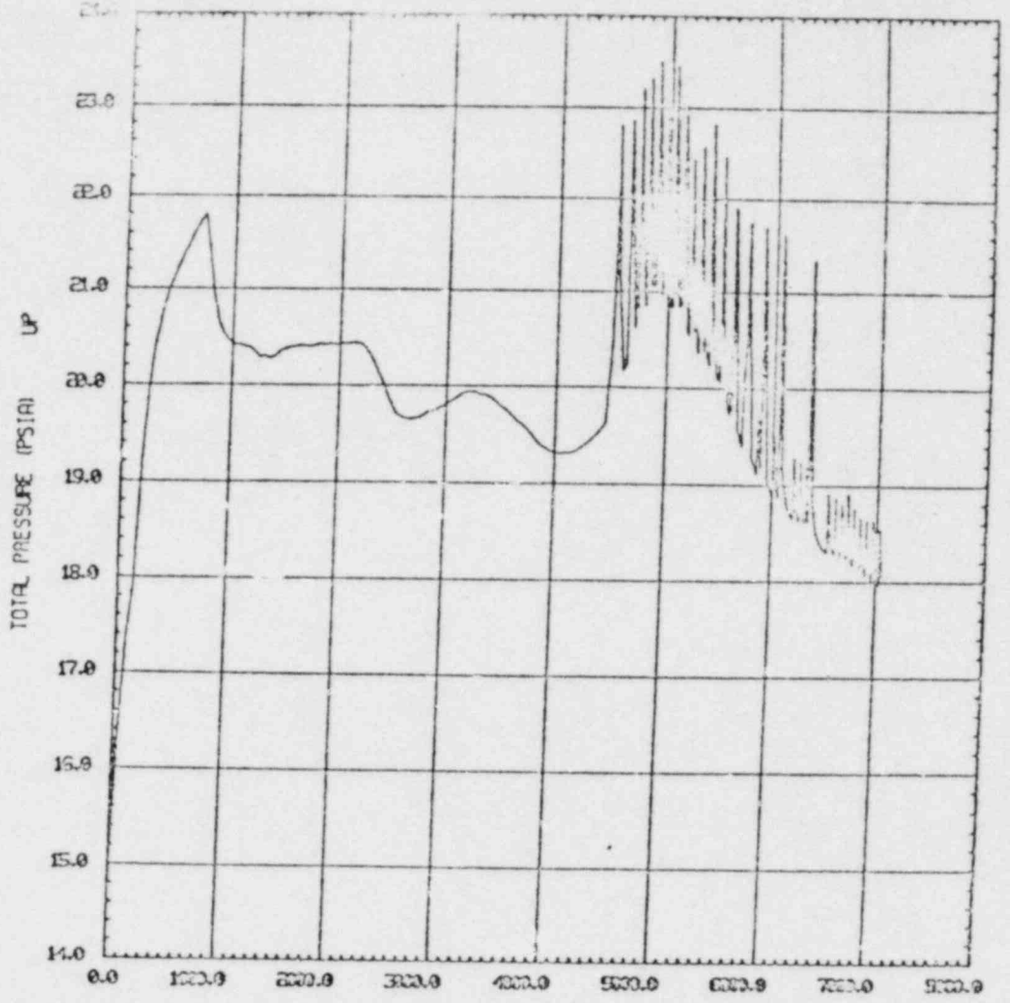


FIGURE 2.1-27

READY-

FRAME 03

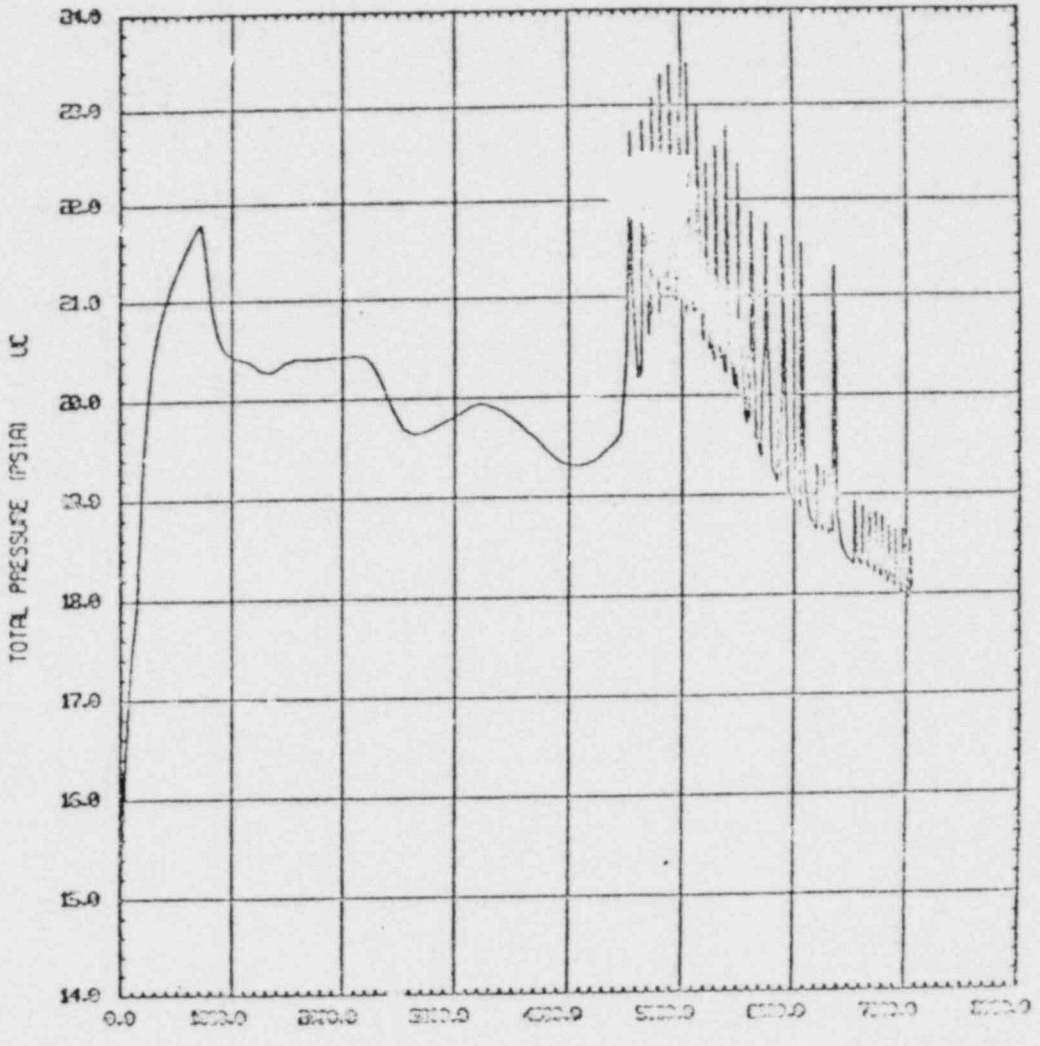


