TU ELECTRIC

Log # TXX-92526
File # 10010
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Ref. # 10CFR50.55a

William J. Cahill, Jr.
Group Vice President

November 6, 1992

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
ADVANCE FSAR SUBMITTAL - COOLING POND HYDROTHERMAL ANALYSIS

Gentlemen:

The attachment to this letter provides an advance CPSES FSAR submittal to facilitate NRC Staff review of the subject area in support of licensing Unit 2. The attachment is organized as follows:

1. A description/justification of each change.

2. A copy of the revised FSAR pages (changes are indicated in the margin by the word "DRAFT").

The attached material will be incorporated in CPSES FSAR Amendment 87 which is currently scheduled for December, 1992. If you have any questions regarding this submittal, please contact Mr. Manu Patel at (214) 812-8298.

Sincerely,

William J. Cahill, Jr.

By: D R Woodlan
D. R. Woodlan
Docket Licensing Manager

MCP/gjh
Attachment

c - Mr. J. L. Milhoan, Region IV
Resident Inspectors, CPSES (2)
Mr. T. A. Bergman, NRR
Mr. B. E. Holian, NRR

D029 1/1

Prefix Page (as amended)	Group	Description
2.3-12,13	2	See Sheet No(s) :14 Update the Ultimate Heat Sink Analysis based on the revised calculation for two unit operation. Update : A review of 39 years of historical meteorological data through 1991 identified 1990 as being more severe than 1974. Therefore, the updated analyses used 1990 regional climatological conditions in accordance with R.G 1.27, C.1. The 1974 meteorological data is retained because it represents actual on-site data and shows that the regional data is conservative for the CPSES site. The selection of meteorological data is consistent with R.G 1.27 and the previous description relocated from Section 1A(B) for R.G 1.27. Incorporate responses to Q 371.16 and 371.32 based on revised analysis. Change Request Number : SA-92-720.1 Commitment Register Number : Related SER : 9.2.5 SSER : SER/SSER Impact : Yes SER section 9.2.5 should be revised to use meteorological data based on 39 years in lieu of 30 years used in the SER.
Table 2.3-7A	2	Replace Table 2.3-7 with a new Table 2.3-7A. Update : Table 2.3-7 is updated and changed to Table 2.3-7A based on the revised calculation for Ultimate Heat Sink (See description for 92-720.2). The 1974 meteorological data presented in Table 2.3-7A show wind speeds lower than in the original Table 2.3-7. The lower wind speeds are the result of correcting the anemometer height to the standard 2 m level used in surface heat exchange computations. In addition, minor differences in temperature are the result of conversion of the original Fahrenheit temperatures to Celsius and back to Fahrenheit again for use in the table. Change Request Number : SA-92-720.3 Commitment Register Number : Related SER : 2.3 SSER : SER/SSER Impact : No
Table 2.3-7B	2	Added most severe 39 day period for peak SSI temperatures. Addition : Added meteorological data based on the revised calculation (see description for 92-720.2). Change Request Number : SA-92-720.4

Prefix Page (as amended)	Group	Description
		Commitment Register Number : Related SER : 2.3 SSER : SER/SSER Impact : No
Table 2.3-7C	2	Added most severe 30 day period for evaporation. Addition : This table is added to provide the most severe 30 day period for evaporation based on the revised calculation (see description for 92-720.2). Change Request Number : SA-92-720.5 Commitment Register Number : Related SER : 2.3 SSER : SER/SSER Impact : No
2.4-34	3	Clarify the SSI functions and SSI volume at elevation 769.5 between 284 acre-feet and 367 acre-feet. Add reference to Table 2.4-19 to clarify SSI capacity characteristics. Addition : Clarify the SSI volume at elevation 769.5 feet to match Sections 9.2.5.2, 2.4.11.5, Table 2.4-18 and Table 2.4-19. (See description for 92-720.15) Clarify functions to match Section 9.2. Change Request Number : SA-92-720.7 Commitment Register Number : Related SER : 2.4 SSER : SER/SSER Impact : No
2.4-44	3	Add the results of Post-Accident evaporation analysis. Updates and incorporates the response to Q371.16. Addition : Add the results of Post-Accident evaporation analysis based on the revised calculation. (See description for 92-720.15). Change Request Number : SA-92-720.8 Commitment Register Number : Related SER : 2.4 SSER : SER/SSER Impact : No
2.4-45	3	Add the SSI used for Auxilliary Feedwater as a back-up source and deletion of SSI water used as a Fire Protection System during normal operation. Addition : Add Auxiliary Feedwater use to match FSAR Section 10.4.9.3. Delete Fire Protection use to match new Fire Protection System as described in Section 9.5.1.4.2 and Figure 9.5-43. Change Request Number : SA-92-720.9 Commitment Register Number : Related SER : 2.4 SSER :

Prefix Page (as amended)	Group	Description
		SER/SSER Impact : No
2.4-46	4	Delete the descriptive part of Service Water Pump. Addition : Section 2.4.11.5 includes descriptive part of Service Water Pumps. Deleted the duplication in this section. Change Request Number : SA-92-720.10 Commitment Register Number : Related SER : 2.4 SSER : SER/SSER Impact : No
2.4-47	3	Update the seepage, drift and evaporation information. Addition : The 36 acre-feet was the original loss evaluated in the Preliminary Safety Analysis Report. FSAR Section 9.2.5.3 changed this to 80 acre-feet in FSAR Amendment 10; however, that loss was due to maximum temperature meteorological conditions. The updated analysis for maximum loss is incorporated. Change Request Number : SA-92-720.11 Commitment Register Number : Related SER : 2.4 SSER : SER/SSER Impact : No
2.4-69	3	Add the description of the Technical Specification bases for SSI temperature (102 degrees F) and elevation (770 feet). Addition : Addition of SSI temperature of 102 degrees F and elevation of 770 feet satisfies R.G. 1.70 requirements and clarifies the basis for CPSES Technical Specifications. Change Request Number : SA-92-720.12 Commitment Register Number : Related SER : 2.4 SSER : SER/SSER Impact : No
Figure 2.4-26,27	3	See sheet no(s): 28 and 29 Corrects the evaporative losses for the SSI during various plant conditions. Addition : Evaporative losses of 16,365 gpm, as previously indicated are not correct. The evaporative losses are calculated for the plant conditions and are revised in the figures. Change Request Number : SA-92-720.13 Commitment Register Number : Related SER : 2.4 SSER : SER/SSER Impact : No
9.2-5	4	Update the maximum CCW temperature from 133.5 degrees

Prefix Page (as amended)	Group	Description
		F to 135 degrees F at CCW Heat Exchangers outlet. Addition : Update the temperature to be consistent with FSAR Section 9.2.5 (See FSAR Amentment 76). Change Request Number : SA-92-720.14 Commitment Register Number : Related SER : 9.2.1 SSER : SER/SSER Impact : No
9.2-47,49	2	See Sheet No(s): 50 and 51 Revise the Satety Evaluation for SSI based on the revised calculation for two unit operation. The SSI water consumption is updated for new heat loads and 1980 meteorological data. Incorporate 0371.10 into Section 9.2.5.3. Addition : The SSI for Ultimate Heat Sink calculations has been revised based on the two unit operation and the following criteria changes: 1) 30 year meteorological record updated to 39 year record. 2) The SSI model was changed from a "longitudinal-vertical" to a "longitudinal-lateral-vertical" model. 3) Offsite data is used instead of onsite data. 4) 1980 and 1990 data used instead of 1974. 5) An analysis of two train LOCA using the most severe one day meteorological data was added to determine intake temperature responses. 6) The SSI Water Consumption is updated for new heat loads and 1980 meteorological data. Change Request Number : SA-92-720.15 Commitment Register Number : Related SER : 9.2.5 SSER : SER/SSER Impact : Yes The SER needs to be revised to reflect the updated analysis for 39 years in lieu of SER value for 30 years. This resulted in more conservative data than previously used.
9.2-48	4	Delete the exception to R.G. 1.27 and reference to 1A(B) section. Clarification : The previous analysis as described was not an exception to R.G. 1.27. The description were provided tr describe how the time period (39 days) exceeded the R.G requirement (30 days). R.G 1.27 compliance is described in Sections 2.3, 2.4 and 9.2. Change Request Number : SA-92-720.17 Commitment Register Number : Related SER : 9.2.5 SSER :

Prefix Page (as amended)	Group	Description
		SER/SSER Impact : No
O&R 371-17	4	Incorporation of 0371.10 in FSAR section 9.2.5.3. Addition : Update section 9.2.5.3 to incorporate 0371.10 as part of USAR Update FSAR Change request No: 92-720.16. Change Request Number : SA-92-720.16 Commitment Register Number : Related SER : 9.2.5 SSER : SER/SSER Impact : No
O&R 371-23,50	3	Incorporate 371.26 and 371.32 into FSAR Sections 2.3.1.2.10 and 2.4.11.5. Addition : Revised the input for Q371.16 and 371.32 based on new revised analysis and incorporated in FSAR Sections 2.3.1.2.10 and 2.4.11.5. Change Request Number : SA-92-720.6 Commitment Register Number : Related SER : 2.3 SSER : SER/SSER Impact : No

FSAR Page (as amended)	Group	Description
2.4-5	4	Updates FSAR description of the ... w Creek catchment to reference the existing CPSES man-made ponds. Update: FSAR Section 2.4.1.2.2 Squaw Creek has been updated to indicate the three man-made retaining ponds in the catchment which are used for mitigating oil spills as previously described in FSAR Section 2.2.3.2.3. FSAR Change Request Number: 92-736.1 Related SER Section: 2.4.1 SER/SSER Impact: No
2.4-47	4	Updates FSAR to reflect the actual interface between the Fire Protection System and the Safe Shutdown Impoundment (SSI) to be consistent with FSAR sections changed in previous FSAR amendments. Update: FSAR Section 2.4.11.6 Heat Sink Dependability Requirements has been updated to reflect that the SSI is now only used as the source of fire protection storage tank emergency fill water as described in FSAR Section 9.5.1 FSAR Change Request Number: 92-736.2 Related SER Section: 9.5.1.1; SSER21 9.5.1.5 SER/SSER Impact: No
Figure 2.4-26, 27	4	See Sheet No(s):28 and 29 Updates FSAR Figures to reflect actual water usages and to provide consistency between FSAR sections changed in previous FSAR amendments. Update: FSAR Figures 2.4-26 thru -29 have been updated to reflect the actual water usages as reflected in FSAR Sections 9.2.1 and 9.5.1 and FSAR Table 1.3-2, Sht. 16. Also see Description for p. 2.4-47. FSAR Change Request Number: 92-736.3 Related SER Section: 2.4.4 SER/SSER Impact: No

in accordance with ANSI N18.2, Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants, 1973, which is an alternate acceptable method of meeting the intent of Revision 3 (2/76) of this regulatory guide.

Also refer to Appendix 1A(N).

Regulatory Guide 1.27

Ultimate Heat Sink for Nuclear Power Plants

Discussion

Q400.3

DRAFT The CPSES ultimate heat sink meets the requirements of Revision 2 (January 1976) of the Regulatory Guide 1.27 as described in Sections 2.3.1.2.10, 2.4.11.5, 2.4.11.6 and 9.2.5.

Regulatory Guide 1.28

Quality Assurance Program Requirements (Design and Construction)

Discussion

75 The quality assurance program (design and construction) for CPSES complies with the requirements of Safety Guide 28 (6/7/72) except as stated in Appendix 1A(N). Revisions 1 (3/78) and 2 (2/79) of this guide are not addressed.

Q371.15

7 The size of these openings and their location preclude:

7 a) the possibility of ice and snow build-up blocking them and
7 b) roof ponding.

7 All design features of the relief and drainage opening are shown in Figure 2.4-42.

2.3.1.2.9 Dust Storms

Blowing dust or sand may occur occasionally in West Texas where strong winds are more frequent and vegetation is sparse. While blowing dust or sand may reduce visibility to less than five miles over an area of thousands of square miles, dust storms that reduce visibility to one mile or less are quite localized and depend on soil type, soil condition, and vegetation in the immediate area. At Fort Worth during the six year period from 1970-1975, only 0.02 percent of the observations had visibilities of one mile or less due to dust [22].

2.3.1.2.10 Ultimate Heat Sink

Q371.16
Q371.32
DRAFT The performance of the ultimate heat sink is discussed in Section 9.2.5. The meteorological parameters used in the analysis are presented in Tables 2.3-7A, 2.3-7B and 2.3-7C.

DRAFT Three meteorological records were examined in the analysis. These records are data from the onsite station and data from two offsite stations, Dallas-Fort Worth Regional Airport (DFW) and Waco Madison Cooper Airport. DFW is approximately 59 miles northeast of CPSES, with a ground elevation of 551 ft. The DFW record available on magnetic tape begins with May 1953. Until the end of 1973, DFW observations were taken at Love Field. Waco is approximately 53 miles southeast, with ground elevation of 501 ft. The Waco record begins with July 1948. At the time of the analysis, data through

December 1991 at both stations were available. The data consists of hourly (or three-hourly for the period 1965-1980) air and dew point temperatures, windspeed and direction, cloud cover and atmospheric pressure. In addition to these variables, surface heat exchange computations require solar radiation, which can be determined from cloud cover. DRAFT

The onsite data set is not as complete as the offsite data. For this reason, no direct use of the onsite meteorological data set was made in the analysis. However, the 1974 onsite data set (Table 2.3-7A), previously identified as resulting in high Safe Shutdown Inpoundment (SSI) temperatures for years preceding 1978, is presented here for comparison to the data sets selected from the offsite records for SSI performance analysis (Tables 2.3-7B and 7C). The day with the highest water temperature, as computed from the onsite meteorological record as a response to atmospheric heating or cooling, is July 15, 1974. DRAFT

The two offsite records were used to compute SSI termperatures under normal operating conditions for comparison to SSI routinely monitored intake temperatures. These comparison showed that the DFW meteorological data more accurately represented onsite conditions than the Waco data. The DFW data were used for the SSI performance analysis. DRAFT

The entire DFW record (39 years) was then used to compute fully-mixed water temperatures responding to atmospheric heating or cooling and steady heat load similar to those used in the SSI analysis. From this long record of response temperatures, 1-, 5-, 10-, 2[illegible] and 30-day average response temperature were computed. Maximum values of these average temperatures were then identified and ranked by year. From this table, 1990 was identified as the year that would produce the highest temperatures in the SSI for all durations. The meteorological data from 1990 are shown in Table 2.3-7B for the period of maximum SSI temperatures. This period includes data for both for the 24 hour transient analysis and for the peak SSI intake temperature analysis. The day with the highest water temperatures computed from this meteorological record is August 31, 1990. DRAFT

DRAFT

A similar search was conducted for the maximum 30-day evaporation. The fully-mixed computation was used to determine evaporation rates. The period of 30-day maximum evaporation was identified by examining the entire 39 year record using a moving sum procedure. The maximum natural evaporation occurred in 1980. The meteorological data for this period are shown in Table 2.3-7C. The 30-day period with the greatest potential for evaporation is June 25, 1980 to July 25, 1980. In order to be conservative, the evaporation analysis was continued for nine days beyond the 30 day minimum specified in R.G.1.27. The additional data are also shown in the Table.

2.3.1.2.11 Extreme Winds

Estimated extreme winds (fastest mile) for the general area based on the Frechet distribution are [24]:

Return Period (Years)	Wind Speed (Miles Per Hour)
2	51
10	61
50	71
100	76

Fastest mile winds are sustained winds, normalized to 30 feet above ground and include all meteorological phenomena except tornadoes.

