

TENNESSEE VALLEY AUTHORITY

KNOXVILLE, TENNESSEE 37902

TVA Mailroom

54-327

MAY 23 1983

Mr. John Marlar, Chief  
Facilities Performance Branch  
Water Management Division  
U.S. Environmental Protection Agency  
Region IV  
345 Courtland Street, NE.  
Atlanta, Georgia 30365

Dear Mr. Marlar:

NOTIFICATION OF NONCOMPLIANCE WITH EFFLUENT LIMITATIONS - NPDES PERMIT  
NO. TN0026450 - SEQUOYAH NUCLEAR PLANT (SQN)

Description of the discharge--Discharge No. 024 - Diffuser gate. On March 26 and 28, the instream river temperature monitors indicated a temperature rise between the upstream ambient monitor and the downstream river monitor in excess of the maximum permit limitation of 5.4°F.

The two noncompliances occurring on March 26 were at 5 p.m. and midnight. The maximum delta temperature for that day was 5.47°F and occurred at midnight. The noncompliance on March 28 had a maximum delta temperature of 5.49°F and occurred at 1 a.m.

Cause and period of the noncompliance--The noncompliance on March 26 occurred during a period of low riverflow (4,000 cfs). The plant was operating the cooling tower in helper/open mode operation (one tower, four lift pumps). As a result of the noncompliance, riverflows were increased to approximately 17,000 cfs in an effort to alleviate the condition. This approach proved effective for several hours and the delta temperature was reduced to 2.01°C by 9 p.m. However, the delta temperature began to increase once more, and in order to avoid another noncompliance, the second cooling tower was placed in-service at 10 p.m. However, despite this measure a second noncompliance occurred. Because of the substantial traveltime from the cooling tower discharge to the downstream river monitors, the effectiveness of the second cooling tower was delayed. Following the second noncompliance the riverflow at SQN was increased to approximately 20,000 cfs. The plant was in compliance by 1 a.m. on March 27. The duration of each of these noncompliances was one hour or less.

The noncompliance on March 28 was preceded by a period of low riverflows (6,000 cfs). At 8 a.m. the diffuser pond temperature began to increase and reached a maximum of 22.21°C at 1 p.m. Recognizing the possibility for a delta temperature noncompliance, the plant added lift pumps at 2 p.m. and 11 p.m. Therefore one hour prior to the noncompliance, the cooling system was being operated in helper mode (two towers, seven lift pumps). Again, despite diligent efforts, the time delay in the cooling system made this noncompliance unavoidable. The duration of the noncompliance was less than one hour.

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The enclosed graphs associated with the computer compliance model illustrated the above data.

Steps taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge--Cooling tower(s) and increased riverflow were utilized in an effort to prevent, reduce, and eliminate these delta temperature noncompliances.

