

NRC REPORT TO
COMMONWEALTH EDISTON COMPANY
Chicago, Illinois

OPERATIONAL ENVIRONMENTAL MONITORING ON
THE MISSISSIPPI RIVER NEAR
QUAD-CITIES STATION

Prepared and Submitted by
ENVIRONMENTAL RESEARCH AND TECHNOLOGY, INC.

January through December 1981

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March 23, 1982



Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Quad Cities Station Units 1 and 2
Annual Non-Radiological
Environmental Report
NRC Docket Nos. 50-254 and 50-265

Dear Mr. Denton:

Attached is the Annual Non-Radiological Environmental Report for Quad Cities Station Units 1 and 2 as required by the Technical Specifications. This report covers the period of January through December, 1981.

One (1) signed original and thirty-nine (39) copies of this letter and report are provided for your use.

Very truly yours,

Thomas J. Rausch
Nuclear Licensing Administrator

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Attachment

cc: Region III Inspector - Quad Cities

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PREFACE

The Quad-Cities Station is a nuclear fueled steam electric generating facility located near Cordova, Illinois, adjacent to Pool 14 of the Mississippi River, about 21 miles north of the Davenport-Moline-Rock Island area.

This report is presented as required by the Nuclear Regulatory Commission Operating Licenses DPR-29 and DPR-30 non-radiological technical specifications for Quad-Cities Station Units 1 and 2. These specifications require the submission of reports describing the results of environmental monitoring for the total chlorine used in condenser chlorination, temperature monitoring, station chemical usage, and fish impingement.

The monitoring results for the period January through December 1981 are herein reported.

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CHAPTER 1
TOTAL CHLORINE MONITORING

Operational Environmental Monitoring In The
Mississippi River Near Quad-Cities Station

January through December 1981

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1.0 TOTAL CHLORINE MONITORING

1.1 Introduction

Total residual chlorine monitoring during Quad-Cities condenser chlorination began on July 27, 1972, and has continued through this study period, January through December 1981. During this time, the Station operated mainly on a combination open and closed cycle mode of condenser cooling, with only limited closed cycle operation (see Appendix D for details).

The objectives of this study were:

1. to document total residual chlorine concentrations in the Mississippi River upstream and downstream from the Quad-Cities Station and at the point of discharge to the diffuser and/or blowdown pipes;
2. to monitor variations in chlorine concentration during condenser chlorination in the station's discharge bay during the open or combination open and closed cycle mode of condenser cooling or in the spray canal during the closed cycle mode; and
3. to compare all chlorine concentrations determined during this study to the surveillance requirements approved in the technical specifications by the U.S. Nuclear Regulatory Commission (1974).

1.2 Field and Analytical Procedures

Total residual chlorine concentrations were determined during condenser chlorination four times per month in compliance with the non-radiological technical specifications for the Quad-Cities Station (USNRC 1974). Measurements were made in the Mississippi River before, during, and after condenser chlorination in either the discharge bay or spray canal of the station at frequent time intervals during chlorination. Sampling locations are described in Tables 1-1 and 1-2.

Since all samples were taken during combination cycle cooling mode, only the Discharge Bay (Location 7) was sampled for total residual chlorine during this report period. Chlorine concentrations were determined at three minute intervals starting at the time of condenser chlorination and ending approximately twenty minutes after termination or when chlorine levels were below the analytical limit of 0.01 mg/l.

Samples in the river were collected at a depth of one meter using a Kemmerer sampler except during cold weather when the sampler was rendered inoperable. At these times, bottles were filled directly, as they were at the Station Location (7). Samples were analyzed immediately after collection by Method 409C (A.P.H.A. et al., 1976). A Fisher and Porter Amperometric Titrator having an analytical detection limit of 0.01 mg/l was used for analysis of all samples.

1.3 Results and Discussion

Throughout this study period all chlorine concentrations were within the U.S. Nuclear Regulatory Commission 1974 surveillance requirements as summarized in Tables 1-3 and 1-4.

Station operation data during the chlorination cycles monitored from January through December 1981 are listed in Table 1-5.

Total residual chlorine data from January through December 1981 are presented in Tables 1-6 through 1-16.

1.4 Summary and Conclusions

1. Chlorine monitoring was conducted 44 times during operation of the Quad-Cities condenser chlorination system from January through December 1981. No detectable levels of total residual

chlorine were found in the Mississippi River, either upstream or downstream from the plant, indicating complete dissipation of chlorine and compliance with Commonwealth Edison Company - U.S. Environmental Protection Agency (1976) recommended limit of 0.20 mg/l.

2. Total chlorine concentrations in the discharge bay and spray canal were within limits approved by the U.S. Nuclear Regulatory Commission.

1.5 References Cited

A.P.H.A., A.W.W.A., and W.P.C.F. 1976. Standard methods for the examination of water and wastewater. 14th Ed. Amer. Public Health Assn., Washington, D.C. 1193 pp.

Commonwealth Edison Company. 1976. Chlorine reduction study for Quad-Cities Station. Proposed literature by the U.S.E.P.A. and Commonwealth Edison Company letter dated 29 January 1976.

U.S. Nuclear Regulatory Commission. 1974. Appendix B to operating license DPR-29 and DPR-30: Non-radiological technical and specifications and basis for Quad-Cities Station Units 1 and 2, Rock Island, Illinois. Commonwealth Edison Company. Docket numbers 50-254 and 50-265. Washington, D.C. 15 pp.

TABLE 1-1
DESCRIPTION OF SAMPLING LOCATIONS MONITORED,
FEBRUARY THROUGH DECEMBER 1981

Sampling Location	Description
6	At the intake forebay of the station.
7	At the entrance to the diffuser pipe in the discharge canal of the station.
9	At the entrance to the blowdown pipe in the spray canal.
21	Downstream from the diffuser pipes.
22	Downstream from the blowdown pipe.
23	Upstream from the diffuser pipe.
24	At the point of discharge from the diffuser pipe.
26	Upstream from the blowdown pipe.
30	South edge of intake.

TABLE 1-2

SAMPLING LOCATIONS MONITORED FOR TOTAL RESIDUAL CHLORINE DURING
CONDENSER CHLORINATION, FEBRUARY THROUGH DECEMBER 1981

Station Operating Condition	Sampling Frequency	Sampling Locations	Replicates	Depth
Open and Combination Cycle	4 times per month	Discharge bay (7)	Single	Tap
		Upstream discharge pipe (23)	Single	One meter
		Discharge pipe (24)	Single	One meter
		Downstream discharge pipe (21)	Single	One meter
		Intake forebay (6)	Single	One meter
Closed cycle	4 times per month	Spray canal (9)	Single	Tap
		Upstream blowdown pipe (26)	Single	One meter
		Downstream blowdown pipe (22)	Single	One meter
		Intake forebay (6)	Single	One meter
		South end of Intake (30)	Single	One meter

TABLE 1-3

U.S. NUCLEAR REGULATORY COMMISSION SURVEILLANCE REQUIREMENTS
FOR TOTAL CHLORINE CONCENTRATIONS

Circulating water pumps operating	Allowable ^{1/} (mg/l)	Observed ^{2/} (mg/l)	
		Discharge Bay	Spray Canal
2	1.50	Not applicable ^{3/}	Not applicable
3	1.00	0.01	Not applicable
4	0.75	Not applicable	Not applicable
5	0.60	Not applicable	Not applicable
6	0.50	0.13	0.17

^{1/} Maximum total chlorine concentration (mg/l) allowable in the discharge bay or spray canal as averaged over the injection cycle according to U.S. Nuclear Regulatory Commission (1974).

^{2/} The maximum detectable total chlorine concentration determined as averaged over the injection cycle for the number of circulating pumps operating is defined according to Commonwealth Edison (1976) as the arithmetic mean of detectable chlorine concentrations (0.01 mg/l or higher) during any particular monitoring period during a sodium hypochlorite injection cycle.

^{3/} Not applicable because monitoring was not conducted when the specified number of pumps was operating.

TABLE 1-4
AVERAGE DETECTABLE CHLORINE CONCENTRATIONS, QUAD-CITIES STATION,
JANUARY THROUGH DECEMBER 1981

Sampling Date	No. Circulating Water Pumps Operating	USNRC Allowable Limit ^{1/} (mg/l)	Observed Average Detectable Concentration ^{2/} (mg/l)	Location Monitored
January 14, 1981	6	0.5	0.12	Discharge Bay (7)
January 20, 1981	6	0.5	<0.01	Discharge Bay (7)
January 29, 1981	6	0.5	0.27	Discharge Bay (7)
January 29, 1981	6	0.5	0.30	Discharge Bay (7)
February 10, 1981	6	0.5	0.23	Discharge Bay (7)
February 18, 1981	6	0.4	0.08	Discharge Bay (7)
February 19, 1981	6	0.5	0.12	Discharge Bay (7)
February 25, 1981	6	0.5	0.16	Discharge Bay (7)
March 3, 1981	6	0.5	0.2	Discharge Bay (7)
March 9, 1981	6	0.5	0.04	Discharge Bay (7)
March 19, 1981	6	0.5	0.08	Discharge Bay (7)
March 26, 1981	6	0.5	0.03	Discharge Bay (7)
April 2, 1981	6	0.5	0.02	Discharge Bay (7)
April 23, 1981	6	0.5	0.13	Discharge Bay (7)
April 23, 1981	6	0.5	0.10	Discharge Bay (7)
April 30, 1981	6	0.5	0.12	Discharge Bay (7)
May 7, 1981	6	0.5	<0.01	Discharge Bay (7)
May 19, 1981	6	0.5	<0.01	Discharge Bay (7)
May 20, 1981	6	0.5	0.08	Discharge Bay (7)
May 29, 1981	6	0.5	0.19	Discharge Bay (7)
June 2, 1981	6	0.5	0.06	Discharge Bay (7)
June 9, 1981	6	0.5	<0.01	Discharge Bay (7)
June 16, 1981	6	0.5	0.05	Discharge Bay (7)
June 23, 1981	6	0.5	<0.01	Discharge Bay (7)
July 9, 1981	6	0.5	<0.01	Discharge Bay (7)
July 14, 1981	6	0.5	<0.01	Discharge Bay (7)
July 29, 1981	6	0.5	0.17	Discharge Bay (7)
July 30, 1981	6	0.5	<0.01	Discharge Bay (7)

TABLE 1-4 (CONTINUED)

Sampling Date	No. Circulating Water Pumps Operating	USNRC Allowable Limit ^{1/} (mg/l)	Observed Average Detectable Concentration ^{2/} (mg/l)	Location Monitored
August 7, 1981	6	0.5	.05	Discharge Bay (7)
August 24, 1981	6	0.5	<0.01	Discharge Bay (7)
August 27, 1981	6	0.5	<0.01	Discharge Bay (7)
August 28, 1981	6	0.5	.14	Discharge Bay (7)
September 11, 1981	3	1.0	.14	Discharge Bay (7)
September 14, 1981	3	0.5	.23	Discharge Bay (7)
September 23, 1981	3	1.0	.55	Discharge Bay (7)
September 25, 1981	3	1.0	<0.01	Discharge Bay (7)
October 1, 1981	3	1.0	0.05	Discharge Bay (7)
October 6, 1981	3	1.0	<0.01	Discharge Bay (7)
October 15, 1981	3	1.0	0.04	Discharge Bay (7)
October 26, 1981	3	1.0	0.02	Discharge Bay (7)
November 9, 1981	3	1.0	<0.01	Discharge Bay (7)
November 11, 1981	3	1.0	<0.01	Discharge Bay (7)
November 16, 1981	3	1.0	<0.01	Discharge Bay (7)
November 30, 1981	3	1.0	<0.01	Discharge Bay (7)
December 3, 1981	3	1.0	<0.01	Discharge Bay (7)
December 8, 1981	3	1.0	<0.01	Discharge Bay (7)
December 11, 1981	3	1.0	<0.01	Discharge Bay (7)
December 15, 1981	3	1.0	<0.01	Discharge Bay (7)

^{1/} Maximum total chlorination concentration (mg/l) allowable in the discharge bay or spray canal as averaged over the injection cycle according to the U.S. Nuclear Regulatory Commission (1979).

^{2/} The maximum detectable total chlorine concentration determined as averaged over the injection cycle for the number of circulating pumps operating defined according to Commonwealth Edison (1976) as the arithmetic mean of detectable chlorine concentrations (0.01 mg/l or higher) during any particular monitoring period during a sodium hypochlorite injection cycle.

TABLE 1-5

SAMPLING DATES FOR TOTAL CHLORINE MONITORING DURING CONDENSER CHLORINATION
AND QUAD-CITIES OPERATING CONDITIONS, JANUARY THROUGH DECEMBER, 1981

Date	Station Operation	Number of Circulating Water pumps Operating	Number of Lift pumps Operating	Injection Period of Station Condenser Chlorination (hour)	Locations Monitored at Station	Mississippi River Locations Monitored	Number of Total Chlorination Determinations Performed
January 14, 1981	Combination Cycle	6	4	1030-1200	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	37
January 20, 1981	Combination Cycle	6	4	1000-1130	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	36
January 29, 1981	Combination Cycle	6	4	1000-1130	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	41
January 29, 1981	Combination Cycle	6	4	1400-1530	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	39
February 10, 1981	Combination Cycle	6	4	1000-1130	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	38
February 18, 1981	Combination Cycle	6	4	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	65
February 19, 1981	Combinations Cycle	6	4	1030-1400	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	76
February 25, 1981	Combination Cycle	6	4	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	74
February 26, 1981	Combination Cycle	6	4	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	12
March 3, 1981	Combination Cycle	6	4	1030-1150	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	79

TABLE 1-5 (CONTINUED)

Date	Station Operation	Number of Circulating Water pumps Operating	Number of Lift pumps Operating	Injection Period of Station Condenser Chlorination (hour)	Locations Monitored at Station	Mississippi River Locations Monitored	Number of Total Chlorination Determinations Performed
March 9, 1981	Combination Cycle	6	4	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	64
March 19, 1981	Combination Cycle	6	4	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	62
March 26, 1981	Combination Cycle	6	4	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	59
April 2, 1981	Combination Cycle	6	4	0900-1020	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	31
April 23, 1981	Combination Cycle	6	3	1030-1150	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	37
April 23, 1981	Combination Cycle	6	3	1300-1420	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	39
April 30, 1981	Combination Cycle	6	3	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	67
May 7, 1981	Combination Cycle	6	3	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	60
May 19, 1981	Combination Cycle	6	3	1100-1220	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	33
May 20, 1981	Combination Cycle	6	3	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	60
May 29, 1981	Combination Cycle	6	3	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	59
June 2, 1981	Combination Cycle	6	3	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	60
June 9, 1981	Combination Cycle	6	3	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	58

TABLE 1-5 (CONTINUED)

Date	Station Operation	Number of Circulating Water pumps Operating	Number of Lift pumps Operating	Injection Period of Station Condenser Chlorination (hour)	Locations Monitored at Station	Mississippi River Locations Monitored	Number of Total Chlorination Determinations Performed
June 16, 1981	Combination Cycle	6	3	1030-1310	Discharge Bay (7)	upstream (6,23) downstream (21,24)	59
June 23, 1981	Combination Cycle	6	3	1030-1150	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	32
July 9, 1981	Combination Cycle	6	3	1030-1150	Discharge Bay (7)	upstream (6, 23) downstream (24, 21)	31
July 14, 1981	Combination Cycle	6	3	1030-1150	Discharge Bay (7)	upstream (6, 23) downstream (24, 21)	35
July 29, 1981	Combination Cycle	6	3	1030-1310	Discharge Bay (7)	upstream (6, 23) downstream (24, 21)	59
July 30, 1981	Combination Cycle	6	3	1245-1405	Discharge Bay (7)	upstream (6, 23) downstream (24, 21)	30
August 7, 1981	Combination Cycle	6	3	0900-1140	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	64
August 24, 1981	Combination cycle	6	3	1000-1120	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	38
August 27, 1981	Combination cycle	6	4	0930-1050	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	36
August 28, 1981	Combination Cycle	6	3	0900-1150	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	65
September 11, 1981	Combination Cycle	3	2	0900-1140	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	67
September 14, 1981	Combination Cycle	3	2	0900-1140	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	68

TABLE 1-5 (CONTINUED)

Date	Station Operation	Number of Circulating Water pumps Operating	Number of Lift pumps Operating	Injection Period of Station Condenser Chlorination (hour)	Locations Monitored at Station	Mississippi River Locations Monitored	Number of Total Chlorination Determinations Performed
September 23, 1981	Open Cycle	3	0	0900-1055	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	53
September 25, 1981	Combination Cycle	3	2	0900-1100	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	46
October 1, 1981	Combination Cycle	3	2	0900-1400	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	66
October 6, 1981	Combination Cycle	3	2	0930-1210	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	64
October 15, 1981	Combination Cycle	3	2	0900-1140	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	64
October 26, 1981	Combination Cycle	3	2	0900-1140	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	64
November 4, 1981	Combination Cycle	3	2	0900-1020	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	40
November 9, 1981	Combination Cycle	3	2	0900-1140	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	64
November 16, 1981	Combination Cycle	3	2	0900-1020	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	38
November 30, 1981	Combination Cycle	3	2	0900-1020	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	39
December 3, 1981	Combination Cycle	3	2	0930-1050	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	38

TABLE 1-5. (CONTINUED)

Date	Station Operation	Number of Circulating Water pumps Operating	Number of Lift pumps Operating	Injection Period of Station Condenser Chlorination (hour)	Locations Monitored at Station	Mississippi River Locations Monitored	Number of Total Chlorination Determinations Performed
December 8, 1981	Combination Cycle	3	2	0900-1020	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	39
December 11, 1981	Combination Cycle	3	2	0930-1050	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	33
December 15, 1981	Combination Cycle	3	2	0900-1020	Discharge Bay (7)	upstream (6, 23) downstream (21, 24)	39

TABLE 1-6
TOTAL RESIDUAL CHLORINE CONCENTRATIONS MEASURED DURING CONDENSER
CHLORINATION, JANUARY 1981

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)		Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)		Diffuser Pipe (Location 24) (hour) (mg/l)		Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)		Discharge Bay (Location 7) (hour) (mg/l)	
January 14, 1981 Combination Cycle 1021-1209	1030	<0.01	1031	<0.01	1033	<0.01	1034	<0.01	1021	<0.01
									1024	<0.01
									1027	<0.01
									1030	<0.01
									1033	<0.01
									1036	<0.01
									1039	<0.01
									1042	<0.01
									1045	<0.01
									1048	<0.01
									1051	<0.01
									1054	<0.01
									1057	<0.01
									1100	<0.01
									1103	<0.01
									1106	<0.01
	1108	<0.01	1109	<0.01					1109	0.12
					1111	<0.01	1112	<0.01	1112	0.10
									1115	0.08
									1118	0.05
									1121	0.20
									1124	0.12
									1127	0.20
									1130	<0.01
									1133	<0.01
									1136	<0.01
									1139	<0.01
									1142	<0.01
									1145	<0.01
									1148	<0.01
									1151	<0.01
									1154	<0.01
									1157	<0.01
									1200	<0.01
									1203	<0.01
									1206	<0.01
									1209	<0.01
	1209	<0.01	1210	<0.01	1211	<0.01	1213	<0.01		
January 20, 1981 Combination Cycle 0957-1142	935	<0.01	938	<0.01	941	<0.01	943	<0.01	0957	<0.01
									1000	<0.01
									1003	<0.01
									1006	<0.01
									1009	<0.01
									1012	<0.01
									1015	<0.01
									1018	<0.01
									1021	<0.01
									1024	<0.01
									1027	<0.01
									1030	<0.01
									1033	<0.01
									1036	<0.01

TABLE 1-6 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
January 29, 1981 Combination Cycle 0945-1142	1045 <0.01	1048 <0.01	1050 <0.01	1052 <0.01	1039 <0.01
					1042 <0.01
					1045 <0.01
					1048 <0.01
					1051 <0.01
					1054 <0.01
					1057 <0.01
					1100 <0.01
					1103 <0.01
					1106 <0.01
					1109 <0.01
					1112 <0.01
					1115 <0.01
					1118 <0.01
					1121 <0.01
					1127 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
					1142 <0.01
	1135 <0.01	1138 <0.01	1140 <0.01	1141 <0.01	
	0945 <0.01	0948 <0.01	0951 <0.01	0953 <0.01	0945 <0.01
					0948 <0.01
					0951 <0.01
					0954 <0.01
					0957 <0.01
					1000 <0.01
					1003 <0.01
					1006 <0.01
					1009 <0.01
					1012 <0.01
					1015 0.07
					1018 0.19
					1021 0.38
					1024 0.33
					1027 0.26
					1030 0.34
					1033 0.46
					1036 0.41
					1039 0.41
					1042 0.38
					1045 0.16
					1048 0.05
					1051 0.07
					1054 0.11
					1057 0.11
					1100 0.20
					1103 0.22
					1106 0.25
					1109 0.36
					1112 0.43
					1115 0.49
					1118 0.38
					1121 0.33
					1124 0.10
	1035 <0.01	1037 <0.01	1039 <0.01	1042 <0.01	

TABLE 1-6 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
January 29, 1981 Combination Cycle 1351-1545					1127 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
					1142 <0.01
	1140 <0.01	1143 <0.01	1146 <0.01	1149 <0.01	
	1355 <0.01	1405 <0.01	1407 <0.01	1410 <0.01	
					1351 <0.01
					1354 <0.01
					1357 <0.01
					1400 <0.01
					1403 <0.01
					1406 <0.01
					1409 <0.01
					1412 <0.01
					1415 0.05
					1418 0.14
					1421 0.16
					1424 0.20
					1427 0.25
				1430 <0.01	1430 0.21
	1435 <0.01		1435 <0.01		1433 0.20
		1440 <0.01			1436 0.30
					1439 0.42
					1442 0.47
					1445 0.49
					1448 0.30
					1451 0.33
					1454 0.38
					1457 0.39
					1500 0.40
					1503 0.39
					1506 0.31
					1509 0.49
					1512 0.49
					1515 0.45
					1518 0.48
					1521 0.40
					1524 0.39
					1527 0.28
					1530 0.28
					1533 0.20
					1536 0.13
					1539 0.10
					1542 <0.01
					1545 <0.01
	1532 <0.01	1550 <0.01	1545 <0.01	1546 <0.01	

TABLE 1-7
TOTAL RESIDUAL CHLORINE CONCENTRATIONS MEASURED DURING CONDENSER
CHLORINATION, FEBRUARY 1981

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
February 10, 1981 Combination Cycle 0945-1136					0945 <0.01 0948 <0.01 0951 <0.01 0954 <0.01 0957 <0.01 1000 <0.01 1003 <0.01 1006 <0.01 1009 <0.01 1012 <0.01 1015 <0.01 1018 <0.01 1021 <0.01 1024 <0.01 1027 <0.01 1030 0.14 1033 0.14 1036 0.12 1039 0.35 1042 0.37 1045 0.33 1048 0.25 1051 0.28 1054 0.24 1057 0.07 1100 0.19 1103 0.23 1106 0.28 1109 0.29 1112 0.36 1115 0.28 1118 0.07 1121 <0.01 1124 <0.01 1127 <0.01 1130 <0.01 1133 <0.01 1136 <0.01
February 18, 1981 Combination Cycle 1018-1330	1015 <0.01	1019 <0.01	1021 <0.01	1024 <0.01	1018 <0.01 1021 <0.01 1024 <0.01 1027 <0.01 1030 <0.01 1033 <0.01 1036 <0.01 1039 <0.01 1042 <0.01 1045 0.02 1048 <0.01 1051 <0.01 1054 <0.01 1057 <0.01 1100 <0.01 1103 <0.01

TABLE 1-7 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1106 <0.01
					1109 <0.01
	1021 <0.01				1112 <0.01
		1117 <0.01	1119 <0.01		1115 <0.01
				1121 <0.01	1118 <0.01
					1121 <0.01
					1124 0.01
					1127 0.04
					1130 0.02
					1133 0.02
					1136 0.04
					1139 0.01
					1142 0.01
					1145 0.02
					1148 0.05
					1151 0.06
					1154 0.14
					1157 0.12
					1200 0.05
					1203 0.02
					1208 0.01
					1209 0.06
					1212 0.02
					1215 0.04
					1218 0.06
					1221 0.10
					1224 0.10
					1227 0.09
					1230 0.06
					1233 0.05
					1236 0.06
					1239 0.09
					1242 0.14
					1245 0.12
					1248 0.14
					1251 0.10
					1254 0.12
					1257 0.09
					1300 0.13
					1303 0.14
					1306 0.16
					1309 0.13
					1312 0.16
					1315 0.12
					1318 0.16
					1321 0.04
					1327 <0.01
	1430 <0.01	1432 <0.01	1434 <0.01	1436 <0.01	1330 <0.01
February 19, 198 Combination Cycle 1015-1400	1020 <0.01	1022 <0.01	1024 <0.01	1026 <0.01	1015 <0.01
					1018 <0.01
					1021 <0.01
					1024 <0.01
					1029 <0.01
					1030 <0.01
					1033 <0.01
					1039 <0.01
					1042 <0.01

TABLE 1-7 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1045 <0.01
					1048 <0.01
					1051 <0.01
					1054 <0.01
					1057 <0.01
					1100 <0.01
					1103 <0.01
					1106 <0.01
					1109 <0.01
					1112 <0.01
					1115 <0.01
					1118 <0.01
					1121 <0.01
					1124 <0.01
					1127 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
					1142 <0.01
					1145 <0.01
					1148 <0.01
	1150 <0.01	1052 <0.01			1151 0.06
			1154 <0.01		1154 0.09
				1156 <0.01	1157 0.13
					1200 0.28
					1203 0.18
					1206 0.15
					1209 0.11
					1212 0.09
					1215 0.08
					1218 0.08
					1221 0.09
					1224 0.08
					1227 0.09
					1230 0.08
					1233 0.12
					1236 0.10
					1239 0.07
					1242 0.08
					1245 0.06
					1248 0.06
					1251 0.05
					1254 0.06
					1257 0.06
					1300 0.06
					1303 0.06
					1306 0.07
					1309 0.10
					1312 0.12
					1315 0.16
					1318 0.15
					1321 0.20
					1324 8.25
					1327 0.27
					1330 0.32
					1333 0.30
					1336 0.34
					1339 0.23
					1342 0.18

TABLE 1-7 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1345 0.12
					1351 <0.01
					1357 <0.01
	1355 <0.01	1357 <0.01	1359 <0.01	1402 <0.01	1400 <0.01
February 25, 1981	1020 <0.01	1022 <0.01	1024 <0.01	1026 <0.01	
Combination Cycle					1015 <0.01
1015-1354					1018 <0.01
					1021 <0.01
					1024 <0.01
					1027 <0.01
					1030 <0.01
					1033 <0.01
					1036 <0.01
					1039 <0.01
					1042 <0.01
					1045 0.03
					1048 0.06
					1051 0.06
					1054 0.12
					1057 0.11
					1100 0.12
					1103 0.12
					1109 0.13
					1112 0.13
					1115 0.11
					1118 0.19
					1121 0.15
					1124 0.16
					1127 0.13
					1130 0.13
					1133 0.10
					1136 0.12
					1139 0.12
					1142 0.16
					1145 0.15
					1145 0.17
					1154 0.17
					1157 0.18
					1200 0.19
					1203 0.19
					1206 0.20
					1209 0.24
					1212 0.15
					1215 0.14
					1218 0.15
					1221 0.14
					1224 0.17
					1227 0.16
					1230 0.19
					1233 0.20
					1236 0.24
					1239 0.19
					1232 0.19
					1245 0.22
					1248 0.22
					1248 0.20
					1251 0.20
					1254 0.21

TABLE 1-7 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Upper River Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
February 26, 1981 Combination Cycle 1022-1327					1257 0.20
					1300 0.20
					1303 0.20
					1306 0.19
					1309 0.19
					1312 0.17
					1315 0.17
					1318 0.24
					1321 0.21
					1324 0.20
					1327 0.24
					1330 0.19
					1333 0.15
					1336 0.28
					1339 0.15
					1342 0.09
					1345 0.05
					1348 <0.01
					1351 <0.01
					1354 <0.01
	1400 <0.01	1402 <0.01	1404 <0.01	1406 <0.01	
	1022 <0.01	1024 <0.01	1026 <0.01	1028 <0.01	
	1132 <0.01	1134 <0.01	1136 <0.01	1138 <0.01	
	1322 <0.01	1325 <0.01	1326 <0.01	1327 <0.01	

TABLE 1-8
TOTAL RESIDUAL CHLORINE CONCENTRATIONS MEASURED DURING CONDENSER
CHLORINATION, MARCH 1981

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
March 3, 1981 Combination Cycle 1021-1415	1025 <0.01	1026 <0.01	1028 <0.01	1030 <0.01	1021 <0.01 1024 <0.01 1027 <0.01 1030 <0.01 1033 <0.01 1036 <0.01 1039 <0.01 1042 <0.01 1045 <0.01 1048 <0.01 1051 <0.01 1054 0.05 1057 0.12 1100 0.26 1103 0.44 1106 0.42 1109 0.36 1112 0.32 1115 0.28 1121 0.03 1124 0.40 1127 0.40 1130 0.40 1133 0.38 1136 0.33 1139 0.33 1142 0.33 1145 0.25 1148 0.22 1151 0.17 1154 0.15 1157 0.15 1200 0.10 1203 0.15 1206 0.13 1209 0.11 1212 0.10 1215 0.12 1218 0.12 1221 0.20 1224 0.22 1227 0.23 1230 0.25 1233 0.30 1236 0.30 1239 0.35 1242 0.30 1245 0.35 1248 0.33 1251 0.30 1254 0.35 1257 0.30 1300 0.40 1303 0.28 1306 0.30
	1136 <0.01	1138 <0.01	1139 <0.01	1140 <0.01	

TABLE 1-8 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1309 0.29
					1312 0.28
					1315 0.28
					1318 0.32
					1321 0.27
					1324 0.25
					1327 0.19
					1330 0.23
					1333 0.22
					1336 0.22
					1339 0.18
					1342 0.18
					1345 0.18
					1348 0.30
					1351 0.19
					1354 0.12
					1357 0.12
					1400 0.13
					1403 0.13
					1406 0.16
					1409 0.08
					1412 0.01
					1415 0.01
	1415 <0.01	1416 <0.01	1418 <0.01	1420 <0.01	
March 9, 1981 Combination Cycle 1018-1327	1017 <0.01	1019 <0.01	1021 <0.01	1022 <0.01	
					1018 <0.01
					1021 <0.01
					1024 <0.01
					1027 <0.01
					1030 <0.01
					1033 <0.01
					1036 <0.01
					1039 <0.01
					1042 <0.01
					1045 <0.01
					1048 <0.01
					1051 <0.01
					1054 <0.01
					1057 <0.01
					1100 <0.01
					1103 <0.01
					1106 <0.01
					1109 <0.01
					1112 <0.01
					1115 <0.01
					1118 <0.01
					1121 <0.01
					1124 <0.01
					1127 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
					1142 <0.01
				1145 <0.01	
		1149 <0.01	1147 <0.01		1145 <0.01
					1148 <0.01
					1151 <0.01

TABLE 1-8 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
	1153 <0.01				1154 <0.01 1157 <0.01 1200 <0.01 1203 <0.01 1206 0.05 1209 0.08 1212 0.06 1215 0.07 1218 0.04 1221 0.05 1224 0.04 1227 0.04 1230 0.03 1233 <0.01 1236 <0.01 1239 <0.01 1242 0.03 1245 0.03 1248 0.03 1251 0.05 1257 0.04 1300 0.05 1303 0.04 1306 0.03 1309 0.03 1312 0.03 1315 0.04 1318 0.01 1321 <0.01 1324 <0.01 1327 <0.01
	1316 <0.01	1318 <0.01	1320 <0.01	1322 <0.01	
March 19, 1981 Combination Cycle 1024-1327	1012 <0.01	1014 <0.01	1016 <0.01	1018 <0.01	1024 <0.01 1027 <0.01 1030 <0.01 1033 <0.01 1036 <0.01 1039 <0.01 1042 <0.01 1045 <0.01 1048 <0.01 1051 <0.01 1054 <0.01 1057 <0.01 1100 <0.01 1103 0.05 1106 <0.01 1109 <0.01 1112 0.13 1115 0.02 1118 0.01 1121 <0.01 1124 0.06 1127 0.02 1130 0.01 1133 <0.01

TABLE 1-8 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1136 0.03
					1139 0.04
					1142 0.10
					1145 0.09
					1148 0.10
					1151 0.12
					1154 0.14
					1147 0.14
					1200 0.15
					1203 0.11
					1206 0.12
					1209 0.10
					1212 0.12
					1215 0.10
					1218 0.07
					1221 0.07
					1224 0.08
					1227 0.08
					1230 0.08
					1233 0.13
					1236 0.10
					1239 0.10
	1242 <0.01	1244 <0.01			1242 0.12
			1246 <0.01		1245 0.06
				1248 <0.01	1248 0.06
					1251 0.05
					1254 0.05
					1257 0.09
					1300 0.05
					1303 0.05
					1306 0.05
					1309 0.02
					1312 0.05
					1315 0.06
					1318 0.04
					1321 0.02
					1324 <0.01
					1324 <0.01
					1327 <0.01
	1323 <0.01	1325 <0.01	1327 <0.01	1330 <0.01	
March 26, 1981 Combination Cycle 1021-1315	1020 <0.01	1022 <0.01	1023 <0.01	1025 <0.01	
					1021 <0.01
					1024 <0.01
					1027 <0.01
					1030 <0.01
					1033 <0.01
					1036 <0.01
					1039 <0.01
					1042 <0.01
					1048 <0.01
					1051 <0.01
					1054 <0.01
					1057 <0.01
					1100 <0.01
					1103 <0.01
					1106 <0.01
					1109 <0.01
					1112 <0.01

TABLE 1-8 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1115 <0.01
					1118 0.05
					1121 0.02
					1124 0.02
					1127 0.01
					1130 0.07
					1133 0.05
					1136 0.05
					1139 0.04
	1140 <0.01				1142 0.05
		1142 <0.01			1145 <0.01
			1144 <0.01	1145 <0.01	1148 <0.01
					1151 0.01
					1154 <0.01
					1157 <0.01
					1200 <0.01
					1203 <0.01
					1206 <0.01
					1209 <0.01
					1212 0.02
					1215 <0.01
					1218 <0.01
					1221 <0.01
					1224 <0.01
					1227 <0.01
					1230 <0.01
					1233 <0.01
					1236 <0.01
					1239 <0.01
					1242 <0.01
					1245 <0.01
					1248 <0.01
					1251 <0.01
					1254 <0.01
					1257 <0.01
					1300 <0.01
					1303 <0.01
					1309 <0.01
					1312 <0.01
	1317 <0.01	1315 <0.01	1313 <0.01	1311 <0.01	1315 <0.01

TABLE 1-9
TOTAL RESIDUAL CHLORINE CONCENTRATIONS MEASURED DURING CONDENSER
CHLORINATION, APRIL 1981

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)		Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)		Diffuser Pipe (Location 24) (hour) (mg/l)		Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)		Discharge Bay (Location 7) (hour) (mg/l)	
April 2, 1981 Combination Cycle 0854-1024	0850	<0.01	0852	<0.01	0854	<0.01	0856	<0.01	0854	<0.01
									0857	<0.01
									0900	<0.01
									0903	<0.01
									0906	<0.01
									0909	<0.01
									0912	<0.01
									0915	<0.01
									0921	<0.01
									0924	<0.01
									0927	<0.01
									0930	<0.01
									0933	<0.01
									0936	<0.01
									0939	<0.01
									0942	<0.01
									0945	<0.01
									0948	<0.01
									0951	<0.01
									0954	<0.01
									0957	<0.01
									1000	<0.01
									1003	<0.01
	1005	<0.01	1007	<0.01					1006	<0.01
					1008	<0.01	1010	<0.01	1009	<0.01
									1012	<0.01
									1015	<0.01
									1018	<0.01
									1021	<0.01
									1024	<0.01
	1020	<0.01	1022	<0.01	1024	<0.01	1025	<0.01		
April 23, 1981 Combination Cycle 1015-1203	1010	<0.01	1013	<0.01	1014	<0.01	1015	<0.01	1015	<0.01
									1018	<0.01
									1021	<0.01
									1024	<0.01
									1027	<0.01
									1030	<0.01
									1033	<0.01
									1036	<0.01
									1039	<0.01
									1042	<0.01
									1045	<0.01
									1048	<0.01
									1051	<0.01
									1054	<0.01
									1100	0.07
									1103	0.09
					1106	<0.01	1105	<0.01	1106	0.10
	1110	<0.01	1108	<0.01					1109	0.09
									1112	0.15
									1115	0.14
									1118	0.17
									1121	0.12

TABLE 1-9 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
April 23, 1981 Combination Cycle 1245-1439					1124 0.16
					1127 0.16
					1130 0.25
					1133 0.16
					1136 0.14
					1139 0.10
					1142 0.16
					1145 0.14
					1148 0.11
					1151 0.06
					1154 <0.01
					1157 <0.01
					1200 <0.01
					1203 <0.01
	1208 <0.01	1210 <0.01	1212 <0.01	1214 <0.01	
	1255 <0.01	1245 <0.01	1247 <0.01	1250 <0.01	
					1245 <0.01
					1248 <0.01
					1251 <0.01
					1254 <0.01
					1257 <0.01
					1300 <0.01
					1303 <0.01
					1306 <0.01
					1309 0.08
					1312 0.02
					1315 0.03
					1318 0.02
					1321 0.06
					1324 0.09
					1327 0.12
					1330 0.14
					1333 0.12
					1336 0.13
					1339 0.10
					1342 0.10
					1345 0.14
					1348 0.11
	1355 <0.01	1350 <0.01	1351 <0.01	1352 <0.01	1351 0.12
					1354 0.12
					1357 0.13
					1400 0.10
					1403 0.12
					1406 0.13
					1409 0.11
					1412 0.12
					1413 0.12
					1418 0.12
					1421 0.12
					1424 0.10
					1427 0.15
					1430 0.14
					1433 0.07
					1436 <0.01
	1444 <0.01	1440 <0.01	1442 <0.01	1443 <0.01	1439 <0.01

TABLE 1-9 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
April 30, 1981 Combination Cycle 1021-1339	1005 <0.01	1007 <0.01	1008 <0.01	1009 <0.01	1021 <0.01
					1024 <0.01
					1027 <0.01
					1030 ^{1/} --
					1033 --
					1036 --
					1039 --
					1042 --
					1045 --
					1051 --
					1057 --
					1100 --
					1103 --
					1106 --
					1109 --
					1112 --
					1115 --
					1118 --
					1121 --
					1124 --
					1127 --
					1130 --
					1133 --
					1136 --
					1139 --
					1142 --
					1145 --
					1148 --
					1151 --
					1154 --
					1157 --
					1200 --
					1203 0.32
					1206 0.26
					1209 0.20
					1212 0.13
					1215 0.10
					1218 0.09
					1221 0.07
					1224 0.06
					1227 0.06
					1230 0.09
					1233 0.11
					1236 0.11
					1239 0.08
					1242 0.07
					1245 0.06
					1248 0.05
					1251 0.06
					1254 0.10
					1257 0.10
					1300 0.09
					1303 0.14
					1306 0.18
					1309 0.18
					1312 0.17
					1315 0.20
					1318 0.15
					1321 0.15
	1225 <0.01	1227 <0.01	1228 <0.01	1229 <0.01	

TABLE 1-9 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1324 0.13
					1327 0.05
					1330 0.04
					1333 <0.01
					1336 <0.01
					1339 <0.01
	1347 <0.01	1343 <0.01	1344 <0.01	1345 <0.01	

TABLE 1-10

TOTAL RESIDUAL CHLORINE CONCENTRATIONS MEASURED DURING CONDENSER
CHLORINATION, MAY 1981

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)		Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)		Diffuser Pipe (Location 24) (hour) (mg/l)		Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)		Discharge Bay (Location 7) (hour) (mg/l)	
May 7, 1981 Combination Cycle 1021-1318	1005	<0.01	1013	<0.01	1015	<0.01	1017	<0.01	1021	<0.01
									1024	<0.01
									1027	<0.01
									1030	<0.01
									1033	<0.01
									1036	<0.01
									1039	<0.01
									1042	<0.01
									1045	<0.01
									1048	<0.01
									1051	<0.01
									1054	<0.01
									1057	<0.01
									1100	<0.01
									1103	<0.01
									1106	<0.01
									1109	<0.01
									1112	<0.01
									1115	<0.01
									1118	<0.01
									1121	<0.01
									1124	<0.01
									1127	<0.01
									1130	<0.01
									1133	<0.01
									1136	<0.01
									1139	<0.01
									1142	<0.01
									1145	<0.01
									1148	<0.01
									1151	<0.01
	1155	<0.01							1154	<0.01
			1157	<0.01					1157	<0.01
					1159	<0.01	1200	<0.01	1200	<0.01
									1203	<0.01
									1206	<0.01
									1209	<0.01
									1212	<0.01
									1215	<0.01
									1218	<0.01
									1221	<0.01
									1224	<0.01
									1227	<0.01
									1230	<0.01
									1233	<0.01
									1236	<0.01
									1239	<0.01
									1242	<0.01
									1245	<0.01
									1248	<0.01
									1251	<0.01
									1254	<0.01
									1257	<0.01
									1300	<0.01
									1303	<0.01
									1306	<0.01

TABLE 1-10 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
May 19, 1981 Combination Cycle 1051-1227					1309 <0.01
					1312 <0.01
					1315 <0.01
					1318 <0.01
	1318 <0.01	1317 <0.01	1319 <0.01	1321 <0.01	
	1047 <0.01	1050 <0.01	1053 <0.01	1054 <0.01	
					1051 <0.01
					1054 <0.01
					1057 <0.01
					1100 <0.01
					1103 <0.01
					1106 <0.01
					1109 <0.01
					1112 <0.01
					1115 <0.01
					1118 <0.01
					1121 <0.01
					1124 <0.01
					1127 <0.01
					1130 <0.01
May 20, 1981 Combination Cycle 1021-1318					1133 <0.01
					1136 <0.01
					1139 <0.01
					1142 <0.01
					1145 <0.01
					1148 <0.01
	1150 <0.01	1152 <0.01			1151 <0.01
			1154 <0.01		1154 <0.01
				1156 <0.01	1157 <0.01
					1200 <0.01
					1203 <0.01
					1206 <0.01
					1209 <0.01
					1212 <0.01
					1215 <0.01
					1218 <0.01
					1221 <0.01
					1224 <0.01
					1227 <0.01
	1230 <0.01	1232 <0.01	1234 <0.01	1236 <0.01	
	1017 <0.01	1019 <0.01	1021 <0.01	1023 <0.01	
					1011 <0.01
					1014 <0.01
					1027 <0.01
					1030 0.04
					1033 0.04
					1036 0.04
					1039 0.04
					1042 0.02
					1045 0.01
					1048 0.07
					1051 0.07
					1054 0.06
					1057 0.09
					1100 0.09
					1103 0.10
					1106 0.10

TABLE 1-10 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1109 0.07
					1112 0.09
					1115 0.09
					1118 0.10
					1121 0.09
					1124 0.10
					1127 0.10
					1130 0.10
					1133 0.10
					1136 0.09
					1139 0.09
					1142 0.09
					1145 0.14
					1148 0.06
					1151 <0.01
					1154 <0.01
					1157 <0.01
					1200 <0.01
					1203 <0.01
	1205 <0.01	1207 <0.01		1206 <0.01	
			1208 <0.01	1209 <0.01	1209 <0.01
					1212 <0.01
					1215 <0.01
					1218 <0.01
					1221 <0.01
					1224 <0.01
					1227 <0.01
					1230 <0.01
					1233 <0.01
					1236 <0.01
					1239 <0.01
					1242 <0.01
					1245 <0.01
					1248 <0.01
					1251 <0.01
					1254 <0.01
					1257 <0.01
					1300 <0.01
					1303 <0.01
					1306 <0.01
					1309 <0.01
					1312 <0.01
					1315 <0.01
					1318 <0.01
	1319 <0.01	1321 <0.01	1323 <0.01	1325 <0.01	
May 29, 1981 Combination Cycle 1021-1315	1025 <0.01	1022 <0.01	1023 <0.01	1024 <0.01	
					1021 <0.01
					1024 <0.01
					1027 <0.01
					1030 <0.01
					1033 <0.01
					1036 <0.01
					1039 <0.01
					1042 <0.01
					1045 0.07
					1048 0.28
					1051 0.20
					1054 0.15

TABLE 1-10 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1057 0.11
					1100 0.11
					1103 0.15
					1106 0.16
					1109 0.16
					1112 0.21
					1115 0.20
					1118 0.18
					1121 0.14
					1124 0.15
					1127 0.17
					1130 0.15
					1133 0.16
					1136 0.17
					1139 0.17
					1142 0.17
			1146 <0.01	1145 <0.01	1145 0.17
	1148 <0.01	1147 <0.01			1148 0.21
					1151 0.20
					1154 0.18
					1157 0.18
					1200 0.20
					1203 0.17
					1206 0.16
					1209 0.20
					1212 0.20
					1215 0.20
					1218 0.20
					1221 0.42
					1224 0.40
					1227 0.21
					1230 0.19
					1233 0.19
					1236 0.22
					1239 0.27
					1242 0.20
					1245 0.20
					1248 0.20
					1251 0.21
					1254 0.21
					1257 0.22
					1300 0.24
					1303 0.23
					1306 0.08
					1309 0.03
					1312 <0.01
					1315 <0.01
	1318 <0.01	1317 <0.01	1316 <0.01	1315 <0.01	

TABLE 1-11
TOTAL RESIDUAL CHLORINE CONCENTRATIONS MEASURED DURING CONDENSER
CHLORINATION, JUNE 1981

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)		Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)		Diffuser Pipe (Location 24) (hour) (mg/l)		Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)		Discharge Bay (Location 7) (hour) (mg/l)	
June 2, 1981 Combination Cycle	1025	<0.01	1025	<0.01	1026	<0.01	1027	<0.01	1021	<0.01
									1024	<0.01
									1027	<0.01
									1030	<0.01
									1033	<0.01
									1036	<0.01
									1039	<0.01
									1042	<0.01
									1042	<0.01
									1045	<0.01
									1048	<0.01
									1051	<0.01
									1054	<0.01
									1057	<0.01
									1100	<0.01
									1103	<0.01
									1106	<0.01
									1109	<0.01
									1112	0.05
									1115	0.08
									1118	0.06
									1121	0.08
									1124	0.06
									1127	0.06
									1130	0.06
									1133	0.08
									1136	0.04
									1139	0.02
									1142	0.03
	1148	6.01	1149	<0.01					1148	0.03
					1151	<0.01			1151	0.04
							1153	<0.01	1154	0.08
									1157	0.08
									1206	0.08
									1203	0.10
									1206	0.05
									1209	0.04
									1212	<0.01
									1215	<0.01
									1218	<0.01
									1221	<0.01
									1224	<0.01
									1227	<0.01
									1230	<0.01
									1233	<0.01
									1236	<0.01
									1239	<0.01
									1242	<0.01
									1245	<0.01
									1248	<0.01
									1251	<0.01
									1254	<0.01
									1257	<0.01
									1300	<0.01

TABLE 1-11 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1303 <0.01
					1306 <0.01
					1309 <0.01
					1312 <0.01
					1315 <0.01
					1318 <0.01
	1325 <0.01	1322 <0.01	1321 <0.01	1320 <0.01	
June 9, 1981 Combination Cycle	1014 <0.01	1016 <0.01	1017 <0.01	1018 <0.01	
					1024 <0.01
					1027 <0.01
					1030 <0.01
					1033 <0.01
					1036 <0.01
					1039 <0.01
					1042 <0.01
					1045 <0.01
					1048 <0.01
					1051 <0.01
					1054 <0.01
					1057 <0.01
					1100 <0.01
					1103 <0.01
					1106 <0.01
					1109 <0.01
					1112 <0.01
					1115 <0.01
					1118 <0.01
					1121 <0.01
					1124 <0.01
					1127 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
					1142 <0.01
					1145 <0.01
					1148 <0.01
					1151 <0.01
	1155 <0.01				1154 <0.01
		1157 <0.01	1158 <0.01		1157 <0.01
				1159 <0.01	1200 <0.01
					1203 <0.01
					1206 <0.01
					1209 <0.01
					1212 <0.01
					1215 <0.01
					1218 <0.01
					1221 <0.01
					1224 <0.01
					1227 <0.01
					1230 <0.01
					1233 <0.01
					1236 <0.01
					1239 <0.01
					1242 <0.01
					1245 <0.01
					1248 <0.01
					1251 <0.01

TABLE 1-11 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
June 16, 1981 Combination Cycle 1021-1315					1254 <0.01
					1257 <0.01
					1300 <0.01
					1303 <0.01
					1306 <0.01
					1309 <0.01
					1312 <0.01
					1312 <0.01
					1315 <0.01
	1320 <0.01	1322 <0.01	1323 <0.01	1324 <0.01	
	1014 <0.01	1016 <0.01	1017 <0.01	1018 <0.01	
					1021 <0.01
					1024 <0.01
					1027 <0.01
					1030 <0.01
					1033 <0.01
					1036 <0.01
					1039 <0.01
					1042 <0.01
					1045 <0.01
					1048 <0.01
					1051 <0.01
					1054 <0.01
					1057 <0.01
					1100 <0.01
					1103 <0.01
					1106 <0.01
					1112 <0.01
					1115 <0.01
					1118 <0.01
					1121 <0.01
					1124 <0.01
					1127 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
					1142 <0.01
					1145 <0.01
					1148 <0.01
					1151 <0.01
	1155 <0.01				1154 <0.01
		1157 <0.01	1158 <0.01		1157 <0.01
				1159 <0.01	1200 <0.01
					1203 <0.01
					1206 <0.01
					1209 <0.01
					1212 0.07
					1215 0.02
					1218 0.04
					1221 0.06
					1224 0.06
					1227 0.07
					1230 0.08
					1233 0.05
					1236 0.03
					1239 0.03
					1242 <0.01

TABLE 1-11 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
June 23, 1981 Combination Cycle 1024-1157					1245 <0.01
					1248 <0.01
					1251 <0.01
					1254 <0.01
					1257 <0.01
					1300 <0.01
					1303 <0.01
					1306 <0.01
					1309 <0.01
					1312 <0.01
					1315 <0.01
	1320 <0.01	1322 <0.01	1323 <0.01	1324 <0.01	
	1010 <0.01	1012 <0.01	1013 <0.01	1015 <0.01	
					1024 <0.01
					1027 <0.01
					1030 <0.01
					1036 <0.01
					1039 <0.01
					1042 <0.01
					1045 <0.01
					1048 <0.01
					1051 <0.01
					1054 <0.01
					1057 <0.01
	1100 <0.01				1100 <0.01
		1102 <0.01	1104 <0.01		1103 <0.01
				1106 <0.01	1106 <0.01
					1109 <0.01
					1112 <0.01
					1115 <0.01
					1118 <0.01
					1121 <0.01
					1124 <0.01
					1127 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
					1142 <0.01
					1145 <0.01
					1148 <0.01
					1151 <0.01
					1154 <0.01
					1157 <0.01
	1200 <0.01	1202 <0.01	1204 <0.01	1206 <0.01	

TABLE 1-12
TOTAL RESIDUAL CHLORINE CONCENTRATIONS MEASURED DURING CONDENSER
CHLORINATION, JULY 1981

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)		Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)		Diffuser Pipe (Location 24) (hour) (mg/l)		Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)		Discharge Bay (Location 7) (hour) (mg/l)	
July 9, 1981 Combination Cycle 1030-1150	1022	<0.01	1024	<0.01	1026	<0.01	1028	<0.01	1024	<0.01
									1027	<0.01
									1030	<0.01
									1033	<0.01
									1036	<0.01
									1039	<0.01
									1042	<0.01
									1045	<0.01
									1048	<0.01
									1051	<0.01
									1054	<0.01
									1057	<0.01
	1103	<0.01	1105	<0.01	1106	<0.01	1108	<0.01	1100	<0.01
									1103	<0.01
									1106	<0.01
									1109	<0.01
									1112	<0.01
									1115	<0.01
									1118	<0.01
									1121	<0.01
									1124	<0.01
									1127	<0.01
									1130	<0.01
									1133	<0.01
									1136	<0.01
									1139	<0.01
									1142	<0.01
									1145	<0.01
	1151	<0.01	1152	<0.01	1153	<0.01	1154	<0.01	1148	<0.01
									1151	<0.01
									1154	<0.01
July 14, 1981 Combination Cycle 1030-1150	1016	<0.01	1014	<0.01	1013	<0.01	1011	<0.01	1015	<0.01
									1018	<0.01
									1021	<0.01
									1024	<0.01
									1027	<0.01
									1030	<0.01
									1033	<0.01
									1036	<0.01
									1039	<0.01
									1042	<0.01
									1045	<0.01
									1048	<0.01
									1051	<0.01
									1054	<0.01
									1057	<0.01
									1100	<0.01
									1103	<0.01
									1106	<0.01
									1109	<0.01
									1112	<0.01
									1115	<0.01

TABLE 1-12 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
July 29, 1981 Combination Cycle 1030-1310	1119 <0.01				1118 <0.01
		1120 <0.01	1121 <0.01	1122 <0.01	1121 <0.01
					1124 <0.01
					1127 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
					1142 <0.01
					1145 <0.01
					1148 <0.01
					1151 <0.01
					1154 <0.01
					1157 <0.01
	1206 <0.01	1208 <0.01			
			1209 <0.01	1210 <0.01	
					1021 <0.01
	1024 <0.01	1026 <0.01			1024 <0.01
			1027 <0.01	1029 <0.01	1027 <0.01
					1030 <0.01
					1033 <0.01
					1036 <0.01
					1039 <0.01
					1042 <0.01
					1045 <0.01
					1048 <0.01
					1051 <0.01
					1054 <0.01
					1057 <0.01
					1100 <0.01
					1103 <0.01
	1106 <0.01	1108 <0.01			1106 0.03
			1110 <0.01	1112 <0.01	1109 0.06
					1112 <0.01
					1115 <0.01
					1118 <0.01
					1121 <0.01
					1124 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
					1142 0.04
					1145 0.07
					1148 0.09
					1151 0.16
					1154 0.34
					1157 0.42
					1200 0.37
					1203 0.24
					1206 0.24
					1209 0.22
					1212 0.18
					1215 0.16
					1218 0.16
					1221 0.16
					1224 0.16

TABLE 1-12 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
July 30, 1981 Combination Cycle 1245-1405					1227 0.18
					1230 0.16
					1233 0.14
					1236 0.14
					1239 0.14
					1242 0.12
					1245 0.12
					1248 <0.01
					1251 <0.01
					1254 <0.01
					1257 <0.01
					1300 <0.01
					1303 <0.01
					1306 <0.01
					1309 <0.01
	1315 <0.01	1316 <0.01			1312 <0.01
			1317 <0.01	1319 <0.01	1315 <0.01
	1240 <0.01	1241 <0.01			1242 <0.01
			1242 <0.01	1243 <0.01	1245 <0.01
					1248 <0.01
					1248 <0.01
					1251 <0.01
					1254 <0.01
					1257 <0.01
					1300 <0.01
					1303 <0.01
					1306 <0.01
					1309 <0.01
					1312 <0.01
					1315 <0.01
					1318 <0.01
					1321 <0.01
					1324 <0.01
					1327 <0.01
					1330 <0.01
					1333 <0.01
	1337 <0.01	1339 <0.01			1336 <0.01
			1340 <0.01	1341 <0.01	1339 <0.01
					1342 <0.01
					1345 <0.01
					1348 <0.01
					1351 <0.01
					1354 <0.01
					1357 <0.01
					1400 <0.01
					1403 <0.01
					1406 <0.01
	1410 <0.01	1411 <0.01	1412 <0.01	1413 <0.01	1409 <0.01

TABLE 1-13
TOTAL RESIDUAL CHLORINE CONCENTRATIONS MEASURED DURING CONDENSER
CHLORINATION, AUGUST 1981

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)		Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)		Diffuser Pipe (Location 24) (hour) (mg/l)		Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)		Discharge Bay (Location 7) (hour) (mg/l)	
August 7, 1981 Combination Cycle	0850	<0.01	0851	<0.01	0852	<0.01	0853	<0.01	0851	<0.01
									0854	<0.01
									0857	<0.01
									0900	<0.01
									0903	<0.01
									0906	<0.01
									0909	<0.01
									0912	<0.01
									0915	<0.01
									0918	<0.01
									0921	<0.01
									0924	<0.01
									0927	<0.01
									0930	<0.01
									0933	<0.01
									0936	<0.01
									0939	<0.01
									0942	<0.01
									0945	<0.01
									0948	<0.01
									0954	<0.01
									0957	<0.01
									1000	<0.01
									1003	<0.01
									1006	<0.01
									1009	0.10
									1012	0.08
									1015	0.11
									1018	0.11
									1021	0.13
									1024	0.14
									1027	0.10
									1030	0.10
									1033	0.12
									1036	0.11
									1039	0.11
									1042	0.14
									1045	0.12
									1048	0.14
									1051	0.08
									1054	0.08
									1057	0.04
									1100	<0.01
									1103	<0.01
									1106	<0.01
									1109	<0.01
									1112	<0.01
									1115	<0.01
									1118	0.03
									1121	0.05
									1124	0.03
									1127	0.03
									1130	0.03
									1133	0.10
									1136	0.08
									1139	0.13
	1015	<0.01	1016	<0.01	1017	<0.01	1018	<0.01		

