

Submitted: [Signature]

SP Number 29.023.03

Approved: [Signature]

Revision 3

(Plant Manager)

Effective Date 1-7-83

CONTAINMENT CONTROL EMERGENCY PROCEDURE

MC-1

1.0 PURPOSE

The purpose of this procedure is to control primary containment temperatures, pressure and level.

2.0 ENTRY CONDITIONS

Enter the paragraphs of this procedure as required by the entry condition. The paragraphs can and should be performed concurrently with each other as the entry conditions dictate and concurrently with the procedure from which it was entered.

2.1 The entry conditions for this procedure are any of the following:

		Paragraph
2.1.1 Suppression Pool Temperature	Above 90°F	3.1
2.1.2 Drywell Temperature	Above 135°F	3.2
2.1.3 Drywell Pressure	Above 1.69 psig	3.3
2.1.4 Suppression Pool Level	Above +6"	3.4
2.1.5 Suppression Pool Level	Below -6"	3.4

2.2 Notify the Watch Engineer to classify the event per SP69.010.01 and initiate the Emergency Plan as required.

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3.0 OPERATOR ACTIONS

Supp. Pool Temp > 90°F

3.1 MONITOR and CONTROL suppression pool temperature by performing the following:

3.1.1 Attempt to close any open SRV which is not required to be open by cycling the valve switch

3.1.1 Ref to SP 23.116.01
(Main and Auxiliary Steam)

3.1.2 IF the open SRV is stuck open,

THEN scram the reactor

3.1.2 Ref SP 29.010.01
(Emergency Shutdown)

CAUTION

If continuous LPCI is required to assure adequate core cooling, do not divert RHR pumps from the LPCI mode.

3.1.3 IF suppression pool temperature exceeds 90°F,

3.1.3 Ref SP 23.121.01
(Residual Heat Removal (RHR) System)

THEN operate available suppression pool cooling

3.1.4 IF suppression pool temperature reaches 110°F,

3.1.4 Ref SP 29.010.01
(Emergency Shutdown)

THEN scram the reactor

CAUTION

Cooldown rates above 100°F/hr may be required to accomplish steps 3.1.5 and 3.1.6.

CAUTION

Do not depressurize the RPV below 110 psig unless motor driven pumps sufficient to maintain RPV water level are running and the systems are available for injection.

CAUTION

Refer to Fig. 7, 8, or 9 for
NPSH requirements for pumps taking a suction from the
suppression pool.

3.1.5 IF suppression pool
temperature cannot be
maintained below the
heat capacity temperature
limit of Figure 1

THEN maintain RPV pressure
below the heat capacity
temperature limit of
Figure 1.

3.1.6 IF suppression pool
temperature

AND

RPV pressure cannot be
restored

OR

maintained below the heat
capacity temperature
limit (Fig 1)

THEN open all ADS
valves.

AND

Proceed to
SP 29.023.05 (Rapid
RPV Depressurization)

3.2 MONITOR and CONTROL drywell temperature
by performing the following:

Dry Well Temp. >135°F

3.2.1 IF drywell temperature
exceeds 135°F,

THEN operate all avail-
able drywell cooling.

CAUTION

If continuous LPCI operation is required to assure adequate core cooling, do not divert RHR pumps from the LPCI mode.

CAUTION

Whenever the temperature indicated on L-993 and L-994 exceeds the temperature in the table, the actual RPV water level may be anywhere below the elevation of the lower instrument tap when the instrument reads below the indicated level in the table.

<u>Temperature</u>	<u>Indicated Level</u>	<u>Instrument</u>
Any	+235 in.	Shutdown Range (0 to 400 in.)
Any	-150 in.	Fuel Zone A (-150 to +50 in.)
Any	-150 in.	Fuel Zone B (-150 to +50 in.)
120°F	+180 in.	Upset Range (0 to 180 in.)
371°F	-142 in.	Wide Range A (-150 to +60 in.)
395°F	8 in.	Narrow Range A (0 to 60 in.)
>600°F	-150 in.	Wide Range B (-150 to +60 in.)
>600°F	-0 in.	Narrow Range B (0 to 60 in.)

3.2.2 IF drywell temperature
approaches 296°F,

THEN shutdown the
Reactor Recirculation
Pumps

AND

Shutdown the Drywell
Fans

AND

Initiate drywell sprays

CAUTION

Do not depressurize the RPV below 110 psig unless motor driven pumps sufficient to maintain RPV water level are running and the systems are available for injection.

CAUTION

Cooldown rates above 100°F/hr may be required to accomplish step 3.2.3.

CAUTION

Refer to Fig. 7, 8, or 9 for
NPSH requirements for pumps taking a suction from the suppression pool.

