10 CFR 50.90

CP&L
A Progress Energy Company

Serial: RNP-RA/01-0118

JUL 06 2001

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23

SUPPLEMENT 2 TO REQUEST FOR TECHNICAL
SPECIFICATIONS CHANGE REGARDING ULTIMATE HEAT SINK

Ladies and Gentlemen:

By letters dated June 5 and August 4, 2000, Carolina Power and Light Company (CP&L) provided, respectively, a request for Technical Specifications change for the Ultimate Heat Sink (UHS) for H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, and Supplement 1 to this request. The intent of the proposed Technical Specifications change is to provide Required Actions and Completion Times for the UHS in the event that service water temperature exceeds the 97°F surveillance acceptance limit.

To respond to additional staff questions regarding this proposed Technical Specifications change, a working level meeting was conducted on June 25, 2001, between the NRC and HBRSEP, Unit No. 2. During this meeting, HBRSEP, Unit No. 2, agreed to provide data that would be representative of the daily variances typically observed for Lake Robinson, which serves as the UHS for HBRSEP, Unit No. 2. The requested data is provided within Attachments I and II to this letter.

If you have any questions regarding this matter, please contact Mr. H. K. Chernoff.

Sincerely,

for B. L. Fletcher III
Manager Regulatory Affairs

Robinson Nuclear Plant
3581 West Entrance Road
Hartsville, SC 29550

A001

CTB/ctb

Attachments:

I. Temperature Versus Time for July 31, 1999
II. Temperature Versus Time for August 12, 2000

c: Mr. Max K. Batavia, Chief, Bureau of Radiological Health (SC)
Mr. L. A. Reyes, NRC, Region II
Mr. R. Subbaratnam, NRC, NRR
NRC Resident Inspectors, HBRSEP, Unit No. 2
Attorney General (SC) w/out Attachment(s)

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

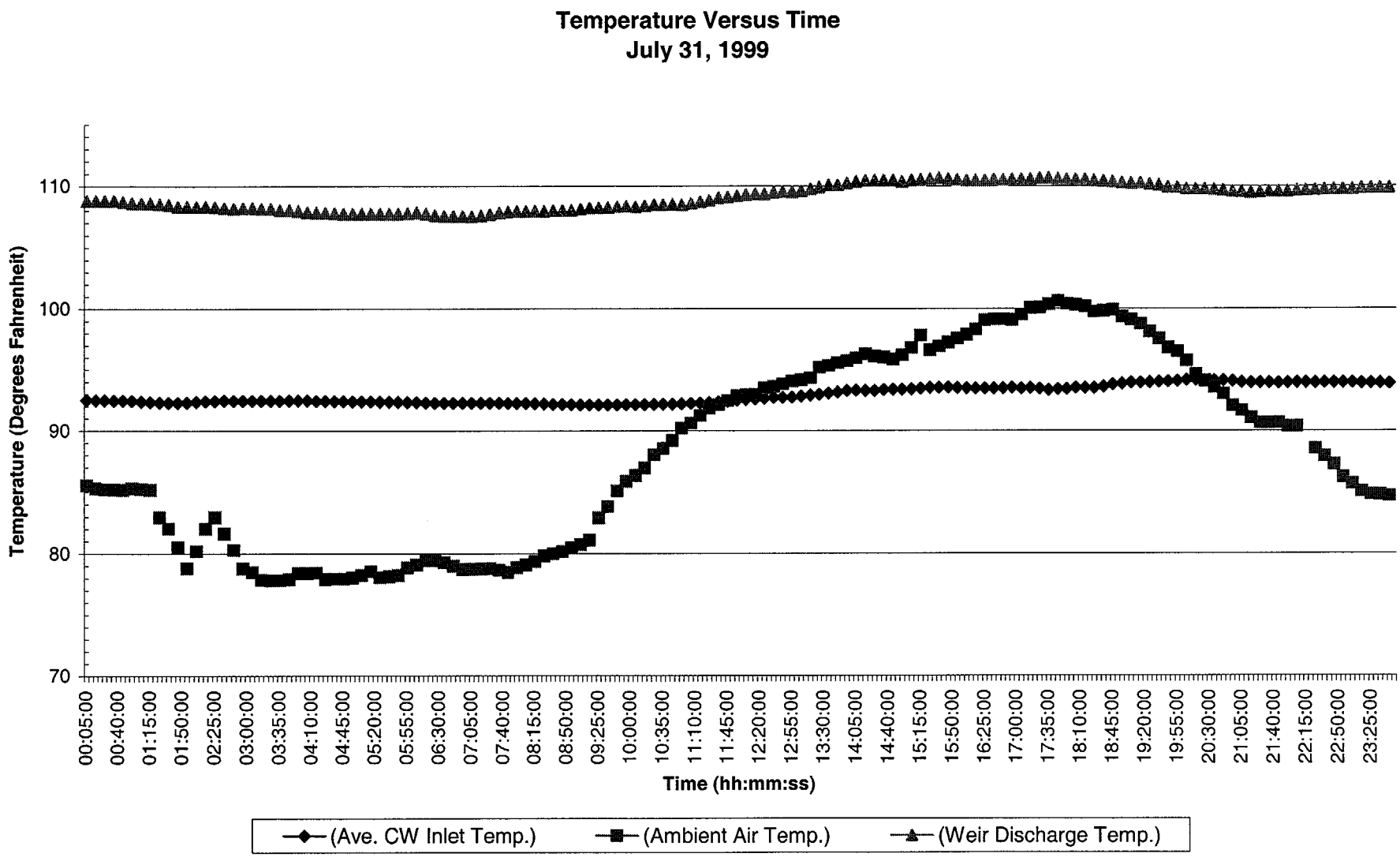
TEMPERATURE VERSUS TIME FOR JULY 31, 1999