TWA S2D WALL CASED 200000CFM FAN 350000FM SCREW BURN 60PCT AT 600 FPS

FIGURE 2.1-28

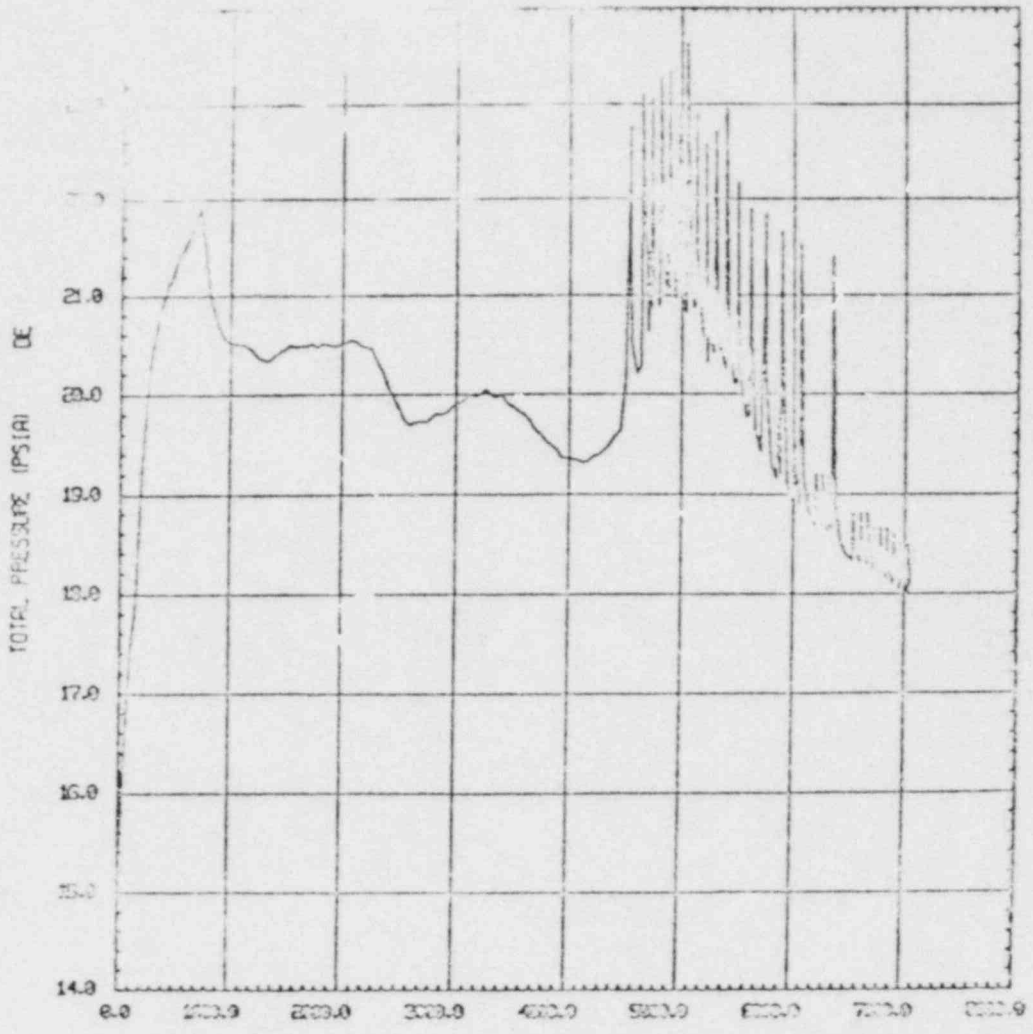
READY-

FRAME 09 1