3.2.3 IF drywell temperature
near the cold reference
leg temperature instruments
reaches the RPV saturation
limit (Fig. 2)

OR

cannot be maintained
below 296°F,

THEN open all ADS
valves

AND

Proceed to
SP 29.023.05
(Rapid RPV Depressurization)

3.2.3 NOTE

Drywell cold reference
leg temperature
instruments are
L-993 and L-994

3.3 MONITOR and CONTROL primary containment
pressure by performing the following:

CAUTION

ELEVATED SUPPRESSION CHAMBER PRESSURE MAY TRIP THE RCIC TURBINE
ON HIGH EXHAUST PRESSURE, 25 psig

3.3.1 Operate the post loca
hydrogen recombination
system

3.3.1 Refer to SP23.402.01
(Primary Containment
Post Loca Hydrogen
Recombination)

3.3.2 Operate the MSIV Leakage
Control System if
necessary

3.3.2 Refer to SP 23.406.01
(MSIV Leakage Control
System)

3.3.3 Sample and analyze pri-
mary containment
atmosphere to ensure
environmental release
limits are met.

3.3.4 IF dry well temperature
is below 212°F

AND

Release limits are met
THEN vent the primary
containment

3.3.4 Vent the primary
containment through
1T48*MOV-031B and
1T48*MOV-035B
to the Post LOCA
Hydrogen Recombination
System Primary
Containment
Atmospheric Purge
Filter FLT 008

CAUTION

If continuous LPCI operation is required to assure adequate
core cooling, do not divert RHR pumps from the LPCI mode.

3.3.5 INITIATE suppression
pool sprays

BEFORE

the suppression chamber
pressure reaches the
suppression pool spray
limit (Fig 3)

3.3.6 If suppression chamber
pressure reaches the
pressure suppression
limit (Fig 4)

Then SHUTDOWN the Reactor
Recirculation pumps

AND

Shutdown the
drywell fans

AND

Initiate drywell sprays as
necessary to maintain
suppression chamber
pressure below the pressure
suppression limit.

CAUTION

Do not depressurize the RPV below 110 psig unless motor driven
pumps sufficient to maintain RPV water level are running and the
systems are available for injection.

CAUTION

Refer to Fig. 7, 8, or 9 for
NPSH requirements for pumps taking a suction from the suppression
pool.

CAUTION

Cooldown rates greater than 100°F/hr may be required to
accomplish Step 3.3.7.

3.3.7 IF suppression chamber
pressure cannot be
maintained below the
pressure suppression
limit (Fig 4),

THEN open all ADS
valves.

AND

Proceed to
SP 29.023.05
(Rapid RPV Depressurization)

Supp. Pool Level
> +6" or < -6"

3.4 MONITOR and CONTROL suppression pool
water level by performing the following:

3.4.1 Maintain suppression
pool water level between
+6 and -6"

3.4.2 IF suppression pool
water level is BELOW -6"

3.4.2 Refer to SP23.202.01
(HPCI System) pr
SP23.119.01
(RCIC System)

THEN initiate suppression
pool makeup

CAUTION

Do not depressurize the RPV below 110 psig unless motor driven
pumps sufficient to maintain RPV water level are running and
the systems are available for injection.

CAUTION

Cooldown rates above 100°F/hr may be required to accomplish
steps 3.4.3, 3.4.8, and 3.4.9.

CAUTION

Refer to Fig. 7, 8, or 9 for
NPSH requirements for pumps taking a suction from the suppression
pool.

3.4.3 IF suppression pool level cannot be maintained above the heat capacity level limit (Fig 5)

THEN open all ADS valves

AND

Proceed to
SP 29.023.05
(Rapid RPV Depressurization)

3.4.4 IF signals of high suppression pool water level (+6)

OR

Low condensate storage tank water level (3'4") occur,

THEN confirm automatic transfer of/or manually transfer HPCI and R&IC suction from the condensate tank to the suppression pool.

3.4.5 IF the suppression pool water level can not be maintained below +6".

AND

adequate core cooling is assured,

THEN terminate injection into the reactor vessel from sources external to the primary containment.

3.4.6 Notify Radiochemistry to Sample and analyze suppression pool water to ensure suppression pool discharge limits are met.

3.4.7 IF suppression pool
water level is above
+6"

3.4.7 Refer to SP 23.708.01
(Fuel Pool Cleanup)

AND

discharge limits are
met

THEN lower suppression
pool level.

3.4.8 IF suppression pool
water level cannot be
maintained below the
suppression pool load
limit,

THEN maintain RPV
pressure below the load
limit of Figure 6.

3.4.9 IF suppression pool
water level and RPV
pressure cannot be
restored or maintained
below the suppression
pool load limit,

THEN open all ADS
valves

AND

Proceed to
SP 29.023.05
(Rapid RPV Depressurization)

3.4.10 IF primary containment
water level reaches
elevation, 65 Ft

THEN terminate injection
into the RPV from sources
external to the primary
containment irrespective
of whether adequate
core cooling is assured.

4.0 REFERENCES

- 4.1 SP 23.116.01 Main Auxiliary Steam
- 4.2 SP 23.121.01 Residual Heat Removal (RHR) System
- 4.3 SP 29.010.01 Emergency Shutdown
- 4.4 SP 29.023.05 Rapid RPV Depressurization
- 4.5 SP 23.402.01 Primary Containment Post LOCA Hydrogen Recombination

SUPPRESSION POOL TEMPERATURE (°F)

220
210
200
90
80
70
60
50
0

0 100 200 300 400 500 600 700 800 900 1000 1100

RPV PRESSURE (psig)