Data available from plant process computer archive files has been obtained for an approximate 24-hour period occurring on July 31, 1999. Plant operating logs indicate that Required Action A.1 was entered for Technical Specification 3.7.8, "Ultimate Heat Sink (UHS)," at 1534 hours because the service water (SW) temperature exceeded 95°F. Note that a Notice of Enforcement Discretion (NOED) had been previously approved to extend the Completion Time for this Required Action from six hours to 72 hours.

Temperature versus time data obtained for this time period includes average circulating water (CW) inlet temperature, ambient air temperature, and weir discharge temperature, which measures the temperature of the plant cooling water effluent at the end of the discharge canal where it enters Lake Robinson.

While these data points are reflective of daily variances in UHS temperature, they do not include the temperature data used for monitoring adherence with Technical Specification 3.7.8. This data is obtained from a local temperature indication within the HBRSEP, Unit No. 2, Auxiliary Building. This temperature data is recorded within Operations logs and surveillance procedures and does not provide the same level of detailed trending capability that is available from plant process computer data.

To facilitate review, this temperature versus time data is provided in both graphical and tabular formats.


Temperature Versus Time
July 31, 1999
Temperature (Degrees Fahrenheit)
110
100
90
80
70
00:05:00
00:40:00
01:15:00
01:50:00
02:25:00
03:00:00
03:35:00
04:10:00
04:45:00
05:20:00
05:55:00
06:30:00
07:05:00
07:40:00
08:15:00
08:50:00
09:25:00
10:00:00
10:35:00
11:10:00
11:45:00
12:20:00
12:55:00
13:30:00
14:05:00
14:40:00
15:15:00
15:50:00
16:25:00
17:00:00
17:35:00
18:10:00
18:45:00
19:20:00
19:55:00
20:30:00
21:05:00
21:40:00
22:15:00
22:50:00
23:25:00
Time (hh:mm:ss)
(Ave. CW Inlet Temp.)
(Ambient Air Temp.)
(Weir Discharge Temp.)