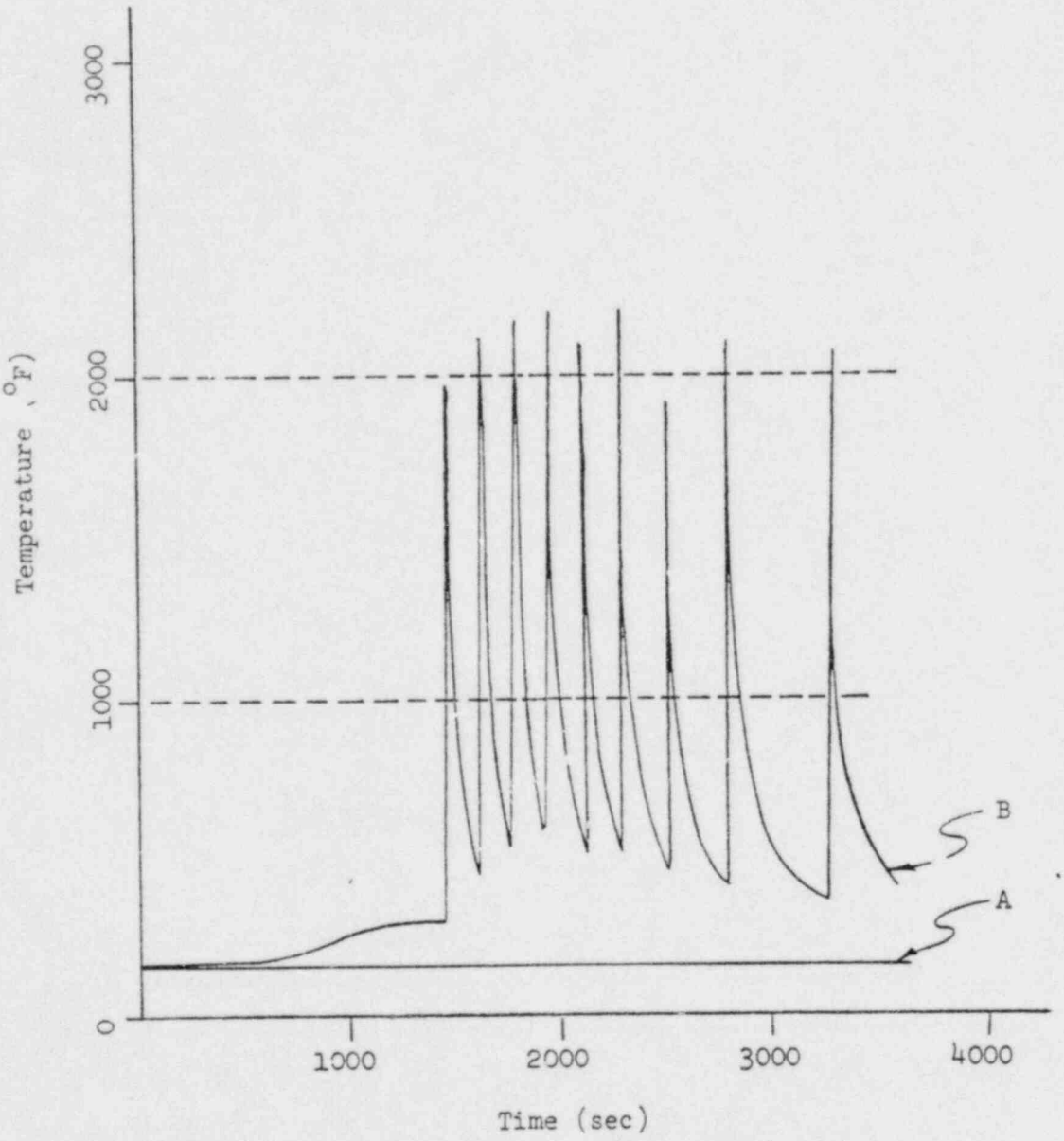
TVA S2D WALL CASE3 [illegible]CFM FAN [illegible]GPM SPRAY DUR: 60PCT AT 0U/0 OFFS