TABLE 1-13 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
August 24, 1981 Combination Cycle					1142 0.11
					1145 0.14
					1148 0.21
					1151 0.18
					1154 0.16
					1157 0.14
					1200 0.14
					1203 0.12
					1206 0.08
					1209 <0.01
					1212 <0.01
	1215 <0.01	1216 <0.01	1217 <0.01	1218 <0.01	1215 <0.01
	0956 <0.01	0958 <0.01	1000 <0.01	1002 <0.01	0952 <0.01
					0955 <0.01
					0958 <0.01
					1001 <0.01
					1004 <0.01
					1007 <0.01
					1010 <0.01
					1013 <0.01
					1016 <0.01
					1019 <0.01
					1022 <0.01
					1025 <0.01
					1028 <0.01
	1030 <0.01	1032 <0.01			1031 <0.01
			1034 <0.01	1036 <0.01	1034 <0.01
					1037 <0.01
					1040 <0.01
					1043 <0.01
					1046 <0.01
					1049 <0.01
					1052 <0.01
					1055 <0.01
					1058 <0.01
					1101 <0.01
					1104 <0.01
					1107 <0.01
					1110 <0.01
					1113 <0.01
					1116 <0.01
					1119 <0.01
					1122 <0.01
					1125 <0.01
					1128 <0.01
					1131 <0.01
					1134 <0.01
August 27, 1981	1138 <0.01				
		1140 <0.01			
			1142 <0.01	1144 <0.01	1143 <0.01
	0915 <0.01	0917 <0.01	0919 <0.01		
				0921 <0.01	
					0925 <0.01
					0928 <0.01
					0931 <0.01
					0934 <0.01
					0937 <0.01

TABLE 1-13 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					0940 <0.01
					0943 <0.01
					0946 <0.01
					0949 <0.01
					0952 <0.01
					0955 <0.01
					0958 <0.01
					1001 <0.01
					1004 <0.01
					1007 <0.01
					1010 <0.01
	1015 <0.01				
		1017 <0.01			
			1019 <0.01	1021 <0.01	1019 <0.01
					1022 <0.01
					1025 <0.01
					1028 <0.01
					1031 <0.01
					1034 <0.01
					1037 <0.01
					1040 <0.01
					1043 <0.01
					1046 <0.01
					1049 <0.01
					1052 <0.01
					1055 <0.01
					1058 <0.01
					1101 <0.01
					1104 <0.01
					1107 <0.01
					1100 <0.01
	1110 <0.01				
		1111 <0.01			
			1114 <0.01	1116 <0.01	
August 28, 1981	0845 <0.01	0847 <0.01	0849 <0.01		
					0852 <0.01
					0855 <0.01
					0858 <0.01
					0901 <0.01
					0904 <0.01
					0907 <0.01
					0910 <0.01
					0913 <0.01
					0916 <0.01
					0919 0.03
					0922 0.05
					0925 0.05
					0928 0.06
					0931 0.06
					0934 0.06
					0937 0.09
					0940 0.09
					0943 0.08
					0946 0.02
					0949 0.12
					0952 0.12
					0955 0.13

TABLE 1-13 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					0958 0.16
					1001 0.18
					1004 0.18
					1007 0.20
					1010 0.18
					1013 0.19
					1016 0.18
					1019 0.18
					1022 0.20
	1025 <0.01	1027 <0.01			
			1029 <0.01		
				1031 <0.01	1031 0.16
					1034 0.18
					1037 0.17
					1040 0.17
					1043 0.16
					1046 0.15
					1049 0.12
					1052 0.13
					1055 0.13
					1058 0.14
					1101 0.18
					1104 0.17
					1107 0.17
					1110 0.15
					1113 0.15
					1116 0.17
					1119 0.15
					1122 0.14
					1125 0.18
					1128 0.19
					1131 0.19
					1134 0.19
					1137 0.15
					1140 0.16
					1143 0.16
					1146 0.17
					1149 0.10
	1155 <0.01	1157 <0.01			1152 0.08
			1159 <0.01		1155 0.05
				1202 <0.01	1158 <0.01
					1201 <0.01
					1204 <0.01
					1207 <0.01

TABLE 1-14
TOTAL RESIDUAL CHLORINE CONCENTRATIONS MEASURED DURING CONDENSER
CHLORINATION, SEPTEMBER 1981

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
September 11, 1981 Combination Cycle 0837-1203	0837 < 0.01	08400 < 0.01	0843 < 0.01	0845 < 0.01	0845 < 0.01 0848 < 0.01 0851 < 0.01 0854 < 0.01 0857 < 0.01 0900 < 0.01 0903 < 0.01 0906 < 0.01 0909 0.09 0912 0.10 0915 0.13 0918 0.13 0921 0.13 0924 0.13 0927 0.12 0930 0.12 0933 0.16 0936 0.18 0939 0.16 0942 0.15 0945 0.15 0948 0.14 0951 0.14 0954 0.15 0957 0.15 1000 0.16 1003 0.17 1006 0.17 1009 0.17 1012 0.16 1015 0.16 1018 0.15 1021 0.13 1024 0.15 1027 0.17 1030 0.17 1033 0.16 1036 0.16 1039 0.15 1042 0.16 1045 0.15 1048 0.13 1051 0.12 1054 0.12 1057 0.13 1100 0.14 1103 0.15 1106 0.15 1109 0.17 1127 0.12 1130 0.12 1133 0.13 1136 0.15
	0948 < 0.01	0951 < 0.01	0954 < 0.01	0957 < 0.01	

TABLE 1-14 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
September 14, 1981 Combination Cycle 0843-1206	1138 < 0.01	1141 < 0.01	1145 < 0.01	1148 < 0.01	1139 0.16 1142 0.15 1145 0.15 1148 0.14 1151 0.06 1154 0.04 1157 < 0.01 1200 < 0.01 1203 < 0.01
	0840 < 0.01	0843 < 0.01	0846 < 0.01	0849 < 0.01	0845 < 0.01 0848 < 0.01 0851 < 0.01 0854 < 0.01 0857 < 0.01 0900 < 0.01 0903 < 0.01 0906 < 0.01 0909 < 0.01 0912 < 0.01 0915 < 0.01 0918 < 0.01 0921 < 0.01 0924 < 0.01 0927 < 0.01 0930 0.10 0933 0.15 0936 0.26 0939 0.22 0942 0.26 0945 0.28 0948 0.29 0951 0.28 0954 0.29 0957 0.28
	0957 < 0.01	1000 < 0.01	1003 < 0.01	1006 < 0.01	1000 0.27 1003 0.26 1006 0.26 1009 0.25 1012 0.23 1015 0.20 1018 0.26 1021 0.24 1024 0.24 1027 0.22 1030 0.20 1033 0.19 1036 0.22 1039 0.23 1042 0.24 1045 0.24 1048 0.22 1051 0.25 1054 0.24 1057 0.25 1100 0.25 1103 0.24 1106 0.25
	1143 < 0.01	1146 < 0.01	1149 < 0.01	1051 < 0.01	

TABLE 1-14 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
September 23, 1981 Open Cycle 0840-1157	1143 < 0.01	1146 < 0.01	1149 < 0.01	1151 < 0.01	1109 0.24
					1112 0.24
					1115 0.25
					1118 0.25
					1121 0.26
					1124 0.25
					1127 0.26
					1130 0.26
					1133 0.24
					1136 0.24
					1139 0.23
					1142 0.21
					1145 0.22
					1148 0.23
					1151 0.19
					1154 0.12
					1157 0.05
					1200 <0.01
					1203 <0.01
					1206 <0.01
	0854 < 0.01	0856 < 0.01	0858 < 0.01	0859 < 0.01	0840 <0.01
					0843 <0.01
					0846 <0.01
					0849 <0.01
					0852 <0.01
					0855 <0.01
					0858 <0.01
					0901 <0.01
					0904 <0.01
					0907 <0.01
					0910 <0.01
					0913 <0.01
					0916 <0.01
					0919 <0.01
					0922 <0.01
					0925 <0.01
					0928 <0.01
					0931 <0.01
					0934 <0.01
					0937 <0.01
					0940 <0.01
					0943 0.10
					0946 0.15
					0949 0.18
					0952 0.20
					0955 0.25
					0958 0.37
	1005 < 0.01	1008 < 0.01	1010 < 0.01	1012 < 0.01	1001 0.44
					1004 0.62
					1007 0.60
					1010 0.69
					1013 0.84
					1016 0.80
					1019 0.72
					1022 0.76
					1025 0.73
					1028 0.79

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TABLE 1-14 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1045 <0.01
					1048 <0.01
					1051 <0.01
					1054 <0.01
					1057 <0.01
					1100 <0.01
					1103 <0.01
					1106 <0.01
	1110 < 0.01	1113 < 0.01	1114 < 0.01	1116 < 0.01	

TABLE 1-15
TOTAL RESIDUAL CHLORINE CONCENTRATIONS MEASURED DURING CONDENSER
CHLORINATION, OCTOBER 1981

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
October 1, 1981 Combination Cycle 0845-1200					0845 <0.01
					0848 <0.01
					0851 <0.01
					0854 <0.01
	0856 <0.01				0857 <0.01
		0857 <0.01	0858 <0.01	0859 <0.01	0900 <0.01
					0903 <0.01
					0906 <0.01
					0909 <0.01
					0912 <0.01
					0915 <0.01
					0918 <0.01
					0921 <0.01
					0924 <0.01
					0927 <0.01
					0930 <0.01
					0933 <0.01
					0936 <0.01
					0939 <0.01
					0942 0.03
	0950 <0.01				0945 0.03
		0953 <0.01			0948 0.03
			0955 <0.01	0957 <0.01	0951 0.04
					0957 0.03
					1000 0.03
					1006 <0.01
					1009 <0.01
					1011 0.04
					1015 0.03
					1018 0.03
					1021 0.04
					1024 0.04
					1027 0.05
					1030 0.04
					1033 0.03
					1036 0.02
					1039 0.02
					1042 0.02
					1045 0.04
					1048 0.05
					1051 0.08
					1054 0.05
					1057 0.05
					1100 0.04
					1103 0.04
					1106 0.05
					1109 0.06
					1109 0.06
					1112 0.06
					1115 0.07
					1118 0.07
					1121 0.09
					1124 0.08
					1127 0.09
					1130 0.09
					1133 0.06

TABLE 1-15 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
October 6, 1981 Combination Cycle 0910-1224	1154 <0.01	1156 <0.01	1158 <0.01	1159 <0.01	1136 0.06
					1142 0.04
					1145 0.05
					1148 0.05
					1151 0.02
					1154 <0.01
					1157 <0.01
					1200 <0.01
					0915 <0.01
					0918 <0.01
	0927 <0.01	0929 <0.01	0930 <0.01	0931 <0.01	0921 <0.01
					0924 <0.01
					0927 <0.01
					0930 <0.01
					0933 <0.01
					0936 <0.01
					0939 <0.01
					0942 <0.01
					0945 <0.01
					0948 <0.01
	1118 <0.01	1123 <0.01	1124 <0.01		0951 <0.01
					0954 <0.01
					0957 <0.01
					1000 <0.01
					1003 <0.01
					1006 <0.01
					1009 <0.01
					1012 <0.01
					1015 <0.01
					1018 <0.01
					1021 <0.01
					1024 <0.01
					1027 <0.01
					1030 <0.01
					1036 <0.01
					1039 <0.01
					1042 <0.01
					1045 <0.01
					1048 <0.01
					1051 <0.01
					1054 <0.01
					1057 <0.01
					1100 <0.01
					1103 <0.01
					1106 <0.01
					1109 <0.01
					1112 <0.01
					1115 <0.01
					1118 <0.01
					1124 <0.01

TABLE 1-15 (CONTINUED)

Sampling Date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
October 15, 1981 Combination Cycle 0845-1200				1125 <0.01	1127 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
					1142 <0.01
					1145 <0.01
					1148 <0.01
					1151 <0.01
					1154 <0.01
					1157 <0.01
					1200 <0.01
					1203 <0.01
					1206 <0.01
					1209 <0.01
					1212 <0.01
	1215 <0.01				1215 <0.01
		1216 <0.01	1218 <0.01		1218 <0.01
				1220 <0.01	1221 <0.01
					1224 <0.01
					0845 <0.01
					0848 <0.01
	0851 <0.01				0851 <0.01
		0854 <0.01			0854 <0.01
			0856 <0.01		0857 <0.01
				0858 <0.01	0900 <0.01
					0903 <0.01
					0906 <0.01
					0909 <0.01
					0912 <0.01
					0915 <0.01
					0918 <0.01
					0921 <0.01
					0924 <0.01
					0927 <0.01
					0930 <0.01
					0933 <0.01
					0936 <0.01
					0939 <0.01
					0942 <0.01
					0945 <0.01
					0948 <0.01
					0951 <0.01
					0954 <0.01
	0957 <0.01				0957 <0.01
		1000 <0.01	1002 <0.01		1000 <0.01
				1004 <0.01	1006 <0.01
					1009 <0.01
					1012 <0.01
					1015 <0.01
					1018 <0.01
					1021 <0.01
					1024 <0.01
					1027 <0.01
					1030 <0.01

TABLE 1-15 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1033 <0.01
					1036 0.04
					1039 0.04
					1042 0.05
					1045 0.06
					1048 0.04
					1051 0.04
					1054 0.03
					1057 0.03
					1100 0.04
					1103 <0.01
					1106 <0.01
					1109 <0.01
					1112 <0.01
					1115 <0.01
					1118 <0.01
					1121 <0.01
					1124 <0.01
					1127 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
	1145 <0.01				1142 <0.01
		1147 <0.01	1148 <0.01		1145 <0.01
				1149 <0.01	1148 <0.01
					1151 <0.01
					1154 <0.01
					1157 <0.01
					1200 <0.01
October 26, 1981 Combination Cycle 0845-1200					0845 <0.01
					0848 <0.01
					0851 <0.01
	0854 <0.01				0854 <0.01
		0856 <0.01			0857 <0.01
			0858 <0.01	0859 <0.01	0900 <0.01
					0903 <0.01
					0906 <0.01
					0909 <0.01
					0912 <0.01
					0915 <0.01
					0918 <0.01
					0921 <0.01
					0924 <0.01
					0927 <0.01
					0930 <0.01
					0933 <0.01
	0937 <0.01	0938 <0.01			0936 <0.01
			0940 <0.01	0942 <0.01	0939 <0.01
					0942 <0.01
					0945 <0.01
					0948 <0.01
					0951 <0.01
					0954 <0.01
					0957 <0.01
					1000 <0.01
					1003 <0.01
					1006 <0.01

TABLE 1-15 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1009 <0.01
					1012 <0.01
					1015 <0.01
					1018 <0.01
					1021 0.02
					1024 0.02
					1027 0.03
					1030 <0.01
					1033 <0.01
					1036 <0.01
					1039 <0.01
					1042 <0.01
					1045 <0.01
					1048 <0.01
					1051 <0.01
					1057 <0.01
					1100 <0.01
					1103 <0.01
					1106 <0.01
					1109 <0.01
					1112 <0.01
					1115 <0.01
					1118 <0.01
					1121 <0.01
					1124 <0.01
					1127 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
					1142 <0.01
					1145 <0.01
					1148 <0.01
					1151 <0.01
					1154 <0.01
	1155 <0.01	1157 <0.01			1157 <0.01
			1158 <0.01	1200 <0.01	1200 <0.01

TABLE 1-16

TOTAL RESIDUAL CHLORINE CONCENTRATIONS MEASURED DURING CONDENSER
CHLORINATION, NOVEMBER 1981

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
November 4, 1981 Combination Cycle 0845-1042					0845 <0.01
					0848 <0.01
					0851 <0.01
					0854 <0.01
					0857 <0.01
					0900 <0.01
					0903 <0.01
					0906 <0.01
					0909 <0.01
					0912 <0.01
					0915 <0.01
	0917 <0.01	0918 <0.01	0919 <0.01		0918 <0.01
				0920 <0.01	0921 <0.01
					0924 <0.01
					0927 <0.01
					0930 <0.01
					0933 <0.01
					0936 <0.01
					0939 <0.01
					0942 <0.01
					0945 <0.01
					0948 <0.01
					0951 <0.01
					0954 <0.01
	1000 <0.01	0957 <0.01	0956 <0.01	0958 <0.01	0957 <0.01
					1000 <0.01
					1003 <0.01
					1006 <0.01
					1009 <0.01
					1012 <0.01
					1015 <0.01
					1018 <0.01
					1021 <0.01
	1026 <0.01				1024 <0.01
		1030 <0.01	1031 <0.01		1027 <0.01
				1033 <0.01	1030 <0.01
					1033 <0.01
					1036 <0.01
					1039 <0.01
					1042 <0.01
November 6, 1981 Combination Cycle 0850-1041					0850 <0.01
					0853 <0.01
					0856 <0.01
					0859 <0.01
	0900 <0.01	0902 <0.01	0903 <0.01	0905 <0.01	0905 <0.01
					0908 <0.01
					0911 <0.01
					0914 <0.01
					0917 <0.01
					0920 <0.01
	0925 <0.01	0927 <0.01	0928 <0.01	0929 <0.01	0923 <0.01
					0926 <0.01
					0929 <0.01
					0932 <0.01
					0938 <0.01

TABLE 1-16 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
November 9, 1981 Combination Cycle 0850-1200					0941 <0.01
					0944 <0.01
					0947 <0.01
					0950 <0.01
					0953 <0.01
					0956 <0.01
					0959 <0.01
					1002 <0.01
					1005 <0.01
					1008 <0.01
					1011 <0.01
					1014 <0.01
					1017 <0.01
					1020 <0.01
					1023 <0.01
					1026 <0.01
					1029 <0.01
					1032 <0.01
					1035 <0.01
					1038 <0.01
					1041 <0.01
					0850 <0.01
					0853 <0.01
					0859 <0.01
					0902 <0.01
					0905 <0.01
					0908 <0.01
					0911 <0.01
					0914 <0.01
					0917 <0.01
					0920 <0.01
					0923 <0.01
					0926 <0.01
					0929 <0.01
					0932 <0.01
					0935 <0.01
					0938 <0.01
					0947 <0.01
					0944 <0.01
					0947 <0.01
					0950 <0.01
					0953 <0.01
					0956 <0.01
					0959 <0.01
					1002 <0.01
					1005 <0.01
					1008 <0.01
					1011 <0.01
					1014 <0.01
					1017 <0.01
					1020 <0.01
					1023 <0.01
					1026 <0.01
					1029 <0.01
					1032 <0.01
					1035 <0.01
					1038 <0.01
					1041 <0.01

TABLE 1-16 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
					1044 <0.01
					1047 <0.01
					1050 0.02
					1053 0.02
					1056 0.02
					1059 0.01
					1102 0.02
					1105 0.02
					1108 0.02
					1112 0.02
					1115 0.02
					1118 <0.01
					1121 <0.01
					1124 <0.01
					1127 <0.01
					1130 <0.01
					1133 <0.01
					1136 <0.01
					1139 <0.01
	1143 <0.01	1144 <0.01			1142 <0.01
			1145 <0.01	1147 <0.01	1145 <0.01
					1148 <0.01
					1151 <0.01
					1154 <0.01
					1157 <0.01
					1200 <0.01
November 30, 1981					0848 <0.01
Combination Cycle					0851 <0.01
0848-1042					0854 <0.01
					0857 <0.01
					0900 <0.01
					0903 <0.01
					0906 <0.01
					0909 <0.01
					0912 <0.01
					0915 <0.01
					0918 <0.01
					0921 <0.01
					0924 <0.01
					0927 <0.01
					0930 <0.01
					0933 <0.01
	0937 <0.01				0936 <0.01
		0941 <0.01	0942 <0.01	0944 <0.01	0939 <0.01
					0942 <0.01
					0945 <0.01
					0948 <0.01
					0951 <0.01
					0954 <0.01
					0957 <0.01
					1000 <0.01
					1003 <0.01
					1006 <0.01
					1009 <0.01
					1012 <0.01
					1015 <0.01
					1018 <0.01
					1021 <0.01
					1024 <0.01

TABLE 1-16 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
	1025 <0.01	1028 <0.01	1030 <0.01	1032 <0.01	0927 <0.01 1030 <0.01 1033 <0.01 1036 <0.01 1039 <0.01 1042 <0.01

TABLE 1-17

TOTAL RESIDUAL CHLORINE CONCENTRATIONS MEASURED DURING CONDENSER
CHLORINATION, DECEMBER 1981

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
December 3, 1981 Combination Cycle					0850 <0.01 0853 <0.01 0856 <0.01 0859 <0.01 0902 <0.01 0905 <0.01 0908 <0.01 0911 <0.01 0914 <0.01 0917 <0.01 0920 <0.01 0923 <0.01 0926 <0.01 0929 <0.01 0932 <0.01 0935 <0.01 0938 <0.01 0941 <0.01 0944 <0.01 0947 <0.01 0950 <0.01 0953 <0.01 0956 <0.01 0959 <0.01 1002 <0.01 1005 <0.01 1008 <0.01 1011 <0.01 1014 <0.01 1017 <0.01 1020 <0.01 1023 <0.01 1026 <0.01 1029 <0.01 1032 <0.01 1035 <0.01 1038 <0.01 1041 <0.01
	0900 <0.01	0902 <0.01	0903 <0.01	0905 <<0.01	
	0937 <0.01	0940 <0.01	0942 <0.01	0944 <0.01	
	1025 <0.01	1027 <0.01	1028 <0.01	1030 <0.01	
December 8, 1981 Combination Cycle					0850 <0.01 0853 <0.01 0856 <0.01 0859 <0.01 0902 <0.01 0905 <0.01 0908 <0.01 0911 <0.01 0914 <0.01 0917 <0.01 0920 <0.01 0923 <0.01 0926 <0.01 0929 <0.01 0932 <0.01 0935 <0.01
	0854 <0.01	0856 <0.01	0857 <0.01	0859 <0.01	

TABLE 1-17 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
December 15, 1981 Combination Cycle	0851 <0.01	0854 <0.01	0855 <0.01	0856 <0.01	0850 <0.01 0853 <0.01 0956 <0.01 0859 <0.01 0902 <0.01 0905 <0.01 0908 <0.01 0911 <0.01 0914 <0.01 0917 <0.01 0920 <0.01 0923 <0.01 0926 <0.01 0929 <0.01 0932 <0.01 0935 <0.01 0938 <0.01 0941 <0.01 0944 <0.01 0947 <0.01 0950 <0.01 0953 <0.01 0956 <0.01 0959 <0.01 1002 <0.01 1005 <0.01 1008 <0.01 1011 <0.01 1014 <0.01 1017 <0.01 1020 <0.01 1023 <0.01 1026 <0.01 1029 <0.01 1032 <0.01 1035 <0.01 1038 <0.01 1041 <0.01 1044 <0.01
	0945 <0.01	0946 <0.01	0948 <0.01	0950 <0.01	
	1029 <0.01	1030 <0.01	1032 <0.01	1033 <0.01	

TABLE 1-17 (CONTINUED)

Sampling date Station Operating Cycle Hours of Chlorination	Mississippi River Upstream Near Intake (Location 6) (hour) (mg/l)	Upstream of Diffuser Pipe (Location 23) (hour) (mg/l)	Diffuser Pipe (Location 24) (hour) (mg/l)	Downstream of Diffuser Pipe (Location 21) (hour) (mg/l)	Discharge Bay (Location 7) (hour) (mg/l)
December 11, 1981 Combination Cycle	0937 <0.01	0939 <0.01	0941 <0.01	0944 <0.01	0938 <0.01
					0941 <0.01
					0944 <0.01
					0947 <0.01
					0950 <0.01
					0953 <0.01
					0956 <0.01
					0959 <0.01
					1002 <0.01
					1005 <0.01
					1008 <0.01
					1011 <0.01
					1014 <0.01
					1017 <0.01
					1020 <0.01
					1023 <0.01
	1025 <0.01	1027 <0.01	1029 <0.01	1031 <0.01	1026 <0.01
					1029 <0.01
					1032 <0.01
					1035 <0.01
					1038 <0.01
					1041 <0.01
					1044 <0.01
					0924 <0.01
					0927 <0.01
					0930 <0.01
	0931 <0.01	0933 <0.01	0934 <0.01	0935 <0.01	0833 <0.01
					0936 <0.01
					0939 <0.01
					0942 <0.01
					0945 <0.01
					0948 <0.01
					0951 <0.01
					0954 <0.01
					0957 <0.01
					1000 <0.01
					1003 <0.01
					1006 <0.01
					1009 <0.01
					1012 <0.01
					1015 <0.01
					1018 <0.01
	1020 <0.01	1022 <0.01	1023 <0.01	1024 <0.01	1021 <0.01
					1024 <0.01
					1027 <0.01
					1030 <0.01
					1033 <0.01
					1036 <0.01
					1039 <0.01
					1042 <0.01
					1045 <0.01
					1048 <0.01
					1051 <0.01
	1054 <0.01	1056 <0.01	1057 <0.01	1058 <0.01	1054 <0.01
					1057 <0.01
					1100 <0.01

CHAPTER 2
TEMPERATURE MONITORING

Operational Environmental Monitoring In The
Mississippi River Near Quad-Cities Station

January through December 1981

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2.0 TEMPERATURE MONITORING

2.1 Introduction

This report presents results of continuous monitoring of water temperature in the Mississippi River near the Quad-Cities Station from January through December 1981.

The objectives of this study were:

1. to provide an hourly record of the temperature regime of the Mississippi River in the vicinity of the Quad-Cities Station including the observation of any downstream thermal changes resulting from station operation; and
2. to identify diurnal, seasonal and other normal or periodic variations in river water temperature

2.2 Field and Analytical Procedures

Eight sensors were used to record hourly temperatures near the Quad-Cities Station (Figure 2-1). One sensor was located upstream near the Illinois shore. Four sensors were placed along a transect 600 ft downstream from the diffuser pipes. One sensor was placed at the entrance to the intake bay in the center of the opening. The discharge bay temperature sensor was located near the port to the diffuser pipes, and a sensor was placed in the cold end (return side) of the cooling canal. All sensors were approximately two feet above the bottom. Temperatures were also manually measured on a weekly basis, upstream in the mid-channel of the Mississippi River and in the Wapsipinicon River.

Water temperatures at the continuous monitoring locations were measured in situ with ultralinear silicon sensors having a range of 32 to 100F (0 to 38C) and an accuracy of $\pm 1.0\%$ of full scale. The sensors were wired to the station control room. The output of the analyzers was continuously recorded by a Honeywell class 15 multipoint

recorder. Ground truth data were taken at weekly intervals with a calibrated YSI tele-thermometer to evaluate the accuracy of the continuous monitoring system. Adjustments were made when necessary so chart and ground truth temperatures would agree. Prior to temperature sensor installation, the 32F and 100F points on the analyzer scale were set using individual resistance (ohm) inputs for the cable and sensor. On occasions when discharge temperatures exceeded 100F, adjustments were performed on the analyzer to permit recording.

Minimum, maximum, and mean values for temperature were calculated on a daily basis throughout the study period. To facilitate interpretation of the data downstream from the diffusers, temperatures recorded from sensors A, B, C, and D were averaged. Daily and monthly maximum and mean temperature differences were computed by averaging data from each 24 hr period. Daily temperature differentials were obtained by subtracting each day's mean temperature at the Station's intake from that of the discharge, and daily mean upstream temperature from the downstream average (A-D, over 24 hrs). In determining the maximum daily ΔT values, the highest hourly upstream temperature (or intake) was subtracted from the highest hourly downstream (or discharge) temperature.

2.3 Results and Discussion

2.3.1 Natural Variations in River Water Temperature

Upstream temperatures in the Mississippi River near the Quad-Cities Station during January through December 1981 followed typical seasonal trends and ranged from 31.3 to 83.6 °F (Table 2-1; see also Appendix A).

Upstream and downstream temperatures of the Mississippi River exhibited fluctuations attributable to climatic and hydrological parameters rather than to station operation. The Wapsipinicon River, for example, caused significant temperature variation near its confluence with the Mississippi River. Temperatures at the upstream sensor, located in relatively shallow water, further reflected the influence of natural factors on water temperature. Temperatures at the two upstream locations were usually similar; however, the effects of solar absorption, changes in atmospheric temperature, and surface runoff that are more pronounced in shallow water (i.e. upstream sensor), occasionally led to temperature differences between these locations (Appendices C and G). In addition, warming of shallow water by solar radiation and/or surface runoff periodically resulted in negative ΔT values between upstream and downstream locations (Appendix B). Findings similar to those discussed above were observed in Langford's (1972) study which indicated that significant variations in water temperature may occur due to changing hydrological and meteorological conditions unrelated to station operation.

2.3.2 Station Related Variations in Water Temperature

The maximum monthly temperature differences in the river upstream and downstream from the station ranged from 5.4°F to -0.0°F between January and December 1981; monthly mean ΔT values ranged from 2.0°F to -0.7°F. A summary of temperature differences between the discharge and intake, as well as between sensors downstream and upstream from the station is presented in Table 2-2 along with power output. Daily maximum and mean ΔT values are shown in Appendix B. Temperature

differences between downstream and upstream sensors for the January to December period complied with the standard for thermal discharge in the Mississippi River promulgated by the Illinois Pollution Control Board (1972).

2.4 Summary and Conclusions

1. Monthly mean differences in the Mississippi River water temperature downstream and upstream from the Quad-Cities Station during the January through December 1981 study period ranged from 2.0°F to -0.7°F.
2. Temperature differences between upstream and downstream sensors were in compliance with Illinois' thermal standards during the January through December 1981 period of study.
3. Natural hydrological and meteorological factors resulted in significant temperature differences among sensors that were unrelated to station operation.

2.5 References Cited

- Illinois Pollution Control Board. 1972. Illinois pollution control board rules and regulations Chapter 3; water pollution. Part II: Water Quality Standards. Rule 203 General Standards. March 7, 1972. Including amendments adopted on or before March 6, 1975. 36 pp.
- Langford, T. E. 1972. A comparative assessment of thermal effects in some British and North American rivers. Pages 319-351. In R. T. Oglesby, C. A. Carlson, and J. A. McCann, eds. River ecology and man. Academic Press, New York.

TABLE 2-1
MONITORING MEAN, MINIMUM, AND MAXIMUM TEMPERATURE,
QUAD-CITIES STATION, JANUARY THROUGH DECEMBER 1981

Month	Min - Max ^{1/}	Temperature (°F)				
		Upstream	Intake	Cooling Canal	Discharge Bay	Downstream
January	mean	32.8	33.1	73.6	84.3	32.7
	min-max	31.3-34.4	30.3-54.5	50.7-84.2	51.3-97.1	27.6-34.9
February	mean	32.6	33.1	76.8	87.0	33.4
	min-max	31.8-33.6	29.9-37.0	45.9-91.0	45.2-100.0	30.8-37.6
March	mean	39.7	41.5	80.6	93.3	40.6
	min-max	32.5-49.1	33.2-55.0	51.2-93.5	53.8-108.0	30.5-52.7
April	mean	53.4	53.4	84.9	97.7	53.7
	min-max	48.3-71.6	48.6-58.1	70.1-95.4	72.0-109.8	47.4-81.0
May	mean	59.5	61.2	84.7	97.8	61.5
	min-max	53.1-71.4	53.0-72.6	72.9-96.0	84.4-110.9	52.9-74.3
June	mean	73.2	74.0	85.8	102.6	73.7
	min-max	69.4-76.2	70.4-77.4	71.0-100.9	91.2-113.0	69.6-79.0
July	mean	78.1	78.1	93.1	103.7	78.0
	min-max	65.5-83.8	66.9-83.9	76.4-101.0	84.0-113.5	66.9-84.9
August	mean	75.7	74.3	92.0	103.2	75.2
	min-max	74.5-76.0	73.3-75.3	89.8-94.0	101.0-106.0	74.0-76.5
September	mean	68.1	67.3	87.3	101.3	67.5
	min-max	67.0-68.9	66.3-68.4	85.2-89.5	98.9-104.3	66.0-68.9
October	mean	52.4	51.1	80.6	97.6	52.6
	min-max	44.2-62.5	43.0-61.2	69.1-87.4	84.4-104.4	41.7-63.3
November	mean	45.3	43.2	69.6	85.8	44.6
	min-max	31.6-53.3	34.9-49.0	35.6-88.2	34.5-101.0	33.8-53.7
December	mean	32.9	34.4	65.3	76.9	33.8
	min-max	32.6-33.3	33.5-36.0	62.1-68.5	73.1-81.3	32.4-35.1

^{1/} Minimum and maximum hourly temperatures recorded during each month.

TABLE 2-2
MONTHLY MAXIMUM AND MEAN TEMPERATURE DIFFERENCES AND MEAN MEGAWATT OUTPUT,
QUAD-CITIES STATION, JANUARY THROUGH DECEMBER 1981

Month	Temperature Difference (°F)				Average Megawatt Output (percent of capacity)		
	Discharge Minus Intake		Downstream Minus Upstream		Unit 1	Unit 2	Total Station
	Max.	Mean	Max.	Mean			
January 1981	42.6	51.2	0.5	-0.1	80.0	85.0	82.0
February 1981	63.0	53.9	7.0	0.8	94.0	83.0	88.0
March 1981	20.6	51.8	20.2	0.9	69.0	90.0	80.0
April 1981	51.7	44.3	9.4	0.3	94.0	80.0	87.0
May 1981	38.3	36.6	2.9	2.0	86.0	88.0	87.0
June 1981	35.6	28.6	2.8	0.5	91.0	79.0	85.0
July 1981	29.6	25.6	1.1	.1	64.0	68.0	66.0
August 1981	30.7	28.9	.5	-.5	82.0	63.0	72.0
September 1981	35.9	34.0	0.0	-1.0	89.0	11.9 ^{1/}	51.0
October 1981	43.2	46.5	0.8	0.2	93.0	0	46.0
November 1981	52.0	42.6	0.4	-0.7	74.0	0	37.0
December 1981	45.3	42.5	1.8	3.0	94.5	6.0 ^{1/}	50.3

^{1/} Starting September 7, Unit II was shut down for refueling.

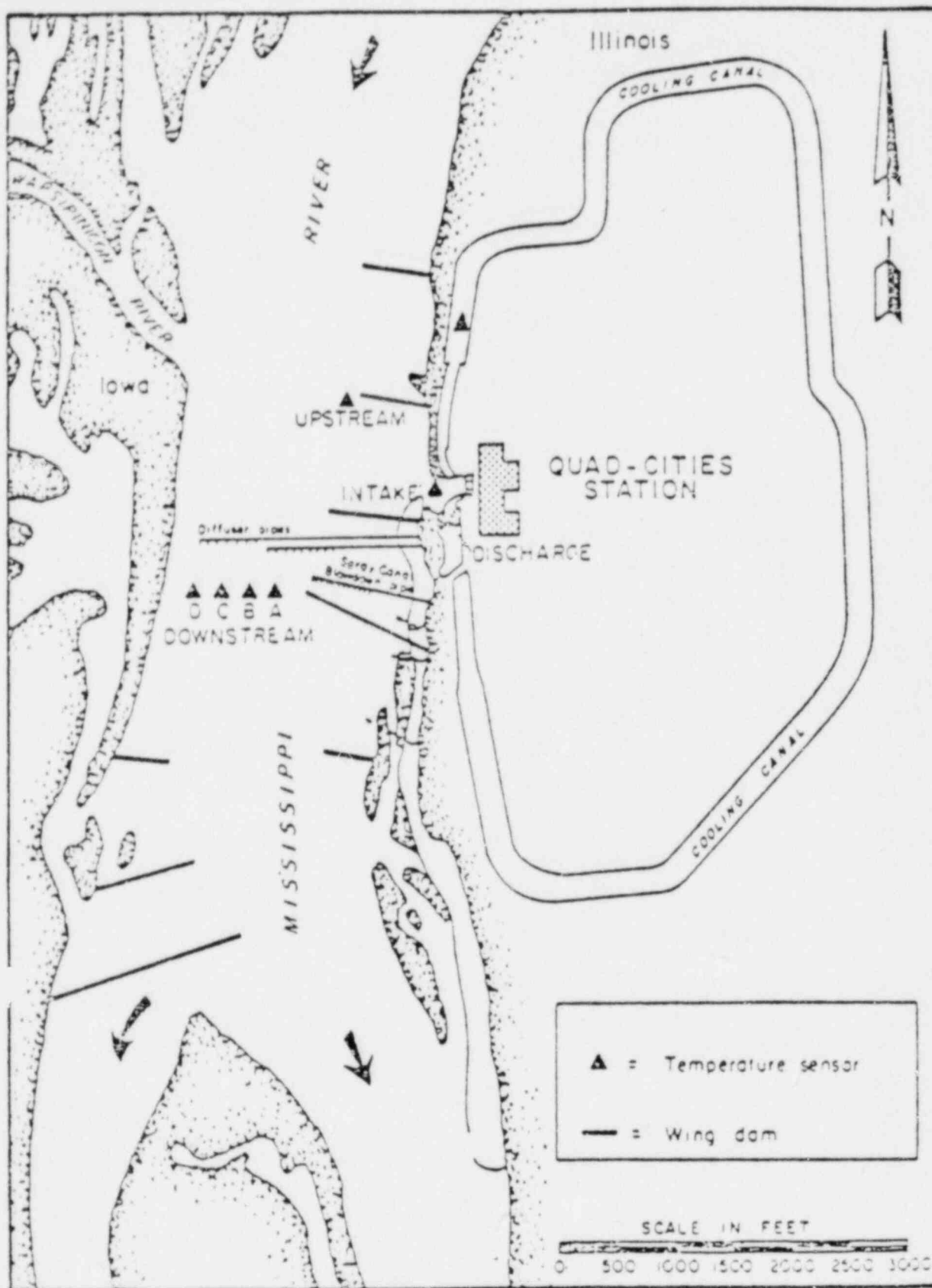


Figure 2-1. Temperature Sensor Locations at Quad-Cities Station, August 1979 through December 1981.

CHAPTER 2
CHEMICAL USE

Operational Environmental Monitoring In The
Mississippi River Near Quad-Cities Station

January through December 1981

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3.0 CHEMICAL USAGE

3.1 Introduction

The purpose of this section is to document chemical usage at the Quad-Cities Station including chlorine consumption (chlorine demand). A monthly log of chemicals used in connection with demineralizers and circulating, and service water is tabulated in compliance with U.S. Nuclear Regulatory Commission (1974) requirements. Data for this chapter were provided by personnel from the Station.

3.2 Field and Analytical Procedures

Water samples for chlorine analysis were collected at the Station's inlet water box. Free chlorine consumption was determined in accordance with surveillance requirements approved by the U.S. Nuclear Regulatory Commission (1974). These samples were collected through a bypass valve located at the inlet water box and were representative of intake cooling water used by the Station.

All samples were collected by Quad-Cities personnel and analyzed using a Wallace and Tiernan or Fischer and Porter Amperometric Titrator by method 409°C (A.P.H.A. et al. 1976), which has an analytical detection limit of 0.01 mg/l.

3.3 Results and Discussion

The results of chlorine analyses have been compiled in Table 3-1. A summary of monthly chemical use and consumption at the station has been tabulated in Table 3-2 to comply with U.S. Nuclear Regulatory Commission Specifications (1974).

3.4 References Cited

- A.P.H.A., A.W.W.A., and W.P.C.F. 1976. Standard methods for the examination of water and wastewater. 14th ed. Amer. Public Health Assn., Washington, D.C. 1193 pp.
- U.S. Nuclear Regulatory Commission. 1974. Appendix B to operating license DPR-29 and DPR-30: Non-radiological technical specifications and basis for Quad-Cities Station Unit 1 and Unit 2, Rock Island, Illinois. Commonwealth Edison Company and Iowa-Illinois Gas and Electric Company. Docket numbers 50-254 and 50-265. Washington, D.C. 15 pp.

TABLE 3-1

CHLORINE DOSE, FREE CHLORINE RESIDUAL, FREE CHLORINE CONSUMPTION AND SODIUM
HYPOCHLORITE INJECTION FLOW RATE INTO CONDENSERS AT THE
QUAD-CITIES STATION JANUARY THROUGH DECEMBER 1981
AS PROVIDED BY QUAD-CITIES STATION PERSONNEL

Date	Chlorine dose (mg/l-NAOCL)	Free Chloride Residue (mg/l)	Free Chlorine Consumption (mg/l)	Sodium Hypochlorite Injection Flow Rate into Condensers (gal./min.)
January 5, 1981	2.48	1.29	1.19	7.86
7	2.48	1.0	1.48	8.31
12	2.41	1.46	.95	7.48
14	2.41	1.42	.99	5.27
23	2.51	1.82	.69	7.08
25	2.48	1.82	.66	7.0
26	2.48	1.89	.59	4.83
31	2.48	1.89	.59	2.50
February 2, 1981	2.48	.75	1.73	2.91
4	1.25	.98	.27	6.42
9	2.95	1.32	1.63	8.60
13	2.95	.26	2.69	5.83
18	2.62	1.17	1.45	4.66
20	2.62	1.3	1.32	4.7
25	2.62	2.3	.32	6.5
26	2.55	1.65	.9	8.84
March 2, 1981	2.56	.30	2.26	10.97
6	2.56	.39	2.17	8.26
9	2.13	.38	1.75	8.73
11	1.92	.03	1.99	8.77
16	1.7	1.33	.368	6.58
18	2.1	1.46	.643	7.0
23	2.5	1.21	1.28	7.99
25	2.4	.66	1.75	8.77
April 1, 1981	2.34	.3	2.04	9.2
6	1.99	1.13	.85	7.34
8	2.20	1.04	1.16	7.81
13	2.06	.725	1.33	8.09
15	2.06	1.18	.88	7.64
20	1.77	1.58	.19	6.30
22	1.70	1.56	.14	6.22
29	1.77	.96	.82	7.27

TABLE 3-1 (CONTINUED)

Date	Chlorine dose (mg/l-NAOCL)	Free Chloride Residue (mg/l)	Free Chlorine Consumption (mg/l)	Sodium Hypochlorite Injection Flow Rate into Condensers (gal./min.)
May 1, 1981	1.56	.64	.92	7.44
4	1.99	1.33	.65	7.02
6	2.69	1.58	1.12	7.74
11	2.62	1.61	1.01	7.58
12	2.65	1.80	.85	7.58
18	1.99	1.60	.39	6.60
22	2.34	1.59	.75	4.30
25	2.34	.92	1.42	8.23
27	1.84	1.42	.42	6.66
June 1, 1981	2.34	0	2.49	9.9
3	2.84	1.1	1.74	5.72
10	2.70	.67	2.03	9.18
12	2.70	.22	2.48	9.87
15	2.06	.80	1.26	7.96
17	2.62	.94	1.68	8.62
22	3.12	1.53	1.59	8.48
29	.99	1.28	0	5.55
July 3, 1981	3.12	1.63	1.49	4.47
6	2.48	1.67	.81	7.27
8	2.41	1.25	1.16	7.81
13	2.48	.686	1.79	8.8
15	2.48	.58	1.90	8.96
20	2.69	1.27	1.42	8.22
22	2.41	1.50	.91	7.40
28	2.48	.74	1.74	8.72
29	2.48	1.81	.669	7.04
August 5, 1981	2.62	1.32	1.31	8.04
7	2.62	1.74	.89	7.39
10	1.63	1.48	.15	6.23
14	2.69	1.36	1.33	8.08
17	2.63	.9	1.73	8.73
19	2.63	1.26	1.37	8.07
25	2.69	0	2.80	10.37
28	2.69	.94	1.75	8.41
September 2, 1981	2.48	1.8	.68	6.51
4	2.48	2.33	.15	6.2
11	2.48	1.63	.86	5.78
12	2.48	1.35	1.13	7.77
14	2.48	1.4	1.08	7.69
16	2.48	.85	1.63	6.8
21	2.99	1.9	1.09	7.7
23	2.99	1.85	1.14	7.8
30	2.34	2.25	.09	3.27

TABLE 3-1 (CONTINUED)

Date	Chlorine dose (mg/l-NAOCL)	Free Chloride Residue (mg/l)	Free Chlorine Consumption (mg/l)	Sodium Hypochlorite Injection Flow Rate into Condensers (gal./min.)
October 2, 1981	2.34	1.9	.44	6.68
5	2.41	2.0	.41	6.65
7	2.41	1.6	.82	6.66
12	2.41	.71	1.70	8.65
14	2.48	1.18	1.30	8.03
20	.455	0	.65	7.02
23	2.37	1.09	1.28	8.00
26	2.65	2.16	.49	6.77
28	2.65	2.32	.33	6.53
November 2, 1981	2.27	2.01	.26	5.3
4	2.27	2.0	.27	5.3
9	2.27	2.21	.07	6.11
11	2.77	1.79	.49	6.77
16	2.13	2.11	.02	6.03
18	2.06	1.89	.16	6.25
23	2.29	1.78	.51	8.04
27	2.29	.99	1.30	8.04
30	2.36	1.00	1.36	8.12
30	2.36	2.09	.27	6.42
December 7, 1981	2.60	2.17	.43	6.67
7	2.60	2.02	.58	6.91
14	1.88	.43	1.45	2.7
18	2.39	2.04	.35	9.2
21	2.31	2.0	.31	9.13
23	2.48	1.25	1.23	7.92
29	2.69	2.00	.69	7.08
30	2.69	1.78	.92	7.43

TABLE 3-2
 CHEMICAL USAGE AND CONSUMPTION AT THE QUAD-CITIES STATION
 JANUARY THROUGH DECEMBER 1981 AS PROVIDED BY QUAD-CITIES
 STATION PERSONNEL

	Jan 81	Feb 81	Mar 81	Apr 81	May 81	June 81	July 81	Aug 81	Sept 81	Oct 81	Nov 81	Dec 81
<u>Demineralizers</u>												
Sulfuric Acid (H_2SO_4) (pounds)	13,666	8,685	11,580	9,650	6,755	10,615	11,736	9,650	12,545	9,650	26,523	13,510
Sodium Hydroxide (NaOH) (pounds)	5,827	3,000	3,900	3,000	2,100	2,100	4,327	3,300	3,600	2,400	7,881	3,900
<u>Circulating and Service Water</u>												
Sodium Hypochlorite (NaOCL) (pounds)	41,070	47,058	65,125	56,216	63,024	32,142	5,092	10,184	153,500	200,000	145,440	0
<u>Domestic Water and Sewage</u>												
Sodium Hypochlorite (NaOCL) (pounds)	20	20	20	20	20	20	20	20	20	20	20	20
<u>Closed Cooling Water</u>												
Sodium Nitrate ($NaNO_2$) (pounds)	47	29	40	0	0	6	55	48	38	76	40	38

CHAPTER 4
IMPINGEMENT INVESTIGATION

Operational Environmental Monitoring In The
Mississippi River Near Quad-Cities Station

January through December 1981

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4.0 IMPINGEMENT INVESTIGATION

4.1 Introduction

Evaluation of the nature and magnitude of fish impingement at the Quad-Cities Nuclear Power Station began in 1973, and has continued through this report period of January - December 1981.

Quad-Cities Station employs three protective structures to prevent submerged and floating debris, and fishes from entering the plant intake pumps and condenser tubes. The first of these structures is a floating boom at the mouth of the intake forebay designed to prevent the entrance of logs or large floating materials into the forebay. The second protective structure is a series of vertical bar grills with three-inch spacings which are located in front of the crib house entrance. Directly behind the bar grills are the standard traveling screens with 3/8 inch square openings which are employed to further reduce the entrainment of fishes and debris. Materials that are trapped on the vertical bar grills are removed by a mechanical lift and dumped into a trash basket. Small materials impinged by the intake current onto the traveling screens are retained on the screens until washed into trash baskets at pre-set time intervals or when screens are activated by a reduction in intake water volume due to the collection of debris. A schematic representation of the intake structure is present in Figure 4-1.

4.2 Field and Analytical Procedures

Fish and debris were allowed to accumulate for approximately 24 hours, four times per week in the trash baskets. This procedure was followed from January through the end of March. Collections were initiated twice per week from April through October 24, and four days per week from October 26 to December 31, 1981. Only small mesh (3/8" x 3/8") trash baskets were used during the period covered by this report. Fish contained in each 24-hour collection were identified, counted, and length range, average weight, total weight, and incidence of parasitism were recorded by species. Scientific and common names of all fishes reported follow Bailey (1970).

4.3 Results and Discussion

Results of counts, relative abundance, and weight determinations of impinged fish collected during January through December 1981 are presented in Table 4-1. A total of 26,802 fish were collected during 144 sampling days. Total number, weight, and fish species impinged and collected varied among the sampling dates. The five most abundant fish impinged were gizzard shad (68.2%), freshwater drum (20.1%), white bass (5.6%), channel catfish (2.0%), and bluegill (1.3%). The total weight of impinged fish was 541.2 Kg. The bulk of the catch by weight consisted of gizzard shad and freshwater drum. For most fish species, the average weights indicated that young-of-the-year and juveniles accounted for the majority of impinged fishes.

Table 4-2 lists the occurrence of parasites or diseases of impinged fishes for the January through December 1981 period. A single specimen mud darter, listed as threatened in Iowa (Roosa 1977), was collected in 1981 (Table 4-1).

No threatened or endangered species listed by the State of Illinois or the U.S. Fish and Wildlife Service (Miller 1972, Smith 1979) were observed in impingement collections.

4.4 Summary and Conclusions

The most abundant fishes impinged during January through December 1981 were juvenile and young-of-the-year gizzard shad and freshwater drum. The majority of additional species impinged also consisted of young-of-the-year and juveniles.

4.5 References Cited

- Bailey, R. M. 1979. A list of common and scientific names of fishes from the United States and Canada. 3rd. ed. Am. Fish. Soc. Spec. Publ. 6, 150 pp.
- Miller, R. R. 1972. Threatened freshwater fishes of the United States. Trans. Am. Fish. Soc. Vol. 101, No. 2, 239-252.
- Smith, W. P. 1979. The fishes of Illinois. University of Illinois Press, Urbana, Illinois, 314 p.
- Roosa, D. M. 1977. Endangered and threatened fish of Iowa. Special report of the Preserves Board No. 1, Des Moines, Iowa. 25 pp.

TABLE 4-1

NUMBER, TOTAL WEIGHT, AVERAGE WEIGHT PER FISH, RELATIVE ABUNDANCE, AND TOTAL LENGTH RANGE OF FISH
REMOVED FROM TRAVELING INTAKE SCREENS AND COLLECTED FROM TRASH BASKETS
AT QUAD-CITIES STATION, JANUARY THROUGH DECEMBER 1981

Species	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total Weight (g)	Average Weight	Total Number	Percent of Total Catch	Total Length Range
Silver lamprey	1		5	1	4					1			533	44.4	12	0.1	232-340
Paddlefish	1												270	270.0	1	<0.1	510
Longnose gar	1	1	1	1	2		8	4	2	13	11	3	2,319	49.3	47	0.2	129-402
Shortnose gar	1	1	1		1		11	2	2	4	5		4,052	144.7	28	0.1	107-429
Snowfin			2		6	1	1	3					2,701	207.8	13	0.1	79-403
Gizzard shad	15,347	572	35	15	25	142	917	152	178	537	314	45	349,021	19.1	18,279	68.2	40-374
Mooneye	25	3	6	8	29	8	17	3	6	2	2		7,938	72.8	109	0.4	72-338
Northern pike			1	2		10	6			2			16,024	763.1	21	361-692	
Carp			1			1	3	5	2		2		4,170	297.9	14	0.1	75-497
Silver chub	1	1	1			1	7	4	8	3			420	16.2	26	0.1	69-157
Emerald shiner	1			1	1	1	2		7				26	2.0	13	0.1	62-83
River shiner			4										14	3.5	4	<0.0	86-98
Spottail shiner			2	1	1	3		2					28	3.1	9	<0.1	55-87
Bullhead minnow							1						1	1.0	1	<0.1	49
Creek chub		1											77	77.0	1	<0.1	192
River carpsucker	2						2	1	2	1			1,901	237.6	8	<0.1	93-365
Quillback					1	1				1			202	67.3	3	<0.1	108-254
Highfin carpsucker	2												525	262.5	2	<0.1	170-334
Smallmouth buffalo	4	2	2	2	6	5	1			2	1		4,616	184.6	25	0.1	110-511
Bigmouth buffalo							1						1,461	1,461.0	1	<0.1	443
Moxostoma sp.					1								12	12.0	1	<0.1	130
Silver redhorse						1							24	24.0	1	<0.1	136
Golden redhorse	1												39	39.0	1	<0.1	158
Shorthead redhorse		1	3			7		1					1,913	159.4	12	0.1	92-410
Black bullhead	2		5	2		1	1						282	25.6	11	<0.1	53-196
Yellow bullhead			3			1							80	20.0	4	<0.1	79-144
Channel catfish	79	130	169	11	3	5	57	21	33	6	26	12	16,305	29.5	552	2.1	42-552
Tadpole madtom			1			1							13	6.5	2	<0.1	74-115
Flathead catfish	17	5	22				3	1	1		7	2	4,296	74.1	58	0.2	41-485
White bass	74	14	22	50	15	31	983	205	48	33	23	2	13,480	9.0	1,500	5.6	35-255
Green sunfish	2				1	1				1			107	21.4	5	<0.1	53-130
Pumpkinseed					2								133	66.5	2	<0.1	126-157
Orange spotted sunfish	2		1		1	2	1		1				74	9.3	8	<0.1	47-105
Bluegill	1	3	25	11	44	130	20	15	36	24	16	15	10,523	31.0	340	1.3	32-196
Smallmouth bass										1			23	23.0	1	<0.1	108
Largemouth bass	1				2	12	1		6	5	6		2,332	70.7	33	0.1	59-314

TABLE 4-1 (CONTINUED)

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Total Weight (g)	Average Weight	Total Number	Percent of Total Catch	Total Length Range
White crappie	8	1		3	4	25	3	3	5	3	2	1	3,845	66.3	58	0.2	58-305
Black crappie	5	2	8		5	91	11	6	9	7	3	5	10,224	67.3	152	0.6	50-287
Yellow perch			6	1		1				2			287	26.1	11	<0.1	70-208
Log perch			2										11	5.5	2	<0.1	77-95
Mud darter			1										3	3.0	1	<0.1	67
Sauger			5	2	12	19	1		1	2			2,935	69.9	42	0.2	114-304
Freshwater drum	495	406	373	327	259	105	456	139	1,889	859	56	30	77,935	14.5	5,394	20.1	41-425
Total Number	16,074	1,143	707	438	425	606	2,514	567	2,236	1,509	474	115			26,808		
Total species	24	15	27	16	22	26	24	17	18	21	14	9			43		
Total weight	298,208	39,013	18,891	13,849	25,395	37,007	21,577	9,880	18,341	36,225	18,680	4,109	541,175				
Sampling days	15	7	4	1	5	6	9	7	4	8	6	4			76		

TABLE 4-1 (CONTINUED)

Taxa	Total weight (g)	Average weight	Total Number	Percent of Total Catch	Total length range
Chestnut lamprey	71	71.0	1	<0.1	320
Silver lamprey	789	39.5	20	0.1	203 - 362
Lepisosteus sp.	1	1.0	1	<0.1	87
Longnose gar	6,979	166.2	42	0.1	210 - 600
Shortnose gar	17,329	228.0	76	0.2	117 - 615
Bowfin	30,128	164.6	183	0.5	94 - 535
Gizzard shad	466,584	18.8	24,802	70.2	36 - 367
Mooneye	24,604	36.1	681	1.9	103 - 329
Brown trout	59	59.0	1	<0.1	199
Central mudminnow	70	10.0	7	<0.1	78 - 115
Grass pickerel	32	32.0	1	<0.1	182
Northern pike	31,374	108.2	290	0.8	145 - 545
Cyprinidae	2	2.0	1	<0.1	60
Carp	8,117	541.1	15	0.1	58 - 499
Hybopsis sp.	11	11.1	1	<0.1	107
Silver chub	224	18.7	12	<0.1	89 - 172
Golden shiner	63	15.8	4	<0.1	83 - 137
Notropis sp.	14	14.1	1	<0.1	128
Emerald shiner	509	3.9	132	0.4	56 - 151
Spottail shiner	86	3.0	29	0.1	54 - 88
Creek chub	7	7.0	1	<0.1	107
Pimephales sp.	219	54.8	4	<0.1	136 - 216
Catostomidae	4	4.0	1	<0.1	83
Carpiodes sp.	67	6.7	10	<0.1	46 - 102
River carpsucker	3,087	106.4	29	0.1	64 - 432
Quillback	2,255	98.0	23	0.1	87 - 340
Highfin carpsucker	122	122.0	1	<0.1	223
Smallmouth buffalo	9	3.0	3	<0.1	58 - 71
Bigmouth buffalo	4,527	46.7	97	0.3	57 - 118
Moxostoma sp.	424	106.0	4	<0.1	70 - 270
Ictalurus sp.	15	7.5	2	<0.1	112 - 113
Black bullhead	858	23.2	37	0.1	54 - 123
Yellow bullhead	101	33.7	3	<0.1	62 - 185
Channel catfish	12,265	16.4	750	2.1	30 - 437
Stone cat	66	22.0	3	<0.1	62 - 145
Tadpole madtom	43	4.8	9	0.1	61 - 98
Flathead catfish	5,094	46.3	110	0.3	55 - 555
White bass	12,137	26.3	462	1.3	48 - 345
Lepomis sp.	781	5.0	155	0.4	34 - 137
Green sunfish	80	16.0	5	<0.1	54 - 130
Orange spotted sunfish	93	5.2	18	<0.1	49 - 175
Bluegill	5,873	19.0	309	0.9	37 - 195
Largemouth bass	1,829	166.3	11	<0.1	67 - 307

TABLE 4-1 (CONTINUED)

Taxa	Total weight (g)	Average weight	Total Number	Percent of Total Catch	Total length range
White crappie	9,134	30.1	303	0.9	42 - 272
Black crappie	6,204	50.4	123	0.3	54 - 235
Percina sp.	3	3.0	1	<0.1	63
Mud darter	350	29.2	12	0.1	80 - 240
Yellow perch	1	1.0	1	<0.1	56
Logperch	75	4.7	16	0.1	59 - 91
River darter	22	3.1	7	0.1	61 - 77
Sauger	2,382	39.0	61	0.2	82 - 340
Walleye	3,145	349.4	9	0.1	57 - 544
Freshwater drum	127,175	19.8	6,426	18.2	32 - 385
Total number			35,320		
Total weight	786,066				

1/ Numbers based on 4 collections per week

2/ Numbers based on 2 collections per week

TABLE 4-2

EXTERNAL PARASITES OF IMPINGED FISHES ENCOUNTERED DURING IMPINGEMENT
STUDIES AT QUAD-CITIES STATION, JANUARY THROUGH DECEMBER 1981

Month	Infected Species	Disorder	Number Afflicted
January	Gizzard shad	Fungus	1
	Freshwater drum	Popeye	1
February	Gizzard shad	Fungus	2
March	Silver lamprey	Fungus	1
	Channel catfish	Fungus	3
	White bass	Fungus	2
	Freshwater drum	Fungus	1
	Freshwater drum	Popeye	1
April	Mooneye	Fungus	1
	Smallmouth buffalo	Fungus	1
	White bass	Fungus	10
	White bass	Hemorrhagic Septicemia	4
	Freshwater drum	Fungus	7
	Freshwater drum	Hemorrhagic Septicemia	2
		Septicemia	
May	White bass	Fungus	2
	Bluegill	Fungus	1
	Freshwater drum	Fungus	4
	Freshwater drum	Popeye	5
June	Mooneye	Fungus	1
July	None		
August	None	None	
September	Largemouth Bass	Popeye	1
October	White Bass	Popeye	2
	Freshwater Drum	Fungus	1
	Freshwater Drum	Popeye	4
	Freshwater Drum	Eyeworm	9
November	Freshwater Drum	Eyeworm	4
December	Gizzard shad	Fungus	1
	Freshwater drum	Fungus	1
	Freshwater drum	Eyeworm	1

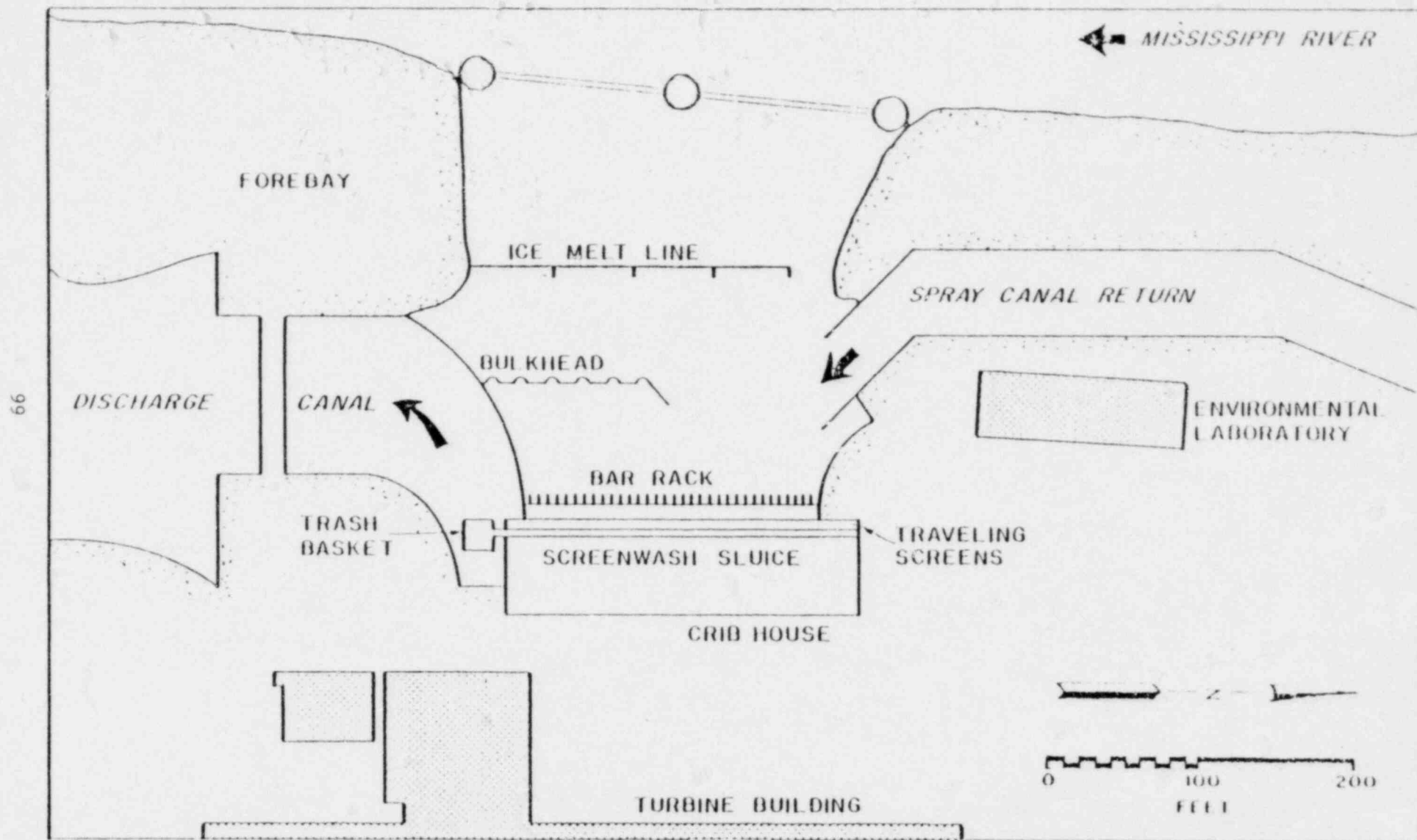


Figure 4-1. Schematic Representation of the Quad-Cities Station Intake Forebay.