Temperature Versus Time July 31, 1999			
Time of Day (hh:mm:ss)	Average Circulating Water Inlet Temperature (°F)	Ambient Air Temperature (°F)	Weir Discharge Temperature (°F)
00:05:00	92.50	85.57	108.83
00:15:00	92.48	85.32	108.83
00:25:00	92.48	85.24	108.83
00:35:00	92.47	85.22	108.83
00:45:00	92.47	85.20	108.74
00:55:00	92.46	85.32	108.63
01:05:00	92.39	85.26	108.63
01:15:00	92.34	85.19	108.63
01:25:00	92.31	82.97	108.54
01:35:00	92.29	82.05	108.49
01:45:00	92.28	80.53	108.35
01:55:00	92.31	78.83	108.34
02:05:00	92.36	80.22	108.34
02:15:00	92.40	82.04	108.34
02:25:00	92.44	82.97	108.31
02:35:00	92.46	81.65	108.25
02:45:00	92.45	80.33	108.20
02:55:00	92.44	78.82	108.22
03:05:00	92.44	78.51	108.23
03:15:00	92.45	77.88	108.16
03:25:00	92.44	77.84	108.15
03:35:00	92.45	77.85	108.06
03:45:00	92.46	77.93	108.06
03:55:00	92.46	78.42	107.99
04:05:00	92.46	78.43	107.90
04:15:00	92.44	78.47	107.85
04:25:00	92.42	77.94	107.85
04:35:00	92.42	77.97	107.82
04:45:00	92.40	77.97	107.77
04:55:00	92.39	78.05	107.77
05:05:00	92.39	78.26	107.77
05:15:00	92.38	78.57	107.77
05:25:00	92.38	78.07	107.77

Temperature Versus Time July 31, 1999			
Time of Day (hh:mm:ss)	Average Circulating Water Inlet Temperature (°F)	Ambient Air Temperature (°F)	Weir Discharge Temperature (°F)
05:35:00	92.36	78.15	107.77
05:45:00	92.34	78.26	107.77
05:55:00	92.32	78.88	107.80
06:05:00	92.32	79.10	107.87
06:15:00	92.29	79.46	107.78
06:25:00	92.27	79.46	107.65
06:35:00	92.26	79.30	107.58
06:45:00	92.27	79.01	107.58
06:55:00	92.26	78.74	107.58
07:05:00	92.26	78.77	107.55
07:15:00	92.26	78.78	107.62
07:25:00	92.26	78.79	107.73
07:35:00	92.25	78.67	107.85
07:45:00	92.24	78.49	107.96
07:55:00	92.24	78.88	107.97
08:05:00	92.23	79.09	107.98
08:15:00	92.22	79.37	107.99
08:25:00	92.19	79.84	107.97
08:35:00	92.17	79.99	108.05
08:45:00	92.15	80.18	108.07
08:55:00	92.14	80.48	108.07
09:05:00	92.12	80.73	108.17
09:15:00	92.11	81.09	108.25
09:25:00	92.12	82.90	108.27
09:35:00	92.12	83.81	108.30
09:45:00	92.12	85.09	108.36
09:55:00	92.13	85.88	108.39
10:05:00	92.14	86.35	108.36
10:15:00	92.15	86.97	108.42
10:25:00	92.16	88.06	108.51
10:35:00	92.18	88.56	108.52
10:45:00	92.19	89.21	108.54
10:55:00	92.20	90.22	108.50
11:05:00	92.24	90.63	108.61

Temperature Versus Time July 31, 1999			
Time of Day (hh:mm:ss)	Average Circulating Water Inlet Temperature (°F)	Ambient Air Temperature (°F)	Weir Discharge Temperature (°F)
11:15:00	92.27	91.26	108.75
11:25:00	92.31	91.84	108.84
11:35:00	92.37	92.13	109.06
11:45:00	92.43	92.47	109.13
11:55:00	92.49	92.89	109.21
12:05:00	92.56	92.94	109.32
12:15:00	92.60	92.99	109.38
12:25:00	92.66	93.50	109.37
12:35:00	92.72	93.64	109.50
12:45:00	92.73	93.83	109.56
12:55:00	92.75	94.07	109.55
13:05:00	92.82	94.17	109.64
13:15:00	92.90	94.32	109.78
13:25:00	92.97	95.19	109.93
13:35:00	93.06	95.35	110.09
13:45:00	93.15	95.57	110.10
13:55:00	93.27	95.74	110.25
14:05:00	93.30	95.96	110.38
14:15:00	93.27	96.28	110.46
14:25:00	93.27	96.10	110.48
14:35:00	93.35	96.01	110.48
14:45:00	93.37	95.86	110.50
14:55:00	93.39	96.20	110.37
15:05:00	93.40	96.81	110.49
15:15:00	93.47	97.82	110.52
15:25:00	93.52	96.62	110.59
15:35:00	93.53	96.93	110.67
15:45:00	93.54	97.23	110.59
15:55:00	93.50	97.58	110.51
16:05:00	93.47	97.87	110.49
16:15:00	93.47	98.31	110.47
16:25:00	93.45	99.09	110.47
16:35:00	93.47	99.14	110.56
16:45:00	93.48	99.17	110.51