HEAT CAPACITY
TEMPERATURE LIMIT

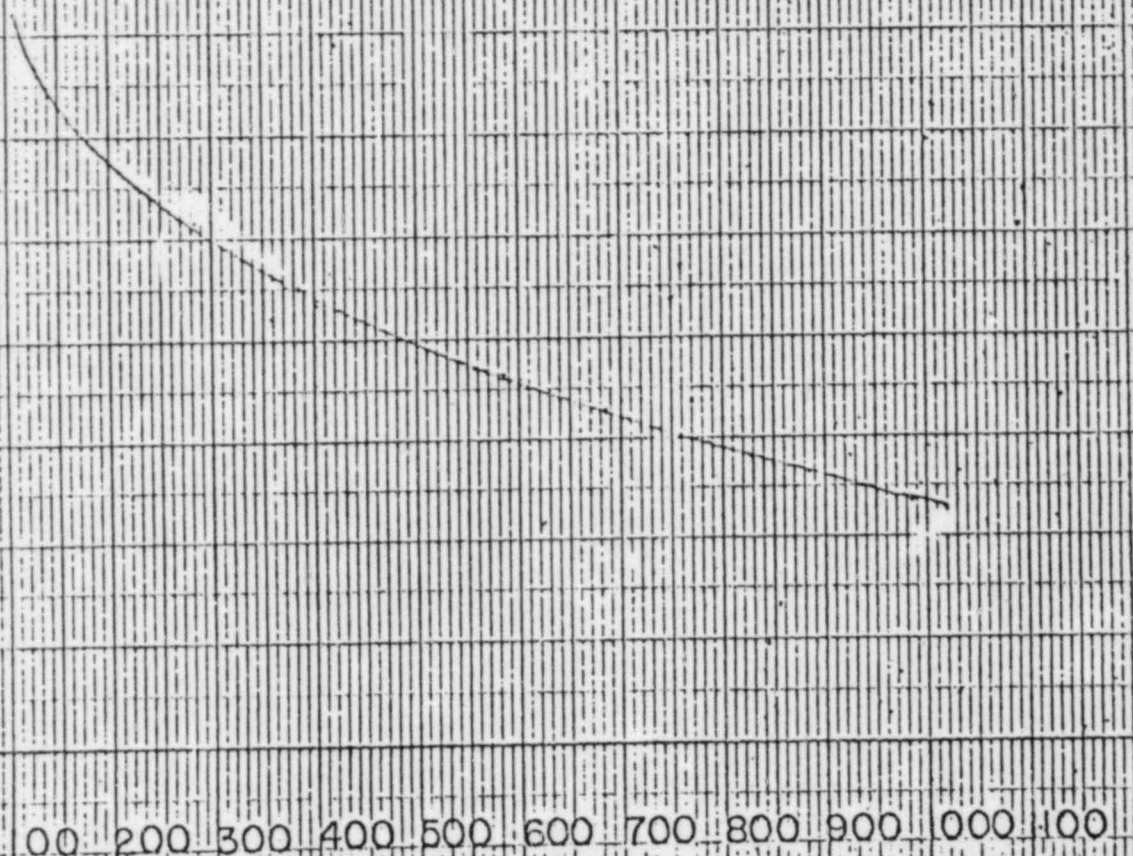
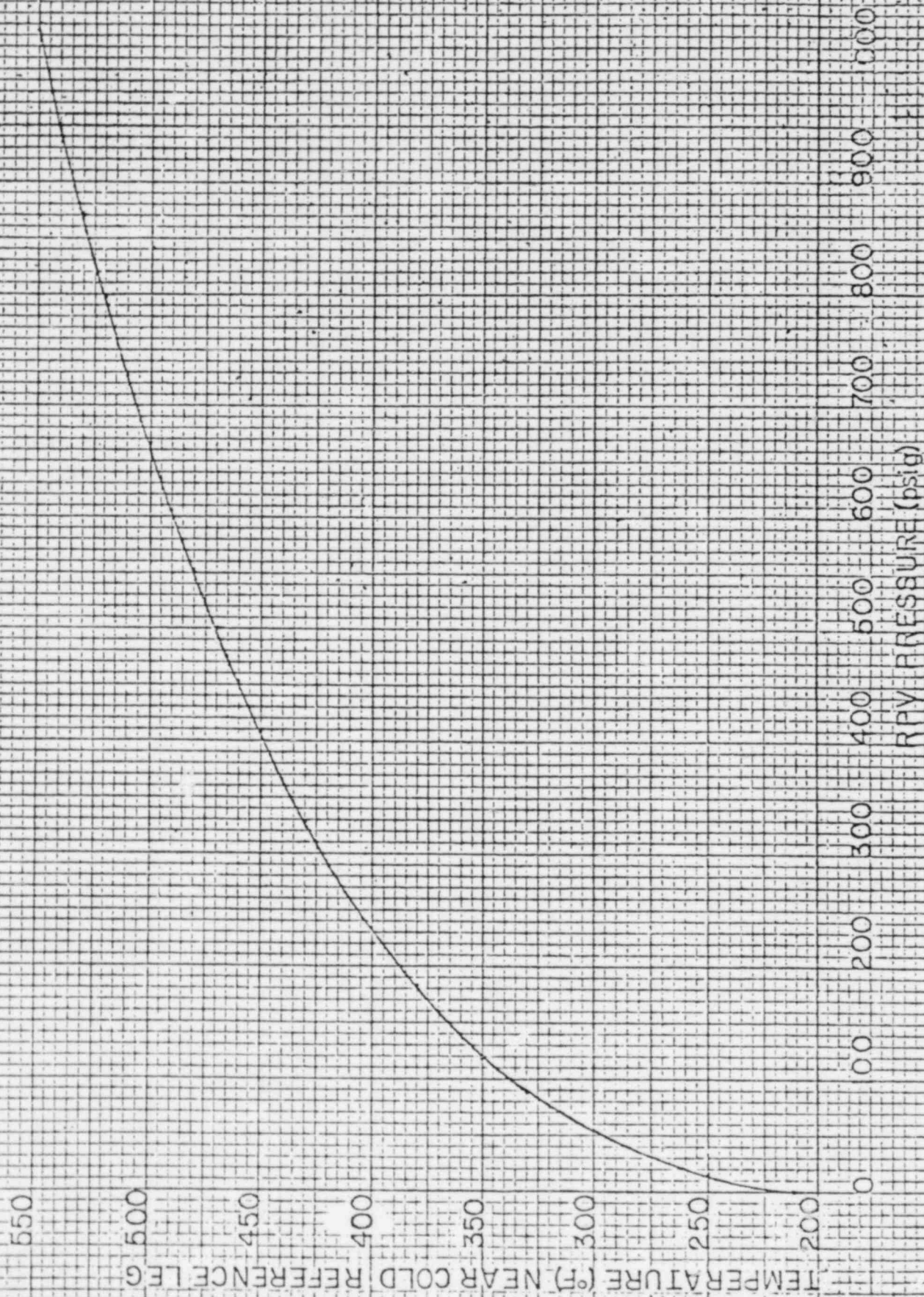


