STATE OF FLORIDA)
) ss.
COUNTY OF DADE)

Robert E. Uhrig, being first duly sworn, deposes and says:

That he is a Vice President of Florida Power & Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this said document are true and correct to the best of his knowledge, information, and belief, and that he is authorized to execute the document on behalf of said Licensee.

Robert E. Uhrig

Robert E. Uhrig

Subscribed and sworn to before me this

13 day of February, 1980

Cheryl L. Fredrick

NOTARY PUBLIC, in and for the county of Dade, State of Florida

My commission expires: Notary Public, State of Florida at Large
My Commission Expires October 30, 1983
~~Bonded thru Maynard Bonding Agency~~

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reactivity insertion upon ejection greater than 0.3% k/k at rated power. Inoperable rod worth shall be determined within 4 weeks.

b. A control rod shall be considered inoperable if
   (a) the rod cannot be moved by the CRDM, or
   (b) the rod is misaligned from its bank by more than 15 inches, or
   (c) the rod drop time is not met.

c. If a control rod cannot be moved by the drive mechanism, shutdown margin shall be increased by boron addition to compensate for the withdrawn worth of the inoperable rod.

5. CONTROL ROD POSITION INDICATION

If either the power range channel deviation alarm or the rod deviation monitor alarm are not operable rod positions shall be logged once per shift and after a load change greater than 10% of rated power. If both alarms are inoperable for two hours or more, the nuclear overpower trip shall be reset to 93% of rated power.

6. POWER DISTRIBUTION LIMITS

a. Hot channel factors:

(1) With steam generator tube plugging >22% and ≤25%, the hot channel factors (defined in the basis) must meet the following limits at all times except during low power physics tests:

$$F_q\ (Z) \leq (* /P) \times K(Z),\ \text{for } P > .5$$

$$F_q\ (Z) \leq (*) \times K(Z),\ \text{for } P \leq .5$$

$$F^N_{\Delta H} \leq 1.55\ [1.+0.2\ (1-P)]$$

Where P is the fraction of rated power at which the core is operating; K(Z) is the function given in Figure 3.2-3b; Z is the core height location of F_q.

If F_q, as predicted by approved physics calculations, exceeds (*), the power will be limited to the rated power multiplied by the ratio of (*) divided by the predicted F_q, or augmented surveillance of hot channel factors shall be implemented.

(2) With steam generator tube plugging ≤ 22%, the hot channel factors (defined in the basis) must meet the following limits at all times except during low power physics tests:

$$F_q\ (Z) \leq (1.99/P) \times K(Z),\ \text{for } P > .5$$

$$F_q\ (Z) \leq (3.98) \times K(Z),\ \text{for } P \leq .5$$

$$F^N_{\Delta H} \leq 1.55\ [1.+0.2\ (1-P)]$$

Where P is the fraction of rated power at which the core is operating; K(Z) is the function given in Figure 3.2-3a; Z is the core height location of F_q.

* To be supplied based on results of revised ECCS analysis for 25% steam generator tube plugging.

If F_q, as predicted by approved physics calculations, exceeds 1.99, the power will be limited to the rated power multiplied by the ratio of 1.99 divided by the predicted F_q, or augmented surveillance of hot channel factors shall be implemented.

b. Following initial loading before the reactor is operated above 75% of rated power and at regular effective full rated power monthly intervals thereafter, power distribution maps, using the movable detector system shall be made, to confirm that the hot channel factor limits of the specification are satisfied. For the purpose of this comparison,

(1) The measurement of total peaking factor, F_q^{Meas}, shall be increased by three percent to account for manufacturing tolerances and further increased by five percent to account for measurement error.

(2) The measurement of the enthalpy rise hot channel factor, $F_{\Delta H}^N$, shall be increased by four percent to account for measurement error.

If either measured hot channel factor exceeds its limit specified under Item 6a, the reactor power shall be reduced so as not to exceed a fraction of the rated value equal to the ration of the F_q or $F_{\Delta H}^N$ limit to measured value, whichever is less, and the high neutron flux trip setpoint shall be reduced by the same ratio. If subsequent in-core mapping cannot, within a 24 hour period, demonstrate that the hot channel factors are met, the reactor shall be brought to a hot shutdown condition with return to power authorized only for the purpose of physics testing. The reactor may be returned to higher power levels when measurements indicate that hot channel factors are within limits.

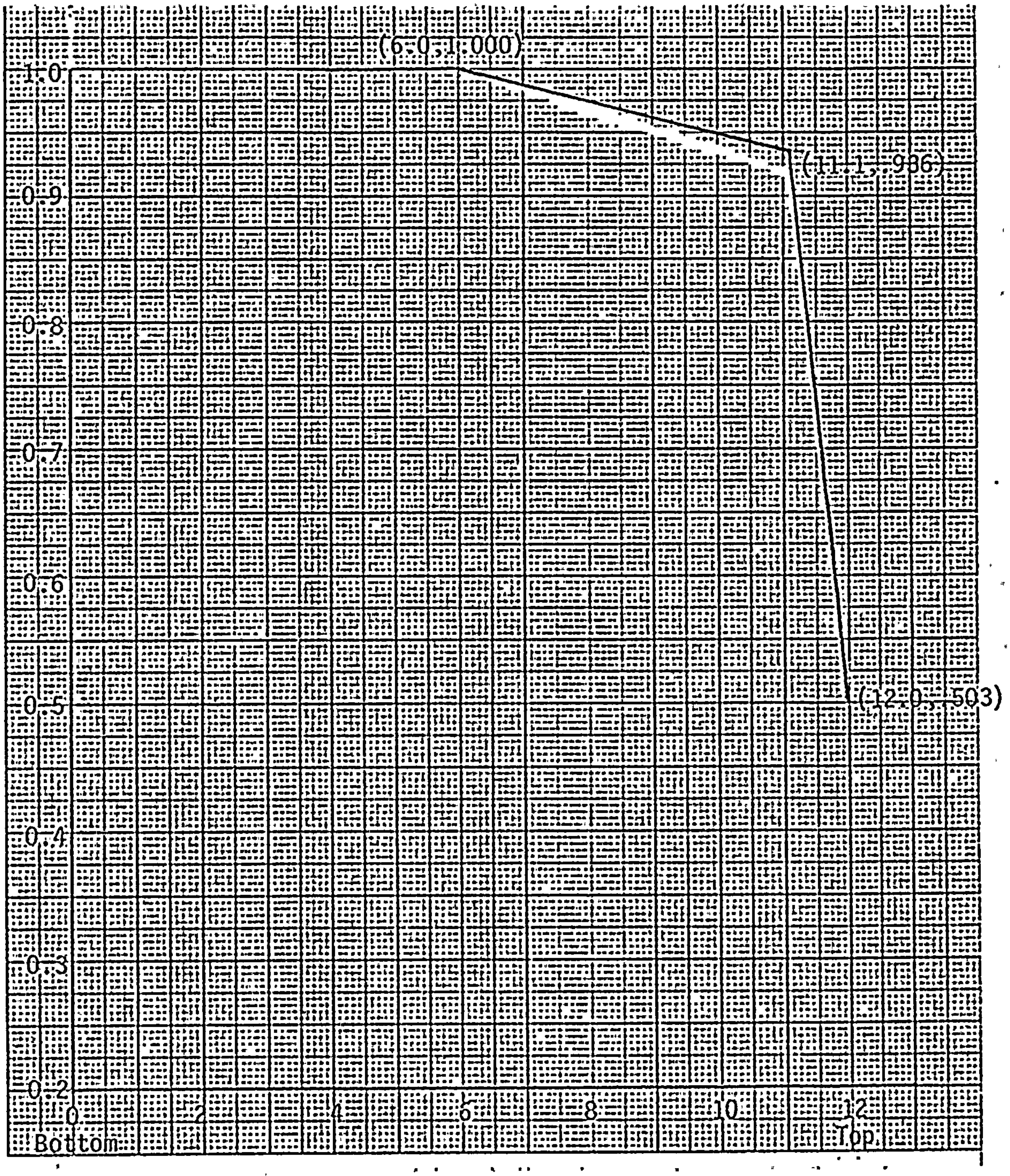
c. The reference equilibrium indicated axial flux difference as a function of power level (called the target flux difference) shall be measured at least once per effective full power quarter. If the axial flux difference has not been measured in the last effective full power month, the target flux difference must be updated monthly by linear interpolation using the most recent measured value and the value predicted for the end of the cycle life.

d. Except during physics tests or during excore calibration procedures and as modified by items 6e through 6g below, the indicated axial flux difference shall be maintained within a $\pm$ 5% band about the target flux difference (this defines the target band on axial flux difference).

e. If the indicated axial flux difference at a power level greater than 90% of rated power deviates