Temperature Versus Time July 31, 1999			
Time of Day (hh:mm:ss)	Average Circulating Water Inlet Temperature (°F)	Ambient Air Temperature (°F)	Weir Discharge Temperature (°F)
16:55:00	93.52	99.11	110.56
17:05:00	93.45	99.52	110.56
17:15:00	93.49	100.09	110.58
17:25:00	93.43	100.11	110.66
17:35:00	93.34	100.38	110.66
17:45:00	93.39	100.67	110.59
17:55:00	93.43	100.42	110.56
18:05:00	93.52	100.33	110.56
18:15:00	93.50	100.22	110.56
18:25:00	93.50	99.79	110.45
18:35:00	93.61	99.84	110.42
18:45:00	93.78	99.92	110.37
18:55:00	93.85	99.37	110.28
19:05:00	93.93	99.11	110.26
19:15:00	93.93	98.76	110.27
19:25:00	93.95	98.12	110.16
19:35:00	93.99	97.56	110.09
19:45:00	94.01	96.81	109.92
19:55:00	94.06	96.50	109.91
20:05:00	94.14	95.74	109.78
20:15:00	94.14	94.61	109.78
20:25:00	94.10	94.07	109.78
20:35:00	94.11	93.58	109.73
20:45:00	94.10	93.02	109.69
20:55:00	94.06	92.05	109.60
21:05:00	93.95	91.66	109.56
21:15:00	93.93	91.07	109.49
21:25:00	93.93	90.63	109.53
21:35:00	93.93	90.63	109.58
21:45:00	93.92	90.68	109.59
21:55:00	93.93	90.36	109.59
22:05:00	93.95	90.36	109.67
22:15:00	93.95	Data Unavailable	109.69
22:25:00	93.93	88.57	109.71

Temperature Versus Time July 31, 1999			
Time of Day (hh:mm:ss)	Average Circulating Water Inlet Temperature (°F)	Ambient Air Temperature (°F)	Weir Discharge Temperature (°F)
22:35:00	93.95	87.94	109.76
22:45:00	93.96	87.26	109.78
22:55:00	93.95	86.24	109.78
23:05:00	93.96	85.70	109.78
23:15:00	93.92	85.06	109.86
23:25:00	93.91	84.83	109.88
23:35:00	93.91	84.79	109.88
23:45:00	93.88	84.69	109.88