FIG 1

SP 29.023.03

RPV PRESSURE
LIMIT

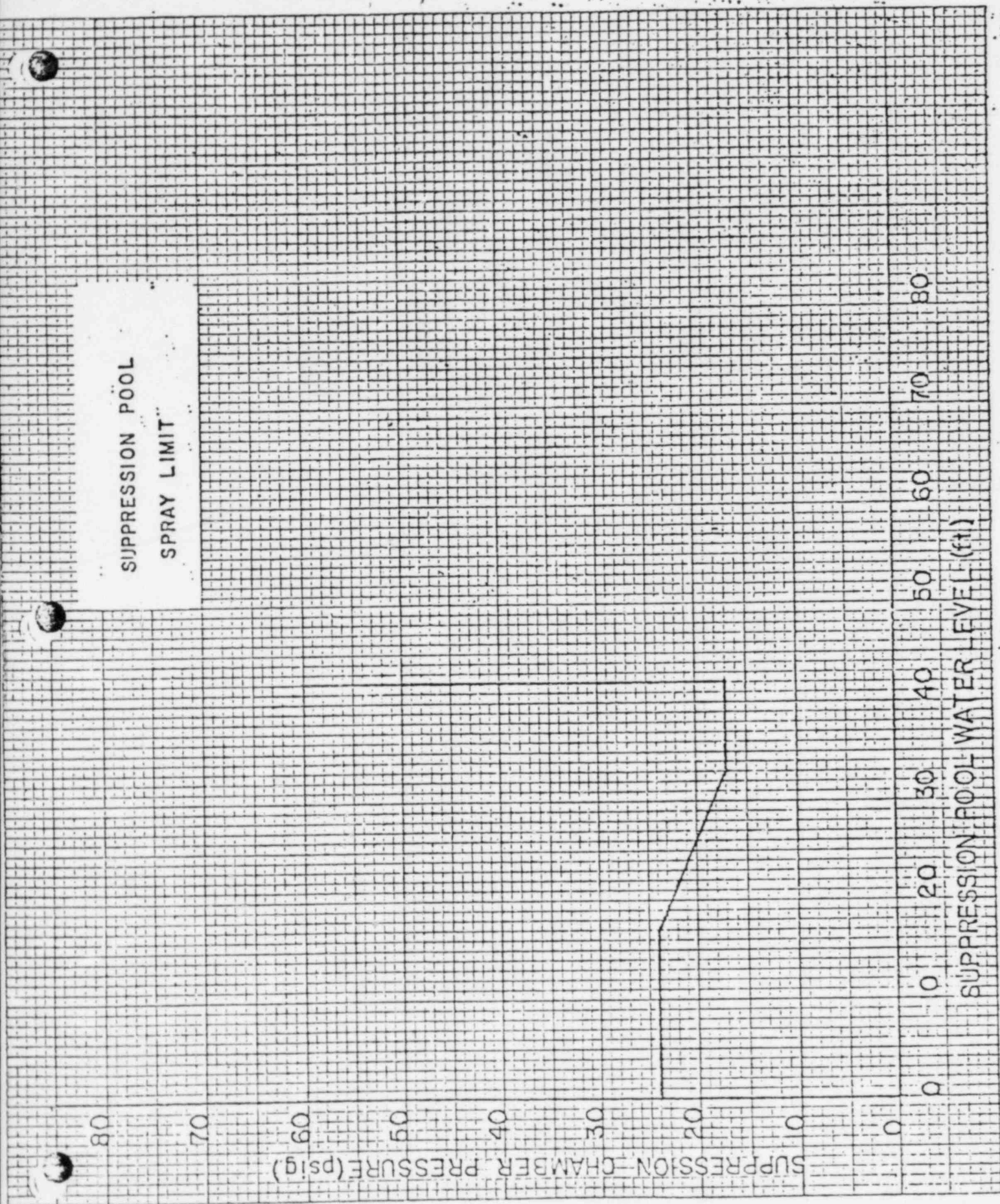


SUPPRESSION POOL
SPRAY LIMIT

SUPPRESSION CHAMBER PRESSURE (psig)