HOT CHANNEL FACTOR
NORMALIZED OPERATING ENVELOPE

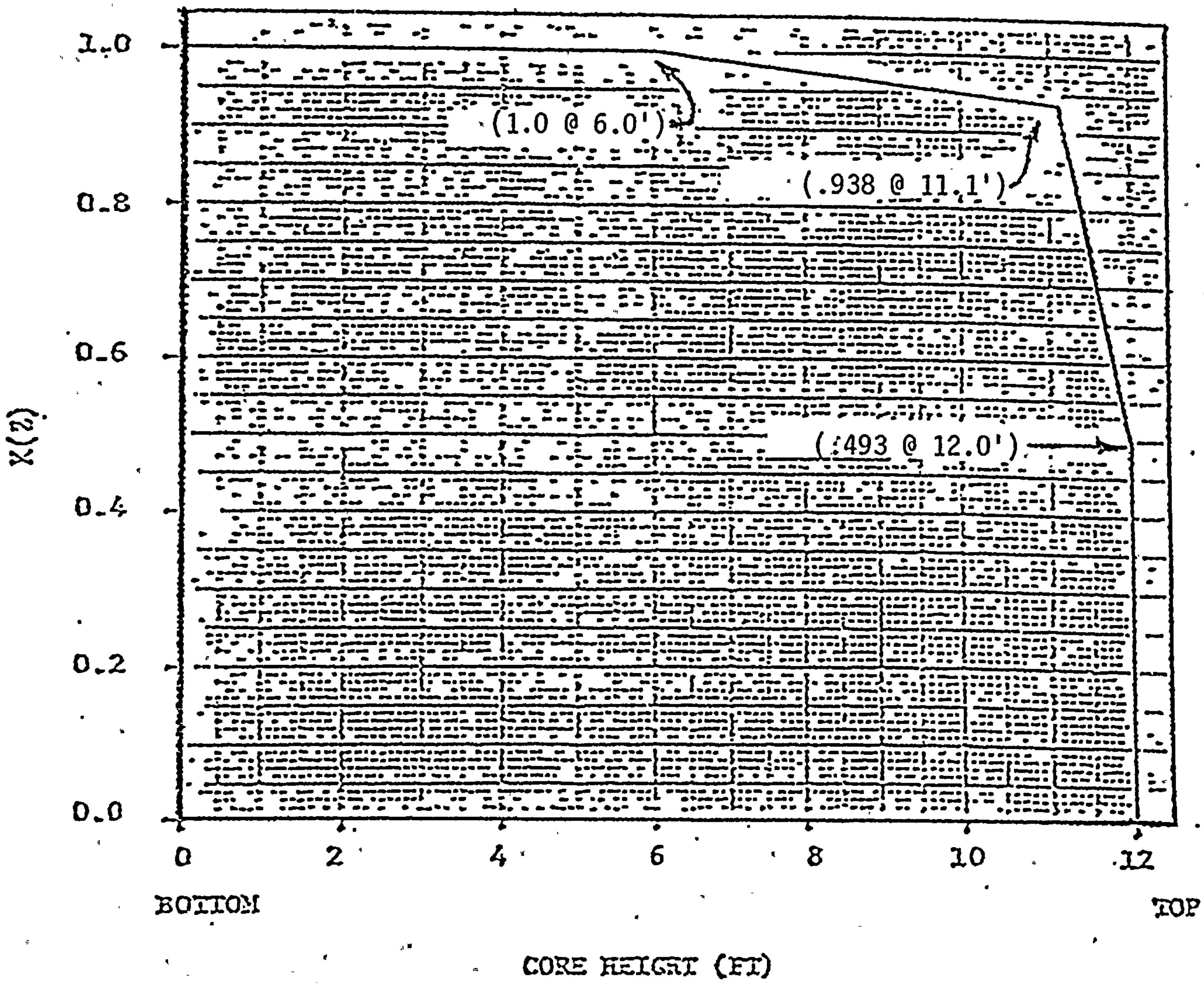
(for steam generator tube plugging 22% and F_q=1.99)



CORE HEIGHT (FT.)

Figure 3.2-3a

HOT CHANNEL FACTOR-NORMALIZED OPERATING ENVELOPE (FOR STEAM GENERATOR TUBE PLUGGING ≤25% and F_q = *)



* To be supplied based on results of revised ECCS analysis for 25% steam generator tube plugging.

FIGURE 3.2-3b

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TABLE 1

LARGE BREAK

TIME SEQUENCE OF EVENTS

Event	DECL (CD=0.4) (SEC)
START	0.0
Rx Trip Signal	0.678
S. I. Signal	0.73
Acc. Injection	15.7
End of Bypass	27.94
End of Blowdown	29.23
Bottom of Core Recovery	46.86
Acc. Empty	59.85
Pump Injection	25.73

TABLE 2

LARGE BREAK

Results	DECL (CD=0.4)
Peak Clad Temp. °F	2160
Peak Clad Location Ft.	6.0
Local Zr/H_2O Rxn(max)%	7.365
Local Zr/H_2O Location Ft.	6.0
Total Zr/H_2O Rxn %	<0.3
Hot Rod Burst Time sec	34.6
Hot Rod Burst Location Ft.	6.0

Calculation	
Core Power Mwt 102% of	2200
Peak Linear Power kw/ft 102% of	11.31
Peaking Factor	1.99
Accumulator Water Volume (ft^3)	875 (per accumulator)

Fuel region + cycle analyzed	Cycle	Region
PTP Unit 3	All	All
PTP Unit 4	All	All

TABLE 3

LARGE BREAK

CONTAINMENT DATA (DRT CONTAINMENT)

NET FREE VOLUME	$1.55x10^6$ Ft^3	
INITIAL CONDITIONS		
Pressure	14.7	psia
Temperature	90	°F
RWST Temperature	39	°F
Service Water Temperature	63	°F
Outside Temperature	39	°F
SPRAY SYSTEM		
Number of Pumps Operating	2	
Runout Flow Rate	1450	gpm
Actuation Time	26	secs
SAFEGUARDS FAN COOLERS		
Number of Fan Coolers Operating	3	
Fastest Post Accident Initation of Fan Coolers	26	secs

CONTAINMENT DATA (DRY CONTAINMENT)

STRUCTURAL HEAT SINKS	THICKNESS (INCH)	AREA (FT^2)
Paint Carbon steel	0.006996 0.20	51824.69
Carbon steel	0.006996	996054.9
Paint Carbon steel	0.006996 0.4896	35660.11
Carbon steel	0.4896	11886.7
Paint Carbon steel Concrete	0.006996 0.2898 24.0	102000.0
Carbon steel Concrete	0.2898 24.0	34000.0
Paint Carbon steel	0.006996 1.56	4622.69
Carbon steel	1.56	1540.89
Paint Carbon steel	0.006996 5.496	1277.87
Carbon steel	5.496	425.93
Paint Carbon steel	0.006996 2.748	951.525
Carbon steel	2.748	317.175
Paint Carbon steel	0.006996 0.03	23550.0
Paint Carbon steel	0.006996 0.063	80368.5
Paint Carbon steel	0.006996 0.10	42278.25
Aluminum	0.006996	102400.0
Stainless steel	0.4404	768.0
Stainless steel	2.1264	3704.0
Stainless steel Concrete	0.1398 24.0	14392.0
Concrete	24.0	59132.0

TABLE 4

REFLOOD MASS AND ENERGY RELEASES - DECLG (CD=0.4)

Time (sec)	Mass Flow (lb/sec)	Energy Flow (10^5 BTU/sec)
46.85	0.0	0.0
48.570	0.070	0.0009
54.551	34.33	0.4457
64.664	79.06	0.6337
78.264	83.75	1.043
94.164	90.99	1.122
110.764	238.4	1.511
128.064	274.4	1.561
165.464	283.9	1.481
206.664	291.1	1.387
252.764	298.8	1.278

TABLE 5

BROKEN LOOP ACCUMULATOR FLOW TO CONTAINMENT

FOR LIMITING CASE DECLG (CD=0.4)

Time (sec)	Mass Flow (lb/sec)
0.0	0.0
0.01	2820.8
2.01	2367.0
4.01	2081.9
6.01	1879.1
8.01	1724.5
10.01	1599.4
15.01	1368.0
20.01	1212.9
25.01	1105.9
30.138	1034.5
31.675	1015.2

* For energy flow, multiply mass flow by an enthalpy of 59.62 BTU/lb.

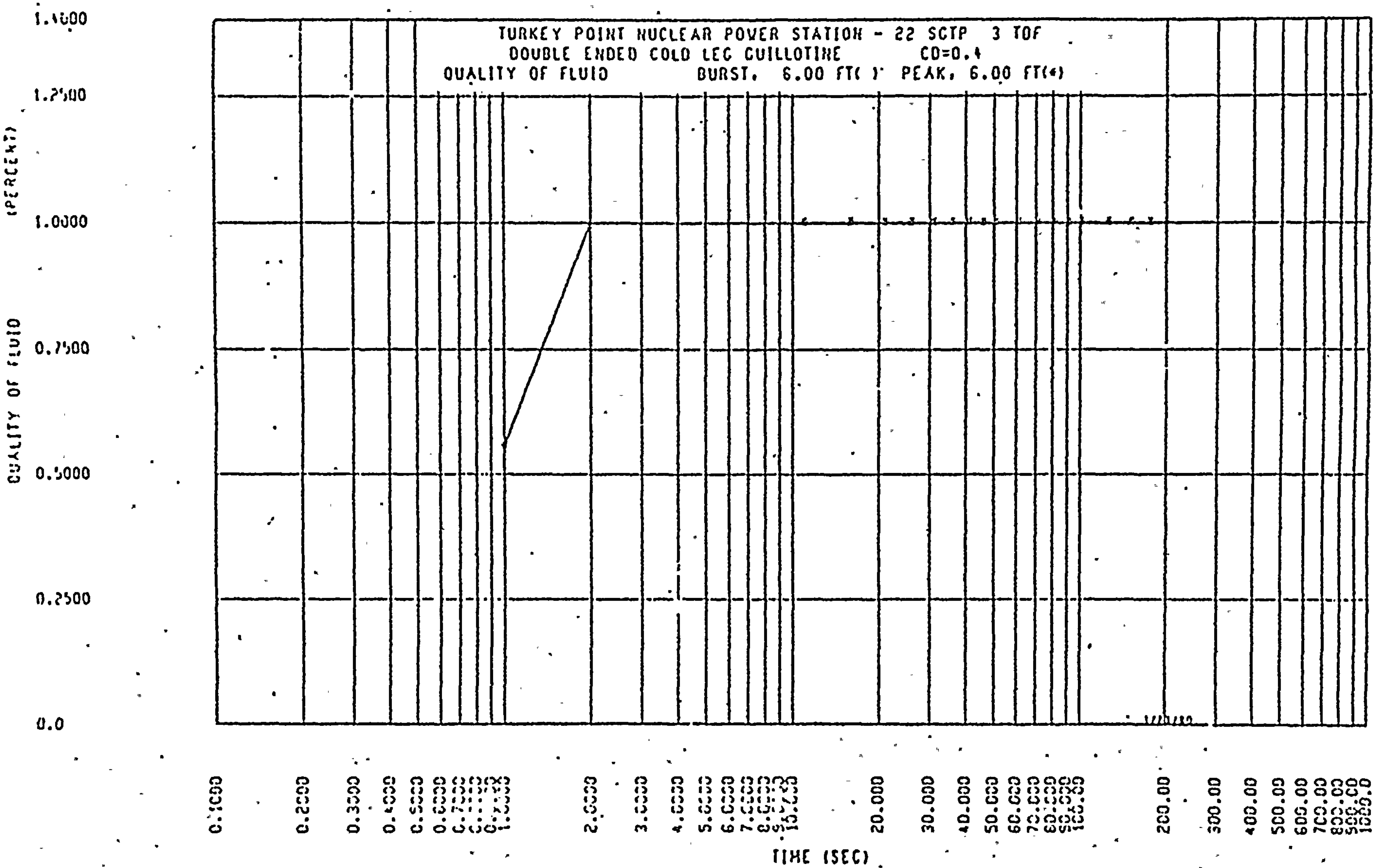

Figure 1 Fluid Quality - DECLG (CD=0.4)