APPENDIX A

(Related to Chapter 2 of Text)

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND
MEAN WATER TEMPERATURES

QUAD-CITIES STATION

January through December 1981

TABLE A-1

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND MEAN WATER
TEMPERATURES (°F) QUAD-CITIES STATION, JANUARY 1981

Day	Upstream			Intake			Cooling Canal, Cold End			Discharge			Downstream		
	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1	32.3	32.9	32.6	32.3	33.3	33.0	79.1	82.5	81.1	2/			27.9	34.6	31.2
2	32.3	32.8	32.6	32.6	33.3	32.9	82.4	84.2	83.3				27.6	34.7	31.1
3	32.1	32.8	32.5	32.2	33.3	32.8	76.8	84.0	79.1				27.9	34.5	31.1
4	32.1	32.8	32.4	32.4	33.4	32.8	73.1	78.8	75.8				27.7	34.9	31.0
5	32.2	33.0	32.6	32.7	33.5	33.1	74.6	80.0	77.5	51.3 ^{1/}	93.3	89.1	27.8	34.7	31.1
6	32.3	33.0	32.6	32.8	33.6	33.2	75.2	79.1	77.8	92.9	95.4	94.3	28.0	34.6	30.8
7	32.3	34.4	32.8	32.8	33.4	33.1	75.2	79.0	76.8	93.2	96.8	94.8	28.0	34.9	33.3
8 ^{1/}	33.0	34.4	33.8	33.2	33.8	33.4	75.2	79.0	77.4	88.2	97.1	89.3	28.4	34.9	32.2
9	32.9	33.5	33.2	33.0	33.6	33.3	74.6	75.4	74.8	81.6	88.0	87.0	31.6	34.1	33.0
10	32.9	33.3	33.0	33.2	33.4	33.3	55.2	74.7	61.4	60.5	79.5	63.5	31.1	34.0	32.5
11	32.8	33.0	32.9	33.2	33.5	33.3	51.0	54.8	52.2	57.4	60.1	58.2	30.9	33.7	32.3
12	32.6	33.0	32.8	33.2	33.6	33.4	50.7	65.1	56.0	57.7	76.0	65.8	30.7	34.0	32.5
13	32.3	33.0	32.7	32.9	33.6	33.3	65.4	69.3	68.0	76.4	79.4	78.3	31.5 ^{1/}	33.9	32.8
14 ^{1/}	32.4	33.1	32.8	32.7	33.4	33.1	69.1	73.0	70.7	79.7	85.2	82.1	31.5 ^{1/}	34.0	33.0
15	32.5	33.0	32.7	32.6	33.1	32.8	70.7	74.2	72.7	84.6	86.5	85.6	32.4	34.0	33.2
16	32.6	33.0	32.8	32.6	33.2	33.0	70.6	72.5	71.6	80.6	86.3	84.8	32.2	34.0	33.2
17	32.7	33.0	32.9	32.9	33.6	33.2	63.7	76.0	67.4	72.1	80.5	76.3	31.8	34.0	33.2
18	32.9	33.3	33.0	33.1	33.9	33.4	69.4	76.8	72.8	79.7	88.0	84.0	32.4	34.2	32.8
19	32.7	33.2	33.0	33.0	34.1	33.5	75.7	80.0	78.1	88.2	92.6	90.2	32.4	34.0	33.5
20 ^{1/}	32.7	33.4	33.0	33.2	34.4	33.7	78.7	81.2	80.2	92.6	95.0	93.4	32.7	34.3	33.6
21	32.7	33.2	33.0	33.4	34.1	33.6	76.8	78.3	77.6	91.5	93.1	92.4	32.7	34.3	33.6
22	32.8	33.4	33.0	33.3	34.4	33.7	76.8	79.1	78.0	90.5	93.4	92.2	32.6	34.4	33.6
23	32.8	33.4	33.0	33.4	34.6	33.3	73.4	78.2	75.6	86.2	89.7	87.9	32.3	34.2	33.5
24	32.7	33.2	32.9	33.4	34.9	34.0	70.5	76.6	73.2	80.1	85.5	82.8	32.2	34.4	33.6
25	32.7	33.2	33.0	33.7	35.1	34.2	74.0	78.8	76.4	85.6	91.0	88.6	32.4	34.4	33.7
26	32.4	33.0	32.7	33.1	33.8	33.4	73.7	77.4	75.4	88.3	90.9	89.4	32.6	34.0	33.4
27	31.8	33.1	32.8	33.1	33.5	33.3	76.0	78.2	77.4	91.3	93.3	92.6	32.6	34.0	33.4
28	32.4	32.7	32.5	33.0	33.6	33.2	74.6	76.2	75.4	90.7	92.7	91.3	29.9	34.0	33.0
29 ^{1/}	32.2	32.6	32.4	30.5	33.4	32.0	74.0	76.9	75.6	86.1	91.6	88.9	29.7	34.5	33.0
30	32.3	32.7	32.5	30.5	31.2	30.7	74.4	78.5	76.9	70.5	88.0	84.4	29.9	34.5	33.1
31	31.3	32.6	32.4	30.3	34.5	31.8	58.8	72.0	64.0	65.6	77.6	68.6	31.0	33.9	32.9

^{1/} Instruments zeroed to ground truth data

^{2/} Sensor malfunction - no data

TABLE A-2

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND MEAN WATER
TEMPERATURES (°F) QUAD-CITIES STATION, FEBRUARY 1981

Day	Upstream			Intake			Cooling Canal, Cold End			Discharge			Downstream		
	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1	32.2	32.5	32.4	30.0	30.5	30.3	5.08	62.0	58.1	64.5	69.1	66.8	31.1	33.7	32.9
2	32.1	32.9	32.8	29.9	30.8	30.4	45.9	58.2	51.2	45.2	64.3	53.2	30.8	33.8	32.8
3	32.3	32.9	32.6	30.2	30.8	30.6	51.9	66.6	58.9	55.2	75.2	66.6	31.0	34.2	33.1
4	32.4	32.8	32.6	30.4	30.8	30.6	67.0	76.5	68.6	75.7	79.5	78.0	31.1	34.3	33.2
5	32.5	32.9	32.6	30.4	30.8	30.6	60.0	73.0	70.4	78.4	82.3	79.8	31.2	34.2	33.2
6	32.5	33.0	32.7	30.6	30.9	30.8	73.0	76.9	74.8	80.6	85.4	83.2	31.3	32.9	32.3
7	32.6	32.9	32.7	30.7	31.0	30.8	69.5	74.1	72.1	78.4	81.1	79.9	31.6	34.7	33.5
8	32.5	32.9	32.7	30.5	30.9	30.7	66.2	73.0	69.2	75.8	83.2	79.0	31.3	34.6	33.4
9	32.6	32.8	32.7	30.6	30.9	30.7	73.1	75.8	74.4	83.6	86.0	84.7	31.4	34.0	33.5
10	32.5	32.8	32.6	30.6	30.9	30.7	66.5	75.5	71.6	77.2	86.7	81.0	31.3	34.8	33.4
11	32.3	32.8	32.5	30.1	30.8	30.5	63.9	69.0	65.8	75.6	81.5	77.6	30.8	34.5	33.1
12	32.6	32.8	32.7	30.4	34.6	32.5 ^{1/}	69.4	80.6	74.6 ^{1/}	81.4	91.9	86.3 ^{1/}	31.1	34.4	33.2
13	32.4	32.8	32.6	34.4	34.6	34.5	80.0	84.4	82.2	91.3	95.6	93.4	31.2	35.0	33.0
14	32.4	32.7	32.5	34.5	34.4	34.7	83.1	86.6	84.9	93.8	96.7	95.2	31.3	35.6	33.5
15	32.4	32.9	32.6	34.6	35.1	34.8	83.5	87.4	85.6	92.4	97.4	95.1	31.6	35.4	33.6
16	32.3	32.8	32.6	34.6	35.4	34.9	86.9	90.8	88.8	96.5	100.0	89.2	32.0	35.1	33.7
17	32.2	32.9	32.5	34.6	36.8	35.4	87.3	91.0	89.3	96.0	100.0	98.0	31.9	34.7	32.8
18 ^{1/}	32.3	32.9	32.5	33.9	36.3	34.9	85.2	90.1	87.8	95.7	98.3	96.8	31.9	34.7	33.6
19	32.0	32.5	32.3	33.4	34.6	33.9	84.8	87.7	86.0	94.8	98.7	96.8	31.9	34.3	33.5
20	32.0	33.2	32.6	33.3	35.7	34.3	85.0	89.3	87.0	96.3	99.5	97.9	31.5	34.9	33.0
21	32.4	32.9	32.7	33.9	34.9	34.5	81.0	86.1	83.0	93.1	97.4	94.7	31.9	34.9	33.6
22	32.4	32.9	32.7	34.3	34.8	34.6	82.5	85.2	84.2	93.2	96.1	95.1	31.3	37.5	34.0
23	32.1	32.6	32.4	33.1	34.2	33.5	80.5	82.7	81.6	91.9	94.1	93.0	30.9	37.0	33.7
24	31.8	32.9	32.4	32.9	34.4	33.5	80.9	85.4	83.0	92.1	95.8	93.8	31.1	37.6	33.9
25 ^{1/}	32.4	33.4	32.9	34.0	35.9	35.9	83.4	86.2	84.8	94.3	99.5	96.7	31.7	35.7	34.0
26	33.0	33.4	33.2	35.0	36.5	35.7	81.4	84.5	82.9	96.7	98.5	97.3	30.8	36.0	33.8
27	33.0	33.5	33.2	35.1	36.5	35.9	81.6	87.3	84.0	89.1	99.3	96.7	30.9	36.4	33.8
28	33.2	33.6	33.4	36.0	37.0	36.5	69.1	84.0	73.0	76.5	88.1	80.1	31.6	36.4	34.0

^{1/} Instrument zeroed to ground truth data.

TABLE A-3

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND MEAN WATER TEMPERATURES (°F)

QUAD-CITIES STATION MARCH 1981

Day	Upstream			Intake			Cooling Canal, Cold End			Discharge			Downstream		
	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1	32.9	33.4	33.2	35.1	45.1	37.5	66.0	72.1	68.7	62.9	77.6	72.3	30.7	36.0	33.6
2	32.5	33.1	32.9	34.6	36.3	35.2	51.2	60.7	54.8	53.8	61.6	58.0	30.5	35.5	33.3
3 ^{1/}	32.8	33.4	33.0	33.4	35.4	34.8	56.0	62.9	59.4	61.4	72.3	66.6	30.7	35.9	32.4
4	32.9	33.1	33.5	33.2	35.0	34.3	63.4	68.0	65.9	72.0	88.3	74.9	32.9	35.4	34.6
5	33.2	34.0	33.6	33.9	35.9	34.7	63.4	65.4	63.6	71.3	80.0	73.4	33.6	36.8	35.0
6	33.4	34.4	34.0	31.1	46.8	35.2	66.8	76.4	72.6	81.4	91.3	87.4	34.0	37.5	34.6
7	33.6	34.3	33.9	34.0	36.6	35.2	76.7	81.7	79.0	91.7	97.1	94.3	34.1	37.6	35.6
8	33.5	35.1	34.2	34.1	37.8	36.1	80.5	86.0	83.5	95.5	102.2	99.2	34.3	39.0	36.5
9 ^{1/}	34.1	39.0	36.3	35.8	38.6	37.4	85.3	87.3	86.3	101.0	102.9	101.7	34.7	40.4	37.5
10	38.3	39.9	38.7	37.6	39.0	39.4	85.2	86.9	85.9	99.8	101.7	100.5	36.9	40.3	38.4
11	38.3	39.1	38.8	37.6	39.5	38.6	84.3	86.4	85.2	98.8	100.8	99.9	37.5	41.0	38.9
12	38.6	39.9	39.3	38.4	40.8	39.6	84.3	87.5	86.0	98.6	101.8	100.4	37.7	42.1	39.7
13	39.1	40.3	39.8	39.5	41.9	40.6	91.2	87.7	86.0	89.5	101.7	98.4	37.9	42.0	39.6
14	39.6	40.7	40.1	39.8	43.1	41.4	75.4	83.3	79.6	86.5	97.2	92.2	38.3	42.6	39.5
15	39.8	41.6	40.6	40.3	44.2	42.4	75.7	83.6	78.9	81.8	95.6	88.0	38.4	44.1	41.4
16	40.4	41.8	41.1	41.1	44.9	43.1	79.4	83.8	81.5	93.0	97.7	95.2	38.9	44.5	42.2
17	40.2	41.0	40.6	41.5	43.5	42.6	83.1	84.5	83.8	97.2	100.0	98.6	38.8	43.7	41.1
18	39.5	40.3	39.9	40.1	42.1	41.2	82.6	84.4	83.4	98.9	100.1	99.2	38.4	42.9	40.9
19 ^{1/}	39.1	39.7	39.4	39.2	40.9	40.0	82.1	84.1	82.8	98.1	99.6	98.7	38.1	41.6	40.1
20	38.9	29.9	39.4	38.6	41.0	39.8	83.6	86.1	84.8	92.4	101.0	99.2	38.2	42.4	40.6
21	39.5	40.9	40.1	39.5	42.4	40.9	73.6	86.0	78.5	83.8	95.4	89.8	38.2	43.6	41.1
22	40.2	41.5	40.9	41.5	44.0	42.8	79.4	83.8	81.7	91.0	97.5	94.1	38.9	45.5	42.2
23	41.0	41.9	41.4	43.0	45.3	44.2	83.9	90.1	87.2	98.2	104.7	101.6	39.6	46.7	43.0
24	41.1	42.3	41.8	44.2	46.6	45.4	88.3	91.6	90.2	102.5	106.0	104.5	40.9	48.3	44.4
25 ^{1/}	41.9	42.6	42.2	45.4	46.4	45.9	87.8	90.2	89.2	103.1	105.6	104.5	41.5	48.5	44.6
26 ^{1/}	42.3	46.4	43.9	46.0	47.4	46.7	89.0	92.6	91.3	102.1	106.9	105.3	41.7	47.9	45.7
27	46.4	47.0	46.7	47.0	48.9	48.3	87.6	88.9	88.0	102.2	104.4	103.8	46.3	47.9	46.8
28	46.1	47.4	46.6	47.7	49.7	48.8	88.4	93.5	90.6	103.2	108.0	105.6	46.1	49.2	47.3
29	47.1	48.0	47.5	49.6	51.5	50.5	75.4	93.0	81.5	84.2	95.9	88.4	46.7	50.8	48.5
30	47.8	48.2	48.0	51.3	52.6	51.8	75.0	88.2	81.7	86.5	101.9	95.4	47.0	51.5	48.9
31	48.0	49.1	48.6	51.9	55.0	53.3	86.4	89.0	87.8	101.5	103.6	102.2	47.4	52.7	50.4

^{1/} Instruments zeroed to ground truth data^{2/} Recorder not printing for part of month, minimum shown may not be true minimum.

TABLE A-4

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND MEAN WATER
TEMPERATURES (°F) QUAD-CITIES STATION, APRIL 1981

Day	Upstream			Intake			Cooling Canal, Cold End			Discharge			Downstream		
	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1	48.3	49.2	48.8	52.1	54.4	53.3	83.4	89.6	85.7	100.1	106.0	102.0	47.5	52.3	49.9
2 ^{1/}	48.3	52.1	50.2	51.4	53.1	52.4	89.9	93.6	91.3	105.9	108.6	106.9	47.4	52.5	50.6
3	51.6	53.0	52.2	51.6	54.5	53.0	85.0	43.4	40.0	48.0	108.7	103.0	50.1	54.1	52.3
4	51.8	52.9	52.3	51.8	54.2	53.0	76.1	84.8	79.4	92.0	97.1	93.8	50.6	53.9	52.5
5 ^{2/}	50.6	51.6	51.0	49.1	51.5	50.2	76.9	88.6	80.9	90.5	105.6	96.8	48.9	51.8	49.5
6	50.6	51.4	50.9	48.6	51.1	49.5	89.3	92.4	90.9	106.0	108.5	107.1	49.0	51.1	49.8
7	51.0	51.4	51.2	49.2	51.5	50.5	90.4	95.4	92.5	106.4	109.8	108.0	49.1	51.4	50.1
8	51.4	52.9	51.9	50.6	51.9	51.4	83.1	94.8	90.7	95.3	109.1	99.1	49.4	52.2	50.4
9	51.2	52.6	52.0	51.7	52.5	52.1	85.5	94.4	92.0	94.4	108.8	102.5	49.2	52.6	51.0
10	51.9	52.6	52.0	51.7	52.5	52.1	85.5	94.4	92.0	94.4	108.8	102.5	49.2	52.6	51.0
11 ^{3/}	52.1	71.6	55.0	52.1	53.7	53.1	82.7	85.1	84.5	93.1	95.4	94.1 ^{3/}	48.7	53.4	51.5
12 ^{4/}	68.4	69.0	68.7	51.1	53.6	53.2	78.8	83.5	81.6	91.2	96.0	93.7 ^{5/}	50.0	55.8	51.6
13 ^{1/}				51.2	54.9	53.1	83.1	88.6	85.9	94.9	99.1	97.2 ^{6/}	48.7	57.5	56.2
14				54.4	55.6	54.9	81.3	92.1	86.4	94.3	107.5	101.3	53.6	57.5	55.2
15				53.6	54.9	54.2	84.2	93.4	89.7	96.2	108.0	101.9	52.9	60.6	55.6
16 ^{1/}				53.2	54.8	53.9	82.8	84.1	83.5	95.0	95.9	95.4	53.2	60.6	55.8
17				53.4	56.6	55.1	84.6	84.1	86.9	95.8	99.4	97.8	53.6	60.5	56.8
18				56.4	57.8	56.9	83.1	87.0	85.4	96.2	98.9	97.6	55.9	63.0	58.2
19				54.7	56.8	56.1	81.5	84.6	83.0	95.2	96.4	95.7	54.3	61.9	51.8
20				52.6	55.0	54.0	77.5	90.0	83.2	91.3	106.0	98.7	52.6	61.1	56.1
21 ^{2/}				51.7	55.0	53.3	89.5	93.8	86.8	105.6	108.4	106.9	52.6	60.1	55.8
22 ^{1/}	53.6	54.2	54.0	52.7	54.4	53.4	85.9	95.0	91.9	96.3	108.9	98.8	53.1	60.6	55.5
23	51.7	53.6	53.1	51.5	53.6	52.9	78.4	86.0	82.0	91.7	102.1	96.4	51.9	55.9	54.2
24	50.0	51.5	51.0	49.5	51.2	50.4	86.0	91.9	89.1	102.0	106.0	104.1	50.1	55.0	52.2
25	49.9	51.9	50.9	49.3	452.4	50.8	81.2	92.0	89.6	83.6	106.1	98.9	50.3	54.1	52.2
26 ^{1/}	51.4	54.0	52.8	50.6	55.0	52.9	70.1	80.4	73.4	72.0	80.4	74.0	51.6	54.6	53.6
27 ^{2/}	52.9	56.6	55.0	53.1	57.9	55.5	70.4	82.1	74.5	74.0	87.1	78.8	53.1	57.0	55.3
28	56.0	57.6	56.6	56.5	57.5	56.9	82.0	85.2	83.3	87.4	94.7	91.0	56.0	58.9	56.9
29	55.4	56.9	56.4	56.4	57.4	56.8	80.4	83.1	81.3	90.2	94.9	91.8	55.6	57.4	56.6
30 ^{1/}	55.1	57.6	56.6	55.7	58.1	57.0	82.8	85.0	84.0	94.6	97.9	96.3	55.6	58.4	57.1

^{1/} Instruments zeroed to ground truth data.^{2/} Recorder not printing^{3/} Thunderstorm^{4/} Being adjusted by I.M.^{5/} Sensor A out and needs replacement^{6/} Adjusted sensor #10^{7/} Changed to daylight savings time.^{8/} Upstream sensor out and needs replacement.

TABLE A-5

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND MEAN WATER
TEMPERATURES (°F) QUAD-CITIES STATION, MAY 1981

Day	Upstream			Intake			Cooling Canal, Cold End			Discharge			Downstream		
	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1	56.7	57.7	57.2	56.7	58.3	57.4	82.1	84.9	83.4	95.9	97.2	96.5	56.3	59.0	57.6
2	56.1	58.5	57.2	56.1	59.2	57.5	81.7	83.9	83.1	94.9	97.8	96.4	55.9	58.6	57.4
3	57.0	59.0	58.1	57.1	60.2	58.5	81.9	85.1	83.5	94.1	98.0	96.5	56.4	59.4	58.0
4	57.9	59.3	57.5	58.1	59.9	59.1	84.0	89.4	86.6	96.9	100.6	98.8	57.4	69.7	59.2
5 ^{1/}	58.6	59.1	58.9	58.9	59.5	59.3	85.8	89.6	87.5	98.4	100.6	99.4	58.1	60.6	59.0
6	56.5	58.5	57.6	56.6	59.0	57.9	80.4	86.0	82.2	94.9	98.5	96.0	56.1	60.6	58.4
7	56.6	57.7	57.3	56.5	58.6	57.7	81.1	84.9	83.0	95.0	97.4	96.2	56.1	60.5	58.3
8	57.4	59.1	58.2	57.6	59.0	58.4	82.5	85.6	84.0	95.9	97.9	96.9	56.9	61.9	60.0
9	57.4	59.6	58.8	57.5	60.4	59.7	84.0	86.0	85.1	94.5	97.1	96.0	56.9	62.0	59.3
10	54.5	60.1	57.5	54.5	59.9	57.7	72.9	82.9	76.0	85.9	94.9	89.4	54.4	62.5	59.0
11	53.1	55.1	53.9	53.0	55.0	54.2	74.0	91.0	80.8	86.6	106.0	95.6	52.9	61.1	56.4
12	55.3	56.6	56.0	54.9	56.4	56.0	83.9	91.4	88.6	96.0	106.6	101.0	55.0	59.7	57.1
13	56.1	56.9	56.4	56.5	56.8	56.6	81.5	83.5	82.9	94.6	96.1	95.4	55.8	59.9	57.4
14	54.6	57.2	55.7	53.6	57.1	55.4	80.1	90.9	83.6	93.9	106.0	98.7	54.4	60.1	56.9
15	54.4	58.2	55.7	54.4	57.6	55.8	86.6	94.6	87.2	97.8	107.3	102.4	54.2	59.6	56.8
16 ^{1/}	58.5	62.0	60.0	58.0	60.4	59.4	85.0	87.4	86.3	96.5	99.4	98.0	57.9	61.6	59.3
17	60.6	62.7	61.5	59.4	61.2	60.4	80.7	86.4	82.7	92.7	97.6	94.8	58.1	63.0	60.4
18	58.3	60.6	59.3	56.4	59.3	58.0	77.9	81.4	79.3	92.6	95.6	94.0	56.2	62.4	58.9
19 ^{1/}	57.9	59.4	58.3	56.4	58.4	57.1	78.8	84.1	81.7	93.0	97.2	95.2	56.1	61.4	58.4
20	57.9	62.0	60.3	56.6	62.0	59.5	83.1	88.9	86.1	96.6	101.9	99.3	57.9	61.4	60.2
21	61.0	65.0	64.1	60.4	65.2	62.7	85.5	89.1	87.8	97.9	103.6	101.2	60.5	64.4	62.5
22	63.5	65.3	64.3	63.0	65.4	64.0	87.4	89.0	88.2	93.1	103.0	100.9	62.8	65.1	63.7
23	62.1	65.1	64.5	64.1	65.2	64.6	78.1	88.1	80.3	84.6	100.0	87.5	62.4	65.1	63.9
24	64.2	66.5	65.4	65.5	66.3	65.5	76.1	88.8	81.8	84.4	102.1	92.2	62.9	66.1	64.4
25	65.1	67.4	66.2	64.8	68.1	66.4	75.7	86.1	80.5	84.4	97.9	91.6	63.5	66.7	65.7
26 ^{1/}	66.0	68.7	67.1	66.0	69.0	67.5	85.5	87.4	86.1	97.2	102.1	99.6	65.2	70.0	67.7
27	66.9	69.6	68.2	67.4	70.6	68.8	85.7	90.1	87.9	101.7	107.0	104.1	67.0	71.4	68.9
28	68.0	70.1	69.1	68.6	71.1	69.8	87.0	92.9	89.9	103.1	108.9	106.2	67.7	72.4	69.8
29	68.7	71.4	70.0	64.4	72.0	71.0	76.0	92.6	89.2	94.2	108.4	100.0	68.5	74.3	69.2
30	70.0	71.4	70.9	70.6	72.6	71.5	73.2	93.5	87.8	96.0	107.9	103.8	70.2	74.2	71.8
31	69.1	71.4	70.2	69.9	72.4	71.2	92.6	96.0	94.1	105.9	110.9	108.7	68.6	73.5	71.2

^{1/} Instruments zeroed to ground truth data.

TABLE A-6

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND MEAN WATER
TEMPERATURES (°F) QUAD-CITIES STATION, JUNE 1981

Day	Upstream			Intake			Cooling Canal, Cold End			Discharge			Downstream		
	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1	69.9	72.1	70.9	70.4	72.9	71.7	94.1	97.1	95.7	109.4	112.0	110.9	69.6	74.1	71.8
2 ^{1/}	69.4	72.1	70.9	70.4	73.1	71.8	83.6	96.3	91.2	102.1	113.0	107.9	69.9	74.0	71.9
3	70.9	73.4	72.2	71.6	74.6	73.0	79.1	83.1	82.0	96.1	102.1	100.8	71.0	75.1	72.8
4	72.1	74.1	73.1	72.6	75.8	74.1	79.6	82.8	81.0	100.7	102.6	101.5	71.9	75.7	73.6
5 ^{2/}	72.1	74.9	73.6	73.1	75.9	74.6	77.7	80.4	77.4	97.9	100.0	98.9	72.9	77.4	73.9
6 ^{2/}	73.4	75.6	74.4	74.0	77.0	75.6	76.4	80.4	77.4	97.9	100.0	98.9	72.9	77.4	73.9
7	74.0	75.4	74.8	75.0	76.6	75.8	71.0	76.6	73.7	89.5	98.7	94.1	72.9	78.8	74.4
8	73.9	75.1	74.6	74.9	76.4	75.6	75.0	80.9	75.0	97.4	101.9	99.9	73.1	77.6	75.1
9 ^{2/}	72.6	74.1	73.2	73.6	74.9	74.2	76.6	78.6	77.5	97.6	100.1	98.8	72.0	77.1	74.2
10 ^{1/}															
11	71.2	72.8	72.0	71.8	73.7	72.7	74.8	77.9	76.4	97.2	99.0	98.0	70.5	75.6	72.8
12	71.9	73.6	72.7	72.4	74.1	73.3	74.6	79.6	77.6	93.1	100.4	97.8	71.0	75.7	73.2
13 ^{1/}	69.6	75.0	73.2	72.9	75.9	74.4	74.8	79.6	77.6	92.9	99.4	96.4	71.6	76.3	73.9
14	74.1	76.2	75.1	74.7	77.4	76.1	76.6	80.6	78.6	95.3	101.2	98.7	73.1	77.4	75.2
15	75.3	76.0	75.6	75.9	77.1	76.4	78.0	80.4	79.4	99.6	101.0	100.4	74.4	78.8	76.0
16 ^{1/}	72.1	75.1	74.0	72.8	75.9	74.7	73.0	77.6	74.7	96.2	99.1	97.3	71.6	79.0	74.5
17	71.0	72.1	71.6	71.5	73.0	72.2	72.1	75.1	74.2	92.4	96.9	95.2	70.4	75.0	72.1
18 ^{1/}	71.2	73.1	72.1	71.4	74.1	72.7	71.9	95.5	82.5	91.2	108.7	99.7	70.5	75.9	72.8
19 ^{3/}	72.0	75.0	73.4	72.1	76.0	74.1	93.4	95.9	94.7	107.1	109.9	108.5	71.4	77.0	74.1
20	73.2	74.6	73.9	73.6	75.7	74.5	91.4	95.8	94.1	102.9	108.9	106.6	72.7	76.8	73.5
21	72.3	73.5	73.1	73.0	74.1	73.6	91.4	95.5	93.5	102.0	108.6	104.6	71.9	78.9	74.0
22 ^{1/}	71.1	72.4	71.6	71.6	73.3	72.4	85.6	91.4	88.5	94.8	104.1	99.7	70.9	75.1	72.5
23	71.4	73.0	72.3	71.6	74.1	72.8	90.8	95.4	93.1	104.4	108.6	106.6	71.0	76.6	75.1
24	72.0	72.9	72.4	72.6	73.9	73.2	89.2	97.1	93.5	99.4	108.7	104.8	71.6	75.4	72.6
25	71.9	72.5	72.2	72.6	74.0	73.1	94.4	97.6	95.2	105.0	108.6	107.3	71.6	73.4	72.5
26	72.5	73.2	72.9	72.7	74.8	73.8	90.4	96.5	94.3	101.3	108.9	105.7	72.4	74.2	73.1
27	73.1	73.9	73.4	73.7	75.0	74.3	90.1	95.4	93.6	100.0	107.3	104.2	72.9	75.2	73.7
28	73.1	74.4	73.8	73.8	76.0	74.7	94.1	97.4	95.7	107.4	109.9	108.6	73.1	75.5	74.1
29	74.1	75.4	74.7	74.7	76.6	75.6	96.0	100.9	98.4	108.6	112.2	110.2	74.0	76.0	74.7
30	73.9	76.0	75.4	75.6	77.1	76.4	97.3	99.8	98.9	110.0	111.4	110.9	74.4	76.1	75.3

^{1/} Instruments zeroed to ground truth data.

^{2/} Recorder not printing.

^{3/} Recorder shut off.

TABLE A-7

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND MEAN WATER
TEMPERATURES (°F), QUAD-CITIES STATION, JULY 1981

Day	Upstream			Intake			Cooling Canal, Cold End			Discharge			Downstream		
	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1	75.4	76.0	75.7	76.0	77.5	76.6	95.6	98.9	97.3	109.0	111.1	110.1	74.6	76.6	75.6
2	76.1	77.0	76.7	76.6	78.4	77.7	97.6	100.5	98.4	110.4	112.4	111.2	74.7	78.3	76.5
3	76.7	77.5	77.1	77.5	79.2	78.2	94.5	99.2	97.5	105.0	110.6	108.4	74.6	78.5	76.5
4	77.2	78.0	77.6	77.6	79.5	78.4	92.5	98.6	96.4	102.4	110.3	107.0	74.6	79.2	77.1
5	77.7	79.2	78.6	78.6	81.0	79.8	97.4	101.0	99.1	107.5	113.5	111.5	75.8	80.1	78.1
6	79.3	80.5	80.0	80.3	82.4	81.3	97.6	100.7	99.0	108.6	113.4	110.5	77.0	81.2	79.3
7	80.6	81.5	81.1	80.3	82.3	81.3	92.2	98.6	95.1	98.5	110.6	103.7	78.8	82.6	80.8
8	81.2	82.3	81.9	80.2	82.3	81.4	93.5	100.1	97.7	106.4	111.6	109.7	80.4	82.7	81.5
9	81.9	83.0	82.5	82.0	83.0	82.1	99.0	100.9	99.7	110.4	112.0	111.1	80.6	83.3	81.9
10	82.5	83.8	83.1	81.5	83.5	82.4	94.0	99.7	97.4	104.6	111.8	109.1	80.5	83.5	82.3
11	81.3	83.5	82.8	80.7	82.8	80.1	87.0	98.5	90.6	93.7	109.6	95.8	80.8	84.6	82.8
12	80.6	82.8	81.7	79.9	83.3	81.5	84.5	92.1	88.0	92.6	96.3	94.4	80.6	84.8	82.5
13	82.3	83.8	83.1	82.0	83.9	83.0	81.5	100.8	95.0	95.1	112.2	106.6	82.2	84.9	83.8
14	80.4	82.9	82.1	80.5	82.8	82.9	96.5	100.7	97.6	107.9	111.8	109.8	80.6	83.5	82.5
15	78.8	80.9	80.0	78.5	80.5	79.5	92.2	97.5	94.8	103.5	109.3	106.7	77.0	81.1	79.6
16	78.6	79.9	79.6	78.2	80.0	79.0	94.7	97.3	96.0	106.9	109.0	107.9	76.8	80.2	78.6
17	79.0	81.0	79.8	78.5	80.4	79.4	95.6	98.3	96.8	107.5	109.7	108.6	77.3	81.4	79.2
18	79.1	80.4	79.7	78.3	80.5	79.3	95.9	99.3	98.0	107.7	110.1	108.9	77.3	80.5	79.0
19	79.6	80.9	80.7	78.8	81.0	80.0	98.0	100.7	99.1	106.8	111.0	109.0	77.8	81.5	79.6
20	79.0	81.5	80.3	78.9	81.5	80.2	96.5	98.3	97.9	107.4	110.2	109.1	77.6	81.5	79.9
21	79.0	80.5	80.1	78.8	80.5	79.6	95.2	97.8	96.5	107.4	109.6	108.5	77.6	81.0	79.4
22	78.3	79.1	78.9	77.8	79.6	78.6	92.8	96.5	93.8	104.8	108.2	106.3	77.0	80.1	78.6
23	77.3	78.1	77.6	76.4	78.4	77.3	91.0	94.0	92.5	103.4	108.0	106.1	75.5	78.6	77.1
24	75.9	77.5	76.6	75.1	77.6	76.5	92.0	95.4	93.8	105.8	109.5	108.5	75.1	78.3	76.6
25	76.0	77.5	76.6	76.0	77.5	76.6	81.0	94.0	87.2	88.5	103.9	90.7	73.0	81.2	76.4
26	72.2	75.2	74.2	74.1	75.9	75.0	78.0	81.0	79.7	87.0	89.6	88.0	72.4	83.5	75.5
27	69.0	73.0	70.5	70.8	73.6	72.4	76.4	84.2	80.1	86.5	100.0	94.1	70.0	75.6	72.2
28	65.5	70.3	68.2	68.0	70.2	69.0	83.2	86.8	84.9	97.4	101.2	99.3	67.5	71.2	69.2
29	66.9	71.0	69.2	66.9	70.8	68.7	78.5	86.6	83.1	85.0	100.0	89.2	66.9	72.0	69.2
30	70.2	73.2	71.7	69.3	73.0	71.0	79.2	82.1	80.6	84.0	87.4	85.7	70.0	74.6	72.1
31	71.2	74.0	72.5	70.4	73.6	72.0	79.5	84.6	81.6	84.9	92.9	87.8	71.0	75.8	73.1

TABLE A-8

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND MEAN WATER
TEMPERATURES (°F) QUAD-CITIES STATION, AUGUST 1981

Day	Upstream			Intake			Cooling Canal, Cold End			Discharge			Downstream		
	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1	72.0	75.0	74.0	71.6	75.0	73.2	85.0	89.1	87.0	92.8	98.0	94.6	72.0	76.5	74.2
2	74.0	74.9	74.3	73.1	74.1	73.6	87.5	92.6	90.7	96.8	103.9	100.6	73.1	78.0	75.0
3	74.0	75.5	75.0	72.3	75.1	73.7	92.6	94.8	93.8	104.0	107.3	105.4	72.5	76.0	74.6
4	74.2	77.4	76.0	73.9	77.1	75.5	93.6	98.0	96.0	106.6	110.1	108.4	74.3	77.0	76.0
5	74.5	77.6	76.2	75.0	76.9	76.1	93.2	97.6	94.8	107.1	109.6	108.0	75.0	76.9	76.0
6	71.4	76.8	74.5	74.0	76.5	75.1	87.0	94.3	90.8	93.3	107.0	101.1	74.1	76.9	75.7
7	72.0	76.5	75.3	74.3	75.7	75.0	87.7	90.0	88.3	99.9	103.1	101.5	74.0	76.9	75.5
8	74.5	75.9	75.2	73.5	75.5	74.4	89.4	93.0	91.1	102.9	106.5	104.5	73.9	76.1	75.0
9	74.9	77.4	76.1	73.5	76.6	75.2	92.0	95.9	94.0	106.1	109.5	107.3	74.0	76.5	75.3
10	76.0	77.5	76.7	75.0	77.1	76.0	91.1	94.5	93.4	107.1	108.5	108.0	75.0	76.0	75.6
11	75.4	76.8	76.1	74.0	76.4	75.4	91.0	83.9	92.5	105.9	108.1	106.8	74.4	75.6	75.2
12	74.4	76.6	75.6	73.2	76.0	74.6	91.9	95.9	94.0	105.9	108.9	107.1	73.9	76.0	74.7
13	75.0	77.5	76.3	73.9	76.5	75.3	93.8	96.0	95.1	107.1	109.4	108.3	74.0	75.9	75.8
14	75.8	77.2	76.5	74.1	76.5	75.3	92.4	96.0	94.6	107.0	109.0	107.6	73.5	75.9	75.0
15	75.5	77.2	76.7	73.2	6.2	74.8	91.6	96.4	94.1	106.0	109.9	109.0	73.9	76.5	75.0
16	75.0	76.9	76.2	73.4	75.5	74.8	89.9	95.2	90.7	105.0	109.1	106.5	73.6	74.8	74.2
17	72.9	74.9	75.0	71.5	73.2	72.4	87.5	90.6	89.2	103.0	105.4	104.3	72.0	74.2	72.7
18	72.4	74.5	73.4	70.2	73.2	71.7	87.3	89.9	88.4	98.8	104.0	101.3	72.1	76.1	74.4
19	73.4	75.1	74.3	71.0	73.9	72.4	80.4	87.4	84.7	86.5	101.0	93.2	71.4	75.6	74.0
20	73.0	75.3	74.1	71.1	74.2	72.7	81.0	88.5	85.1	92.5	98.6	95.6	70.5	75.8	73.3
21	74.0	76.6	75.5	72.0	75.4	73.7	87.0	92.0	89.2	98.0	103.5	100.7	73.2	76.4	75.2
22	75.0	77.4	76.0	73.0	75.8	74.5	90.0	93.6	92.0	102.3	106.0	104.1	74.8	77.8	76.2
23	75.4	77.0	76.3	73.8	75.8	74.8	91.4	94.1	93.2	102.0	105.9	104.5	74.8	77.0	75.8
24	75.0	76.6	76.0	73.6	75.1	74.7	92.6	95.6	94.1	104.0	106.3	105.2	75.0	77.4	76.3
25	75.4	77.5	76.5	74.0	75.9	75.1	93.0	96.1	94.7	104.0	106.3	105.2	75.3	78.0	76.6
26	76.0	77.8	77.0	74.7	76.3	75.6	93.2	95.6	94.4	104.3	106.2	105.3	75.3	78.0	76.6
27	76.1	78.1	77.2	74.6	75.7	75.3	93.9	95.2	94.6	104.7	105.6	105.1	75.0	77.3	76.1
28	76.5	77.9	77.3	74.8	76.4	75.5	94.0	95.3	94.6	104.4	106.0	105.2	75.1	78.0	76.3
29	75.0	76.9	76.1	74.1	75.3	7.7	86.4	95.1	91.1	84.5	103.6	87.5	75.0	76.0	75.4
30	75.3	77.0	76.0	73.0	74.3	73.5	83.3	93.0	88.2	84.2	102.5	94.0	73.6	76.2	75.1
31	73.8	77.9	75.4	72.4	75.0	73.5	91.4	96.0	93.6	101.6	105.2	103.3	75.2	76.9	76.0

TABLE A-9

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND MEAN WATER
TEMPERATURES (°F) QUAD-CITIES STATION, SEPTEMBER 1981

Day	Upstream			Intake			Cooling Canal, Cold End			Discharge			Downstream		
	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1	72.6	72.7	72.6	71.4	73.5	72.8	90.0	92.4	91.5	100.2	102.5	101.6	72.4	73.0	72.8
2	70.0	70.8	70.5	69.9	71.3	70.2	88.9	91.2	90.0	99.4	100.5	100.0	70.5	72.0	71.1
3	70.8	73.8	71.8	69.9	71.4	70.8	88.8	91.4	90.1	99.3	100.9	99.9	70.8	73.5	71.7
4	71.2	71.5	71.4	70.6	73.1	71.5	89.0	90.9	90.1	99.3	104.1	101.3	69.2	72.9	71.5
5	71.2	72.3	72.0	72.1	73.3	72.7	86.3	90.4	87.7	98.0	100.4	99.0	72.1	73.1	72.7
6	70.9	72.8	71.7	71.3	72.8	72.3	84.4	88.0	86.3	92.4	99.9	97.9	71.4	73.0	72.4
7	69.0	71.7	70.3	69.6	71.8	70.6	77.8	86.4	80.1	84.9	92.8	86.1	69.0	72.6	70.0
8	68.4	69.1	68.6	68.0	70.0	69.0	75.1	83.4	77.8	83.0	102.9	91.9	67.2	69.3	68.5
9	68.0	69.4	68.7	67.5	70.1	68.8	82.6	88.0	86.1	101.7	106.0	104.3	67.2	69.2	68.5
10	68.5	70.1	69.5	68.2	71.2	69.6	86.4	90.4	88.4	104.4	108.0	106.1	68.0	70.2	69.3
11	69.3	71.9	70.7	69.3	72.8	71.0	89.0	92.3	90.7	106.6	109.6	108.1	68.8	72.3	70.9
12	71.0	73.4	72.2	71.2	74.2	72.4	91.1	93.8	92.4	108.6	110.9	109.7	70.9	74.2	72.6
13	72.4	74.1	73.1	72.4	75.0	73.5	90.5	93.5	92.0	106.4	111.0	109.4	72.6	75.2	73.9
14	73.2	74.6	73.7	73.0	75.3	74.1	89.3	93.0	91.5	108.4	110.6	109.7	73.6	75.7	74.5
15	70.9	73.0	72.3	71.2	73.8	72.8	86.2	88.9	87.6	106.2	108.2	107.1	70.8	73.9	72.9
16	68.4	70.8	70.0	68.0	71.0	69.8	82.5	85.9	84.3	102.9	105.9	104.5	67.0	71.6	69.6
17	65.8	68.0	66.6	65.2	67.8	66.3	81.6	82.9	82.4	101.5	102.7	102.2	63.9	68.0	65.9
18	63.9	65.9	64.5	62.8	65.0	63.9	81.9	85.8	83.8	100.0	102.6	101.6	61.4	65.6	63.5
19	63.1	64.8	64.0	61.6	64.5	63.2	84.5	90.0	87.0	101.5	105.6	103.5	60.9	64.4	62.8
20	63.8	66.1	64.8	63.0	64.7	63.9	85.6	90.0	88.3	98.0	104.9	102.3	62.0	66.6	64.1
21	65.5	67.3	66.4	64.5	66.7	65.5	86.0	91.0	88.4	103.2	106.9	104.7	64.7	68.6	66.2
22	64.9	66.8	65.7	63.9	65.4	64.7	84.9	86.2	85.7	102.2	104.1	103.2	63.4	67.0	65.3
23	62.8	64.6	63.7	61.5	63.7	62.5	76.9	83.5	79.3	60.9	97.9	72.8	61.1	64.9	62.9
24	62.7	67.5	66.5	61.5	62.6	62.0	75.5	87.6	83.7	86.6	99.4	93.3	61.2	63.5	62.3
25	62.6	66.2	65.9	61.8	62.4	62.1	88.8	93.9	90.5	100.2	107.2	102.8	60.6	63.4	62.1
26	63.5	63.6	63.5	61.6	62.9	62.2	90.1	94.4	92.4	104.8	107.1	105.6	60.8	63.5	62.5
27	1/	-	-	60.7	62.1	61.5	83.6	90.0	86.3	100.8	103.6	101.5	61.5	62.9	62.3
28	60.4	60.9	60.7	59.4	61.1	60.1	84.8	87.8	86.3	101.0	103.5	102.2	59.7	61.6	60.9
29	59.0	62.0	61.0	58.6	60.5	60.0	85.1	90.1	87.7	101.0	104.5	102.8	59.3	61.9	60.0
30	60.4	62.6	61.5	58.5	61.8	60.2	88.9	91.1	89.5	102.4	105.4	103.8	59.1	62.7	61.4

1/ Recorder malfunction.

TABLE A-10

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND MEAN WATER
TEMPERATURES (°F) QUAD-CITIES STATION, OCTOBER 1981

Day	Upstream			Intake			Cooling Canal, Cold End			Discharge			Downstream		
	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1	61.5	62.5	62.1	58.0	61.2	59.8	77.9	86.6	81.4	97.6	104.4	100.1	59.4	63.3	61.7
2	57.2	51.1	59.7	54.5	58.0	56.5	78.4	82.9	80.8	97.9	100.6	99.3	54.4	59.6	56.7
3 ^{1/}				53.4	55.6	54.4	81.0	83.3	82.3	98.5	100.8	99.0	53.4	56.2	54.7
4				54.6	56.8	55.8	77.5	83.0	81.1	88.6	93.9	91.6	53.4	57.6	55.5
5	56.8	57.3	57.1	55.0	56.6	56.0	80.9	86.0	82.9	93.2	99.9	98.6	54.5	57.6	56.4
6	57.0	57.4	57.3	56.2	58.3	56.7	81.4	85.7	82.3	98.5	101.2	99.5	55.8	58.7	57.5
7	55.1	57.0	56.4	54.9	56.7	56.1	81.0	83.6	82.7	99.9	102.0	101.3	54.9	57.6	56.4
8	54.0	55.9	54.6	53.9	55.9	54.6	82.2	84.0	82.5	98.5	101.9	100.0	53.8	57.1	52.1
9	55.1	56.1	55.6	54.2	55.8	55.1	80.3	84.4	82.1	98.5	101.7	100.0	54.6	57.4	55.8
10	55.0	55.8	55.3	54.0	55.3	54.9	84.1	85.4	84.8	101.0	102.5	101.8	54.6	56.8	55.9
11	55.1	56.2	55.4	54.3	56.1	55.4	82.5	85.0	83.9	98.3	101.8	100.2	54.8	56.8	56.0
12	54.8	55.9	55.3	54.2	55.9	55.3	82.9	83.8	83.3	100.3	101.3	100.8	54.7	56.8	55.8
13	54.9	56.1	55.5	54.2	56.0	55.2	83.4	87.4	84.9	100.6	103.4	101.7	54.8	57.2	56.3
14	52.9	55.9	54.7	55.4	56.2	55.8	86.4	87.4	86.8	102.7	103.6	103.1	56.4	58.1	57.1
15	52.8	56.9	55.0	56.0	57.5	56.7	84.7	87.0	86.3	102.0	103.2	102.7	56.6	58.0	57.5
16	56.5	57.3	57.1	56.0	57.4	56.6	83.1	85.7	84.5	101.0	102.8	101.8	56.6	58.5	57.7
17	53.1	56.5	55.5	55.5	56.6	56.2	83.5	86.5	85.0	101.2	103.4	102.2	56.4	58.2	57.2
18	52.4	54.6	53.8	52.0	55.9	54.0	73.5	82.3	76.6	93.9	98.2	95.7	52.1	57.3	56.1
19	50.6	52.2	51.3	49.9	51.8	50.7	74.3	79.4	77.5	94.6	97.1	95.8	49.4	53.7	51.4
20	50.6	51.8	51.2	49.4	51.3	50.1	79.0	84.3	81.1	96.6	101.1	99.1	49.4	53.5	51.5
21	50.4	52.0	51.3	50.3	51.3	50.9	80.2	83.4	81.4	98.3	99.4	99.1	46.3	54.4	51.2
22	49.0	56.3	49.9	48.3	50.0	49.4	75.6	80.9	78.0	95.0	98.3	96.5	44.8	51.8	48.9
23	46.9	49.2	48.4	46.0	49.3	47.9	71.3	80.9	78.1	95.0	98.3	96.5	44.8	51.8	48.9
24	44.3	46.8	45.6	43.5	46.5	45.1	69.1	72.0	70.5	89.0	91.3	89.9	42.0	47.5	45.2
25	44.2	44.5	44.4	43.1	43.4	43.3	70.3	73.2	72.2	84.4	90.0	87.0	41.7	44.5	43.6
26	44.2	45.2	44.8	43.0	44.6	44.0	72.8	76.6	74.8	89.5	94.0	92.1	41.8	45.1	44.2
27	44.4	45.8	45.2	43.6	45.7	44.6	75.4	79.6	77.6	93.0	95.9	94.5	42.5	45.5	44.6
28	45.2	46.3	45.8	44.7	46.2	45.2	77.7	80.4	79.3	94.5	96.8	95.9	43.2	46.1	44.9
29 ^{1/}	46.0	46.5	46.2				78.0	79.3	78.8	95.3	96.4	95.8	44.2	46.8	45.3
30	46.3	47.9	47.2				78.3	82.4	80.1	92.2	98.4	95.8	45.1	48.0	46.7
31	44.9	48.7	47.9				79.3	81.9	80.6	91.0	96.7	93.8	46.8	48.9	48.1

^{1/} Recorder malfunction.

TABLE A-11

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND MEAN WATER
TEMPERATURE (°F), QUAD-CITIES STATION, NOVEMBER 1981

Day	Upstream			Intake			Cooling Canal, Cold End			Discharge			Downstream		
	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1	45.4	49.3	48.0	1/	--	--	81.1	83.1	82.1	96.0	98.8	98.0	47.0	49.8	48.9
2	48.1	49.9	49.3	1/	--	--	82.0	83.4	82.8	98.5	100.0	99.3	48.6	50.9	50.0
3	49.7	51.0	50.3	1/	--	--	80.1	84.5	82.7	97.0	101.0	99.3	50.5	52.6	51.3
4	50.2	53.3	51.7	1/	--	--	83.0	84.3	83.7	99.4	100.8	100.5	51.4	53.7	52.8
5	52.1	53.0	52.5	1/	--	--	76.4	83.0	80.5	93.0	99.9	97.9	50.8	53.3	52.6
6	50.3	52.0	51.5	48.4	49.2	49.9	71.5	76.1	73.1	89.3	92.4	90.4	48.3	52.3	51.1
7	50.0	51.4	50.7	47.6	49.3	48.6	72.6	75.5	74.3	89.6	92.0	90.1	47.8	51.6	50.3
8	50.4	51.7	51.0	48.1	49.8	49.0	75.3	78.2	76.5	91.3	95.9	94.2	48.2	51.9	50.6
9	48.4	50.2	50.0	46.5	48.3	47.6	51.6	75.0	61.3	56.3	70.8	64.0	45.3	50.5	49.0
10	47.8	48.6	48.2	44.8	46.2	45.6	53.1	68.2	61.5	68.9	85.4	77.2	43.8	48.3	46.8
11	47.3	48.5	48.2	44.6	46.2	45.7	68.4	75.2	72.3	85.9	93.4	90.3	43.6	48.1	47.6
12	47.0	48.0	47.6	44.4	45.8	45.2	70.3	74.2	72.1	87.1	90.0	88.4	43.5	48.0	46.5
13	47.3	48.2	47.6	44.5	45.8	45.5	69.9	75.4	72.3	87.0	93.8	89.8	43.3	47.9	46.3
14	46.6	48.2	47.4	44.3	45.8	44.7	74.5	78.8	76.3	92.9	96.3	94.1	42.6	47.3	46.0
15	46.8	47.5	46.9	44.6	45.4	45.1	75.5	78.6	77.7	92.8	95.8	94.1	42.8	47.4	45.6
16	46.2	48.2	47.7	45.2	46.9	45.8	78.7	80.0	79.3	96.1	97.3	96.6	43.6	47.7	46.0
17	47.6	48.4	47.4	44.0	46.2	45.3	76.4	78.5	77.4	94.4	96.0	95.0	43.6	47.6	46.1
18	47.3	48.0	47.7	44.8	45.6	45.2	75.6	77.4	76.2	93.1	95.2	94.1	43.4	47.2	46.0
19	46.4	48.0	46.8	43.6	46.6	45.6	71.0	76.5	74.4	90.1	94.6	92.5	42.6	57.1	45.4
20	44.5	46.2	45.1	40.8	43.5	42.0	67.0	70.7	67.5	68.8	90.0	84.7	38.4	45.6	42.6
21	42.0	43.9	43.0	38.2	40.5	39.4	53.5	67.6	59.5	35.9	60.6	39.7	35.5	41.7	39.7
22	41.3	42.6	42.0	37.3	38.4	37.8	49.8	53.3	52.2	37.5	49.6	46.7	34.0	40.3	38.5
23	40.9	42.8	41.9	46.9	37.3	37.2	47.4	49.3	48.4	47.0	48.5	47.8	33.8	39.7	37.4
24	36.5	41.6	39.2	37.1	38.0	37.4	45.0	47.2	46.0	34.5	47.8	41.1	34.0	39.4	37.3
25	36.5	31.0	36.8	37.2	37.6	37.4	35.6	48.2	43.0	34.5	44.8	39.6	36.3	39.2	37.6
26	36.4	37.5	37.0	37.7	38.2	37.9	38.1	62.5	51.1	44.8	72.5	61.9	36.9	39.2	38.1
27	36.6	38.0	37.0	37.2	37.8	37.5	62.8	70.5	67.3	72.3	73.2	77.1	37.1	39.5	38.5
28	35.4	36.5	35.6	36.2	37.4	36.7	63.9	75.0	69.3	70.0	89.4	77.3	35.4	38.8	37.2
29	39.9	35.8	35.1	35.6	36.6	36.2	74.1	88.2	77.3	89.8	98.8	82.5	34.4	48.3	36.4
30	34.9	35.8	35.1	35.6	36.6	36.2	74.1	88.2	77.3	89.8	98.8	82.5	34.4	38.3	36.4
31	31.6	35.2	34.3	34.9	36.4	35.3	64.5	88.2	71.3	78.4	98.8	85.7	33.8	37.9	35.2

1/ Temperature sensor malfunction.