TABLE 2.3-7

THIS TABLE HAS BEEN DELETED | DRAFT

CPSES/FSAR

TABLE 2.3-7A (Sheet 1 of 9)

ONSITE METEOROLOGICAL DATA

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}
7/13/74	0	75.9	70.0	4.0	0
	3	73.9	69.1	0.9	0
	6	72.0	69.1	0.0	27
	9	78.1	71.1	2.5	3133
	12	87.1	68.0	4.7	6105
	15	91.9	64.0	5.6	5973
	18	93.9	61.0	4.7	2363
	21	87.1	63.0	4.0	0
7/14/74	0	82.0	63.0	4.0	0
	3	78.1	62.1	1.6	0
	6	75.0	63.0	1.6	16
	9	82.9	66.9	3.1	3053
	12	91.9	61.0	4.0	6307
	15	97.0	60.1	4.0	6174
	18	98.1	60.1	3.1	2389
	21	89.1	64.0	5.6	0
7/15/74	0	75.9	70.0	8.7	0
	3	73.0	70.0	4.0	0
	6	71.1	66.9	2.5	0
	9	80.1	66.9	4.0	3053
	12	88.0	64.9	4.7	6105
	15	93.9	63.0	6.3	5946
	18	93.0	63.0	7.8	2363
	21	87.1	64.9	4.0	0
7/16/74	0	80.1	66.9	4.0	0
	3	75.9	68.0	2.5	0
	6	73.0	68.0	0.9	0
	9	81.0	71.1	1.6	1487
	12	89.1	64.9	6.3	5707
	15	93.0	64.0	6.3	4995
	18	93.0	63.0	6.3	1911
	21	84.0	68.0	11.0	11
7/17/74	0	75.9	68.0	4.0	0
	3	73.0	68.0	1.6	0
	6	70.0	68.0	1.6	32
	9	78.1	70.0	5.6	2920
	12	87.1	64.9	5.6	5075

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CPSES/FSAR
TABLE 2.3-7A (Sheet 2 of 9)
ONSITE METEOROLOGICAL DATA

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft⁻² day⁻¹
	15	91.0	62.1	8.7	5866
	18	88.0	64.9	11.9	2363
	21	82.0	66.9	5.6	0
7/18/74	0	75.9	61.0	2.5	0
	3	73.9	64.0	1.6	0
	6	70.0	64.9	1.6	32
	9	78.1	69.1	4.7	2989
	12	86.0	66.0	6.3	4969
	15	93.9	63.0	4.7	6017
	18	93.0	60.1	6.3	2654
	21	82.0	63.0	5.6	0
7/19/74	0	75.9	64.0	7.2	0
	3	73.9	64.0	2.5	0
	6	73.0	68.0	3.1	27
	9	80.1	66.9	6.3	2947
	12	90.0	64.0	5.6	6068
	15	95.0	57.0	6.3	6078
	18	97.0	55.9	5.6	2230
	21	89.1	61.0	6.3	16
7/20/74	0	81.0	60.1	9.4	0
	3	79.0	62.1	3.1	0
	6	78.1	63.0	2.5	16
	9	84.9	64.9	6.3	2947
	12	95.0	61.0	4.0	6366
	15	98.1	59.0	5.6	5707
	18	98.1	57.9	5.6	2256
	21	91.0	59.0	4.7	37
7/21/74	0	84.0	57.9	4.0	0
	3	82.0	61.0	4.7	0
	6	78.1	59.0	1.6	16
	9	88.0	60.1	4.7	2989
	12	98.1	55.9	4.7	6137
	15	100.9	53.1	6.3	5893
	18	100.9	52.0	6.3	2458
	21	93.0	55.9	4.0	0
7/22/74	0	84.9	61.0	4.0	53
	3	82.9	63.0	5.6	27
	6	79.0	62.1	2.5	27

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CPSES/FSAR
TABLE 2.3-7A (Sheet 3 of 9)
ONSITE METEOROLOGICAL DATA

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}
	9	89.1	62.1	5.6	2845
	12	[illegible]	57.0	4.7	6158
	[illegible]	102.9	55.9	5.6	5866
	18	100.9	57.9	6.3	1539
	21	93.9	62.1	5.6	106
7/23/74	0	87.1	64.0	4.0	53
	3	82.	64.0	4.7	53
	6	81.0	63.0	1.6	43
	9	90.0	64.9	5.6	2999
	12	99.0	61.0	4.7	6052
	15	102.9	57.0	7.2	5866
	18	102.0	57.9	7.8	2389
	21	93.9	61.0	4.0	133
7/24/74	0	88.0	64.9	4.7	95
	3	84.0	64.9	15.7	53
	6	81.0	64.9	8.7	43
	9	87.1	66.0	8.7	2580
	12	96.1	62.1	8.7	4979
	15	99.0	61.0	7.8	3849
	18	95.0	63.0	11.9	1794
	21	91.0	64.9	13.4	133
7/25/74	0	86.0	63.0	13.4	80
	3	84.0	64.9	7.8	53
	6	79.0	69.1	7.2	27
	9	78.1	73.0	6.3	1396
	12	93.0	68.0	12.5	6041
	15	100.0	62.1	9.4	6026
	18	102.0	57.9	7.2	1794
	21	93.9	62.1	13.4	133
7/26/74	0	88.0	62.1	11.0	122
	3	84.9	60.1	5.6	80
	6	82.0	62.1	9.4	106
	9	87.1	64.9	23.5	2856
	12	95.0	64.0	7.8	6371
	15	97.0	64.9	4.0	3053
	18	73.9	71.1	6.3	53
	21	77.0	71.1	4.7	0
7/27/74	0	75.9	72.0	0.0	0

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CPSES/FSAR
TABLE 2.3-7A (Sheet 4 of 9)
ONSITE METEOROLOGICAL DATA

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}
	3	75.0	71.1	3.1	0
	6	73.0	71.1	0.9	0
	9	81.0	73.9	3.1	2999
	12	91.0	70.0	4.7	6052
	15	96.1	68.0	5.6	5378
	18	93.9	69.1	8.7	1991
	21	86.0	64.9	5.6	0
7/28/74	0	82.0	72.0	3.1	0
	3	79.0	72.0	3.1	0
	6	77.0	72.0	2.5	0
	9	87.1	75.9	1.6	2920
	12	95.0	75.0	2.5	6185
	15	98.1	75.0	4.7	5707
	18	98.1	73.9	5.6	1858
	21	90.0	71.1	6.3	0
7/29/74	0	84.0	71.1	4.7	0
	3	80.1	71.1	4.0	0
	6	75.9	70.0	3.1	0
	9	89.1	73.9	1.6	3053
	12	95.0	60.1	4.7	5458
	15	100.0	87.1	5.6	5909
	18	99.0	87.1	5.6	733
	21	77.0	66.9	11.0	0
7/30/74	0	75.0	68.0	3.1	0
	3	70.0	68.0	6.3	0
	6	70.0	70.0	2.5	0
	9	72.0	69.1	4.0	1062
	12	75.0	69.1	3.1	2527
	15	82.9	66.9	4.7	2325
	18	82.9	66.9	4.7	637
	21	80.1	68.0	4.0	0
7/31/74	0	77.0	68.0	0.0	0
	3	75.0	70.0	1.6	0
	6	72.0	69.1	1.6	0
	9	77.0	69.1	3.1	1327
	12	86.0	64.9	3.1	5707
	15	90.0	64.0	5.6	5707
	18	90.0	64.0	7.2	929

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CPSES/FSAR
TABLE 2.3-7A (Sheet 5 of 9)
ONSITE METEOROLOGICAL DATA

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}
	21	82.0	69.1	7.2	0
8/1/74	0	75.0	70.0	7.2	0
	3	72.0	70.0	3.1	0
	6	70.0	70.0	3.1	0
	9	78.1	70.0	6.3	2150
	12	89.1	66.9	7.2	5197
	15	81.0	69.1	4.0	1630
	18	72.0	69.1	7.2	101
	21	72.0	70.0	7.2	0
8/2/74	0	70.0	70.0	4.7	0
	3	71.1	70.0	3.1	0
	6	71.1	70.0	2.5	0
	9	77.0	69.1	5.6	1858
	12	89.1	73.9	2.5	4247
	15	86.0	[illegible]	10.3	6238
	18	86.0	64.9	7.2	1168
	21	80.1	64.9	4.7	0
8/3/74	0	75.0	66.9	2.5	0
	3	73.9	70.0	4.7	0
	6	72.0	69.1	1.6	0
	9	75.9	71.1	4.0	1529
	12	80.1	60.1	7.8	1746
	15	84.9	55.0	8.7	2756
	18	84.0	52.0	11.0	1593
	21	77.0	50.0	7.2	0
8/4/74	0	73.0	46.9	0.0	0
	3	70.0	48.9	2.5	0
	6	68.0	51.1	0.0	0
	9	75.0	51.1	4.7	1991
	12	81.0	54.0	5.6	5176
	15	86.0	57.9	5.6	5644
	18	86.0	57.0	4.0	865
	21	82.0	61.0	4.0	0
8/5/74	0	77.0	64.9	4.0	0
	3	73.9	66.9	1.6	0
	6	72.0	68.0	2.5	0
	9	73.9	69.1	4.7	1301
	12	79.0	64.0	7.8	1248

CPSES/FSAR
TABLE 2.3-7A (Sheet 6 of 9)
ONSITE METEOROLOGICAL DATA

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}
	15	78.1	64.0	6.3	743
	18	69.1	66.9	7.8	207
	21	68.0	66.0	2.5	0
8/6/74	0	68.0	66.9	4.7	0
	3	66.9	66.9	3.1	0
	6	64.0	64.0	6.3	0
	9	66.9	64.9	2.5	345
	12	72.0	63.0	4.7	1555
	15	75.0	63.0	4.0	1497
	18	75.9	64.9	7.2	797
	21	72.0	69.1	4.0	0
8/7/74	0	69.1	69.1	4.7	0
	3	66.9	66.9	1.6	0
	6	66.9	66.9	0.9	0
	9	71.1	69.1	3.1	1762
	12	73.9	71.1	4.0	3483
	15	82.0	68.0	6.3	3971
	18	82.9	69.1	9.4	1741
	21	77.0	70.0	4.7	0
8/8/74	0	72.0	71.1	6.3	0
	3	71.1	71.1	5.6	0
	6	73.0	70.0	4.7	0
	9	71.1	71.1	7.2	547
	12	71.1	71.1	11.0	945
	15	79.0	72.0	13.4	1858
	18	82.9	72.0	14.1	1603
	21	79.0	75.0	11.9	0
8/9/74	0	75.0	75.0	7.8	0
	3	73.9	75.0	7.8	0
	6	75.0	73.9	8.7	0
	9	78.1	73.9	12.5	1757
	12	86.0	71.1	15.0	4587
	15	91.0	70.0	13.4	3823
	18	91.0	70.0	14.1	1858
	21	84.9	73.9	11.9	0
8/10/74	0	80.1	72.0	12.5	0
	3	77.0	73.9	7.8	0
	6	77.0	73.9	5.6	0

CPSES/FSAR
TABLE 2.3-7A (Sheet 7 of 9)
ONSITE METEOROLOGICAL DATA

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}
	9	78.1	75.0	9.4	1375
	12	82.9	73.9	11.0	2123
	15	70.0	69.1	7.8	239
	18	71.1	69.1	3.1	865
	21	68.0	68.0	6.3	0
8/11/74	0	68.0	68.0	6.3	0
	3	66.0	64.9	7.2	0
	6	66.0	64.0	2.5	0
	9	72.0	71.1	1.6	1401
	12	78.1	70.0	5.6	2458
	15	82.9	73.0	7.2	4066
	18	86.0	72.0	3.1	1491
	21	81.0	73.0	3.1	0
8/12/74	0	77.0	72.0	3.1	0
	3	75.0	75.0	3.1	0
	6	77.0	73.9	6.3	0
	9	75.9	77.0	4.7	765
	12	84.0	73.9	6.3	3982
	15	89.1	71.1	6.3	4895
	18	90.0	66.0	4.7	1885
	21	84.0	68.0	1.6	0
8/13/74	0	73.0	73.0	4.7	0
	3	71.1	72.0	2.5	0
	6	72.0	68.0	2.5	0
	9	79.0	78.1	5.6	2750
	12	87.1	75.0	6.3	5314
	15	91.0	70.0	4.7	4640
	18	87.1	73.9	4.7	823
	21	82.9	73.9	4.0	0
8/14/74	0	78.1	75.0	9.4	0
	3	73.9	73.9	3.1	0
	6	71.1	68.0	2.5	0
	9	80.1	77.0	5.6	2724
	12	89.1	73.0	7.8	6105
	15	91.9	70.0	4.7	4577
	18	93.0	70.0	7.2	1707
	21	86.0	71.1	6.3	0
8/15/74	0	79.0	73.0	4.0	0

CPSES/FSAR
TABLE 2.3-7A (Sheet 8 of 9)
ONSITE METEOROLOGICAL DA[illegible]

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}
	3	73.9	73.9	3.1	0
	6	71.1	68.0	4.0	0
	9	80.1	75.9	5.6	2788
	12	89.1	73.9	7.8	5973
	15	93.0	70.0	7.8	5776
	18	93.0	[illegible]	8.7	1848
	21	86.0	68.0	6.3	0
8/16/74	0	79.0	70.0	5.6	0
	3	77.0	75.0	6.3	0
	6	78.1	73.0	4.0	0
	9	80.1	75.9	7.2	2893
	12	88.0	73.0	7.2	6212
	15	93.0	69.1	6.3	5548
	18	95.0	66.0	15.7	1869
	21	86.0	68.0	11.0	0
8/17/74	0	81.0	70.0	7.2	0
	3	77.0	75.0	6.3	149
	6	73.9	75.0	2.5	133
	9	81.0	75.9	5.6	3079
	12	90.0	72.0	11.0	5999
	15	93.9	70.0	11.0	5309
	18	95.0	66.9	7.8	2060
	21	86.0	70.0	4.7	80
8/18/74	0	82.0	72.0	5.6	53
	3	79.0	73.0	6.3	186
	6	75.0	75.0	6.3	133
	9	82.0	77.0	11.9	3122
	12	91.0	72.0	10.3	6238
	15	95.0	69.1	9.4	5840
	18	96.1	66.9	5.6	2097
	21	87.1	69.1	3.1	175
8/19/74	0	82.0	69.1	4.7	133
	3	79.0	70.0	5.6	80
	6	75.0	73.9	9.4	80
	9	82.9	75.0	7.2	3026
	12	91.0	70.0	9.4	6105
	15	95.0	68.0	9.4	5574
	18	96.1	66.9	7.8	1746

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CPSES/FSAR
TABLE 2.3-7A (Sheet 9 of 9)
ONSITE METEOROLOGICAL DATA

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}
	21	87.1	66.0	6.3	16
8/20/74	0	82.9	72.0	7.2	0
	3	79.0	77.0	7.2	16
	6	75.0	75.9	7.2	16
	9	82.0	73.9	8.7	3053
	12	91.0	70.0	11.0	6105
	15	95.0	68.0	10.3	5553
	18	93.9	68.0	9.4	1699
	21	87.1	71.1	7.2	0
8/21/74	0	80.1	71.1	4.7	0
	3	75.0	73.9	3.1	0
	6	73.0	66.9	2.5	0
	9	79.0	73.0	5.6	3026
	12	89.1	66.0	9.4	5978
	15	93.9	63.0	7.2	5335
	18	95.0	63.0	7.2	1673
	21	87.1	66.0	5.6	0
8/22/74	0	80.1	66.9	3.1	0
	3	75.9	70.0	2.5	0
	6	73.0	72.0	0.0	0
	9	82.0	78.1	0.0	2813
	12	90.0	73.0	0.0	5707
	15	82.0	72.0	2.5	797
	18	82.0	73.9	5.6	133
	21	77.0	70.0	0.0	0
8/23/74	0	75.0	69.1	2.5	0
	3	72.0	66.9	2.5	0
	6	73.0	69.1	4.7	0
	9	81.0	73.0	0.0	2389
	12	88.0	73.9	3.1	5113
	15	95.0	75.0	3.1	4226
	18	93.0	73.0	7.2	1062
	21	81.0	66.9	7.8	0

CPSES/FSAR
TABLE 2.3-7B (Sheet 1 of 21)
OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
8/26/90	0	82.9	66.9	0.0	0	0	29.38
	1	81.0	66.9	0.0	0	0	29.37
	2	81.0	66.9	0.0	0	0	29.37
	3	78.1	68.0	0.0	0	0	29.38
	4	78.1	68.0	0.0	0	0	29.38
	5	75.9	68.0	0.0	0	0	29.39
	6	75.0	66.9	0.0	0	0	29.41
	7	78.1	66.9	0.0	701	0	29.42
	8	84.9	68.0	6.7	2446	0	29.43
	9	88.0	69.1	6.7	4224	0	29.44
	10	91.9	70.0	0.0	5736	0	29.45
	11	95.0	69.1	0.0	6831	0	29.44
	12	98.1	68.0	4.9	6644	4	29.43
	13	99.0	68.0	4.3	6232	5	29.41
	14	99.0	66.0	0.0	5785	5	29.39
	15	100.0	66.0	4.9	5248	4	29.38
	16	100.0	63.0	0.0	4122	3	29.37
	17	100.0	64.0	0.0	2462	3	29.36
	18	98.1	66.0	3.4	792	3	29.36
	19	93.0	66.0	0.0	0	3	29.35
	20	90.0	64.9	0.0	0	0	29.36
	21	87.1	64.9	0.0	0	0	29.38
	22	86.0	64.9	0.0	0	0	29.38
	23	84.9	64.9	0.0	0	0	29.38
8/27/90	0	82.0	66.0	0.0	0	2	29.38
	1	82.0	66.0	0.0	0	2	29.38
	2	81.0	66.0	0.0	0	3	29.37
	3	81.0	64.9	0.0	0	7	29.37
	4	79.0	66.0	0.0	0	6	29.37
	5	81.0	66.0	0.0	0	6	29.38
	6	75.0	66.9	0.0	0	0	29.40
	7	79.0	69.1	0.0	686	0	29.42
	8	87.1	69.1	0.0	2366	2	29.42
	9	91.9	64.0	0.0	4097	2	29.42
	[illegible]	95.0	63.0	0.0	5719	0	29.43
	[illegible]	99.0	62.1	0.0	6813	0	29.42
	12	100.0	62.1	0.0	7347	1	29.39

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CPSES/FSAR
TABLE 2.3-7B (Sheet 2 of 21)
OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	13	100.0	64.0	0.0	7370	1	29.37
	14	102.0	63.0	0.0	6703	2	29.36
	15	102.0	64.0	0.0	5576	2	29.33
	16	102.0	64.0	0.0	4232	2	29.31
	17	99.0	64.9	0.0	2561	1	29.30
	18	99.0	64.0	3.4	810	0	29.31
	19	96.1	66.0	0.0	0	0	29.30
	20	93.0	66.9	0.0	0	0	29.31
	21	91.0	68.0	0.0	0	0	29.32
	22	87.1	69.1	0.0	0	0	29.33
	23	87.1	68.0	0.0	0	0	29.33
8/28/90	0	84.9	68.0	0.0	0	0	29.33
	1	84.9	69.1	0.0	0	0	29.33
	2	82.9	69.1	0.0	0	0	29.32
	3	82.0	68.0	0.0	0	0	29.32
	4	82.0	68.0	0.0	0	0	29.31
	5	78.1	69.1	0.0	0	0	29.32
	6	75.9	68.0	0.0	0	0	29.33
	7	78.1	69.1	0.0	671	0	29.34
	8	84.9	71.1	0.0	2411	0	29.35
	9	89.1	[illegible]	0.0	4190	0	29.35
	10	93.9	[illegible]	0.0	5701	0	29.36
	11	97.0	66.0	2.5	6794	0	29.35
	12	98.1	64.9	3.4	7374	0	29.34
	13	98.1	63.0	0.0	7395	0	29.32
	14	99.0	64.9	4.9	6855	0	29.30
	15	100.0	66.0	3.4	5797	0	29.28
	16	100.0	66.0	6.7	4282	1	29.26
	17	99.0	62.1	4.3	2542	0	29.26
	18	97.0	64.0	3.4	778	0	29.25
	19	93.9	64.0	0.0	0	0	29.25
	20	89.1	66.0	0.0	0	0	29.27
	21	88.0	66.0	0.0	0	0	29.29
	22	86.0	66.0	0.0	0	0	29.30
	23	84.9	66.9	0.0	0	0	29.30
8/29/90	0	82.9	68.0	0.0	0	0	29.29
	1	82.9	69.1	2.5	0	0	29.29