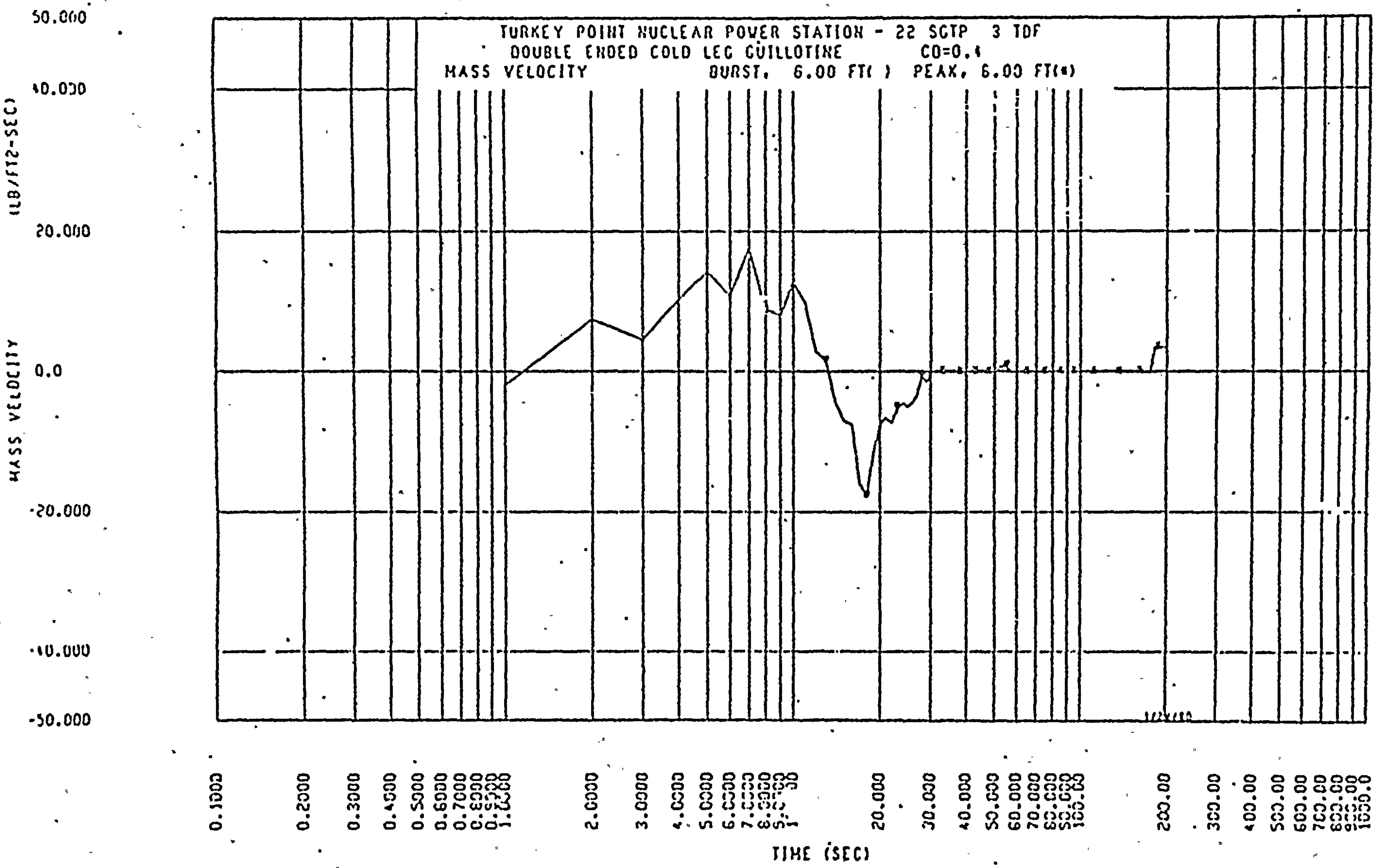

Figure 2 Mass Velocity - DECLG (CD=0.4)

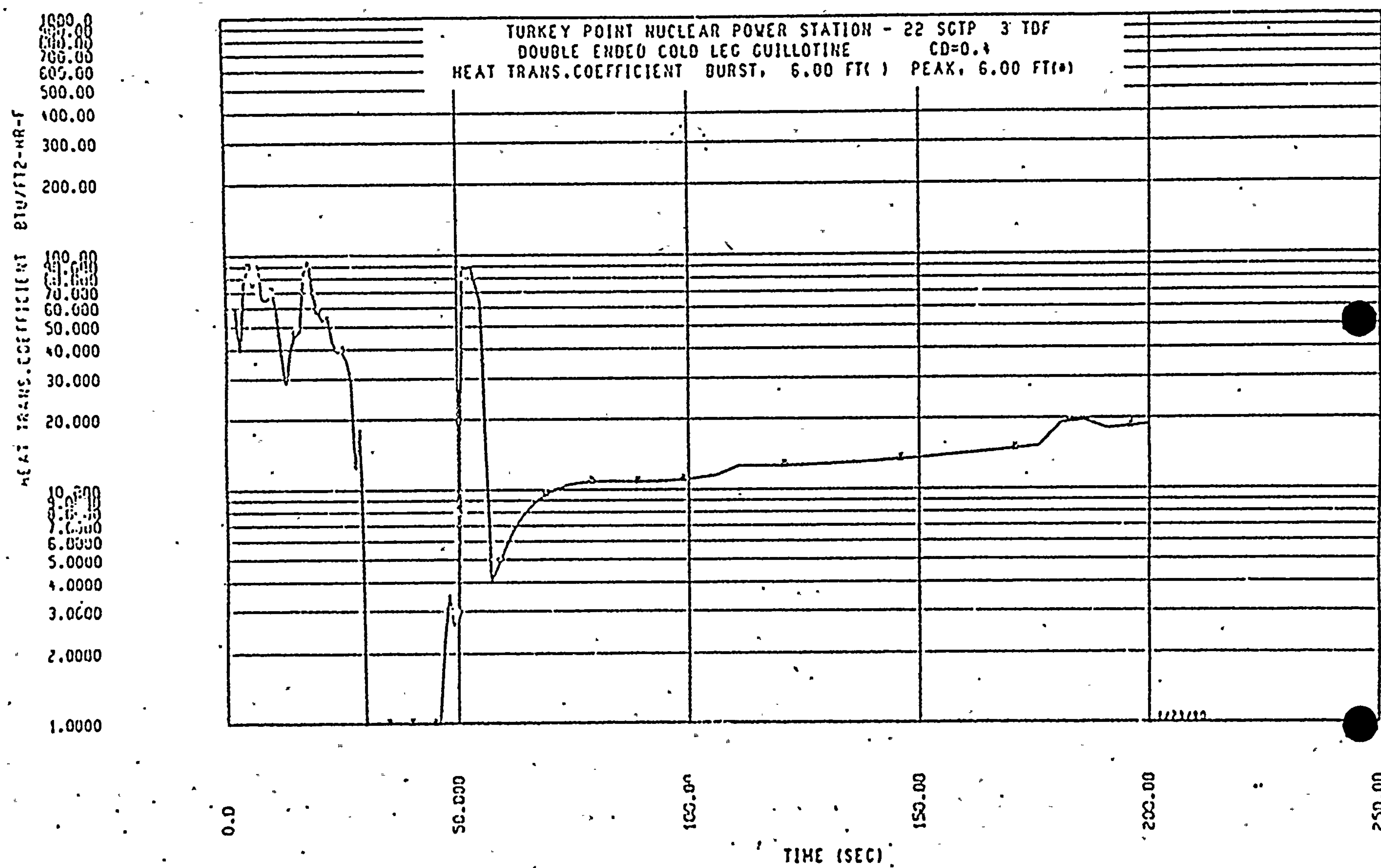

Figure 3 Heat Transfere Coefficient - DECLG (CD=0.4)

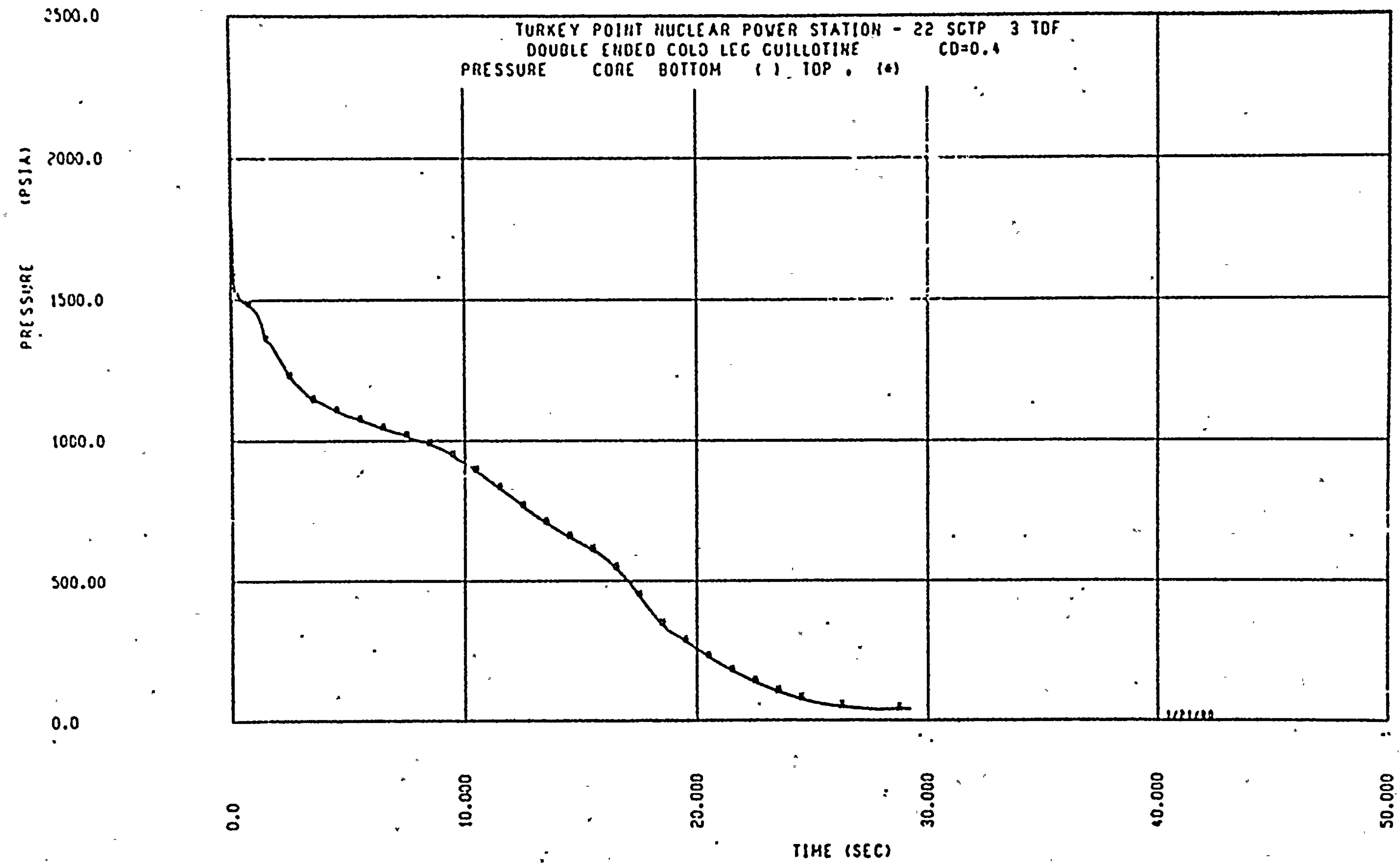

Figure 4 Pressure - DECLG (CD=0.4)