TABLE A-12

SUMMARY OF DAILY MINIMUM, MAXIMUM, AND MEAN WATER
TEMPERATURES (°F), QUAD-CITIES STATION, DECEMBER 1981

Day	Upstream			Intake			Cooling Canal, Cold End			Discharge			Downstream		
	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean
1	29.3	34.9	31.4	35.1	35.7	35.4	65.3	68.1	67.3	78.3	81.1	80.1	33.4	35.2	34.3
2	34.3	34.8	34.5	34.5	35.1	34.8	65.0	66.4	65.8	78.5	80.1	79.8	33.4	35.2	34.1
3	33.7	34.4	34.0	34.2	35.1	34.7	66.5	71.8	68.3	79.9	87.9	82.6	32.9	34.4	34.2
4	33.4	34.2	33.7	34.2	35.1	34.8	68.3	71.8	69.5	85.1	87.7	86.2	33.7	35.8	35.0
5	32.6	33.7	33.1	33.8	34.8	34.3	68.3	69.9	69.2	85.3	86.6	85.9	33.1	35.3	34.3
6	32.2	33.2	32.3	33.2	34.9	33.8	68.0	71.5	69.9	83.0	87.7	85.1	32.8	34.9	34.0
7	32.7	33.9	33.6	34.0	35.6	34.8	69.6	74.7	72.6	36.5	90.2	88.1	33.5	36.8	35.0
8	33.6	34.2	34.0	34.9	36.2	35.1	68.3	69.7	68.8	85.5	86.3	85.8	35.0	36.4	35.7
9	33.6	34.2	33.9	34.4	35.3	34.6	68.7	70.0	69.5	85.8	89.6	86.5	34.3	36.3	35.4
10	32.6	33.5	32.9	33.7	34.3	33.9	56.6	70.9	63.7	60.8	85.6	68.9	32.7	35.3	34.2
11	32.4	33.3	32.8	33.5	34.1	33.7	56.2	58.4	57.5	60.9	63.3	62.1	32.5	35.6	34.0
12	32.7	33.1	32.9	33.7	52.8	42.4	45.4	59.5	52.3	45.8	76.8	59.7	32.8	34.4	33.9
13	33.3	33.5	33.3	34.6	44.1	37.7	59.3	71.8	67.7	76.5	88.8	83.4	33.5	35.5	34.2
14	33.0	33.4	33.3	33.6	35.0	34.5	65.5	69.9	68.4	80.8	85.0	83.4	33.8	35.4	34.3
15	32.4	32.9	32.7	33.0	33.7	33.3	63.2	65.3	65.0	79.0	80.7	79.7	32.1	34.8	33.5
16	32.2	32.5	32.4	33.0	33.6	33.3	62.6	63.6	63.2	78.9	80.2	79.6	32.0	34.0	33.0
17	32.1	32.8	32.7	32.8	33.4	33.1	60.2	63.3	61.6	77.2	79.0	78.1	32.0	34.0	33.2
18	32.4	32.6	32.5	33.0	33.4	33.1	59.1	61.3	60.1	72.3	78.4	76.1	32.0	34.2	33.3
19	32.2	32.6	32.4	33.0	40.1	33.4	47.6	65.2	50.9	53.6	64.9	56.1	32.0	34.3	33.3
20	32.4	32.8	32.5	32.9	33.3	33.1	48.0	65.2	50.9	53.5	64.9	56.1	32.0	34.3	33.3
21	32.2	32.7	32.5	32.8	33.4	33.1	50.0	57.4	54.6	56.3	62.4	60.2	31.6	34.2	33.1
22	31.8	32.6	32.3	32.8	33.4	33.0	56.5	59.3	58.1	62.2	63.6	63.0	31.5	34.9	33.4
23	32.4	32.6	32.5	32.8	33.6	33.2	53.8	56.0	55.1	60.2	61.6	61.0	31.6	34.4	33.5
24	32.0	32.7	32.3	32.8	33.4	33.1	53.8	61.6	56.4	60.3	80.9	68.0	31.4	34.6	33.1
25	32.0	32.8	32.4	32.6	33.2	32.9	56.5	68.6	59.7	61.3	69.8	64.0	31.3	34.6	33.3
26	32.8	33.0	32.9	33.2	33.6	33.4	58.1	60.4	58.7	63.2	70.5	64.5	31.9	35.2	33.8
27	32.6	32.9	32.7	33.2	33.6	33.4	61.8	70.0	67.1	71.5	80.3	75.7	31.8	35.0	33.6
28	32.6	33.5	33.0	33.3	42.4	36.8	70.6	89.4	78.2	80.8	104.9	91.0	31.4	34.9	32.9
29	32.4	33.2	33.0	33.0	47.2	38.7	81.8	94.2	90.6	90.8	109.4	102.3	31.2	35.7	32.4
30	32.4	33.1	33.0	32.8	33.3	32.9	76.6	81.8	78.8	87.0	90.6	88.7	31.2	35.7	32.7
31	32.8	33.8	33.1	32.9	33.3	33.1	72.7	79.3	77.0	83.9	88.9	87.4	31.5	35.4	33.1

APPENDIX B

(Related to Chapter 2 of Text)

SUMMARY OF DAILY TEMPERATURE DIFFERENCES

QUAD-CITIES STATION

January through December 1981

TABLE 1
SUMMARY OF TEMPERATURE DIFFERENTIALS (Δ),
QUAD-CITIES STATION, JANUARY 1981

Day	Temperatures ($^{\circ}$ F)			
	Discharge minus Maximum	Intake Mean	Downstream minus Maximum	Upstream Mean
1	<u>1/</u>		1.7	-1.4
2			1.9	-1.5
3			1.7	-1.4
4			2.1	-1.4
5	59.8	56.0	1.7	-1.5
6	61.8	61.1	1.6	-1.8
7	63.4	61.7	0.5	0.5
8	63.3	55.9	0.5	-1.6
9	54.4	53.7	0.6	-0.2
10	46.1	30.2	0.7	-0.5
11	26.6	24.9	0.7	-0.6
12	42.4	32.4	1.0	-0.3
13	45.8	45.0	0.9	0.1
14	51.8	49.0	0.9	0.2
15	53.4	52.8	1.0	0.5
16	53.1	51.8	1.0	0.4
17	46.9	43.1	1.0	0.3
18	54.1	50.6	0.9	-0.2
19	58.5	56.7	0.8	0.5
20	60.6	59.7	0.9	0.6
21	59.0	58.8	1.1	0.6
22	59.0	58.5	1.0	0.6
23	55.1	54.1	0.8	0.5
24	50.6	48.8	1.2	0.7
25	55.9	54.4	1.2	0.7
26	57.1	56.0	1.0	0.7
27	59.8	59.3	0.9	0.6
28	59.1	58.1	1.3	0.5
29	58.2	56.9	1.9	0.6
30	56.8	53.7	1.8	0.6
31	23.1	36.8	1.3	0.5

1/ Sensor malfunction - no data.

TABLE 1
SUMMARY OF TEMPERATURE DIFFERENTIALS (Δ),
QUAD-CITIES STATION, FEBRUARY 1981

Day	Temperatures ($^{\circ}$ F)			
	Discharge minus Maximum	Intake Mean	Downstream minus Maximum	Upstream Mean
1	38.6	36.5	1.2	0.5
2	33.5	22.8	0.9	0.0
3	44.4	36.0	1.3	0.5
4	48.7	47.4	1.7	0.6
5	51.5	49.2	1.3	0.6
6	54.5	52.4	2.2	-0.4
7	50.1	49.1	1.8	0.8
8	52.3	48.3	1.7	0.7
9	55.1	54.0	2.1	0.8
10	56.0	50.3	2.0	0.8
11	50.7	47.1	1.7	0.6
12	57.3	53.8	1.6	0.5
13	61.0	58.9	2.2	0.4
14	61.8	60.5	2.9	1.0
15	62.3	60.3	2.5	1.0
16	64.6	63.3	2.3	1.1
17	63.2	62.6	1.8	0.3
18	62.0	61.9	1.8	1.1
19	64.1	62.9	1.8	1.2
20	63.8	63.6	1.7	0.4
21	62.5	60.2	2.0	0.9
22	61.3	60.5	4.6	1.3
23	59.9	59.5	4.4	1.3
24	61.4	60.3	4.7	1.5
25	63.6	60.8	2.3	1.1
26	62.3	61.6	2.6	0.6
27	62.8	60.8	2.9	0.6
28	51.1	43.5	2.8	0.6

TABLE 1
SUMMARY OF TEMPERATURE DIFFERENTIALS (Δ),
QUAD-CITIES STATION, MARCH 1981

Day	Temperatures ($^{\circ}\text{F}$)			
	Discharge minus Intake		Downstream minus Upstream	
	Maximum	Mean	Maximum	Mean
1	45.4	44.7	0.3	2.9
2	45.0	45.0	0.4	-0.4
3	52.8	47.9	1.1	0.2
4	52.6	51.4	1.6	1.3
5	51.8	51.6	1.6	1.2
6	52.8	51.3	1.7	1.7
7	54.6	53.3	2.9	1.4
8	50.1	50.7	2.2	1.7
9	54.3	51.9	2.1	1.5
10	51.3	35.0	1.8	1.3
11	29.2	28.4	2.3	1.2
12	24.0	17.3	1.3	1.0
13	44.7	45.7	2.0	0.9
14	50.0	48.9	2.0	1.0
15	47.0	46.4	1.0	0.8
16	46.6	46.3	1.5	0.6
17	45.6	45.0	1.2	0.5
18	45.0	43.0	1.6	0.8
19	38.5	38.0	3.4	0.8
20	31.6	23.0	1.5	0.8
21	29.0	27.1	1.5	0.6
22	30.2	30.0	2.3	1.1
23	28.0	27.8	1.8	1.0
24	47.5	34.9	1.9	0.8
25	36.6	31.1	1.8	0.9
26	36.9	31.1	2.2	0.9
27	46.7	42.3	2.1	0.9
28	6.25	54.2	1.4	-0.1
29	6.22	6.36	2.5	-0.6
30	57.3	55.8	2.6	-0.3
31	55.6	54.3	1.6	0

TABLE 1
SUMMARY OF TEMPERATURE DIFFERENTIALS (Δ),
QUAD-CITIES STATION, APRIL 1981

Day	Temperatures ($^{\circ}$ F)			
	Discharge Maximum	minus Intake Mean	Downstream Maximum	minus Upstream Mean
1	51.6	48.7	3.1	1.1
2	55.5	54.5	0.4	0.4
3	54.2	50.0	1.1	0.1
4	42.9	40.8	1.0	0.2
5	54.1	46.6	0.2	-1.5
6	57.4	47.6	-0.3	-1.1
7	58.3	57.5	0	-1.1
8	57.2	47.7	-0.7	-1.5
9	56.6	50.7	0.2	-1.0
10	56.7	50.4	0	-1.0
11	41.7	41.0	^{1/}	-3.5
12	42.4	40.5	^{2/} 9.5	-17.1
13	44.2	44.1		
14	51.9	46.4		
15	53.1	47.7		
16	41.1	41.5		
17	42.8	42.7		
18	41.1	40.7		
19	39.6	39.6		
20	51.0	44.7		
21	53.4	53.4		
22	54.5	45.4	6.4	1.5
23	48.5	43.5	2.3	1.1
24	54.8	54.7	3.5	1.1
25	53.7	48.1	2.2	1.3
26	25.4	22.0	0.6	0.8
27	29.2	23.3	0.4	0.3
28	37.2	34.1	1.3	0.3
29	37.5	35.0	0.5	0.2
30	39.8	39.3	0.8	0.5

^{1/} Thunderstorm interference prevented accurate computation.

^{2/} Sensor #1 being adjusted by I.M.

TABLE 1
SUMMARY OF TEMPERATURE DIFFERENTIALS (Δ),
QUAD-CITIES STATION, MAY 1981

Day	Temperatures ($^{\circ}\text{F}$)			
	Discharge Maximum	Intake Mean	Downstream minus Maximum	Upstream Mean
1	38.9	39.1	1.3	0.4
2	37.8	38.9	0.1	0.2
3	37.8	38.0	0.4	-0.1
4	40.7	39.7	0.4	1.7
5	41.1	40.1	1.5	0.1
6	39.5	38.1	2.1	0.8
7	38.8	38.5	2.8	1.0
8	38.9	38.5	2.8	1.8
9	36.7	46.9	2.4	0.5
10	35.0	31.7	2.4	1.5
11	51.0	41.4	6.0	2.5
12	50.2	45.0	3.1	1.1
13	39.3	38.8	3.0	1.0
14	48.9	42.8	2.9	1.2
15	49.7	46.6	1.4	1.1
16	39.0	38.6	-0.4	-0.7
17	36.4	34.4	0.3	-1.1
18	36.3	36.0	1.8	-0.4
19	38.8	38.1	2.0	0.1
20	39.9	39.8	-0.6	-0.1
21	38.4	38.5	-0.6	-0.6
22	37.6	36.9	-0.3	-0.6
23	34.8	22.9	0	-0.6
24	35.8	26.7	-0.4	-1.0
25	29.8	25.2	-0.7	-1.1
26	33.1	32.1	1.3	0
27	36.4	35.3	1.8	0.7
28	37.8	36.4	2.3	0.7
29	36.4	29.0	2.9	-0.8
30	35.3	32.3	2.8	0.9
31	38.5	37.5	2.0	1.0

TABLE 1
SUMMARY OF TEMPERATURE DIFFERENTIALS (Δ),
QUAD-CITIES STATION, JUNE 1981

Day	Temperatures ($^{\circ}$ F)			
	Discharge minus Maximum	Intake Mean	Downstream minus Maximum	Upstream Mean
1	39.1	39.2	2.0	0.9
2	39.9	36.1	1.9	1.0
3	27.5	27.8	1.7	0.6
4	26.8	27.4	1.6	0.5
5	27.6	26.2	1.2	0.5
6	23.0	23.3	1.8	-0.5
7	22.1	18.3	3.4	-0.4
8	25.5	24.3	2.5	0.5
9	25.2	24.6	3.1	1.0
10 ^{1/}				
11	25.3	25.3	2.8	0.8
12	26.3	14.5	2.1	0.5
13	23.5	22.0	1.3	0.7
14	23.8	22.6	1.2	0.1
15	23.9	24.0	2.8	0.4
16	23.2	22.6	3.9	0.5
17	23.9	23.0	2.9	0.5
18	34.6	27.0	2.8	0.7
19	33.9	34.4	2.0	0.7
20	33.2	32.1	2.2	-0.4
21	34.5	31.0	5.4	0.9
22	30.8	27.3	2.7	0.9
23	34.5	33.8	3.6	2.8
24	34.8	31.6	2.5	0.2
25	34.6	34.2	0.9	0.3
26	34.1	31.9	1.0	0.2
27	32.3	29.9	1.3	0.3
28	33.9	33.9	1.1	0.3
29	35.6	34.6	0.6	0
30	34.3	34.5	0.1	-0.1

^{1/}Recorder not printing.

TABLE 1
SUMMARY OF TEMPERATURE DIFFERENTIALS (Δ),
QUAD-CITIES STATION, JULY 1981

Day	Temperatures ($^{\circ}$ F)			
	Discharge minus Maximum	Intake Mean	Downstream minus Maximum	Upstream Mean
1	33.6	33.5	.6	-.1
2	34.0	33.5	1.6	-.2
3	31.4	30.2	1.0	-.6
4	30.8	28.6	1.2	-.5
5	32.5	31.7	.9	-.5
6	31.0	29.2	.7	-.7
7	28.3	22.4	1.1	-.3
8	29.3	22.4	1.1	-.3
9	29.3	28.3	.4	-.4
10	29.0	29.0	.3	-.6
11	28.3	26.7	-.3	-.8
12	26.8	15.7	1.1	.0
13	13.0	12.9	2.0	.8
14	29.2	23.6	1.1	.7
15	29.0	26.9	.6	.4
16	28.8	27.2	.6	.4
17	29.3	29.2	.4	-.6
18	29.9	29.6	.1	-.7
19	30.0	29.0	.6	-1.1
20	28.7	28.9	.0	-.4
21	29.1	28.9	.5	-.7
22	28.6	27.7	.4	-.3
23	29.6	28.8	.5	-.5
24	31.9	32.0	.8	.0
25	26.4	14.1	3.7	-.2
26	14.6	13.0	8.3	1.3
27	26.4	21.7	2.6	1.7
28	31.0	30.3	.9	1.0
29	29.2	20.5	1.0	0
30	14.4	14.7	1.4	.4
31	19.3	15.8	1.8	.6

TABLE 1
SUMMARY OF TEMPERATURE DIFFERENTIALS (Δ),
QUAD-CITIES STATION, AUGUST 1981

Day	Temperatures ($^{\circ}$ F)			
	Discharge minus Maximum	Intake Mean	Downstream minus Maximum	Upstream Mean
1	23.0	21.4	1.5	.2
2	29.8	27.0	3.1	.7
3	32.2	31.7	.5	-.4
4	33.0	32.9	-.4	0
5	32.7	31.9	-.7	-.2
6	30.5	26.0	.1	1.2
7	27.3	26.5	.4	.2
8	31.0	30.1	.2	-.2
9	32.9	32.6	-.9	-.8
10	31.4	32.0	-1.5	-1.1
11	31.7	31.4	-1.2	-.9
12	32.9	32.8	-.6	-.9
13	32.9	33.0	-1.6	-1.5
14	32.5	32.3	-1.3	-1.5
15	33.7	33.2	-.7	-1.7
16	33.6	31.7	2.4	-2.0
17	32.2	31.9	-.7	-1.3
18	30.8	29.6	1.6	1.0
19	27.1	20.8	.5	-.3
20	24.4	22.9	.5	-.8
21	28.1	27.0	-.2	-.3
22	30.2	29.6	.4	.2
23	30.1	29.7	0	-.5
24	30.8	30.4	1.4	.1
25	30.4	30.1	-.1	-.2
26	29.9	29.7	.2	-.4
27	29.9	29.8	-.8	-1.1
28	29.6	29.7	.1	-1.0
29	28.3	12.8	-.9	-.7
30	28.2	20.5	-.8	-.9
31	30.2	29.8	-1.0	.6

TABLE 1
SUMMARY OF TEMPERATURE DIFFERENTIALS (Δ),
QUAD-CITIES STATION, SEPTEMBER 1981

Day	Temperatures ($^{\circ}$ F)			
	Discharge minus Maximum	Intake Mean	Downstream minus Maximum	Upstream Mean
1	29.0	28.8	.3	.2
2	29.2	29.8	1.2	.6
3	29.5	29.1	-.3	-.1
4	31.0	29.8	1.4	.1
5	25.7	26.3	.8	.7
6	27.1	25.6	.8	.7
7	21.0	15.5	.9	-.3
8	32.9	22.9	.2	-.1
9	35.9	35.5	-.2	-.3
10	36.8	36.5	.1	-.2
11	36.8	37.1	.4	.2
12	36.7	37.3	.8	.4
13	37.5	35.9	1.1	.8
14	35.3	35.6	1.1	.8
15	34.4	34.3	.9	.7
16	34.9	34.7	.8	-.4
17	34.9	35.9	0.0	-.7
18	37.6	37.7	-.3	-1.0
19	41.1	40.3	-.4	-1.2
20	40.2	38.4	.5	-.7
21	40.2	39.2	1.3	-.2
22	38.7	38.5	.2	-.4
23	34.2	10.3	.3	-.8
24	36.8	31.3	-4.0	-4.2
25	44.8	40.7	-2.8	-3.8
26	44.2	43.4	-.1	-1.0
27	41.5	40.0	1/	1/
28	32.4	32.1	.7	.2
29	44.0	42.8	-.1	-1.0
30	43.6	43.6	.1	-.1

1/ Data unavailable due to recorder malfunction.

TABLE 1
SUMMARY OF TEMPERATURE DIFFERENTIALS (Δ),
QUAD-CITIES STATION, OCTOBER 1981

Day	Temperatures ($^{\circ}$ F)			
	Discharge minus Maximum	Intake Mean	Downstream minus Maximum	Upstream Mean
1	43.2	40.3	.8	-.5
2	42.6	42.8	-1.5	-3.0
3	45.2	44.6	-	-
4	40.1	35.8	-	-
5	43.3	42.6	.3	-.7
6	42.9	42.8	1.3	.2
7	45.3	45.2	.6	0.0
8	46.0	45.4	1.2	-2.5
9	45.9	44.9	1.3	.2
10	47.2	46.9	1.0	.6
11	45.7	44.9	.6	.6
12	45.4	45.5	.9	.5
13	47.4	46.5	1.1	1.2
14	47.4	47.3	2.2	2.4
15	45.7	46.0	1.1	2.5
16	45.4	45.2	1.2	.6
17	46.8	46.0	1.7	1.7
18	42.3	41.7	2.7	2.3
19	45.3	45.1	1.5	.1
20	49.8	49.0	1.6	.3
21	48.1	48.2	2.4	-.1
22	48.3	47.1	1.5	1.0
23	45.1	43.8	2.0	-.5
24	44.8	44.8	.7	-.4
25	46.6	43.7	0.0	-.8
26	49.4	48.1	-.1	-.6
27	50.2	49.9	-.3	-6
28	50.6	40.7	-.2	-.9
29 ^{1/}			.3	-.9
30			.1	-.5
31			.2	.2

^{1/}Recorder malfunction.

TABLE 1
SUMMARY OF TEMPERATURE DIFFERENTIALS (Δ),
QUAD-CITIES STATION, NOVEMBER 1981

Day	Temperatures ($^{\circ}$ F)			
	Discharge minus Intake Maximum	Mean	Downstream minus Upstream Maximum	Mean
1	$\frac{1}{-}$.6	.9
2	$\frac{1}{-}$		1.0	.7
3	$\frac{1}{-}$		1.6	1.0
4	$\frac{1}{-}$.4	1.1
5	$\frac{1}{-}$.3	.1
6	43.2	41.6	.3	-.4
7	42.7	41.5	.2	-.4
8	46.1	45.2	.2	-.4
9	22.5	16.4	.3	-1.0
10	39.2	31.6	-.3	-1.4
11	47.2	44.6	-.4	-.6
12	44.2	43.2	0	-1.1
13	48.0	44.3	-.3	-1.3
14	50.5	49.2	-.9	-1.4
15	50.4	49.0	-.1	-1.3
16	50.4	50.8	-.5	-1.7
17	49.8	49.7	-.8	-1.3
18	49.6	48.9	-.8	-1.7
19	48.0	46.9	-.9	-1.4
20	46.5	42.7	-.6	-2.5
21	20.1	.3	-2.2	-3.3
22	11.1	8.9	-2.2	-3.5
23	11.2	10.6	-3.1	-4.5
24	9.8	3.7	-2.2	-1.9
25	7.2	2.2	2.2	.8
26	34.3	24.0	1.7	1.1
27	45.4	39.6	1.5	1.5
28	52.0	40.6	2.3	1.6
29	62.2	46.3	2.5	1.3
30	62.4	50.4	2.7	.9

$\frac{1}{-}$ Temperature sensor malfunction.

TABLE 1
SUMMARY OF TEMPERATURE DIFFERENTIALS (Δ),
QUAD-CITIES STATION, DECEMBER 1981

Day	Temperatures ($^{\circ}$ F)			
	Discharge minus Intake		Downstream minus Upstream	
	Maximum	Mean	Maximum	Mean
1	45.4	44.7	0.3	2.9
2	45.0	45.0	0.4	-0.4
3	52.8	47.9	1.1	0.2
4	52.6	51.4	1.6	1.3
5	51.8	51.6	1.6	1.2
6	52.8	51.3	1.7	1.7
7	54.6	53.3	2.9	1.4
8	50.1	50.7	2.2	1.7
9	54.3	51.9	2.1	1.5
10	51.3	35.0	1.8	1.3
11	29.2	28.4	2.3	1.2
12	24.0	17.3	1.3	1.0
13	44.7	45.7	2.0	0.9
14	50.0	48.9	2.0	1.0
15	47.0	46.4	1.0	0.8
16	46.6	46.3	1.5	0.6
17	45.6	45.0	1.2	0.5
18	45.0	43.0	1.6	0.8
19	38.5	38.0	3.4	0.8
20	31.6	23.0	1.5	0.8
21	29.0	27.1	1.5	0.6
22	30.2	30.0	2.3	1.1
23	28.0	27.8	1.8	1.0
24	47.5	34.9	1.9	0.8
25	36.6	31.1	1.8	0.9
26	36.9	31.1	2.2	0.9
27	46.7	42.3	2.1	0.9
28	62.5	54.2	1.4	-0.1
29	62.2	63.6	2.5	-0.6
30	57.3	55.8	2.6	-0.3
31	55.6	54.3	1.6	0

APPENDIX C

(Related to Chapter 2 of Text)

WEEKLY TEMPERATURE IN THE WAPSIPINICON
AND MISSISSIPPI RIVERS

QUAD-CITIES STATION

January through December 1981

TABLE 1

TEMPERATURES IN THE WAPSIPINICON RIVER AND MISSISSIPPI RIVER
(UPSTREAM - MIDCHANNEL) JANUARY THROUGH DECEMBER 1981

Month	Date Day	Temperatures (°F)	
		Wapsipinicon River	Mississippi River
January	8	32.0	32.5
	14	31.6	31.6
	20	33.6	32.9
	29	30.6	30.9
February	19	33.1	33.8
	25	36.5	34.9
March	3	36.0	33.4
	9	40.8	40.1
	19	40.8	40.1
	20	48.0	45.9
April	2	52.2	51.0
	13	56.9	54.0
	22	54.9	54.0
	30	59.2	56.4
May	5	60.3	58.2
	16	61.0	59.3
	19	57.3	57.0
	26	68.0	68.4
June	2	73.0	72.0
	9	74.0	74.8
	18	73.8	73.0
	23	71.0	71.8
July	1	73.9	75.4
	7	80.1	80.6
	14	82.1	81.8
	23	75.8	77.2
	29	65.8	69.2
August	3	73.6	73.7
	17	70.3	73.3
	19	66.9	72.1
	24	73.8	75.5
September	4	69.2	71.1
	10	66.8	69.7

TABLE 1 (CONTINUED)

Date		Temperatures (°F)	
Month	Day	Wapsipinicon River	Mississippi River
September	18	60.6	63.6
	23	59.9	62.8
	30	61.0	60.5
October	6	56.9	57.2
	15	57.7	56.5
	23	46.9	49.1
	26	43.5	45.9
November	4	56.0	52.5
	9	45.5	48.2
	24	36.9	37.2
	30	34.5	34.7
December	3	35.1	34.9
	8	37.0	34.1
	15	32.0	32.8

APPENDIX D

(Related to Chapter 2 of Text)

CHRONOLOGY OF CHANGES IN STATION
OPERATING CONDITIONS

QUAD-CITIES STATION

January through December 1981

TABLE 1

CHRONOLOGY OF CHANGES IN STATION OPERATION CONDITION, JANUARY THROUGH DECEMBER 1981
(OPERATING CONDITIONS FROM A DATA AND TIME LISTED WERE FIXED UNTIL THE NEXT CHANGE)

Month	Date Day	Time (hour)	Lift pump Operating (Numbers)	Circulating Water Pumps Operating (Number)	Moded Station Operation (condenser) cooling
January	31	0300	4	5	combination cycle
		1235	2	3	
February	2	0417	2	5	combination cycle
		0424	3	6	
		0427	4	6	
	28	0800	4	5	
March	1	1700	4	6	combination cycle
		1855	3	6	
	2	0905	4	6	
April	3	0920	3	6	combination cycle
	5	1100	4	6	
	8	1010	3	6	
	9	0830	4	6	
	10	0905	3	6	
	14	0840	4	6	
	15	0825	3	6	
	20	0902	4	6	
	22	0830	3	6	
	23	0830	4	6	
	25	0835	3	6	
	27	1400	4	6	
	28	0920	3	6	
May	11	0955	4	6	Combination
	12	0820	3	6	
	14	1120	4	6	
	15	0920	3	6	
	23	2205	2	3	
	24	1115	2	6	Open Combination
	29	0930	0	6	
		2230	1	6	
	30	0035	3	6	
		0105	2	6	
		0203	3	6	
June					
July	11	0045	3	6	Opening S.D.G.
		0115	2	6	S.D.G. Full Open
		0125	2	6	Opening N.D.G.
		0150	1	6	
		0210	0	6	
		0305	0	6	
	13	0310	0	6	N.D.G. Full Open
		0400	1	6	Closing N.D.G.
		0430	2	6	
		0515	3	6	N.D.G. Closed
		0530	3	6	
					S.D.G. 1/3 open

TABLE 1 (CONTINUED)

Month	Date Day	Time (hour)	Lift pump Operating (Numbers)	Circulating Water Pumps Operating (Number)	Moded Station Operation (condenser) cooling
July	25	0023	3	6	Opening S.D.G.
		0038	2	6	
		0103	2	6	S.D.G. Open
		0113	2	6	Opening N.D.G.
		0203	1	6	
	27	0253	0	6	N.D.G. Open
		0400	0	6	Closing N.D.G.
		0440	1	6	
		0530	2	6	
		0540	2	6	N.D.G. Closed
		0550	2	6	S.D.G. Closing
		0615	3	6	
		0620	3	6	S.D.G. 50% Open
August	29	0205	3	6	Started to open S.D.G.
		0228	2	6	
		0242	2	6	S.D.G. 100% open, opening N.D.G.
		0304	0	0	All spray modules off
		0338	1	6	
	30	0413	0	6	N.D.G. 100% open
		0825	0	6	Started closing N.D.G.
		0920	1	6	
		0250	2	6	
		1030	3	6	
		1100	3	6	N.D.G. closed, partially closed S.D.G.
September	8	1050	2	3	
	16	0900	3	3	
	22	1215	2	3	
	23	2348	0	3	S.D.G. Open
		0200	0	3	N.D.G. Open
		2030	2	3	N.D.G. Closed
October	No Change since September 23, 1981				
November	21	0700	0	3	Combination
	23	0001	0	0	Combination
	24	1830	0	3	Combination
	25	0100	1	3	Combination
	25	0210	2	3	Combination
	28	0030	1	3	Combination
	28	0300	2	3	Combination
December	10	0550	2	5	Combination
	10	0757	3	5	Combination
	12	1030	3	3	Combination
	13	1215	2	3	Combination
	19	0825	2	6	Combination
	19	1000	3	6	Combination
	19	1030	3	3	Combination
	19	2050	3	6	Combination
	19	2320	3	5	Combination
	24	1010	2	3	Combination
	24	2010	2	6	Combination
	24	2215	3	6	Combination
	28	0945	4	6	Combination
	29	1210	3	6	Combination
	29	1255	4	6	Combination

APPENDIX E

(Related to Chapter 2 of Text)

DAILY MEGAWATT POWER OUTPUT
(PERCENT OF CAPACITY)

QUAD-CITIES STATION

January through December 1981

TABLE 1
DAILY MEGAWATT POWER OUTPUT (PERCENT OF CAPACITY),
QUAD-CITIES STATION, JANUARY 1981

Date	Unit 1	Unit 2	Station Average	Remarks
1	76	93	84	
2	77	95	86	
3	78	94	86	
4	78	94	86	
5	77	95	86	
6	81	95	88	
7	92	95	94	
8	93	95	94	
9	86	94	90	
10	2	95	48	
11	0	93	46	
12	31	96	63	
13	56	93	74	
14	72	93	82	
15	90	92	91	
16	92	89	90	
17	93	50	72	
18	91	69	80	
19	92	81	86	
20	93	90	91	
21	93	92	92	
22	90	92	91	
23	67	92	80	
24	80	58	69	
25	97	72	84	
26	96	85	90	
27	97	94	96	
28	98	94	96	
29	100	95	98	
30	99	78	88	
31	99	0	50	

TABLE 1
DAILY MEGAWATT POWER OUTPUT (PERCENT OF CAPACITY),
QUAD-CITIES STATION, FEBRUARY 1981

Date	Unit 1	Unit 2	Station Average	Remarks
1	97	0	48	
2	99	3	51	
3	99	58	78	
4	94	85	90	
5	93	84	88	
6	99	84	92	
7	99	75	87	
8	94	89	92	
9	99	95	97	
10	99	80	90	
11	100	91	96	
12	98	93	96	
13	100	95	98	
14	94	93	94	
15	100	87	94	
16	98	92	95	
17	99	89	94	
18	98	88	93	
19	98	91	94	
20	97	94	96	
21	99	92	96	
22	91	93	92	
23	98	95	96	
24	98	95	96	
25	98	94	96	
26	98	94	96	
27	90	94	92	
28	1	95	48	

TABLE 1

DAILY MEGAWATT POWER OUTPUT (PERCENT OF CAPACITY),
QUAD-CITIES STATION, MARCH 1981

Date	Unit 1	Unit 2	Station Average	Remarks
1	0	67	34	
2	0	81	40	
3	0	92	46	
4	1	95	48	
5	5	97	51	
6	57	96	76	
7	74	96	76	
8	88	94	91	
9	97	95	96	
10	98	96	97	
11	96	95	96	
12	97	95	96	
13	79	94	86	
14	57	95	76	
15	83	47	65	
16	97	71	84	
17	99	86	92	
18	97	94	96	
19	99	96	98	
20	91	96	94	
21	39	93	66	
22	77	75	76	
23	99	89	94	
24	95	95	95	
25	98	94	96	
26	98	95	94	
27	97	94	96	
28	98	93	96	
29	<1	95	48	
30	46	95	71	
31	70	94	82	

TABLE 1
DAILY MEGAWATT POWER OUTPUT (PERCENT OF CAPACITY),
QUAD-CITIES STATION, APRIL 1981

Date	Unit 1	Unit 2	Station Average	Remarks
1	0	0	0	
2	97	93	95	
3	98	94	96	
4	100	95	98	
5	94	94	94	
6	97	93	95	
7	96	92	94	
8	97	93	95	
9	98	93	96	
10	96	92	94	
11	98	77	88	
12	95	88	92	
13	97	95	96	
14	98	95	97	
15	98	95	97	
16	97	94	96	
17	98	94	96	
18	98	93	96	
19	95	94	94	
20	97	91	94	
21	97	91	94	
22	98	92	95	
23	100	94	97	
24	95	88	97	
25	98	84	91	
26	95	2	44	
27	99	0	50	
28	98	40	69	
29	100	69	85	
30	96	90	93	

TABLE 1
DAILY MEGAWATT POWER OUTPUT (PERCENT OF CAPACITY),
QUAD-CITIES STATION, MAY 1981

Date	Unit 1	Unit 2	Station Average	Remarks
1	98	95	96	
2	98	92	95	
3	92	93	92	
4	97	92	94	
5	97	91	94	
6	98	92	96	
7	98	91	95	
8	98	91	95	
9	98	78	88	
10	74	91	82	
11	88	91	90	
12	97	92	95	
13	98	92	95	
14	97	90	94	
15	98	90	94	
16	96	87	92	
17	85	85	85	
18	97	91	94	
19	97	89	93	
20	97	88	93	
21	98	85	92	
22	86	86	86	
23	0	86	43	
24	0	87	44	
25	37	87	62	
26	65	85	75	
27	86	85	86	
28	100	83	97	
29	94	83	89	
30	96	69	83	
31	92	82	87	

TABLE 1
DAILY MEGAWATT POWER OUTPUT (PERCENT OF CAPACITY),
QUAD-CITIES STATION, JUNE 1981

Date	Unit 1	Unit 2	Station Average	Remarks
1	96	89	90	
2	95	87	91	
3	87	87	87	
4	95	86	91	
5	97	83	90	
6	94	74	84	
7	68	80	74	
8	90	84	87	
9	95	84	90	
10	92	78	85	
11	96	86	91	
12	91	80	86	
13	96	63	80	
14	95	76	86	
15	94	81	88	
16	97	83	90	
17	96	78	87	
18	93	77	85	
19	96	83	90	
20	96	71	84	
21	87	72	80	
22	65	71	68	
23	93	85	89	
24	86	71	78	
25	92	74	83	
26	85	74	80	
27	79	70	74	
28	92	80	86	
29	98	81	90	
30	94	77	86	

TABLE 1
DAILY MEGAWATT POWER OUTPUT (PERCENT OF CAPACITY),
QUAD-CITIES STATION, JULY 1981

Date	Unit 1	Unit 2	Station Average	Remarks
1	95	78	86	
2	94	78	86	
3	72	76	74	
4	71	68	70	
5	88	74	81	
6	83	67	75	
7	31	75	53	
8	66	75	70	
9	70	74	72	
10	66	67	66	
11	51	49	50	
12	54	47	50	
13	68	66	67	
14	71	70	70	
15	70	68	69	
16	72	72	72	
17	72	71	72	
18	72	72	72	
19	66	73	70	
20	79	70	74	
21	62	72	67	
22	72	68	70	
23	77	70	74	
24	84	70	77	
25	50	49	50	
26	54	47	50	
27	71	64	68	
28	86	67	76	
29	21	66	44	
30	0	72	36	
31	7	72	40	

TABLE 1
DAILY MEGAWATT POWER OUTPUT (PERCENT OF CAPACITY),
QUAD-CITIES STATION, AUGUST 1981

Date	Unit 1	Unit 2	Station Average	Remarks
1	29	71	50	
2	65	62	64	
3	81	70	76	
4	88	68	78	
5	88	67	78	
6	43	68	56	
7	66	67	66	
8	82	66	74	
9	93	65	79	
10	95	65	80	
11	95	65	80	
12	96	65	80	
13	96	65	80	
14	91	64	78	
15	94	65	80	
16	95	64	80	
17	94	63	78	
18	80	63	72	
19	33	64	48	
20	63	62	62	
21	80	64	72	
22	92	62	77	
23	92	63	78	
24	92	60	76	
25	95	62	78	
26	95	62	78	
27	95	61	78	
28	95	61	78	
29	70	34	52	
30	77	52	64	
31	93	61	77	

TABLE 1
DAILY MEGAWATT POWER OUTPUT (PERCENT OF CAPACITY),
QUAD-CITIES STATION SEPTEMBER 1981

Date	Unit 1	Unit 2	Station Average	Remarks
1	95	61	78	
2	95	60	78	
3	96	61	78	
4	95	60	78	
5	66	60	63	
6	73	55	64	
7	77	0 ^{1/}	38	
8	91	0	46	
9	95	0	48	
10	95	0	48	
11	95	0	48	
12	95	0	48	
13	92	0	46	
14	95	0	48	
15	95	0	48	
16	96	0	48	
17	95	0	48	
18	96	0	48	
19	97	0	48	
20	87	0	44	
21	93	0	46	
22	96	0	48	
23	31	0	16	
24	65	0	32	
25	86	0	43	
26	98	0	49	
27	91	0	46	
28	98	0	49	
29	92	0	46	
30	96	9	48	

^{1/} Unit 2 is down for refueling.

TABLE 1
DAILY MEGAWATT POWER OUTPUT (PERCENT OF CAPACITY),
QUAD-CITIES STATION, OCTOBER 1981

Date	Unit 1	Unit 2	Station Average	Remarks
1	96	0	48	
2	96	0	48	
3	96	0	48	
4	65	0	32	
5	76	0	38	
6	92	0	46	
7	96	0	48	
8	96	0	48	
9	96	0	48	
10	96	0	48	
11	92	0	46	
12	96	0	48	
13	96	0	48	
14	96	0	48	
15	97	0	48	
16	94	0	47	
17	96	0	48	
18	96	0	48	
19	96	0	48	
20	96	0	48	
21	96	0	48	
22	97	0	48	
23	96	0	48	
24	97	0	48	
25	86	0	43	
26	96	0	48	
27	97	0	48	
28	96	0	48	
29	96	0	48	
30	94	0	47	
31	83	0	42	

TABLE 1

DAILY MEGAWATT POWER OUTPUT (PERCENT OF CAPACITY),
QUAD-CITIES STATION, NOVEMBER 1981

Date	Unit 1	Unit 2	Station Average	Remarks
1	91	0	46	
2	96	0	48	
3	97	0	48	
4	97	0	48	
5	97	0	48	
6	97	0	48	
7	98	0	49	
8	97	0	48	
9	16	0	8	
10	73	0	36	
11	92	0	46	
12	96	0	48	
13	97	0	48	
14	96	0	48	
15	95	0	48	
16	96	0	48	
17	97	0	48	
18	97	0	48	
19	97	0	48	
20	84	0	42	
21	0	0	0	
22	0	0	0	
23	0	0	0	
24	0	0	0	
25	0	0	0	
26	52	0	26	
27	70	0	35	
28	90	0	45	
29	94	0	47	
30	97	0	48	

TABLE 1
DAILY MEGAWATT POWER OUTPUT (PERCENT OF CAPACITY),
QUAD-CITIES STATION, DECEMBER 1981

Date	Unit 1	Unit 2	Station Average	Remarks
1	98	0	49	
2	98	0	49	
3	98	0	49	
4	98	0	49	
5	98	0	49	
6	94	9	47	
7	98	0	49	
8	98	0	49	
9	98	0	49	
10	98	9	49	
11	98	0	49	
12	51	0	26	
13	79	0	40	
14	96	0	48	
15	98	0	49	
16	98	9	49	
17	98	0	49	
18	98	0	49	
19	90	0	45	
20	79	0	40	
21	95	0	48	
22	98	0	49	
23	99	0	50	
24	100	0	50	
25	96	0	48	
26	99	1	50	
27	93	11	52	
28	97	38	68	
29	97	43	70	
30	98	45	72	
31	97	45	71	

APPENDIX F

(Related to Chapter 2 of Text)

PERCENT RECOVERY OF TEMPERATURE DATA AND
EXPLANATION OF DATA LOSSES

QUAD-CITIES STATION

January through December 1981

TABLE 1
PERCENT RECOVERY OF TEMPERATURE DATA FROM THE CONTINUOUS
MONITORING SYSTEM AT QUAD-CITIES STATION
JANUARY THROUGH DECEMBER 1981

Month	Percent Recovery Temperature Monitoring
January	99
February	100
March	97
April	87
May	88
June	87
July	79
August	62
September	75
October	91
November	96
December	96

TABLE 2
SUMMARY OF TEMPERATURE DATA LOSS AT QUAD-CITIES STATION,
JANUARY THROUGH DECEMBER 1981

Month	Date and Time	Monitoring Location	Remarks
January	12/31/80 at 1200 hrs. to 01/05/81 at 1300 hrs.	Discharge	Sensor Malfuction
February			
March	03/27/81 at 0100 hrs to 03/27/81 at 2200 hrs.	all sensors	recorder not printing
April	04-13-81 at 0100 hrs to 04-22-81 at 1500 hrs	sensor #1, upstream sensor #9, downstream B	Sensor malfunction, due to electric storm
	04-28-81 at 1100 hrs to 04-28-81 at 1600 hrs	all sensors	chart paper ran out
May	04-13-81 at 0100 hrs to 09-05-82 at 1300 hrs	Sensor #9, downstream B	Sensor manfunction Replaced
June	06-09-81 at 1600 hrs to 06-11-81 at 0100 hrs	All sensors	Recorder not printing
	06-19-81 at 1100 hrs to 06-19-81 at 1300 hrs	All sensors	Recorder not not printing
July	07-12-81 at 0100 hrs to 09-18-81 at 1500 hrs	Sensor #10 downstream C	Sensor malfunctioned for unknown reason. Replaced
July	07-25-81 at 1900 hrs to 07-26-81 at 0900	Sensor #1 upstream	Temporary malfunction, reason unknown
August	08-02-81 at 1400 hrs to 08-03-81 at 1100 hrs	Sensor #1, upstream	Temporary sensor malfunction
	08-14-81 at 0700 hrs to 08-14-81 at 1200 hrs	Sensor #1, upstream	Temporary sensor malfunction
	08-14-81 at 2100 hrs to 09-05-81 at 1300 hrs	Sensor #8, downstream A	Sensor malfunction, due to eletrical storm

TABLE 2 (CONTINUED)

Month	Date and Time	Monitoring Location	Remarks
September	08-14-81 at 2200 hrs to 08-15-81 at 1100 hrs	Sensor #1, upstream	Temporary sensor malfunction
	08-18-81 at 1100 hrs to 09-18-81 at 1500 hrs	Sensor #11, downstream D	Sensor malfunction, due to electrical storm
	09-01-81 at 0100 hrs to 09-05-81 at 1300 hrs	Sensor #1, upstream	Sensor malfunction Replaced
	09-26-81 at 0600 hrs to 09-28-81 at 1700 hrs	Sensor #1, upstream	Recorder malfunction
	09-26-81 at 0600 hrs to 09-30-81 at 1300 hrs	Sensor #10, 11 downstream , D	Recorder Malfunction
October	09-29-81 at 0600 hrs to 09-29-91 at 1400 hrs	Sensor #1, upstream	Recorder malfunction
	10-02-81 at 1500 hrs to 10-05-81 at 1300 hrs	Sensor #1, upstream	Instrument malfunction
	10-05-81 at 1100 hrs to 1300 hrs	All locations	Recorder not printing
	10-05-81 at 1400 hrs to 10-21-81 1300 hrs	Sensor #9, downstream B	Parts taken from #9 to repair #1
November	10-28-81 at 1300 hrs to 11/0/81 at 1800 hrs	Sensor #2 Intake	Sensor cable cut
	11/17/81 at 1700 hrs to 11/18/81 at 0700 hrs	All Sensors	Chart paper ran out
December	12/10/81 at 0700 hrs to 12/15/81 at 1200 hrs	Sensor #11 downstream	Temporary sensor malfunction
	12/26/81 at 1900 hrs	Sensor #9 downstream	Sensor malfunction

APPENDIX G

(Related to Chapter 2 of Text)

HOURLY WATER TEMPERATURE DATA

QUAD-CITIES STATION

January through December 1981

TABLE 1
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 1, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	33.2	79.1	^{4/}	28.4	33.9	34.3	29.3
0200	32.7	33.2	79.4		28.4	34.0	34.5	29.3
0300	32.8	33.2	79.5		28.4	34.2	34.5	29.3
0400	32.9	33.2	79.5		28.5	34.2	34.5	29.4
0500	32.9	33.2	79.6		28.5	34.2	34.5	29.4
0600	32.8	33.2	79.8		28.5	34.2	34.6	29.2
0700	32.8	33.2	80.0		28.5	34.1	34.5	29.3
0800	32.9	33.2	80.1		28.5	33.5	34.5	29.3
0900	33.0	33.2	80.3		28.5	33.5	34.5	29.2
1000	33.0	33.3	80.6		28.6	33.7	34.5	29.3
1100	32.9	33.2	80.9		28.4	33.5	34.5	29.3
1200	32.9	33.3	81.5		28.5	33.6	34.5	29.3
1300	32.9	33.2	82.0		28.5	33.4	34.5	29.1
1400	32.8	33.1	82.0		28.4	33.4	34.2	29.0
1500	32.6	33.0	81.9		28.2	33.1	34.1	28.9
1600	32.4	32.8	81.9		28.1	33.0	34.0	28.7
1700	32.4	32.7	82.1		28.1	33.0	34.0	28.7
1800	32.3	32.7	82.0		28.0	32.9	34.0	28.7
1900	32.3	32.7	82.2		28.0	32.9	33.9	28.8
2000	32.2	32.5	82.5		28.0	32.9	33.9	28.5
2100	32.2	32.5	82.6		28.0	32.9	33.9	28.5
2200	32.2	32.4	82.3		27.8	32.9	33.8	28.5
2300	32.2	32.3	82.4		27.9	32.9	33.8	28.4
2400	32.3	32.5	82.2		27.9	33.0	33.8	28.3

^{4/} Sensor malfunction - no data

TABLE 2
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 2, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.4	32.6	82.4		28.0	33.1	33.7	28.4
0200	32.7	32.8	82.6		28.3	33.4	34.2	28.4
0300	32.7	32.9	82.6		28.3	33.5	34.2	28.4
0400	32.8	32.9	83.1		28.3	33.5	34.4	28.4
0500	32.6	32.9	83.0		28.4	33.3	34.1	28.5
0600	32.8	33.0	82.9		28.4	33.4	34.4	28.7
0700	32.8	32.9	82.7		28.4	33.4	34.5	28.7
0800	32.7	32.9	82.7		28.4	33.3	34.2	28.6
0900	32.6	32.8	82.7		28.2	33.2	34.2	28.5
1000	32.5	32.8	82.6		28.1	33.2	34.1	28.4
1100	32.4	32.7	82.6		28.0	33.0	33.9	27.6
1200	32.3	32.7	82.8		28.0	33.0	33.7	28.2
1300	32.4	32.8	83.2		28.0	32.9	33.9	28.3
1400	32.5	33.0	83.8		28.0	33.0	33.9	28.5
1500	32.5	33.0	83.8		28.1	33.0	33.8	28.6
1600	32.5	33.0	84.0		28.0	33.0	34.0	28.7
1700	32.4	32.9	84.0		28.0	33.5	34.0	28.8
1800	32.4	33.0	84.2		28.0	33.2	34.0	28.8
1900	32.4	32.9	84.0		28.1	33.5	34.0	28.9
2000	32.5	33.0	84.2		28.2	33.5	34.2	29.1
2100	32.8	33.2	83.5		28.4	33.7	34.6	29.4
2200	32.8	33.3	83.9		28.6	34.0	34.5	28.9
2300	32.7	33.3	84.2		28.5	34.0	34.7	29.2
2400	32.7	33.2	84.2		28.5	33.7	34.5	29.3

TABLE 3
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 3, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.8	33.3	84.1		28.5	33.8	34.3	29.0
0200	32.8	33.2	83.5		28.4	33.7	34.2	28.9
0300	32.8	33.1	82.9		28.4	33.6	34.4	29.0
0400	32.6	33.0	82.1		28.2	33.5	34.5	28.7
0500	32.4	32.8	81.2		28.0	33.2	34.0	28.5
0600	32.2	32.5	80.1		27.9	33.0	33.9	28.6
0700	32.2	32.3	79.7		28.0	33.0	33.9	28.2
0800	32.2	32.2	79.2		28.0	33.1	33.9	28.3
0900	32.2	32.4	78.8		27.9	33.1	34.0	28.4
1000	32.2	32.4	78.5		28.0	33.1	33.7	28.1
1100	32.2	32.4	78.3		28.0	33.1	34.0	28.2
1200	32.2	32.5	78.2		27.9	33.3	33.8	28.1
1300	32.1	32.5	78.1		28.0	33.5	33.8	28.2
1400	32.2	32.5	77.9		28.0	33.2	33.8	28.4
1500	32.5	32.9	78.0		28.3	33.6	34.2	28.6
1600	32.7	33.1	78.4		28.5	33.9	34.2	28.5
1700	32.8	33.1	78.1		28.5	33.9	34.2	29.0
1800	32.8	33.1	78.0		28.5	33.7	34.3	28.7
1900	32.6	33.0	77.7		28.5	33.9	34.4	28.7
2000	32.7	33.0	77.6		28.3	33.7	34.5	28.8
2100	32.6	33.0	77.4		28.4	33.7	34.2	28.6
2200	32.6	33.0	77.2		28.4	33.8	34.5	28.7
2300	32.7	33.0	77.1		28.4	34.0	34.5	28.6
2400	32.4	32.8	76.8		28.3	33.9	34.1	28.3

TABLE 4
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 4, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.2	32.6	76.5		28.0	33.6	34.2	28.0
0200	32.2	32.5	76.0		27.9	33.5	34.0	27.7
0300	32.1	32.5	75.0		27.7	33.6	34.0	27.8
0400	32.1	32.5	74.6		27.8	33.4	34.0	27.7
0500	32.2	32.4	74.4		27.9	33.4	34.0	27.8
0600	32.2	32.5	73.7		27.9	33.6	34.0	27.9
0700	32.2	32.5	73.3		27.9	33.5	34.0	27.9
0800	32.2	32.5	73.1		27.9	33.4	34.2	27.8
0900	32.2	32.5	73.2		27.8	33.5	34.0	27.8
1000	32.2	32.6	73.4		27.9	33.6	34.1	27.8
1100	32.5	33.0	73.6		28.2	33.6	34.5	28.2
1200	32.7	33.2	74.0		28.4	33.6	34.5	28.4
1300	32.7	33.2	74.5		28.5	34.0	34.9	28.4
1400	32.8	33.3	75.5		28.5	34.1	34.7	28.4
1500	32.8	33.3	76.2		28.5	34.0	34.7	28.4
1600	32.8	33.4	77.2		28.5	34.0	34.6	28.6
1700	32.7	33.4	77.5		28.5	34.1	34.7	28.5
1800	32.7	33.2	77.8		28.2	34.0	34.5	28.4
1900	32.6	33.2	78.1		28.3	33.9	34.5	28.4
2000	32.5	32.9	78.5		28.1	33.8	34.3	28.2
2100	32.4	32.7	78.5		28.0	33.4	34.2	28.2
2200	32.2	32.7	78.6		27.9	33.6	34.2	28.1
2300	32.2	32.8	78.6		27.9	33.5	34.2	27.9
2400	32.2	32.7	78.8		27.9	33.4	34.1	27.7

TABLE 5
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 5, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.2	32.7	78.8		27.8	33.5	34.0	28.0
0200	32.2	32.7	78.8		27.9	33.5	34.2	28.0
0300	32.2	32.7	78.8		27.8	33.5	34.0	28.0
0400	32.3	32.8	78.8		27.9	33.6	34.2	28.0
0500	32.3	32.8	78.9		28.0	33.7	34.2	28.0
0600	32.3	32.9	79.0		28.0	33.8	34.0	28.1
0700	32.5	33.0	79.3		28.3	33.8	34.3	28.2
0800	32.8	33.2	79.6		28.3	34.0	34.5	28.5
0900	32.8	33.2	79.7		28.5	34.0	34.5	28.5
1000	32.9	33.3	79.7		28.5	34.2	34.6	28.6
1100	33.0	33.4	80.0		28.7	34.1	34.5	28.5
1200	33.0	33.5	79.7		28.6	34.0	34.5	28.7
1300 ^{1/}	32.9	33.5	79.8	51.3	28.5	33.9	34.7	28.6
1400	32.9	33.5	74.6	92.0	28.5	33.9	34.5	28.6
1500	32.9	33.5	74.7	92.1	28.4	33.9	34.5	28.7
1600	32.7	33.2	75.0	92.2	28.2	33.7	34.4	28.5
1700	32.5	33.1	75.0	92.2	28.0	33.6	34.3	28.4
1800	33.0	33.0	75.4	92.7	28.0	33.4	34.2	28.3
1900	32.4	32.9	75.6	92.8	28.0	33.3	34.0	28.4
2000	32.4	32.9	75.5	92.2	27.9	33.5	34.0	28.4
2100	32.3	32.9	75.6	92.6	27.9	33.6	34.1	28.3
2200	32.4	32.9	75.9	92.8	27.9	33.4	34.0	28.3
2300	32.3	32.9	76.4	93.2	28.0	33.4	34.0	28.2
2400	32.3	33.0	76.5	93.3	28.0	33.5	34.0	28.5

^{1/} Instruments zeroed to ground truth data.