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CPSES/FSAR
TABLE 2.3-7B (Sheet 3 of 21)
OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	2	82.0	61.0	0.0	0	0	29.29
	3	81.0	69.1	0.0	0	0	29.29
	4	79.0	69.1	0.0	0	0	29.30
	5	77.0	70.0	0.0	0	0	29.30
	6	77.0	69.1	0.0	0	0	29.31
	7	78.1	70.0	0.0	657	0	29.32
	8	84.0	71.1	0.0	2394	0	29.33
	9	88.0	71.1	0.0	4172	0	29.34
	10	93.9	70.0	0.0	5684	0	29.35
	11	96.1	68.0	0.0	6775	0	29.35
	12	98.1	68.0	6.7	7305	1	29.33
	13	99.0	66.9	0.0	7371	0	29.30
	14	99.0	66.9	2.5	6827	0	29.28
	15	100.0	66.9	0.0	5728	1	29.26
	16	100.0	66.0	4.3	4164	2	29.24
	17	99.0	64.9	3.4	2489	1	29.24
	18	98.1	64.9	3.4	746	0	29.23
	19	93.0	66.9	0.0	0	0	29.23
	20	89.1	68.0	0.0	0	0	29.25
	21	88.0	68.0	0.0	0	0	29.27
	22	87.1	68.0	3.4	0	0	29.28
	23	84.9	69.1	0.0	0	0	29.30
8/30/90	0	82.0	68.0	3.4	0	0	29.29
	1	82.0	69.1	3.4	0	0	29.29
	2	81.0	68.0	0.0	0	0	29.29
	3	82.0	68.0	0.0	0	0	29.29
	4	79.0	68.0	0.0	0	0	29.29
	5	77.0	68.0	0.0	0	0	29.30
	6	78.1	68.0	0.0	0	0	29.30
	7	79.0	69.1	0.0	641	0	29.31
	8	84.9	69.1	0.0	2376	0	29.32
	9	91.9	69.1	0.0	4155	0	29.32
	10	93.9	69.1	2.5	5666	0	29.33
	11	98.1	66.9	3.4	6756	0	29.33
	12	98.1	68.0	4.3	7284	1	29.31
	13	100.9	64.9	0.0	7155	2	29.29
	14	100.9	63.0	3.4	6755	1	29.27

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CPSES/FSAR
TABLE 2.3-7B (Sheet 4 of 21)
OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	15	102.0	61.0	4.9	5733	0	29.25
	16	102.0	60.1	0.0	4239	0	29.23
	17	100.9	61.0	4.3	2468	0	29.22
	18	99.0	62.1	0.0	641	4	29.22
	19	93.0	62.1	0.0	0	4	29.22
	20	90.0	62.1	3.4	0	5	29.23
	21	89.1	64.0	4.3	0	4	29.24
	22	87.1	64.9	0.0	0	3	29.26
	23	84.9	66.9	4.9	0	2	29.27
8/31/90	0	82.9	66.9	4.9	0	3	29.27
	1	84.0	66.0	4.3	0	3	29.27
	2	82.0	66.0	0.0	0	2	29.26
	3	79.0	64.9	0.0	0	2	29.27
	4	80.1	66.9	0.0	0	2	29.27
	5	79.0	68.0	0.0	0	2	29.28
	6	78.1	66.0	0.0	0	1	29.29
	7	78.1	68.0	0.0	627	0	29.31
	8	87.1	69.1	0.0	2358	0	29.32
	9	91.9	66.0	4.3	4136	0	29.33
	10	95.0	68.0	3.4	5647	0	29.34
	11	99.0	66.9	7.6	6736	0	29.33
	12	100.9	64.9	4.3	7262	1	29.31
	13	102.9	64.9	6.7	7131	2	29.28
	14	106.0	61.0	4.3	6594	2	29.26
	15	105.1	63.0	3.4	5552	2	29.24
	16	102.9	61.0	4.3	3957	3	29.23
	17	104.0	59.0	4.9	2287	3	29.22
	18	100.9	60.1	3.4	523	6	29.22
	19	95.0	61.0	3.4	0	3	29.24
	20	89.1	64.0	3.4	0	0	29.25
	21	88.0	64.0	0.0	0	0	29.28
	22	87.1	62.1	0.0	0	2	29.30
	23	87.1	66.0	0.0	0	2	29.30
9/1/90	0	87.1	66.0	0.0	0	3	29.31
	1	86.0	66.9	4.3	0	2	29.30
	2	82.9	66.9	0.0	0	2	29.30
	3	80.1	66.0	6.7	0	2	29.30

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CPSES/FSAR

TABLE 2.3-7B (Sheet 5 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	4	79.0	66.0	4.3	0	1	29.31
	5	77.0	64.9	4.3	0	1	29.32
	6	77.0	66.0	0.0	0	2	29.33
	7	79.0	66.9	0.0	576	3	29.34
	8	84.0	69.1	4.3	1960	5	29.34
	9	86.0	70.0	0.0	3877	3	29.35
	10	90.0	69.1	6.7	4714	5	29.35
	11	91.0	68.0	6.7	6323	3	29.36
	12	91.9	68.0	0.0	4966	7	29.35
	13	93.0	66.0	4.3	5589	6	29.33
	14	99.0	64.9	4.3	4594	7	29.31
	15	98.1	60.1	10.7	5336	3	29.29
	16	97.0	57.0	13.4	4166	0	29.27
	17	97.0	55.0	14.1	2391	0	29.28
	18	93.9	51.1	11.6	583	4	29.30
	19	90.0	54.0	4.9	0	5	29.32
	20	84.9	55.9	0.0	0	4	29.34
	21	86.0	59.0	9.2	0	4	[illegible].36
	22	82.0	66.0	10.1	0	4	29.38
	23	78.1	66.0	0.0	0	2	29.39
9/2/90	0	75.9	66.9	0.0	0	3	29.39
	1	73.9	66.9	0.0	0	5	29.39
	2	73.0	66.0	0.0	0	3	29.39
	3	72.0	66.0	0.0	0	3	29.40
	4	70.0	66.0	0.0	0	3	29.41
	5	70.0	66.0	0.0	0	3	29.43
	6	70.0	66.0	0.0	0	0	29.43
	7	72.0	66.9	0.0	597	0	29.44
	8	77.0	68.0	0.0	2322	0	29.45
	9	82.0	66.0	0.0	4100	0	29.47
	10	84.9	64.9	4.3	5609	0	29.48
	11	87.1	64.0	0.0	6695	0	29.43
	12	91.0	63.0	6.7	7217	1	29.46
	13	91.0	62.1	3.4	7222	1	29.44
	14	93.0	63.0	8.3	6536	2	29.42
	15	93.0	61.0	7.6	5487	2	29.40
	16	93.9	62.1	8.3	4021	2	29.39

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CPSES/FSAR

TABLE 2.3-7B (Sheet 6 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	17	93.9	62.1	9.2	2291	2	29.39
	18	91.0	62.1	4.9	603	2	29.39
	19	89.1	63.0	3.4	0	3	29.41
	20	86.0	64.0	0.0	0	4	29.43
	21	86.0	64.9	9.2	0	5	29.45
	22	82.9	66.0	4.3	0	2	29.46
	23	80.1	66.9	4.3	0	0	29.45
9/3/90	0	77.0	66.9	4.3	0	2	29.45
	1	75.9	66.9	0.0	0	3	29.44
	2	75.9	68.0	0.0	0	2	29.45
	3	75.9	66.9	0.0	0	2	29.46
	4	75.0	68.0	0.0	0	5	29.47
	5	75.9	68.0	0.0	0	6	29.48
	6	73.9	68.0	0.0	0	6	29.49
	7	75.9	70.0	0.0	548	3	29.51
	8	82.0	70.0	0.0	2289	1	29.52
	9	84.9	69.1	0.0	4054	1	29.53
	10	88.0	68.0	4.9	5554	1	29.54
	11	88.0	68.0	4.9	5980	4	29.53
	12	90.0	66.9	4.3	5546	6	29.52
	13	93.0	66.9	6.7	5548	6	29.50
	14	93.0	64.9	10.1	4553	7	29.48
	15	95.0	64.9	0.0	3816	7	29.46
	16	93.9	66.0	6.7	2788	7	29.45
	17	93.0	66.9	4.3	1937	5	29.44
	18	93.0	64.9	4.9	527	4	29.45
	19	90.0	64.0	4.3	0	3	29.45
	20	87.1	66.9	3.4	0	3	29.48
	21	84.9	66.0	0.0	0	2	29.49
	22	82.9	66.9	3.4	0	0	29.49
	23	82.0	66.9	0.0	0	0	29.50
9/4/90	0	82.0	66.9	6.7	0	0	29.50
	1	80.1	66.9	6.7	0	0	29.51
	2	77.0	68.0	4.9	0	0	29.51
	3	75.9	66.9	0.0	0	0	29.53
	4	75.9	68.0	0.0	0	0	29.52
	5	75.0	68.0	0.0	0	0	29.54

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CPSES/FSAR

TABLE 2.3-7B (Sheet 7 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	6	73.0	68.0	0.0	0	1	29.56
	7	77.0	68.0	0.0	568	0	29.58
	8	82.9	70.0	0.0	2286	0	29.60
	9	88.0	69.1	0.0	4062	0	29.60
	10	91.0	68.0	0.0	5570	0	29.60
	11	91.9	66.0	4.9	6609	1	29.60
	12	93.0	66.9	8.3	6794	3	29.58
	13	93.9	66.0	3.4	6465	4	29.56
	14	96.1	66.0	7.6	5957	4	29.54
	15	96.1	64.9	6.7	5238	3	29.52
	16	97.0	64.9	4.9	3816	3	29.50
	17	96.1	64.9	7.6	2258	1	29.48
	18	93.9	64.9	0.0	557	0	29.48
	19	91.0	64.0	0.0	0	1	29.48
	20	87.1	64.0	0.0	0	1	29.49
	21	86.0	64.9	0.0	0	2	29.50
	22	82.0	64.9	0.0	0	0	29.52
	23	81.0	66.0	0.0	0	2	29.53
9/5/90	0	81.0	66.0	0.0	0	2	29.52
	1	80.1	66.0	0.0	0	5	29.52
	2	80.1	66.0	0.0	0	5	29.53
	3	82.0	64.9	0.0	0	4	29.52
	4	75.9	66.0	0.0	0	3	29.52
	5	75.0	66.0	0.0	0	2	29.53
	6	75.0	64.9	0.0	0	1	29.53
	7	77.0	66.0	0.0	550	1	29.54
	8	84.0	66.9	0.0	2252	1	29.56
	9	88.0	68.0	4.3	4017	1	29.55
	10	91.9	68.0	2.5	5514	1	29.55
	11	97.0	64.9	2.5	6631	0	29.54
	12	98.1	64.9	0.0	7145	1	29.52
	13	99.0	66.0	4.9	7000	2	29.50
	14	99.0	64.0	4.3	6445	2	29.47
	15	100.0	64.0	0.0	5384	2	29.44
	16	98.1	64.0	0.0	3596	4	29.42
	17	99.0	62.1	0.0	2219	1	29.40
	18	97.0	61.0	0.0	494	3	29.40

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CPSES/FSAR

TABLE 2.3-7B (Sheet 8 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	19	93.0	66.0	0.0	0	7	29.39
	20	88.0	64.9	0.0	0	3	29.40
	21	88.0	66.0	4.3	0	8	29.42
	22	84.9	66.9	0.0	0	10	29.42
	23	84.0	68.0	0.0	0	10	29.41
9/6/90	0	82.0	68.0	0.0	0	10	29.41
	1	81.0	68.0	0.0	0	10	29.40
	2	81.0	66.9	0.0	0	10	29.40
	3	79.0	68.0	0.0	0	8	29.39
	4	78.1	66.0	0.0	0	8	29.40
	5	75.0	66.9	0.0	0	8	29.40
	6	75.0	66.9	0.0	0	7	29.40
	7	77.0	69.1	0.0	413	6	29.40
	8	82.0	68.0	0.0	2117	3	29.41
	9	88.0	68.0	0.0	3788	3	29.40
	10	93.0	68.0	0.0	5386	2	29.40
	11	96.1	66.9	0.0	6436	2	29.39
	12	98.1	64.9	4.3	6980	2	29.37
	13	99.0	64.9	4.3	6972	2	29.35
	14	100.0	64.9	6.7	6414	2	29.32
	15	100.0	64.0	7.6	5349	2	29.30
	16	100.0	64.0	3.4	3741	3	29.28
	17	99.0	64.0	6.7	2064	3	29.27
	18	97.0	64.0	8.3	414	5	29.26
	19	93.0	64.0	4.3	0	3	29.26
	20	89.1	64.9	2.5	0	2	29.27
	21	89.1	64.9	4.9	0	2	29.28
	22	87.1	64.9	3.4	0	5	29.29
	23	87.1	63.0	7.6	0	7	29.30
9/7/90	0	86.0	63.0	7.6	0	6	29.31
	1	84.0	63.0	7.6	0	4	29.31
	2	82.9	63.0	9.2	0	6	29.31
	3	80.1	64.0	4.9	0	6	29.32
	4	78.1	64.0	4.3	0	8	29.32
	5	78.1	64.9	4.3	0	8	29.33
	6	75.9	66.0	2.5	0	8	29.33
	7	77.0	68.0	0.0	306	8	29.33

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CPSES/FSAR

TABLE 2.3-7B (Sheet 9 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	8	81.0	70.0	6.7	1302	8	29.33
	9	84.9	70.0	6.7	3067	6	29.34
	10	91.0	70.0	4.9	4936	4	29.34
	11	93.0	68.0	4.3	3846	8	29.35
	12	96.1	66.9	3.4	2499	10	29.33
	13	98.1	64.0	4.9	2495	10	29.31
	14	99.0	63.0	7.6	2293	10	29.29
	15	98.1	61.0	4.9	3186	8	29.26
	16	98.1	62.1	7.6	2681	7	29.23
	17	97.0	61.0	10.7	1802	5	29.22
	18	95.0	62.1	8.3	437	3	29.23
	19	90.0	62.1	0.0	0	2	29.23
	20	88.0	63.0	0.0	0	10	29.26
	21	86.0	63.0	0.0	0	10	29.27
	22	86.0	64.0	0.0	0	10	29.28
	23	84.9	63.0	0.0	0	10	29.28
9/8/90	0	81.0	64.0	0.0	0	9	29.28
	1	82.9	64.0	0.0	0	9	29.28
	2	82.9	64.9	8.3	0	9	29.28
	3	84.0	66.9	4.3	0	9	29.29
	4	82.9	68.0	4.9	0	8	29.30
	5	82.0	69.1	2.5	0	9	29.30
	6	79.0	69.1	0.0	0	9	29.31
	7	79.0	69.1	0.0	178	10	29.32
	8	81.0	70.0	2.5	774	10	29.32
	9	82.9	70.0	6.7	1886	9	29.32
	10	89.1	71.1	6.7	2598	9	29.33
	11	91.0	70.0	6.7	2297	10	29.32
	12	93.0	68.0	6.7	2490	10	29.31
	13	88.0	64.9	4.9	2484	10	29.31
	14	82.0	70.0	0.0	2281	10	29.31
	15	79.0	71.1	7.6	1896	10	29.30
	16	75.9	73.0	7.6	1363	10	29.28
	17	75.9	73.9	0.0	739	10	29.28
	18	77.0	73.9	4.3	152	10	29.29
	19	75.9	75.0	6.7	0	10	29.29
	20	77.0	73.9	0.0	0	10	29.30

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CPSES/FSAR
TABLE 2.3-7B (Sheet 10 of 21)
OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE
HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	21	75.9	73.9	6.7	0	10	29.33
	22	73.9	72.0	4.9	0	10	29.33
	23	75.0	72.0	0.0	0	10	29.33
9/9/90	0	73.9	71.1	0.0	0	10	29.33
	1	73.9	71.1	0.0	0	9	29.33
	2	72.0	71.1	0.0	0	10	29.34
	3	73.0	71.1	0.0	0	10	29.34
	4	73.0	71.1	0.0	0	10	29.33
	5	73.0	72.0	0.0	0	10	29.33
	6	73.0	72.0	0.0	0	9	29.33
	7	73.9	73.0	0.0	235	9	29.34
	8	75.0	73.0	0.0	1280	8	29.35
	9	77.0	73.0	0.0	1877	9	29.37
	10	78.1	72.0	2.5	1913	10	29.38
	11	80.1	71.1	4.9	2289	10	29.40
	12	79.0	71.1	10.7	2481	10	29.38
	13	75.9	70.0	8.3	2474	10	29.37
	14	79.0	69.1	8.3	2270	10	29.36
	15	79.0	69.1	4.3	2547	9	29.34
	16	79.0	69.1	0.0	1348	10	29.33
	17	78.1	68.0	4.9	724	10	29.32
	18	77.0	69.1	0.0	142	10	29.33
	19	75.9	69.1	6.7	0	9	29.33
	20	73.9	70.0	4.3	0	9	29.35
	21	73.0	70.0	0.0	0	8	29.36
	22	72.0	70.0	0.0	0	7	29.36
	23	72.0	69.1	0.0	0	8	29.37
9/10/90	0	73.9	71.1	3.4	0	10	29.37
	1	73.9	71.1	0.0	0	10	29.37
	2	73.0	71.1	0.0	0	9	29.37
	3	72.0	70.0	0.0	0	9	29.36
	4	71.1	69.1	0.0	0	6	29.34
	5	72.0	70.0	0.0	0	10	29.36
	6	70.0	69.1	0.0	0	6	29.37
	7	71.1	70.0	0.0	328	7	29.38
	8	73.0	70.0	0.0	760	10	29.39
	9	73.9	69.1	4.3	1380	10	29.39