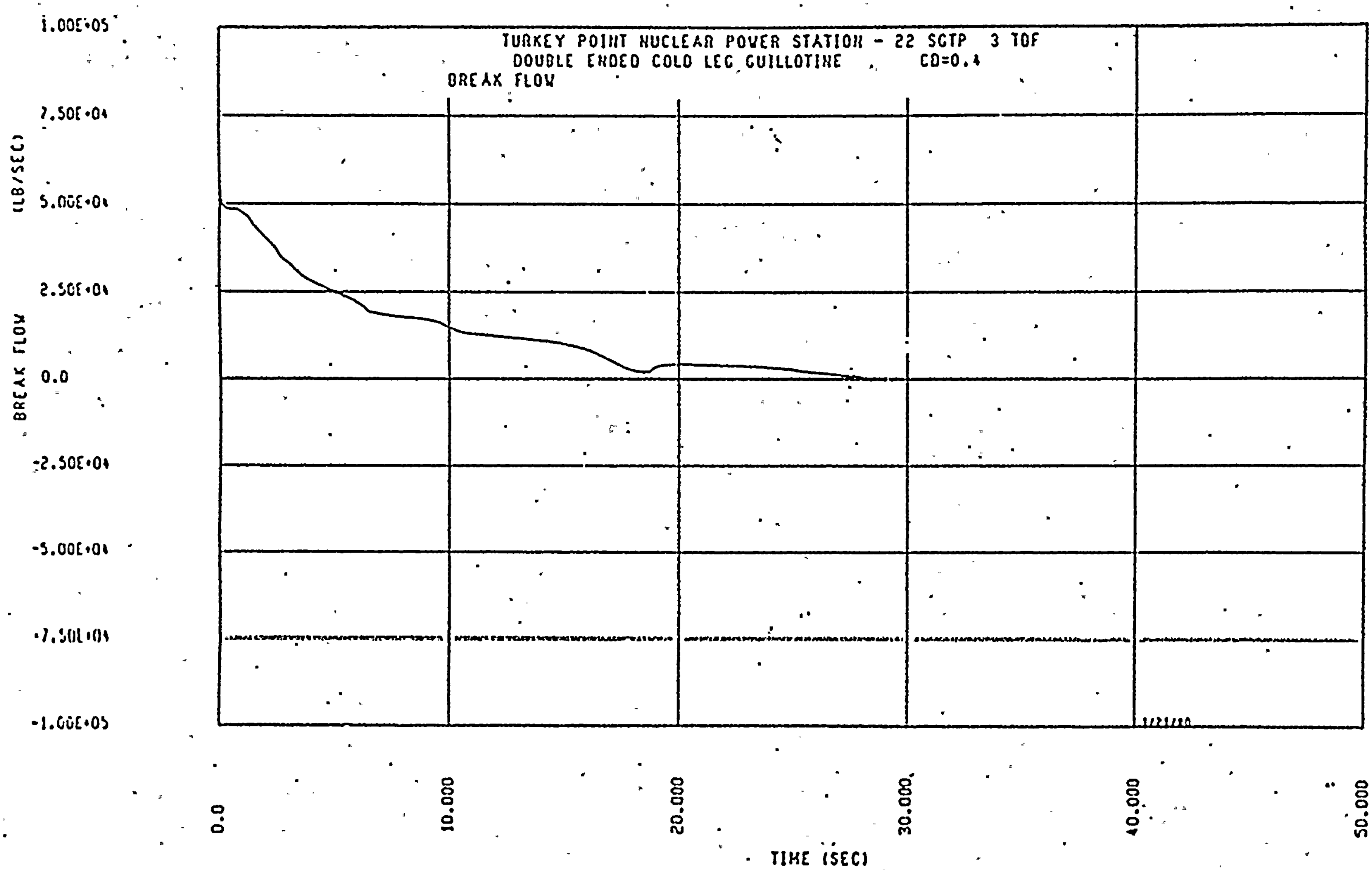

Figure 5 Break Flow Rate - DECLG (CD=0.4)

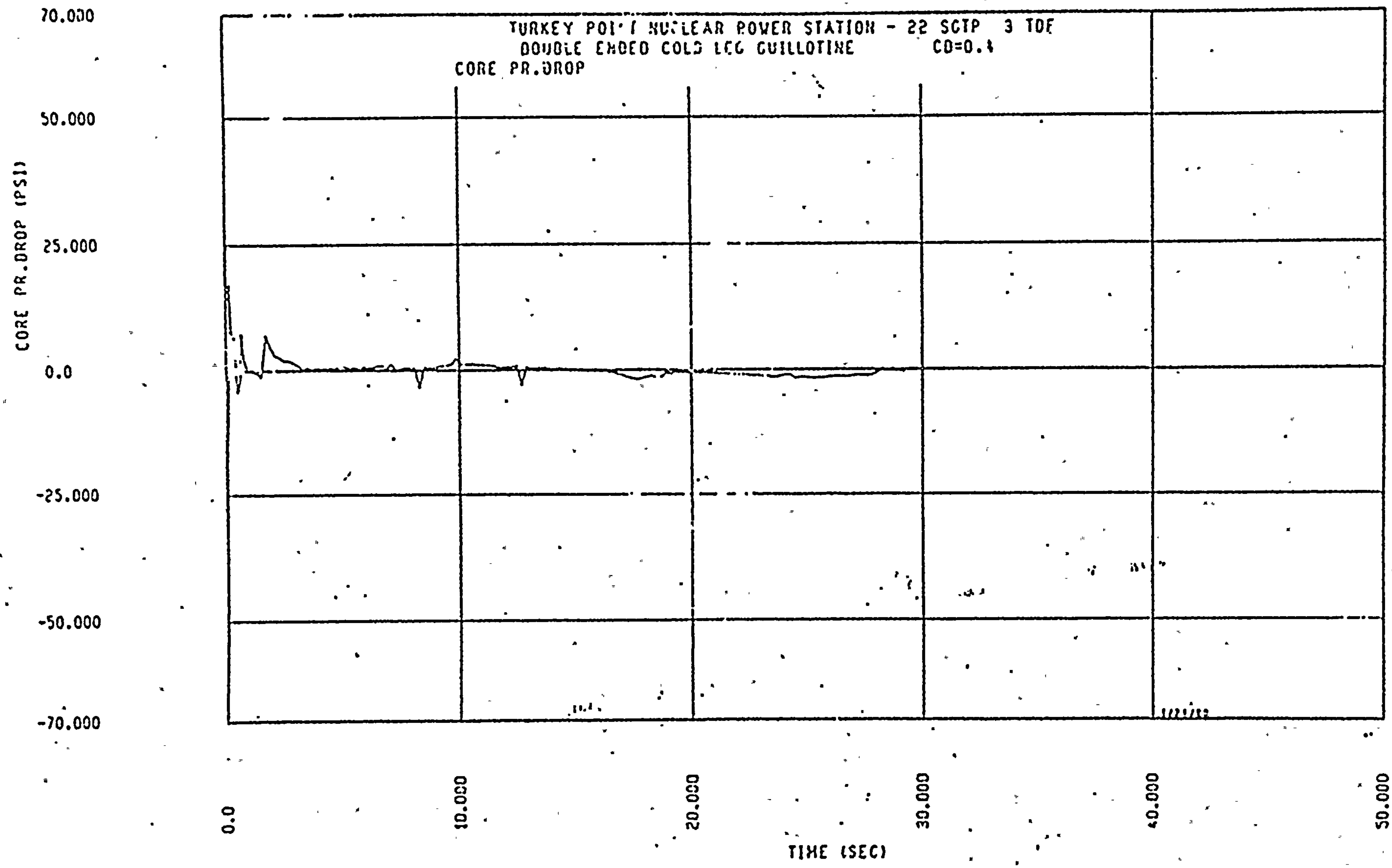

Figure 6 Core Pressure Drop - DECLG (CD=0.4)