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

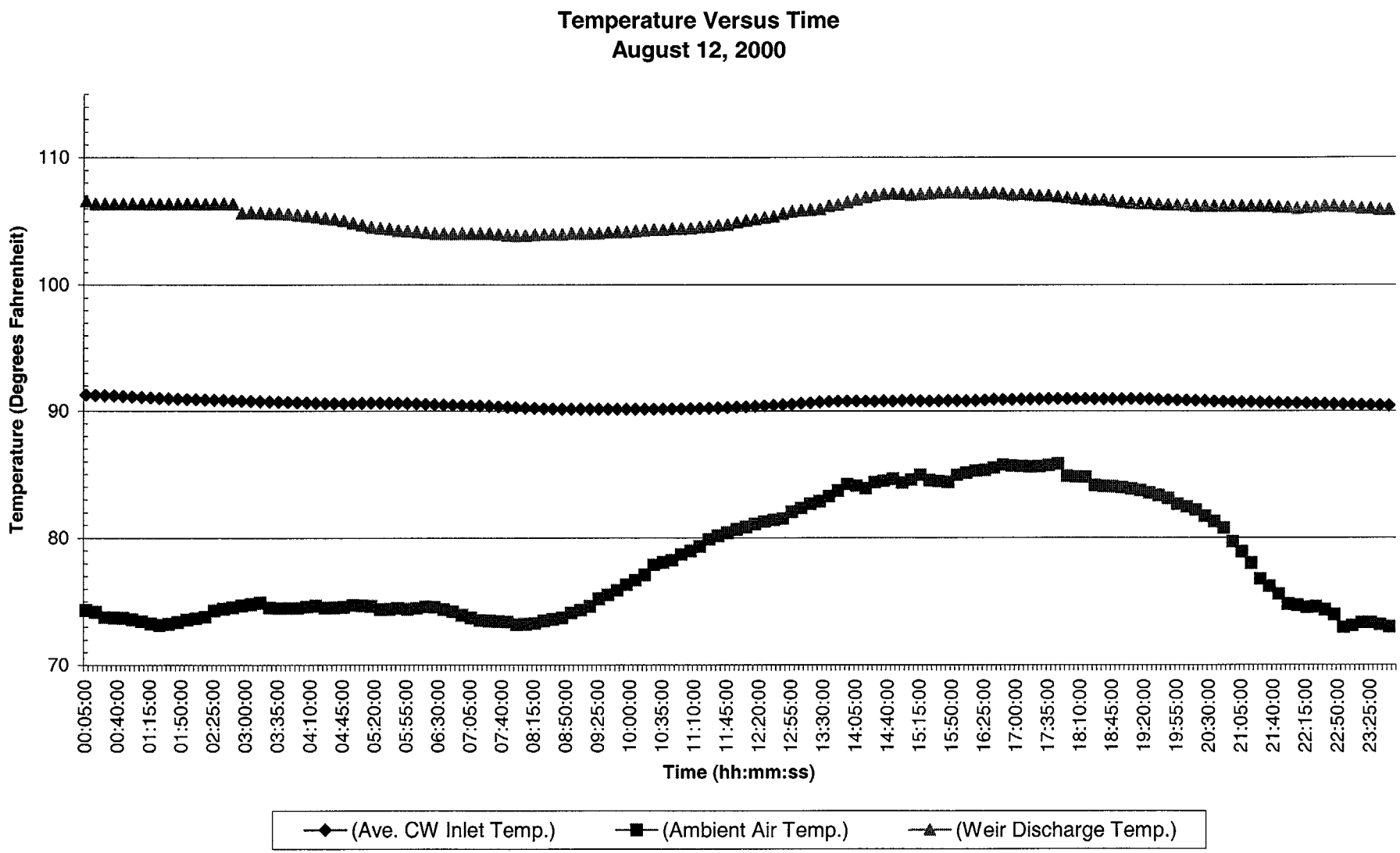
TEMPERATURE VERSUS TIME FOR AUGUST 12, 2000

Data available from plant process computer archive files has been obtained for an approximate 24-hour period occurring on August 12, 2000. Based upon review of plant operating logs from July, August, and September 2000, no instances were identified where service water (SW) temperature exceeded 95°F, which in turn would invoke Required Action A.1 for Technical Specification 3.7.8, "Ultimate Heat Sink (UHS)." The date of August 12, 2000, was selected as one of the hotter days during this time period and provides data that is reflective of typical daily temperature variances.

Temperature versus time data obtained for this time period includes average circulating water (CW) inlet temperature, ambient air temperature, and weir discharge temperature, which measures the temperature of the plant cooling water effluent at the end of the discharge canal where it enters Lake Robinson.

While these data points are reflective of daily variances in UHS temperature, they do not include the temperature data used for monitoring adherence with Technical Specification 3.7.8. This data is obtained from a local temperature indication within the HBRSEP, Unit No. 2, Auxiliary Building. This temperature data is recorded within Operations logs and surveillance procedures and does not provide the same level of detailed trending capability that is available from plant process computer data.

To facilitate review, this temperature versus time data is provided in both graphical and tabular formats.