FIGURE 2.1-29



TVA SQD WALL CASES SMOOTH FAN SHOCK SLOW DECK EXIT AT GV/O EPTS

FIGURE 2.1-30



A-- Calculated Heat Sink Temperature with Burn
- TVA analysis
- maximum heat sink temperature (275°F)

B - Calculated Atmospheric Temperature with Burn
- CLASIX S_2D case
- no structural heat sinks

Figure 2.3-1

LOWER COMPARTMENT ATMOSPHERIC TEMPERATURE

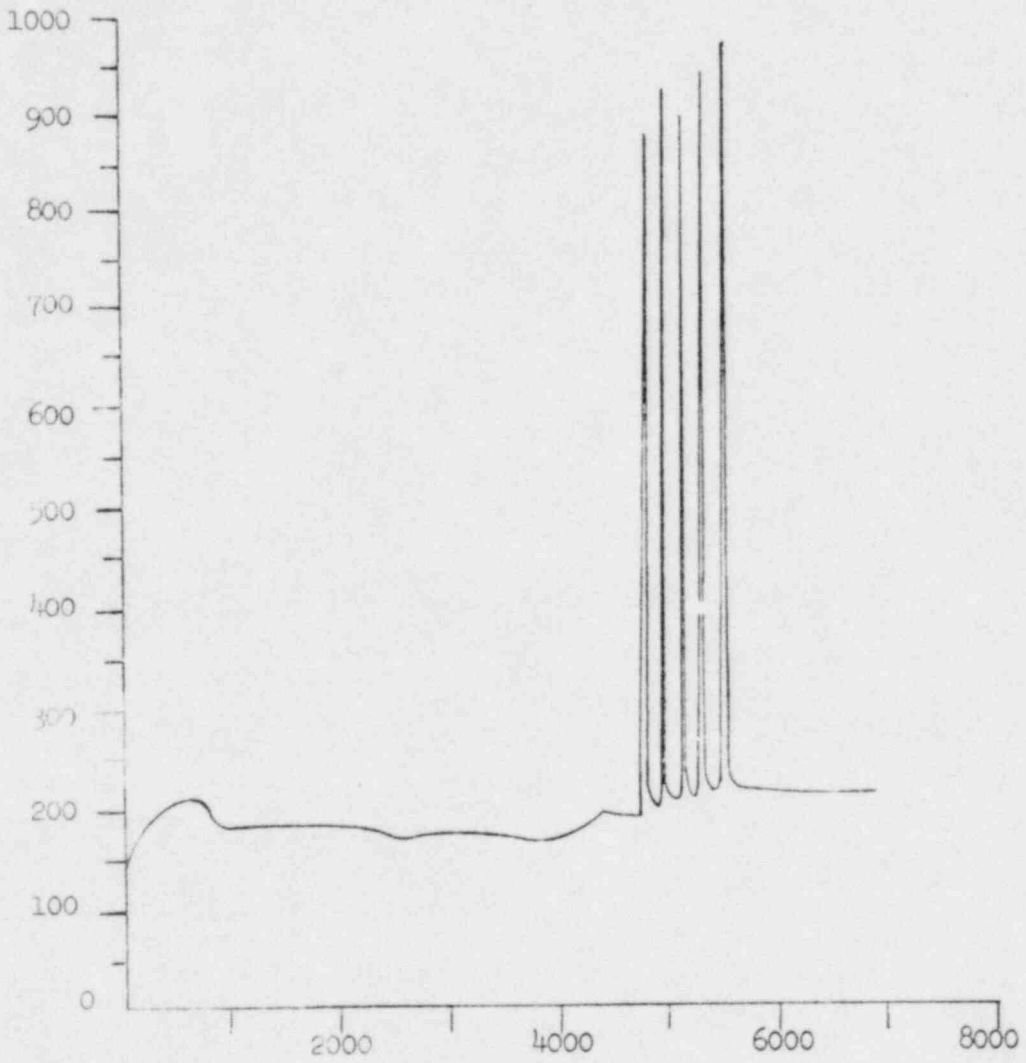


FIGURE 2.3-2

UPPER PLENUM ATMOSPHERIC TEMPERATURE

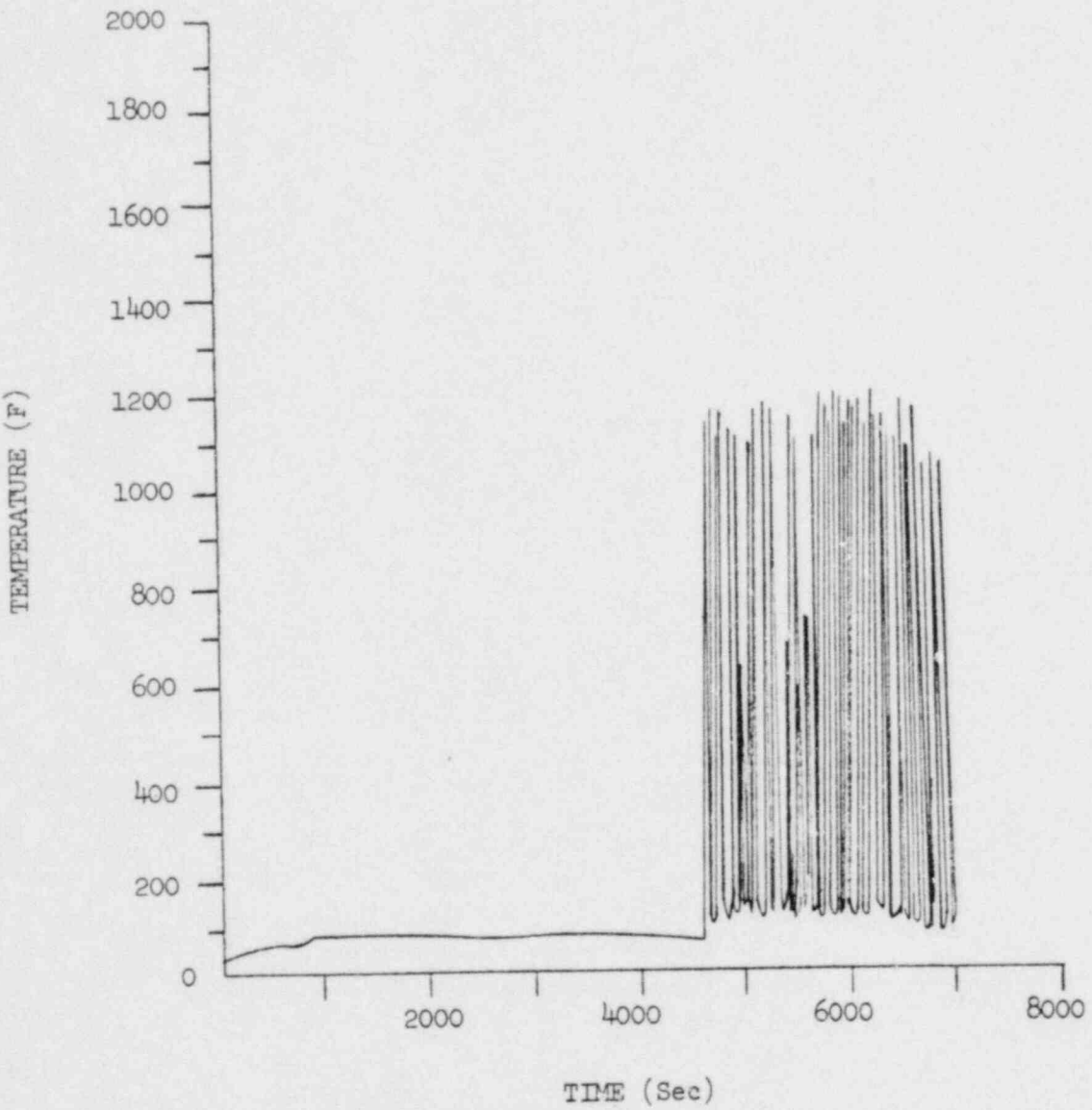


FIGURE 2.3-3

ATM [illegible] TEMPERATURE

Upper Plenum
Lower Compartment
(Burn at 8%)