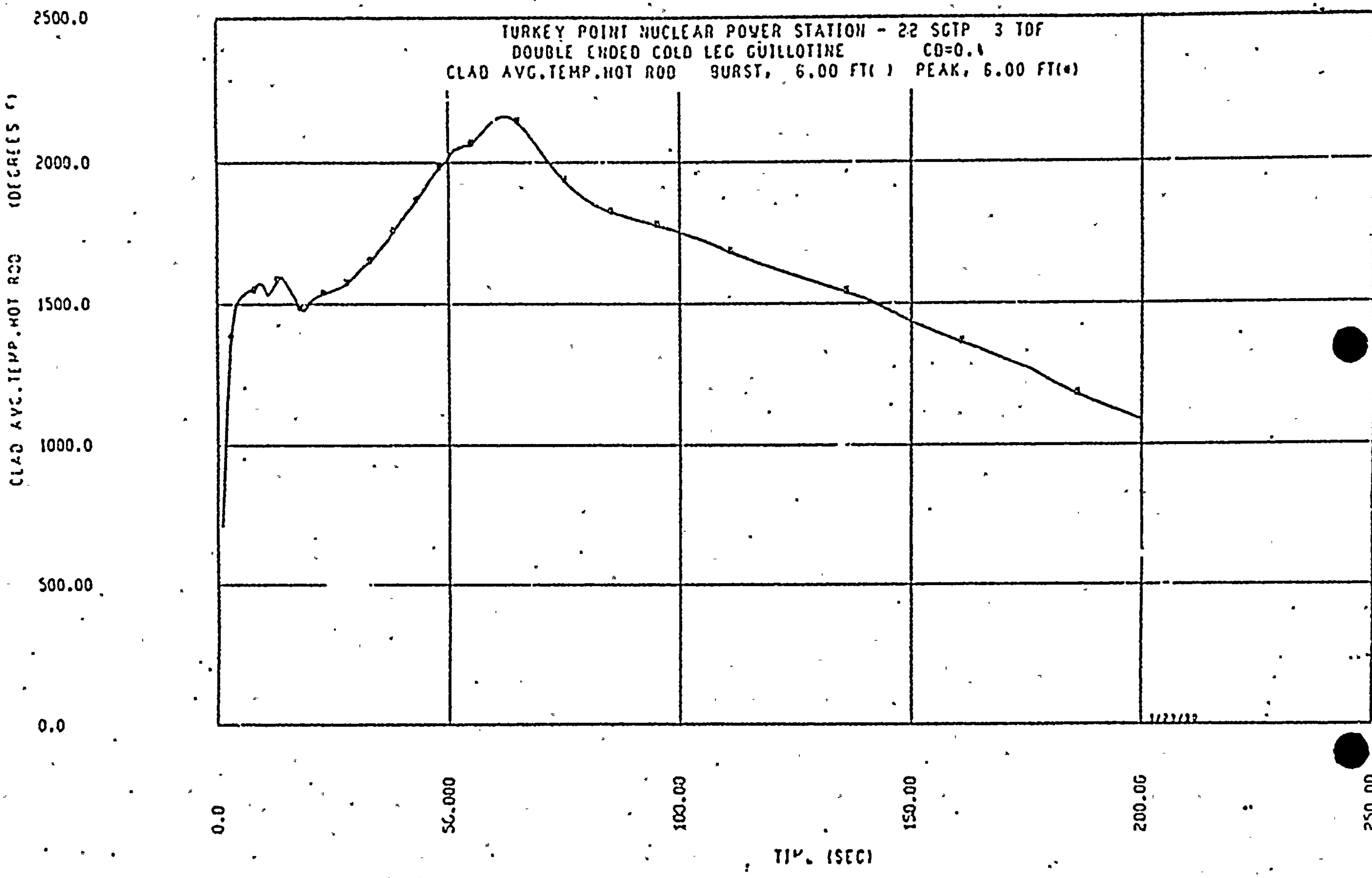

Figure 7 Peak Clad Temperature - DECLG (CD=0.4)

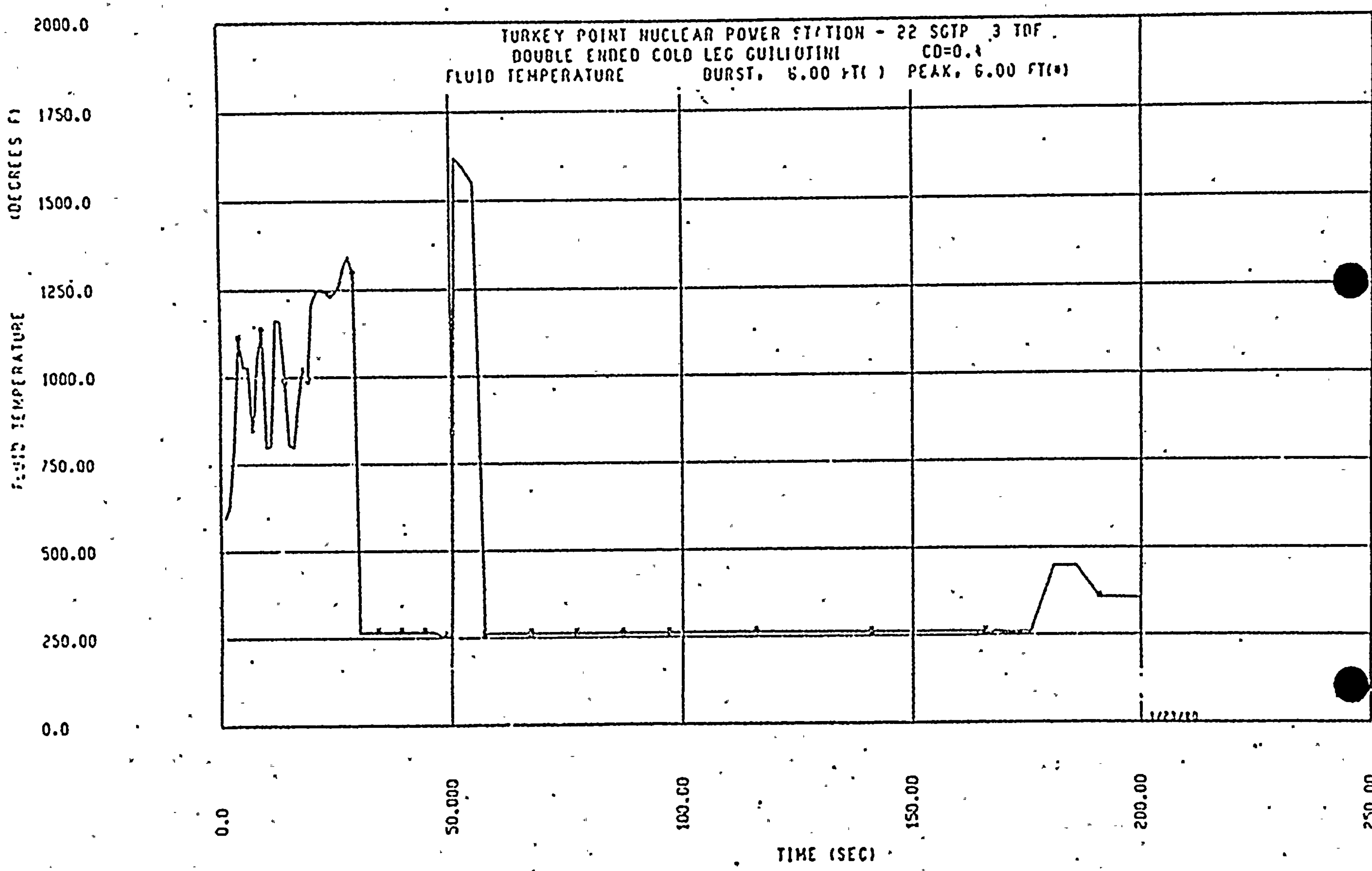

Figure 8-- Fluid Temperature - DECLG (CD=0.4)

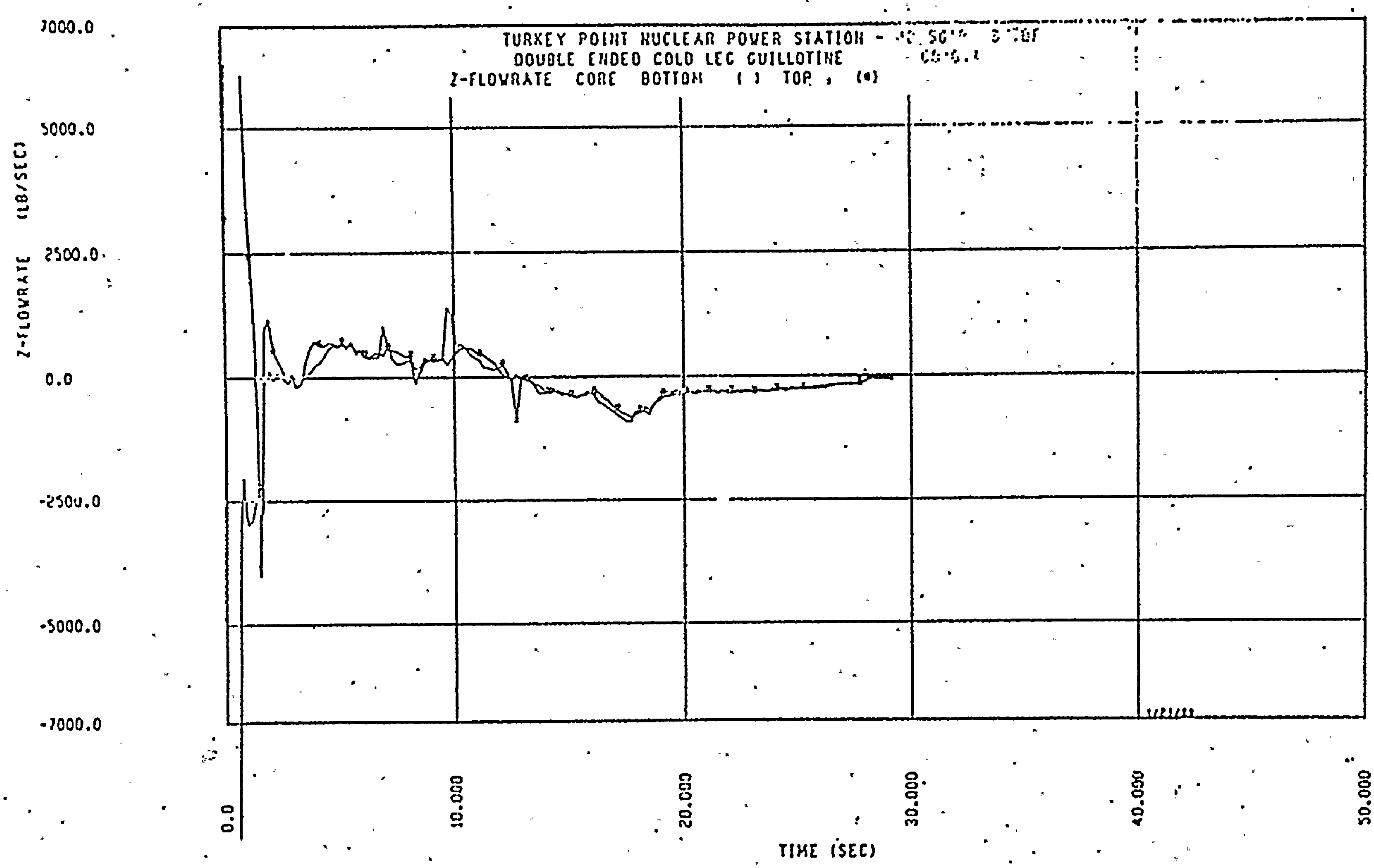

Figure 9 Core Flow - Top and Bottom - DECLG (CD=0.4)