Sincerely,

**Original Signed By**

**M. Paul Schmierbach**

Mohamed T. El-Ashry, Ph.D.  
Director of Environmental  
Quality

Enclosures

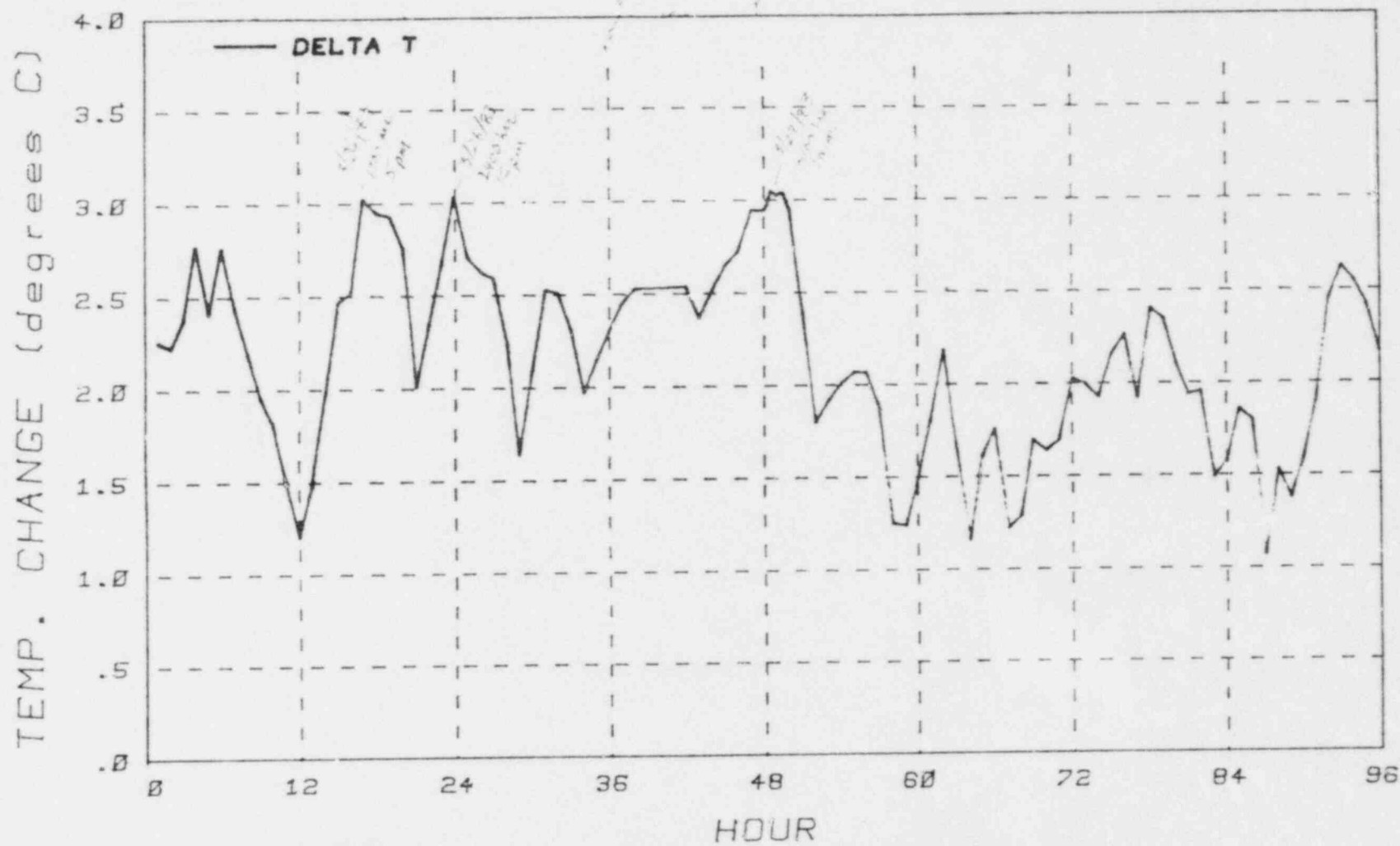
cc (Enclosures):

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
7920 Norfolk Avenue  
Washington, D.C. 20555