TABLE 6
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 6, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.4	33.0	76.6	93.4	28.0	33.5	34.0	28.6
0200	32.4	33.0	77.0	93.8	28.0	33.5	34.0	28.6
0300	32.4	33.0	77.3	94.0	28.0	33.6	34.0	28.6
0400	32.7	33.2	77.4	94.2	28.3	34.0	34.4	28.8
0500	32.8	33.4	77.7	94.4	28.4	34.0	34.6	28.8
0600	32.8	33.4	78.2	94.2	28.4	34.0	34.5	28.8
0700	32.9	33.5	78.4	94.7	28.5	34.1	34.5	28.9
0800	33.0	33.6	78.7	94.7	28.4	34.1	34.5	28.8
0900	33.0	33.6	78.7	94.5	28.4	33.9	34.6	28.8
1000	33.0	33.6	78.8	95.0	28.4	33.9	34.6	28.8
1100	33.0	33.5	79.1	95.4	28.4	34.1	34.6	29.0
1200	32.8	33.4	79.0	95.2	28.4	34.0	34.5	28.7
1300	32.8	33.3	79.0	95.3	28.4	33.7	34.5	28.8
1400	32.6	33.2	79.0	94.9	28.3	33.5	34.2	28.7
1500	32.4	33.0	78.6	95.0	28.1	33.5	34.0	28.6
1600	32.4	33.0	78.6	94.6	28.1	33.6	34.1	28.6
1700	23.4	33.0	78.2	93.7	28.1	33.4	34.0	28.5
1800	32.4	33.0	77.6	94.4	28.1	33.4	34.0	28.7
1900	32.4	33.0	77.7	94.7	28.0	33.5	34.0	28.4
2000	32.4	33.0	77.4	93.5	28.0	33.5	34.0	28.5
2100	32.4	33.0	76.5	93.5	28.0	33.4	34.1	28.4
2200	32.4	33.0	76.3	93.3	28.0	33.4	34.0	28.4
2300	32.3	32.8	75.8	93.0	28.0	33.4	34.0	28.3
2400	32.3	32.8	75.2	92.9	28.0	33.3	33.9	28.3

TABLE 7
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 7, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.4	32.8	75.2	93.2	28.1	33.5	34.0	28.3
0200	32.5	33.1	75.7	93.6	28.2	33.5	34.3	28.5
0300	32.8	33.1	75.7	93.7	28.3	33.9	34.4	28.8
0400	32.8	33.2	75.7	93.7	28.4	33.9	34.5	28.7
0500	32.8	33.2	75.8	93.8	28.4	34.0	34.5	28.7
0600	32.8	33.2	75.8	93.8	28.4	33.9	34.4	28.7
0700	32.8	33.2	75.7	94.1	28.4	33.9	34.4	28.7
0800	32.9	33.3	75.7	94.0	28.4	33.9	34.4	28.7
0900	32.7	33.1	75.7	94.0	28.4	34.0	34.5	28.6
1000	32.7	33.1	75.8	94.0	28.3	33.8	34.2	28.5
1100	32.6	33.1	76.0	94.2	28.2	33.5	34.2	28.2
1200	32.3	33.0	76.0	94.2	28.1	33.5	34.1	28.1
1300	32.4	33.0	76.2	94.7	28.1	33.4	34.0	28.4
1400	32.6	33.3	76.8	95.0	28.3	33.6	34.2	28.6
1500	32.5	33.1	77.2	95.0	28.2	33.3	34.4	28.8
1600	32.5	33.1	77.6	95.3	28.3	33.3	34.5	28.7
1700	32.4	33.1	77.7	95.9	28.1	33.3	34.4	28.5
1800	32.4	33.1	77.9	95.9	28.1	33.3	34.4	28.6
1900	32.4	33.0	78.2	96.0	28.1	33.2	34.5	28.8
2000	32.4	33.0	78.3	96.2	28.0	33.3	34.4	28.7
2100	32.6	33.1	78.8	96.2	28.1	33.6	34.5	28.9
2200	34.1	33.1	78.6	96.7	28.4	33.4	34.6	28.8
2300	34.2	33.2	78.9	96.6	28.4	33.6	34.8	28.9
2400	34.4	33.4	79.0	96.8	28.6	33.8	34.9	29.0

TABLE 8
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 8, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	34.4	33.4	79.0	96.8	28.5	33.7	34.7	29.1
0200	34.4	33.4	79.0	97.0	28.6	33.8	34.9	29.1
0300	34.4	33.4	78.8	96.9	28.5	33.7	34.9	29.1
0400	34.3	33.4	78.8	96.5	28.5	33.7	34.9	29.0
0500	34.3	33.4	78.7	96.8	28.5	33.7	34.8	29.0
0600	34.3	33.4	78.8	96.8	28.5	33.8	34.7	29.0
0700	34.4	33.4	79.0	97.0	28.4	33.5	34.7	28.9
0800	34.4	33.4	78.6	96.9	28.4	33.5	34.5	29.0
0900	34.2	33.2	78.6	96.7	28.4	33.5	34.7	29.0
1000	34.2	33.4	78.7	96.6	28.5	33.8	34.4	29.0
1100	34.3	33.4	79.0	96.8	28.6	33.7	34.7	28.9
1200 ^{1/}	34.3	33.4 ^{1/}	79.3 ^{1/}	96.8 ^{1/}	28.7	33.7 ^{1/}	34.7 ^{1/}	28.9
1300	34.3	33.6	79.6	97.1	28.6	33.8	34.7	29.0
1400	33.1	33.5	75.7	88.4	32.0	33.8	33.2	32.6
1500	33.1	33.5	76.0	88.0	32.0	33.9	33.2	32.6
1600	33.3	33.8	76.3	88.6	32.0	33.9	33.5	32.9
1700	33.1	33.5	75.6	88.6	32.0	34.0	33.5	32.8
1800	33.0	33.2	75.8	88.8	31.8	33.8	33.5	32.4
1900	33.2	33.3	75.3	88.3	31.9	34.0	33.5	32.5
2000	33.1	33.4	75.5	88.3	31.9	33.7	33.4	32.5
2100	33.1	33.4	75.4	88.4	31.9	33.9	33.4	32.5
2200	33.0	33.4	75.4	88.5	31.9	33.7	33.5	32.5
2300	33.0	33.4	75.2	88.2	31.9	33.9	33.4	32.5
2400	33.1	33.4	75.2	88.2	32.0	33.8	33.4	32.5

^{1/} Instruments zeroed to ground truth data.

TABLE 9
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 9, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.0	33.3	75.0	88.0	32.0	33.8	33.1	32.6
0200	33.1	33.3	75.0	87.7	31.9	34.0	33.4	32.5
0300	33.0	33.1	74.8	87.8	31.9	33.9	33.4	32.4
0400	33.0	33.1	74.7	87.7	31.9	33.9	33.2	32.2
0500	33.1	33.2	74.6	87.7	31.9	34.0	33.3	32.2
0600	33.1	33.3	74.7	87.7	32.0	34.1	33.2	32.2
0700	33.0	33.2	74.7	87.6	31.9	34.0	33.3	32.4
0800	33.0	33.2	74.6	87.6	31.9	34.0	33.3	32.3
0900	32.9	33.3	74.6	87.6	31.6	34.0	33.2	32.2
1000	32.9	33.0	74.6	87.5	31.6	33.9	33.2	32.2
1100	32.9	33.2	74.8	87.4	31.6	33.7	33.1	32.1
1200	32.9	33.1	74.7	87.4	31.7	33.7	33.1	32.1
1300	32.9	33.3	74.7	87.2	31.9	34.0	33.4	32.3
1400	33.1	33.4	74.7	87.7	32.0	33.9	33.4	32.4
1500	33.3	33.6	74.9	87.7	32.1	33.8	33.5	32.5
1600	33.3	33.6	75.4	87.8	32.0	34.0	33.5	32.5
1700	33.4	33.5	75.1	87.8	31.9	33.9	33.5	32.7
1800	33.4	33.5	75.0	87.8	31.9	33.9	33.7	32.7
1900	33.4	33.5	75.0	87.5	31.9	33.9	33.7	32.6
2000	33.5	33.5	75.0	87.5	31.9	33.9	33.6	32.6
2100	33.4	33.5	75.0	87.4	31.9	33.9	33.7	32.6
2200	33.4	33.5	75.0	83.1	31.9	34.0	33.5	32.5
2300	33.4	33.5	75.0	82.5	31.9	34.0	33.5	32.4
2400	33.2	33.3	75.0	81.6	31.9	33.7	33.4	32.4

TABLE 10
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 10, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.3	33.4	74.7	79.5	31.8	33.7	33.4	32.2
0200	33.2	33.4	71.6	76.8	31.9	34.0	33.4	32.2
0300	33.1	33.4	70.9	74.7	31.9	33.7	33.2	32.1
0400	33.1	33.4	69.7	72.8	31.8	33.7	33.2	31.8
0500	33.1	33.3	68.4	71.7	31.8	33.9	33.2	31.7
0600	33.0	33.3	66.0	70.1	31.7	33.6	33.1	31.7
0700	33.0	33.2	64.3	68.4	31.7	33.7	33.0	31.4
0800	33.0	33.2	62.6	67.0	31.8	33.6	33.0	31.6
0900	33.0	33.2	62.1	66.7	31.8	33.6	33.1	31.5
1000	33.1	33.4	61.1	65.7	31.9	33.6	33.1	31.6
1100	33.1	33.4	60.1	64.9	32.0	33.8	33.1	31.6
1200	33.1	33.4	59.4	64.0	32.0	33.8	33.1	31.4
1300	33.1	33.4	59.1	63.6	32.0	33.6	33.0	31.4
1400	33.0	33.4	58.8	63.6	31.9	33.6	32.9	31.2
1500	33.0	33.4	58.2	63.0	31.9	33.7	32.9	31.1
1600	33.0	33.3	57.6	62.5	31.8	33.7	33.0	31.2
1700	32.9	33.2	57.1	62.3	31.8	33.6	32.9	31.1
1800	32.9	33.2	57.0	62.0	31.7	33.5	32.9	31.1
1900	32.9	33.2	56.7	61.8	31.7	33.7	32.9	31.1
2000	32.9	33.2	56.1	61.1	31.7	33.7	32.9	31.1
2100	33.0	33.2	55.9	61.1	31.7	33.7	32.9	31.1
2200	33.0	33.2	55.7	60.9	31.8	33.7	32.9	31.2
2400	33.0	33.3	55.2	60.5	31.8	33.5	33.0	31.2

TABLE 11
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 11, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.9	33.3	54.8	60.1	31.8	33.5	32.9	31.0
0200	33.0	33.2	54.5	59.9	31.7	33.6	32.7	31.1
0300	33.0	33.2	54.2	57.6	31.7	33.6	32.7	31.0
0400	32.9	33.2	53.9	58.4	31.8	33.6	32.7	31.1
0500	33.0	33.2	53.6	58.8	31.8	33.6	32.9	31.0
0600	33.0	33.2	53.1	58.7	31.8	33.7	32.8	31.0
0700	33.0	33.2	51.8	57.7	31.8	33.5	32.9	31.0
0800	32.9	33.2	51.8	57.8	31.8	33.5	32.8	31.0
0900	32.9	33.2	51.8	57.7	31.7	33.5	32.7	30.9
1000	32.9	33.2	51.7	57.7	31.7	33.5	32.9	30.9
1100	33.0	33.4	51.5	57.6	31.8	33.5	32.9	30.9
1200	33.0	33.4	51.4	57.4	31.9	33.5	32.9	31.0
1300	33.0	33.4	51.8	57.8	31.9	33.4	32.9	31.0
1400	33.0	33.4	52.2	58.5	31.9	33.6	33.0	31.1
1500	33.0	33.5	52.4	58.6	31.8	33.4	33.0	31.2
1600	33.0	33.4	52.0	58.3	31.9	33.5	32.9	31.0
1700	32.9	33.4	52.1	58.5	31.8	33.6	33.0	31.1
1800	32.9	33.4	52.0	58.7	31.8	33.5	32.9	31.0
1900	32.9	33.4	51.8	58.4	31.8	33.6	33.0	31.0
2000	32.9	33.4	51.6	58.5	31.9	33.4	33.0	31.1
2100	32.8	33.2	51.1	58.0	31.7	33.5	32.9	31.0
2200	32.9	33.2	51.0	57.7	31.7	33.4	33.0	31.0
2300	32.9	33.2	51.1	58.0	31.7	33.7	33.0	31.0
2400	32.8	33.2	51.0	57.9	31.7	33.5	32.8	30.9

TABLE 12
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 12, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.7	33.2	50.8	57.7	31.7	33.4	32.9	30.9
0200	32.7	33.2	50.7	57.7	31.6	33.2	32.7	30.8
0300	32.7	33.2	50.9	57.9	31.6	33.2	32.8	30.8
0400	32.7	33.2	51.0	57.9	31.6	33.2	32.7	30.8
0500	32.6	33.2	50.9	57.8	31.5	33.3	32.7	30.8
0600	32.6	33.2	51.0	57.9	31.6	33.3	32.8	30.8
0700	32.6	33.2	51.0	57.9	31.6	33.3	32.8	30.7
0800	32.6	33.2	51.0	59.2	31.6	33.3	32.9	30.7
0900	32.6	33.2	51.0	60.0	31.7	33.4	33.0	31.0
1000	32.9	33.5	51.3	61.5	31.9	33.8	33.1	31.1
1100	32.8	33.4	51.5	62.9	31.9	33.8	33.1	31.3
1200	33.0	33.5	53.0	64.2	32.0	33.8	33.3	31.4
1300	32.9	33.5	54.2	66.0	32.0	33.8	33.3	31.5
1400	33.0	33.5	55.6	67.7	32.0	33.8	33.4	31.5
1500	33.0	33.6	57.2	69.2	31.9	33.8	33.4	31.6
1600	32.9	33.5	58.6	70.1	31.9	33.8	33.3	31.6
1700	32.7	33.5	59.8	71.6	31.9	33.9	33.5	31.8
1800	32.8	33.5	61.2	72.6	31.9	33.9	33.4	32.0
1900	32.8	33.5	62.3	73.8	31.9	33.8	33.4	32.0
2000	32.9	33.5	63.0	74.0	31.8	33.8	33.5	32.1
2100	32.9	33.4	63.7	74.7	31.9	33.8	33.5	32.1
2200	32.9	33.5	64.2	75.0	31.9	34.0	33.5	32.2
2300	32.7	33.4	64.8	75.4	31.9	33.9	33.5	32.0
2400	32.9	33.5	65.1	76.0	31.9	33.9	33.6	32.1

TABLE 13
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 13, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.9	33.4	65.4	76.4	31.9	33.7	33.6	32.1
0200	33.0	33.6	66.0	76.9	31.9	33.8	33.6	32.1
0300	32.8	33.4	66.5	77.2	31.9	33.8	33.8	32.3
0400	32.8	33.4	66.8	77.2	31.9	33.8	33.6	32.2
0500	32.7	33.4	67.0	77.2	31.9	33.9	33.6	32.1
0600	32.7	33.4	67.2	77.4	31.8	33.7	33.6	32.1
0700	32.7	33.4	67.2	77.5	31.9	33.9	33.5	32.4
0800	32.7	33.4	67.3	77.5	31.9	33.8	33.5	32.1
0900	32.4	32.9	66.8	77.5	31.4	33.2	33.2	31.6
1000	32.3	32.9	67.2	77.5	31.5	33.4	33.2	31.6
1100	32.6	33.1	67.8	78.1	31.5	33.5	33.4	31.9
1200	32.4	33.1	68.3	78.3	31.6	33.4	33.4	31.9
1300	32.7	33.1	68.7	78.6	31.7	33.5	33.5	32.1
1400	32.7	33.2	69.0	79.0	31.7	33.4	33.4	32.1
1500	32.6	33.1	69.1	79.1	31.7	33.4	33.4	32.1
1600	32.6	33.4	69.0	79.0	31.7	33.4	33.4	32.2
1700	32.6	33.4	69.2	79.2	31.9	33.6	33.6	32.6
1800	32.7	33.4	69.0	79.3	31.7	33.6	33.6	32.4
1900	32.7	33.3	69.2	79.2	31.9	33.7	33.7	32.6
2000	32.8	33.4	69.3	79.2	31.7	33.7	33.6	32.5
2100	32.6	33.2	69.2	79.2	31.7	33.6	33.6	32.4
2200	32.7	33.2	69.2	79.5	31.8	33.9	33.9	32.6
2300	32.6	33.2	69.3	79.4	31.8	33.8	33.7	32.5
2400	32.8	33.4	69.3	79.5	31.9	33.9	33.7	32.6

TABLE 14
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 14, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.8	33.4	69.4	79.9	31.9	33.7	33.7	32.5
0200	32.7	33.3	69.4	79.9	31.9	33.9	33.7	32.6
0300	32.7	33.3	69.5	79.9	31.7	33.5	33.5	32.7
0400	32.7	33.3	69.1	80.0	31.7	34.0	33.7	32.6
0500	32.7	33.4	69.4	80.0	31.7	33.8	33.8	32.5
0600	32.7	33.3	69.5	80.2	31.7	33.6	33.6	32.5
0700	32.9	33.4	69.7	80.4	31.8	33.6	33.6	32.6
0800	32.9	33.4	69.7	80.4	31.8	33.9	33.8	32.6
0900	32.5	33.1	69.5	80.2	31.5	33.5	33.1	32.0
1000	32.4	33.0	69.7	80.8	31.5	33.3	33.3	32.1
1100	33.0	33.1	70.0	81.0	31.6	33.7	33.4	32.4
1200	33.0	33.1	70.1	81.7	31.6	33.4	33.5	32.5
1300	33.1	33.1	70.6	82.7	31.6	33.4	33.5	32.6
1400	33.0	33.1	70.6	82.7	31.5	33.5	33.5	32.3
1500 ^{1/}	33.0	33.1	70.9	82.9	31.5	33.3	33.5	32.5
1600	32.9	32.9	71.3	83.2	32.9	33.5	33.5	32.5
1700	32.9	32.9	71.7	83.5	32.9	33.5	33.5	32.8
1800	33.0	33.0	71.9	84.1	32.9	33.5	33.5	32.8
1900	32.8	33.0	72.0	84.2	32.9	33.5	33.5	32.8
2000	32.7	32.9	72.1	84.4	33.0	33.5	33.5	32.8
2100	32.6	32.9	72.4	84.4	32.9	33.5	33.5	32.7
2200	32.7	32.8	72.8	84.9	32.9	33.5	33.5	32.8
2300	32.6	32.9	73.0	84.9	32.9	32.5	33.5	32.8
2400	32.7	32.7	73.0	85.2	33.0	33.7	33.6	32.7

^{1/} Instruments zeroed to ground truth data.

TABLE 15
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 15, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.7	32.9	73.1	85.3	33.0	33.8	33.7	32.6
0200	32.7	32.9	73.6	85.6	33.0	33.8	33.7	32.8
0300	32.7	32.9	73.6	85.9	33.0	33.6	33.6	32.8
0400	32.6	32.8	73.9	86.1	33.0	33.5	33.5	32.7
0500	32.6	32.8	74.0	85.9	33.0	33.6	33.6	32.9
0600	33.0	33.0	74.2	86.3	33.0	33.6	33.6	32.7
0700	32.8	33.0	74.2	86.5	33.0	33.7	33.4	32.8
0800	32.7	32.8	74.0	86.1	33.0	33.5	33.5	32.7
0900	32.9	32.9	73.7	86.1	33.0	33.5	33.5	32.7
1000	32.6	33.0	73.4	86.0	33.1	33.5	33.5	32.7
1100	33.0	33.0	73.6	86.4	33.0	33.6	33.6	32.7
1200	32.8	33.1	73.2	86.2	33.1	33.6	33.6	32.9
1300	32.7	33.0	73.0	85.9	33.0	33.6	33.6	32.7
1400	32.6	32.9	72.7	86.0	33.1	34.0	33.5	32.5
1500	32.7	33.0	72.7	86.1	33.1	33.7	33.7	32.7
1600	32.7	32.9	72.2	85.2	33.1	33.9	33.7	32.6
1700	32.6	32.7	72.0	85.2	33.1	33.8	33.7	32.6
1800	32.6	32.7	71.7	85.4	33.0	34.0	33.5	32.6
1900	32.5	32.7	71.5	85.0	33.0	33.6	33.5	32.6
2000	32.7	32.7	71.4	84.9	33.0	33.6	33.5	32.6
2100	32.7	32.7	71.1	84.7	33.0	33.5	33.5	32.5
2200	32.7	32.7	71.1	84.9	33.0	33.7	33.5	32.5
2300	32.6	32.6	71.1	84.6	33.0	33.7	33.5	32.4
2400	32.6	32.6	70.7	84.6	33.0	34.0	33.5	32.4

TABLE 16
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 16, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	32.7	70.7	84.6	33.0	34.0	33.5	32.2
0200	32.6	32.6	70.7	86.5	32.9	34.0	33.5	32.2
0300	32.6	32.7	70.9	84.4	33.0	34.0	33.5	32.3
0400	32.8	32.8	70.8	84.4	33.0	34.0	33.5	32.4
0500	32.8	32.9	70.6	84.5	33.0	34.0	33.5	32.4
0600	32.8	32.9	70.7	84.5	33.0	34.0	33.6	32.5
0700	32.8	32.9	70.7	84.5	33.0	34.0	33.6	32.2
0800	32.7	32.8	70.7	84.6	32.9	33.9	33.5	32.3
0900	32.7	32.8	71.1	84.8	32.9	34.0	33.5	32.3
1000	32.7	32.8	71.0	84.5	32.9	33.9	33.4	32.3
1100	33.0	33.0	71.2	85.0	33.0	33.9	33.6	32.4
1200	32.8	33.0	71.5	85.1	33.1	33.9	33.5	32.4
1300	32.7	33.0	71.6	85.0	33.1	34.0	33.6	32.5
1400	32.8	33.1	71.9	85.6	33.1	33.8	33.5	32.4
1500	32.7	33.1	72.1	85.9	33.0	33.8	33.5	32.4
1600	32.7	33.1	72.5	85.9	33.0	33.8	33.5	32.4
1700	32.7	33.2	72.3	86.2	33.1	33.8	33.5	32.6
1800	32.8	33.0	72.5	86.3	33.1	33.8	33.5	32.5
1900	32.9	33.1	72.5	86.2	33.1	33.8	33.5	32.6
2000	32.8	33.1	72.5	86.0	33.2	33.8	33.6	32.5
2100	32.8	33.0	72.5	85.6	33.1	33.7	33.6	32.6
2200	32.9	33.0	72.5	83.7	33.0	33.7	33.6	32.4
2300	32.8	33.0	72.4	81.8	33.0	33.7	33.5	32.4
2400	32.8	32.9	72.5	80.6	33.1	33.7	33.6	32.5

TABLE 17
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 17, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.7	33.0	72.0	79.0	33.1	34.0	33.5	32.5
0200	32.9	33.0	76.0	75.5	33.1	33.9	33.5	32.3
0300	32.8	33.0	70.0	73.5	33.0	33.9	33.5	32.1
0400	32.9	33.0	69.2	72.7	33.0	33.9	33.4	32.0
0500	32.8	32.9	68.3	72.1	33.0	33.8	33.4	32.0
0600	32.9	33.0	66.2	72.6	33.0	33.8	33.3	31.9
0700	32.9	32.9	64.8	73.5	33.0	33.8	33.4	31.9
0800	33.0	33.0	64.1	73.3	33.0	33.8	33.4	32.0
0900	32.8	33.0	63.7	72.9	33.0	33.8	33.4	32.0
1000	33.0	33.0	63.7	73.0	33.1	33.8	33.4	32.0
1100	33.0	33.1	64.5	75.3	33.2	33.8	33.4	31.8
1200	33.0	33.3	64.6	75.8	33.2	34.0	33.5	32.0
1300	33.0	33.3	64.7	75.9	33.3	34.0	33.4	32.2
1400	33.0	33.5	65.0	76.2	33.3	34.0	33.5	32.1
1500	33.0	33.5	66.8	77.2	33.4	34.0	33.5	32.4
1600	33.0	33.6	67.2	78.2	33.4	34.0	33.6	32.5
1700	32.9	33.4	67.2	78.2	33.3	34.0	33.6	32.3
1800	32.9	33.4	67.4	78.3	33.3	33.8	33.5	32.2
1900	32.9	33.3	67.9	78.7	33.2	33.8	33.5	32.3
2000	32.9	33.2	68.5	79.2	33.2	34.0	33.6	32.2
2100	32.7	33.2	68.5	79.5	33.2	33.8	33.5	32.2
2200	32.9	33.2	68.8	79.6	33.2	34.0	33.5	32.2
2300	32.9	33.2	69.1	80.1	33.2	34.0	33.5	32.3
2400	32.8	33.2	69.5	80.5	33.2	34.0	33.6	32.2

TABLE 18
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 18, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.9	33.1	69.6	80.0	33.3	34.1	33.6	32.4
0200	32.9	33.1	69.4	79.7	33.3	34.0	33.7	32.4
0300	32.9	33.1	69.7	80.0	33.3	34.0	33.7	32.4
0400	32.9	33.2	70.0	81.3	33.4	34.2	33.8	32.4
0500	32.9	33.2	69.9	81.2	33.4	33.9	33.8	32.4
0600	32.9	33.2	69.6	81.0	33.4	33.9	33.7	32.4
0700	32.9	33.1	69.8	81.6	33.4	33.9	33.6	32.4
0800	33.0	33.1	70.7	82.2	33.4	33.9	33.8	32.4
0900	33.0	33.3	70.9	82.5	33.4	33.9	33.7	32.4
1000	33.2	33.2	70.9	82.6	33.4	33.9	33.9	32.4
1100	33.2	33.5	71.2	83.1	33.5	34.0	33.9	32.4
1200	33.1	33.5	72.0	82.8	33.6	34.0	33.9	32.5
1300	33.2	33.7	73.0	84.0	33.6	34.1	33.9	32.6
1400	33.1	33.7	73.7	84.9	33.5	34.0	34.0	32.6
1500	33.1	33.7	74.4	85.4	33.5	34.0	34.0	32.8
1600	33.2	33.9	74.5	85.6	33.5	34.0	34.0	32.9
1700	33.3	33.9	74.9	86.0	33.6	33.9	33.9	32.8
1800	33.1	33.8	75.6	86.7	33.4	33.9	33.9	32.9
1900	33.1	33.6	75.8	86.9	33.5	34.0	34.0	32.9
2000	33.1	33.6	75.9	87.0	33.5	34.0	34.0	33.0
2100	33.0	33.6	75.9	87.4	33.5	34.0	34.0	32.9
2200	33.1	33.5	76.3	87.8	33.4	34.0	34.0	32.9
2300	33.1	33.4	76.6	87.9	33.5	34.0	33.9	33.0
2400	33.1	33.3	76.8	88.0	33.5	34.0	34.0	33.1

TABLE 19
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION,
January 19, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.2	33.5	76.8	88.2	33.5	34.0	34.0	33.0
0200	33.1	33.5	76.9	88.7	33.5	34.0	34.0	33.0
0300	33.1	33.5	76.9	88.7	33.5	34.0	34.0	33.0
0400	33.1	33.5	76.9	88.4	33.5	34.0	34.0	32.9
0500	33.0	33.5	76.7	88.9	33.5	34.0	34.0	33.0
0600	33.0	33.5	76.9	89.0	33.5	34.0	34.0	33.0
0700	33.0	33.5	77.0	89.1	33.5	34.0	34.0	33.0
0800	33.0	33.5	76.9	89.1	33.5	34.0	34.0	32.9
0900	32.7	33.0	75.7	88.7	33.0	33.5	33.6	32.4
1000	32.8	33.1	77.2	88.9	33.1	33.8	33.7	32.5
1100	32.8	33.3	77.3	89.5	33.1	33.7	33.7	32.6
1200	32.9	33.5	77.6	89.7	33.1	33.7	33.7	32.6
1300	32.8	33.6	77.9	89.9	33.3	33.9	33.7	32.8
1400	33.0	33.7	78.4	90.5	33.4	34.0	34.0	33.0
1500	33.0	33.5	78.5	90.3	33.5	34.0	34.0	33.0
1600	33.1	34.1	78.9	91.3	33.6	33.6	34.0	33.3
1700	33.0	33.7	79.1	91.3	33.5	33.5	34.0	33.5
1800	33.0	33.7	79.5	91.7	33.5	33.7	34.0	33.1
1900	32.9	33.5	79.5	92.2	33.5	33.9	33.9	33.3
2000	33.0	33.6	80.0	92.1	33.4	33.8	33.9	33.2
2100	32.9	33.5	80.0	92.5	33.5	34.0	34.0	33.2
2200	32.9	33.5	80.0	92.4	33.4	33.8	34.0	33.1
2300	32.9	33.5	80.0	92.5	33.3	33.8	34.0	33.1
2400	32.9	33.5	80.0	92.6	33.3	33.8	34.0	33.1

TABLE 20
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 20, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.9	33.4	80.0	92.9	33.4	33.8	34.0	33.1
0200	32.9	33.5	80.2	92.8	33.4	33.9	34.0	33.0
0300	32.9	33.5	80.1	92.8	33.4	33.9	34.0	33.0
0400	32.9	33.4	80.2	92.8	33.4	33.9	34.0	32.9
0500	32.9	33.3	80.0	92.8	33.3	33.9	33.9	32.8
0600	32.8	33.2	80.0	92.6	33.3	33.8	33.9	32.8
0700	32.8	33.2	79.8	92.7	33.2	33.8	33.8	32.8
0800	32.7	33.2	79.6	92.2	33.3	33.8	33.8	32.8
0900	33.0	33.5	79.9	92.4	33.4	34.0	34.0	32.9
1000	33.0	33.5	80.0	92.6	33.5	34.0	34.0	32.7
1100	33.0	33.7	80.4	92.9	33.6	33.9	34.0	32.8
1200	33.0	33.9	80.9	93.5	33.6	34.0	34.0	33.0
1300 ^{1/}	33.0	33.9	81.2	93.8	33.6	33.8	34.0	33.0
1400	33.1	34.0	80.2	94.1	33.6	33.8	34.0	33.0
1500	33.1	34.2	80.6	94.4	33.7	34.0	34.0	33.4
1600	33.4	34.3	81.0	95.0	33.7	34.0	34.3	33.7
1700	33.1	34.4	81.2	94.8	33.9	34.1	34.3	33.6
1800	33.0	34.2	81.0	94.7	33.7	34.1	34.2	33.6
1900	33.0	34.1	80.7	94.7	33.6	33.9	34.3	33.5
2000	32.9	33.8	80.4	94.2	33.6	34.1	34.1	33.5
2100	32.9	33.8	80.0	94.0	33.5	33.9	34.1	33.3
2200	32.9	33.5	79.3	93.1	33.5	34.0	34.0	33.2
2300	32.9	33.5	79.1	93.0	33.5	34.0	34.0	33.2
2400	32.9	33.7	78.7	92.6	33.5	34.0	34.0	33.2

^{1/} Instruments zeroed to ground truth data.

TABLE 21
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 21, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.0	33.5	78.2	92.8	33.5	34.3	34.2	33.0
0200	33.0	33.6	78.0	92.6	33.5	34.0	34.2	33.0
0300	33.0	33.6	77.5	92.1	33.4	34.0	34.1	32.8
0400	33.0	33.6	77.5	91.8	33.5	34.0	34.1	32.8
0500	32.9	33.5	77.6	92.0	33.5	33.8	33.8	32.7
0600	33.0	33.5	77.4	92.1	33.5	33.8	33.8	32.9
0700	33.0	33.5	77.2	91.7	33.5	33.7	33.8	33.0
0800	32.8	33.4	77.0	91.6	33.4	33.7	33.8	32.9
0900	32.7	33.4	76.9	91.5	33.4	33.6	33.6	32.7
1000	32.8	33.4	76.8	91.9	33.4	33.8	33.8	32.9
1100	33.0	33.6	77.0	92.0	33.6	33.8	33.8	32.9
1200	33.0	33.6	77.0	92.2	33.6	33.8	33.8	32.9
1300	33.0	33.6	76.9	91.7	33.6	33.8	33.8	32.9
1400	33.2	33.8	77.4	92.4	33.7	33.8	33.9	32.9
1500	33.0	34.1	77.4	92.5	33.7	33.9	33.9	33.0
1600	33.2	34.1	77.7	92.8	33.7	34.0	34.0	33.1
1700	33.0	33.6	77.7	92.8	33.7	33.9	33.9	32.9
1800	33.0	34.0	78.0	93.0	33.6	33.9	33.9	32.9
1900	33.1	33.6	78.1	93.1	33.6	34.1	34.1	33.1
2000	33.0	33.8	78.2	93.0	33.6	34.1	34.2	33.3
2100	32.9	33.6	78.0	92.8	33.6	34.0	34.1	33.2
2200	32.9	33.5	78.0	92.8	33.5	34.0	34.0	33.0
2300	32.9	33.5	77.9	92.8	33.4	33.9	34.0	33.0
2400	32.7	33.5	77.8	92.6	33.4	34.0	34.0	33.1

TABLE 22
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 22, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.9	33.5	77.8	92.7	33.5	34.0	34.0	33.1
0200	32.8	33.4	77.8	92.5	33.4	34.0	34.0	33.0
0300	32.8	33.4	77.8	92.2	33.5	34.0	34.0	33.1
0400	32.9	33.4	77.6	91.8	33.5	34.0	34.0	33.0
0500	32.9	33.4	77.6	91.7	33.4	34.0	33.9	33.0
0600	32.8	33.4	77.3	91.7	33.4	34.0	33.8	32.9
0700	32.8	33.3	77.1	91.5	33.4	34.0	33.8	32.7
0800	32.8	33.3	76.9	91.4	33.4	34.0	33.8	32.9
0900	32.9	33.4	76.8	91.4	33.5	34.0	34.0	32.8
1000	33.0	33.4	76.9	91.2	33.6	34.0	34.0	32.8
1100	32.8	33.4	77.0	91.5	33.6	34.0	34.0	32.8
1200	32.9	33.6	77.2	92.0	33.6	34.0	34.0	32.6
1300	33.0	33.8	77.9	92.3	33.6	34.0	34.0	32.8
1400	33.0	34.1	78.2	92.5	33.7	34.0	34.0	33.1
1500	33.2	34.3	78.8	92.8	33.9	34.0	34.3	33.3
1600	33.4	34.4	79.1	93.4	33.9	34.0	34.4	33.4
1700	33.3	34.4	79.1	93.3	34.0	34.0	34.3	33.4
1800	33.2	34.4	79.0	93.2	33.9	33.9	34.1	33.1
1900	33.1	34.2	79.0	93.0	33.8	33.8	34.1	33.2
2000	33.0	34.1	79.0	93.1	33.7	33.8	34.0	33.3
2100	33.0	33.9	79.0	92.9	33.6	33.8	34.0	33.3
2200	33.0	33.7	78.7	92.9	33.6	33.8	34.0	33.2
2300	33.0	33.7	78.5	92.0	33.6	33.8	34.0	33.4
2400	33.0	33.6	78.3	90.5	33.6	33.7	34.0	33.0

TABLE 23
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 23, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.9	33.5	78.2	89.0	33.6	33.7	33.9	32.9
0200	32.9	33.5	78.2	87.7	33.5	33.7	33.8	32.9
0300	32.9	33.5	77.5	87.4	33.5	33.7	33.7	32.8
0400	32.8	33.5	76.1	87.4	33.4	33.6	33.6	32.7
0500	32.9	33.4	75.3	86.8	33.4	33.8	33.7	32.7
0600	32.9	33.4	74.0	86.5	33.5	33.8	33.7	32.7
0700	32.8	33.4	73.6	86.2	33.4	33.6	33.6	32.5
0800	32.8	33.4	73.9	86.4	33.4	33.6	33.6	32.4
0900	32.9	33.4	73.4	86.4	33.4	33.6	33.6	32.3
1000	33.0	33.5	73.4	86.1	33.5	33.6	33.6	32.3
1100	32.9	33.5	73.6	86.7	33.6	33.7	33.7	32.4
1200	32.9	33.7	74.1	87.0	33.7	33.7	33.6	32.4
1300	33.0	33.9	74.5	87.6	34.0	34.0	33.8	32.5
1400	33.1	34.2	74.9	87.7	34.1	34.1	33.8	32.9
1500	33.4	34.5	75.6	88.6	34.2	34.2	34.0	32.8
1600	33.0	34.5	75.8	88.9	34.2	34.2	34.0	33.0
1700	33.1	34.6	76.2	89.0	34.1	34.1	34.0	33.0
1800	33.1	34.4	76.4	88.9	34.0	34.1	34.0	32.9
1900	33.0	34.1	76.7	89.4	34.0	34.0	34.0	33.0
2000	33.0	34.1	76.7	89.5	33.9	34.0	34.0	33.0
2100	33.0	34.0	76.7	89.4	33.8	34.0	34.0	33.0
2200	32.9	33.8	76.5	89.7	33.8	33.9	33.9	32.8
2300	32.9	33.7	76.6	88.8	33.8	33.8	33.8	32.7
2400	32.9	33.7	76.8	88.8	33.8	33.9	33.8	32.9

TABLE 24
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 24, 1980

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.0	33.7	76.5	85.0	33.7	33.8	33.8	32.9
0200	32.9	33.8	76.6	83.5	33.7	33.9	33.7	32.6
0300	32.9	33.5	76.0	83.5	33.6	33.7	33.6	32.5
0400	32.7	33.6	74.7	82.0	33.6	33.7	33.6	32.6
0500	32.7	33.4	73.6	81.0	33.5	33.7	33.6	32.4
0600	32.7	33.4	72.4	80.7	33.5	33.6	33.6	32.3
0700	32.7	33.4	72.1	81.0	33.5	33.7	33.5	32.3
0800	32.8	33.4	71.3	80.6	33.5	33.6	33.6	32.2
0900	32.8	33.4	70.5	80.1	33.6	33.7	33.6	32.3
1000	32.7	33.4	70.5	80.0	33.6	33.7	33.6	32.3
1100	32.9	33.7	71.0	80.5	33.6	33.6	33.5	32.4
1200	32.9	34.0	71.6	81.2	33.9	33.9	33.8	32.4
1300	33.0	34.1	71.8	81.3	34.0	34.2	34.0	32.7
1400	33.2	34.6	72.2	82.2	34.2	34.2	34.0	32.9
1500	33.2	34.8	72.7	82.7	34.2	34.2	34.0	32.9
1600	33.1	34.9	73.3	83.7	34.4	34.3	34.2	33.0
1700	33.2	34.9	73.4	83.8	34.2	34.1	34.0	33.0
1800	33.1	34.6	73.6	84.2	34.1	34.1	34.1	33.0
1900	33.0	34.5	73.9	84.5	34.0	34.0	34.0	33.0
2000	33.0	34.3	74.0	84.9	34.0	34.0	34.0	32.9
2100	32.9	34.1	73.9	85.0	33.9	34.0	34.0	32.9
2200	33.0	34.0	73.9	85.1	33.9	33.9	34.0	32.9
2300	32.9	34.0	74.0	85.4	33.9	34.0	34.0	32.9
2400	33.0	33.8	74.1	85.5	33.9	34.0	33.0	32.9

TABLE 25
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 25, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.9	34.0	74.0	85.6	33.9	33.9	33.9	32.9
0200	32.8	33.9	74.1	85.8	33.8	33.9	33.8	32.7
0300	32.9	33.9	74.3	86.0	33.8	33.9	33.8	32.9
0400	32.9	33.9	74.6	86.4	33.7	33.8	33.9	32.7
0500	33.0	33.9	74.5	86.4	33.7	33.9	33.9	32.6
0600	32.8	33.9	74.7	86.9	33.7	33.9	33.8	32.7
0700	32.7	33.8	74.8	87.0	33.6	33.8	33.9	32.7
0800	32.8	33.7	74.9	87.1	33.6	33.8	33.9	32.6
0900	32.7	33.7	75.0	87.4	33.6	33.9	33.9	32.4
1000	32.8	33.9	75.4	87.7	33.7	33.8	33.9	32.7
1100	32.8	33.9	75.7	87.7	33.7	33.8	33.9	32.7
1200	33.0	34.1	76.4	88.8	34.0	34.0	34.0	32.8
1300	33.0	34.3	76.9	89.0	34.0	34.1	34.1	32.9
1400	33.0	34.6	77.2	89.6	34.1	34.1	34.1	33.1
1500	33.2	34.8	77.4	89.8	34.2	34.1	34.1	33.3
1600	33.2	34.9	78.0	90.4	34.4	34.2	34.2	33.3
1700	33.2	35.1	78.1	90.6	34.4	34.4	34.3	33.3
1800	33.1	35.0	78.5	90.9	34.2	34.0	34.3	33.4
1900	33.0	34.7	78.8	91.0	34.1	34.1	34.0	33.4
2000	33.0	34.6	78.7	90.7	34.1	34.1	34.0	33.4
2100	32.9	34.2	78.6	90.7	34.0	34.1	34.2	33.4
2200	33.1	34.0	78.4	90.7	34.0	34.0	34.0	33.4
2300	33.0	34.0	77.9	90.6	34.0	34.0	34.1	33.3
2400	33.0	33.9	77.4	90.7	34.0	34.1	34.1	33.2

TABLE 26
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 26, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.0	33.8	77.4	90.3	34.0	34.0	34.0	33.1
0200	32.9	33.6	77.3	90.0	34.0	34.0	34.0	33.1
0300	32.9	33.6	76.8	90.0	33.9	34.0	34.0	33.2
0400	32.9	33.5	76.6	89.5	33.9	34.0	34.0	33.1
0500	32.8	33.5	76.0	88.6	33.6	33.7	33.6	33.1
0600	32.9	33.5	75.0	89.0	33.6	33.7	33.7	33.3
0700	32.9	33.4	75.4	88.8	33.8	33.8	33.8	33.3
0800	32.8	33.4	75.2	89.2	33.8	33.9	33.8	33.1
0900	32.4	33.1	74.2	88.6	33.4	33.5	33.5	32.6
1000	32.5	33.2	74.1	88.3	33.4	33.4	33.4	32.7
1100	32.7	33.3	73.7	88.6	33.4	33.5	33.5	32.7
1200	32.6	33.4	74.0	89.0	33.4	33.5	33.5	32.7
1300	32.6	33.4	74.5	89.0	33.5	33.6	33.6	32.7
1400	32.8	33.6	74.4	89.3	33.5	33.6	33.6	32.7
1500	32.6	33.6	74.6	88.7	33.6	33.6	33.6	32.7
1600	32.6	33.6	74.9	89.2	33.6	33.6	33.6	32.7
1700	32.6	33.4	75.0	89.3	33.5	33.5	33.5	32.6
1800	32.5	33.4	75.1	89.6	33.5	33.6	33.5	32.8
1900	32.5	33.4	75.8	89.6	33.5	33.5	33.5	32.9
2000	32.5	33.4	75.6	89.8	33.4	33.5	33.5	32.9
2100	32.5	33.2	75.5	90.0	33.4	33.4	33.4	32.9
2200	32.6	33.2	75.9	90.9	33.4	33.4	33.4	32.8
2300	32.5	33.2	76.1	90.6	33.3	33.4	33.4	32.8
2400	32.5	33.1	76.1	90.9	33.3	33.4	33.4	32.9

TABLE 27
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 27, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.5	33.1	76.0	91.3	33.4	33.4	33.6	32.8
0200	32.6	33.2	76.5	91.7	33.4	33.6	33.6	32.7
0300	32.6	33.1	76.7	91.9	33.4	33.5	33.6	32.7
0400	32.5	33.1	77.0	92.1	33.3	33.6	33.6	32.6
0500	32.6	33.2	77.1	92.0	33.4	33.8	33.8	32.9
0600	32.6	33.2	77.3	92.4	33.4	33.7	33.7	32.6
0700	32.6	33.1	77.1	92.5	33.4	33.6	33.6	32.6
0800	32.6	33.1	77.5	92.6	33.4	33.6	33.6	32.6
0900	32.9	33.4	77.8	92.9	33.5	33.7	33.7	32.6
1000	32.9	33.4	77.8	93.1	33.6	33.6	33.6	32.9
1100	33.1	33.5	78.0	93.3	33.6	33.6	33.6	33.0
1200	33.0	33.5	78.2	93.0	33.9	33.9	33.9	33.0
1300	32.9	33.5	78.2	92.6	33.9	33.9	33.5	32.9
1400	32.9	33.5	78.1	93.0	33.9	33.9	33.6	33.0
1500	32.9	33.5	78.1	93.3	33.9	34.0	33.6	32.9
1600	32.9	33.5	78.1	93.4	33.9	34.0	33.9	33.0
1700	32.8	33.5	77.5	92.9	33.9	33.9	33.9	32.9
1800	31.8	33.4	77.5	92.8	33.6	33.9	33.5	32.9
1900	32.8	33.4	77.5	93.1	33.7	33.9	33.6	32.9
2000	32.7	33.2	77.5	93.0	33.6	33.7	33.7	32.6
2100	32.6	33.2	77.0	92.4	33.4	33.5	33.7	32.8
2200	32.6	33.1	77.0	92.8	33.4	33.6	33.6	32.6
2300	32.6	33.1	76.9	92.5	33.5	33.7	33.6	32.7
2400	32.6	33.2	76.5	92.4	33.4	33.6	33.6	32.6

TABLE 28
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 28, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	33.2	76.2	92.0	33.4	33.8	33.7	32.5
0200	32.6	33.1	76.1	91.9	33.4	33.6	33.6	32.4
0300	32.6	33.1	76.0	91.7	33.4	33.5	33.6	32.4
0400	32.5	33.1	75.7	91.5	33.2	33.5	33.5	32.4
0500	32.5	33.1	75.5	91.5	33.4	33.4	33.5	32.3
0600	32.5	33.0	75.4	91.2	33.3	33.5	33.5	32.4
0700	32.5	33.0	75.2	91.4	33.3	33.6	33.5	32.5
0800	32.5	33.0	75.1	90.9	33.3	33.5	33.5	32.2
0900	32.5	33.0	75.0	90.8	33.2	33.6	33.4	32.2
1000	32.4	33.0	75.0	91.1	33.4	33.5	33.5	32.5
1100	32.5	33.1	75.0	90.8	33.4	33.5	33.5	32.5
1200	32.5	33.2	75.0	91.0	33.5	33.7	33.6	32.6
1300	32.6	33.5	75.0	90.7	33.5	33.6	33.6	32.5
1400	32.7	33.5	75.1	91.1	33.6	33.8	33.6	32.5
1500	32.6	33.6	75.0	91.1	33.6	33.8	34.0	31.1
1600	32.6	33.4	74.8	90.9	33.5	33.6	34.0	30.8
1700	32.5	33.2	74.6	90.7	33.4	33.5	34.0	30.3
1800	32.5	33.3	74.7	90.7	33.4	33.8	33.9	30.3
1900	32.6	33.1	74.6	91.0	33.4	33.5	33.9	30.1
2000	32.4	33.1	74.9	91.3	33.4	33.7	34.0	30.0
2100	32.5	33.0	76.7	92.7	33.4	33.7	34.0	30.0
2200	32.4	33.0	75.8	92.0	33.4	33.7	33.9	30.0
2300	32.4	33.0	76.1	91.3	33.4	33.7	33.9	30.0
2400	32.4	33.0	77.1	92.6	33.3	33.4	33.8	29.9

TABLE 29
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 29, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.4	33.0	75.6	91.3	33.3	33.4	34.0	29.9
0200	32.4	33.0	75.1	90.8	33.3	33.4	34.0	29.9
0300	32.2	32.9	74.6	90.8	33.2	33.5	34.0	29.9
0400	32.3	32.9	75.5	91.3	33.1	33.8	33.9	29.8
0500	32.3	32.9	74.9	91.0	33.1	33.7	33.7	29.8
0600	32.2	32.9	74.5	90.8	33.1	33.5	33.7	29.7
0700	32.2	32.9	74.0	90.4	33.0	33.3	33.7	29.7
0800	32.2	32.8	74.5	90.9	33.1	33.4	33.7	29.7
0900	32.4	33.0	74.7	90.7	33.1	33.4	33.7	29.7
1000	32.5	33.0	74.3	91.0	33.2	33.5	33.8	29.7
1100	32.4	33.1	74.5	90.8	33.3	33.6	33.8	29.9
1200	32.4	33.3	75.0	90.9	33.4	33.5	33.9	29.9
1300 ^{1/}	32.5	33.4	75.4	91.6	33.4	33.5	33.9	30.0
1400	32.6	31.0	76.1	86.1	33.5	33.7	34.1	30.1
1500	32.6	31.1	76.1	86.1	33.5	33.5	34.2	30.1
1600	32.6	31.0	76.4	86.1	33.4	33.5	34.3	30.1
1700	32.6	30.9	76.6	86.6	33.4	33.6	34.2	30.0
1800	32.5	30.7	76.9	86.9	33.4	33.6	34.2	30.0
1900	32.5	30.6	76.9	87.0	33.3	33.7	34.1	30.0
2000	32.4	30.5	76.7	86.7	33.4	33.7	34.1	30.0
2100	32.4	30.5	76.7	86.7	33.3	33.7	34.1	30.0
2200	32.4	30.5	76.8	86.8	33.4	33.8	34.3	30.0
2300	32.4	30.5	76.7	86.7	33.4	33.7	34.2	29.9
2400	32.5	30.6	76.4	86.7	33.4	33.9	34.5	30.0

^{1/} Instruments zeroed to ground truth data.

TABLE 30
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 30, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.5	30.6	76.3	86.4	33.4	33.8	34.4	30.0
0200	32.5	30.6	76.2	86.4	33.5	33.9	34.3	30.0
0300	32.5	30.5	76.4	86.4	33.4	34.0	34.2	30.0
0400	32.5	30.5	76.4	86.4	33.4	33.8	34.0	29.9
0500	32.5	30.5	76.1	86.0	33.4	34.0	34.1	30.0
0600	32.5	30.5	76.1	86.1	33.4	33.8	34.1	30.0
0700	32.5	30.5	76.1	86.1	33.4	33.8	34.0	29.9
0800	32.5	30.5	76.1	86.4	33.4	33.8	34.1	29.9
0900	32.7	30.6	76.0	86.3	33.4	33.6	34.5	31.4
1000	32.6	30.6	76.2	86.8	33.4	33.7	34.2	31.4
1100	32.7	30.8	76.7	86.9	33.5	33.5	34.5	31.5
1200	32.7	31.0	77.0	87.0	33.6	33.6	34.5	32.6
1300	32.6	31.0	77.0	87.4	33.5	33.5	34.4	31.7
1400	32.6	31.1	77.6	87.7	33.6	33.7	34.5	31.9
1500	32.6	31.2	77.7	87.9	33.6	33.7	34.5	31.9
1600	32.5	31.1	78.0	88.0	33.6	33.6	34.5	31.9
1700	32.5	31.1	78.2	87.9	33.5	33.6	34.3	31.9
1800	32.5	31.0	78.4	87.9	33.5	33.6	34.5	31.9
1900	32.5	30.9	78.5	85.2	33.5	33.6	34.4	31.8
2000	32.5	30.9	78.4	81.5	33.5	33.6	34.3	31.7
2100	32.4	30.7	78.0	77.9	33.4	33.5	34.3	31.5
2200	32.4	30.6	77.7	75.7	33.4	33.6	34.2	31.5
2300	32.4	30.6	76.4	72.2	33.4	33.4	34.2	31.5
2400	32.3	30.5	74.4	70.5	33.3	33.4	33.9	31.5

TABLE 31
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
January 31, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.3	30.5	72.9	69.0	33.4	33.5	33.9	31.4
0200	32.3	30.5	70.1	67.6	33.4	33.4	33.9	31.5
0300	32.3	30.5	68.2	65.9	33.4	33.6	33.6	31.5
0400	32.3	33.3	66.8	72.2	33.4	33.4	32.1	31.5
0500	32.2	30.4	65.5	68.2	33.4	33.4	33.4	31.4
0600	31.3	30.3	64.4	66.7	33.2	33.3	31.1	31.4
0700	32.1	30.4	63.2	65.6	33.1	33.1	33.1	31.2
0800	32.1	30.3	67.0	68.9	33.2	33.2	33.1	31.2
0900	32.2	30.4	65.1	67.3	33.2	33.2	33.1	31.1
1000	32.4	30.5	64.2	66.2	33.3	33.3	33.3	33.3
1100	32.3	30.5	63.5	65.6	33.3	33.4	33.1	32.2
1200	32.4	30.6	65.2	66.0	33.4	33.4	33.2	31.3
1300	32.5	54.5	65.0	71.7	33.4	33.3	32.0	31.0
1400	32.6	31.9	63.9	77.6	33.6	33.6	33.6	31.5
1500	32.6	31.2	62.2	72.2	33.5	33.4	33.5	31.6
1600	32.6	31.1	61.0	69.8	33.5	33.5	33.5	31.6
1700	32.6	31.0	60.1	68.9	33.5	33.5	33.5	31.7
1800	32.6	31.0	59.3	61.0	33.4	33.5	33.5	31.6
1900	32.6	30.9	58.8	67.8	33.5	33.5	33.5	31.5
2000	32.5	30.8	59.5	67.5	33.4	33.5	33.5	31.5
2100	32.5	30.8	65.1	70.6	33.4	33.4	33.4	31.5
2200	32.5	30.7	63.5	71.3	33.2	33.4	33.5	31.5
2300	32.5	30.7	61.5	70.0	33.4	33.4	33.4	31.5
2400	32.5	30.6	60.9	69.2	33.2	33.5	33.5	31.4

TABLE 32
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 1, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.5	30.5	60.4	67.4	33.3	33.4	33.4	31.3
0200	32.4	30.4	60.0	64.5	33.2	33.4	33.4	31.3
0300	32.4	30.4	60.0	65.1	33.2	33.4	33.4	31.2
0400	32.5	30.5	60.0	66.1	33.3	33.4	33.3	31.2
0500	32.5	30.5	61.7	68.1	33.3	33.4	33.4	31.3
0600	32.5	30.5	62.0	68.8	33.4	33.5	33.5	31.4
0700	32.5	30.4	61.5	68.8	33.4	33.4	33.4	31.4
0800	32.5	30.5	61.0	69.1	33.5	33.5	33.5	31.4
0900	32.4	30.4	50.8	68.1	33.3	33.4	33.5	31.3
1000	32.4	30.3	58.5	67.6	33.4	33.5	33.4	31.3
1100	32.5	30.4	58.5	67.1	33.3	33.6	33.6	31.2
1200	32.5	30.3	58.5	67.0	33.2	33.7	33.6	31.3
1300	32.5	30.3	58.8	67.2	33.4	33.7	33.5	31.3
1400	32.4	30.3	58.5	67.6	33.4	33.6	33.5	31.4
1500	32.4	30.3	58.2	67.5	33.4	33.6	33.6	31.5
1600	32.4	30.2	57.9	67.0	33.4	33.6	33.6	31.4
1700	32.4	30.1	57.2	66.6	33.4	33.6	33.5	31.5
1800	32.3	30.1	56.5	66.5	33.3	33.5	33.5	31.5
1900	32.3	30.0	56.5	66.4	33.2	33.6	33.4	31.6
2000	32.2	30.0	56.2	65.8	33.3	33.7	33.4	31.4
2100	32.2	30.0	56.0	66.0	33.2	33.5	33.2	31.4
2200	32.2	30.0	55.7	65.7	33.2	33.6	33.4	31.4
2300	32.2	30.0	55.0	65.2	33.1	33.6	33.4	31.3
2400	32.3	30.0	54.2	65.0	33.1	33.6	33.2	31.1

TABLE 33
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 2, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.3	30.0	53.8	64.3	33.1	33.6	33.4	31.1
0200	32.2	30.0	53.3	64.0	33.1	33.6	33.5	31.0
0300	32.3	30.0	53.0	64.0	33.1	33.7	33.5	31.0
0400	21.1	29.9	52.4	63.7	33.1	33.7	33.4	30.9
0500	32.1	29.9	52.4	45.2	33.0	33.5	32.7	30.9
0600	32.1	30.0	54.0	51.1	33.0	33.3	33.0	30.8
0700	32.2	30.0	55.9	53.4	33.1	33.4	33.3	30.9
0800	32.1	30.0	58.2	55.4	33.1	33.4	33.4	30.9
0900	32.2	30.1	45.9	47.3	33.1	33.5	33.2	30.8
1000	32.3	30.1	48.9	48.0	33.1	33.4	33.1	30.9
1100	32.4	30.4	51.0	50.0	33.2	33.5	33.1	31.1
1200	32.2	30.3	52.4	51.4	33.1	33.4	33.1	31.0
1300	32.5	30.5	50.0	51.7	33.4	33.4	33.4	31.2
1400	32.6	30.6	47.7	47.7	33.4	33.6	33.1	31.3
1500	32.7	30.7	49.6	49.1	33.5	33.6	33.2	31.5
1600	32.8	30.8	50.8	50.3	33.6	33.8	33.5	31.6
1700	32.8	30.8	50.8	50.3	33.6	33.8	33.5	31.6
1800	32.8	30.8	51.1	51.4	33.6	33.7	33.6	31.7
1900	32.8	30.8	48.5	49.4	33.5	33.6	33.6	31.6
2000	32.7	30.7	50.0	52.5	33.6	33.6	33.6	31.5
2100	32.9	30.7	50.7	53.5	33.5	33.6	33.6	31.5
2200	32.9	30.6	49.6	54.1	33.5	33.7	33.7	31.4
2300	32.9	30.6	49.6	53.5	33.5	33.7	33.7	31.4
2400	32.8	30.7	51.5	54.5	33.5	33.6	33.6	31.4

TABLE 34
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 3, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	30.5	52.1	55.2	33.5	33.6	33.6	31.4
0200	32.6	30.5	52.2	56.8	33.5	33.6	33.6	31.4
0300	32.6	30.6	51.9	57.3	33.5	33.6	33.6	31.4
0400	32.6	30.6	52.5	58.2	33.5	33.6	33.6	31.4
0500	32.5	30.6	53.3	60.1	33.5	33.6	33.6	31.4
0600	32.6	30.6	54.0	61.0	33.5	33.6	33.6	31.4
0700	32.6	30.6	54.5	61.5	33.6	33.7	33.7	31.4
0800	32.6	30.6	55.1	62.7	33.5	33.5	33.8	31.4
0900	32.3	30.2	56.0	63.4	33.2	33.4	33.4	31.0
1000	32.5	30.6	57.2	64.4	33.5	33.5	33.6	31.3
1100	32.8	30.6	58.0	65.0	33.5	33.9	33.9	31.4
1200	32.6	30.7	59.0	65.8	33.5	33.5	33.7	31.4
1300	32.8	30.7	60.0	67.3	33.5	33.5	34.0	31.4
1400	32.9	30.8	60.6	69.1	33.5	33.7	34.2	31.6
1500	32.7	30.8	60.8	69.5	33.5	33.8	34.0	31.6
1600	32.6	30.8	61.3	70.0	33.5	33.7	34.0	31.6
1700	32.6	30.6	61.7	71.4	33.5	33.5	34.0	31.6
1800	32.5	30.6	62.8	72.4	33.5	33.5	34.0	31.6
1900	32.5	30.6	63.7	73.3	33.5	33.6	34.0	31.4
2000	32.5	30.6	64.2	73.7	33.4	33.5	33.9	31.1
2100	32.5	30.6	65.0	74.7	33.4	33.7	34.0	31.4
2200	32.5	30.5	65.9	75.1	33.4	33.8	33.9	31.4
2300	32.5	30.5	66.2	75.2	33.4	33.6	33.9	31.4
2400	32.5	30.5	66.6	75.2	33.4	33.6	34.0	31.4