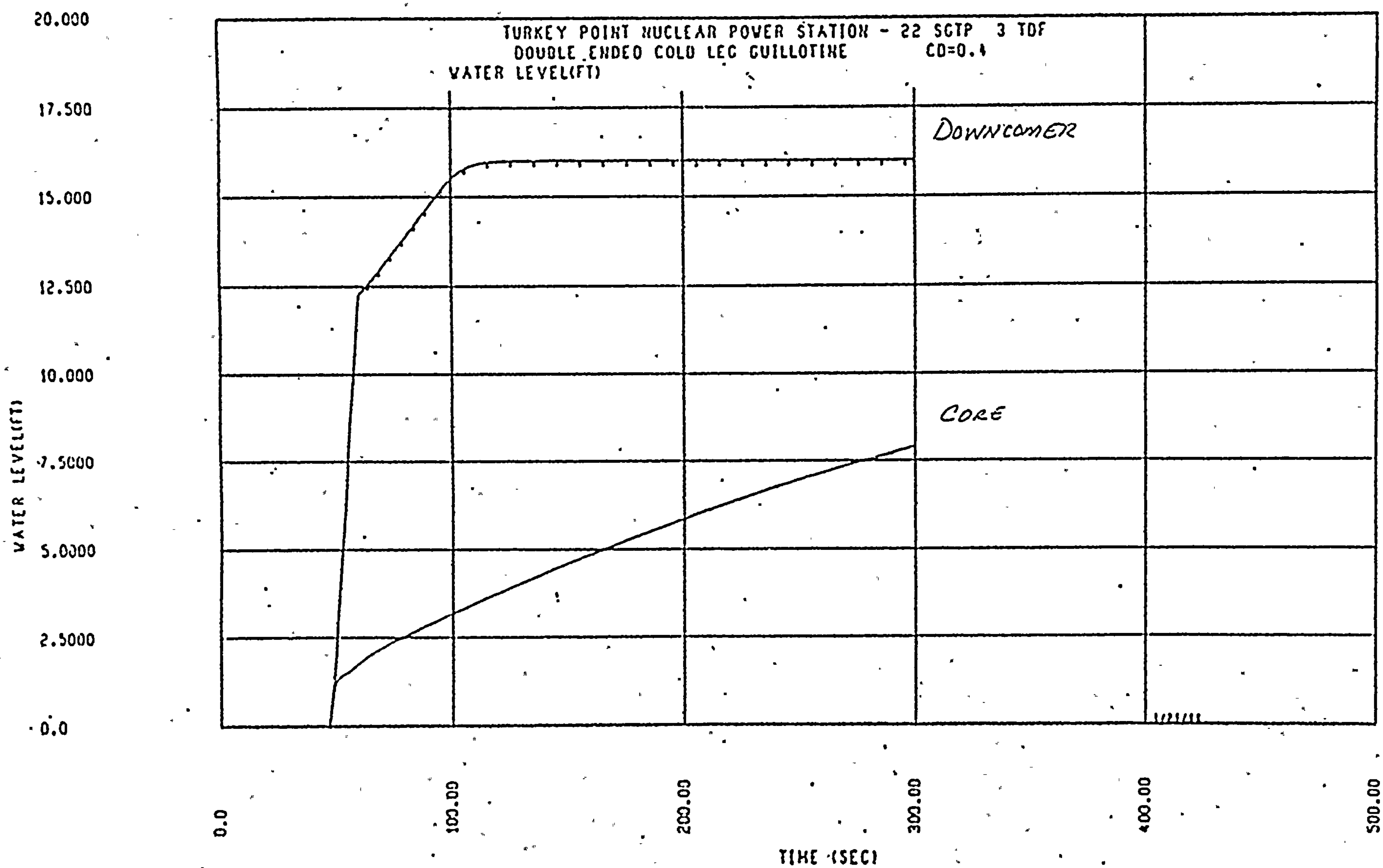

Figure 10a REflood Transient - DECLG (CD=0.4)

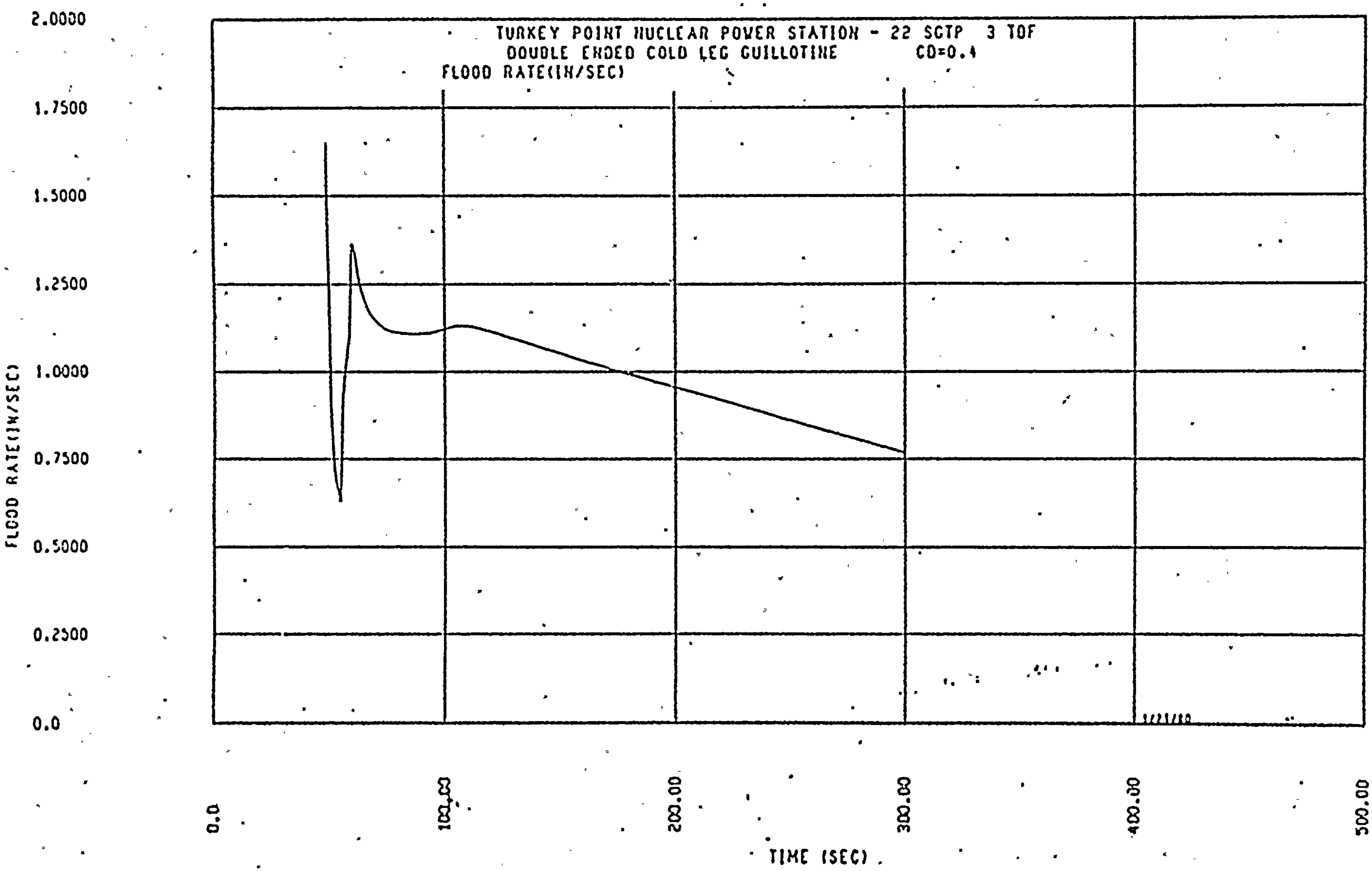

Figure 10b Reflood Transient - DECLG (CD=0.4)

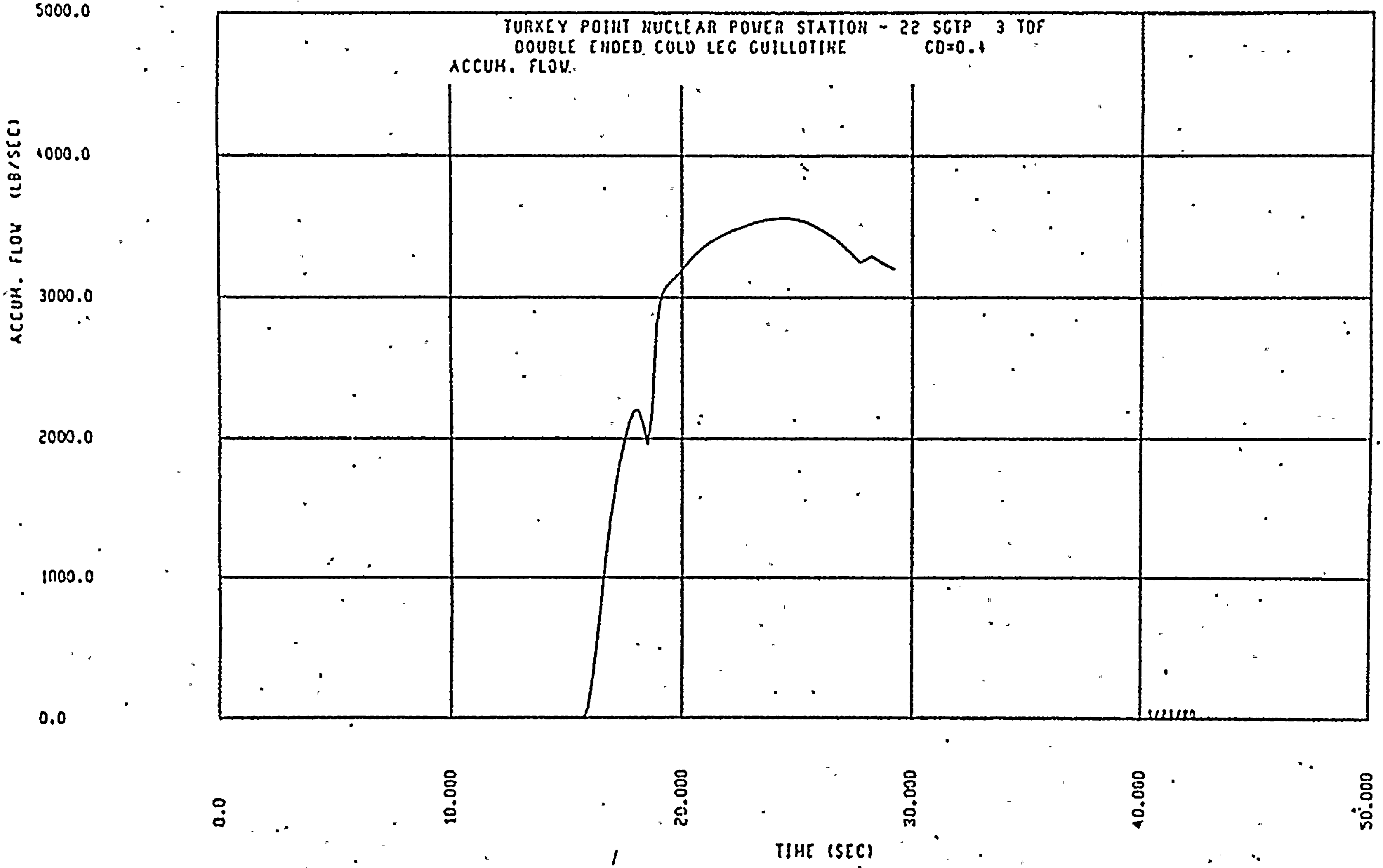

Figure 11 Accumulator Flow (Blowdown) - DECLG (CD=0.4)