SUPPRESSION POOL WATER LEVEL (ft)

FIG 3
SP 29.023.03



PRESSURE SUPPRESSION
LIMIT

60

50

40

30

20

0

0

SUPPRESSION CHAMBER PRESSURE (psig)

0

10

20

30

40

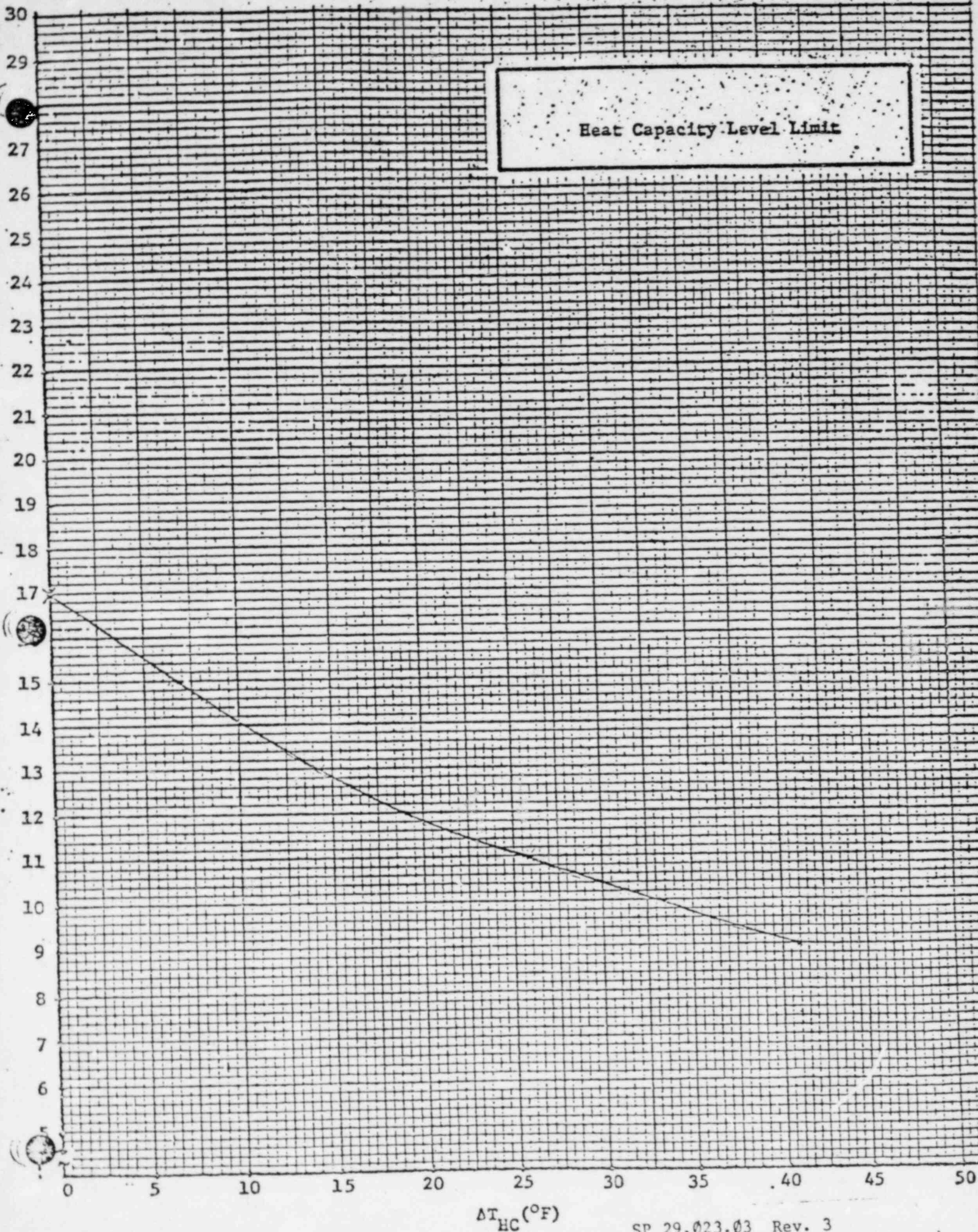
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60