TABLE 35
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 4, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.4	30.4	67.0	75.7	33.4	33.6	34.0	31.3
0200	32.5	30.5	67.2	76.0	33.4	33.8	34.0	31.3
0300	32.5	30.4	67.1	76.3	33.4	33.8	34.0	31.3
0400	32.4	30.4	67.1	76.0	33.4	33.6	34.0	31.2
0500	32.5	30.4	67.3	76.2	33.4	33.9	34.0	31.2
0600	32.6	30.5	67.5	76.6	33.4	33.5	33.9	31.2
0700	32.4	30.4	67.5	76.7	33.4	33.5	33.9	31.2
0800	32.5	30.5	67.4	76.7	33.4	33.5	33.9	31.1
0900	32.5	30.4	67.3	77.0	33.4	33.7	33.9	31.1
1000	32.5	30.6	67.7	77.7	33.5	33.5	34.0	31.2
1100	32.5	30.5	67.8	77.8	33.4	33.6	34.0	31.2
1200	32.6	30.6	68.0	78.0	33.5	33.6	34.0	31.4
1300	32.7	30.8	68.5	78.4	33.5	33.8	34.0	31.4
1400	32.7	30.8	67.0	78.7	33.5	33.8	34.0	31.5
1500	32.8	30.8	69.0	79.0	33.5	33.9	34.0	31.6
1600	32.6	30.8	69.5	79.0	33.5	33.7	34.1	31.7
1700	32.7	30.8	69.7	78.9	33.5	33.7	34.1	31.6
1800	32.7	30.8	70.0	79.4	33.5	33.7	34.1	31.5
1900	32.5	30.6	70.1	79.6	33.5	33.7	34.3	31.4
2000	32.5	30.6	70.5	79.4	33.5	33.7	34.2	31.4
2100	32.5	30.5	70.3	79.5	33.4	33.9	34.1	31.4
2200	32.6	30.6	70.5	79.5	33.5	33.6	34.1	31.3
2300	32.5	30.6	70.3	79.4	33.5	33.6	34.0	31.4
2400	32.5	30.5	70.3	79.4	33.5	33.8	34.0	31.4

TABLE 36
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 5, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	30.5	70.3	79.3	33.4	34.0	34.0	31.4
0200	32.5	30.4	70.2	79.1	33.4	34.0	34.1	31.4
0300	32.5	30.5	70.2	78.9	33.4	33.5	34.0	31.4
0400	32.7	30.5	70.1	78.9	33.4	34.0	34.0	31.3
0500	32.5	30.5	69.9	78.7	33.6	34.0	34.0	31.3
0600	32.5	30.4	69.8	79.0	33.4	33.8	34.0	31.2
0700	32.5	30.5	69.5	78.5	33.4	33.6	34.0	31.2
0800	32.5	30.6	69.2	78.4	33.4	34.0	34.1	31.2
0900	32.5	30.6	69.2	78.8	33.4	33.9	34.0	31.2
1000	32.7	30.6	69.2	78.8	33.5	33.7	34.0	31.3
1100	32.8	30.6	69.0	78.5	33.5	33.7	34.0	31.3
1200	32.8	30.7	69.0	78.9	33.5	33.9	34.1	31.4
1300	32.7	30.6	69.6	79.0	33.5	33.7	34.0	31.4
1400	32.8	30.8	70.0	79.5	33.6	33.8	34.1	31.4
1500	32.7	30.7	70.0	79.5	33.5	33.7	33.9	31.4
1600	32.9	30.8	70.5	79.9	33.5	33.7	33.9	31.4
1700	32.7	30.8	70.5	80.5	33.5	34.0	34.1	31.6
1800	32.8	30.7	70.7	80.2	33.5	34.0	34.0	31.6
1900	32.7	30.7	71.2	81.0	33.5	34.0	34.0	31.6
2000	32.7	30.7	71.7	81.2	33.5	33.9	34.0	31.4
2100	32.6	30.7	72.2	81.5	33.5	33.8	34.0	31.5
2200	32.7	30.6	72.0	81.6	33.5	34.0	34.2	31.4
2300	32.6	30.6	72.7	82.3	33.5	33.8	34.2	31.4
2400	32.7	30.6	73.0	82.1	33.5	34.0	34.2	31.5

TABLE 37
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 6, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	30.6	73.0	82.0	33.5	33.9	34.0	31.4
0200	32.5	30.6	73.0	82.3	33.4	34.0	34.3	31.4
0300	32.7	30.6	73.0	82.5	33.5	34.0	34.3	31.4
0400	32.6	30.6	73.0	82.5	33.6	34.0	34.3	31.4
0500	32.6	30.6	73.5	82.7	33.5	33.8	34.2	31.4
0600	32.6	30.6	73.6	82.9	33.5	34.0	34.2	31.4
0700	32.7	30.6	73.8	82.7	33.6	33.9	34.2	31.4
0800	32.6	30.6	73.8	83.0	33.5	34.0	34.3	31.3
0900	32.8	30.7	74.0	83.2	33.5	34.0	34.3	31.3
1000	32.6	30.8	74.0	83.4	33.6	34.0	34.4	31.5
1100	32.7	30.8	74.3	83.2	33.6	34.0	34.2	31.5
1200	32.7	30.9	74.6	83.6	33.6	34.0	34.2	31.5
1300	32.8	30.9	75.0	84.3	33.7	34.0	34.4	31.7
1400	32.7	30.9	75.4	84.2	33.7	34.0	34.5	31.7
1500	32.7	30.9	75.7	85.1	33.8	34.0	34.5	31.7
1600	32.8	30.9	75.9	84.7	33.8	34.0	34.5	31.7
1700	33.0	30.9	76.0	85.0	34.0	34.1	34.7	31.7
1800	32.8	30.9	76.1	85.1	33.7	34.0	34.8	31.7
1900	32.8	30.9	76.5	85.4	33.7	34.0	34.9	31.9
2000	32.7	30.8	76.4	82.6	33.7	34.1	34.8	31.8
2100	32.7	30.8	76.6	80.6	33.6	34.0	34.6	31.8
2200	32.7	30.9	76.8	81.6	33.6	34.1	34.7	31.8
2300	32.6	30.8	76.9	82.4	33.5	34.0	34.7	31.7
2400	32.7	30.8	75.5	82.3	33.5	34.0	34.9	31.8

TABLE 38
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 7, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.7	30.8	73.6	90.8	33.6	34.0	34.6	31.8
0200	32.8	30.8	74.0	80.5	33.6	34.0	34.5	31.8
0300	32.6	30.8	74.1	81.0	33.5	34.0	34.5	31.7
0400	32.8	30.8	74.1	81.1	33.6	34.0	34.5	31.8
0500	32.8	30.7	73.3	80.5	33.6	34.0	34.5	31.7
0600	32.7	30.8	73.5	80.6	33.6	34.0	34.4	31.7
0700	32.6	30.8	73.8	80.6	33.6	34.0	34.5	31.6
0800	32.7	30.8	73.8	80.9	33.6	34.0	34.5	31.6
0900	32.7	30.8	73.4	80.9	33.6	34.0	34.5	31.6
1000	32.7	30.8	73.0	80.0	33.6	34.0	34.4	31.6
1100	32.8	30.8	72.7	79.9	33.7	34.2	34.4	31.6
1200	32.7	30.9	72.2	79.6	33.7	34.2	34.5	31.6
1300	32.8	31.0	72.0	79.9	33.8	34.2	34.5	31.7
1400	32.8	31.0	71.5	79.4	33.8	34.1	34.5	31.7
1500	32.9	31.0	71.1	79.4	33.8	34.3	34.6	31.8
1600	32.9	31.0	71.0	79.8	33.8	34.5	34.5	31.9
1700	32.8	30.9	71.2	79.3	33.7	34.0	34.5	31.9
1800	32.8	31.0	70.8	79.4	33.8	34.3	34.4	31.9
1900	32.7	30.9	70.6	70.4	33.7	34.3	34.4	31.9
2000	32.7	30.8	70.7	79.4	33.7	34.3	34.4	31.9
2100	32.7	30.8	70.0	78.9	33.7	34.5	34.7	31.8
2200	32.7	30.8	70.0	79.3	33.7	34.5	34.7	31.9
2300	32.7	30.7	70.0	78.4	33.7	34.3	34.4	31.8
2400	32.6	30.7	69.5	78.8	33.7	34.5	34.5	31.8

TABLE 39
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 8, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	30.7	69.0	77.3	33.6	34.1	34.4	31.8
0200	32.6	30.6	69.0	76.9	33.6	34.2	34.4	31.7
0300	32.6	30.7	68.5	76.8	33.6	34.2	34.4	31.6
0400	32.6	30.5	68.4	76.7	33.6	34.2	34.2	31.4
0500	32.6	30.5	67.2	76.7	33.6	34.2	34.3	31.5
0600	32.6	30.5	66.4	76.0	33.5	34.0	34.1	31.3
0700	32.5	32.6	66.2	75.8	33.6	31.1	34.1	31.3
0800	32.6	30.6	66.5	76.4	33.6	34.1	34.2	31.4
0900	32.6	30.6	67.0	77.0	33.5	34.1	34.2	31.3
1000	32.7	30.7	66.9	76.9	33.5	34.0	34.2	31.3
1100	32.7	30.8	67.3	77.4	33.6	34.0	34.2	31.3
1200	32.7	30.8	68.0	78.2	33.7	34.2	34.4	31.4
1300	32.7	30.8	68.9	78.9	33.7	34.2	34.4	31.4
1400	32.8	30.8	69.2	79.2	33.8	34.2	34.4	31.5
1500	32.8	30.9	69.5	79.8	33.7	34.1	34.4	31.5
1600	32.9	30.9	69.9	80.0	33.7	34.1	34.5	31.6
1700	32.8	30.8	70.0	80.7	33.7	34.2	34.4	31.6
1800	32.8	30.8	70.5	81.3	33.7	34.4	34.5	31.6
1900	32.8	30.9	71.0	81.5	33.7	34.4	34.5	31.6
2000	32.7	30.8	71.4	82.0	33.7	34.3	34.4	31.6
2100	32.7	30.8	71.8	82.5	33.6	34.4	34.5	31.7
2200	32.6	30.8	72.3	82.8	33.7	34.4	34.4	31.6
2300	32.8	30.7	72.6	83.2	33.6	34.3	34.6	31.6
2400	32.8	30.6	73.0	83.2	33.6	34.3	34.5	31.5

TABLE 40
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 9, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.8	30.6	73.1	83.9	33.6	34.1	34.6	31.7
0200	32.6	30.6	73.1	83.6	33.6	34.1	34.5	31.4
0300	32.7	30.6	73.6	84.1	33.7	34.4	34.6	31.5
0400	32.6	30.6	73.5	84.1	33.6	34.3	34.4	31.5
0500	32.7	30.6	73.9	84.1	33.7	34.3	34.5	31.4
0600	32.7	30.6	73.8	83.8	33.6	34.2	34.5	31.4
0700	32.6	30.6	73.6	83.8	33.6	34.2	34.5	31.4
0800	32.6	30.6	73.5	83.9	33.6	34.2	34.4	31.4
0900	32.6	30.6	73.4	83.8	33.6	34.1	34.4	31.5
1000	32.7	30.7	73.5	83.9	33.6	34.1	34.4	31.5
1100	32.6	30.8	73.4	84.0	33.7	34.3	34.4	31.4
1200	32.7	30.8	73.9	84.4	33.9	34.4	34.6	31.6
1300	32.8	30.9	74.3	84.5	33.8	34.4	34.7	31.6
1400	32.8	30.9	74.7	84.4	33.9	34.4	34.5	31.7
1500	32.7	30.9	75.0	85.0	33.9	34.5	34.6	31.7
1600	32.7	30.9	75.3	85.4	33.9	34.2	34.6	31.7
1700	32.8	30.9	75.3	85.4	33.0	34.3	34.9	31.7
1800	32.8	30.9	75.6	85.6	33.9	34.1	34.8	31.7
1900	32.7	30.7	75.4	85.6	33.7	34.2	34.8	31.7
2000	32.6	30.7	74.7	86.0	33.6	34.1	34.2	31.7
2100	32.7	30.7	75.8	85.9	33.8	34.3	34.9	31.7
2200	32.7	30.8	75.7	85.7	33.8	34.2	34.4	31.7
2300	32.7	30.6	75.8	85.9	33.8	34.2	34.4	31.7
2400	32.6	30.6	75.7	85.7	33.8	34.2	34.9	31.9

TABLE 41
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 10, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.7	30.7	75.5	86.7	33.7	34.2	34.8	31.7
0200	32.6	30.6	75.0	86.5	33.7	34.2	34.8	31.7
0300	32.6	30.6	74.6	86.0	33.7	34.0	34.8	31.7
0400	32.7	30.6	74.2	85.6	33.8	34.3	34.8	31.7
0500	32.7	30.6	74.4	85.4	33.8	34.2	34.8	31.7
0600	32.7	30.6	74.4	82.6	33.7	34.1	34.8	31.6
0700	32.7	30.6	74.2	82.0	33.7	34.1	34.8	31.6
0800	32.7	30.6	73.8	81.6	33.7	34.2	34.7	31.4
0900	32.7	30.6	73.9	81.7	33.8	34.2	34.8	31.5
1000	32.6	30.6	72.9	81.1	33.7	34.4	34.6	31.4
1100	32.6	30.6	72.6	80.5	33.5	34.4	34.8	31.4
1200	32.5	30.6	72.6	80.4	33.5	34.4	34.8	31.3
1300	32.6	30.7	72.8	80.9	33.4	34.2	34.8	31.3
1400	32.5	30.7	72.4	79.8	33.5	34.1	34.8	31.3
1500	32.7	30.8	71.2	79.4	33.5	33.9	34.5	31.4
1600	32.7	30.8	70.4	80.2	33.5	33.8	34.6	31.4
1700	32.8	30.9	69.9	79.6	33.4	33.7	34.6	31.4
1800	32.7	30.8	69.0	79.0	33.4	33.8	34.5	31.4
1900	32.7	30.7	68.5	78.0	33.4	33.9	34.3	31.3
2000	32.6	30.6	68.4	78.0	33.4	33.9	34.4	31.3
2100	32.6	30.6	67.6	77.6	33.3	33.9	34.4	31.4
2200	32.6	30.8	67.2	77.9	33.4	34.0	34.5	31.4
2300	32.6	30.8	66.6	77.2	33.3	34.0	34.4	31.4
2400	32.6	30.8	66.5	77.2	33.3	33.8	34.4	31.4

TABLE 42
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 11, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	30.6	66.6	77.5	33.3	33.9	34.4	31.4
0200	32.6	30.6	66.0	77.0	33.3	33.9	34.4	31.4
0300	32.6	30.7	65.3	76.8	33.3	33.9	34.4	31.4
0400	32.6	30.7	65.1	76.3	33.3	33.9	34.5	31.4
0500	32.6	30.6	65.1	76.4	33.3	34.0	34.4	31.4
0600	32.6	30.6	65.8	36.2	33.3	33.8	34.4	31.4
0700	32.8	30.8	64.8	76.2	33.4	33.6	34.3	31.3
0800	32.8	30.8	64.7	76.6	33.4	33.6	34.3	31.3
0900	32.4	30.3	64.3	75.8	33.3	33.5	34.0	30.9
1000	32.3	30.1	63.9	75.8	33.3	33.4	33.8	30.8
1100	32.3	30.1	63.9	75.8	33.3	33.4	33.8	30.8
1200	32.3	30.2	64.1	75.6	33.3	33.7	33.8	30.8
1300	32.3	30.3	64.4	76.1	33.4	33.9	33.9	30.9
1400	32.4	30.3	64.7	76.8	33.3	33.9	34.0	31.0
1500	32.4	30.5	65.0	77.4	33.4	33.9	34.2	31.2
1600	32.6	30.5	65.4	77.7	33.4	34.0	34.2	31.2
1700	32.6	30.5	65.7	78.3	33.4	34.0	34.1	31.2
1800	32.6	30.5	66.4	78.8	33.4	34.0	34.2	31.2
1900	32.6	30.4	67.1	79.4	33.4	33.9	34.2	31.2
2000	32.6	30.4	67.5	79.9	33.4	33.9	34.0	31.2
2100	32.6	30.4	67.9	80.1	33.4	33.9	34.0	31.2
2200	32.6	30.4	68.3	80.5	33.4	33.9	34.0	31.2
2300	32.6	30.4	68.6	80.9	33.4	33.8	34.1	31.2
2400	32.6	30.5	69.0	81.5	33.3	33.6	34.2	31.2

TABLE 43
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 12, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	30.4	69.4	81.4	33.2	33.7	33.8	31.2
0200	32.6	30.5	69.7	81.9	33.2	33.8	34.2	31.2
0300	32.6	30.5	69.9	82.2	33.2	33.7	34.3	31.2
0400	32.6	30.5	70.1	82.4	33.2	33.7	34.2	31.2
0500	32.6	30.5	70.1	82.4	33.2	33.7	34.2	31.2
0600	32.6	30.5	70.1	82.4	33.2	33.4	34.3	31.2
0700	32.6	30.6	70.7	82.9	33.2	33.4	33.4	31.1
0800	32.7	30.6	70.7	82.7	33.3	33.6	34.4	31.1
0900	32.6	30.6	70.3	82.6	33.3	33.7	34.2	31.1
1000	32.7	30.5	70.1	82.4	33.6	33.7	34.0	31.1
1100	32.7	30.6 ^{1/}	70.4 ^{1/}	82.4 ^{1/}	33.6	33.8	33.9	31.3
1200	32.7	30.7 ^{1/}	70.1 ^{1/}	82.1 ^{1/}	33.7	34.0	34.1	31.3
1300	32.7	34.4	76.0	87.5	33.4	34.0	34.1	31.3
1400	32.7	34.6	76.6	87.9	33.6	34.1	34.2	31.3
1500	32.7	34.6	77.2	89.4	33.5	34.0	34.3	31.4
1600	32.8	34.6	77.9	89.4	33.6	33.9	34.3	31.4
1700	32.8	34.6	78.5	90.7	33.6	33.8	34.3	31.4
1800	32.7	34.6	78.6	90.9	33.6	33.8	34.3	31.4
1900	32.7	34.4	79.7	91.5	33.6	33.8	34.4	31.4
2000	32.7	34.4	79.7	91.3	33.6	33.8	34.4	31.4
2100	32.7	34.4	80.3	91.7	33.6	33.8	34.4	31.4
2200	32.7	34.4	80.1	91.9	33.6	33.7	34.3	31.4
2300	32.7	34.4	80.5	90.5	33.4	33.9	34.3	31.4
2400	32.8	34.4	80.6	90.9	33.6	33.9	34.3	31.4

^{1/} Instruments zeroed to ground truth data

TABLE 44
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 13, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.7	34.4	80.7	91.4	33.6	33.8	34.4	31.4
0200	32.6	34.6	80.9	92.0	33.6	33.8	34.4	31.4
0300	32.8	34.4	80.0	91.4	33.6	33.9	34.4	31.4
0400	32.5	34.4	80.0	91.3	33.6	33.7	34.0	31.4
0500	32.7	34.4	80.4	91.8	33.6	33.8	34.1	31.4
0600	32.7	34.4	80.4	91.8	33.6	33.8	34.1	31.4
0700	32.7	34.4	80.5	92.1	33.6	33.8	34.3	31.4
0800	32.7	34.4	80.3	92.1	33.6	33.8	34.4	31.2
0900	32.4	34.4	80.5	92.1	33.4	33.9	34.4	31.2
1000	32.4	34.5	80.9	92.3	33.4	33.9	34.4	31.2
1100	32.6	34.4	81.6	92.9	33.6	34.0	34.4	31.3
1200	32.6	34.5	82.2	93.4	33.6	33.8	34.0	31.4
1300	32.4	34.4	82.3	93.8	33.4	33.9	34.5	31.3
1400	32.6	34.6	83.0	94.2	33.4	34.0	34.6	31.4
1500	32.6	34.6	83.4	94.8	33.4	34.0	34.8	31.4
1600	32.5	34.6	83.5	94.5	33.4	34.0	34.7	31.4
1700	32.5	34.6	83.8	95.0	33.4	33.8	34.7	31.4
1800	32.5	34.6	83.9	94.7	33.5	33.9	34.9	31.4
1900	32.6	34.6	84.0	94.8	33.4	34.0	34.6	31.5
2000	32.4	34.6	84.2	95.2	33.4	34.0	34.9	31.5
2100	32.5	34.6	84.3	95.0	33.4	34.0	34.9	31.5
2200	32.4	34.5	84.2	95.0	33.4	34.1	35.0	31.5
2300	32.4	34.5	84.4	95.2	33.4	34.0	35.0	31.5
2400	32.4	34.5	84.4	95.6	33.4	34.0	34.9	31.5

TABLE 45
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 14, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.5	34.6	84.4	95.4	33.4	34.0	35.0	31.5
0200	32.5	34.5	84.4	95.0	33.4	34.0	35.1	31.5
0300	32.4	34.6	84.4	94.0	33.4	34.0	35.0	31.5
0400	32.4	34.6	84.7	94.0	33.4	34.1	35.2	31.4
0500	32.5	34.6	84.6	94.6	33.4	33.9	35.1	31.4
0600	32.4	34.6	84.0	94.6	33.4	34.0	35.1	31.4
0700	32.4	34.6	83.1	93.8	33.4	34.1	35.0	31.3
0800	32.4	34.6	83.2	93.9	33.4	33.9	35.1	31.3
0900	32.4	34.5	83.5	94.1	33.4	34.0	35.2	31.3
1000	32.6	34.6	84.2	94.4	33.5	34.0	35.3	31.4
1100	32.6	34.7	83.9	94.6	33.4	34.0	35.2	31.4
1200	32.7	34.7	84.4	94.6	33.5	33.9	35.4	31.5
1300	32.7	34.8	85.0	95.0	33.5	33.9	35.4	31.7
1400	32.6	34.8	85.5	96.1	33.5	33.9	35.3	31.7
1500	32.6	34.9	85.9	96.2	33.5	33.7	35.4	31.8
1600	32.6	34.8	85.8	96.0	33.5	33.9	35.4	31.8
1700	32.5	34.8	85.8	96.4	33.4	33.9	35.6	31.7
1800	32.5	34.8	86.5	96.5	33.4	33.8	35.4	31.7
1900	32.5	34.8	86.6	96.6	33.4	33.7	35.4	31.7
2000	32.5	34.7	86.2	96.7	33.4	33.9	35.4	31.7
2100	32.4	34.7	85.9	96.3	33.4	33.8	35.4	31.7
2200	32.4	34.6	85.4	95.7	33.4	33.9	35.3	31.7
2300	32.5	34.6	85.6	96.0	33.5	33.9	35.3	31.8
2400	32.5	34.6	85.5	95.7	33.5	34.0	35.4	31.8

TABLE 46
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 15, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.5	34.6	85.2	95.4	33.4	34.0	35.3	31.8
0200	32.4	34.6	85.0	94.9	33.4	33.9	35.4	31.8
0300	32.4	34.6	85.2	93.5	33.4	34.0	35.4	31.7
0400	32.5	34.6	85.6	93.2	33.4	34.2	35.3	31.7
0500	32.5	34.6	85.3	93.0	33.4	33.7	35.2	31.7
0600	32.4	34.6	85.1	92.4	33.4	34.1	35.3	31.6
0700	32.4	34.6	84.4	92.8	33.4	34.0	35.2	31.6
0800	32.7	34.6	83.9	92.7	33.6	33.7	35.2	31.7
0900	32.4	34.6	83.8	93.7	33.4	34.0	35.1	31.6
1000	32.5	34.7	83.5	93.5	33.4	33.9	35.3	31.6
1100	32.6	34.9	83.9	94.5	33.5	34.0	35.3	31.7
1200	32.7	34.8	84.1	94.1	33.5	33.8	35.2	31.7
1300	32.7	34.9	85.4	95.0	33.5	34.0	35.1	31.9
1400	32.7	35.0	85.4	95.4	33.5	34.2	35.1	32.0
1500	32.7	35.1	85.9	95.7	33.6	33.8	34.8	32.1
1600	32.9	35.0	86.1	96.1	33.6	33.9	34.6	32.1
1700	32.8	35.0	86.8	96.5	33.5	33.8	34.9	32.3
1800	32.8	34.9	87.0	97.0	33.4	33.8	34.8	32.2
1900	32.7	34.8	87.1	97.0	33.4	33.6	34.8	32.2
2000	32.7	34.8	87.2	97.3	33.3	33.9	34.8	32.3
2100	32.6	34.8	87.0	97.0	33.3	33.0	34.8	32.3
2200	32.6	34.7	87.2	97.4	33.4	33.9	34.8	32.1
2300	32.6	34.7	87.3	97.3	33.3	33.9	34.8	32.1
2400	32.6	34.7	87.4	97.4	33.3	34.0	34.7	32.2

TABLE 47
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 16, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	34.7	86.8	97.4	33.3	34.0	34.8	32.2
0200	32.7	34.6	87.0	97.0	33.5	34.1	34.8	32.2
0300	32.7	34.7	87.0	97.0	33.4	34.1	34.6	32.2
0400	32.6	34.7	86.9	97.2	33.4	34.0	34.6	32.2
0500	32.7	34.6	87.0	97.2	33.3	33.9	34.7	32.1
0600	32.6	34.6	87.0	97.0	33.4	33.8	34.7	32.1
0700	32.6	34.6	87.3	97.3	33.3	33.8	34.6	32.0
0800	32.5	34.6	87.4	97.5	33.3	33.9	34.6	32.0
0900	32.6	34.8	87.5	97.5	33.4	33.9	34.7	32.0
1000	32.7	34.8	87.6	97.6	33.4	33.9	34.7	32.0
1100	32.6	35.0	88.3	98.3	33.4	33.9	34.9	32.3
1200	32.8	35.0	88.7	98.5	33.4	33.6	34.8	32.4
1300	32.7	35.1	89.4	98.9	33.4	33.6	35.1	32.7
1400	32.6	35.3	89.6	98.9	33.5	33.9	34.9	32.9
1500	32.6	35.4	90.0	99.4	33.6	33.6	35.0	33.1
1600	32.6	35.3	90.5	99.9	33.7	33.9	34.4	33.1
1700	32.5	35.3	90.7	99.7	33.7	34.0	34.9	33.1
1800	32.5	35.1	90.8	100.0	33.7	34.0	35.0	33.0
1900	32.4	35.1	90.8	99.8	33.7	34.3	35.0	33.1
2000	32.4	35.0	90.8	99.9	33.7	34.3	35.0	32.9
2100	32.4	34.9	90.6	99.5	33.7	34.1	34.9	32.9
2200	32.4	34.9	90.0	99.0	33.7	34.0	34.7	32.7
2300	32.4	34.8	99.9	97.2	33.6	34.0	34.7	32.7
2400	32.3	34.8	89.7	96.5	33.6	34.0	34.7	32.7

TABLE 48

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

February 17, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.2	34.7	89.5	96.5	33.6	34.1	34.7	32.5
0200	32.4	34.7	89.2	96.0	33.9	34.1	34.7	32.6
0300	32.5	34.6	88.6	96.2	33.9	34.1	34.6	32.3
0400	32.5	34.8	87.7	96.1	33.9	34.1	34.6	32.4
0500	32.5	34.6	87.7	96.4	33.7	34.2	34.4	32.3
0600	32.4	34.6	87.1	96.2	33.7	34.1	34.6	32.2
0700	32.4	34.6	87.4	96.5	33.9	34.2	34.4	32.1
0800	32.5	34.6	87.3	96.4	33.9	34.2	34.4	32.0
0900	32.3	34.7	87.7	96.4	33.9	34.3	34.5	31.8
1000	32.3	34.9	87.9	96.7	33.7	34.3	34.5	31.9
1100	32.4	35.0	88.5	97.3	34.1	34.1	34.6	32.1
1200	32.6	35.4	89.1	97.7	34.1	34.1	34.4	32.1
1300	32.9	35.7	89.5	98.5	34.3	34.3	34.4	32.4
1400	32.8	36.4	89.5	98.5	34.4	34.3	34.4	32.6
1500	32.8	36.5	90.3	99.1	34.5	34.5	34.7	32.8
1600	32.8	36.8	90.5	99.4	34.5	34.2	34.5	32.9
1700	32.7	36.3	90.7	99.9	34.3	34.3	34.5	33.0
1800	32.7	36.1	90.5	99.5	34.1	34.0	34.5	33.1
1900	32.5	36.7	91.0	100.0	34.1	34.0	34.5	32.9
2000	32.4	36.6	91.0	99.8	33.9	34.0	34.6	32.9
2100	32.5	35.4	91.0	99.9	33.9	33.9	34.6	33.0
2200	32.7	35.1	90.4	99.7	33.9	33.9	34.5	32.8
2300	32.6	35.1	90.3	99.2	33.9	34.0	34.4	32.7
2400	32.7	35.1	90.1	99.4	34.0	33.9	34.3	33.7

TABLE 49
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 18, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	35.2	90.1	98.3	33.9	33.9	34.1	32.6
0200	32.5	35.0	90.1	97.3	33.9	33.9	33.9	32.5
0300	32.4	35.0	90.0	97.0	33.8	33.8	34.1	32.4
0400	32.5	35.1	90.1	96.7	33.7	33.7	34.0	32.3
0500	32.5	35.1	89.6	96.3	33.7	33.7	34.0	32.1
0600	32.5	35.1	88.6	95.7	33.7	33.7	34.0	32.1
0700	32.4	35.1	88.1	96.1	33.7	33.9	34.2	32.1
0800	32.4	35.1	87.8	96.4	33.9	33.8	34.0	32.0
0900	32.4	35.2	87.4	95.9	33.7	33.6	34.0	32.9
1000	32.5	35.4	87.4	96.0	34.1	33.9	34.4	32.1
1100	32.6	35.8	87.7	96.2	34.3	33.8	34.3	32.4
1200	32.9	36.2	88.3	97.3	34.4	33.8	34.4	32.6
1300	32.8	36.3	88.5	97.4	34.6	33.9	34.4	32.6
1400	32.9	36.2	88.8	97.7	34.4	33.8	34.5	32.9
1500	32.7	34.9	85.2	95.7	34.4	33.8	34.7	33.3
1600	32.6	34.7	86.0	96.4	34.4	33.5	34.5	33.4
1700	32.7	34.2	86.4	96.9	34.3	33.8	34.4	33.1
1800	32.4	34.3	86.4	97.5	34.3	33.8	34.4	33.1
1900	32.3	34.1	86.6	97.2	34.2	33.7	34.3	32.8
2000	32.3	34.0	87.0	97.4	34.0	33.8	34.2	32.4
2100	32.3	33.9	87.1	97.4	34.0	33.8	34.4	32.2
2200	32.3	34.0	87.2	97.4	34.0	33.8	34.3	32.1
2300	32.3	34.0	86.9	97.1	34.0	33.9	34.4	32.0
2400	32.3	33.9	86.7	96.9	33.9	33.9	34.3	32.1

TABLE 50
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 19, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.1	33.9	86.8	95.5	33.9	33.8	34.3	32.1
0200	32.2	33.8	86.7	94.8	34.0	33.7	34.3	32.3
0300	32.2	33.9	86.6	95.0	33.9	33.8	34.3	32.3
0400	32.1	33.8	86.4	95.7	33.9	33.8	34.2	32.2
0500	32.0	33.6	85.3	95.6	33.9	33.8	34.1	32.1
0600	32.0	33.5	84.9	95.1	33.9	33.8	34.0	32.1
0700	32.2	33.7	84.8	95.2	33.6	33.6	34.2	32.1
0800	32.1	33.4	85.0	95.0	33.6	33.6	34.0	31.9
0900	32.1	33.4	85.0	95.7	33.5	33.5	34.0	31.9
1000	32.1	33.6	84.8	96.0	33.8	33.6	34.0	32.1
1100	32.3	33.8	85.0	96.2	33.7	33.5	34.0	32.2
1200	32.3	34.0	85.3	96.6	32.8	33.5	34.0	32.2
1300	32.3	34.2	86.0	97.3	34.0	33.6	34.0	32.3
1400	32.4	34.2	86.6	97.9	34.0	33.6	34.0	32.5
1500	32.5	34.4	87.0	97.6	34.1	33.6	34.1	32.6
1600	32.4	34.6	87.1	97.7	34.2	33.8	34.2	32.5
1700	32.4	34.4	87.5	98.5	34.2	33.6	34.2	32.5
1800	32.4	34.4	87.7	98.7	34.1	33.6	34.2	32.5
1900	32.4	34.2	87.5	98.5	34.1	33.6	34.1	32.4
2000	32.4	34.0	87.2	98.4	34.1	33.6	34.1	32.4
2100	32.4	33.9	87.4	98.3	34.0	33.6	34.0	32.2
2200	32.4	33.9	87.2	98.1	34.0	33.8	34.0	32.1
2300	32.3	33.7	87.8	97.5	34.0	33.7	33.9	32.0
2400	32.2	33.7	86.6	97.5	34.0	33.6	33.8	31.9

TABLE 51
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 20, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.1	33.5	86.2	97.3	34.0	33.6	33.8	31.7
0200	32.0	33.5	86.1	97.1	33.8	33.6	33.6	31.7
0300	32.0	33.3	85.7	86.7	33.9	33.6	33.6	31.6
0400	32.1	33.4	84.7	96.7	33.7	33.6	33.6	31.5
0500	32.0	33.4	85.5	96.5	33.6	33.6	33.6	31.5
0600	32.0	33.3	85.5	96.5	33.9	33.6	33.6	31.5
0700	32.1	33.4	85.3	96.6	33.9	33.8	33.7	31.5
0800	32.3	33.4	85.0	96.3	33.9	33.7	33.7	31.6
0900	32.3	33.5	85.1	96.8	33.9	33.9	33.9	31.7
1000	32.1	33.7	85.5	96.9	34.0	33.9	33.8	31.8
1100	32.4	34.2	86.1	97.9	34.1	33.5	33.8	32.1
1200	32.5	34.6	86.7	97.7	34.4	33.9	34.0	32.3
1300	32.6	35.2	87.4	98.2	34.3	34.0	34.0	32.8
1400	32.7	35.3	87.8	98.9	34.7	33.9	34.5	32.9
1500	32.9	35.6	88.8	99.5	34.7	33.8	34.5	33.0
1600	32.9	35.7	88.8	99.4	34.9	33.9	34.5	33.1
1700	33.2	35.5	89.0	99.5	34.8	34.0	34.5	33.1
1800	33.1	35.3	89.0	99.5	34.7	33.9	34.5	33.1
1900	33.0	34.9	89.3	99.3	34.7	33.9	34.4	33.1
2000	33.0	34.7	88.9	99.1	34.5	33.9	34.4	33.1
2100	33.1	34.5	88.5	99.0	34.5	33.9	34.3	32.8
2200	33.0	34.5	87.9	98.5	34.5	33.9	34.0	32.9
2300	32.9	34.5	87.4	98.0	34.5	33.9	33.9	32.8
2400	32.9	34.5	86.8	98.0	34.5	33.9	33.9	32.6

TABLE 52
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 21, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.9	34.4	86.1	97.4	34.7	34.0	34.0	32.5
0200	32.9	34.4	85.4	95.5	34.5	34.0	34.0	32.4
0300	32.7	34.3	84.9	95.2	34.5	33.9	33.9	32.3
0400	32.7	34.2	84.3	95.2	34.4	34.0	34.0	32.1
0500	32.6	34.1	83.5	94.6	34.4	33.9	33.9	32.1
0600	32.7	34.0	82.1	93.9	34.5	33.9	33.8	32.3
0700	32.6	33.9	81.7	93.8	34.3	33.9	33.8	32.0
0800	32.7	33.9	81.5	93.4	34.3	34.0	33.9	32.1
0900	32.5	34.1	81.0	93.1	34.2	33.9	33.5	31.9
1000	32.4	34.1	81.0	93.3	34.2	34.0	33.7	32.0
1100	32.6	34.4	81.3	93.1	34.5	34.0	34.0	32.1
1200	32.6	34.7	81.3	93.4	34.2	33.9	33.9	32.1
1300	32.5	34.8	81.5	93.5	34.3	33.9	34.0	32.2
1400	32.6	34.9	82.0	93.8	34.3	33.9	34.0	32.3
1500	32.7	34.9	82.0	94.3	34.3	33.6	33.9	32.4
1600	32.7	34.9	82.4	94.0	34.3	33.7	34.2	32.4
1700	32.7	34.9	82.9	95.0	34.3	33.6	34.1	32.6
1800	32.8	34.8	83.3	95.1	34.4	33.6	34.2	32.4
1900	32.8	34.8	83.5	96.0	34.5	33.7	34.2	32.6
2000	32.8	34.7	83.5	95.9	34.5	33.7	34.0	32.5
2100	32.9	34.7	83.9	95.9	34.5	33.7	34.2	32.4
2200	32.8	34.6	83.8	95.9	34.7	33.7	34.2	32.5
2300	32.8	34.7	84.5	96.0	34.9	33.9	34.1	32.5
2400	32.8	34.7	84.1	95.6	34.9	33.7	34.5	32.4

TABLE 53

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

February 22, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.8	34.8	84.5	94.9	34.9	33.7	34.5	32.4
0200	32.9	34.7	84.8	95.3	35.0	33.6	33.9	32.5
0300	32.9	34.7	85.1	95.6	35.2	33.6	33.6	32.5
0400	32.9	34.8	85.0	95.6	35.4	33.7	33.7	32.4
0500	32.9	34.8	84.8	95.5	35.6	33.7	33.7	32.4
0600	32.8	34.6	85.0	95.8	35.7	33.7	33.7	32.3
0700	32.8	34.7	85.2	96.1	36.1	33.5	33.6	32.0
0800	32.8	34.6	85.1	96.1	36.8	33.4	33.7	31.8
0900	32.8	34.5	85.0	96.1	37.2	33.6	33.6	31.9
1000	32.8	34.7	84.8	96.0	37.3	33.6	33.6	31.8
1100	32.9	34.7	84.8	95.9	37.4	33.6	33.6	31.8
1200	32.8	34.7	84.8	95.7	37.4	33.7	33.6	31.9
1300	32.8	34.7	84.8	96.0	37.5	33.7	33.6	31.8
1400	32.8	34.7	84.9	95.8	37.5	33.7	33.6	31.5
1500	32.8	34.7	84.9	95.7	37.5	33.8	33.5	31.4
1600	32.7	34.8	83.9	95.0	37.4	33.7	33.5	31.7
1700	32.5	34.8	84.0	95.5	37.4	33.6	33.6	31.9
1800	32.5	34.7	83.0	94.2	37.3	33.5	33.5	31.7
1900	32.5	34.6	83.0	94.0	37.3	33.7	33.5	31.8
2000	32.5	34.5	82.8	93.8	37.4	33.6	33.5	31.7
2100	32.6	34.5	83.0	94.0	37.3	33.5	33.5	31.6
2200	32.5	34.4	82.5	94.0	37.3	33.5	33.4	31.5
2300	32.4	34.3	82.5	93.2	37.2	33.5	33.4	31.4
2400	32.6	34.3	82.7	93.7	37.1	33.6	33.4	31.1

TABLE 54
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 23, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	34.2	82.7	93.6	37.0	33.5	33.4	31.1
0200	32.5	34.1	82.6	94.1	36.9	33.5	33.4	31.1
0300	32.5	34.0	82.1	93.7	36.9	33.5	33.4	32.8
0400	32.5	34.0	82.4	94.0	36.9	33.5	33.3	32.8
0500	32.5	33.9	82.2	93.8	37.0	33.5	33.3	32.5
0600	32.5	33.6	82.5	94.0	36.8	33.5	33.2	32.3
0700	32.4	33.5	82.3	93.9	36.8	33.4	33.2	31.3
0800	32.5	33.4	82.5	93.7	37.0	33.4	33.4	31.4
0900	32.5	33.4	82.5	93.8	36.9	33.5	33.2	30.9
1000	32.5	33.4	82.3	93.5	37.0	33.5	33.0	31.0
1100	32.5	33.5	82.0	93.6	36.9	33.4	33.0	31.0
1200	32.5	33.6	81.8	93.1	36.9	33.5	33.1	31.3
1300	32.2	33.5	81.5	92.9	36.7	33.5	33.1	31.5
1400	32.3	33.4	81.3	92.4	36.7	33.4	33.3	31.3
1500	32.4	33.3	81.1	92.3	36.7	33.4	33.2	31.5
1600	32.4	33.2	80.5	92.3	36.7	33.5	33.1	31.5
1700	32.4	33.2	80.7	92.4	36.9	33.5	33.1	31.5
1800	32.6	33.1	80.6	92.1	36.8	33.5	33.1	31.5
1900	32.4	33.4	80.6	92.4	36.8	33.4	32.9	31.4
2000	32.4	33.2	80.6	91.9	36.4	33.3	33.1	31.2
2100	32.1	33.1	80.6	92.0	36.4	33.4	33.4	31.2
2200	32.4	33.2	80.5	92.3	36.5	33.4	33.3	31.3
2300	32.3	33.1	80.8	92.0	36.5	33.4	33.1	31.3
2400	32.1	33.1	80.8	92.4	36.4	33.4	33.4	31.4

TABLE 55
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 24, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.1	33.1	80.9	92.1	36.5	33.4	33.4	31.4
0200	32.1	33.1	81.0	92.4	36.6	33.5	33.1	31.4
0300	32.1	33.1	80.9	92.4	36.4	33.2	33.1	31.4
0400	32.1	33.1	81.2	92.5	36.4	33.4	33.4	31.4
0500	32.4	33.1	81.5	92.5	36.4	33.3	33.3	31.4
0600	32.1	33.1	81.6	92.7	36.5	33.4	33.2	31.4
0700	32.1	33.1	81.6	92.7	36.5	33.2	33.2	31.4
0800	32.1	33.1	81.6	92.9	36.5	33.5	33.2	31.4
0900	31.8	32.9	81.6	92.7	36.2	33.0	33.0	31.1
1000	31.9	32.9	82.0	93.0	36.2	33.1	33.0	31.1
1100	31.9	33.0	82.3	93.0	36.4	33.3	33.0	31.3
1200	32.1	33.3	83.0	93.1	36.6	33.3	33.1	31.7
1300	32.3	33.4	83.1	93.5	37.0	33.4	33.3	32.1
1400	32.4	33.4	83.3	94.2	37.0	33.6	33.6	32.3
1500	32.6	33.5	83.6	94.4	37.2	33.7	33.6	32.5
1600	32.8	33.5	83.8	94.5	37.5	33.6	33.6	32.6
1700	32.8	33.9	84.0	94.8	37.6	33.7	33.7	32.7
1800	32.9	34.0	84.5	95.1	37.4	33.6	33.6	32.5
1900	32.8	34.0	84.9	95.3	37.4	33.5	33.6	32.5
2000	32.7	34.1	95.2	95.6	37.5	33.5	33.8	32.4
2100	32.9	34/3	85.4	95.8	37.5	33.6	33.9	32.5
2200	32.9	34.4	85.4	95.8	37.5	33.6	34.1	32.5
2300	32.7	34.3	85.3	95.7	37.4	33.5	34.0	32.6
2400	32.6	34.2	85.0	95.7	37.4	33.5	34.0	32.5

TABLE 56
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 25, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.5	34.2	85.6	95.7	37.3	33.7	34.1	32.5
0200	32.4	34.0	84.7	95.4	37.2	33.5	34.3	32.5
0300	32.5	34.0	84.6	95.2	37.2	33.7	34.2	32.6
0400	32.7	34.0	84.5	95.1	37.5	33.6	34.3	32.7
0500	32.7	34.1	84.5	95.1	37.4	33.7	34.3	32.7
0600	32.7	34.2	84.1	95.1	37.4	33.7	34.0	32.7
0700	32.5	34.3	83.9	94.6	37.5	33.7	33.9	32.6
0800	32.6	34.3	83.6	94.7	37.3	33.5	33.8	32.3
0900	32.5	34.3	83.5	94.7	37.3	33.5	33.9	32.3
1000	32.7	34.6	83.7	94.8	37.4	33.6	34.0	32.3
1100	33.0	34.9	83.4	94.6	37.6	33.5	34.0	32.5
1200	33.0	35.2	83.5	94.3	37.6	33.5	34.0	32.6
1300	33.1	35.6	83.7	94.6	37.8	33.7	34.3	32.8
1400	33.3	35.9	84.0	94.8	38.0	33.8	34.3	32.9
1500	33.2	35.9	86.0	99.1	33.6	33.7	34.4	35.4
1600	33.4	35.9	86.0	99.3	33.6	33.9	34.4	35.3
1700	33.3	35.9	86.0	99.2	33.8	33.8	34.4	35.3
1800	33.4	35.6	86.1	99.1	33.8	33.8	34.3	35.1
1900	33.2	35.5	86.1	99.4	33.5	33.7	34.0	35.0
2000	33.2	35.4	86.2	99.4	33.5	33.7	34.2	34.9
2100	33.2	35.5	85.9	99.5	33.4	33.7	34.6	35.0
2200	33.2	35.4	85.4	99.0	32.2	33.7	34.7	35.2
2300	33.3	35.1	85.3	99.0	31.9	34.0	34.9	35.3
2400	33.1	35.1	84.8	98.5	31.7	33.9	34.9	35.7

TABLE 57
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 26, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.2	35.0	84.5	98.5	31.6	33.9	35.1	35.8
0200	33.2	35.0	84.1	98.1	31.6	33.7	35.1	36.0
0300	33.3	35.0	83.8	97.8	31.5	34.0	35.1	36.0
0400	33.2	35.1	83.6	97.6	31.7	34.0	34.7	35.9
0500	33.3	35.1	83.2	97.3	31.7	34.0	34.5	35.9
0600	33.3	35.3	83.0	97.2	31.6	34.1	34.4	35.6
0700	33.3	35.4	83.7	97.1	31.7	33.9	34.3	35.4
0800	33.2	35.5	82.5	97.0	31.5	34.1	34.1	35.4
0900	33.2	35.7	82.2	96.9	31.5	33.9	34.0	35.4
1000	33.3	35.8	82.2	96.8	31.5	34.0	34.0	35.3
1100	33.3	35.9	82.1	97.0	31.5	33.9	34.0	35.3
1200	33.3	36.0	81.9	96.7	31.4	33.9	34.0	35.3
1300	33.4	36.0	82.0	96.8	31.4	34.0	34.0	35.2
1400	33.4	36.4	82.2	97.0	31.6	33.9	34.3	35.3
1500	33.4	36.5	82.4	97.1	31.6	33.9	34.0	35.4
1600	33.4	36.4	82.2	96.9	31.6	33.9	34.0	35.4
1700	33.4	36.3	82.5	97.0	31.6	34.0	34.0	35.2
1800	33.3	36.1	83.0	97.3	31.5	33.8	34.0	35.2
1900	33.2	35.9	83.5	97.6	31.4	33.8	34.1	35.0
2000	33.2	35.9	93.3	97.7	31.3	33.7	34.2	35.0
2100	33.1	35.6	83.0	97.5	31.1	33.6	34.2	34.9
2200	33.0	35.4	82.8	97.2	30.9	33.7	34.2	34.8
2300	33.1	35.4	83.0	97.3	30.8	33.6	34.2	35.2
2400	33.2	35.3	83.0	97.3	30.8	33.9	34.8	35.2

TABLE 58
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 27, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.1	35.1	83.0	97.5	30.9	33.6	34.6	35.6
0200	33.1	35.1	82.6	97.2	31.1	33.9	35.0	36.0
0300	33.3	35.1	82.8	97.7	31.2	33.8	35.0	36.4
0400	33.5	35.1	82.5	97.2	31.3	33.5	34.9	36.0
0500	33.4	35.2	82.5	96.9	31.3	33.6	34.6	36.0
0600	33.4	35.2	82.4	97.0	31.3	33.5	34.4	35.8
0700	33.4	35.3	82.2	96.8	31.2	33.6	34.1	35.6
0800	33.2	35.4	82.0	96.7	31.2	33.6	34.2	35.6
0900	33.0	35.6	81.8	96.2	31.3	33.7	34.2	35.5
1000	33.1	35.9	81.9	96.7	31.3	33.6	34.5	35.4
1100	33.1	36.0	81.6	96.4	31.3	33.4	34.4	35.5
1200	33.1	36.1	82.3	96.7	31.4	33.8	34.6	35.5
1300	33.1	36.2	82.9	97.0	31.2	33.6	34.6	35.7
1400	33.1	36.3	83.5	97.3	31.3	33.6	34.2	35.7
1500	33.3	36.3	83.5	97.3	31.3	33.6	34.2	34.7
1600	33.3	36.4	85.6	98.2	31.4	33.6	34.6	35.6
1700	33.3	36.4	86.2	98.7	31.3	33.7	34.5	35.5
1800	33.2	36.4	86.5	98.9	31.4	33.6	34.5	35.5
1900	33.2	36.5	87.3	99.0	31.5	33.8	34.3	35.6
2000	33.3	36.5	87.2	99.3	31.5	33.9	34.5	35.4
2100	33.4	36.4	86.9	97.0	31.3	33.7	34.6	35.5
2200	33.3	36.4	86.4	93.7	31.5	33.8	34.9	35.5
2300	33.1	36.3	86.0	91.0	31.4	33.7	34.7	35.5
2400	33.3	36.1	85.6	89.1	31.5	33.9	34.7	35.7

TABLE 59
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
February 28, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.2	36.0	84.0	88.1	31.6	33.7	34.9	35.8
0200	33.3	36.0	82.0	85.7	31.6	34.0	34.8	36.0
0300	33.4	36.0	79.9	82.2	31.6	34.1	34.7	36.0
0400	33.4	36.1	78.8	81.4	31.7	34.0	34.6	36.0
0500	33.4	36.2	78.0	80.3	31.9	33.9	34.6	36.0
0600	33.5	36.2	75.1	78.5	31.9	33.9	34.8	36.0
0700	33.5	36.3	73.0	76.5	32.0	34.1	34.5	36.2
0800	33.5	36.4	72.3	76.6	32.0	34.1	34.1	36.2
0900	33.5	36.4	71.5	80.3	32.1	34.0	34.1	36.0
1000	33.6	36.6	70.0	79.4	32.1	34.0	34.1	36.2
1100	33.5	36.8	69.2	78.5	32.1	33.9	34.0	36.2
1200	33.6	36.9	69.1	77.3	32.1	33.9	34.0	36.3
1300	33.6	37.0	71.2	79.3	32.1	33.9	34.0	36.4
1400	33.5	37.0	70.8	80.0	32.3	34.0	34.1	36.3
1500	33.6	36.8	70.2	79.9	32.0	34.0	34.0	36.1
1600	33.6	36.7	69.7	79.0	32.0	33.7	34.0	36.0
1700	33.4	36.6	70.6	79.2	32.0	33.7	34.0	36.0
1800	33.4	36.7	71.0	80.0	32.0	33.7	33.8	36.0
1900	33.4	36.6	70.5	80.2	31.8	33.7	33.7	35.9
2000	33.4	36.5	70.0	80.0	31.7	33.7	33.8	35.9
2100	33.4	36.5	70.6	79.5	31.7	33.8	33.8	35.9
2200	33.4	36.4	71.5	80.8	31.6	33.6	33.9	35.7
2300	33.3	36.4	71.6	80.9	31.6	33.7	33.9	35.7
2400	33.4	36.2	71.4	79.0	31.6	33.6	33.9	35.9

TABLE 60
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 1, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.4	36.4	71.5	77.0	31.6	33.6	34.0	35.8
0200	33.4	36.3	72.0	75.3	31.6	33.9	34.0	35.9
0300	33.3	36.0	72.1	73.8	31.6	33.9	34.0	36.0
0400	33.4	36.1	70.7	74.2	31.6	33.9	33.9	35.9
0500	33.4	36.1	69.4	72.8	31.6	33.7	33.9	35.9
0600	33.4	36.1	68.0	72.4	31.5	33.9	33.9	35.7
0700	33.3	36.0	67.0	72.1	31.5	33.6	33.7	35.8
0800	33.3	36.0	67.1	72.4	31.5	33.6	33.6	35.8
0900	33.2	36.1	66.4	72.9	31.4	33.6	33.6	35.7
1000	33.3	37.3	66.3	73.3	31.4	33.5	33.5	35.7
1100	33.2	37.8	66.1	73.4	31.3	33.6	33.5	35.7
1200	33.2	39.1	66.5	73.3	31.3	33.6	33.5	35.6
1300	33.2	46.1	67.4	75.2	31.4	33.5	33.5	35.6
1400	33.3	40.1	67.9	75.2	31.3	33.5	33.5	35.6
1500	33.3	37.5	68.0	75.2	31.3	33.5	33.5	35.6
1600	33.1	39.9	68.2	75.4	31.2	33.5	33.5	35.6
1700	33.1	45.2	69.4	77.6	31.2	33.6	33.4	35.6
1800	33.1	37.8	70.0	77.2	31.2	33.5	33.5	35.4
1900	33.0	36.1	70.3	72.2	31.1	33.6	34.4	35.2
2000	33.0	35.7	70.0	66.0	31.0	33.7	34.2	35.1
2100	32.9	35.6	70.4	65.1	30.9	33.6	34.1	35.0
2200	32.9	35.4	70.3	65.1	30.7	33.4	34.0	35.0
2300	32.9	35.4	68.9	63.9	30.7	33.5	34.1	35.1
2400	32.9	35.1	66.0	62.9	30.7	33.4	34.1	35.1

TABLE 61
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 2, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.8	35.1	60.7	59.0	30.7	33.3	34.1	35.0
0200	32.9	35.0	59.4	57.7	30.7	33.3	34.0	35.2
0300	32.9	35.0	59.1	57.6	30.8	33.6	34.0	35.1
0400	32.9	35.0	58.0	57.1	30.9	33.6	34.0	35.0
0500	32.9	34.9	56.9	56.1	30.8	33.4	34.0	35.0
0600	32.9	35.0	54.6	55.3	30.9	33.5	34.0	35.0
0700	32.8	34.8	53.0	53.8	30.7	33.2	33.8	34.8
0800	32.8	34.9	52.7	53.9	30.7	33.5	33.8	34.8
0900	32.8	35.0	52.4	53.4	30.7	33.3	33.8	34.9
1000	32.9	35.0	52.2	56.1	30.7	33.3	33.6	35.0
1100	32.9	35.5	51.2	56.8	30.8	33.3	33.6	35.2
1200	33.0	35.6	51.2	56.6	31.0	33.4	33.6	35.2
1300	33.0	36.0	51.6	57.0	31.0	33.5	33.7	35.5
1400	33.0	36.2	53.4	58.3	31.1	33.3	33.8	35.5
1500	33.1	36.3	54.1	59.5	31.2	33.4	33.8	35.4
1600	33.0	36.1	53.7	59.1	31.1	33.3	33.8	35.2
1700	33.1	36.0	53.8	59.3	31.1	33.3	33.8	35.4
1800	33.0	35.8	54.6	59.7	31.0	33.3	33.4	35.2
1900	32.9	35.6	55.3	60.9	30.9	33.3	33.7	35.1
2000	32.8	35.4	55.2	60.8	30.7	33.3	33.8	35.1
2100	32.7	35.0	55.0	60.6	30.6	33.4	34.0	35.0
2200	32.7	34.9	55.4	60.8	30.5	33.5	34.2	35.0
2300	32.5	34.6	55.8	61.5	30.5	33.3	34.6	35.2
2400	32.7	34.6	56.1	61.6	30.5	33.6	34.8	35.4

TABLE 62
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 3, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.8	34.5	56.0	61.4	30.7	33.5	34.8	35.6
0200	33.0	34.7	56.1	61.8	30.9	33.3	34.9	35.7
0300	33.0	34.7	56.5	62.0	30.9	33.6	34.9	35.8
0400	33.0	34.9	56.5	62.3	31.0	33.6	34.7	35.9
0500	33.1	35.0	56.5	62.4	31.1	33.6	34.5	35.7
0600	33.1	35.0	56.8	63.0	31.3	33.7	34.3	35.7
0700	33.1	35.1	57.2	63.0	31.2	33.4	34.0	35.6
0800	33.0	35.4	57.2	63.3	31.1	33.7	34.0	35.2
0900	33.0	35.4	57.6	63.8	31.0	33.4	33.9	35.1
1000	32.9	35.7	58.2	64.1	30.9	33.4	33.9	35.2
1100	32.9	35.9	58.6	64.6	31.0	33.4	33.9	35.3
1200	32.9	36.0	59.0	65.2	30.9	33.5	33.8	35.3
1300	33.1	36.3	59.8	65.9	31.1	33.5	34.0	35.5
1400	33.3	36.5	60.3	66.5	31.3	33.9	34.3	35.8
1500 ^{1/}	33.4	36.5	60.8	67.2	31.4	34.1	34.5	35.6
1600	33.4	34.3	61.2	70.2	33.4	33.6	34.5	35.7
1700	33.3	34.2	61.4	70.3	33.3	33.7	34.4	35.6
1800	33.1	33.9	61.5	70.5	33.2	33.5	34.0	35.3
1900	33.0	33.6	61.7	70.7	32.7	33.4	34.0	35.0
2000	32.9	33.5	61.9	71.0	32.9	33.4	34.0	35.0
2100	32.9	33.5	62.1	71.8	32.9	33.3	34.2	34.9
2200	32.9	33.4	62.4	72.1	32.6	33.3	34.4	35.0
2300	32.8	33.4	62.5	72.3	32.9	33.3	34.7	35.1
2400	32.9	33.4	62.9	72.1	32.7	33.3	34.9	35.4

^{1/} Instruments zeroed to ground truth data.