CPSES/FSAR

TABLE 2.3-7B (Sheet 11 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	10	72.0	70.0	4.9	1906	10	29.41
	11	72.0	71.1	8.3	2280	10	29.42
	12	73.9	71.1	8.3	2471	10	29.40
	13	79.0	70.0	6.7	2463	10	29.38
	14	81.0	69.1	4.3	3766	8	29.35
	15	77.0	71.1	0.0	2529	9	29.33
	16	80.1	66.9	6.7	2225	8	29.31
	17	81.0	66.9	13.4	1382	7	29.30
	18	78.1	66.9	7.6	288	6	29.31
	19	73.9	66.9	4.9	0	5	29.33
	20	72.0	66.9	0.0	0	3	29.34
	21	72.0	66.9	4.3	0	4	29.36
	22	71.1	68.0	0.0	0	5	29.36
	23	72.0	68.0	3.4	0	10	29.36
9/11/90	0	71.1	68.0	6.7	0	10	29.35
	1	71.1	68.0	4.9	0	10	29.34
	2	70.0	68.0	8.3	0	10	29.33
	3	70.0	68.0	8.3	0	10	29.31
	4	70.0	68.0	4.9	0	10	29.31
	5	70.0	68.0	8.3	0	10	29.32
	6	69.1	69.1	7.6	0	10	29.33
	7	69.1	69.1	6.7	164	10	29.34
	8	69.1	69.1	9.2	753	10	29.34
	9	70.0	69.1	8.3	1372	10	29.35
	10	71.1	70.0	10.7	1897	10	29.36
	11	72.0	69.1	10.1	2271	10	29.36
	12	77.0	70.0	10.1	2462	10	29.35
	13	75.0	69.1	8.3	2452	10	29.34
	14	73.9	71.1	2.5	2244	10	29.32
	15	73.9	70.0	4.3	1855	10	29.31
	16	78.1	71.1	4.9	1784	9	29.28
	17	79.0	70.0	4.9	941	9	29.29
	18	78.1	70.0	0.0	165	9	29.29
	19	75.9	69.1	0.0	0	10	29.30
	20	75.0	71.1	0.0	0	10	29.31
	21	72.0	70.0	0.0	0	10	29.32
	22	72.0	70.0	0.0	0	10	29.33

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CPSES/FSAR
TABLE 2.3-7B (Sheet 12 of 21)
OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE
HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	23	73.0	71.1	0.0	0	10	29.33
9/12/90	0	71.1	70.0	0.0	0	5	29.33
	1	71.1	70.0	0.0	0	8	29.32
	2	71.1	71.1	0.0	0	10	29.32
	3	71.1	71.1	0.0	0	8	29.31
	4	72.0	72.0	0.0	0	10	29.32
	5	72.0	71.1	0.0	0	10	29.33
	6	72.0	71.1	0.0	0	10	29.34
	7	73.0	72.0	0.0	158	10	29.36
	8	73.0	71.1	0.0	746	10	29.37
	9	73.9	71.1	0.0	1365	10	29.38
	10	75.9	71.1	0.0	2556	9	29.39
	11	81.0	71.1	2.5	3775	8	29.38
	12	82.9	71.1	4.3	4091	8	29.37
	13	84.9	69.1	2.5	4073	8	29.35
	14	86.0	66.9	2.5	3725	8	29.33
	15	82.9	70.0	9.2	1842	10	29.31
	16	82.0	70.0	6.7	2177	8	29.31
	17	84.0	69.1	3.4	1324	7	29.30
	18	82.0	69.1	0.0	187	8	29.31
	19	80.1	71.1	0.0	0	8	29.31
	20	79.0	71.1	2.5	0	10	29.32
	21	77.0	72.0	0.0	0	8	29.33
	22	75.9	71.1	0.0	0	3	29.35
	23	73.9	70.0	0.0	0	3	29.35
9/13/90	0	73.9	70.0	0.0	0	3	29.35
	1	73.0	70.0	0.0	0	3	29.34
	2	71.1	69.1	0.0	0	3	29.34
	3	71.1	70.0	0.0	0	2	29.33
	4	71.1	70.0	0.0	0	6	29.33
	5	71.1	70.0	0.0	0	3	29.34
	6	71.1	70.0	0.0	0	4	29.35
	7	71.1	71.1	0.0	154	10	29.36
	8	73.9	72.0	0.0	740	10	29.37
	9	75.0	72.0	0.0	1357	10	29.38
	10	75.9	73.9	0.0	1881	10	29.38
	11	80.1	72.0	0.0	3049	9	29.38

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CPSES/FSAR

TABLE 2.3-7B (Sheet 13 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	12	79.0	71.1	3.4	3303	9	29.36
	13	80.1	73.0	7.6	3287	9	29.35
	14	80.1	73.0	4.3	2219	10	29.33
	15	84.0	72.0	4.3	3050	8	29.30
	16	84.9	72.0	2.5	2152	8	29.28
	17	87.1	71.1	2.5	1296	7	29.28
	18	84.0	70.0	2.5	263	4	29.28
	19	81.0	70.0	0.0	0	2	29.28
	20	78.1	71.1	4.3	0	5	29.30
	21	75.9	71.1	0.0	0	2	29.32
	22	75.9	71.1	4.3	0	2	29.33
	23	75.9	71.1	0.0	0	1	29.33
9/14/90	0	73.9	71.1	3.4	0	1	29.33
	1	73.0	71.1	0.0	0	1	29.34
	2	73.0	71.1	0.0	0	4	29.34
	3	73.9	73.0	2.5	0	10	29.34
	4	73.9	73.0	0.0	0	10	29.34
	5	75.0	73.0	0.0	0	10	29.35
	6	73.9	73.0	0.0	0	10	29.36
	7	75.0	72.0	0.0	202	9	29.37
	8	80.1	72.0	0.0	1427	7	29.38
	9	81.0	72.0	2.5	2252	8	29.40
	10	82.9	72.0	0.0	3647	7	29.40
	11	87.1	72.0	4.3	3036	9	29.40
	12	88.0	71.1	3.4	3289	9	29.38
	13	91.0	68.0	2.5	4035	8	29.36
	14	93.0	68.0	2.5	3682	8	29.34
	15	95.0	68.0	4.3	3026	8	29.32
	16	93.9	66.9	0.0	2126	8	29.31
	17	90.0	70.0	3.4	880	9	29.30
	18	89.1	70.0	4.3	126	9	29.30
	19	84.9	71.1	0.0	0	8	29.31
	20	82.0	72.0	0.0	0	3	29.32
	21	80.1	72.0	0.0	0	3	29.33
	22	78.1	71.1	6.7	0	3	29.34
	23	78.1	72.0	0.0	0	3	29.32
9/15/90	0	75.9	71.1	0.0	0	2	29.32

CPSES/FSAR

TABLE 2.3-7B (Sheet 14 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	1	75.0	71.1	0.0	0	2	29.32
	2	75.0	71.1	0.0	0	2	29.32
	3	73.9	71.1	0.0	0	2	29.31
	4	72.0	70.0	0.0	0	2	29.31
	5	71.1	70.0	0.0	0	2	29.32
	6	72.0	70.0	0.0	0	5	29.32
	7	73.0	71.1	0.0	195	9	29.35
	8	78.1	73.9	0.0	1210	8	29.35
	9	86.0	72.0	0.0	3212	5	29.35
	10	89.1	70.0	2.5	5015	3	29.34
	11	91.0	69.1	2.5	5721	4	29.33
	12	93.0	66.9	4.3	5792	5	29.31
	13	93.9	66.0	2.5	5759	5	29.29
	14	96.1	63.0	2.5	5249	5	29.26
	15	96.1	62.1	3.4	4606	4	29.23
	16	96.1	63.0	4.9	2452	7	29.21
	17	93.9	63.0	3.4	1061	8	29.20
	18	90.0	64.0	3.4	114	9	29.20
	19	84.9	64.9	0.0	0	10	29.20
	20	82.9	63.0	0.0	0	10	29.21
	21	82.0	64.9	0.0	0	10	29.22
	22	81.0	66.9	2.5	0	10	29.22
	23	80.1	68.0	3.4	0	10	29.22
9/16/90	0	77.0	69.1	2.5	0	10	29.22
	1	77.0	70.0	0.0	0	10	29.22
	2	75.9	70.0	0.0	0	10	29.22
	3	75.0	70.0	0.0	0	9	29.23
	4	75.9	71.1	0.0	0	10	29.22
	5	75.0	71.1	0.0	0	[illegible]	29.23
	6	75.0	71.1	0.0	0	8	29.24
	7	73.9	71.1	0.0	271	7	29.25
	8	82.9	73.0	0.0	1398	7	29.26
	9	87.1	73.0	0.0	2920	6	29.27
	10	90.0	71.1	4.3	4062	6	29.27
	11	93.0	70.0	2.5	3713	8	29.27
	12	95.0	66.0	6.7	3260	9	29.24
	13	95.0	64.9	0.0	3240	9	29.22

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TABLE 2.3-7B (Sheet 15 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	14	95.0	63.0	7.6	2950	9	29.20
	15	95.0	66.9	8.3	1785	10	29.18
	16	93.9	68.0	8.3	1244	10	29.17
	17	91.9	66.0	8.3	621	10	29.19
	18	91.0	66.9	8.3	76	10	29.20
	19	88.0	66.0	0.0	0	10	29.22
	20	87.1	69.1	6.7	0	10	29.26
	21	82.9	68.0	14.1	0	10	29.30
	22	79.0	68.0	4.9	0	10	29.26
	23	78.1	66.0	0.0	0	10	29.26
9/17/90	0	75.9	66.9	0.0	0	9	29.25
	1	73.9	66.9	0.0	0	10	29.27
	2	75.0	68.0	0.0	0	10	29.30
	3	73.9	66.9	0.0	0	10	29.30
	4	75.0	68.0	0.0	0	10	29.30
	5	73.9	68.0	0.0	0	9	29.31
	6	73.9	68.0	0.0	0	9	29.31
	7	75.0	69.1	2.5	182	9	29.33
	8	78.1	72.0	3.4	711	10	29.35
	9	80.1	73.9	6.7	1326	10	29.36
	10	82.0	73.0	13.4	2499	9	29.37
	11	84.9	73.0	9.2	2998	9	29.37
	12	87.1	72.0	8.3	2399	10	29.36
	13	88.0	70.0	10.1	2382	10	29.34
	14	90.0	69.1	9.2	2931	9	29.32
	15	91.9	69.1	9.2	3447	7	29.30
	16	91.0	69.1	8.3	2050	8	29.30
	17	88.0	69.1	4.9	820	9	29.30
	18	88.0	69.1	7.6	68	10	29.31
	19	75.0	72.0	7.6	0	10	29.32
	20	77.0	75.0	0.0	0	10	29.35
	21	75.9	75.0	0.0	0	9	29.37
	22	75.9	73.0	0.0	0	10	29.38
	23	75.0	73.0	0.0	0	8	29.39
9/18/90	0	75.0	72.0	0.0	0	7	29.39
	1	73.9	73.0	0.0	0	3	29.39
	2	73.9	73.0	0.0	0	5	29.38

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CPSES/FSAR

TABLE 2.3-7B (Sheet 16 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	3	73.0	72.0	0.0	0	4	29.38
	4	73.0	72.0	0.0	0	5	29.39
	5	73.0	73.0	0.0	0	9	29.39
	6	73.0	73.0	0.0	0	8	29.40
	7	73.9	73.0	0.0	216	8	29.42
	8	77.0	73.9	4.9	1541	6	29.43
	9	81.0	73.9	4.9	2567	7	29.44
	10	84.0	73.0	7.6	4023	6	29.44
	11	87.1	72.0	7.6	5647	4	29.43
	12	90.0	71.1	8.3	6424	3	29.41
	13	91.9	69.1	9.2	6376	3	29.39
	14	93.0	69.1	4.9	5793	3	29.36
	15	93.9	69.1	6.7	4494	4	29.34
	16	93.9	68.0	7.6	2903	5	29.32
	17	93.0	68.0	9.2	1514	4	29.31
	18	91.0	68.0	9.2	168	2	29.31
	19	87.1	69.1	4.9	0	1	29.33
	20	84.0	70.0	0.0	0	4	29.35
	21	84.0	70.0	4.9	0	3	29.36
	22	82.0	72.0	0.0	0	3	29.38
	23	81.0	72.0	0.0	0	1	29.38
9/19/90	0	81.0	72.0	4.3	0	4	29.37
	1	79.0	72.0	4.3	0	2	29.36
	2	78.1	72.0	4.3	0	7	29.35
	3	78.1	72.0	6.7	0	5	29.35
	4	77.0	72.0	4.3	0	2	29.33
	5	75.9	73.0	0.0	0	0	29.35
	6	73.9	72.0	0.0	0	1	29.37
	7	75.9	73.0	0.0	355	1	29.39
	8	80.1	73.0	4.9	1977	1	29.40
	9	82.9	72.0	4.9	3646	2	29.40
	10	87.1	71.1	10.1	5091	2	29.40
	11	87.1	69.1	10.7	4276	7	29.40
	12	89.1	71.1	4.9	4628	7	29.39
	13	91.9	69.1	6.7	6343	3	29.36
	14	93.0	71.1	4.9	5756	3	29.31
	15	93.9	70.0	9.2	4457	4	29.28

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CPSES/FSAR

TABLE 2.3-7B (Sheet 17 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	16	93.9	70.0	9.2	2332	7	29.26
	17	93.0	69.1	9.2	1123	7	29.26
	18	90.0	68.0	3.4	126	5	29.27
	19	86.0	66.9	0.0	0	7	29.29
	20	84.9	70.0	0.0	0	6	29.30
	21	82.9	70.0	3.4	0	5	29.29
	22	79.0	70.0	0.0	0	2	29.32
	23	81.0	71.1	7.6	0	4	29.35
9/20/90	0	80.1	71.1	4.3	0	9	29.35
	1	75.9	72.0	0.0	0	10	29.34
	2	75.9	72.0	0.0	0	9	29.34
	3	75.9	72.0	0.0	0	6	29.34
	4	75.0	71.1	3.4	0	7	29.34
	5	75.0	71.1	0.0	0	9	29.34
	6	73.9	71.1	0.0	0	9	29.35
	7	75.0	71.1	2.5	120	10	29.35
	8	77.0	72.0	2.5	689	10	29.35
	9	80.1	72.0	0.0	1302	10	29.36
	10	82.0	73.0	7.6	1820	10	29.36
	11	84.9	72.0	9.2	2186	10	29.35
	12	87.1	73.0	9.2	2366	10	29.34
	13	88.0	72.0	9.2	2345	10	29.32
	14	88.0	69.1	9.2	2126	10	29.30
	15	91.0	69.1	10.1	1726	10	29.27
	16	73.0	70.0	7.6	1182	10	29.31
	17	73.0	71.1	0.0	561	10	29.26
	18	75.0	72.0	0.0	46	10	29.27
	19	75.0	71.1	0.0	0	10	29.28
	20	75.0	72.0	0.0	0	10	29.30
	21	75.9	72.0	0.0	0	10	29.31
	22	75.0	71.1	0.0	0	8	29.31
	23	75.0	72.0	0.0	0	8	29.32
9/21/90	0	77.0	72.0	0.0	0	8	29.30
	1	75.0	72.0	0.0	0	6	29.31
	2	75.0	73.0	0.0	0	4	29.32
	3	75.9	73.0	0.0	0	9	29.32
	4	75.9	73.9	0.0	0	9	29.33