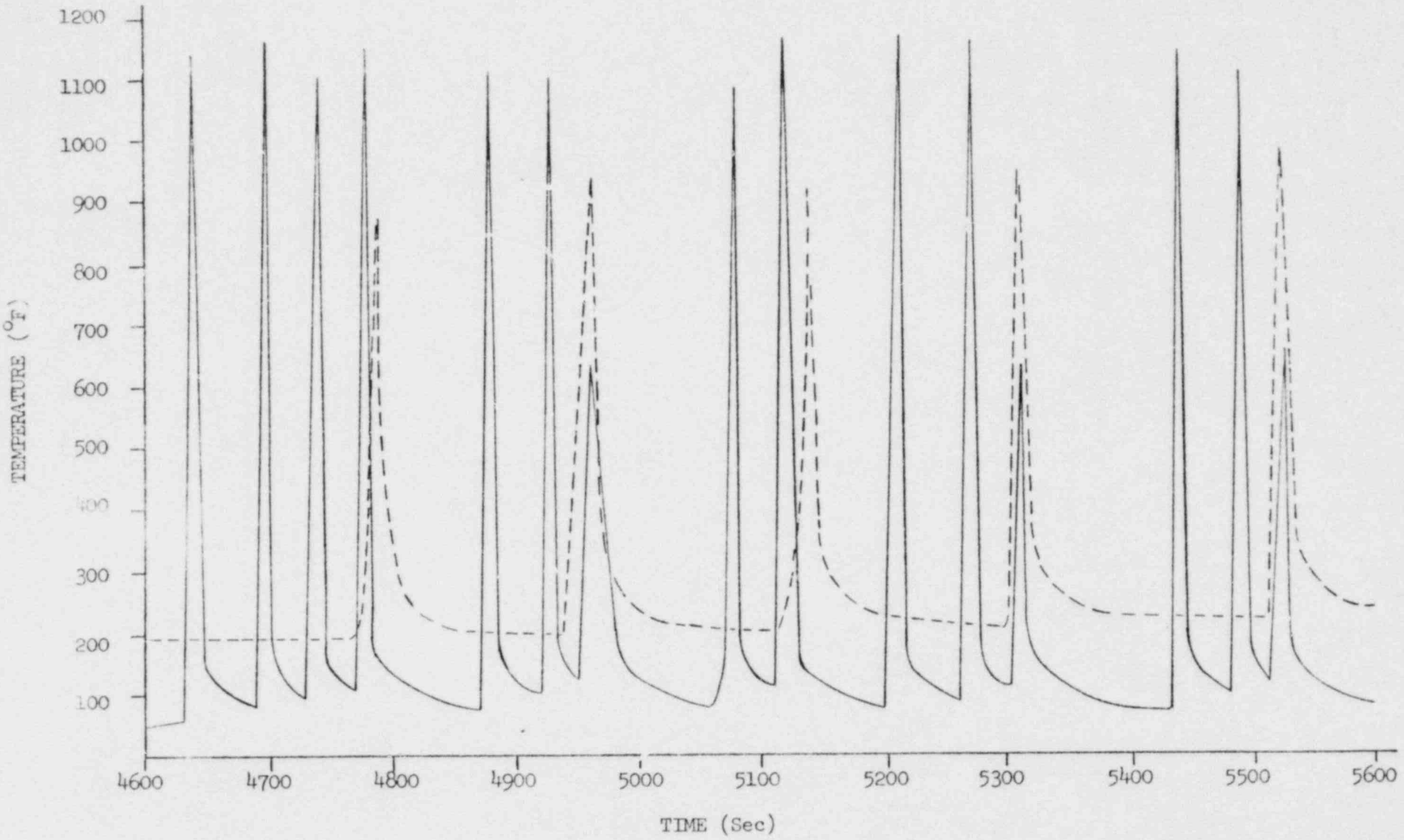


FIGURE 2.3-4

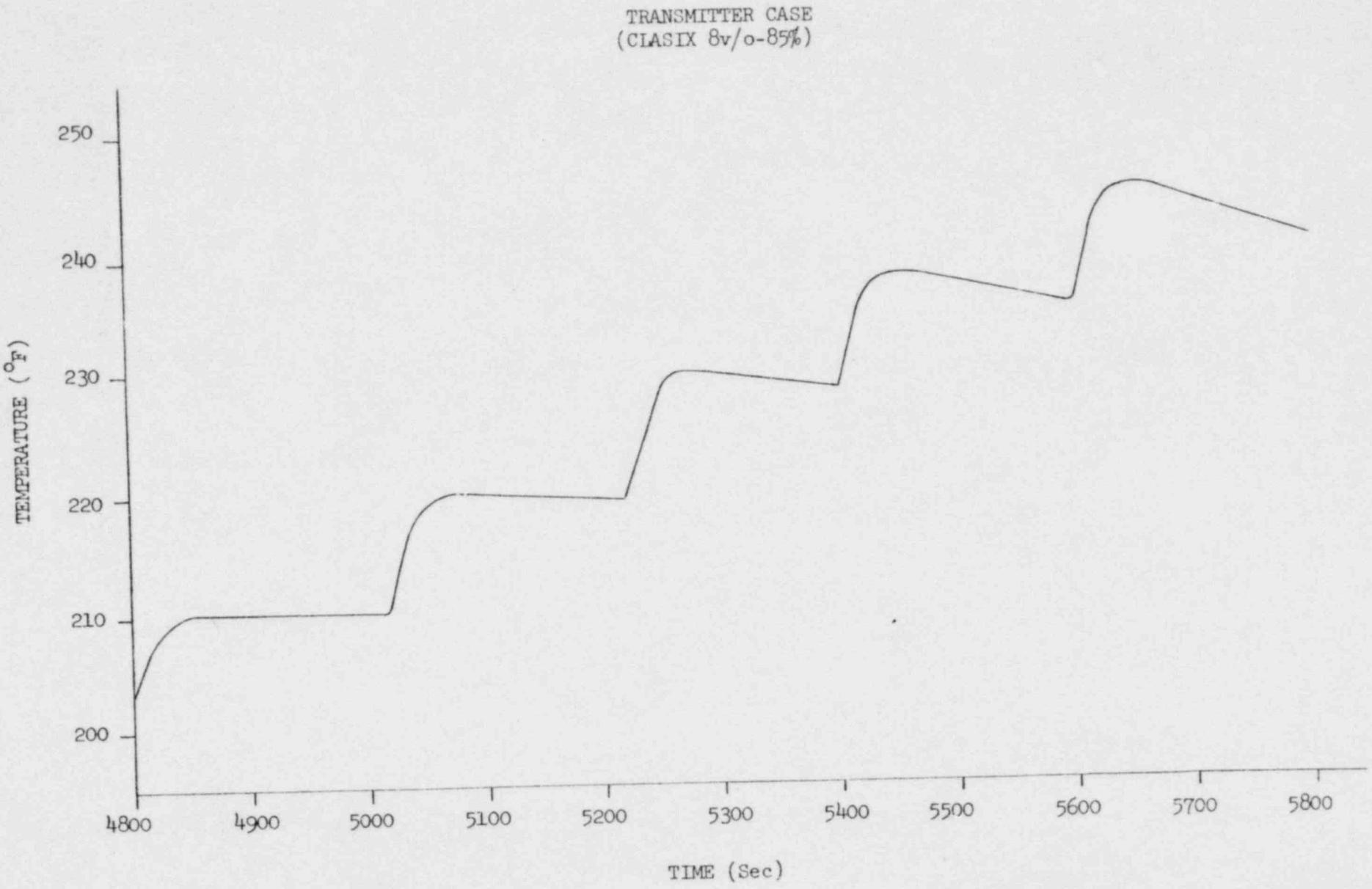

TRANSMITTER CASE
(CIASIX 8v/o-85%)
TEMPERATURE (°F)
250
240
230
220
210
200
4800
4900
5000
5100
5200
5300
5400
5500
5600
5700