Temperature Versus Time
August 12, 2000
Temperature (Degrees Fahrenheit)
110
100
90
80
70
00:05:00
00:40:00
01:15:00
01:50:00
02:25:00
03:00:00
03:35:00
04:10:00
04:45:00
05:20:00
05:55:00
06:30:00
07:05:00
07:40:00
08:15:00
08:50:00
09:25:00
10:00:00
10:35:00
11:10:00
11:45:00
12:20:00
12:55:00
13:30:00
14:05:00
14:40:00
15:15:00
15:50:00
16:25:00
17:00:00
17:35:00
18:10:00
18:45:00
19:20:00
19:55:00
20:30:00
21:05:00
21:40:00
22:15:00
22:50:00
23:25:00
Time (hh:mm:ss)
(Ave. CW Inlet Temp.)
(Ambient Air Temp.)
(Weir Discharge Temp.)

Temperature Versus Time August 12, 2000			
Time of Day (hh:mm:ss)	Average Circulating Water Inlet Temperature (°F)	Ambient Air Temperature (°F)	Weir Discharge Temperature (°F)
00:05:00	91.29	74.35	106.61
00:15:00	91.26	74.20	106.38
00:25:00	91.23	73.79	106.38
00:35:00	91.21	73.75	106.38
00:45:00	91.17	73.73	106.38
00:55:00	91.13	73.62	106.38
01:05:00	91.10	73.46	106.38
01:15:00	91.06	73.28	106.38
01:25:00	91.02	73.16	106.38
01:35:00	90.99	73.25	106.38
01:45:00	90.96	73.40	106.38
01:55:00	90.94	73.60	106.38
02:05:00	90.92	73.70	106.38
02:15:00	90.89	73.80	106.38
02:25:00	90.87	74.31	106.38
02:35:00	90.85	74.44	106.38
02:45:00	90.83	74.56	106.37
02:55:00	90.80	74.71	105.63
03:05:00	90.78	74.81	105.69
03:15:00	90.77	74.92	105.66
03:25:00	90.75	74.55	105.61
03:35:00	90.72	74.51	105.61
03:45:00	90.70	74.51	105.58
03:55:00	90.68	74.51	105.51
04:05:00	90.66	74.59	105.42
04:15:00	90.63	74.69	105.33
04:25:00	90.60	74.53	105.25
04:35:00	90.59	74.55	105.16
04:45:00	90.59	74.58	105.05
04:55:00	90.60	74.73	104.88
05:05:00	90.62	74.70	104.71
05:15:00	90.64	74.67	104.54
05:25:00	90.64	74.41	104.45
05:35:00	90.63	74.43	104.41
05:45:00	90.62	74.51	104.29
05:55:00	90.60	74.43	104.25

Temperature Versus Time August 12, 2000			
Time of Day (hh:mm:ss)	Average Circulating Water Inlet Temperature (°F)	Ambient Air Temperature (°F)	Weir Discharge Temperature (°F)
06:05:00	90.58	74.51	104.19
06:15:00	90.55	74.62	104.12
06:25:00	90.51	74.58	104.06
06:35:00	90.49	74.41	104.06
06:45:00	90.47	74.22	104.04
06:55:00	90.45	73.96	104.06
07:05:00	90.43	73.74	104.06
07:15:00	90.41	73.54	104.06
07:25:00	90.38	73.50	104.06
07:35:00	90.35	73.46	103.98
07:45:00	90.32	73.42	103.92
07:55:00	90.29	73.20	103.87
08:05:00	90.25	73.23	103.90
08:15:00	90.23	73.29	103.96
08:25:00	90.19	73.50	103.97
08:35:00	90.17	73.62	103.98
08:45:00	90.16	73.74	103.99
08:55:00	90.15	74.14	104.07
09:05:00	90.15	74.34	104.07
09:15:00	90.15	74.64	104.07
09:25:00	90.14	75.24	104.07
09:35:00	90.15	75.54	104.15
09:45:00	90.15	75.90	104.17
09:55:00	90.15	76.34	104.17
10:05:00	90.15	76.70	104.26
10:15:00	90.15	77.11	104.32
10:25:00	90.15	77.90	104.36
10:35:00	90.16	78.08	104.36
10:45:00	90.17	78.26	104.43
10:55:00	90.17	78.71	104.43
11:05:00	90.19	79.00	104.46
11:15:00	90.20	79.34	104.54
11:25:00	90.22	79.91	104.60
11:35:00	90.24	80.17	104.69
11:45:00	90.27	80.41	104.75