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CPSES/FSAR

TABLE 2.3-7B (Sheet 18 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	5	75.9	73.9	4.9	0	6	29.33
	6	75.9	73.9	4.9	0	9	29.33
	7	77.0	73.9	7.6	225	7	29.33
	8	79.0	75.0	10.1	1137	8	29.34
	9	82.0	73.9	10.1	2158	8	29.34
	10	82.9	73.9	11.6	2450	9	29.34
	11	84.0	73.9	10.7	2175	10	29.36
	12	82.9	73.0	7.6	2354	10	29.36
	13	82.9	73.0	0.0	2333	10	29.34
	14	82.0	71.1	7.6	2112	10	29.34
	15	82.0	71.1	7.6	1711	10	29.33
	16	82.0	71.1	4.9	1167	10	29.32
	17	81.0	70.0	7.6	547	10	29.33
	18	78.1	70.0	8.3	40	10	29.34
	19	75.9	71.1	4.3	0	10	29.34
	20	75.0	71.1	0.0	0	10	29.35
	21	75.0	71.1	0.0	0	10	29.37
	22	73.9	71.1	4.3	0	10	29.39
	23	75.9	73.0	0.0	0	10	29.39
9/22/90	0	73.0	71.1	0.0	0	8	29.40
	1	73.9	72.0	3.4	0	10	29.40
	2	73.9	72.0	0.0	0	10	29.40
	3	73.9	73.0	3.4	0	10	29.40
	4	73.9	73.0	4.3	0	10	29.41
	5	73.9	71.1	8.3	0	10	29.42
	6	73.9	71.1	6.7	0	10	29.43
	7	73.0	69.1	4.3	111	10	29.44
	8	73.9	68.0	6.7	912	9	29.46
	9	77.0	66.9	10.1	2502	7	29.47
	10	78.1	64.0	9.2	3507	7	29.48
	11	82.9	61.0	4.9	4738	6	29.48
	12	84.9	57.9	7.6	5127	6	29.48
	13	87.1	57.0	7.6	4517	7	29.46
	14	84.9	57.0	8.3	4085	7	29.45
	15	88.0	55.0	4.9	2829	8	29.44
	16	87.1	53.1	10.7	1151	10	29.43
	17	84.9	55.0	15.0	532	10	29.45

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CPSES/FSAR
TABLE 2.3-7B (Sheet 19 of 21)
OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	18	82.0	55.0	14.1	34	10	29.47
	19	80.1	57.0	0.0	0	10	29.47
	20	75.9	55.9	3.4	0	10	29.48
	21	73.0	57.0	0.0	0	10	29.50
	22	71.1	57.0	0.0	0	7	29.53
	23	70.0	57.0	0.0	0	7	29.54
9/23/90	0	68.0	59.0	0.0	0	7	29.55
	1	68.0	59.0	6.7	0	7	29.56
	2	70.0	55.0	6.7	0	8	29.58
	3	66.9	51.1	7.6	0	10	29.59
	4	66.0	48.0	10.1	0	5	29.61
	5	63.0	46.9	10.7	0	2	29.63
	6	62.1	46.0	11.6	0	1	29.65
	7	61.0	43.0	10.7	303	1	29.67
	8	62.1	42.1	15.0	1892	1	29.69
	9	64.9	37.9	14.1	3551	2	29.71
	10	66.9	37.9	14.1	5086	1	29.71
	11	69.1	37.9	10.7	6115	1	29.70
	12	71.1	37.0	14.1	6616	1	29.69
	13	72.0	37.0	11.6	6590	0	29.67
	14	73.0	37.9	13.4	5954	0	29.65
	15	75.0	37.0	11.6	4802	0	29.62
	16	73.9	37.9	13.4	3222	1	29.60
	17	73.0	37.9	10.7	1439	2	29.59
	18	70.0	37.9	8.3	75	3	29.60
	19	63.0	39.9	6.7	0	2	29.59
	20	59.0	42.1	4.3	0	3	29.60
	21	61.0	42.1	4.9	0	4	29.61
	22	57.9	44.1	4.3	0	10	29.62
	23	55.0	44.1	3.4	0	9	29.61
9/24/90	0	55.9	44.1	4.9	0	10	29.60
	1	57.0	42.1	4.3	0	10	29.60
	2	55.9	43.0	0.0	0	10	29.60
	3	54.0	43.0	3.4	0	9	29.60
	4	54.0	43.0	0.0	0	8	29.60
	5	55.0	43.0	4.3	0	9	29.60
	6	54.0	44.1	3.4	0	8	29.60

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CPSES/FSAR

TABLE 2.3-7B (Sheet 20 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	7	57.0	46.0	0.0	171	8	29.62
	8	60.1	46.0	0.0	1099	8	29.62
	9	64.9	44.1	6.7	2115	8	29.62
	10	66.9	37.9	4.9	2973	8	29.62
	11	70.0	39.9	4.9	4174	7	29.60
	12	72.0	39.9	4.9	3869	8	29.58
	13	75.0	39.9	9.2	5020	6	29.55
	14	77.0	37.9	4.9	3453	8	29.52
	15	75.0	41.0	7.6	2253	9	29.50
	16	73.0	39.9	8.3	1120	10	29.48
	17	73.0	37.9	3.4	503	10	29.47
	18	72.0	41.0	3.4	31	9	29.46
	19	69.1	45.0	3.4	0	10	29.45
	20	68.0	45.0	3.4	0	8	29.45
	21	66.9	46.0	4.3	0	8	29.44
	22	66.9	46.9	4.3	0	10	29.44
	23	68.0	46.9	4.3	0	10	29.44
9/25/90	0	66.9	48.0	4.9	0	8	29.42
	1	64.0	46.9	6.7	0	3	29.41
	2	61.0	48.9	4.9	0	2	29.41
	3	61.0	48.9	6.7	0	1	29.40
	4	62.1	48.9	7.6	0	1	29.40
	5	62.1	50.0	7.6	0	7	29.41
	6	61.0	50.0	7.6	0	4	29.40
	7	62.1	51.1	6.7	277	1	29.40
	8	66.9	50.0	13.4	1861	0	29.40
	9	72.0	51.1	8.3	3596	0	29.41
	10	75.9	50.0	8.3	5064	0	29.40
	11	81.0	50.0	8.3	6094	0	29.39
	12	82.9	51.1	10.1	6591	0	29.37
	13	84.0	53.1	8.3	6515	0	29.35
	14	84.9	54.0	8.3	5871	0	29.33
	15	86.0	55.9	6.7	4714	0	29.31
	16	86.0	55.9	7.6	3154	0	29.29
	17	86.0	55.0	7.6	1395	0	29.29
	18	82.9	54.0	8.3	53	0	29.29
	19	77.0	55.9	4.3	0	0	29.29

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TABLE 2.3-7B (Sheet 21 of 21)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK THERMAL PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	20	77.0	55.9	8.3	0	0	29.30
	21	72.0	55.9	6.7	0	0	29.31
	22	71.1	57.0	8.3	0	0	29.32
	23	69.1	57.0	7.6	0	0	29.33

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TABLE 2.3-7C (Sheet 1 of 9)
OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE
HEAT SINK WATER SUPPLY PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
6/25/80	0	87.1	69.1	9.2	0	0	29.22
	3	84.0	73.0	10.1	0	0	29.22
	6	79.0	73.0	4.3	173	0	29.28
	9	91.9	73.9	9.2	4984	0	29.32
	12	100.9	72.0	13.4	7959	0	29.31
	15	108.0	66.0	10.1	6546	0	29.28
	18	105.1	64.0	9.2	1773	0	29.26
	21	93.0	61.0	9.2	0	0	29.27
6/26/80	0	84.0	64.0	6.7	0	0	29.29
	3	82.0	68.0	7.6	0	0	29.28
	6	81.0	66.9	9.2	168	1	29.29
	9	97.0	70.0	10.1	4976	0	29.32
	12	106.0	66.9	6.7	7956	0	29.32
	15	111.9	50.1	7.6	6548	0	29.28
	18	108.0	57.0	8.3	1776	0	29.27
	21	96.1	61.0	7.6	0	0	29.2[illegible]
6/27/80	0	90.0	64.9	8.3	0	0	29.28
	3	86.0	66.0	8.3	0	0	29.27
	6	82.9	66.0	6.7	160	2	29.27
	9	98.1	66.9	7.6	4968	0	29.29
	12	108.0	64.9	4.9	7953	0	29.28
	15	111.9	64.0	7.6	6550	0	29.22
	18	109.0	62.1	10.7	1778	0	29.18
	21	97.0	63.0	8.3	0	0	29.21
6/28/80	0	91.0	66.0	10.7	0	0	29.23
	3	86.0	70.0	10.1	0	0	29.20
	6	82.0	70.0	6.7	159	0	29.23
	9	93.0	71.1	10.7	4960	0	29.27
	12	102.9	69.1	9.2	7950	0	29.26
	15	109.9	66.0	8.3	6551	0	29.22
	18	107.1	64.0	10.7	1780	0	29.19
	21	93.9	64.0	10.1	0	0	29.23
6/29/80	0	89.1	69.1	11.6	0	0	29.26
	3	84.0	69.1	10.7	0	0	29.24
	6	79.0	71.1	4.9	138	4	29.29
	9	91.0	71.1	6.7	4661	3	29.34
	12	100.0	68.0	7.6	7740	2	29.34

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CPSES/FSAR

TABLE 2.3-7C (Sheet 2 of 9)

OFFSIT. METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK WATER SUPPLY PERFORMANCE EVALUAT.ON

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	15	106.0	64.9	7.6	6510	1	29.29
	18	105.1	59.0	10.1	1781	0	29.27
	21	91.0	63.0	6.7	0	0	29.30
6/30/80	0	88.0	64.9	9.?	0	0	29.33
	3	82.0	68.^	4.9	0	0	29.35
	6	79.0	69.1	4.9	140	3	29.36
	9	91.0	70.0	10.7	4942	0	29.40
	12	102.0	66.0	10.7	7944	0	29.38
	15	106.0	62.1	6.7	6511	1	29.33
	18	104.0	61.0	9.2	1782	0	29.29
	21	91.9	64.0	7.6	0	0	29.31
7/1/80	0	87.1	66.9	7.6	0	0	29.32
	3	84.0	72.0	8.3	0	0	29.32
	6	81.0	72.0	6.7	144	0	29.35
	9	93.9	71.1	10.1	4933	0	29.39
	12	104.0	64.9	11.6	7941	0	29.36
	15	109.0	62.1	7.6	6554	0	29.30
	18	105.1	63.0	10.1	1783	0	29.28
	21	95.0	64.9	7.6	0	0	29.30
7/2/80	0	89.1	66.9	8.3	0	0	29.35
	3	86.0	69.1	8.3	0	0	29.34
	6	81.0	69.1	6.7	139	0	29.37
	9	95.0	68.0	7.6	4924	0	29.40
	12	106.0	66.9	9.2	7937	0	29.39
	15	109.9	61.0	7.6	6554	0	29.32
	18	106.0	57.9	10.7	1783	0	29.29
	21	95.0	64.0	10.7	0	0	29.33
7/3/80	0	86.0	63.0	4.9	0	0	29.31
	3	75.9	61.0	0.0	0	0	29.31
	6	80.1	64.9	7.6	133	0	29.36
	9	93.0	66.9	6.7	4915	0	29.37
	12	102.0	64.9	6.7	7933	0	2^.35
	15	109.0	59.0	9.2	6554	0	29.29
	18	104.0	61.0	10.1	1781	0	29.28
	21	95.0	69.1	10.1	0	0	29.30
7/4/80	0	88.0	70.0	4.3	0	0	29.34
	3	86.0	71.1	9.2	0	5	29.33

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CPSES/FSAR

TABLE 2.3-7C (Sheet 3 of 9)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK WATER SUPPLY PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	6	82.0	68.0	8.3	126	1	29.36
	9	91.9	68.0	7.6	4905	0	29.39
	12	99.0	66.9	4.9	7929	0	29.38
	15	102.9	64.0	9.2	6554	0	29.33
	18	100.0	64.0	6.7	1781	0	29.31
	21	91.0	64.0	6.7	0	0	29.34
7/5/80	0	84.9	64.9	4.9	0	0	29.37
	3	82.9	66.0	9.2	0	0	29.36
	6	79.0	69.1	6.7	122	0	29.41
	9	90.0	71.1	8.3	4896	0	29.44
	12	97.0	66.0	9.2	7925	0	29.43
	15	100.9	64.9	9.2	6554	0	29.36
	18	100.9	60.1	8.3	1778	0	29.33
	21	91.0	68.0	8.3	0	0	29.36
7/6/80	0	87.1	66.9	4.3	0	0	29.39
	3	82.9	69.1	4.9	0	0	29.39
	6	81.0	70.0	4.9	117	0	29.43
	9	91.0	69.1	8.3	4886	0	29.46
	12	97.0	68.0	9.2	6634	5	29.45
	15	104.0	66.0	10.1	5871	4	29.39
	18	100.0	64.0	9.2	1776	0	29.35
	21	91.0	66.0	6.7	0	0	29.37
7/7/80	0	86.0	66.0	4.3	0	0	29.40
	3	82.0	66.9	4.9	0	0	29.40
	6	82.0	70.0	7.6	110	0	29.42
	9	91.9	69.1	13.4	4876	0	29.47
	12	100.0	68.0	4.3	7866	1	29.46
	15	102.0	68.0	9.2	5871	4	29.40
	18	100.0	66.0	10.1	1727	2	29.35
	21	91.9	69.1	7.6	0	1	29.35
7/8/80	0	89.1	69.1	6.7	0	0	29.40
	3	84.9	70.0	6.7	0	0	29.43
	6	81.0	70.0	4.3	102	2	29.44
	9	90.0	71.1	7.6	4359	4	29.44
	12	100.9	68.0	13.4	7091	4	29.44
	15	105.1	64.9	10.7	6507	1	29.38
	18	100.9	64.0	10.7	1769	0	29.34

CPSES/FSAR

TABLE 2.3-7C (Sheet 4 of 9)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK WATER SUPPLY PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	21	91.9	64.0	4.3	0	0	29.36
7/9/80	0	87.1	66.0	6.7	0	0	29.38
	3	80.1	64.9	4.3	0	0	29.38
	6	79.0	66.0	6.7	99	0	29.42
	9	95.0	68.0	7.6	4855	0	29.44
	12	100.9	66.0	4.9	7703	2	29.43
	15	105.1	61.0	7.6	6378	2	29.36
	18	102.0	61.0	6.7	1478	5	29.33
	21	93.0	62.1	8.3	0	2	29.36
7/10/80	0	86.0	63.0	4.3	0	5	29.40
	3	80.1	63.0	4.3	0	0	29.39
	6	80.1	68.0	6.7	94	0	29.41
	9	93.9	70.0	9.2	4813	1	29.46
	12	100.0	66.0	6.7	7442	3	29.43
	15	102.0	62.1	3.4	6503	1	29.37
	18	102.0	61.0	4.3	1759	0	29.33
	21	91.9	63.0	6.7	0	0	29.36
7/11/80	0	87.1	63.0	4.9	0	0	29.37
	3	80.1	64.0	4.3	0	0	29.36
	6	79.0	66.9	4.9	88	0	29.39
	9	95.0	69.1	9.2	4834	0	29.41
	12	102.0	64.0	9.2	7695	2	29.38
	15	105.1	61.0	9.2	6500	1	29.32
	18	102.0	61.0	8.3	1754	0	29.28
	21	95.0	63.0	6.7	0	0	29.30
7/12/80	0	89.1	64.9	4.9	0	0	29.33
	3	84.0	64.9	9.2	0	0	29.32
	6	80.1	64.9	4.3	74	4	29.37
	9	93.9	69.1	8.3	4823	0	29.40
	12	100.9	64.9	6.7	7895	0	29.37
	15	106.0	64.0	10.7	6539	0	29.31
	18	102.9	61.0	8.3	1748	0	29.28
	21	90.0	59.0	4.3	0	0	29.29
7/13/80	0	84.0	61.0	4.3	0	0	29.32
	3	82.9	66.0	9.2	0	0	29.34
	6	79.0	66.0	4.9	77	0	29.36
	9	91.9	64.9	9.2	4812	0	29.40

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CPSES/FSAR

TABLE 2.3-7C (Sheet 5 of 9)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK WATER SUPPLY PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	12	100.0	63.0	10.1	7890	0	29.39
	15	106.0	57.9	10.7	6536	0	29.31
	18	104.0	57.0	9.2	1741	0	29.28
	21	91.0	57.0	4.9	0	0	29.30
7/14/80	0	82.0	62.1	4.3	0	0	29.33
	3	84.9	64.9	6.7	0	0	29.35
	6	80.1	66.0	9.2	72	0	29.37
	9	91.9	66.0	10.1	4801	0	29.40
	12	102.9	61.0	13.4	7885	0	29.39
	15	107.1	59.0	9.2	6532	0	29.33
	18	102.9	62.1	10.1	1733	0	29.31
	21	93.0	64.9	7.6	0	0	29.33
7/15/80	0	88.0	64.9	4.9	0	0	29.35
	3	84.9	68.0	7.6	0	0	29.37
	6	82.0	69.1	9.2	65	2	29.40
	9	91.0	69.1	9.2	4790	0	29.42
	12	100.0	68.0	9.2	7880	0	29.40
	15	106.0	63.0	13.4	6528	0	29.34
	18	102.0	61.0	11.6	1725	0	29.30
	21	91.9	62.1	6.7	0	0	29.32
7/16/80	0	88.0	63.0	6.7	0	0	29.34
	3	84.9	64.9	10.1	0	0	29.35
	6	80.1	66.9	4.9	62	0	29.36
	9	91.9	69.1	9.2	4778	0	29.38
	12	102.0	62.1	6.7	7874	0	29.37
	15	108.0	53.1	6.7	6522	0	29.30
	18	106.0	48.9	4.3	1716	0	29.25
	21	90.0	52.0	6.7	0	0	29.26
7/17/80	0	86.0	53.1	0.0	0	0	29.31
	3	80.1	55.0	4.9	0	0	29.29
	6	81.0	59.0	6.7	43	6	29.31
	9	95.0	57.0	6.7	2784	8	29.34
	12	104.0	55.0	9.2	4595	8	29.32
	15	108.0	54.0	6.7	4442	7	29.27
	18	106.0	53.1	6.7	1607	3	29.22
	21	95.0	54.0	6.7	0	0	29.25
7/18/80	0	86.0	57.0	4.9	0	0	29.27