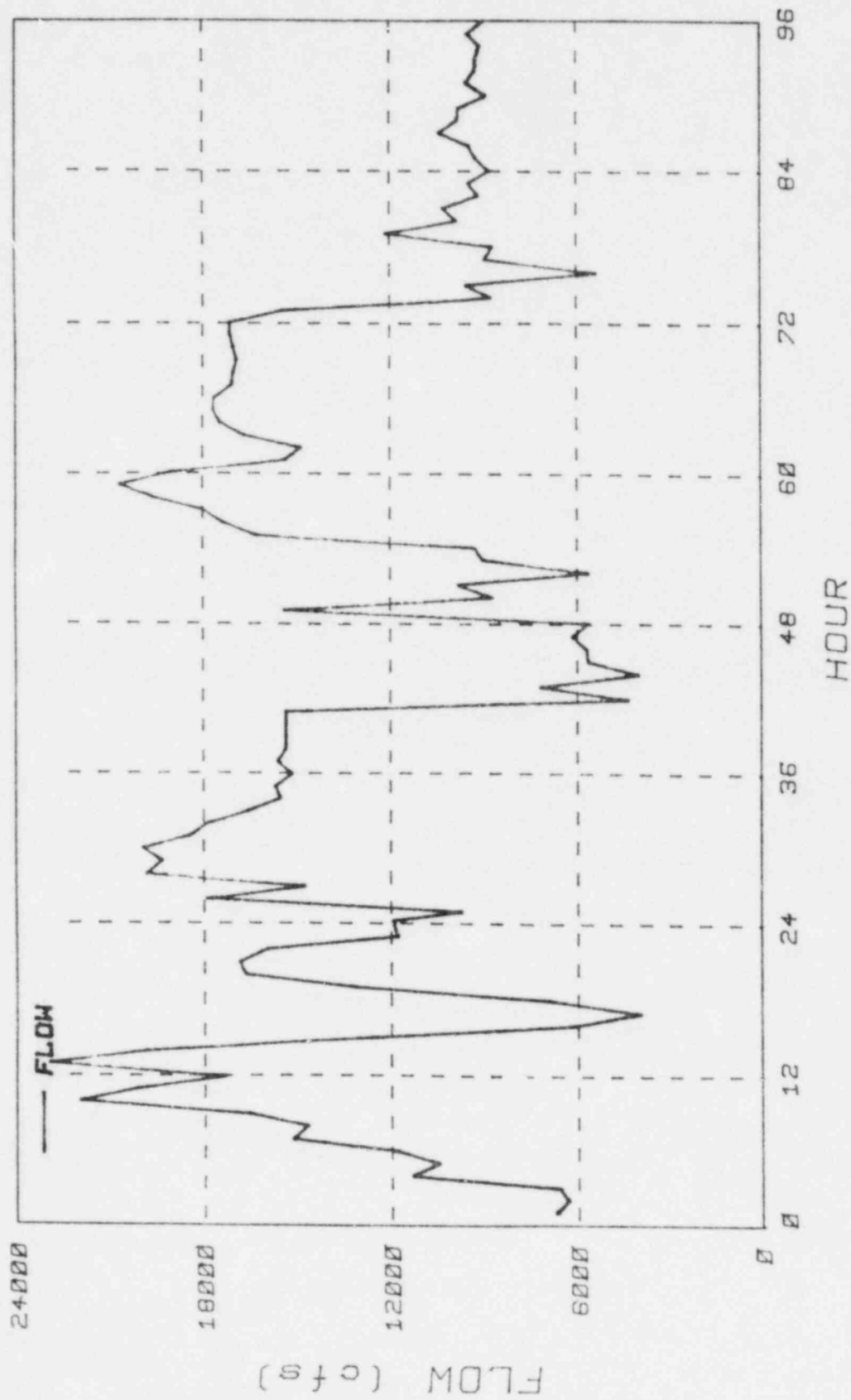
Mr. Jack R. McCormick, Basin Manager  
Chattanooga Basin Office  
Division of Water Management  
2501 Milne Street  
Chattanooga, Tennessee 37406

Mr. James P. O'Reilly, Director  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street  
Atlanta, Georgia 30303