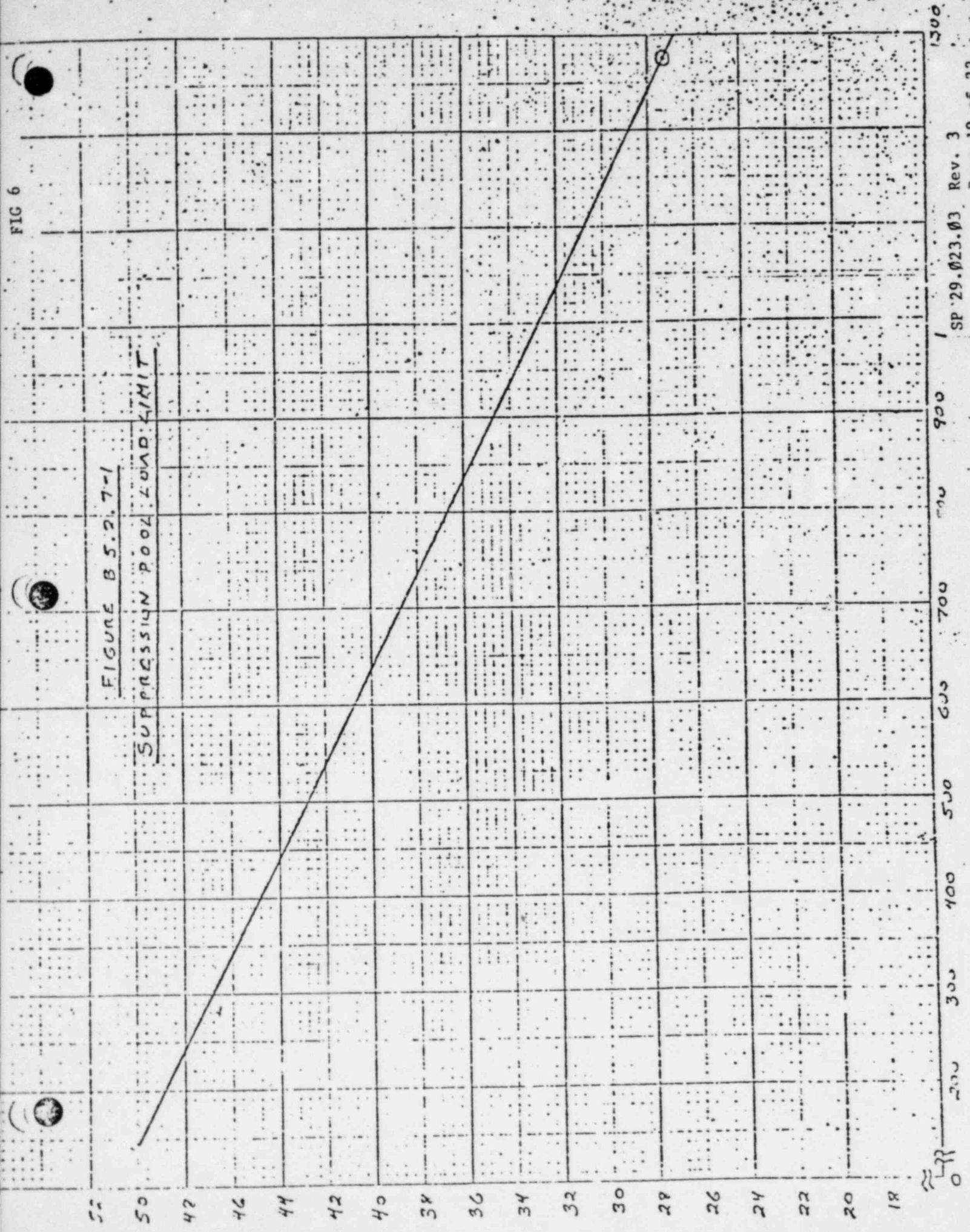
PRIMARY CONTAINMENT WATER LEVEL (ft)