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CPSES/FSAR

TABLE 2.3-7C (Sheet 6 of 9)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK WATER SUPPLY PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	3	81.0	57.0	4.9	0	0	29.26
	6	81.0	57.9	6.7	52	0	29.29
	9	95.0	61.0	9.2	4756	0	29.31
	12	104.0	60.1	3.4	7862	0	29.31
	15	109.0	59.0	10.1	5834	4	29.27
	18	105.1	57.9	8.3	1685	1	29.23
	21	95.0	59.0	6.7	0	0	29.28
7/19/80	0	89.1	60.1	4.3	0	0	29.31
	3	86.0	62.1	6.7	0	0	29.33
	6	84.0	64.0	4.3	47	0	29.35
	9	91.9	66.9	8.3	4744	0	29.38
	12	100.9	64.0	6.7	7856	0	29.36
	15	102.0	63.0	9.2	6463	1	29.31
	18	100.0	60.1	8.3	1685	0	29.28
	21	91.0	60.1	4.3	0	0	29.28
7/20/80	0	88.0	63.0	4.3	0	0	29.30
	3	82.0	62.1	4.3	0	0	29.30
	6	81.0	64.9	4.3	43	0	29.31
	9	89.1	66.0	4.3	4732	0	29.33
	12	98.1	64.0	8.3	7391	3	29.31
	15	102.9	63.0	4.3	5823	4	29.26
	18	100.9	60.1	4.9	1631	2	29.24
	21	90.0	60.1	3.4	0	1	29.27
7/21/80	0	86.0	63.0	2.5	0	4	29.29
	3	82.0	64.0	2.5	0	4	29.29
	6	80.1	64.9	2.5	37	2	29.31
	9	93.0	66.9	4.9	3953	5	29.36
	12	100.9	63.0	10.7	6569	5	29.32
	15	91.0	69.1	6.7	4423	7	29.29
	18	93.0	64.9	0.0	582	10	29.28
	21	82.9	69.1	0.0	0	9	29.31
7/22/80	0	82.9	68.0	4.3	0	5	29.33
	3	81.0	68.0	2.5	0	10	29.34
	6	78.1	68.0	3.4	20	8	29.37
	9	86.0	70.0	4.9	2749	8	29.40
	12	97.0	68.0	9.2	6564	5	29.38
	15	102.0	62.1	11.6	5430	5	29.30

CPSES/FSAR

TABLE 2.3-7C (Sheet 7 of 9)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK WATER SUPPLY PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	18	100.0	59.0	7.6	1606	2	29.28
	21	87.1	54.0	0.0	0	0	29.33
7/23/80	0	82.0	54.0	4.3	0	0	29.35
	3	75.9	53.1	6.7	0	0	29.33
	6	73.9	53.1	7.6	30	0	29.34
	9	87.1	55.0	4.3	4696	0	29.36
	12	97.0	43.0	10.7	7830	0	29.34
	15	102.9	46.0	13.4	6475	0	29.28
	18	100.0	53.1	9.2	1635	0	29.24
	21	89.1	59.0	6.7	0	0	29.27
7/24/80	0	81.0	57.9	0.0	0	0	29.29
	3	75.0	55.9	3.4	0	0	29.28
	6	73.0	59.0	4.3	27	1	29.30
	9	88.0	61.0	10.1	4410	3	29.34
	12	95.0	57.0	10.7	7772	1	29.32
	15	100.0	53.1	10.7	6424	1	29.28
	18	97.0	51.1	8.3	1611	1	29.26
	21	89.1	51.1	4.9	0	0	29.28
7/25/80	0	79.0	55.0	2.5	0	0	29.30
	3	77.0	57.9	0.0	0	0	29.29
	6	77.0	62.1	2.5	22	3	29.31
	9	91.0	66.0	10.7	4550	2	29.35
	12	100.0	64.9	4.9	6545	5	29.33
	15	104.0	63.0	10.7	5785	4	29.28
	18	100.0	57.9	7.6	1564	2	29.26
	21	91.9	57.9	4.9	0	0	29.28
7/26/80	0	87.1	60.1	4.9	0	0	29.29
	3	84.9	64.9	7.6	0	0	29.29
	6	81.0	66.0	6.7	21	1	29.31
	9	91.0	66.9	7.6	4659	0	29.32
	12	100.9	63.0	7.6	7807	0	29.29
	15	105.1	60.1	9.2	3765	8	29.23
	18	88.0	66.9	4.9	557	10	29.22
	21	84.0	66.9	3.4	0	3	29.23
7/27/80	0	82.0	64.0	2.5	0	0	29.25
	3	80.1	64.0	0.0	0	6	29.26
	6	80.1	66.9	2.5	8	9	29.27

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CPSES/FSAR

TABLE 2.3-7C (Sheet 8 of 9)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK WATER SUPPLY PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
	9	88.0	70.0	6.7	2714	8	29.28
	12	97.0	70.0	4.3	6989	4	29.27
	15	88.0	71.1	4.9	4387	7	29.20
	18	86.0	71.1	9.2	1073	7	29.22
	21	75.9	66.9	2.5	0	10	29.27
7/28/80	0	75.0	68.0	6.7	0	5	29.30
	3	73.0	68.0	2.5	0	2	29.28
	6	73.0	66.9	0.0	14	0	29.30
	9	82.9	70.0	3.4	4634	0	29.33
	12	95.0	71.1	3.4	7740	1	29.32
	15	100.9	61.0	6.7	6384	1	29.28
	18	99.0	55.9	8.3	1466	3	29.28
	21	86.0	59.0	0.0	0	0	29.30
7/29/80	0	82.0	66.9	7.6	0	0	29.32
	3	75.0	66.9	2.5	0	0	29.33
	6	72.0	64.9	2.5	12	0	29.36
	9	88.0	69.1	2.5	4621	0	29.40
	12	98.1	57.0	6.7	7783	0	29.39
	15	102.0	57.0	9.2	6414	0	29.35
	18	99.0	57.9	7.6	1540	0	29.32
	21	84.9	60.1	4.3	0	0	29.33
7/30/80	0	80.1	61.0	4.3	0	0	29.36
	3	77.0	63.0	6.7	0	0	29.35
	6	77.0	66.0	7.6	10	0	29.37
	9	90.0	68.0	7.6	4608	0	29.39
	12	100.9	61.0	8.3	7774	0	29.37
	15	105.1	57.9	7.6	6402	0	29.30
	18	102.0	55.0	9.2	1521	0	29.28
	21	91.9	61.0	10.1	0	0	29.31
7/31/80	0	87.1	59.0	7.6	0	0	29.36
	3	81.0	63.0	6.7	0	0	29.36
	6	80.1	66.0	6.7	8	0	29.39
	9	91.9	63.0	9.2	4595	0	29.42
	12	102.9	50.0	13.4	7765	0	29.40
	15	106.0	48.9	7.6	6389	0	29.35
	18	102.0	46.9	10.1	1502	0	29.32
	21	86.0	50.0	4.9	0	0	29.35

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CPSES/FSAR

TABLE 2.3-7C (Sheet 9 of 9)

OFFSITE METEOROLOGICAL DATA USED IN ULTIMATE HEAT SINK WATER SUPPLY PERFORMANCE EVALUATION

date	hour	air temp, F	dewpoint temp, F	windspeed, mph	solar radiation, Btu ft^{-2} day^{-1}	cloud cover, tenths	pressure, in Hg
8/1/80	0	80.1	57.0	4.9	0	0	29.38
	3	72.0	57.0	4.9	0	0	29.37
	6	75.9	59.0	4.9	7	0	29.39
	9	90.0	61.0	4.9	4581	0	29.43
	12	100.0	54.0	9.2	7756	0	29.40
	15	102.9	51.1	6.7	6375	0	29.33
	18	100.9	48.9	8.3	1473	1	29.28
	21	86.0	53.1	4.9	0	0	29.29
8/2/80	0	82.0	57.9	4.9	0	0	29.30
	3	78.1	55.9	4.9	0	0	29.28
	6	75.0	59.0	8.3	5	0	29.31
	9	90.0	66.0	13.4	4568	0	29.30
	12	99.0	63.0	11.6	7746	0	29.27
	15	104.0	57.0	13.4	6321	1	29.20
	18	102.0	57.9	10.7	1452	1	29.16
	21	93.9	60.1	8.3	0	0	29.17

DRAFT

The Squaw Creek watershed is underlain by sedimentary rocks of lower Cretaceous age (poorly cemented sandstone, limestone and shale) which dip gently to the east. The topography is influenced by the underlying geology, generally with steeper slopes in the limestone areas than in the shale and sandstone areas. Landforms are gently to steeply rolling. In the lower reaches of Squaw Creek, a small flood plain has developed.

Topographic maps prepared by the U.S. Geological Survey show a number of small man-made ponds in the catchment, some of which are in creek channels and others which are off-channel. The total volume of the on-channel and off-channel storage in these ponds has been estimated to be about 1150 acre-feet. There are three retaining ponds in the catchment for the purpose of mitigating oil spills. See FSAR Section 2.2.3.2.3. Other than these small ponds, there are no known control structures, weirs, or canals. DRAFT

Tolar, with a 1970 population of 312 [2], is the only community in the catchment. The remainder of the catchment is largely ranchland with some cultivated areas.

2.4.1.2.3 Paluxy River

The Paluxy River basin is hydrologically similar to that of Squaw Creek and is used as a basis for developing hydrologic parameters for Squaw Creek and its subcatchments since Squaw Creek is ungaged. At gaging station 8-0915, near Glen Rose, the Paluxy River has a catchment of 410 square miles [1].

The Paluxy watershed also is underlain by sedimentary rocks of lower Cretaceous age (poorly cemented sandstone, limestone and shale) which dip gently to the east. The topography, governed somewhat by the geology, is generally stair-stepped in limestone areas and gently rolling in sandstone and shale areas.

There are no known control structures on the Paluxy River.

In the event that other dams are constructed between Morris Sheppard Dam and DeCordova Bend Dam, their presence should in no way endanger the safety of the CPSES, even in the case of a domino-type failure.

In the event that Bee Mountain Dam is constructed, with a full elevation of 609 feet, the same flood event could conceivably reach the downstream toe of Squaw Creek Dam, but still would offer little threat to its safety as the depth of contact would be minimal and the time of contact short.

2.4.4.3.5 Consideration of Antecedent Flow

In the preceding description of analyses, river channels have been assumed to be dry. Inclusion of water in the river (antecedent flow) would not have a significant effect on the results of the dam break analyses. For example, the 25-year flood on the Brazos River would contribute only about 90,000 cfs (refer to Figure 2.4-13), which is only 3.2 percent of the theoretical flow from the dam breaks.

2.4.4.4 Water Level at CPSES

The Station site can in no way be endangered by any dam breaks or series of dam breaks, as it is over 110 feet above postulated maximum water levels.

2.4.5 PROBABLE MAXIMUM SURGE AND SEICHE FLOODING

2.4.5.1 Probable Maximum Winds and Associated Meteorological Parameters

The probable maximum sustained over-land wind selected for evaluation of wave action of the maximum operated reservoir elevation is 81 mph. The wind has an estimated return period of 200 years [23].

Squaw Creek and progressing through the channel to the stilling basin. Velocities ranged from 16.2 fps in the lower reach of the channel to five fps just below the stilling basin. The termination of the rip-rap at the end of the discharge channel was designed based on the possibility that future stream bed degradation in Squaw Creek could cause critical depth of flow at the end of the rip-rap lining with a corresponding local flow velocity of 18.5 fps. Rip-rap bedding beneath the stone layer was designed as a filter to prevent migration of soil or bedding material through the slope protection layer. The bottom of the channel is sound limestone and did not require rip-rap protecti.

2.4.8.2.2 Safe Shutdown Impoundment (SSI)

DRAFT

A portion of the arm of the reservoir that is formed by the channel of Panther Branch is utilized as a Safe Shutdown Impoundment, holding water for normal and emergency cooling use. The area and capacity characteristics of this cooling water pond are given in Tables 2.4-18 and 2.4.19. The secondary reservoir is separated from the main body of the reservoir by a rock-fill dam. An open channel was excavated through the narrow ridge to the southwest of the SSI Dam to connect the SSI with the main body of the reservoir. The floor of the channel is at elevation 769.5, six inches below the normal minimum operating level, and under normal operating conditions water will pass back and forth to keep the large and small reservoir surfaces at the same elevation. If the level in the main reservoir should drop due to some emergency, the SSI Dam will hold back between 284 acre-feet and 367 acre-feet of reserve water to allow continued cooling and safe shutdown of the plant.

DRAFT

Details of the SSI Dam embankment are shown in Figure 2.4-21. The middle zone is of select, impervious material, wetted and rolled and carried down to impervious foundation material for effective cut-off.

10 unit, and to maintain them both in a safe shutdown condition. The
available volume of water is determined during postulated 100-yr
drought conditions as specified by NRC Regulatory Guide 1.27 and after
24 a postulated 40 years of sedimentation. The minimum safety-related
cooling water flow required for the two units during accident
operation is 34,000 gpm, which represents the cooling water
requirements of 17,000 gpm for post-LOCA cooling of one unit and
17,000 gpm for safe shutdown of the other unit. Expected safety-
related cooling water flow is 51,000 gpm, which represents 17,000 gpm
for post-LOCA cooling of one unit and 34,000 gpm for safe shutdown of
the other unit. Plant water requirements for all modes of operation
10 are given on Figures 2.4-26, 2.4-27, 2.4-28, and 2.4-29.
Q371.16

Cooling water for both units is withdrawn from the SSI and delivered
by four 17,000-gpm-capacity station service water pumps enclosed in a
seismic Category I structure, the Service Water Intake Structure. The
Service Water Intake Structure sump descends to elevation 755 ft 0 in,
and the service water pump impeller blades descend to elevation 758 ft
40 0 in. Each pump is designed to operate with a minimum submergence
65 requirement of 4 feet - 6 inches. As a result, a minimum water
elevation of at least 762 ft 6 in is necessary for service water pump
DRAFT operation. The minimum water elevation, considering no makeup of
water and the most severe period for evaporation described in Section
2.3.1.2.10, is 765 ft 8 in. at 39 days post-accident. Therefore,
substantial margin for submergence is provided.

Cooling water is returned to the SSI through the Service Water Discharge Structure. Water from this structure enters the SSI at a point remote enough from the Service Water Intake Structure and at a velocity high enough to ensure adequate mixing, dispersion, and evaporative cooling of the effluent. The station service water pumps, Service Water Intake Structure, and Service Water Discharge Structure are described in Section 9.2.1.

The SSI is formed from an inlet of the Squaw Creek Reservoir (SCR) and is separated from the reservoir by a seismic Category I dam. The surface elevation of both bodies of water is a minimum 770 ft 0 in during normal operation. The seismic Category I dam, however, will maintain the SSI at a surface elevation of 769 ft 6 inches in the event of an accident involving water loss from the SCR. The ultimate Heat Sink is described in Section 9.2.5. 10

The SSI is constructed specifically to serve as the ultimate heat sink for the CPSES. Except for a backup source for auxiliary feedwater (Section 10.4.9.3), there are no other uses of this water during accident and safe shutdown operations. Water rights to the SSI are guaranteed by the Texas Water Rights Commission. For use of water near the plant site, see Subsection 2.4.13. DRAFT

2.4.11.6 Heat Sink Dependability Requirements

The source of plant cooling water for the CPSES is the SCR. This reservoir is formed by a dam structure extending across the Squaw Creek and creating a cooling water impoundment in the Squaw Creek Basin behind it (see Figure 2.4-4). The impoundment is normally supplied with makeup water from Lake Granbury. In addition, water is exchanged, as necessary, between Lake Granbury on the Brazos River and the SCR to reduce total dissolved solids levels.

The single source of safety-related cooling water is the SSI, which functions as the ultimate heat sink for the CPSES. The SSI is formed from an inlet of the SCR and separated from it by a seismic Category I dam. A canal connects the SSI with the SCR and maintains an equal water level between the two bodies of water. The seismic Category I dam and canal maintain the water level of the SSI at 769 ft 6 inches in the event of accidental water loss from the SCR. Waterflow through the canal will stop at this elevation. A simultaneous failure of both the SCR dam and the SSI Dam is considered unlikely since the SSI Dam is a seismic Category I structure.

Cooling water for normal plant operation is withdrawn from the SCR by eight 275,000-gpm-capacity circulating water pumps. Each pump is a 25-percent-capacity unit, and all pumps are located in the Circulating Water Intake Structure. Each pump has impeller blades which extend to elevation 758 ft 0 in and to a minimum submergence requirement of 12 ft. The circulating water pumps are not required for plant shutdown.

Cooling water is returned to the SCR via the Circulating Water Discharge Structure. The structure discharge is located at an adequate distance from the Circulating Water Intake Structure to ensure sufficient water mixing and evaporative cooling.

Safety-related cooling water is withdrawn from the SSI by four
DRAFT 17,000-gpm-capacity service water pumps. All pumps are located in the Service Water Intake Structure, a seismic Category I building. Safety-related cooling water is returned to the SSI through the Service Water Discharge Structure. The discharge structure is located at a sufficient distance from the Service Water Intake Structure to ensure adequate water mixing and evaporative cooling.

The minimum water level of both the SCR and the SSI during normal plant operation is 770 ft 0 in. This water level is adequate for both circulating water pump and station service water pump operation.
10 During postulated 100-year drought conditions, and after 40 years of sedimentation, the SSI is determined to have 284 acre-ft of water.

10 Figures 2.4-26 through 2.4-29 describe cooling water requirements for the various modes of plant operation. Section 9.2.5 discusses design bases and safety functions of the SSI as the CPSES ultimate heat sink.