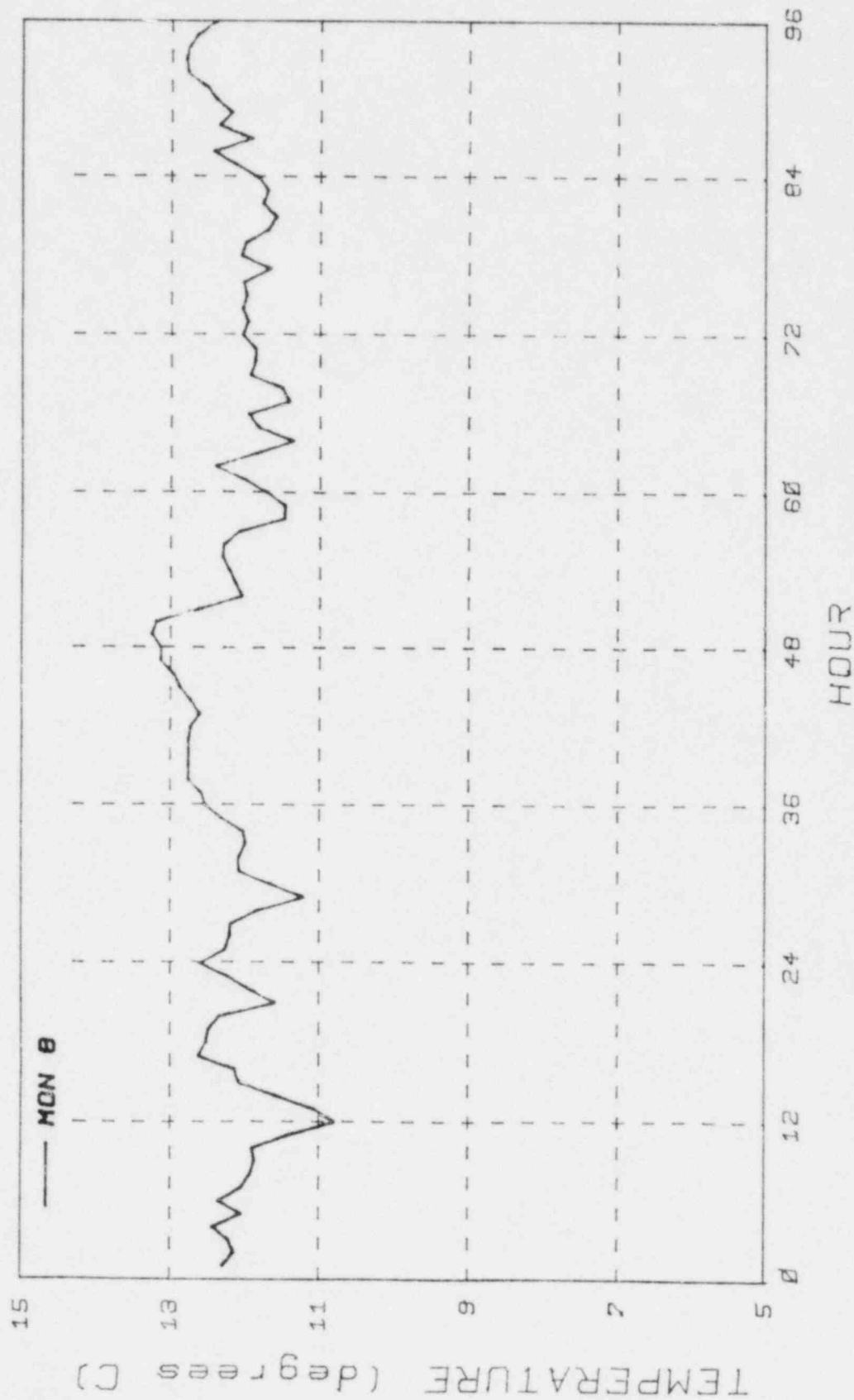
Tennessee Department of Public Health  
Division of Water Management  
TERRA Building  
150 Ninth Avenue, North  
Nashville, Tennessee 37203