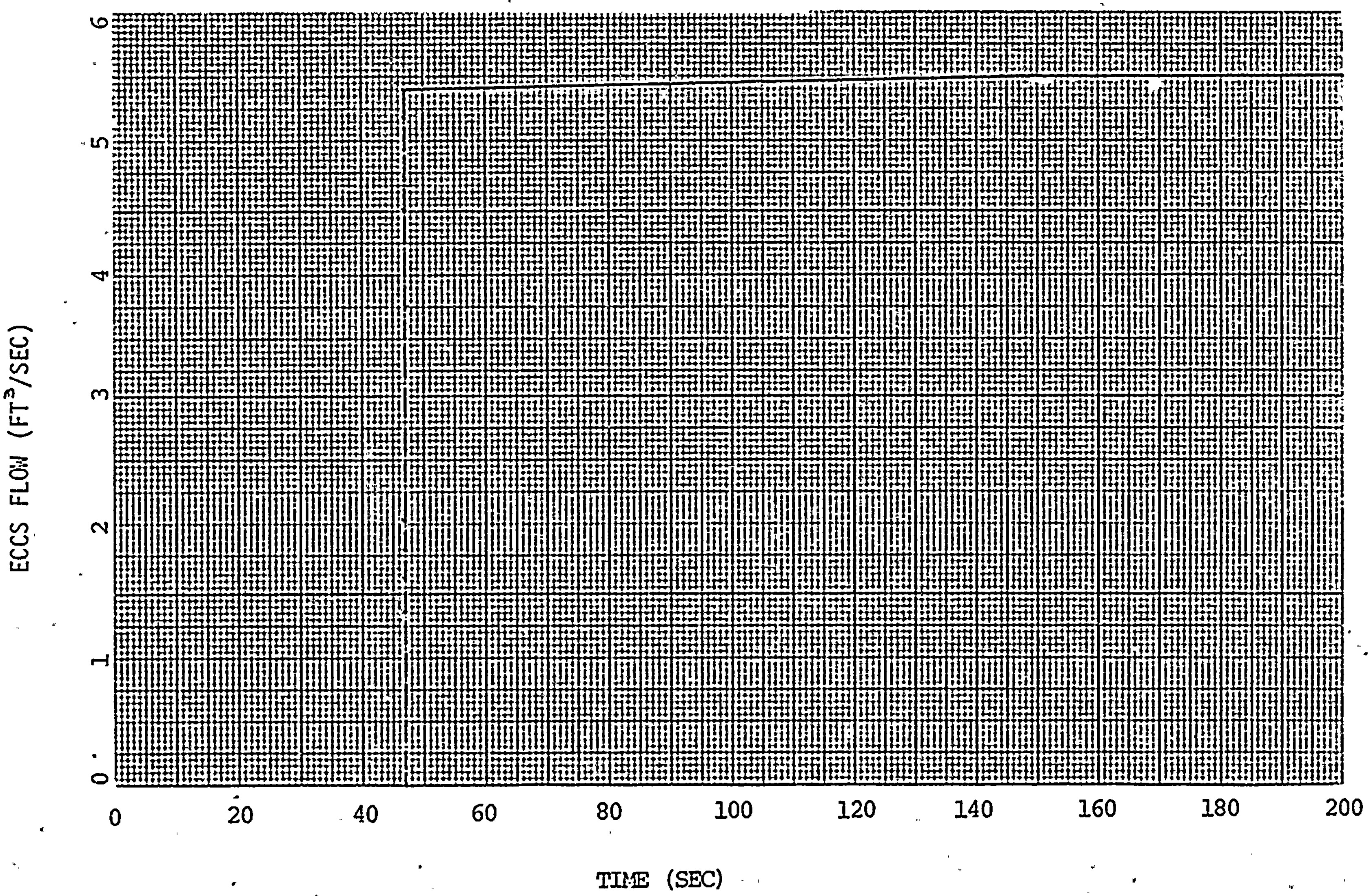

Figure 12 Pump ECCS Flow (Reflood) - DECLG (CD=0.4)

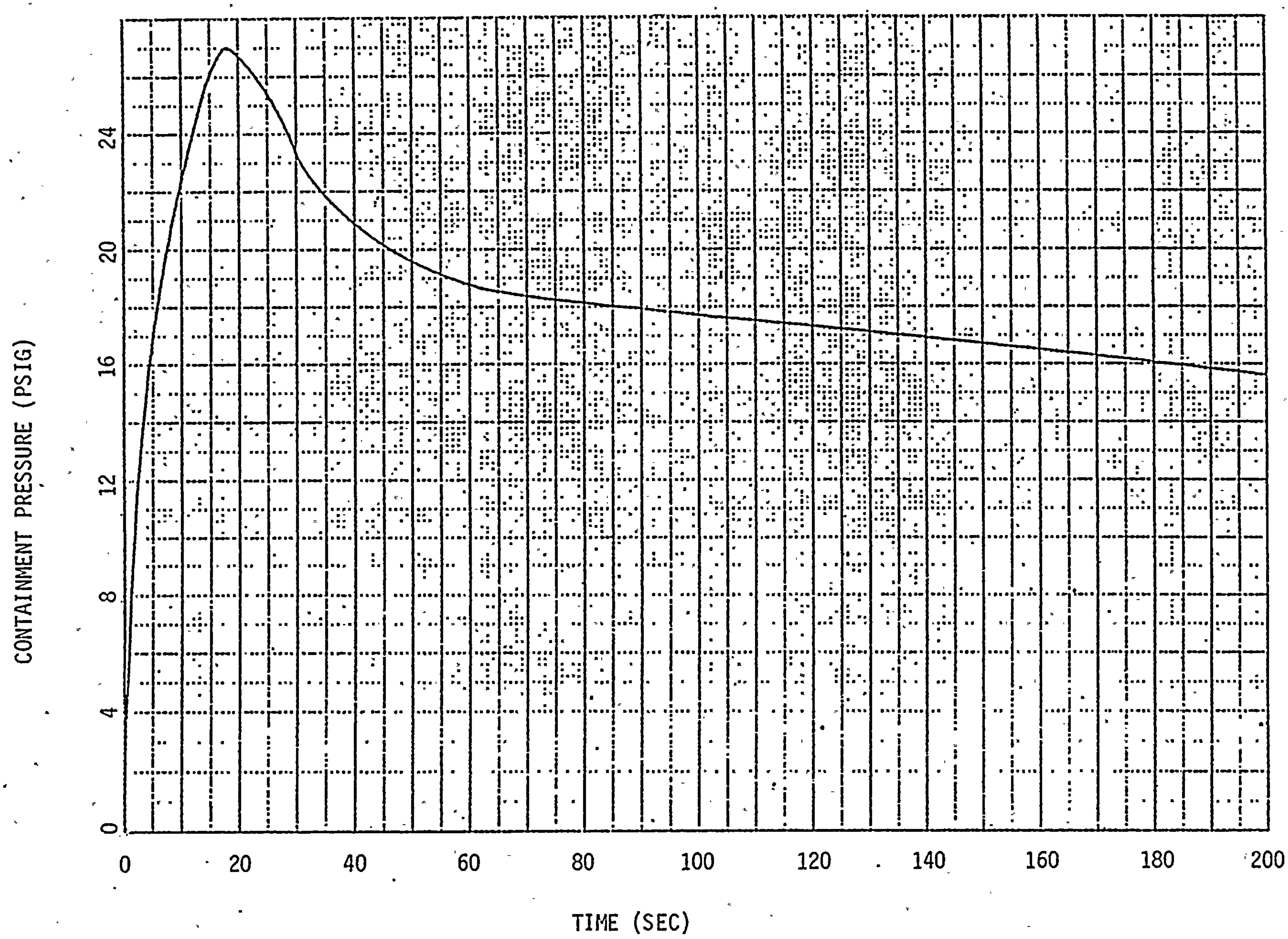

Figure 13 Containment Pressure - DECLG (CD=0.4)