5800
TIME (Sec)

FIGURE 2.3-5

TEST CHAMBER TEMPERATURE

Figure 2.3-6

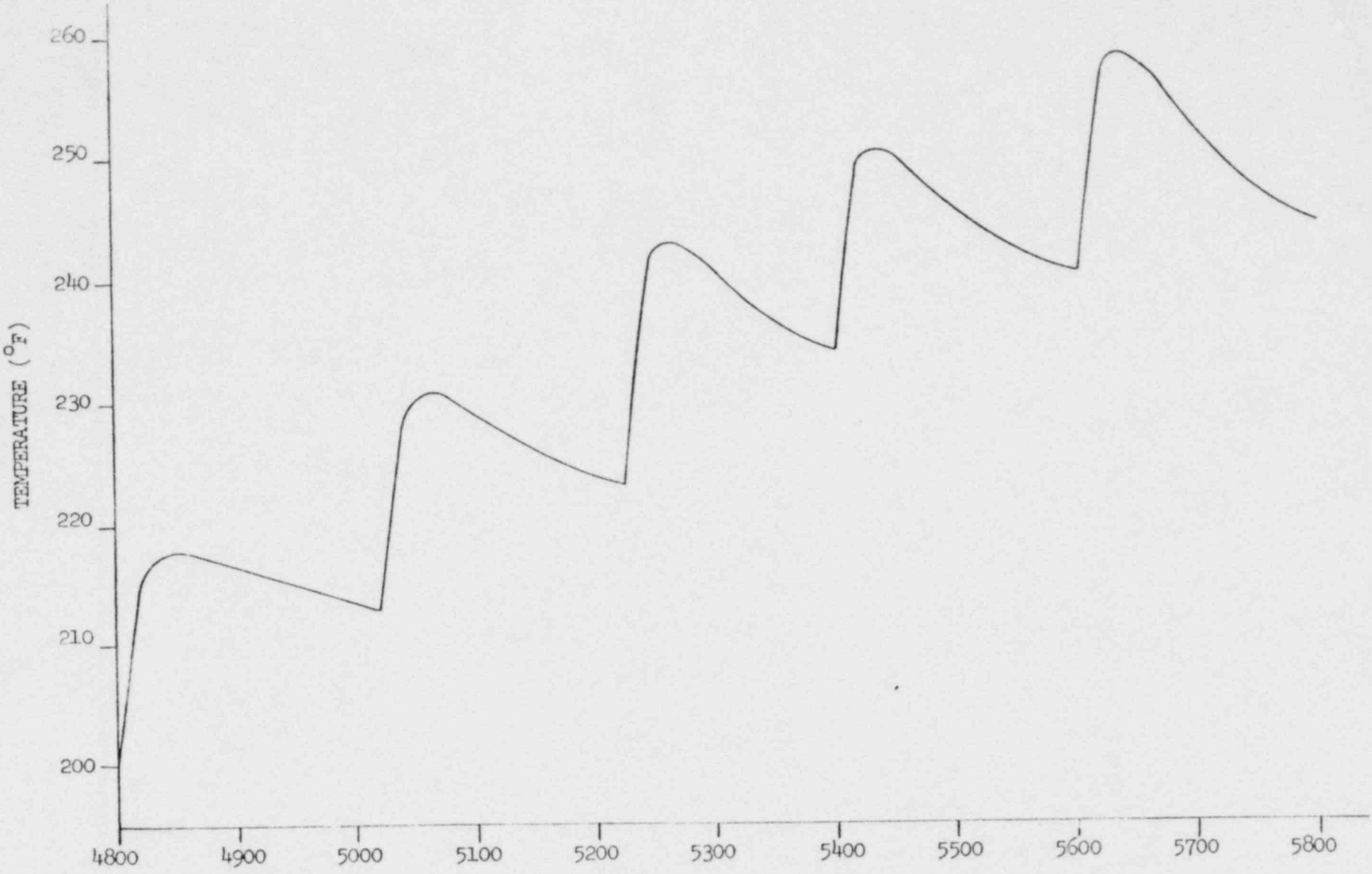

260
250
240
230
220
210
200
TEMPERATURE (°F)
4800
4900
5000
5100
5200
5300
5400
5500
5600
5700
5800
TIME (Sec)