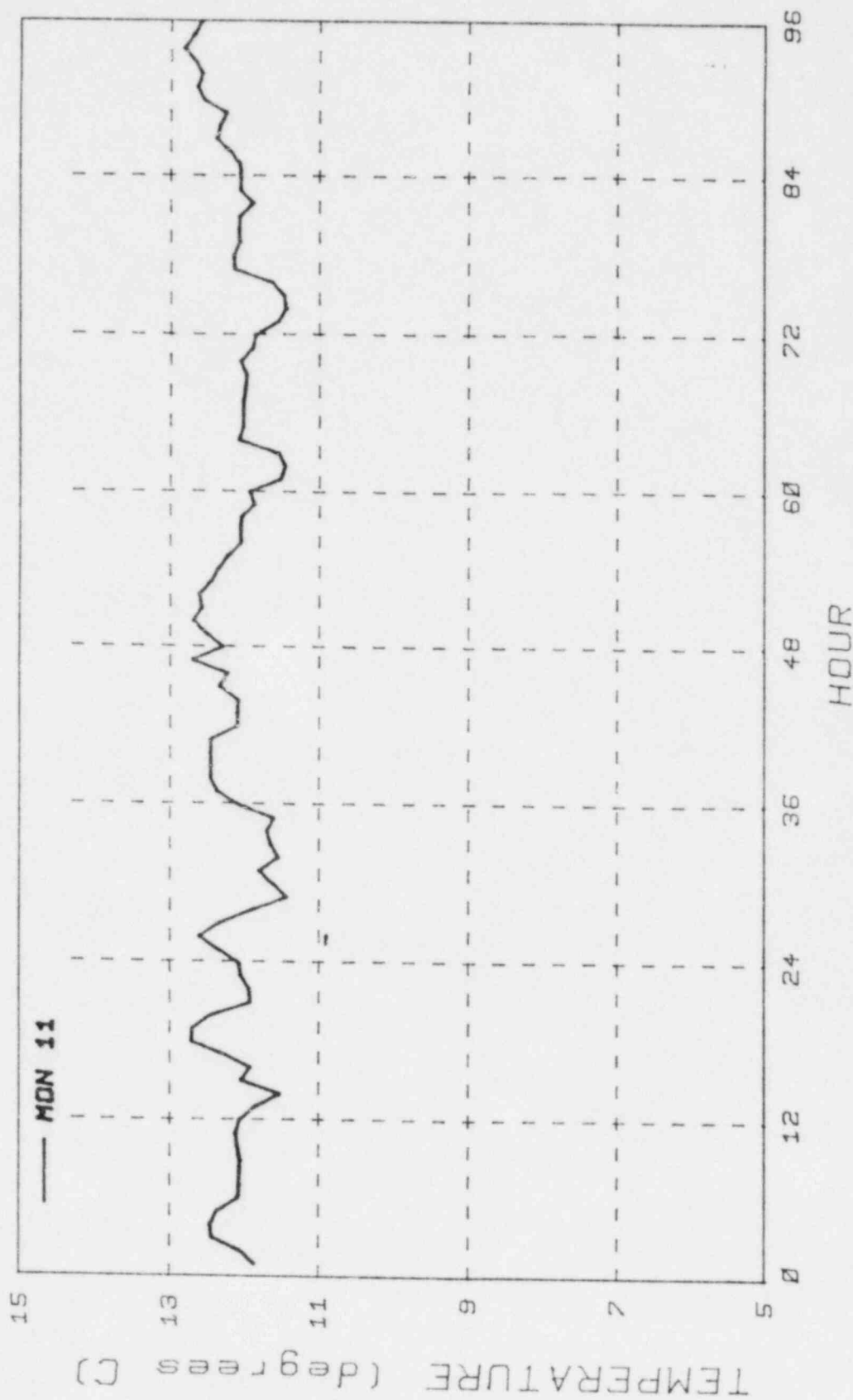
SNP MONITOR TEMP. 3/26 THRU 3/29 1983



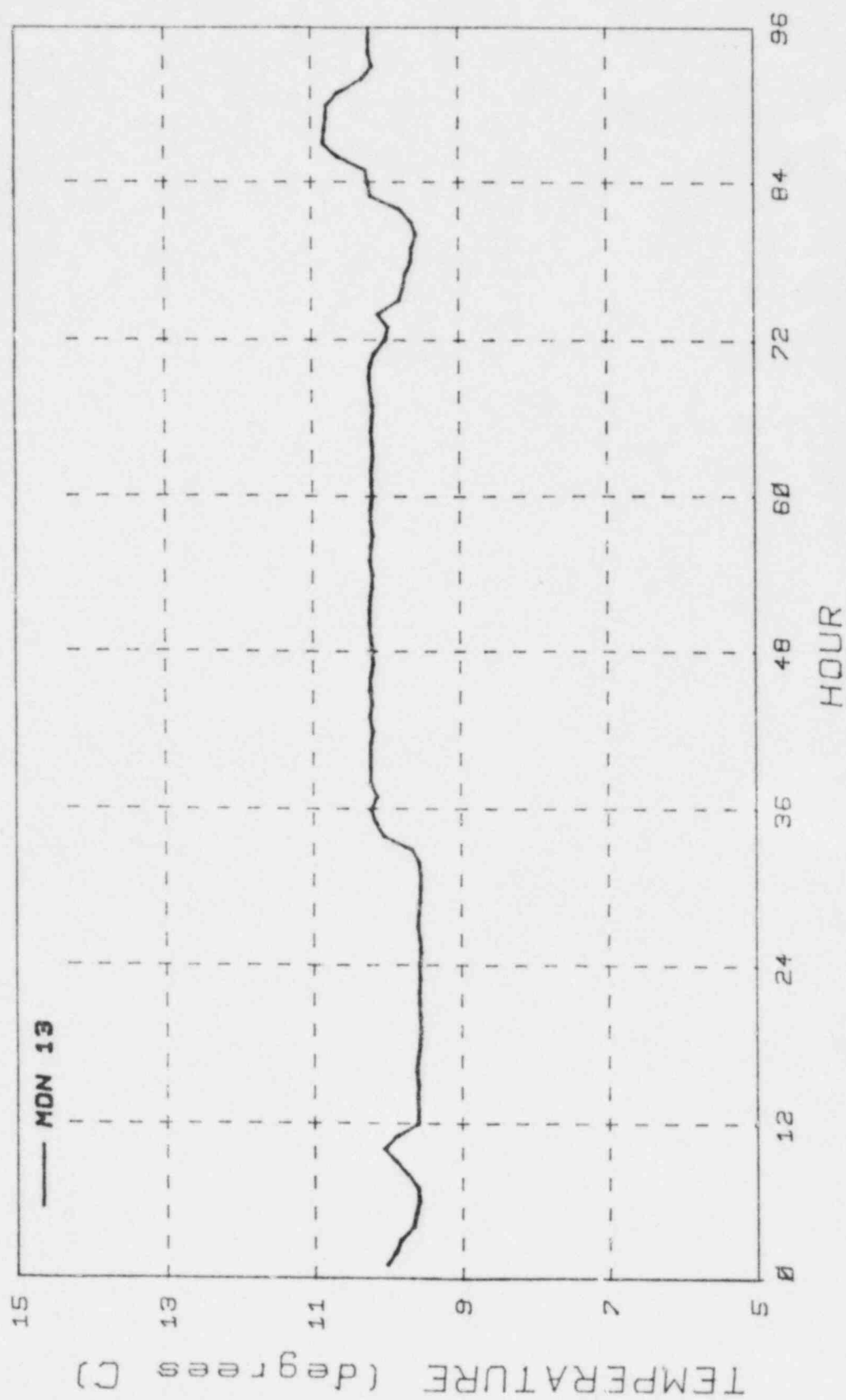