FIG. 4
SP29.023.03

Heat Capacity Level Limit

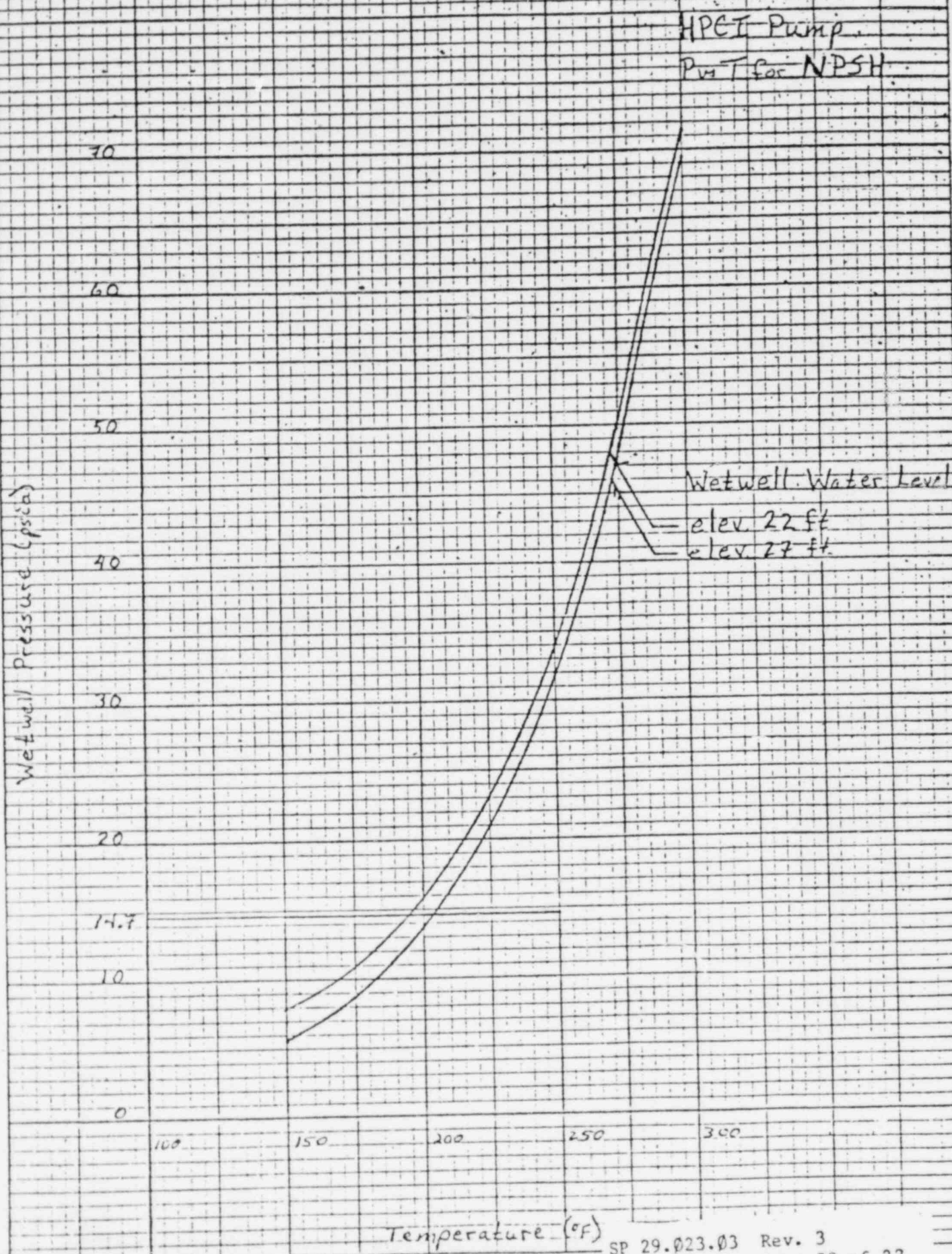


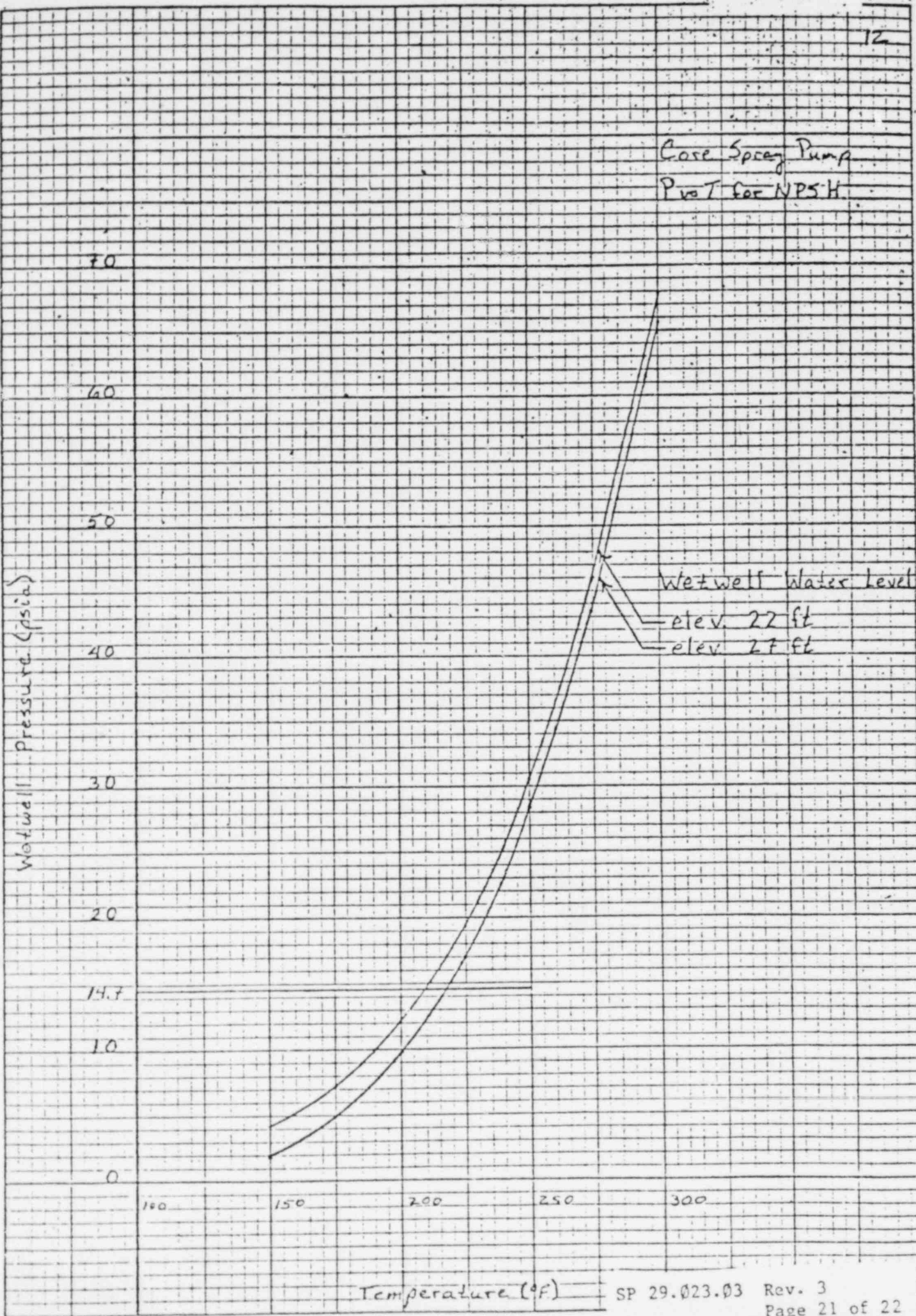
ΔT_{HC} (°F)