FIGURE 2.3-7

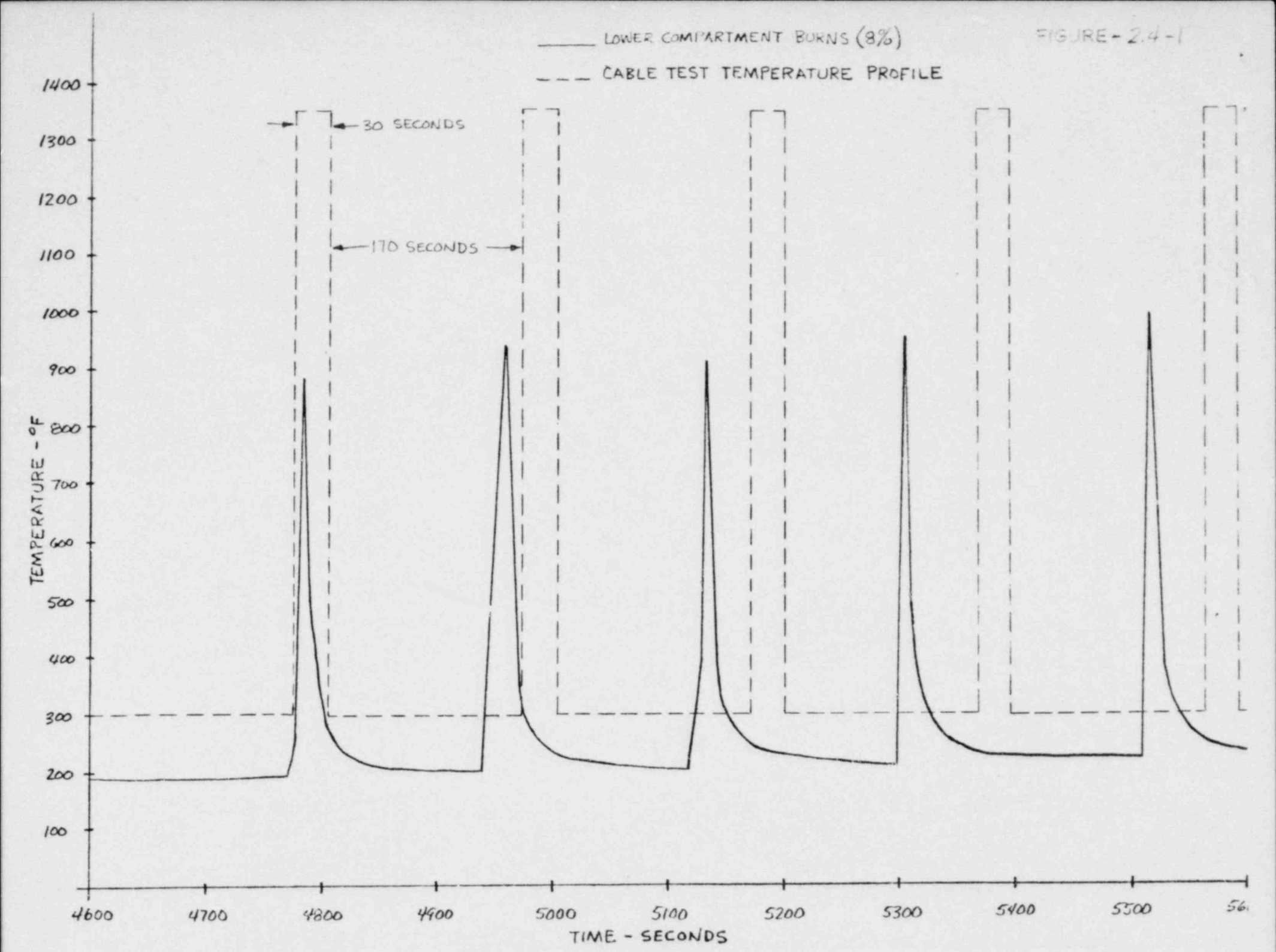

LOWER COMPARTMENT BURNS (8%)
CABLE TEST TEMPERATURE PROFILE
30 SECONDS
170 SECONDS
TEMPERATURE - °F
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
4600
4700
4800
4900
5000
5100
5200
5300
5400
5500
TIME - SECONDS

FIGURE - 2.4-1

ATTACHMENT A.