TENNESSEE RIVER FLOW 3/26 - 3/29 83



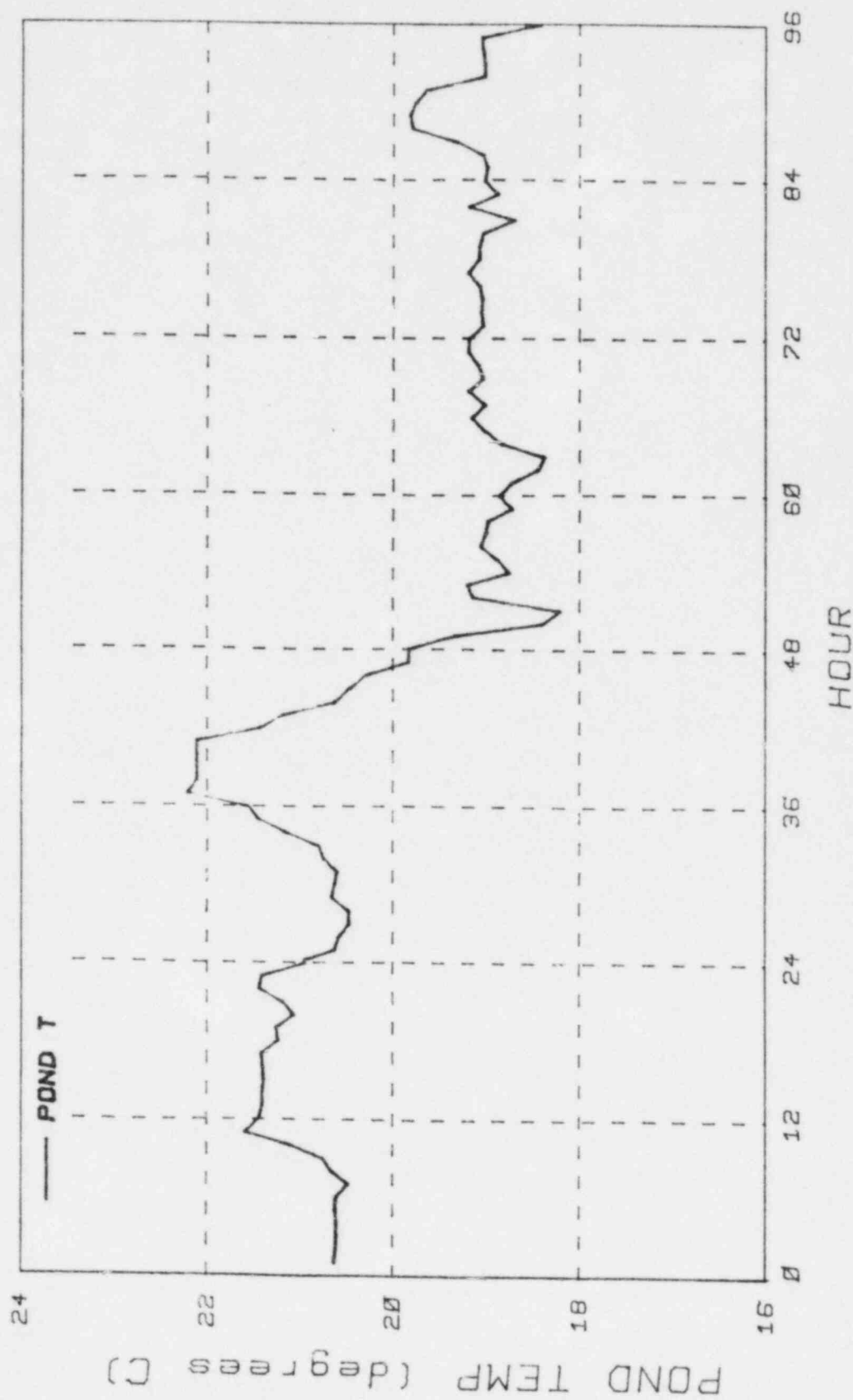
SNP MONITOR TEMP. 3/26 THRU 3/29 1983



SNP MONITOR TEMP. 3/26 THRU 3/29 1983



SNP MONITOR TEMP. 3/26 THRU 3/29 1983



SNP DIFFUSER POND TEMP. 3/26-3/29, 1983