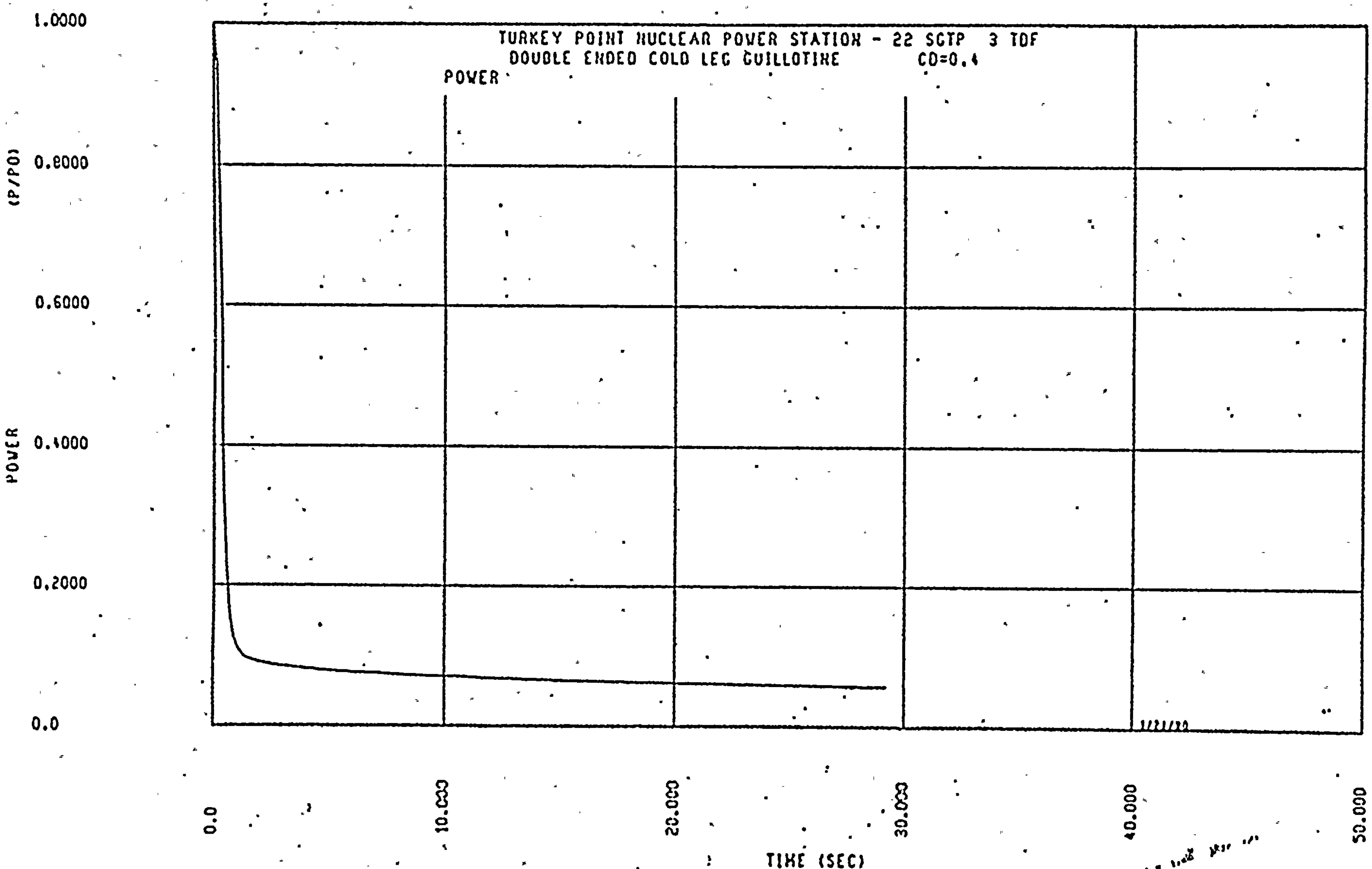

Figure 14 — Core Power - DECLG (CD=0.4)

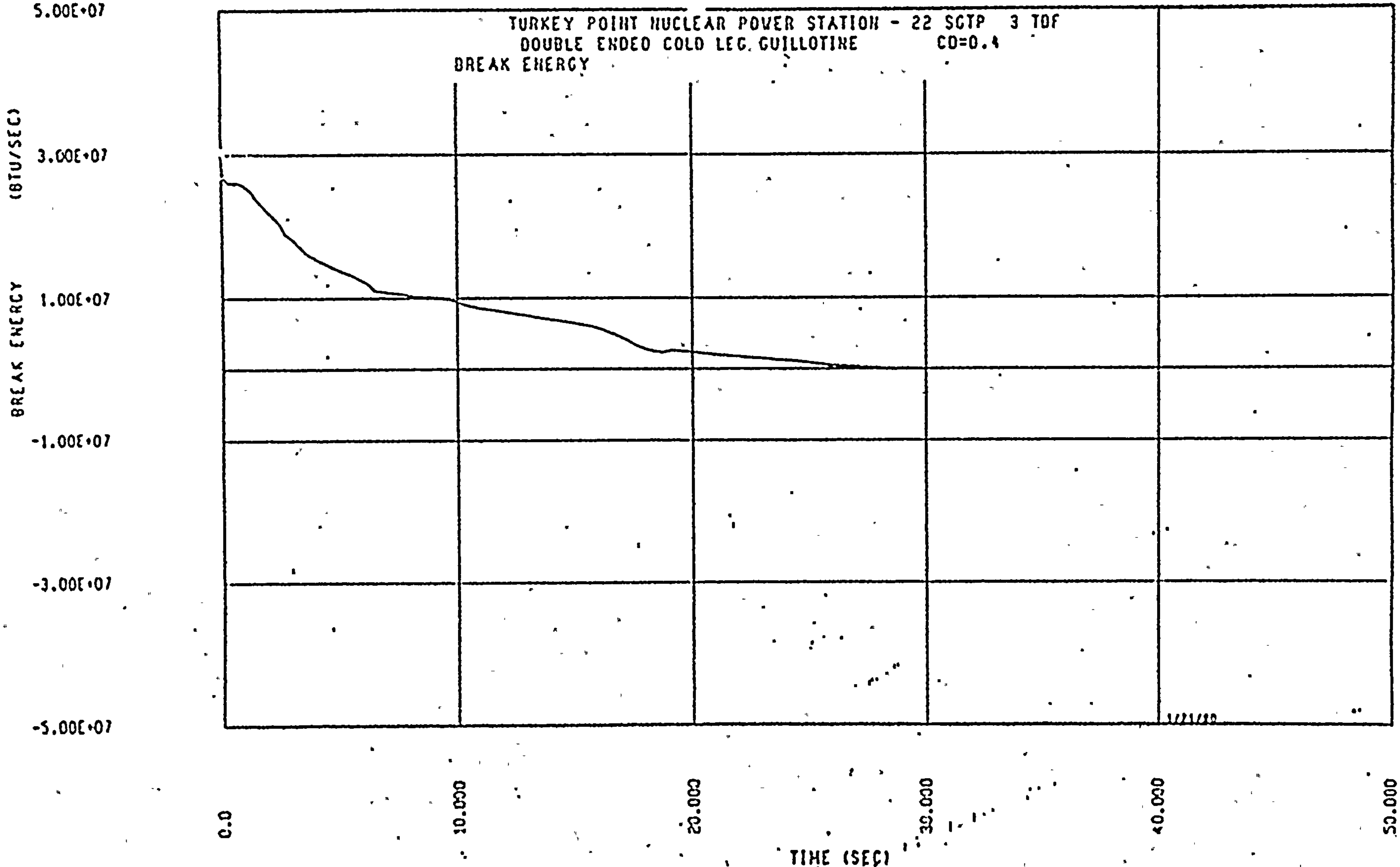

Figure 15 . Break Energy Released To Containment - DECLG (CD=0.4)

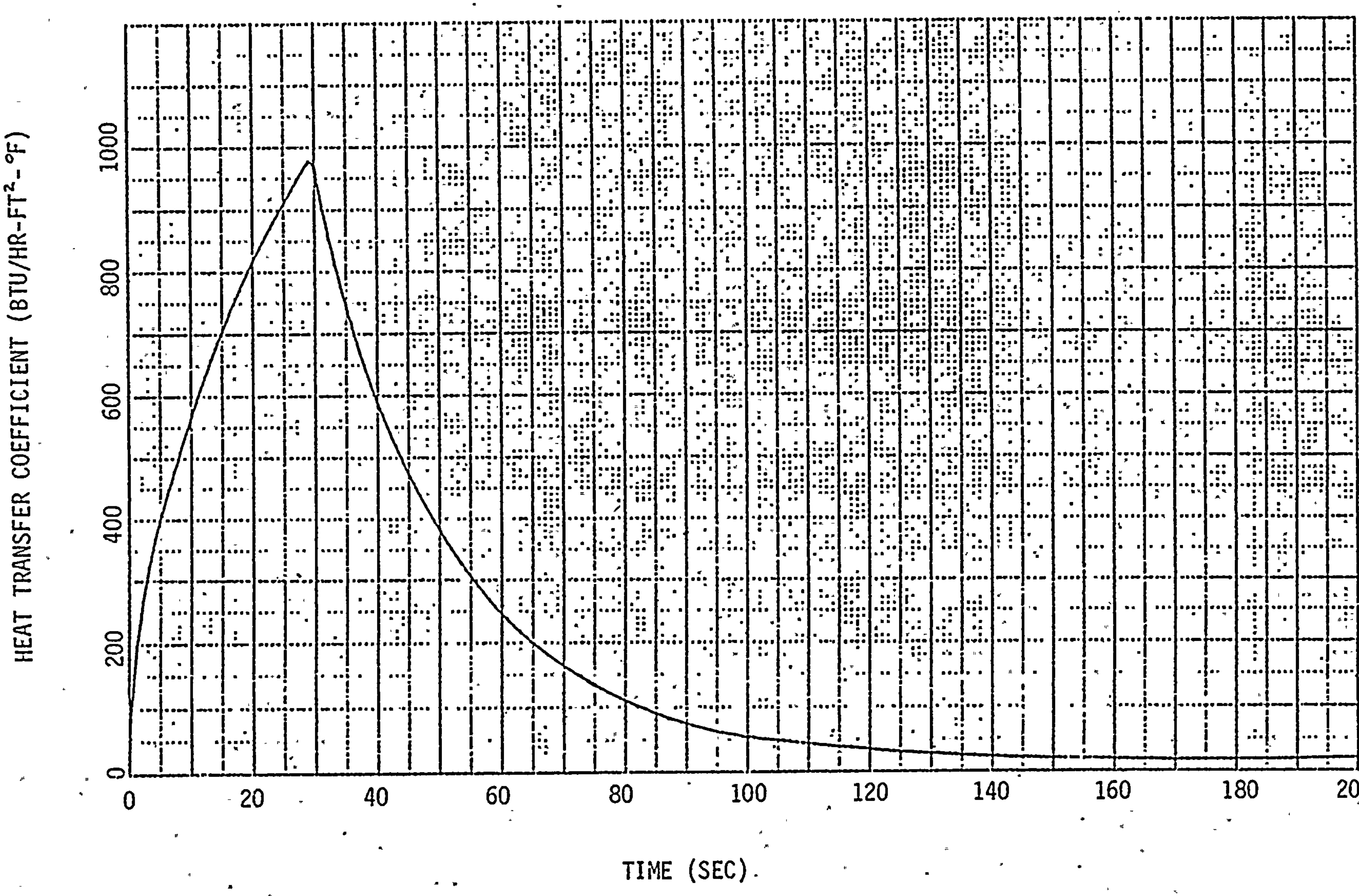

Figure 16 Containment Wall Heat Transfer Coefficient - DECLG (CD=0.4)