The anticipated loss from the SSI caused by evaporation is 92 acre- DRAFT
feet. The seepage and drift loss is negligible in comparison to the
evaporation losses. Instrumentation, which is read in the Control
Room, is provided to measure the SSI water level as shown on Figure
9.2-1. An alarm is provided in the Control Room for low SSI water
level and high differential level across the travelling screens. The 65
low level alarm is set at or above the normal low SSI water level as
desired by the operator as an aid for lake level management. The SSI
will be dredged as required.

The CPSES design of the SSI as the single ultimate heat sink complies with the intent of NRC Regulatory Guide 1.27 as discussed in Chapter 1, Appendix 1A(B).

The SSI is the source of fire protection storage tank emergency fill DRAFT
water. SSI level changes caused of the Fire Protection System are
insignificant since the system is used infrequently and for periods of
short duration. Refer to Section 9.5.1 for a description of the Fire DRAFT
Protection System.

Cooling water is withdrawn from the SSI at the Service Water Intake Structure. Elevations of intake structure pump deck and channel floor are established with due consideration for pump minimum submergence requirements and reservoir level fluctuations. For elevations and layouts of Service Water Intake Structure components, see Section 9.2. Plant water requirements for various modes of operation are given in Figure 2.4-26, 2.4-27, 2.4-28, and 2.4-29.

2.4.12 DISPERSION, DILUTION, AND TRAVEL TIME OF ACCIDENTAL RELEASES OF LIQUID EFFLUENTS IN SURFACE WATERS

2.4.12.1 Introduction

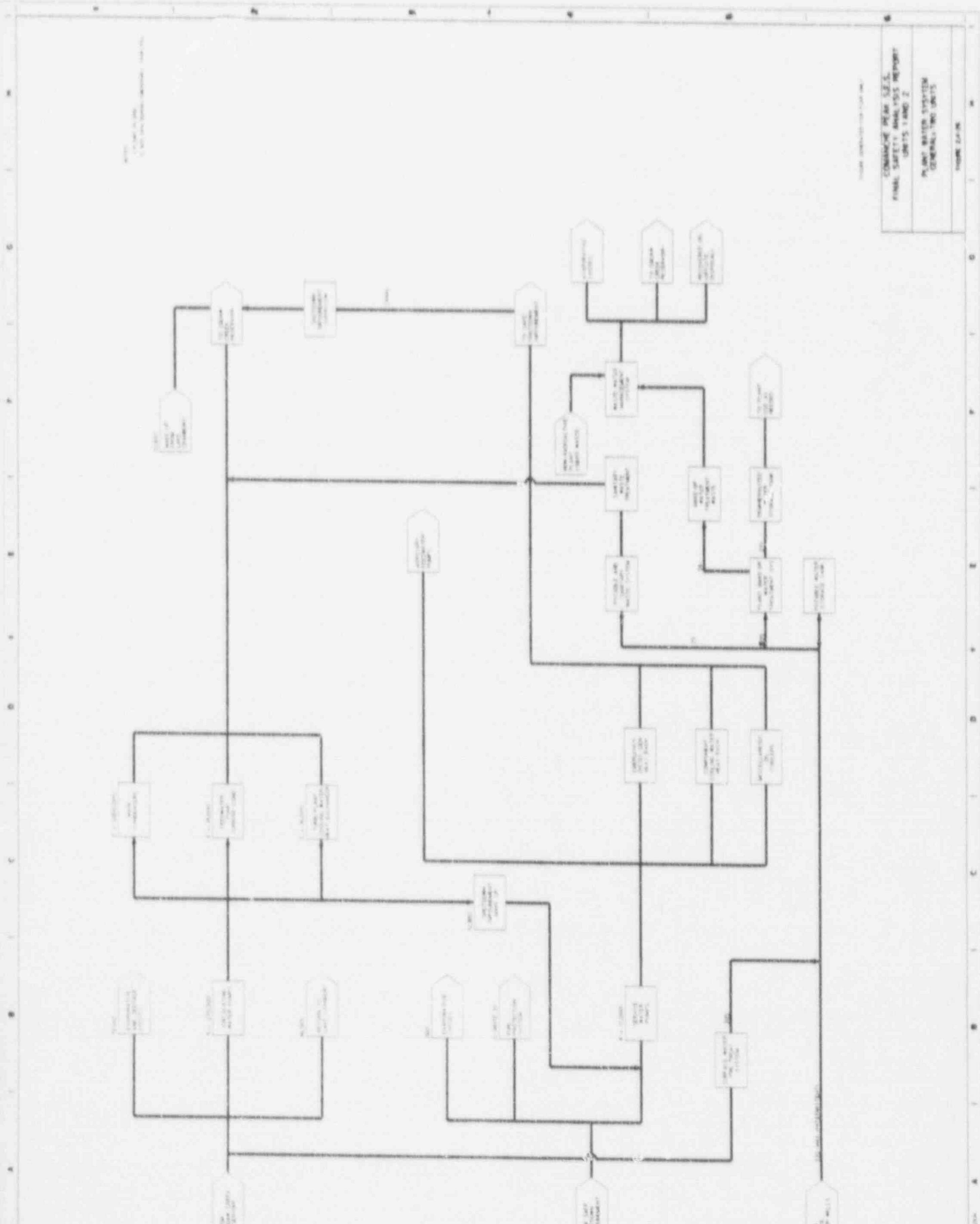
This section provides a conservative analysis of a postulated accidental release of radioactive material in surface waters adjacent

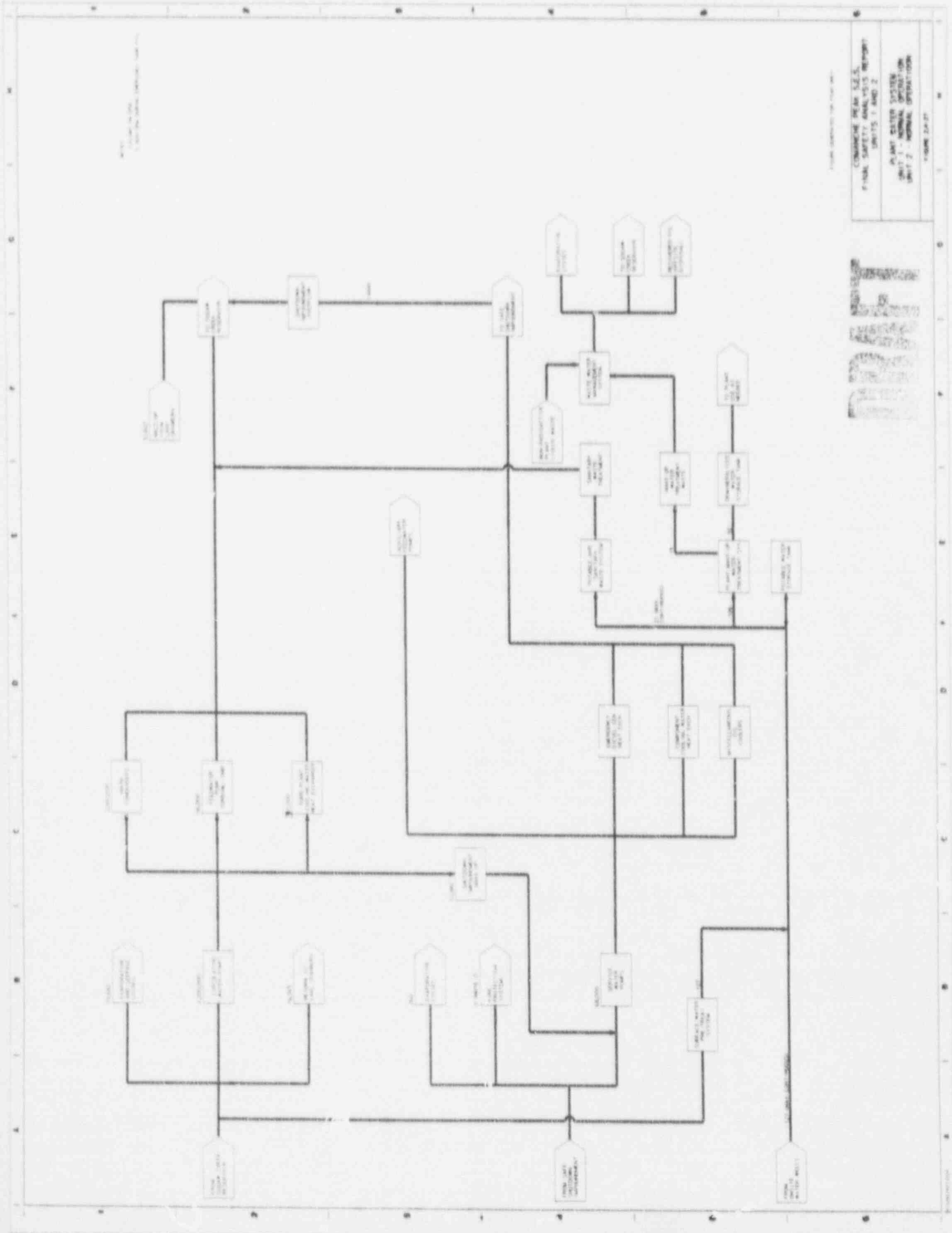
2.4.14 TECHNICAL SPECIFICATION AND EMERGENCY OPERATION REQUIREMENTS

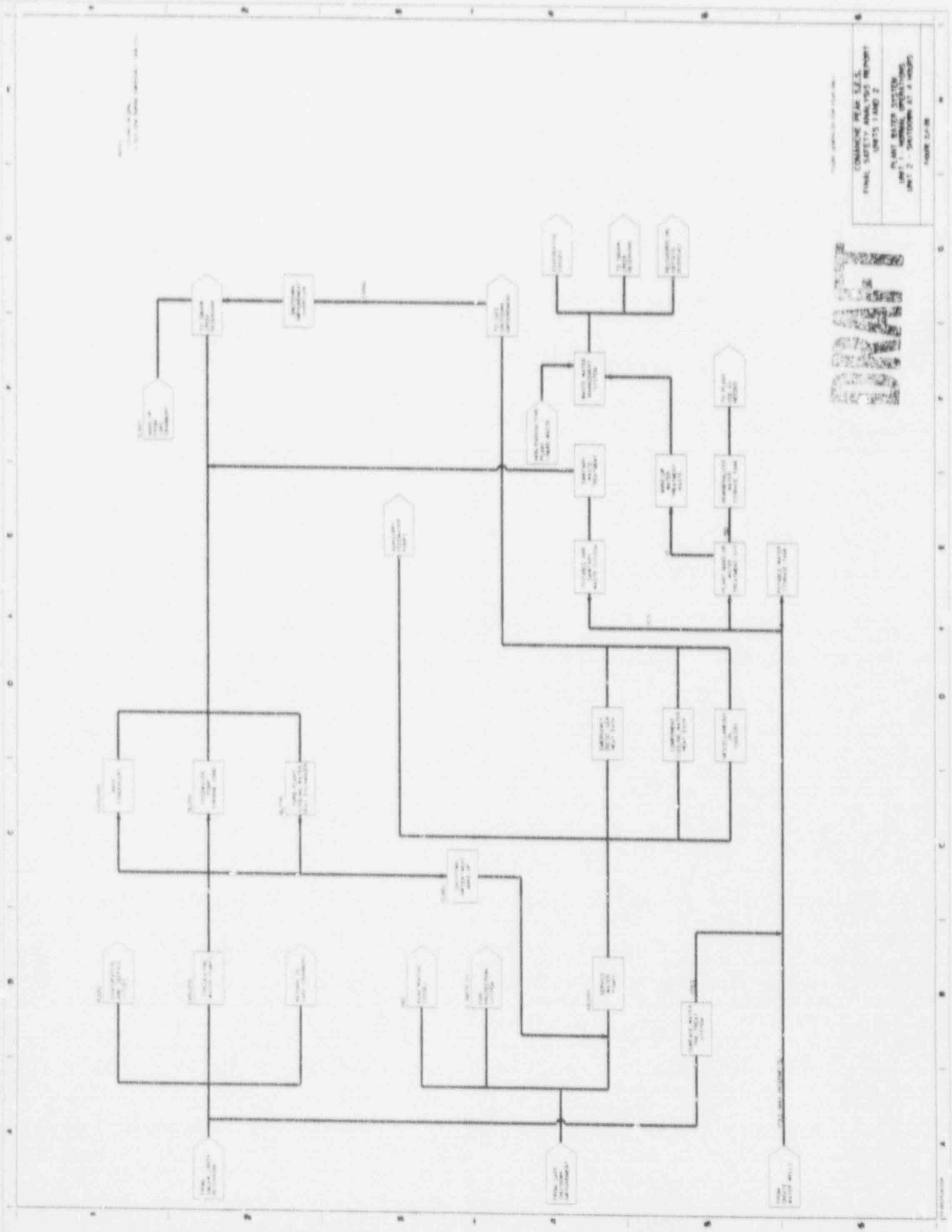
The most adverse hydrological conditions detailed in the preceding sections do not affect the operation of safety-related facilities. Emergency procedures are required, however, if Squaw Creek Reservoir elevation exceeds 778 feet to ensure that the Electrical and Control Building is not flooded via the Circulating Water System. See Section 13.5 for a discussion of these procedures. 33

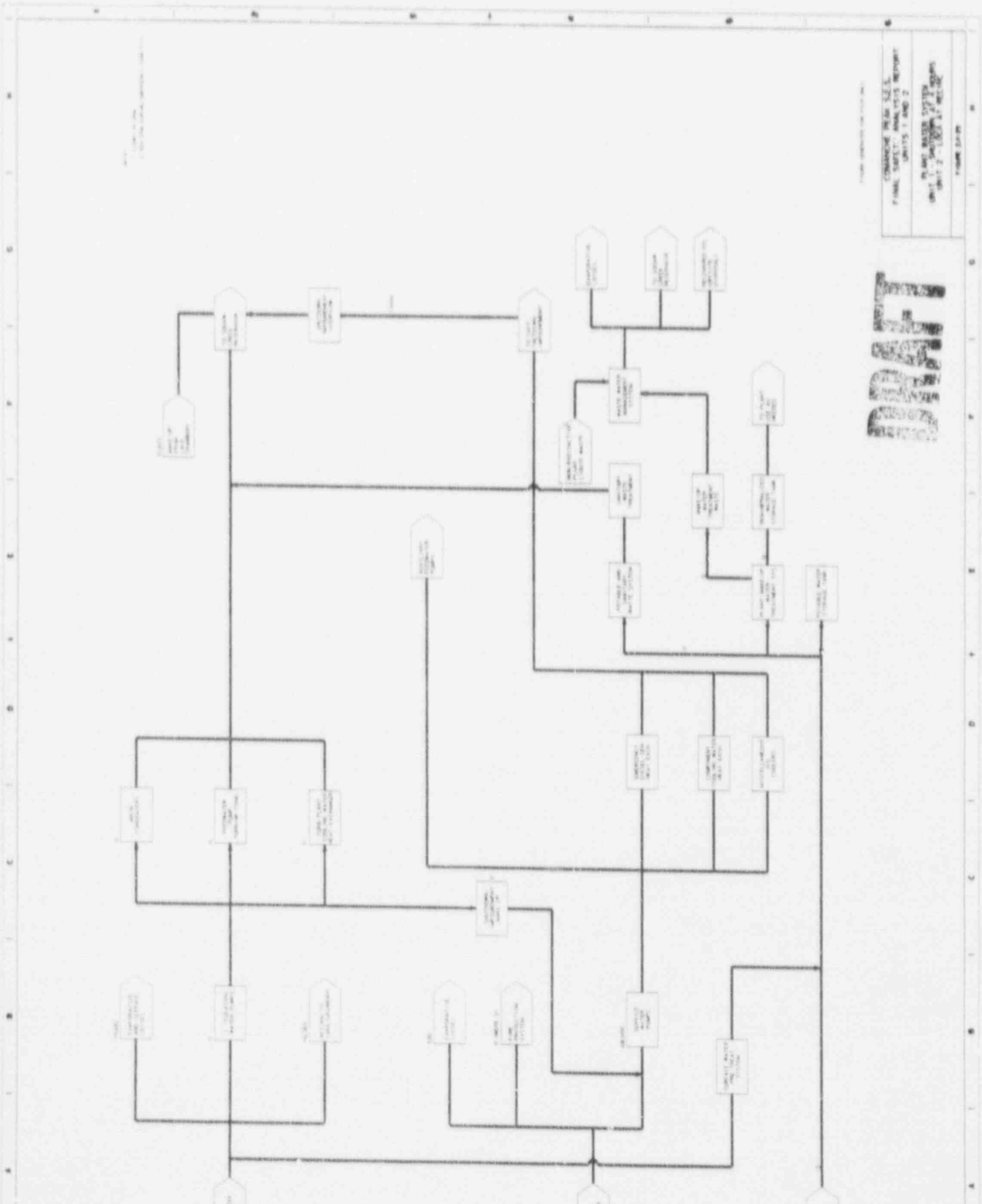
The maximum predicted normal SSI temperature for two unit full power operation is 102°F. Therefore, this is the initial condition assumed in the Station Service Water System (Section 9.2.1), Component Cooling Water System (Section 9.2.2), and Containment Heat Removal (Section 6.2.2) analyses and specified in the Technical Specifications. DRAFT

The lowest normal SSI elevation is 770 ft. 0 in. as described in Section 2.4.11.5. This elevation is the initial condition assumed in the ultimate heat sink analysis described in Section 9.2.5. DRAFT


COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 AND 2
PLANT WATER SYSTEM
GENERATING UNITS


COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 AND 2
UNIT 1 - NORMAL OPERATION
UNIT 2 - NORMAL OPERATION





phosphate, and copolymar is used in addition to the existing biocide treatments for this added corrosion protection. 78

Scale-forming tendencies are reduced as a result of the following:

1. Low water temperatures in the system (less than 110°F with a maximum of 135°F at the CCWS heat exchangers outlet for short periods during initial unit cooldown) DRAFT

2. High water velocities are used in the system piping design.

Periodic monitoring determines when scaling is affecting design tube cleanliness factors. Safety-related systems serviced by SSWS are provided with redundant components so that if scaling affects tube cleanliness factors units are taken out of service during shutdown periods and cleaned.