TABLE 63
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 4, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.9	33.2	63.4	72.3	32.9	33.3	35.0	35.5
0200	32.9	33.3	63.7	72.0	32.9	33.3	35.4	35.9
0300	33.0	33.3	64.0	73.7	32.9	33.4	35.4	36.2
0400	33.0	33.4	64.0	74.4	33.2	33.5	35.4	36.2
0500	33.4	33.5	64.0	74.5	33.4	33.5	35.3	36.4
0600	33.6	33.7	64.0	75.4	33.5	33.6	35.3	36.0
0700	33.6	33.8	65.1	75.7	33.6	33.6	35.0	36.0
0800	33.7	33.9	65.8	77.3	33.6	33.7	35.2	36.0
0900	33.9	34.0	65.7	77.1	33.8	33.9	35.1	35.8
1000	34.1	34.3	66.7	74.7	33.9	33.9	35.0	35.8
1100	34.1	34.5	67.7	76.4	33.9	33.7	35.0	35.7
1200	33.9	45.3	68.0	76.3	33.9	33.8	34.9	35.6
1300	33.9	34.9	68.0	76.5	34.0	34.0	35.0	36.0
1400	33.3	34.8	66.2	75.1	34.0	34.0	34.8	36.1
1500	33.3	34.8	66.8	75.0	34.0	34.0	34.8	35.9
1600	33.4	35.0	67.0	74.9	34.0	34.0	34.8	35.9
1700	33.4	35.0	67.3	75.7	34.0	34.0	35.0	36.0
1800	33.4	34.9	66.6	75.4	33.9	33.9	34.9	35.8
1900	33.5	34.9	66.5	75.2	34.0	34.0	35.0	35.9
2000	33.5	34.6	66.4	74.9	34.1	34.1	35.0	35.7
2100	33.5	34.6	66.0	74.8	34.0	34.0	35.0	35.7
2200	33.5	34.6	65.3	73.9	34.0	34.0	35.2	35.9
2300	33.4	34.5	65.1	73.0	33.9	34.0	35.2	35.9
2400	33.4	34.4	64.9	73.2	33.9	34.0	35.2	35.8

TABLE 64
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 5, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.3	34.1	64.7	73.0	33.7	34.0	35.0	35.8
0200	33.2	34.0	64.0	72.4	33.7	33.8	35.2	35.9
0300	33.3	34.0	63.4	71.9	33.7	33.8	35.3	35.8
0400	33.3	33.9	63.4	71.8	33.7	34.0	35.3	36.2
0500	33.4	34.0	63.2	72.3	34.0	34.0	35.5	36.1
0600	33.4	34.0	62.7	71.4	33.6	33.9	35.5	36.4
0700	33.6	34.0	62.4	71.3	34.3	34.3	35.5	36.3
0800	33.4	34.0	62.4	71.5	34.1	34.1	35.5	36.2
0900	32.5	34.2	62.5	71.8	34.1	34.1	35.3	36.2
1000	33.5	34.4	62.4	71.6	34.1	34.1	35.3	36.2
1100	33.6	34.6	62.7	71.7	34.3	34.3	35.4	36.4
1200	33.6	35.0	63.0	72.0	34.4	34.3	35.3	35.5
1300	33.7	35.1	63.5	72.4	34.4	34.4	35.4	36.5
1400	33.7	35.6	63.5	72.9	34.6	34.4	35.4	36.7
1500	33.9	35.8	63.7	73.0	34.9	34.4	35.4	36.8
1600	34.0	35.9	64.1	73.3	34.8	34.5	35.5	36.8
1700	34.0	35.8	64.1	73.3	34.8	34.4	35.5	36.7
1800	33.9	35.6	64.1	73.5	34.8	34.5	35.2	36.4
1900	33.8	35.3	63.9	73.8	34.5	34.4	35.2	36.1
2000	33.8	35.1	64.0	74.8	34.5	34.4	35.1	36.1
2100	33.7	34.9	64.0	76.7	34.4	34.3	35.0	36.0
2200	33.7	34.9	64.1	77.5	34.4	34.4	35.3	35.8
2300	33.6	34.7	64.2	78.0	34.2	34.2	35.5	35.9
2400	33.4	34.5	65.4	80.0	34.1	34.1	35.7	35.9

TABLE 65

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

March 6, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.4	34.4	66.8	81.4	34.0	34.1	36.0	36.1
0200	33.5	43.1	67.5	82.2	34.0	34.0	36.2	36.4
0300	33.6	34.1	67.8	82.4	34.1	34.1	36.5	36.5
0400	33.7	34.1	69.1	83.5	34.2	34.2	36.6	36.8
0500	33.6	34.1	70.0	84.0	34.4	34.4	36.9	36.9
0600	33.6	34.1	70.7	84.9	34.5	34.5	36.8	36.9
0700	33.7	34.3	70.8	85.0	34.5	34.4	36.5	36.9
0800	33.7	34.3	71.5	85.2	34.6	34.4	36.5	36.8
0900	33.9	34.9	72.0	86.4	34.8	34.6	36.4	36.8
1000	34.0	35.1	72.7	87.3	34.9	34.6	36.4	36.8
1100	34.0	35.4	72.8	87.5	35.0	34.7	36.5	37.0
1200	34.1	35.9	72.9	87.5	35.1	34.7	36.4	37.2
1300	34.2	36.1	73.3	88.4	35.2	34.7	36.5	37.4
1400	34.3	36.5	74.1	89.2	35.5	34.7	36.5	37.5
1500	34.4	36.5	74.3	89.0	35.5	34.7	36.4	37.5
1600	34.4	36.5	74.6	89.5	35.4	34.7	36.2	37.3
1700	34.4	36.4	75.0	89.8	35.4	34.8	36.4	37.2
1800	34.4	36.1	75.4	90.3	35.4	34.8	36.2	37.0
1900	34.2	36.8	75.5	90.3	35.1	34.7	36.1	36.8
2000	34.1	35.5	75.8	90.5	35.0	34.7	35.9	36.6
2100	34.0	35.4	76.0	90.8	34.9	34.7	35.8	36.3
2200	33.9	35.1	76.4	91.1	34.6	34.6	35.9	36.1
2300	33.9	35.0	76.3	91.3	34.5	34.5	36.0	36.1
2400	33.8	34.7	76.4	91.2	34.4	34.4	36.1	36.1

TABLE 66
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 7, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.7	34.5	76.7	91.7	34.4	34.4	36.1	36.1
0200	33.7	34.2	76.7	91.8	34.1	34.2	36.5	36.5
0300	33.7	34.3	76.9	92.0	34.2	34.2	36.5	36.5
0400	33.6	34.1	76.9	92.0	34.2	34.2	36.9	36.7
0500	33.7	34.0	77.0	92.0	34.2	34.2	36.7	36.7
0600	33.7	34.0	77.0	92.0	34.3	34.3	36.9	36.8
0700	33.8	34.0	77.0	92.1	34.4	34.4	36.6	36.6
0800	33.8	34.1	77.3	92.5	34.5	34.5	36.6	36.6
0900	33.9	34.4	77.5	92.9	34.6	34.5	36.7	36.7
1000	34.0	34.7	77.8	93.1	34.9	34.7	36.7	36.7
1100	33.9	35.1	78.1	93.4	35.0	34.6	36.5	36.8
1200	34.0	35.6	78.8	94.1	35.0	34.5	36.6	37.2
1300	34.1	36.1	79.1	94.6	35.1	34.5	36.8	37.3
1400	34.3	36.5	79.5	95.0	35.4	34.5	36.7	37.6
1500	34.3	36.6	80.0	95.5	35.4	34.5	36.7	37.5
1600	34.3	36.6	80.4	95.8	35.4	34.6	36.6	37.5
1700	34.2	36.5	80.7	96.0	35.1	34.6	36.7	37.4
1800	34.1	36.1	80.9	96.2	35.1	34.6	36.4	37.1
1900	34.0	36.0	81.3	86.4	35.1	34.5	36.4	37.0
2000	34.1	36.0	81.3	96.4	35.1	34.5	36.4	37.0
2100	33.8	35.7	81.4	96.9	35.0	34.6	36.4	36.6
2200	34.0	35.4	81.7	97.0	34.6	34.5	36.1	36.6
2300	33.7	35.3	81.7	97.0	34.5	34.4	36.1	36.4
2400	33.7	35.1	81.7	97.1	34.5	34.5	36.1	36.3

TABLE 67
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 8, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.7	35.0	81.7	97.2	34.5	34.4	36.4	36.4
0200	33.7	34.9	82.0	96.5	34.4	34.4	36.5	36.5
0300	33.7	34.7	81.8	95.5	34.4	34.4	36.7	36.6
0400	33.6	34.5	81.8	96.0	34.4	34.4	37.0	36.8
0500	33.6	34.2	81.9	96.7	34.3	34.3	37.0	37.0
0600	33.5	34.1	81.3	96.7	34.3	34.3	37.3	37.1
0700	33.6	34.1	80.5	96.2	34.4	34.5	37.4	37.3
0800	33.6	34.1	80.8	96.5	34.5	34.5	37.4	37.4
0900	33.8	34.4	81.5	97.2	34.9	34.9	37.4	37.4
1000	34.0	34.6	82.0	97.7	35.0	34.9	37.7	37.7
1100	34.2	35.5	82.1	98.4	35.4	35.0	38.0	38.0
1200	34.4	36.1	82.7	99.0	35.6	34.9	38.0	38.2
1300	34.5	36.6	83.6	99.5	36.0	35.0	38.2	38.4
1400	34.7	37.1	84.4	100.4	36.3	35.0	38.2	38.6
1500	34.9	37.4	84.8	100.9	36.5	35.0	38.2	38.8
1600	34.9	37.8	85.0	101.0	36.7	35.0	38.4	39.0
1700	35.0	37.8	85.1	101.5	36.9	35.3	38.2	39.0
1800	35.0	37.8	85.5	101.6	37.0	35.2	38.1	38.8
1900	35.1	37.7	85.7	101.8	37.0	35.3	38.2	38.8
2000	35.0	37.7	85.7	101.9	36.9	35.1	38.0	38.6
2100	35.0	37.5	86.0	101.9	36.9	35.1	38.0	38.5
2200	34.9	37.6	85.9	102.2	36.8	35.1	37.9	38.2
2300	34.9	37.5	85.9	102.1	36.6	35.1	37.9	38.2
2400	34.8	37.4	85.8	101.9	36.5	35.0	37.6	38.0

TABLE 68
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 9, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	34.6	37.1	85.7	101.9	36.2	34.9	37.8	37.8
0200	34.5	37.0	85.8	102.0	36.1	35.0	37.6	37.6
0300	34.4	36.8	85.6	101.9	35.9	34.8	37.7	37.7
0400	34.3	36.4	85.6	102.1	35.7	34.7	37.9	37.8
0500	34.1	36.3	85.6	101.9	35.6	34.9	38.0	38.0
0600	34.1	36.0	85.5	101.5	35.5	34.8	38.1	38.0
0700	34.1	35.8	85.3	101.5	35.5	34.9	38.1	38.1
0800	34.1	35.8	85.4	101.4	35.5	34.9	38.4	38.4
0900	34.1	35.9	85.5	101.5	35.9	34.7	38.4	38.4
1000	34.4	36.4	85.5	101.8	36.1	34.7	38.4	38.6
1100	34.5	36.9	85.8	102.0	35.4	34.9	38.7	38.9
1200	34.6	37.4	86.1	102.2	36.5	35.0	38.8	39.1
1300	34.9	37.7	86.5	102.4	37.0	35.0	38.9	39.3
1400 ^{1/}	34.9	38.1	86.7	102.9	37.1	35.0	39.0	39.5
1500	38.7	38.1	86.9	101.0	32.4	37.4	38.7	39.6
1600	38.7	38.4	87.0	101.1	37.4	37.3	38.9	39.5
1700	38.9	38.5	87.1	101.3	37.6	37.6	38.7	39.5
1800	39.0	38.6	87.0	101.3	37.6	37.5	38.7	40.4
1900	39.0	38.5	87.0	101.3	37.9	37.7	38.7	39.1
2000	39.0	38.6	87.0	101.5	37.9	37.7	38.7	39.1
2100	39.0	38.5	87.3	101.4	38.0	37.7	38.7	39.1
2200	39.0	38.6	87.2	101.5	37.7	37.6	38.6	39.1
2300	38.9	38.5	87.1	101.4	37.6	37.6	38.5	39.0
2400	38.9	38.6	87.0	101.4	37.5	37.5	38.4	38.9

^{1/} Instruments zeroed to ground truth data.

TABLE 69
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 March 10, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	38.9	38.2	86.9	101.1	37.6	37.6	38.1	38.8
0200	38.9	38.4	86.8	101.2	37.6	37.6	38.1	38.6
0300	38.8	38.3	86.6	100.6	37.5	37.5	38.1	38.6
0400	38.7	38.1	86.3	100.7	37.4	37.5	38.0	38.6
0500	38.7	38.0	86.1	100.8	37.2	37.4	38.4	38.4
0600	38.6	37.8	86.0	100.6	37.0	37.3	38.4	38.4
0700	38.3	37.8	85.5	100.0	36.9	37.1	38.5	38.5
0800	38.5	37.6	85.5	99.9	36.9	37.1	38.7	38.5
0900	38.5	37.9	85.5	100.0	36.9	37.1	39.1	38.8
1000	38.5	37.8	85.5	99.8	37.0	37.2	39.1	39.0
1100	38.5	38.0	85.3	99.9	37.2	37.3	39.3	39.3
1200	38.5	38.2	85.4	99.8	37.3	37.4	39.3	39.4
1300	38.6	38.4	85.4	100.0	37.5	37.5	39.5	39.7
1400	38.6	38.6	85.3	99.8	37.5	37.5	39.6	39.9
1500	38.7	38.8	85.5	100.1	37.6	37.5	39.6	40.0
1600	38.9	38.9	85.7	100.1	37.9	37.6	39.6	40.0
1700	38.9	38.8	85.7	100.5	38.0	37.6	39.5	40.0
1800	39.0	39.9	85.9	100.7	38.1	37.9	39.5	40.3
1900	38.9	38.9	86.1	101.1	38.0	37.9	39.4	40.1
2000	38.8	38.8	86.4	101.5	38.3	38.0	39.4	40.0
2100	39.0	38.6	86.5	101.7	38.2	37.9	39.4	39.9
2200	38.9	38.6	86.0	101.3	38.3	38.0	39.1	39.6
2300	38.9	38.6	85.9	100.9	38.3	37.9	39.3	39.6
2400	38.9	38.6	86.0	100.4	38.3	37.9	39.0	39.4

TABLE 70

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

March 11, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	38.8	38.5	85.7	100.4	38.2	37.9	38.8	39.1
0200	38.8	38.4	85.2	100.4	38.0	37.9	38.7	39.1
0300	38.8	38.3	85.0	100.1	38.1	37.7	38.7	39.0
0400	38.7	38.1	84.7	100.0	38.3	37.7	38.4	38.9
0500	38.7	38.0	84.5	99.2	38.0	37.7	38.2	38.7
0600	38.5	37.8	84.5	99.4	38.0	37.7	38.6	38.6
0700	38.5	37.7	84.3	99.0	38.0	37.6	38.5	38.6
0800	38.3	37.6	84.2	99.0	38.0	37.5	38.5	38.5
0900	38.4	37.6	84.3	98.9	38.1	37.5	38.5	38.5
1000	38.5	37.9	84.6	98.8	38.1	37.6	38.9	38.9
1100	38.4	38.2	84.9	98.9	38.6	37.5	39.3	39.3
1200	38.6	38.7	85.2	99.8	38.9	37.6	39.5	39.5
1300	38.9	38.9	85.3	99.9	39.0	37.7	39.8	39.8
1400	39.0	39.1	85.4	99.9	39.2	37.7	39.9	39.9
1500	38.9	39.2	85.2	100.1	39.3	37.6	40.0	40.6
1600	39.0	39.5	85.5	100.3	39.3	37.9	40.0	40.7
1700	39.0	39.4	85.5	100.4	39.4	37.9	40.1	40.8
1800	39.0	39.2	85.4	100.3	39.5	37.9	39.8	40.8
1900	39.0	39.1	85.6	100.5	39.6	37.9	40.0	40.9
2000	39.1	39.1	86.1	100.7	39.6	38.1	40.0	41.0
2100	39.1	39.1	86.4	100.8	39.6	38.1	39.9	40.8
2200	39.0	39.0	86.2	100.8	39.6	38.1	40.0	40.5
2300	39.1	39.1	86.2	100.8	39.8	38.0	39.9	40.1
2400	39.1	39.1	86.0	100.3	39.8	38.0	39.5	40.0

TABLE 71
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 12, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	39.0	39.0	85.7	100.3	39.6	38.1	39.4	40.0
0200	39.0	38.8	85.4	100.3	39.5	37.9	19.0	40.0
0300	39.0	38.9	85.2	100.0	39.4	37.9	39.0	30.9
0400	39.0	38.9	85.0	99.8	39.4	37.9	38.9	39.6
0500	39.0	38.6	84.8	99.4	39.4	37.9	38.8	39.2
0600	39.0	38.6	84.5	99.0	39.2	37.9	38.7	39.1
0700	38.6	38.4	84.3	99.0	39.0	37.7	38.7	39.1
0800	39.0	38.4	84.3	98.9	38.9	37.7	39.0	39.0
0900	38.8	38.4	84.4	98.6	38.9	37.8	39.1	39.1
1000	38.8	38.7	84.6	99.5	39.0	37.9	39.5	39.5
1100	39.0	39.0	85.3	100.0	39.3	37.0	39.9	39.9
1200	39.0	39.3	86.0	100.1	39.5	37.9	40.4	40.4
1300	39.1	40.0	86.4	100.4	39.9	38.0	40.7	40.7
1400	39.4	40.4	87.2	101.4	40.0	38.0	41.0	41.3
1500	39.5	40.8	87.1	101.1	40.2	38.0	41.1	42.0
1600	39.7	40.8	86.8	101.5	40.3	38.1	41.1	42.0
1700	39.8	40.3	86.4	101.3	40.6	38.3	41.0	42.0
1800	39.8	40.4	86.4	101.0	40.6	38.4	41.0	42.0
1900	39.8	40.4	86.5	101.4	40.8	38.1	40.9	42.1
2000	39.9	40.3	87.0	101.3	41.0	38.2	41.0	42.0
2100	39.9	40.4	87.3	101.5	41.1	38.3	41.0	41.8
2200	39.9	40.4	87.2	101.5	41.1	38.4	40.9	41.9
2300	39.9	40.4	87.5	101.8	41.1	38.4	40.9	41.8
2400	39.8	40.3	87.5	101.6	41.0	38.2	40.3	41.4

TABLE 72
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 13, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	39.8	40.2	87.7	101.7	41.0	38.1	40.3	41.2
0200	39.6	40.2	87.4	101.4	40.9	38.4	39.9	40.9
0300	39.4	40.1	87.1	101.2	40.5	38.3	39.6	40.6
0400	39.6	40.1	87.1	101.2	40.5	38.2	39.6	40.6
0500	39.4	39.9	86.9	100.9	40.4	38.1	39.6	40.0
0600	39.4	39.9	86.6	100.7	40.1	38.1	39.4	40.0
0700	39.2	39.5	86.4	100.6	40.0	38.0	40.0	40.0
0800	39.1	39.6	86.5	100.5	39.8	37.9	40.1	40.1
0900	39.2	39.6	86.5	100.8	40.0	38.2	40.9	40.8
1000	39.5	39.5	86.7	101.0	40.0	38.1	41.5	41.5
1100	39.4	40.0	86.9	101.0	40.4	38.3	41.5	41.5
1200	39.6	40.1	86.8	100.8	40.6	38.3	41.9	42.3
1300	39.9	40.5	86.9	100.8	41.0	38.4	42.0	42.5
1400	40.0	41.0	86.9	100.9	41.4	38.5	41.7	43.0
1500	40.0	41.5	86.9	101.0	41.5	38.5	41.6	43.0
1600	40.1	41.6	86.6	100.0	41.7	38.5	41.6	42.9
1700	40.1	41.8	86.4	98.0	41.9	38.7	41.3	42.8
1800	40.3	41.4	86.1	97.0	42.0	38.7	41.3	42.3
1900	40.2	41.4	86.1	95.7	42.0	38.8	41.2	42.3
2000	40.1	41.4	85.5	94.3	42.0	38.7	41.0	41.8
2100	40.2	41.2	84.4	91.8	41.9	38.7	40.8	41.7
2200	40.1	41.0	83.2	90.5	41.9	38.6	40.6	41.5
2300	40.1	41.0	82.1	90.0	41.9	38.8	40.1	41.7
2400	40.0	40.9	81.2	89.5	41.6	38.5	40.1	41.3

TABLE 73

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

March 14, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	40.0	40.7	79.7	88.5	41.5	38.9	40.0	41.2
0200	40.0	40.6	78.7	88.0	41.5	38.5	40.0	41.1
0300	39.9	40.5	78.2	87.4	41.2	38.6	40.0	41.1
0400	39.9	40.3	78.0	86.7	41.2	38.6	40.4	40.5
0500	39.8	40.2	76.6	86.5	40.9	38.6	40.4	41.0
0600	39.8	40.0	76.1	86.8	40.8	38.6	40.4	41.6
0700	39.6	40.0	75.8	88.3	40.9	38.4	40.7	41.1
0800	39.6	39.8	75.4	88.6	40.5	38.4	40.7	41.1
0900	39.6	39.8	75.6	98.4	40.8	38.4	40.9	41.4
1000	39.8	40.3	76.5	90.6	41.0	38.3	41.3	41.6
1100	39.9	40.4	77.7	92.0	41.2	38.4	41.5	41.9
1200	40.0	41.1	78.4	92.6	41.5	38.4	41.5	42.0
1300	40.0	41.7	79.0	93.1	41.9	38.4	41.5	42.1
1400	40.3	42.1	80.1	93.7	42.1	38.6	41.5	42.4
1500	40.4	42.6	80.2	94.4	42.3	38.6	41.5	42.5
1600	40.5	42.8	81.7	95.4	42.5	38.7	41.5	42.5
1700	40.6	43.1	81.9	95.6	42.6	38.8	41.4	42.4
1800	40.6	42.8	81.9	96.0	42.5	38.7	41.3	42.3
1900	40.7	42.6	82.5	96.2	42.6	38.7	41.1	42.2
2000	40.6	42.5	83.1	96.5	42.5	38.9	41.1	42.1
2100	40.6	42.4	83.1	96.8	42.5	38.7	40.9	41.9
2200	40.6	42.4	83.3	97.0	42.3	38.7	40.8	41.9
2300	40.4	42.1	83.1	96.9	42.1	38.6	40.4	41.6
2400	40.2	42.0	83.3	97.2	42.1	38.6	40.3	41.6

TABLE 74
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 15, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	40.1	41.9	83.6	95.6	41.9	38.7	40.3	41.2
0200	40.0	41.6	83.6	92.1	41.7	38.9	40.0	41.0
0300	39.9	41.4	83.4	88.8	41.5	38.9	40.0	41.0
0400	40.0	41.2	83.4	86.5	41.4	38.6	40.4	40.6
0500	39.9	41.0	82.2	85.6	41.1	38.6	40.5	40.9
0600	39.9	40.8	80.0	84.2	41.0	38.4	40.8	41.0
0700	39.8	40.6	78.4	83.0	40.9	38.5	40.9	41.1
0800	39.8	40.3	77.0	81.8	40.9	38.4	41.1	41.5
0900	39.9	40.4	76.6	82.0	40.9	38.5	41.4	41.6
1000	39.9	40.8	76.3	82.3	41.4	38.7	41.6	42.0
1100	40.0	41.6	75.9	84.5	41.7	38.7	41.8	42.4
1200	40.3	42.1	75.6	85.4	42.0	38.8	42.1	42.8
1300	40.5	42.9	76.1	85.7	42.4	39.0	42.2	43.2
1400	40.6	43.4	76.4	86.2	42.9	39.2	42.2	43.6
1500	41.0	43.9	77.4	87.7	43.4	39.1	42.4	43.8
1600	41.0	44.1	77.5	89.2	43.3	39.4	42.3	44.0
1700	41.2	44.1	77.4	98.7	43.5	39.4	42.3	44.0
1800	41.5	44.2	77.5	89.9	43.9	39.6	42.3	44.1
1900	41.6	44.1	78.2	90.5	43.9	39.7	42.4	44.0
2000	41.5	43.9	79.1	91.5	44.0	39.6	42.4	43.9
2100	41.5	43.9	79.3	91.9	43.9	39.8	42.2	43.7
2200	41.4	43.8	79.1	92.3	43.8	39.7	42.1	43.4
2300	41.4	43.6	79.6	92.4	43.6	39.6	42.1	43.1
2400	41.2	43.4	80.0	92.8	43.4	39.5	42.1	43.0

TABLE 75
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 16, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	41.0	43.1	80.0	93.1	43.3	39.4	42.0	42.9
0200	41.0	42.9	79.7	93.3	43.3	39.7	41.8	42.6
0300	40.9	42.4	79.5	93.2	42.9	39.4	42.0	42.5
0400	40.8	42.4	79.4	93.0	42.7	39.4	42.0	42.5
0500	40.6	42.1	79.6	93.0	42.4	39.4	42.3	42.6
0600	40.6	42.0	79.7	93.4	42.4	39.4	42.4	42.7
0700	40.5	41.6	79.7	93.6	42.4	39.3	42.9	42.0
0800	40.6	41.6	79.5	93.3	42.4	39.4	42.8	43.1
0900	40.4	41.1	79.2	93.0	41.9	38.9	42.5	42.9
1000	40.8	41.3	80.1	93.9	42.6	39.1	43.0	43.5
1100	41.0	42.3	80.8	94.5	43.0	39.4	43.1	44.0
1200	41.1	42.8	81.1	94.7	43.3	39.4	42.9	44.2
1300	41.1	43.4	81.7	95.4	43.5	39.6	43.1	44.3
1400	41.5	44.1	82.3	96.2	43.8	39.5	43.3	44.5
1500	41.5	44.6	82.7	96.5	44.0	39.7	43.1	44.5
1600	41.5	44.9	82.8	96.7	44.1	39.7	43.3	44.5
1700	41.7	44.9	83.0	96.7	44.1	39.7	43.0	44.4
1800	41.7	44.5	83.4	96.7	44.1	39.6	43.0	44.3
1900	41.7	44.4	83.5	96.9	44.1	40.0	42.5	44.0
2000	41.6	44.1	83.8	97.3	44.1	39.6	42.5	43.8
2100	41.4	44.0	83.8	97.7	43.9	39.6	42.0	43.5
2200	41.4	44.0	83.8	97.7	43.7	39.4	41.7	43.2
2300	41.0	43.7	83.6	97.7	43.2	39.4	41.4	42.6
2400	41.0	43.3	83.8	97.7	43.2	39.1	41.1	42.6

TABLE 76
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 17, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	40.9	43.0	84.1	97.7	42.9	39.0	41.1	42.0
0200	40.8	42.8	84.0	97.8	42.5	39.0	41.1	41.9
0300	40.6	42.4	83.7	97.6	42.1	39.1	41.1	41.7
0400	40.5	42.3	83.5	97.7	42.2	39.0	41.6	41.7
0500	40.4	42.0	83.7	97.8	42.0	39.0	41.5	41.8
0600	40.4	41.8	83.8	97.2	41.7	39.0	41.7	42.0
0700	40.2	41.7	84.2	98.5	41.7	38.9	41.9	42.2
0800	40.3	41.6	83.8	98.6	41.6	38.9	42.1	42.4
0900	40.3	41.7	83.3	98.0	41.9	39.0	42.5	42.6
1000	40.5	41.7	83.1	98.0	42.0	39.0	42.8	43.0
1100	40.6	42.2	83.1	97.7	42.3	39.2	42.7	43.3
1200	40.6	42.4	83.4	97.9	42.3	39.0	42.9	43.5
1300	40.7	42.9	83.3	98.3	42.5	39.2	42.7	43.5
1400	40.8	43.1	83.5	98.3	42.7	39.3	42.7	43.5
1500	40.9	42.9	83.6	98.6	43.0	39.1	42.7	43.7
1600	41.0	43.5	84.0	99.0	43.2	39.1	42.7	43.5
1700	41.0	43.4	84.0	99.3	43.2	39.1	42.8	43.4
1800	41.0	43.5	83.9	99.5	42.6	39.0	42.6	43.1
1900	41.0	43.4	84.2	99.5	43.1	39.1	42.4	43.1
2000	40.8	43.2	84.3	99.8	43.0	39.0	42.0	42.9
2100	40.7	43.1	84.5	99.6	42.9	38.9	41.7	42.7
2200	40.6	43.0	84.4	99.9	42.7	38.8	41.5	42.4
2300	40.4	42.6	84.5	100.0	42.6	38.8	41.5	42.0
2400	40.4	42.5	84.5	99.7	42.4	38.8	41.5	41.9

TABLE 77
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 18, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	40.2	42.1	84.4	99.8	42.1	38.9	41.4	41.8
0200	40.1	41.8	84.2	100.1	41.8	38.6	41.2	41.6
0300	40.0	41.5	84.0	99.8	41.7	38.5	41.4	41.5
0400	39.9	41.1	83.5	99.3	41.4	38.6	41.5	41.5
0500	39.8	40.9	83.5	99.1	41.3	38.7	41.4	41.6
0600	39.8	40.7	83.7	99.1	41.1	38.7	41.4	41.7
0700	39.5	40.4	83.5	99.2	40.9	38.6	41.5	41.7
0800	39.5	40.1	83.4	99.1	40.9	38.6	41.4	41.8
0900	39.6	40.1	83.3	99.0	40.9	38.6	41.6	42.3
1000	39.6	40.1	83.5	99.0	41.0	38.6	41.9	42.3
1100	39.8	40.8	83.7	99.0	41.2	38.6	41.7	42.5
1200	39.9	41.2	83.6	99.5	41.5	38.6	41.8	42.9
1300	40.0	41.6	83.6	99.3	41.5	38.7	41.9	42.9
1400	40.1	42.1	83.7	99.6	41.9	38.8	41.9	42.9
1500	40.2	41.9	83.5	99.5	42.0	38.6	41.9	42.8
1600	40.3	41.9	83.3	99.2	42.0	38.9	41.5	42.6
1700	40.2	41.6	82.9	99.2	42.1	38.9	41.5	42.5
1800	40.2	41.5	82.6	99.1	42.0	38.6	41.2	42.2
1900	40.1	41.4	82.6	98.9	41.9	38.7	41.1	42.1
2000	40.0	41.3	82.7	98.9	41.8	38.8	41.2	41.7
2100	40.0	41.2	82.8	98.9	41.6	38.7	40.7	41.2
2200	39.9	41.1	82.9	99.0	41.4	38.6	40.5	41.4
2300	39.8	40.9	82.9	99.2	41.2	38.5	40.4	41.2
2400	39.8	40.7	82.9	99.0	41.0	38.4	40.2	41.0

TABLE 78
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 19, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	39.5	40.5	82.9	98.8	40.7	38.4	40.1	40.7
0200	39.5	40.4	82.6	98.8	40.5	38.4	40.1	40.5
0300	39.3	40.0	82.4	98.5	40.2	38.4	40.4	40.5
0400	39.2	39.9	82.1	98.4	40.0	38.4	40.5	40.5
0500	39.3	39.9	82.5	98.5	40.0	38.2	40.8	40.8
0600	39.2	39.4	82.6	98.6	40.0	38.2	40.9	40.9
0700	39.2	39.4	82.9	98.6	40.0	38.2	41.1	41.1
0800	39.1	39.2	82.8	98.5	40.0	38.3	41.0	41.1
0900	39.2	39.2	83.0	98.5	40.0	38.4	41.0	41.2
1000	39.4	39.4	82.8	98.5	40.0	38.1	41.0	41.5
1100	39.2	39.4	82.6	98.4	40.0	38.1	41.0	41.5
1200	39.4	39.9	82.6	98.3	40.3	38.2	40.8	41.5
1300	39.4	40.4	82.3	98.1	40.5	38.4	40.6	41.4
1400	39.4	40.4	82.3	98.1	40.5	38.4	40.6	41.4
1500 ^{1/}	39.7	40.7	82.3	98.5	40.9	38.4	40.9	41.6
1600	39.6	40.9	82.2	98.7	40.9	38.4	40.8	41.6
1700	39.6	40.6	82.4	98.6	40.9	38.5	40.7	41.5
1800	39.5	40.5	82.6	98.6	40.9	38.4	40.5	41.5
1900	39.5	40.4	83.0	98.9	40.6	38.2	40.5	41.1
2000	39.5	40.1	83.4	99.1	40.6	38.2	40.3	41.1
2100	39.4	40.0	83.8	99.4	40.4	38.3	40.0	41.0
2200	39.4	40.0	83.8	99.5	40.4	38.2	40.0	40.9
2300	39.2	39.9	84.1	99.5	40.2	38.2	40.0	41.0
2400	39.4	39.6	84.0	99.6	40.0	38.4	39.9	40.9

^{1/} Instruments zeroed to ground truth data.

TABLE 79
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 20, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	39.4	39.5	84.0	99.3	40.0	38.4	39.9	40.5
0200	39.4	39.4	84.2	99.5	40.0	38.4	39.9	40.5
0300	39.2	39.2	84.2	99.5	39.8	38.4	39.9	40.4
0400	39.2	39.3	84.1	99.4	39.7	38.4	40.3	40.5
0500	39.3	39.2	84.0	99.4	39.7	38.4	40.4	40.4
0600	39.2	39.0	83.9	99.1	39.5	38.4	40.1	40.6
0700	39.0	38.6	83.6	99.0	39.4	38.5	40.1	40.6
0800	39.0	38.6	83.8	99.0	39.4	38.4	40.6	40.7
0900	39.1	38.6	83.7	99.0	39.4	38.4	40.6	40.8
1000	38.9	38.9	83.7	99.0	39.5	38.4	40.9	41.0
1100	39.2	39.2	84.1	99.4	40.0	38.4	41.0	41.3
1200	39.4	39.6	84.3	99.6	40.0	38.2	41.1	41.6
1300	39.4	40.0	84.8	100.0	40.1	38.4	41.0	42.0
1400	39.6	40.5	85.0	100.4	40.5	38.4	41.1	42.1
1500	39.6	41.0	85.3	100.4	40.5	38.4	41.3	42.2
1600	39.8	41.0	85.4	100.1	40.7	38.4	41.2	42.3
1700	39.9	41.0	85.4	100.6	41.0	38.4	41.3	42.4
1800	39.7	41.0	85.4	100.6	41.0	38.4	41.1	42.1
1900	39.7	40.7	85.5	100.7	41.0	38.4	41.2	42.1
2000	39.8	40.6	85.8	101.0	41.0	38.4	41.0	42.0
2100	39.6	40.4	86.1	100.6	40.9	38.2	40.9	41.7
2200	39.9	40.4	86.1	97.5	41.0	38.2	40.9	41.7
2300	39.7	40.2	86.0	95.1	40.8	38.2	40.7	41.5
2400	39.7	40.1	86.1	92.4	40.8	38.4	40.5	41.5

TABLE 80
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 21, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	39.9	40.2	86.0	91.0	40.8	38.5	40.6	41.5
0200	39.9	40.1	84.2	88.6	40.6	38.4	40.5	41.3
0300	39.6	40.1	82.2	86.7	40.5	38.4	40.5	41.3
0400	39.6	40.0	80.4	85.8	40.4	38.4	40.8	41.1
0500	39.5	39.6	78.8	84.7	40.2	38.3	40.9	41.1
0600	39.5	39.6	76.9	83.8	40.1	38.2	41.0	41.4
0700	39.5	39.5	75.6	85.6	40.1	38.3	41.1	41.7
0800	39.5	39.5	74.8	84.4	40.1	38.3	41.6	41.9
0900	39.5	39.5	74.0	85.0	40.1	38.5	41.7	42.1
1000	39.6	39.6	73.6	86.0	40.5	38.5	42.0	42.4
1100	39.9	40.0	74.9	87.9	40.7	38.5	42.0	42.7
1200	39.9	40.2	74.2	88.1	41.0	38.6	42.1	43.0
1300	40.0	40.6	75.1	98.4	41.4	38.9	42.1	43.1
1400	40.3	41.2	76.2	90.2	41.6	38.9	42.4	43.4
1500	40.4	41.5	77.6	91.5	42.0	38.9	42.4	43.6
1600	40.6	41.9	78.0	92.4	42.1	39.0	42.4	43.6
1700	40.6	42.0	78.7	92.7	42.4	39.1	42.4	43.6
1800	40.6	42.0	79.5	93.2	42.4	39.1	42.2	43.4
1900	40.8	42.1	80.0	94.0	42.4	39.2	42.4	43.5
2000	40.9	42.3	80.4	94.4	42.8	39.2	42.2	43.4
2100	40.9	42.4	80.2	94.4	42.9	39.2	42.2	43.4
2200	40.9	42.4	80.5	94.7	42.8	39.2	42.4	43.4
2300	40.9	42.4	80.6	94.9	42.8	39.2	42.1	43.1
2400	40.7	42.4	81.0	95.4	42.6	39.2	42.0	43.1

TABLE 81
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 22, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	40.7	42.3	81.0	94.3	42.5	30.1	41.7	42.9
0200	40.7	42.4	81.1	93.0	42.4	39.1	41.7	42.9
0300	40.8	42.4	81.3	91.4	42.2	39.0	41.6	42.6
0400	40.6	42.1	81.8	92.3	42.1	39.0	41.7	42.6
0500	40.7	41.8	81.0	92.4	42.0	38.9	41.7	42.6
0600	40.4	41.6	80.1	91.4	42.0	39.0	41.7	42.6
0700	40.2	41.5	79.4	91.0	41.7	39.0	41.9	42.4
0800	40.2	41.6	79.5	91.1	42.0	39.0	42.0	42.4
0900	40.2	41.6	80.0	91.6	41.6	38.9	42.1	42.8
1000	40.4	41.8	80.0	91.9	41.8	39.0	42.4	43.0
1100	40.6	42.1	80.1	92.4	42.1	39.0	42.9	43.5
1200	40.6	42.4	80.9	93.1	42.4	39.0	43.1	44.0
1300	40.7	43.1	81.6	94.0	42.6	39.3	43.4	44.6
1400	40.9	43.6	82.0	94.6	42.8	39.3	43.5	45.1
1500	41.0	43.6	81.9	95.0	43.0	39.3	43.9	45.4
1600	41.1	43.8	82.5	95.2	43.3	39.4	43.8	45.4
1700	41.1	44.0	82.9	95.9	43.5	39.5	43.8	45.5
1800	41.3	43.8	83.0	96.1	43.5	39.6	43.6	45.3
1900	41.4	43.7	83.1	96.4	43.7	39.6	43.9	45.1
2000	41.5	43.6	83.3	96.5	43.9	39.7	43.9	45.1
2100	41.4	43.6	83.5	97.0	43.9	39.7	43.8	44.9
2200	41.5	43.7	83.7	97.4	44.0	39.7	43.6	44.9
2300	41.5	43.6	83.7	97.4	44.0	30.8	43.5	44.7
2400	41.4	43.4	83.8	97.5	44.0	39.9	43.4	44.7

TABLE 82

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

March 23, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	41.7	43.6	84.0	98.2	43.9	39.8	43.2	44.6
0200	41.6	43.6	84.0	98.2	43.7	39.6	43.0	44.4
0300	41.4	43.6	83.9	98.4	43.7	40.9	43.0	44.0
0400	41.2	43.3	83.0	98.4	43.5	40.8	43.0	43.9
0500	41.3	43.3	84.0	98.6	43.4	40.8	42.7	43.6
0600	41.2	43.1	84.0	98.9	43.2	40.8	42.6	43.5
0700	41.1	43.0	84.1	99.0	43.2	40.6	42.7	43.4
0800	41.1	43.1	84.5	99.4	43.0	40.7	43.0	43.5
0900	41.0	43.3	84.9	99.5	43.1	40.7	43.3	43.7
1000	41.1	43.6	85.6	100.2	43.2	40.7	43.6	44.2
1100	41.1	44.0	86.3	101.0	43.4	40.7	44.1	44.6
1200	41.2	44.4	87.4	101.6	43.5	40.7	44.3	45.2
1300	41.2	44.6	87.9	102.1	43.8	40.7	44.4	45.7
1400	41.4	44.8	88.7	102.5	44.0	41.0	44.7	46.1
1500	41.5	45.3	89.1	103.4	44.1	40.9	44.7	46.5
1600	41.6	45.1	89.6	103.7	44.3	41.1	44.9	46.7
1700	41.6	45.1	89.9	104.0	44.4	41.1	44.9	46.6
1800	41.6	45.2	89.9	104.1	44.5	41.2	44.9	46.5
1900	41.8	45.0	90.0	104.5	44.6	41.3	44.9	46.4
2000	41.8	45.0	90.0	104.7	44.7	41.4	44.9	46.4
2100	41.9	45.0	90.1	104.7	44.9	41.4	44.8	46.1
2200	41.9	44.9	90.1	104.7	44.9	41.4	44.6	46.1
2300	41.9	44.9	90.1	104.5	44.9	41.3	44.5	46.1
2400	41.8	44.9	90.0	104.1	44.6	41.3	44.6	46.0

TABLE 83

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

March 24, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	41.9	44.9	90.0	104.5	44.7	41.2	44.5	45.7
0200	41.9	45.0	89.9	104.3	44.6	41.2	44.4	45.6
0300	41.9	44.9	89.4	104.0	44.5	41.3	44.3	45.6
0400	41.8	44.9	89.4	103.9	44.4	41.2	44.1	45.4
0500	41.6	44.9	89.0	103.7	44.3	41.2	44.0	45.1
0600	41.5	44.6	88.9	103.4	44.1	41.2	43.9	45.0
0700	41.6	44.4	88.5	102.9	44.1	41.1	44.0	44.9
0800	41.6	44.4	88.3	102.5	44.1	41.1	44.1	44.9
0900	41.1	44.2	88.4	102.9	43.7	40.9	44.1	44.6
1000	41.2	44.4	88.6	102.9	43.9	40.9	44.4	44.9
1100	41.4	44.8	89.4	103.7	44.1	41.0	44.8	45.4
1200	41.6	45.2	89.9	104.1	44.5	41.0	45.2	46.1
1300	41.8	45.6	90.7	104.5	44.7	41.1	45.4	46.7
1400	41.9	46.1	91.0	105.1	44.9	41.3	45.6	47.4
1500	42.0	46.3	91.3	105.1	45.0	41.3	46.0	47.9
1600	42.1	46.6	91.6	105.6	45.1	41.4	46.0	48.1
1700	42.1	46.4	91.4	105.6	45.1	41.5	46.1	48.3
1800	42.2	46.2	91.6	105.3	45.3	41.7	46.1	48.0
1900	42.2	46.2	91.5	106.0	45.2	41.7	46.1	48.1
2000	42.2	46.1	91.5	106.0	45.4	41.9	45.9	47.8
2100	42.3	46.1	91.3	105.7	45.4	41.8	46.0	48.0
2200	42.2	46.0	91.0	105.2	45.5	41.8	46.0	48.0
2300	42.2	45.9	90.0	105.3	45.5	41.8	46.0	47.5
2400	42.2	45.8	90.5	105.0	45.4	41.9	45.9	47.7

TABLE 84

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TABLE 85
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 26, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	42.5	46.2	89.7	104.9	45.8	41.9	45.8	47.5
0200	42.5	46.1	90.0	104.8	45.9	41.9	45.9	47.1
0300	42.5	46.1	90.1	105.1	45.8	41.9	45.6	47.1
0400	42.4	46.1	90.4	105.2	45.6	42.0	45.5	46.9
0500	42.4	46.0	90.6	105.3	45.6	41.9	45.4	46.9
0600	42.4	46.0	90.9	105.0	45.6	41.9	45.4	46.8
0700	42.3	46.0	91.2	105.8	45.6	41.9	45.5	46.8
0800	42.4	46.3	91.5	105.9	45.5	41.9	45.6	47.0
0900	42.4	46.3	91.4	105.8	45.5	41.7	45.6	46.8
1000	42.4	46.4	91.3	105.6	45.7	41.9	45.7	46.8
1100	42.4	46.6	91.8	105.9	45.9	42.0	45.9	46.9
1200	42.5	46.9	92.2	106.1	46.0	41.9	45.9	42.1
1300	42.5	47.0	92.2	106.2	46.0	42.0	46.1	47.5
1400	42.5	47.0	92.3	106.8	46.1	42.0	46.1	47.6
1500 ^{1/}	42.6	47.1	92.4	106.8	46.3	42.1	46.3	42.9
1600	46.3	47.3	92.6	106.9	46.4	46.2	46.5	46.5
1700	46.2	47.0	92.4	106.9	46.5	46.3	46.5	46.5
1800	46.2	47.0	92.5	106.4	46.6	46.5	46.6	46.6
1900	46.2	47.2	92.2	104.6	46.6	46.6	46.6	46.6
2000	46.4	47.2	92.1	104.2	46.9	46.8	46.7	46.6
2100	46.4	47.4	91.6	104.3	46.9	46.8	46.6	46.6
2200	46.4	47.3	91.0	103.8	46.8	46.8	46.5	46.5
2300	46.4	47.2	89.9	103.0	46.6	46.6	46.5	46.5
2400	46.4	47.2	89.0	102.1	46.6	46.5	46.4	46.4

^{1/} Instruments zeroed to ground truth data.

TABLE 86
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 March 27, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100 ^{1/}	46.4	47.0	88.9	102.2	46.5	46.5	46.4	46.3
0200								
0300								
0400								
0500								
0600								
0700								
0800								
0900								
1000								
1100								
1200								
1300								
1400								
1500								
1600								
1700								
1800								
1900								
2000								
2100								
2200	47.0	48.9	87.6	104.1	47.9	46.6	47.1	47.1
2300	46.9	48.7	87.8	104.4	47.2	46.4	47.0	47.0
2400	46.6	48.6	87.9	014.4	47.2	46.4	46.9	46.9

^{1/} Recorder not printing.

TABLE 87

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

March 28, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	46.6	48.5	88.4	103.2	47.1	46.4	46.9	46.9
0200	46.6	48.4	88.6	103.3	47.0	46.4	46.5	46.5
0300	46.4	48.2	88.9	104.3	46.9	46.4	46.5	46.5
0400	46.5	48.1	88.9	104.4	46.6	46.4	46.5	46.5
0500	46.2	47.9	88.5	104.4	46.6	46.2	46.4	46.4
0600	46.1	47.7	88.6	104.2	46.4	46.1	46.4	46.1
0700	46.1	47.7	89.4	104.9	46.5	46.1	46.5	46.1
0800	46.1	47.7	89.6	105.0	46.5	46.1	46.8	46.4
0900	46.4	47.7	89.4	104.8	46.5	46.2	46.9	46.5
1000	46.4	47.7	89.9	105.1	46.6	46.1	47.0	46.8
1100	46.5	48.0	90.1	105.0	46.9	46.2	47.5	47.4
1200	46.6	48.5	90.5	105.6	47.1	46.3	47.9	47.6
1300	46.8	48.7	90.1	105.4	47.4	46.4	48.0	47.9
1400	46.8	49.1	90.3	105.5	47.6	46.6	48.1	48.2
1500	47.0	49.6	90.7	106.1	47.7	46.6	48.1	48.5
1600	47.0	49.6	91.0	106.2	47.9	46.6	48.2	49.2
1700	47.1	49.9	91.1	106.2	48.0	46.6	48.5	49.0
1800	47.1	49.6	91.7	106.5	48.1	46.7	48.5	48.9
1900	47.1	49.6	92.3	107.2	48.3	46.8	48.5	48.9
2000	47.1	49.6	93.1	107.3	48.1	46.9	48.8	48.8
2100	47.3	49.6	93.7	107.7	48.4	46.9	48.6	48.8
2200	47.2	49.6	93.4	108.0	48.5	46.9	48.9	48.8
2300	47.4	49.6	93.5	107.7	48.6	46.9	48.6	48.8
2400	47.4	49.7	93.2	106.2	48.6	46.9	48.6	49.0

TABLE 88
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 29, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	47.4	49.9	92.9	95.9	48.6	46.9	48.1	48.8
0200	47.4	49.8	92.7	95.7	48.6	46.9	48.0	48.9
0300	47.4	49.8	93.0	95.9	48.6	46.8	48.0	48.8
0400	47.2	49.9	92.3	95.6	48.6	46.9	48.1	48.4
0500	47.2	49.9	85.5	91.1	48.5	46.9	48.0	48.5
0600	47.1	49.9	85.2	90.6	48.5	46.8	48.0	48.8
0700	47.1	49.7	85.0	90.4	48.4	46.6	47.9	48.7
0800	47.1	49.8	84.5	90.4	48.5	46.7	48.0	48.0
0900	47.1	49.6	81.0	88.0	48.6	46.8	48.0	48.1
1000	47.1	49.9	79.6	86.9	48.5	46.9	48.0	48.5
1100	47.3	50.0	79.7	87.2	48.6	46.9	48.1	48.5
1200	47.3	50.0	80.0	87.2	48.7	46.9	48.6	48.6
1300	47.4	50.3	79.4	87.0	49.0	46.9	48.9	48.9
1400	47.6	50.8	78.4	86.1	49.3	46.9	49.0	49.5
1500	47.7	51.1	78.1	86.1	49.5	46.9	49.1	49.6
1600	47.8	51.4	77.9	86.1	49.9	47.0	49.4	49.9
1700	47.8	51.4	77.4	85.6	49.9	47.0	49.5	50.0
1800	47.6	51.5	76.4	85.4	49.8	47.2	48.9	50.8
1900	47.6	51.5	76.4	84.9	49.8	47.4	48.7	50.3
2000	47.9	51.4	76.9	85.1	49.8	47.4	48.8	50.2
2100	47.9	51.4	76.7	85.1	49.9	47.4	48.8	50.7
2200	47.9	51.3	76.1	84.9	49.9	47.1	48.7	50.1
2300	47.9	51.3	75.4	84.2	50.0	47.3	48.7	50.4
2400	48.0	51.3	75.5	85.5	50.0	47.4	48.9	50.1

TABLE 89
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 30, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	48.0	51.4	75.4	86.6	50.0	47.1	48.9	50.1
0200	48.0	51.4	75.4	86.5	49.9	47.1	49.0	50.1
0300	48.0	51.4	75.0	86.7	49.9	47.0	48.9	50.1
0400	48.1	51.4	76.0	88.1	49.9	47.1	49.5	50.1
0500	47.9	51.3	76.7	89.2	49.9	47.0	49.4	50.0
0600	47.9	51.3	76.4	89.6	49.8	47.1	49.2	49.9
0700	47.9	51.4	76.6	90.4	49.6	47.1	49.1	49.7
0800	47.9	51.4	77.4	91.8	49.6	47.1	49.3	50.0
0900	47.8	51.4	78.5	93.4	49.5	47.0	49.2	49.6
1000	47.8	51.4	79.2	94.1	49.6	47.0	49.4	49.9
1100	47.9	51.4	80.0	95.1	49.6	47.0	49.4	49.8
1200	47.9	51.5	80.9	96.0	49.6	47.1	49.5	49.6
1300	48.0	51.9	82.5	97.0	49.7	47.1	49.8	49.9
1400	48.0	51.2	83.1	97.9	50.0	47.3	50.0	50.0
1500	47.9	52.4	84.0	98.4	50.1	47.4	50.1	50.4
1600	48.1	52.6	85.0	99.4	50.4	47.4	50.4	50.5
1700	48.1	52.4	85.5	99.8	50.4	47.4	50.6	50.6
1800	48.1	52.4	86.5	100.5	50.4	47.4	50.9	50.9
1900	48.1	52.3	86.9	101.0	50.4	47.5	50.7	51.1
2000	48.2	52.3	87.6	101.5	50.4	47.5	50.9	51.1
2100	48.2	52.1	88.0	101.5	50.5	47.5	51.0	51.5
2200	48.2	52.1	88.2	101.7	50.4	47.5	51.0	51.1
2300	48.2	52.1	88.2	101.7	50.4	47.4	51.0	51.1
2400	48.2	52.0	88.1	101.9	50.4	47.5	51.0	51.1

TABLE 90
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
March 31, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	48.4	52.0	88.0	102.0	50.5	47.5	51.0	51.0
0200	48.4	51.9	88.1	101.7	50.4	47.4	50.7	50.9
0300	48.2	51.9	87.9	102.1	50.4	47.5	50.6	51.0
0400	48.4	51.9	87.9	101.9	50.3	47.4	50.6	50.7
0500	48.1	51.9	87.6	101.5	50.3	47.5	50.5	50.6
0600	48.1	51.9	87.4	101.6	50.2	47.6	50.5	50.5
0700	48.0	52.0	87.6	101.5	50.2	47.6	50.5	50.5
0800	48.1	52.0	87.6	101.9	50.3	47.6	50.6	50.4
0900	48.1	52.3	88.0	102.0	50.5	47.6	50.5	50.5
1000	48.1	52.5	88.6	102.9	50.7	47.6	50.9	50.9
1100	48.4	53.1	88.9	103.2	51.1	47.6	51.0	51.2
1200	48.5	53.5	89.0	102.6	51.1	47.7	51.1	51.5
1300	48.6	53.9	89.0	103.6	51.4	47.7	51.5	51.8
1400	48.8	54.0	88.9	102.9	51.7	47.7	51.0	52.1
1500	49.0	54.5	88.8	102.5	52.0	47.9	51.4	52.4
1600	49.0	54.9	88.5	103.0	52.1	48.0	51.4	52.5
1700	49.1	54.9	87.4	101.9	52.2	48.1	51.5	52.7
1800	49.1	55.0	86.8	101.7	52.1	48.1	51.1	52.6
1900	49.0	55.0	86.9	102.1	52.1	48.1	51.1	52.5
2000	49.0	54.5	86.6	101.7	52.1	48.3	50.9	52.1
2100	49.1	54.0	86.4	102.1	52.0	48.3	50.8	52.1
2200	49.0	53.9	86.7	102.4	52.0	48.3	50.6	52.0
2300	49.0	53.9	87.5	102.6	52.0	48.2	50.4	51.9
2400	48.9	53.6	87.1	102.0	51.9	48.1	50.4	51.6

TABLE 91
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 1, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	48.9	53.5	86.2	101.6	51.6	48.1	50.2	51.6
0200	48.7	53.4	85.7	101.9	51.3	48.1	49.9	51.4
0300	48.6	53.1	85.7	101.5	51.1	47.9	49.8	51.0
0400	48.6	52.8	85.4	101.2	50.9	47.8	49.9	50.9
0500	48.6	52.6	85.0	101.4	50.8	47.7	49.8	50.7
0600	47.8	52.4	84.6	101.0	50.6	47.7	49.8	50.5
0700	47.8	52.3	84.4	100.6	50.4	47.6	50.0	50.6
0800	48.3	52.3	84.0	100.8	50.4	47.5	50.1	50.6
0900	48.5	52.1	84.0	100.1	50.4	47.5	50.4	50.8
1000	48.6	52.3	83.9	100.7	50.6	47.5	50.9	51.2
1100	48.7	52.6	83.4	100.6	50.9	47.7	51.0	51.4
1200	48.7	53.1	84.1	101.5	51.0	47.6	51.0	51.7
1300	48.9	53.4	84.1	100.0	51.3	47.9	51.6	51.9
1400	49.0	53.8	84.4	101.0	51.5	48.0	51.9	51.9
1500	49.1	54.1	85.1	101.4	51.6	48.1	52.0	52.1
1600	49.1	54.4	85.4	101.9	51.7	48.3	52.0	52.3
1700	49.1	54.4	85.6	102.1	51.7	48.3	51.8	52.1
1800	49.1	54.0	86.0	102.2	51.6	48.3	51.7	52.1
1900	49.1	53.9	86.9	102.9	51.6	48.3	51.6	52.1
2000	49.1	53.7	87.5	103.5	51.6	48.2	51.4	51.9
2100	49.1	53.7	88.6	104.0	51.6	48.1	51.2	51.9
2200	49.2	53.6	88.7	104.1	51.5	48.1	51.2	51.5
2300	49.1	53.5	89.1	105.2	51.5	48.1	51.0	51.4
2400	48.9	53.4	89.6	106.0	51.3	48.0	50.9	51.1

TABLE 92
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 2, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	48.9	53.1	89.9	106.0	51.1	48.0	50.5	50.7
0200	48.7	53.0	89.9	106.0	50.8	47.9	50.5	50.5
0300	48.5	52.5	90.5	106.1	50.5	47.7	50.0	50.4
0400	48.5	52.4	90.5	106.4	50.3	47.6	50.1	49.9
0500	48.3	52.1	90.4	106.4	50.0	47.6	50.0	50.4
0600	48.3	51.9	90.3	106.1	50.0	47.6	50.0	49.6
0700	48.3	51.9	90.5	105.0	49.9	47.5	50.1	49.6
0800	48.3	51.6	90.6	106.3	49.9	47.4	50.4	49.9
0900	48.3	52.0	91.1	106.5	50.0	47.6	50.7	50.1
1000	48.4	52.1	91.3	106.6	50.1	47.7	50.9	50.4
1100	48.6	52.4	90.6	106.5	50.5	47.9	51.0	50.8
1200 ^{1/}	48.6	52.0	90.3	106.5	50.8	47.7	51.1	51.3
1300	51.4	51.4	90.1	105.9	51.1	50.1	51.3	51.9
1400	51.6	51.9	90.3	106.1	51.4	50.0	51.4	52.0
1500	51.7	52.1	90.6	106.4	51.5	50.1	51.6	52.1
1600	51.9	52.6	91.4	107.1	51.6	50.1	51.6	52.5
1700	52.0	52.7	91.6	106.6	51.9	50.1	51.9	52.5
1800	52.0	53.0	91.0	107.4	51.0	50.1	51.9	52.4
1900	52.1	52.7	92.8	108.2	52.0	50.3	51.9	52.4
2000	52.0	52.9	93.6	108.6	52.1	50.5	51.9	52.2
2100	52.1	52.7	93.3	108.6	52.2	50.4	51.6	52.1
2200	52.1	52.6	93.1	108.5	52.1	50.5	51.6	52.4
2300	52.0	52.6	93.0	108.5	52.1	50.5	51.6	52.4
2400	52.0	52.5	93.1	108.4	52.1	50.4	51.4	51.9

^{1/} Instruments zeroed to ground truth data.