Temperature Versus Time August 12, 2000			
Time of Day (hh:mm:ss)	Average Circulating Water Inlet Temperature (°F)	Ambient Air Temperature (°F)	Weir Discharge Temperature (°F)
11:55:00	90.30	80.67	104.93
12:05:00	90.33	80.87	105.07
12:15:00	90.37	81.11	105.18
12:25:00	90.41	81.28	105.29
12:35:00	90.44	81.41	105.38
12:45:00	90.49	81.53	105.59
12:55:00	90.52	82.05	105.77
13:05:00	90.60	82.34	105.85
13:15:00	90.64	82.69	105.91
13:25:00	90.70	82.87	105.95
13:35:00	90.74	83.27	106.20
13:45:00	90.78	83.71	106.31
13:55:00	90.79	84.23	106.50
14:05:00	90.78	84.09	106.71
14:15:00	90.78	83.88	106.91
14:25:00	90.75	84.36	107.03
14:35:00	90.80	84.48	107.14
14:45:00	90.79	84.63	107.17
14:55:00	90.82	84.32	107.16
15:05:00	90.84	84.55	107.07
15:15:00	90.80	84.95	107.12
15:25:00	90.77	84.52	107.20
15:35:00	90.80	84.44	107.24
15:45:00	90.81	84.37	107.27
15:55:00	90.82	84.95	107.27
16:05:00	90.81	85.11	107.27
16:15:00	90.82	85.27	107.18
16:25:00	90.85	85.34	107.21
16:35:00	90.91	85.50	107.26
16:45:00	90.90	85.74	107.17
16:55:00	90.89	85.66	107.08
17:05:00	90.92	85.62	107.12
17:15:00	90.94	85.59	107.08
17:25:00	90.95	85.61	107.02
17:35:00	90.96	85.71	107.02

Temperature Versus Time August 12, 2000			
Time of Day (hh:mm:ss)	Average Circulating Water Inlet Temperature (°F)	Ambient Air Temperature (°F)	Weir Discharge Temperature (°F)
17:45:00	90.96	85.83	106.94
17:55:00	90.96	84.86	106.86
18:05:00	90.96	84.80	106.78
18:15:00	90.96	84.78	106.71
18:25:00	90.96	84.12	106.68
18:35:00	90.95	84.04	106.68
18:45:00	90.95	84.03	106.58
18:55:00	90.95	83.96	106.49
19:05:00	90.95	83.85	106.42
19:15:00	90.94	83.73	106.39
19:25:00	90.93	83.53	106.39
19:35:00	90.91	83.33	106.33
19:45:00	90.88	83.09	106.30
19:55:00	90.86	82.64	106.27
20:05:00	90.84	82.44	106.27
20:15:00	90.82	82.19	106.20
20:25:00	90.79	81.68	106.20
20:35:00	90.76	81.28	106.20
20:45:00	90.75	80.76	106.20
20:55:00	90.73	79.69	106.20
21:05:00	90.71	78.91	106.20
21:15:00	90.70	78.01	106.20
21:25:00	90.68	76.77	106.20
21:35:00	90.66	76.20	106.20
21:45:00	90.65	75.59	106.11
21:55:00	90.63	74.80	106.11
22:05:00	90.62	74.70	106.01
22:15:00	90.60	74.54	106.09
22:25:00	90.58	74.58	106.13
22:35:00	90.56	74.34	106.20
22:45:00	90.55	73.97	106.18
22:55:00	90.52	72.97	106.11
23:05:00	90.50	73.11	106.11
23:15:00	90.48	73.34	106.02
23:25:00	90.46	73.34	106.02
23:35:00	90.44	73.18	105.92
23:45:00	90.42	72.99	105.92