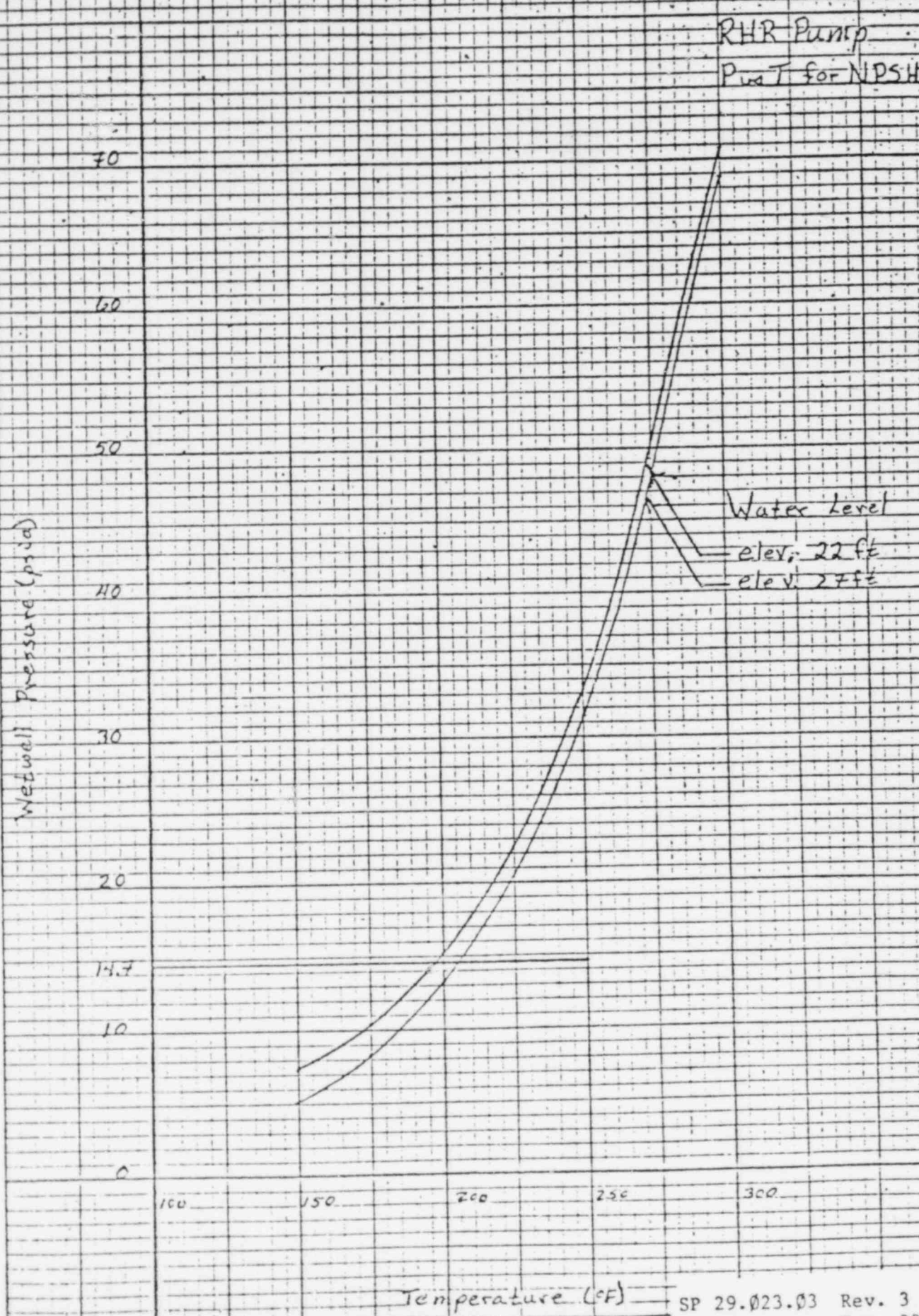
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10 X 10 TO THE INCH 7 X 10 INCHES
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LILCO, January 7, 1983

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CERTIFICATE OF SERVICE

In the Matter of
LONG ISLAND LIGHTING COMPANY
(Shoreham Nuclear Power Station, Unit 1)
Docket No. 50-322 (OL)

DOCKETED
JAN 10 1983
BRANCH

I hereby certify that copies of the attached letter from Donald P. Irwin to the members of the Atomic Safety and Licensing Board dated January 7, 1983 and entitled ICC: SC3/SOC 8, were served this date upon the following by first-class mail, postage prepaid.

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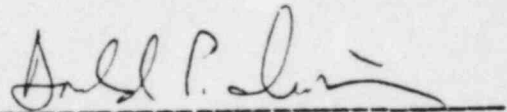
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