9.2.1.2.2 Normal Operation

Normal operation of one unit requires the operation of both pumps associated with Train A and Train B. Operation of both SSWS trains continuously is desirable for corrosion control. 66

To insure reliability, these two pumps are connected to two separate emergency diesel buses.

9.2.1.2.3 Normal Unit Shutdown

For normal cooldown of one unit, two trains are used. The two trains provide the CCWS heat exchangers with the cooling capacity required to meet the design cooldown rate. 69

9.2.5.3 Safety Evaluation

The heat rejection capabilities of the SSI are a function of meteorological conditions, the volume and surface area of the SSI and the location of structures. All three of these features can be represented by using a numerical, three-dimensional, time-varying hydrodynamic and transport model to simulate the performance of the SSI. DRAFT

An analysis of 39 years of offsite meteorological data showed that August 31, 1990 was the most severe period for ultimate heat sink performace, both for the 24 hour transient analysis and for peak SSI intake temperatures. These data are shown in Table 2.3-7B. Similarly, the period June 25, 1980 to July 25, 1980 was shown to be the most severe period of evaporative water loss. The meteorological data for this period is shown in Table 2.3-7C. See Section 2.3.1.2.10 for details. DRAFT

The hydrodynamic and transport model numerically solves the three-dimensional momentum, mass and constituent balance equations. The model requires a finite difference representation of the SSI bathymetry, locations and dimensions of the discharge and intake structures and of the equalization channel connecting the SSI with SCR. These data were generated from topographic and design drawings. DRAFT

Heat rates of the cooling water discharged onto the SSI are based on two safety trains in operation per unit, and are developed from the nuclear steam supply system (NSSS) manufacturer's functional requirements, design criteria for residual decay heat removal, and from balance-of-plant (BOP) heat load requirements. In generating equations for the spent fuel pool heat load, it was assumed that the DBA occurs in one unit during normal two unit operation 8 years after Unit 1 startup and after 1/3 core refuel of both units; specifically 150 hours after refueling of the second unit and 480 hours after refueling of the first unit. 68

The decay heat rate, however, is based on a reactor operating time of
68 16,000 hours for all regions. This results in a high heat input which reflects a conservative spent fuel pool heat loading in conjunction with a conservative containment spray and RHR heat loading.

1. Compliance with NRC Regulatory Guide 1.27

The intent of NRC Regulatory Guide 1.27 is met by SSI. The thermal ability of the SSI to act as an ultimate heat sink for 30 days is covered in Item 3, Thermal Performance Evaluation. As a single source ultimate heat sink serving two units, the SSI is able to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, and floods, taken individually, without loss of capability to perform its safety functions. The natural phenomena and their magnitude are selected in accordance with their probability of occurrence, and designs are based upon the most severe of the natural phenomena recorded for the site, with an appropriate margin to account for uncertainties in historical data. Such phenomena and design criteria are discussed in Sections 2.4, 3.3, and 3.4.

DRAFT

2. Hydraulic Performance

The SSI is supplied with a bleed flow from the Circulating Water System during all normal operating conditions. This flow is directed into the service water pump intake structure and creates a blowdown flow from the SSI to the SCR through the equalization channel. If, as a result of an earthquake, the SCR dam fails,the equalization channel invert maintains the water level in the SSI at elevation 759 ft 6 in. Surface area and volume in the SSI as a function of elevation is discussed in Section 2.4.

Hydraulic short circuiting is prevented by the physical separation of the intake structure and discharge piping outfall and the orientation of the discharge. The intake and discharge points are over 1800 ft apart, and the exit velocity of the discharge water carries it upstream initially, away from the area of the intake structure, allowing extra time for the transfer of heat to the atmosphere.

Q371.10

The service water system effluent flows through an open channel type discharge canal prior to entering the SSI. Cooling occurs throughout the approximately 1300 ft. length of the discharge canal before the service water effluent mixes with the SSI bulk fluid. The discharge canal outlet enters the SSI in a direction away from the service water intake structure. Mixing and dispersion of the effluent occurs when the SSI fluid reverses direction in order to pass to vicinity of the intake structure. The minimum shore line distance between the discharge canal and intake structure is 1500 ft. Further cooling of the mixed fluid occurs en route. Becuase the intake is submerged and the discharge is on the surface, there is vertical as well as horizontal separation. See Figure 1.2-46 for the intake structure. DRAFT

3. Thermal Performance Evaluation

To simulate the operation of the SSI preceding and following LOCA, the time varying meteorological data must be aligned with the heat load data such that the peak SSI intake temperature due to the imposed heat load occurs at the same time that the natural temperature peak occurs. An additional consideration is that the simulation be run for a sufficiently long time so that the SSI temperature reaches stationary state with respect to the pre-LOCA heat load. Both these issues were addressed with sensitivity simulations. To determine the initialization time, steady meteorological data were used with a steady heat load to determine that the SSI temperatures reached steady values after 37 days. To determine the start of LOCA relative the single DRAFT

DRAFT worst day for atmospheric cooling, the time-varying heat loads were run with steady meteorological data. These tests showed that the time to peak intake temperature due to time varying heat loads and plant pumping was 10 days. To further refine this number, additional sensitivity tests were made in which the time to peak was varying under both time-varying meteorological and heat load conditions. The resulting time to peak was found to be eight days.

68

68 The intake temperature reaches a maximum on the evening of the
DRAFT seventh day at 115°F (two train).

DRAFT A 24-hour transient analysis for a two train ESF LOCA case was conducted with the model to determine how quickly intake temperatures would rise immediately after a LOCA. The lag between discharge and intake temperature rises was determined to be more than 5 hours.

68 Component cooling water temperature is a function of heat load on
77 the system and the service water temperature. Component cooling water supply temperature in the DBA unit peaks at approximately 135°F, during the first 400 seconds after the DBA, with service water temperature at 102°F. The maximum component cooling water temperature of the shutdown unit, with only one heat exchanger operable, is limited to 122°F. This temperature
68 occurs upon initiation of RHR, four hours after the DBA occurred
77 in the other unit. The preceding maxima of 135°F, and 122°F ensure that the system will perform satisfactorily in mitigating the event in the DBA unit concurrent with orderly cooldown of the shutdown unit.

During the postulated 100-year drought conditions and after 40 10
years of sedimentation, the SSI is determined to have 284-acre
feet of water. The maximum consumption of SSI water during the DRAFT
39-day postaccident shutdown cooldown period amounts to 92 acre-feet, resulting in a decrease in surface elevation of 3.8 ft., allowing adequate margin for post-30-day operation without exceeding the service water pump submergence requirements. Refer to Sections 2.4.11.5 and 2.4.11.6 for further discussion of the heat sink dependability requirements.

Consumption of SSI water by the Auxiliary Feedwater System for supply to the steam generators, if a failure of the Condensate Storage Tank is assumed, amounts to only 0.63 acre-feet, based on ≤ 60 gal of water per thermal MW rating of the steam supply system.

68
The time variation of decay power, based on the ANS 5.1 fission 10
product curve, is corrected for a finite operating time and
includes the ANS uncertainty factors. The related curve has 68
been used to develop the values of decay heat rates shown in Table 9.2-13.

The heat rejection capabilities of the SSI are a function of the
volume/surface area relationship of this body of water. The SSI 10
is sufficiently sized to accept plant-rejected heat under the most severe conditions specified in NRC Regulatory Guide 1.27, Rev. 2.

Q371.10 Provide the basis for your conclusion that water from the Service Water Discharge Structure enters the SSI at a point remote enough from the Service Water Intake Structure and at a velocity high enough to ensure adequate mixing, dispersion and evaporative cooling of the effluent.

R371.10 See revised Section 9.2.5.3. | DRAFT

Q371.16 The summer of 1980 produced a long period of persistent high temperatures greater than 100°F. What effect will these data have on your ultimate heat sink performance analysis and equipment design.

R371.16 See revised Sections 2.3.1.2.10 and 2.4.11.5. | DRAFT

Q372.32 The meteorological data used in evaluating the performance of the ultimate heat sink (UHS) conta[illegible] hours when the temperature was greater than 100°F [illegible] Present the criteria used in selecting 1974 as [illegible] severe year with regard to ultimate heat sink th[illegible] performance". Provide a comparison of the offsite [illegible] used to determine the most severe year and the onsite data used in the UHS evaluation. The summer of 1980 has had a long period of persistent high temperatures (greater than 100°F). Provide a comparison of these data with the most severe year previously selected.

R372.32 See revised Section 2.3.1.2.10. | DRAFT

File No. : 10002

Page No. : 1

COMMITMENT TRACKING
OUTGOING CORRESPONDENC⁻ ⌐VALUATION
SHEET

DOCUMENT IDENTIFICATION

Title/Subject : ADVANCE FSAR SUBMITTAL-COOLING POND HYDROTHERMAL ANALYSIS

Log No. : TXX-92526
File : 10010,901, 2,9,38
Date : 11/06/1992

ITEM TRACKING

Description	**Tracking Document/No.**
SSI TEMPERATURE REACHES A MAXIMUM ON THE EVENING OF THE SEVENTH DAY AT 115 F (TWO TRAIN). CCW TEMPERATURE IS A FUNCITON OF HEAT LOAD ON THE SYSTEM AND THE SSW TEMPERATURE. CCW SUPPLY TEMPERATURE IN THE DBA UNIT PEAKS AT APPROXIMATELY 135 F, DURING THE FIRST 400 SECONDS AFTER THE DBA, WITH SSW TEMPERATURE AT 102 F. THE MAXIMUM CCW TEMPERATURE OF THE SHUTDOWN UNIT, WITH ONLY ONE HEAT EXCHANGER OPERABLE, IS LIMITED TO 122 F. THIS TEMPERATURE OCCURS UPON INITIATION OF THE RHR, FOUR HOURS AFTER THE DBA OCCURED IN THE OTHER UNIT. THE PRECEDING MAXIMA OF 135 F AND 122 F ENSURE THAT THE SYSTEM WILL PERFORM SATISFACTORILY IN MITIGATING THE EVENT IN THE DBA UNIT CONCURRENT WITH WITH ORDERLY COOLDOWN OF THE SHUTDOWN UNIT.	NL-2064 **Item Types*:**OB **Assigned To:**CECO/ALL **Due Unit 1** :02/18/90 P **Due Unit 2** :12/01/92 P **Affected Unit(s)** : 1X2 **Status** : OPN
Ensure all calculations required to support FSAR discussion of Ultimate Heat Sink are complete. These calculations are prepared by TU Electric, Westinghouse, SWEC , Edinger and other contractors supporting the Revision of the Ultimate Heat Sink Study.	NL-7544 **Item Types*:**EA **Assigned To:**PENG/MECH **Due Unit 1** : P **Due Unit 2** :12/01/92 P **Affected Unit(s):** 1X2 **Status** : OPN
The CPSES ultimate heat sink meets the requirement of Revision 2 (1/76) of the Reg. Guide 1.27.	RE-0263 **Item Types*:** **Assigned To:**CECO/ALL **Due Unit 1** : P **Due Unit 2** :12/01/92 P **Affected Unit(s):** 1X2 **Status** : OPN

* Item Types : **EA** - External Action **OB** - Operational Basis **DB** - Design Basis
IA - Internal Action **DO** - Description Only
C - Committed Date **P** - Proposed Date

COMPLETED BY : Initials MCP [initials] Date 11/5/92

REVIEWED BY : Initials [initials] Date 11/6/92

Commitment Type: REG   Number: 22711   Status: OPN   Register Number: NL-2064

I. COMMITMENT DETAIL INFORMATION

Authority : NRC   Priority : 06
Primary Org: CECO/ALL   Units : 1X2
Lic Contact: MCP   Delete Code:

Subject Codes:
(DB) DESIGN BASIS   (CW) DESIGN BASIS
(SW) SERVICE WATER   (1A) ONGOING COMMITMENT - TO BE INCORPORAT
( )   ( )

Status	: OPN	(1X)	: OPN	(2X)
Milestone	: A	(1X)	: A	(2X)
Sch'd Completion Date:		(1X)	:	(2X)
Req'd Completion Date:		(1X)	:	(2X)

LDCR Number: LDCR-SA-92-720

Title: SSI THERMAL PERFORMANCE DURING LOCA

DESCRIPTION:
SSI TEMPERATURE REACHES A MAXIMUM ON THE EVENING OF THE SEVENTH DAY AT 115 F (TWO TRAIN). CCW TEMPERATURE IS A FUNCITON OF HEAT LOAD ON THE SYSTEM AND THE SSW TEMPERATURE. CCW SUPPLY TEMPERATURE IN THE DBA UNIT PEAKS AT APPROXIMATELY 135 F, DURING THE FIRST 400 SECONDS AFTER THE DBA, WITH SSW TEMPERATURE AT 102 F. THE MAXIMUM CCW TEMPERATURE OF THE SHUTDOWN UNIT, WITH ONLY ONE HEAT EXCHANGER OPERABLE, IS LIMITED TO 122 F. THIS TEMPERATURE OCCURS UPON INITIATION OF THE RHR, FOUR HOURS AFTER THE DBA OCCURED IN THE OTHER UNIT. THE PRECEDING MAXIMA OF 135 F AND 122 F ENSURE THAT THE SYSTEM WILL PERFORM SATISFACTORILY IN MITIGATING THE EVENT IN THE DBA UNIT CONCURRENT WITH WITH ORDERLY COOLDOWN OF THE SHUTDOWN UNIT.

COMMENTS:
Reopen the committment to change "eighth day" to "seventh day', based on the revised study(See TXX-92526), mcp,11/5/92.

II. COMMITMENT REFERENCE INFORMATION

SOURCE REFERENCE:

Type	Level	Number	Section	Rev	Page	Issue Date
FSAR	1	FSAR	9.2.5.3.3	068	9.2-49/50	05-01-89
FSAR	1	FSAR	9.2.5.3.3	076	9.2-49/50	05-01-89
LTR	1	TXX-92526				11-06-92

OTHER REFERENCE:

Type	NUMBER
REG	04085
REG	18837

Commitment Type: REG Number: 04938 Status: OPN Register Number: RE-0263

I. COMMITMENT DETAIL INFORMATION

Authority : NRC Priority :
Primary Org: CECO/ALL Units : 1X2
Lic Contact: MCP Delete Code:

Subject Codes:
(AA) ACCIDENT & DESIGN BASES ANALYSIS (DC) ACCIDENT & DESIGN BASES ANALYSIS
(1A) ONGOING COMMITMENT - TO BE INCORPORAT ( )
( ) ( )

Status	: OPN	(1X)	: OPN	(2X)
Milestone	: X	(1X)	: A	(2X)
Sch'd Completion Date:		(1X)	:	(2X)
Req'd Completion Date:		(1X)	:	(2X)

LDCR Number: LDCR-92-720

Title: R.G. 1.27 - ULTIMATE HEAT SINK REQUIREMENTS

DESCRIPTION:
The CPSES ultimate heat sink meets the requirement of Revision 2 (1/76) of the Reg. Guide 1.27.

COMMENTS:
COMMITMENT COMMENTS See FSAR 9.2.5. Hydrothermal Simulations of Comanche Peak Safe Shutdown Impoundment, J.E. Edinger Assoc. Inc. 37 West Ave. Wayne, PA. 19087 Unit 1 status opened due to entry errors in oic field identified by tug audit deficiency 89-09-02.(section)
TXX-92526:
Reopen the committment to delete the exception taken, as it is a clarification, mcp,11/5/92.

II. COMMITMENT REFERENCE INFORMATION

SOURCE REFERENCE:

Type	Level	Number	Section	Rev	Page	Issue Date
FSAR	1	FSAR	1A(B)	010	1A(B)-	03-31-80
LTR	1	TXX-92526				11-06-92
FSAR	0	FSAR	9.2.5			
RG	0	R.G.-01.027	C	002		01-01-76

OTHER REFERENCE:

Type	NUMBER
REG	13054
REG	20837
REG	21771
REG	21772
REG	21773

Commitment Type: REG Number: Status: OPN Register Number: NL-7544

I. COMMITMENT DETAIL INFORMATION

Authority : NRC
Primary Org: PENG/MECH
Lic Contact: MCP

Priority : 01
Units : 1X2
Delete Code:

Subject Codes:
(HT) HEAT TREATMENT
(CW) COMPONENT COOLING WATER
( )
(SW) HEAT TREATMENT
( )
( )

Status	: OPN	(1X)	: OPN	(2X)
Milestone	: X	(1X)	: A	(2X)
Sch'd Completion Date:		(1X)	:	(2X)
Req'd Completion Date:		(1X)	:	(2X)

LDCR Number: LDCR-92-720

Title: CALCULATIONS FOR ULTIMATE HEAY SINK

DESCRIPTION:
Ensure all calculations required to support FSAR discussion of Ultimate Heat Sink are complete. These calculations are prepared by TU Electric, Westinghouse, SWEC , Edinger and other contractors supporting the Revision of the Ultimate Heat Sink Study.

COMMENTS:

II. COMMITMENT REFERENCE INFORMATION

SOURCE REFERENCE.

Type	Level	Number	Section	Rev	Page	Issue Date
LTR	1	TXX-92526				11-04-92

OTHER REFERENCE:

Type	NUMBER

TNL REVIEWER DATE CTG ENTRY DATE