TABLE 93
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 3, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	51.9	52.4	93.3	108.5	51.9	50.4	51.4	52.0
0200	51.9	52.1	93.1	108.4	51.9	50.4	51.5	51.7
0300	51.9	52.1	93.0	108.4	51.7	50.4	51.4	51.9
0400	51.7	52.0	93.0	108.4	51.6	50.4	51.5	51.6
0500	51.6	51.9	93.4	108.7	51.5	50.4	51.9	51.6
0600	51.6	51.7	92.7	108.2	51.5	50.3	52.0	51.9
0700	51.6	51.6	92.7	107.6	51.6	50.1	52.4	52.1
0800	51.6	51.9	92.3	108.0	51.6	50.4	52.5	52.4
0900	51.7	52.0	92.1	107.4	52.0	50.4	52.6	52.6
1000	51.9	52.3	91.7	103.4	52.1	50.6	53.4	53.1
1100	51.9	52.4	91.4	102.2	52.3	50.6	53.6	53.3
1200	52.0	52.5	91.0	101.8	52.5	50.7	53.6	53.6
1300	52.1	52.6	90.6	101.4	52.6	50.8	53.6	53.6
1400	52.4	53.0	90.6	101.1	52.9	50.9	54.0	53.9
1500	52.5	53.2	89.9	101.0	53.0	50.9	54.0	54.0
1600	52.6	53.6	88.6	99.5	53.4	51.0	53.4	54.0
1700	52.7	53.9	88.1	99.0	53.5	51.1	53.3	54.0
1800	52.8	54.0	87.5	99.4	53.6	50.9	53.3	54.1
1900	52.7	54.1	87.0	98.7	53.6	50.9	53.1	54.1
2000	52.7	54.2	86.4	98.4	53.6	50.9	54.0	54.1
2100	52.8	54.4	85.7	98.1	53.7	50.9	53.0	54.1
2200	52.9	54.4	85.5	98.0	53.8	50.9	53.8	53.8
2300	53.0	54.4	85.0	98.3	53.7	51.0	53.6	53.6
2400	53.0	54.5	85.0	98.1	53.6	50.9	53.5	53.5

TABLE 94
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 4, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	59.2	54.2	84.8	96.0	53.5	50.9	53.9	53.8
0200	52.7	54.1	84.6	96.8	53.4	50.9	53.5	53.4
0300	52.7	54.1	84.6	96.8	53.4	51.0	53.5	53.5
0400	52.7	53.9	84.5	97.1	53.4	50.9	53.8	53.5
0500	52.7	53.9	84.6	97.1	53.4	51.0	53.6	53.6
0600	52.6	53.8	83.6	96.6	53.4	51.0	53.6	53.6
0700	52.6	53.5	82.0	95.6	53.3	51.0	53.5	53.5
0800	52.4	53.4	80.5	95.0	53.1	51.0	53.4	53.4
0900	52.4	53.1	80.1	94.6	53.1	51.0	53.4	53.4
1000	52.4	53.1	79.0	93.9	53.1	51.1	53.3	53.3
1100	52.4	53.1	78.4	93.4	53.1	51.1	53.4	53.4
1200	52.4	53.2	77.9	93.1	53.1	51.2	53.5	53.5
1300	52.4	53.2	77.1	92.6	53.1	51.1	53.5	53.5
1400	52.4	53.1	76.9	92.7	53.1	51.0	53.5	53.5
1500	52.4	53.0	76.4	92.2	53.0	51.0	53.2	53.4
1600	52.2	52.7	76.2	92.4	52.9	50.9	53.2	53.2
1700	52.1	52.5	76.1	92.0	52.7	50.9	53.1	53.2
1800	52.1	52.4	76.3	92.0	52.6	51.0	53.0	53.0
1900	52.1	52.1	76.5	92.0	52.6	51.0	52.5	52.7
2000	52.0	52.1	76.8	92.1	52.4	50.9	52.5	52.7
2100	52.0	52.0	76.9	92.1	52.2	50.9	52.3	52.5
2200	52.0	52.0	76.7	92.1	52.1	50.6	52.1	52.3
2300	51.8	51.8	76.9	92.0	51.9	50.6	51.9	52.0
2400	51.8	51.8	77.1	92.4	51.9	50.6	51.8	51.8

TABLE 95
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 5, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	51.6	51.5	77.11	91.1	51.6	50.6	51.6	51.8
0200	51.5	51.3	77.4	90.5	51.4	50.5	51.1	51.6
0300	51.5	51.1	77.5	91.3	51.1	50.5	51.0	51.4
0400	51.2	50.9	77.7	91.9	50.9	50.4	50.7	51.0
0500	51.1	50.6	77.7	91.7	50.6	50.2	50.6	50.5
0600	51.1	50.5	77.0	91.5	50.4	50.1	50.2	50.4
0700	51.0	50.1	76.9	91.0	50.0	50.0	50.0	50.0
0800	50.9	50.0	77.1	90.6	50.0	50.0	50.0	50.0
0900	50.9	50.0	77.4	90.6	50.0	50.0	50.0	49.9
1000	50.7	49.9	77.5	91.0	49.8	49.8	49.8	49.8
1100	50.6	50.0	77.1	90.7	49.9	49.9	49.5	49.4
1200	50.6	50.2	77.2	94.4	49.7	49.7	49.4	49.8
1300	50.9	50.4	78.4	97.1	49.9	49.7	49.6	50.0
1400	50.9	50.5	79.6	98.5	50.0	49.1	49.5	50.0
1500	51.0	50.6	79.9	99.1	50.0	49.0	49.8	50.1
1600	51.0	50.5	82.6	101.6	50.1	49.2	49.8	50.1
1700	51.0	50.3	84.0	101.9	50.1	49.0	49.9	50.1
1800	51.0	50.1	85.3	102.6	50.0	49.0	49.9	49.9
1900	50.9	49.9	85.1	103.2	49.9	49.0	49.6	50.0
2000	50.9	49.8	86.3	103.7	49.9	48.9	49.5	49.9
2100	50.9	49.6	87.2	104.7	49.9	49.1	49.6	49.9
2200	50.9	49.4	88.2	105.4	49.6	49.1	49.6	49.9
2300	50.9	49.4	88.5	105.6	49.5	49.0	49.9	49.9
2400	50.6	49.1	88.6	105.6	49.5	49.0	50.0	50.0

TABLE 96
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 6, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	50.6	48.9	89.3	106.0	49.4	49.0	50.0	50.0
0200	50.6	48.8	89.6	106.2	49.4	49.0	50.1	50.2
0300	50.6	48.7	89.6	106.3	49.4	49.0	50.1	50.1
0400	50.6	48.6	89.9	106.2	49.5	49.1	50.0	50.2
0500	50.8	48.6	89.9	106.3	49.5	49.1	50.1	50.1
0600	50.6	48.6	89.9	106.4	49.4	49.1	49.9	50.1
0700	50.6	48.8	90.1	106.8	49.5	49.0	49.9	50.0
0800	50.6	48.7	90.1	106.6	49.4	49.0	49.5	49.9
0900	50.7	49.1	91.1	107.0	49.6	49.1	49.6	50.0
1000	50.8	49.4	90.9	107.1	49.6	49.1	49.6	50.0
1100 ^{1/}								
1200								
1300								
1400								
1500								
1600	51.4	51.1	92.4	108.4	50.3	49.3	50.3	51.1
1700	51.4	51.0	92.1	108.5	50.1	49.4	50.1	51.1
1800	51.4	50.9	91.9	107.9	50.1	49.4	50.2	50.9
1900	51.1	50.6	91.8	107.8	49.9	49.4	50.0	50.6
2000	51.1	50.1	92.1	107.7	49.9	49.2	50.0	50.5
2100	50.9	49.9	92.1	107.7	49.6	49.4	49.9	50.4
2200	51.0	49.6	91.9	107.6	49.6	49.4	50.4	50.5
2300	50.9	49.5	91.5	107.6	49.6	49.3	50.5	50.3
2400	51.0	49.4	91.6	107.4	49.6	49.4	50.6	50.6

^{1/} Recorder not printing.

TABLE 97
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 7, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	51.0	49.2	91.5	107.4	49.9	49.2	50.0	50.9
0200	51.1	49.2	91.3	107.1	49.9	49.4	50.0	51.0
0300	51.0	49.3	91.1	107.0	50.0	49.4	50.0	51.0
0400	51.1	49.4	91.1	107.0	50.1	49.5	50.0	51.1
0500	51.2	49.5	91.1	106.9	50.1	49.5	49.9	51.0
0600	51.2	49.5	91.0	107.2	50.2	50.2	49.5	51.0
0700	51.3	49.7	90.6	106.4	50.1	49.5	49.4	50.6
0800	51.2	49.9	90.4	106.7	50.0	49.5	49.2	50.6
0900	51.2	50.1	90.5	106.7	50.0	49.5	49.1	50.6
1000	51.2	50.7	90.9	106.4	50.0	49.4	49.1	50.4
1100	51.2	50.8	91.0	107.0	50.0	49.5	49.1	50.5
1200	51.4	51.0	91.2	107.1	50.2	49.4	49.1	50.4
1300	51.3	51.4	92.0	107.6	50.4	49.5	49.1	50.6
1400	51.4	51.5	92.4	108.1	50.6	49.6	49.1	50.6
1500	51.4	51.5	92.8	108.5	50.6	49.4	49.1	50.6
1600	51.4	51.5	93.0	108.7	50.6	49.4	49.1	50.4
1700	51.4	51.4	93.1	108.6	50.4	49.4	49.1	50.1
1800	51.4	51.4	94.0	109.0	50.4	49.4	49.6	50.1
1900	51.4	51.1	94.6	109.4	50.1	49.4	49.9	50.0
2000	51.3	50.9	94.9	109.6	50.1	49.4	50.0	50.3
2100	51.2	50.7	95.1	109.6	50.1	49.3	49.9	50.4
2200	51.2	50.6	95.2	109.6	50.4	49.3	50.6	50.6
2300	51.2	50.4	95.4	109.4	50.4	49.4	51.0	51.0
2400	51.4	50.5	95.1	109.6	50.6	49.4	51.2	51.4

TABLE 98
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 8, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	51.5	50.6	94.81	109.1	50.9	49.6	51.5	51.9
0200	51.6	50.6	94.5	109.1	50.9	49.6	51.6	51.9
0300	51.7	50.9	93.4	108.4	51.1	49.7	51.6	52.0
0400	51.9	51.1	92.9	108.1	51.4	49.7	51.5	52.2
0500	51.6	51.1	92.7	107.9	51.4	49.9	51.4	52.0
0600	51.9	51.4	92.9	107.6	51.4	49.9	51.4	52.0
0700	51.9	51.5	92.7	107.8	51.5	49.9	51.2	52.1
0800	51.9	51.6	93.0	107.9	51.5	49.9	51.1	52.1
0900	51.9	51.6	93.0	108.1	51.4	49.6	51.0	52.0
1000	51.9	51.6	93.4	108.4	51.4	49.9	51.0	51.7
1100	51.9	51.6	93.5	105.6	51.4	49.9	51.4	51.6
1200	51.9	51.9	93.4	101.4	51.4	49.9	51.1	51.4
1300	51.9	51.9	93.0	101.0	51.4	49.8	51.1	51.4
1400	51.9	51.9	93.1	101.0	51.4	49.9	51.0	51.1
1500	51.9	51.9	93.1	101.0	51.4	49.9	51.0	51.2
1600	52.0	51.9	92.0	100.9	51.1	49.9	51.1	51.5
1700	52.0	51.6	89.4	98.5	51.2	49.6	50.9	50.9
1800	52.2	51.4	88.1	98.5	51.1	49.4	50.9	50.6
1900	52.9	51.4	87.1	97.5	51.1	49.4	50.7	50.5
2000	52.9	51.1	85.1	97.1	51.1	49.4	50.6	50.6
2100	52.9	51.1	85.1	96.5	51.0	49.4	50.8	50.5
2200	51.5	51.0	83.8	95.9	51.1	49.5	50.0	51.1
2300	51.4	51.0	83.8	95.3	51.1	49.6	50.9	51.4
2400	51.5	51.0	83.1	95.3	51.1	49.6	51.0	51.3

TABLE 99
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 9, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	51.5	50.8	83.01	95.2	51.0	49.9	50.8	51.1
0200	51.4	50.7	82.5	95.0	51.0	49.9	50.6	51.0
0300	51.4	50.6	82.2	95.0	51.0	50.0	50.6	50.8
0400	51.4	50.6	81.6	94.5	51.0	50.0	50.1	50.7
0500	51.4	50.6	81.6	94.5	51.0	50.0	50.1	50.5
0600	51.4	50.6	81.6	94.4	50.9	50.0	50.0	50.3
0700	51.2	50.4	81.4	94.2	50.6	50.0	50.0	50.1
0800	51.7	50.5	81.9	94.4	50.6	49.9	49.9	50.0
0900	51.2	50.6	81.9	94.0	50.5	49.9	49.4	49.9
1000	51.4	50.0	83.2	100.0	50.6	49.8	49.9	50.0
1100	51.4	51.1	84.4	101.6	50.8	49.6	49.6	50.0
1200	51.4	51.4	85.4	102.9	50.9	49.6	49.6	50.1
1300	51.6	51.8	87.0	104.0	51.0	49.6	49.9	50.5
1400	51.6	51.7	90.7	105.9	51.1	49.8	50.0	50.8
1500	51.6	52.3	91.0	106.9	51.1	49.9	50.1	50.6
1600	51.6	52.3	91.6	107.8	51.1	49.6	50.1	50.6
1700	51.7	52.3	91.9	107.8	51.1	49.9	50.4	50.9
1800	51.7	51.9	93.1	108.1	51.1	49.9	50.4	50.9
1900	51.6	51.9	93.1	108.4	51.1	49.9	50.6	50.9
2000	51.6	51.6	93.6	108.4	51.0	49.9	51.0	51.0
2100	51.6	51.6	93.6	108.6	51.1	50.0	51.6	51.4
2200	51.5	51.5	93.7	108.9	51.3	50.0	51.6	51.6
2300	51.9	51.8	94.0	108.9	51.4	50.0	52.0	52.0
2400	51.9	51.5	93.6	108.0	51.6	50.1	52.1	52.1

TABLE 100
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 10, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	52.0	51.9	93.6	108.8	51.9	50.3	52.4	52.6
0200	52.0	51.7	93.5	108.6	52.0	50.2	52.4	52.6
0300	52.0	52.0	93.4	108.5	52.1	50.4	52.1	52.6
0400	52.0	52.0	93.1	108.5	52.1	50.1	51.4	52.6
0500	52.1	52.1	92.9	108.4	52.1	50.3	51.7	52.4
0600	52.1	52.1	93.0	108.4	51.9	50.3	51.4	52.3
0700	52.1	52.1	93.4	108.6	51.9	50.1	51.1	52.0
0800	52.0	52.5	93.6	108.6	51.9	50.1	51.0	51.9
0900	52.0	52.1	94.4	109.0	51.7	50.1	50.7	51.7
1000	52.1	52.0	93.9	104.4	51.5	50.1	51.1	51.5
1100	52.0	51.9	93.4	101.4	51.4	50.1	50.9	51.0
1200	51.9	51.8	93.6	101.1	51.3	49.9	50.8	50.6
1300	51.9	51.9	93.6	101.1	51.4	49.7	50.0	50.6
1400	51.9	52.1	93.6	101.0	51.4	49.9	50.0	50.7
1500	52.0	52.5	93.1	101.4	51.4	50.0	50.4	51.0
1600	52.0	52.4	90.9	99.7	51.5	49.9	51.1	51.1
1700	52.0	52.1	91.0	99.1	51.5	49.9	50.0	50.9
1800	52.1	52.1	91.0	97.7	51.4	50.0	50.1	50.9
1900	51.9	52.0	90.9	97.2	51.5	50.0	50.3	50.8
2000	52.0	52.0	90.6	96.9	51.6	50.0	50.2	51.7
2100	52.0	52.1	90.9	96.7	51.5	49.9	50.4	51.0
2200	52.1	52.0	88.1	96.0	51.3	49.2	50.6	51.4
2300	52.6	52.0	86.5	95.2	51.6	49.6	51.0	51.2
2400	52.1	52.1	85.5	94.4	51.9	50.0	51.1	51.5

TABLE 101
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 11, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	52.1	52.1	84.41	94.4	52.1	50.3	51.3	51.9
0200	52.3	52.3	84.6	95.3	52.3	50.3	51.4	52.1
0300	52.4	52.4	84.3	94.6	52.4	50.4	51.3	52.2
0400	52.5	52.6	85.1	93.9	52.6	50.4	51.4	52.2
0500	52.5	52.6	84.6	93.4	52.6	50.4	51.1	52.1
0600	52.5	52.7	84.8	93.1	52.6	50.4	51.1	52.1
0700	52.4	52.9	85.0	93.6	52.6	50.1	51.0	52.0
0800	52.4	52.9	84.6	93.5	52.6	50.1	50.6	52.0
0900	52.4	53.1	84.6	93.6	52.6	50.3	50.8	52.0
1000	52.5	53.1	84.4	93.6	52.6	50.4	50.8	51.9
1100	52.4	53.1	84.2	93.7	52.6	50.1	50.9	51.9
1200	54.6	53.4	84.5	94.0	52.6	50.1	50.7	51.9
1300	54.5	53.1	84.6	94.1	52.6	50.3	50.7	51.8
1400	54.5	53.1	84.6	94.0	52.6	50.2	50.6	51.7
1500	54.6	53.1	84.9	94.3	52.6	50.1	50.8	51.7
1600	54.6	53.4	84.9	94.4	52.7	50.4	51.0	51.9
1700	54.6	53.7	85.1	94.6	52.9	50.4	51.1	52.0
1800	54.6	53.6	85.1	94.9	52.9	50.4	51.2	52.1
1900	54.6	53.6	85.1	95.0	53.0	50.4	51.4	52.3
2000	54.9	53.6	85.0	95.0	53.0	50.4	51.6	52.5
2100	54.8	53.6	84.4	94.6	53.0	50.6	51.6	52.5
2200 ^{1/}	55.0	53.7	83.0	94.5	53.1	50.4	51.9	53.0
2300 ^{1/}	71.6	53.7	83.5	94.1	53.4	50.4	49.0	53.0
2400	71.4	53.7	82.7	93.2	53.1	50.4	48.7	53.0

^{1/}Electrical storm

TABLE 102
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 12, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	69.0	53.6	81.91	91.6	52.9	50.4	51.6	53.1
0200	69.0	53.5	81.2	91.6	52.9	50.3	51.4	52.9
0300	69.0	53.4	80.9	92.1	53.0	50.3	51.5	52.6
0400	69.0	53.2	80.5	91.9	52.9	50.2	51.3	52.6
0500	69.0	53.2	79.6	91.9	52.8	50.4	51.1	52.4
0600	68.9	53.3	78.9	92.0	52.7	50.4	51.1	52.2
0700	68.7	53.1	78.8	91.2	52.4	50.1	51.0	52.0
0800	68.9	53.0	79.8	91.6	52.4	50.3	50.6	52.0
0900	68.6	53.0	79.7	92.4	52.6	50.1	50.7	51.9
1000	68.4	53.1	80.0	92.6	52.5	50.2	50.6	52.0
1100	68.4	53.1	80.5	92.9	52.4	50.5	50.6	51.9
1200	68.4	53.3	81.0	93.4	52.4	50.3	50.6	51.8
1300	68.4	53.5	81.7	94.0	52.4	50.4	50.7	52.2
1400	68.5	53.5	82.4	94.6	52.5	50.2	50.9	52.1
1500	68.6	53.6	82.9	94.9	52.6	50.4	51.0	52.2
1600	68.6	53.6	83.1	95.1	52.4	50.3	51.1	52.1
1700	68.5	53.4	83.0	95.1	52.4	50.2	51.1	52.1
1800	68.4	53.4	83.4	95.4	50.7	50.1	51.0	52.1
1900	68.6	53.1	83.5	95.5	50.0	50.0	50.6	52.1
2000	68.6	53.0	83.5	95.8	50.1	50.1	50.9	52.1
2100	68.4	53.0	83.5	95.6	50.1	50.1	51.0	52.0
2200	68.6	52.0	83.4	95.9	50.1	50.2	51.6	52.0
2300	68.4	52.2	83.1	95.1	50.0	50.1	50.9	52.0
2400	<u>1/</u>	51.1	83.1	96.0	51.6	<u>2/</u>	<u>2/</u>	51.4

1/ Being adjusted by I.M.

2/ Out and needs replacement.

TABLE 103
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 13, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		51.2	83.1	96.3	51.0		75.6 ^{3/}	51.1
0200		51.4	83.1	94.9	52.5		79.0 ^{3/}	52.6
0300		51.5	83.5	95.6	52.1		79.7 ^{3/}	52.6
0400		51.4	83.5	95.4	51.9		79.7 ^{3/}	52.9
0500		51.4	84.5	96.2	51.9		80.5 ^{3/}	53.0
0600		51.4	83.4	95.1	52.0		81.0 ^{3/}	52.7
0700 ^{1/}		51.5	84.0	95.6	51.6		81.0 ^{3/}	52.6
0800		51.4	84.0	95.6	51.7		50.0	52.6
0900		51.6	84.0	96.1	52.1		48.7	52.8
1000 ^{2/}		51.7	84.8	96.4	52.1		50.0	52.8
1100		53.9	85.5	97.1	54.0		54.5	53.1
1200		54.0	86.1	97.7	54.0		54.9	53.5
1300		54.4	86.6	97.7	54.4		55.6	53.6
1400		54.4	87.1	98.1	54.6		55.6	53.5
1500		54.4	87.2	97.9	54.2		55.6	53.5
1600		54.4	87.7	98.2	54.6		55.6	53.6
1700		54.2	87.9	98.6	54.6		55.8	53.6
1800		54.3	88.2	98.7	54.8		55.8	53.6
1900		54.1	88.6	98.9	54.7		55.7	53.9
2000		54.1	88.6	98.8	54.8		56.0	54.1
2100		54.2	88.5	98.9	55.1		56.0	54.5
2200		54.4	88.5	99.1	55.4		55.5	54.5
2300		54.6	88.0	98.5	55.4		55.1	54.5
2400		54.9	86.6	98.3	55.6		55.1	54.5

^{1/} Adjusted Sensor C.

^{2/} Instruments zeroed to ground truth data.

^{3/} Sensor malfunction.

TABLE 104
HOURLY WATER TEMPERATURE (°F) DATA, QUAL-CITIES STATION
April 14, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		55.0	86.11	97.6	55.5		56.0	54.6
0200		55.0	84.9	97.0	55.4		56.2	54.6
0300		55.0	84.0	96.9	55.1		56.2	51.5
0400		54.9	83.1	95.9	55.0		56.4	54.4
0500		54.7	82.9	95.9	55.0		56.5	54.1
0600		54.6	82.1	95.4	54.6		56.4	53.9
0700		54.5	81.7	94.7	54.5		56.6	53.6
0800		54.4	81.4	94.9	54.5		56.7	53.6
0900		54.5	81.3	94.3	54.5		56.7	53.6
1000		54.6	82.0	98.7	54.6		56.9	53.6
1100		54.9	82.7	100.4	54.7		56.9	53.7
1200		55.2	83.9	101.3	54.8		56.9	53.9
1300		55.4	84.7	101.9	55.0		56.9	54.1
1400		55.6	87.0	103.4	55.0		56.9	54.0
1500		55.6	88.4	104.6	55.0		57.0	53.9
1600		55.4	88.7	105.1	54.9		57.0	53.8
1700		55.3	89.0	105.3	54.7		57.1	53.7
1800		55.3	89.7	105.6	54.6		57.1	53.7
1900		54.7	90.9	106.4	54.6		57.1	53.7
2000		54.7	91.0	106.6	54.4		57.1	53.9
2100		54.4	91.4	106.9	54.4		57.2	54.1
2200		54.4	91.7	107.0	54.6		57.5	54.2
2300		54.7	91.9	107.4	54.6		57.5	54.4
2400		54.4	92.1	107.5	54.8		57.5	54.6

TABLE 105
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 15, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		54.6	93.41	107.6	54.9		57.8	54.6
0200		54.9	92.1	107.6	55.0		58.1	54.4
0300		54.7	92.2	107.6	54.9		58.2	54.4
0400		54.6	92.1	107.8	54.7		58.1	54.1
0500		54.6	92.0	107.6	54.6		57.9	53.9
0600		54.4	92.2	107.8	54.3		57.6	53.6
0700		54.4	92.0	107.9	54.0		57.6	53.2
0800		54.0	92.6	108.0	53.7		57.2	53.0
0900		53.9	92.4	107.1	53.8		57.5	52.9
1000		53.8	92.1	102.1	53.6		57.6	53.0
1100		53.8	92.1	100.0	53.7		57.7	53.1
1200		54.0	92.0	100.7	53.7		57.7	53.1
1300 ^{1/}		54.1	91.6	100.1	53.9		57.9	53.4
1400		54.4	91.1	100.0	54.2		58.1	53.6
1500		54.4	88.9	98.9	54.4		58.2	53.7
1600		54.4	88.4	98.3	54.4		58.4	53.7
1700		54.2	87.8	98.0	54.4		58.7	53.9
1800		54.0	87.1	97.5	54.4		58.7	53.9
1900		53.8	86.6	97.0	54.3		59.1	54.0
2000		53.6	85.7	96.7	54.4		59.7	54.3
2100		53.7	85.4	96.7	54.6		60.0	54.6
2200		53.9	85.1	96.6	54.8		60.4	54.9
2300		54.0	84.6	96.4	54.9		60.6	55.1
2400		54.2	84.2	96.2	55.1		60.6	55.4

^{1/} Instruments zeroed to ground truth data.

TABLE 106
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 16, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		54.4	84.0	95.9	55.1		60.6	55.4
0200		54.4	83.6	95.9	55.3		60.4	55.4
0400		54.6	83.4	95.9	55.1		60.4	55.2
0500		54.8	82.9	95.6	54.9		59.4	54.6
0600		54.6	82.8	95.4	54.6		59.2	54.4
0700		54.5	83.0	95.4	54.6		59.0	54.3
0800		54.4	83.1	95.5	54.4		58.7	54.0
0900		54.4	83.0	95.3	54.4		58.6	53.7
1000		54.2	83.0	95.0	54.2		58.4	53.4
1100		53.9	82.9	95.1	54.1		58.6	53.4
1200		53.8	82.9	95.1	54.1		58.5	53.3
1300 ^{1/}		53.8	83.4	95.1	54.1		58.6	53.4
1400		53.8	83.6	95.2	54.0		58.6	53.2
1500		53.6	83.6	95.4	54.0		58.6	53.4
1600		53.6	83.6	95.4	54.0		58.9	53.4
1700		53.6	83.6	95.2	53.9		58.7	53.5
1800		53.6	83.6	95.1	53.9		58.8	53.6
1900		53.4	84.0	95.2	53.9		58.9	53.7
2000		53.4	84.1	95.4	53.9		58.9	53.6
2100		53.2	84.1	95.4	54.0		58.9	53.8
2200		53.2	84.0	95.1	54.0		58.9	53.7
2300		53.3	84.0	95.4	54.0		58.9	53.8
2400		53.4	84.1	95.6	54.1		58.9	53.9

^{1/} Instruments zeroed to ground truth data

TABLE 107
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 April 17, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		53.4	84.6	95.8	54.4		59.2	54.0
0200		53.4	84.7	96.0	54.4		59.2	53.9
0300		53.6	84.9	96.3	54.4		59.4	54.0
0400		53.4	85.1	96.2	54.4		69.2	53.9
0500		53.4	85.2	96.3	54.4		59.1	53.9
0600		53.4	85.6	96.6	54.4		59.1	53.6
0700		53.6	85.6	96.6	54.4		59.1	53.7
0800		53.8	86.0	96.4	54.4		59.1	53.7
0900		54.0	86.1	96.9	54.6		59.2	53.9
1000		54.6	87.0	97.5	54.9		59.6	54.2
1100		55.0	87.4	97.8	55.0		60.0	54.6
1200		55.4	88.1	98.5	55.4		60.2	54.9
1300		55.9	88.7	98.6	55.6		60.4	55.1
1400		56.1	89.0	99.1	56.0		60.4	55.4
1500		56.4	89.1	99.4	56.1		60.1	55.6
1600		56.5	89.0	99.4	56.2		60.1	55.7
1700		56.5	88.9	99.4	56.3		60.1	55.7
1800		56.6	88.6	98.9	56.1		60.1	55.9
1900		56.4	87.9	98.7	56.1		60.2	56.0
2000		56.3	87.4	98.6	56.3		60.2	56.1
2100		56.2	87.1	98.5	56.4		60.3	56.5
2200		56.2	87.0	98.4	56.6		60.3	56.8
2300		56.3	86.9	98.1	56.9		60.2	57.0
2400		56.4	86.6	98.3	57.0		60.5	57.2

TABLE 108
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 18, 1981

Time	Upstream	Intake	Cooling Canal Cold Enr'	Discharge	Downstream Sensors			
					A	B	C	D
0100		56.6	86.0	97.1	57.1		61.1	57.4
0200		56.6	85.4	96.2	57.4		63.0	57.6
0300		56.6	85.0	96.9	57.4		62.6	57.6
0400		56.7	84.5	96.9	57.4		62.3	57.5
0500		56.6	84.2	96.8	57.4		62.2	57.3
0600		56.6	84.0	96.6	57.3		62.0	57.2
0700		56.6	83.1	96.2	57.0		61.8	56.7
0800		56.6	83.2	96.4	56.8		61.6	56.5
0900		56.7	83.7	96.9	56.7		61.5	56.2
1000		57.0	84.4	97.1	56.7		61.3	56.4
1100		57.1	84.8	97.4	56.6		61.1	56.1
1200		57.4	85.1	97.9	56.6		61.1	56.1
1300		57.6	85.9	98.4	56.9		61.1	56.1
1400		57.8	86.4	98.7	56.9		61.1	56.4
1500		57.7	86.5	98.8	56.9		61.4	56.1
1600		57.6	86.6	98.9	56.9		61.4	56.0
1700		57.6	86.9	98.6	56.7		61.3	56.0
1800		57.2	86.9	98.6	56.6		61.5	56.0
1900		57.0	87.0	98.6	56.4		61.1	55.9
2000		56.7	86.9	98.6	56.2		61.1	55.9
2100		56.6	86.6	98.4	56.1		61.1	55.9
2200		56.4	86.1	97.9	56.0		60.0	55.9
2300		56.4	85.7	97.7	56.3		61.1	56.1
2400		56.4	85.5	97.4	56.3		61.4	56.4

TABLE 109
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 19, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		56.4	84.6	96.4	56.6		61.6	56.9
0200		56.4	84.1	95.0	56.7		61.6	57.1
0300		56.4	83.7	95.2	56.9		61.7	57.4
0400		56.4	83.4	95.6	57.0		61.9	57.5
0500		56.5	83.1	95.6	57.1		61.8	57.4
0600		56.8	82.4	95.7	57.1		61.9	57.4
0700		56.6	81.5	95.2	57.1		61.8	57.4
0800		56.4	81.7	95.2	57.1		61.8	57.0
0900		56.4	82.0	95.4	57.1		61.5	56.9
1000		56.2	82.1	95.3	57.0		61.1	56.4
1100		56.3	82.2	95.6	56.8		61.0	56.3
1200		56.6	82.2	95.7	56.6		61.4	56.2
1300		56.5	82.5	95.6	56.6		61.5	56.0
1400		56.4	82.7	95.6	56.4		61.4	55.7
1500		56.1	82.9	95.9	56.1		61.1	55.1
1600		56.0	83.1	95.9	56.0		61.1	55.1
1700		56.0	83.2	96.1	56.1		61.1	54.9
1800		56.0	83.4	96.1	55.6		61.1	54.9
1900		55.7	83.5	96.1	55.6		61.1	54.6
2000		55.6	83.6	96.1	55.3		61.0	54.5
2100		55.4	83.6	96.1	55.1		61.0	54.5
2200		55.2	83.8	96.1	54.9		60.9	54.4
2300		55.0	83.6	95.9	55.0		60.9	54.3
2400		54.7	82.4	95.4	54.7		60.9	54.3

TABLE 110
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 20, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		54.6	81.4	94.6	54.6		61.0	54.3
0200		54.4	80.6	94.1	54.5		61.0	54.4
0300		54.2	79.9	93.6	54.4		61.1	54.4
0400		54.0	79.6	92.9	54.2		61.1	54.4
0500		53.7	79.6	93.0	54.0		61.0	54.4
0600		53.6	79.1	92.6	53.9		61.0	54.2
0700		53.4	78.4	92.1	53.9		61.0	54.1
0800		53.1	77.9	91.6	53.9		60.9	54.1
0900		53.5	77.5	91.3	54.0		60.9	54.1
1000		53.6	77.9	94.4	54.4		60.5	54.0
1100		53.9	78.9	96.6	54.6		60.4	54.2
1200		54.4	80.0	97.6	54.9		60.1	54.3
1300		54.5	80.9	97.9	54.9		60.0	54.2
1400		54.8	82.9	100.0	55.0		60.0	54.2
1500		55.0	85.1	102.6	55.0		59.8	54.0
1600		55.0	86.0	103.4	55.0		59.6	54.1
1700		55.0	86.8	104.0	54.8		59.3	53.9
1800		54.9	87.2	104.3	54.6		59.1	53.7
1900		54.5	89.0	105.0	54.1		59.2	53.2
2000		54.2	89.1	105.6	53.9		59.1	53.1
2100		53.8	89.4	105.6	53.5		59.1	52.8
2200		53.4	89.4	105.4	53.1		59.4	52.6
2300		53.0	89.7	105.7	52.9		59.4	52.6
2400		52.6	90.0	106.0	52.9		59.6	52.9

TABLE 111
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 April 21, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		54.2	89.9	106.0	52.6		59.9	53.1
0200		52.0	89.6	105.6	52.6		59.9	53.1
0300		52.0	89.9	105.6	52.6		59.9	53.6
0400		51.9	90.0	105.8	52.9		59.9	53.6
0500		51.7	89.9	105.6	53.0		60.0	53.9
0600		51.9	89.7	105.8	53.1		60.0	54.0
0700		52.1	89.6	105.6	53.4		60.0	53.9
0800		52.4	89.6	105.7	53.6		60.0	53.9
0900 ^{1/}								
1000		53.3	89.5	105.9	54.2		60.0	53.7
1100		53.9	89.6	106.0	54.4		60.0	54.0
1200		54.4	89.9	106.4	54.5		60.0	54.3
1300		54.7	90.3	106.4	54.6		60.1	54.6
1400		55.0	90.5	107.1	54.6		60.1	54.4
1500		55.0	90.8	106.7	54.6		60.1	54.6
1600		54.9	91.0	107.1	54.4		60.0	54.2
1700		54.5	91.0	107.1	54.4		59.9	54.0
1800		54.3	91.7	107.4	54.0		59.0	53.5
1900		54.0	92.0	107.4	53.9		59.7	53.5
2000		53.7	92.6	107.7	53.6		59.7	53.3
2100		53.5	93.3	108.0	53.4		59.8	53.1
2200		53.3	93.2	108.1	53.3		59.6	53.0
2300		53.1	93.6	108.4	53.3		59.6	53.1
2400		53.0	93.8	108.4	53.1		59.6	53.4

^{1/}Recorder not printing.

TABLE 112
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 22, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		52.9	94.1	108.6	53.1		59.8	53.4
0200		52.7	94.1	108.8	53.1		59.8	53.6
0300		52.7	94.1	108.5	53.4		59.8	53.9
0400		52.7	94.4	108.6	53.5		59.9	54.0
0500		52.8	94.5	108.5	53.8		59.9	54.2
0600		53.0	94.0	108.7	53.9		60.0	54.4
0700		52.1	94.9	108.4	54.1		60.0	54.5
0800		53.1	95.0	108.9	54.0		60.0	54.5
0900		53.1	94.0	108.0	54.1		60.0	54.4
1000		53.1	94.6	102.4	54.1		60.0	54.4
1100		53.0	94.1	101.2	54.1		59.9	54.3
1200		53.3	93.4	100.4	54.2		60.0	54.2
1300		53.7	93.1	100.3	54.5		60.4	54.1
1400 ^{1/}		54.4	93.5	100.6	54.6		60.6	54.5
1500	54.2	54.2	90.2	99.3	54.6		56.0	54.5
1600	54.1	54.0	89.6	98.5	54.5		55.9	54.4
1700	54.1	53.9	89.5	98.4	54.5		56.0	54.2
1800	54.0	53.9	89.6	98.4	54.4		55.9	54.0
1900	54.0	53.6	89.9	98.4	54.4		55.7	54.1
2000	54.0	53.8	88.9	98.0	54.4		55.7	53.9
2100	53.9	53.7	88.4	97.6	54.2		55.6	53.9
2200	53.8	53.8	87.5	97.1	54.2		55.6	53.9
2300	53.8	53.9	86.8	96.9	54.1		55.6	53.9
2400	53.6	53.8	85.9	96.3	54.0		55.6	53.9

^{1/} Instruments zeroed to ground truth data and upstream sensor replaced.

TABLE 113
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 April 23, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	53.6	53.6	84.9	95.9	54.0		55.6	53.9
0200	53.6	53.6	84.3	95.4	54.0		55.6	53.9
0300	53.5	53.5	83.6	95.1	53.8		55.5	53.9
0400	53.4	53.1	82.9	94.4	53.9		55.6	53.9
0500	53.4	53.0	82.1	94.0	53.9		55.5	53.9
0600	53.4	53.0	81.4	93.4	53.9		55.6	53.7
0700	53.5	53.0	80.6	93.1	53.9		55.6	53.9
0800	53.4	53.1	80.1	92.4	53.6		55.6	53.6
0900	53.4	53.1	79.8	92.4	53.6		55.6	53.9
1000	53.5	53.1	79.1	92.4	53.9		55.6	53.9
1100	53.5	53.1	78.8	92.0	53.9		55.6	53.7
1200	53.4	53.1	78.4	91.7	53.8		55.6	53.7
1300	53.4	53.2	78.4	92.0	53.8		55.6	53.8
1400	53.5	53.4	78.9	95.9	53.9		55.6	53.7
1500	53.4	53.1	79.1	96.9	53.9		55.8	53.7
1600	53.4	53.3	80.1	98.0	53.0		55.9	53.4
1700	53.1	53.1	81.1	98.6	53.4		55.8	53.4
1800	53.0	53.0	83.5	100.4	53.3		55.8	53.3
1900	52.9	52.9	84.6	101.0	53.1		55.6	53.1
2000	52.6	52.6	85.0	101.4	52.9		55.5	52.9
2100	52.5	52.4	84.9	101.4	52.6		55.4	52.6
2200	52.1	52.0	85.1	101.6	52.6		55.1	52.3
2300	51.9	51.6	85.5	102.1	52.4		55.0	52.0
2400	51.7	51.5	86.0	102.1	52.1		55.0	51.9

TABLE 114
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 24, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	51.5	51.2	86.0	102.0	52.0		55.0	51.6
0200	51.4	51.0	86.4	102.4	51.9		54.9	51.6
0300	51.2	50.9	87.0	102.6	51.7		54.9	51.5
0400	51.1	50.6	87.0	102.6	51.6		54.7	51.4
0500	51.0	50.6	87.0	102.9	51.5		54.6	51.1
0600	50.7	50.4	87.4	103.0	51.4		54.4	51.0
0700	50.7	50.3	87.4	102.1	51.3		54.4	51.0
0800	50.6	50.2	87.7	103.2	51.1		54.4	50.9
0900	50.6	50.4	88.2	103.4	51.1		54.4	50.9
1000	50.6	50.6	88.6	103.7	51.3		54.4	50.9
1100	50.5	50.5	88.6	104.0	51.1		54.4	51.0
1200	50.6	50.5	88.9	104.1	51.1		54.2	50.9
1300	50.6	50.4	88.8	104.1	51.1		54.2	50.8
1400	50.6	50.6	89.1	104.3	51.1		54.1	50.6
1500	50.4	50.4	89.5	104.5	51.1		54.1	50.6
1600	50.6	50.5	89.8	104.9	51.1		54.1	50.6
1700	50.5	50.5	90.4	104.9	51.1		54.0	50.6
1800	50.4	50.4	90.9	105.4	51.0		54.0	50.6
1900	50.4	50.4	91.1	105.4	50.9		53.9	50.6
2000	50.1	50.1	91.4	105.6	50.9		53.9	50.3
2100	50.1	49.9	91.6	105.9	50.7		53.9	50.2
2200	50.0	49.6	91.6	105.6	50.6		53.8	50.1
2300	50.0	49.6	91.7	105.9	50.6		53.8	50.3
2400	50.0	49.5	91.9	106.0	50.6		53.8	50.3

TABLE 115
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 25, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	50.0	49.5	91.7	106.0	50.6		53.7	50.3
0200	50.0	49.4	91.4	106.0	50.6		53.7	50.4
0300	50.0	49.4	91.6	106.0	50.6		53.7	50.4
0400	50.0	49.3	91.6	105.9	50.6		53.7	50.6
0500	49.9	49.4	91.4	105.9	50.5		53.7	50.6
0600	50.0	49.4	91.6	105.9	50.6		53.7	50.8
0700	50.0	49.4	91.4	105.9	50.6		53.7	50.8
0800	50.1	49.6	91.8	106.1	50.9		53.7	50.9
0900	50.4	49.9	91.9	105.6	50.9		53.7	51.0
1000	50.5	50.4	92.0	100.0	51.1		53.7	51.1
1100	50.8	50.8	91.8	98.5	51.4		53.9	51.5
1200	51.1	51.1	91.7	98.5	51.6		54.0	51.7
1300	51.4	51.5	91.5	98.6	51.7		54.0	52.0
1400	51.7	52.1	90.1	98.6	51.9		54.0	52.4
1500	51.7	52.3	88.3	97.4	52.0		54.1	52.4
1600	51.9	52.4	87.1	96.6	52.1		54.1	52.4
1700	51.7	52.1	86.6	96.0	52.0		54.0	52.4
1800	51.7	52.1	86.1	95.6	51.9		53.9	52.3
1900	51.6	51.9	86.0	95.4	51.9		54.0	52.1
2000	51.6	51.7	85.0	94.6	51.9		54.0	52.0
2100	51.5	51.6	83.6	92.4	51.7		53.9	51.9
2200	51.4	51.4	82.6	87.9	51.7		53.9	51.9
2300	51.4	51.3	81.9	86.1	51.6		53.9	51.9
2400	51.3	41.1	81.2	83.6	51.6		53.7	52.0

TABLE 116
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 26, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100 ^{1/}	51.4	51.0	80.4	80.4	51.6		53.7	52.2
0200								
0300	51.4	50.9	78.6	77.9	51.6		54.2	52.1
0400	51.6	50.9	77.0	75.4	51.9		53.9	52.6
0500	51.6	50.6	75.6	72.0	52.0		53.9	52.9
0600	51.7	50.7	73.9	74.4	52.1		53.7	53.2
0700	52.0	51.0	72.3	73.4	52.4		54.0	53.4
0800	52.1	51.1	71.2	73.1	52.6		53.9	53.5
0900	52.4	51.6	70.1	72.4	52.9		54.1	53.6
1000	52.5	52.0	70.3	72.1	53.0		54.4	53.7
1100	52.7	52.4	70.6	73.0	53.1		54.2	54.0
1200	53.0	53.0	70.9	73.4	53.3		54.5	54.0
1300	53.1	53.4	71.3	73.9	53.6		54.5	54.0
1400	53.4	54.0	71.7	74.4	53.7		54.4	54.1
1500	53.7	54.6	72.1	74.9	53.9		54.6	54.1
1600	53.7	54.9	73.0	75.4	53.9		54.4	54.4
1700	53.9	55.0	73.4	75.9	54.0		54.4	54.1
1800	54.0	55.0	73.5	75.9	54.1		54.5	54.1
1900	54.0	54.9	73.6	75.9	54.1		54.5	53.9
2000	53.9	54.6	73.6	76.0	54.0		54.4	53.7
2100	53.6	54.5	73.6	75.9	53.9		54.3	53.6
2200	53.4	54.1	73.6	76.0	53.6		54.1	53.3
2300	53.1	53.9	73.6	76.0	53.4		54.1	53.3
2400	53.1	53.6	73.4	75.6	53.4		54.3	53.1

^{1/} Changed to Daylight Savings Time.

TABLE 117
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 27, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	52.9	53.4	73.1	75.6	53.4		54.3	53.1
0200	53.0	53.3	72.7	75.4	53.2		54.3	53.3
0300	53.0	53.3	72.5	75.3	53.2		54.4	53.4
0400	53.1	53.1	72.1	74.9	53.3		54.4	53.7
0500	53.1	53.1	71.6	74.6	53.3		54.4	54.0
0600	53.4	53.3	71.0	74.4	53.6		54.6	54.5
0700	53.4	53.4	70.9	74.1	53.9		54.9	54.6
0800	53.8	53.5	70.6	74.1	54.0		54.9	54.9
0900	54.0	53.8	70.4	74.0	54.3		55.0	55.0
1000	54.3	54.2	70.6	74.2	54.6		55.1	55.1
1100	54.9	54.9	71.1	74.6	54.9		55.3	55.3
1200	55.1	55.2	71.7	75.4	55.1		55.4	55.8
1300	55.4	55.8	72.5	76.1	55.6		55.6	56.2
1400	55.7	56.4	73.4	76.8	55.6		55.6	56.4
1500	56.1	57.0	74.6	79.9	56.1		55.9	56.3
1600	56.4	57.4	74.4	81.6	56.3		56.0	56.3
1700	56.6	57.6	76.1	82.3	56.4		56.0	56.4
1800	56.6	57.9	76.9	83.4	56.6		56.0	56.3
1900	56.6	57.9	78.6	84.0	56.4		56.2	56.2
2000	56.6	57.6	79.9	85.6	56.6		56.1	57.0
2100	56.6	57.5	80.4	86.0	56.4		56.4	56.1
2200	56.6	57.4	80.6	86.2	56.4		56.4	56.0
2300	56.4	57.2	80.9	86.3	56.2		56.4	56.1
2400	56.1	57.0	82.1	87.1	56.1		56.6	56.1

TABLE 118
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 28, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	56.0	56.7	82.1	87.4	56.0		56.5	56.3
0200	56.0	56.7	82.0	87.7	56.0		56.6	56.4
0300	56.1	56.6	82.4	88.2	56.0		56.8	56.8
0400	56.1	56.6	82.2	87.1	56.1		56.8	57.3
0500	56.1	56.5	82.6	88.4	56.1		56.7	57.6
0600	56.6	56.6	82.6	89.9	56.4		56.9	57.7
0700	56.9	56.6	83.3	90.4	56.6		56.9	57.9
0800	57.0	56.6	83.0	91.4	56.9		57.0	58.3
0900	57.4	57.1	84.3	94.3	57.4		57.1	58.6
1000	57.6	57.5	94.7	94.7	57.6		57.2	58.9
1100 ^{1/}								
1200								
1300								
1400								
1500								
1600	57.1	57.4	84.4	93.1	57.2		56.6	57.7
1700	56.9	57.4	84.6	92.6	56.8		56.0	57.5
1800	56.9	57.4	85.9	92.9	56.6		56.4	57.4
1900	56.9	57.4	84.6	92.7	56.6		56.4	57.5
2000	56.6	57.4	84.3	92.8	56.4		57.0	57.2
2100	56.6	57.1	83.1	92.2	56.2		56.6	56.9
2200	56.4	56.9	82.7	91.6	56.1		56.6	56.9
2300	56.4	56.8	82.2	91.4	56.1		56.6	56.9
2400	56.1	56.7	82.0	91.2	56.1		56.8	56.9

^{1/} Recorder not printing.

TABLE 119
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 29, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	56.4	56.6	81.9	91.0	56.2		57.1	57.1
0200	56.4	56.6	81.4	90.7	56.3		57.1	57.1
0300	56.6	56.6	81.3	90.8	56.5		57.4	57.4
0400	56.6	56.7	81.3	90.0	56.6		57.4	57.2
0500	56.6	56.7	81.1	90.9	56.6		57.4	57.1
0600	56.6	56.6	81.1	90.6	56.6		57.2	57.1
0700	56.6	56.6	80.6	90.5	56.7		57.3	57.1
0800	56.7	56.7	80.5	90.2	56.9		57.4	56.9
0900	56.9	56.7	80.6	90.4	56.8		57.1	56.6
1000	56.9	56.9	80.6	90.2	56.9		57.3	56.6
1100	56.8	56.8	80.6	90.2	56.6		57.1	56.6
1200	56.6	56.6	80.4	90.4	56.6		57.1	56.4
1300	56.6	56.8	80.4	90.3	56.5		57.0	56.4
1400	56.7	57.1	80.9	90.6	56.6		57.0	56.6
1500	56.7	57.4	81.3	90.0	56.4		57.0	56.6
1600	56.6	57.3	81.1	93.0	56.1		56.3	56.6
1700	56.5	57.1	81.5	93.4	56.0		56.4	56.6
1800	56.5	57.0	81.6	93.7	55.9		56.4	56.5
1900	56.1	57.0	81.6	93.6	55.9		56.4	56.4
2000	56.1	56.8	81.6	93.7	55.7		56.4	56.4
2100	55.9	56.6	82.6	94.0	55.7		56.5	56.4
2200	55.6	56.5	83.0	94.5	55.7		56.6	56.6
2300	55.5	56.4	83.1	94.9	55.6		56.6	56.6
2400	55.4	56.4	83.0	94.8	55.6		56.9	56.9

TABLE 120
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
April 30, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	55.1	56.1	82.9	94.6	55.6		56.9	56.8
0200	55.1	56.1	83.0	94.8	55.7		56.9	57.0
0300	55.1	55.9	83.1	94.9	55.7		56.7	57.1
0400	55.1	55.8	83.1	95.0	55.7		56.9	57.1
0500	55.1	55.7	83.0	94.9	55.9		56.9	57.5
0600	55.3	56.0	83.0	95.1	55.8		57.1	57.6
0700	55.4	56.0	82.8	95.5	56.0		57.1	57.6
0800	55.6	56.1	82.9	95.4	56.0		57.2	57.8
0900	56.6	56.7	83.3	95.4	56.1		57.4	57.3
1000	56.8	56.8	83.5	95.6	56.1		57.3	57.3
1100	56.9	57.0	83.9	96.2	56.3		57.3	57.3
1200	57.1	57.2	84.3	96.6	56.5		57.2	57.5
1300	57.2	57.4	84.3	96.6	56.6		57.4	57.5
1400	57.4	57.5	84.4	96.7	56.8		57.4	57.5
1500 ^{1/}	57.5	57.8	84.5	97.0	56.9		57.6	57.6
1600	57.6	58.1	84.7	97.4	57.1		57.6	57.7
1700	57.7	58.1	85.0	97.9	57.0		57.8	57.8
1800	57.5	58.1	84.9	97.9	56.9		57.6	57.6
1900	57.6	58.1	84.8	97.6	57.0		57.9	57.9
2000	57.6	57.9	84.7	97.4	56.9		58.0	57.8
2100	57.4	57.7	84.9	97.5	56.9		58.0	57.6
2200	57.4	57.6	84.9	97.4	56.9		58.1	57.6
2300	57.1	57.4	84.9	97.3	56.6		58.1	57.7
2400	57.0	57.1	84.9	97.1	56.5		58.4	57.8

^{1/} Instruments zeroed to ground truth data.

TABLE 121
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 May 1, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	56.9	57.1	84.7	97.0	56.6		58.4	57.7
0200	56.9	57.0	84.5	96.9	56.6		58.6	57.9
0300	57.0	57.0	84.1	96.6	56.6		58.7	57.7
0400	57.0	56.9	83.6	96.4	56.4		58.6	57.8
0500	57.0	56.8	83.2	96.4	56.4		59.0	57.7
0600	57.0	56.9	83.0	96.1	56.4		59.0	57.7
0700	57.2	57.0	82.1	96.0	56.6		58.8	57.9
0800	57.1	57.0	82.5	95.9	56.7		59.0	57.7
0900	57.1	57.1	82.5	95.9	56.7		58.7	57.6
1000	57.3	57.3	82.6	96.1	56.7		58.6	57.6
1100	57.3	57.4	82.5	95.9	56.8		58.6	57.6
1200	57.4	57.4	82.6	96.1	56.8		58.7	57.6
1300	57.4	57.5	82.7	96.1	56.8		58.6	57.4
1400	57.4	57.6	82.9	96.1	46.9		58.6	57.7
1500	57.6	58.9	83.1	96.4	57.0		58.7	57.4
1600	57.7	58.1	83.4	96.9	57.1		58.6	57.6
1700	57.7	58.3	83.5	97.0	57.1		58.8	57.7
1800	57.7	58.2	83.6	96.9	57.1		58.7	57.6
1900	57.5	58.2	84.9	97.0	57.0		58.6	57.5
2000	57.4	57.9	83.8	97.2	56.9		58.5	57.5
2100	57.2	57.9	83.8	97.0	56.7		58.5	57.1
2200	57.0	57.4	83.8	96.9	56.6		58.4	57.1
2300	56.9	57.1	83.6	96.7	56.4		58.2	56.9
2400	56.7	56.7	83.5	96.5	56.3		58.1	56.8

TABLE 122
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 2, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	56.5	56.6	83.5	95.4	56.1		57.9	56.7
0200	56.4	56.4	83.1	95.1	55.9		57.8	56.5
0300	56.3	56.3	83.1	95.6	55.9		57.8	56.9
0400	56.1	56.1	82.8	95.4	56.0		57.9	57.0
0500	56.3	56.2	82.6	95.4	56.0		57.7	57.1
0600	56.3	56.1	81.9	95.2	56.1		57.7	57.2
0700	56.4	56.1	81.7	94.9	56.1		57.5	57.4
0800	56.5	56.1	81.9	95.1	56.2		57.5	57.0
0900	56.7	56.4	81.9	95.1	56.2		57.5	57.1
1000	56.9	56.9	82.4	95.9	56.5		57.5	57.4
1100	57.0	57.0	82.4	96.1	56.6		57.5	57.4
1200	57.1	57.4	82.6	96.3	56.8		57.6	57.6
1300	57.5	57.8	83.1	96.7	57.0		57.8	57.6
1400	57.8	58.3	83.4	97.0	57.4		58.0	58.3
1500	58.0	58.9	83.6	97.1	57.6		58.1	58.3
1600	58.3	58.9	83.8	97.4	57.8		58.1	58.6
1700	58.5	59.2	83.9	97.8	58.0		58.1	58.6
1800	58.4	59.1	82.9	97.7	57.9		58.1	58.5
1900	58.2	59.0	83.6	97.5	57.9		58.0	58.4
2000	58.0	58.7	83.7	97.4	57.4		58.0	58.0
2100	57.9	58.5	83.7	97.3	57.4		57.9	57.9
2200	57.6	58.1	83.7	97.2	57.1		57.9	57.6
2300	57.4	57.7	83.9	97.1	56.9		57.9	57.7
2400	57.1	57.5	83.6	97.0	56.6		57.8	57.6

TABLE 123
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 May 3, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	57.0	57.1	83.0	96.5	56.5		57.5	57.7
0200	57.1	57.1	83.0	96.2	56.4		57.6	58.0
0300	57.1	57.1	83.0	96.4	56.6		57.6	58.1
0400	57.2	57.2	82.8	96.2	56.7		57.6	58.2
0500	57.4	57.3	82.7	96.4	56.9		57.6	58.5
0600	57.6	57.3	82.4	94.6	56.9		57.6	58.5
0700	57.6	57.4	82.0	94.1	57.1		57.6	58.4
0800	57.6	57.5	81.9	94.1	57.2		57.6	58.4
0900	57.8	57.8	82.1	94.4	57.4		57.6	58.4
1000	57.9	57.9	82.5	94.9	57.4		57.7	58.4
1100	58.1	58.4	82.6	95.8	57.7		58.0	58.6
1200	58.6	58.9	83.0	96.1	58.0		58.1	58.7
1300	58.9	59.6	83.6	96.6	58.4		58.3	59.2
1400	59.0	59.9	84.0	97.4	58.6		58.4	59.1
1500	59.1	60.0	84.5	97.4	58.6		58.4	59.4
1600	59.1	60.2	85.1	97.9	58.6		58.4	59.1
1700	59.1	60.2	84.7	98.0	58.6		58.4	59.1
1800	59.1	60.1	84.4	97.8	58.4		58.2	59.0
1900	58.8	59.8	84.1	97.5	58.2		58.1	58.4
2000	58.4	59.4	84.3	97.7	57.9		57.9	58.2
2100	58.1	58.9	84.5	97.5	57.7		57.9	57.9
2200	58.0	58.7	84.5	97.6	57.4		57.7	57.9
2300	57.9	58.4	84.4	97.1	57.4		57.6	57.9
2400	57.9	58.3	84.3	97.1	57.4		57.7	58.1

TABLE 124
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 May 4, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	57.9	58.3	84.4	96.9	57.4		57.5	58.1
0200	58.0	58.1	84.2	97.0	57.6		57.5	58.5
0300	58.2	58.1	84.2	96.9	57.6		57.5	58.9
0400	58.4	58.4	84.2	97.0	57.9		57.4	59.1
0500	58.5	58.5	84.0	97.1	58.0		57.5	59.2
0600	58.7	58.7	84.1	97.6	58.2		57.5	59.4
0700	58.8	58.8	84.1	97.4	58.4		57.5	59.4
0800	58.9	58.9	84.5	97.6	58.4		57.4	59.4
0900	59.1	59.1	85.0	98.0	58.6		57.6	59.6
1000	59.3	59.3	85.4	98.4	58.6		57.8	59.7
1100	59.0	59.2	85.3	98.0	58.5		57.4	59.4
1200	59.0	59.4	85.6	98.7	58.5		57.6	59.4
1300	58.9	59.4	86.4	98.9	58.5		57.7	59.4
1400	58.8	59.5	87.2	99.1	58.6		58.4	59.6
1500	58.8	59.5	87.6	99.6	58.6		58.0	59.6
1600	58.8	59.5	88.1	99.9	58.6		58.1	59.6
1700	58.9	59.6	88.4	100.1	58.6		58.1	59.4
1800	59.0	59.9	88.9	100.1	58.7		58.1	59.0
1900	59.0	59.9	89.0	100.1	58.6		58.1	59.0
2000	58.9	59.7	89.4	100.6	58.5		58.2	59.0
2100	58.7	59.6	89.3	100.5	58.5		58.4	59.0
2200	58.6	59.5	89.4	100.4	58.4		58.1	58.9
2300	58.6	59.4	89.4	100.5	58.5		58.3	59.0
2400	58.6	59.1	89.4	100.4	58.4		58.1	59.0

TABLE 125
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 5, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	58.6	59.1	89.6	100.6	58.4		58.1	59.1
0200	58.6	59.1	89.6	100.6	58.4		58.1	59.1
0300	58.6	59.1	89.4	100.4	58.5		58.1	59.1
0400	58.9	59.4	89.4	100.6	58.5		58.3	59.2
0500	58.9	59.2	89.3	100.4	58.5		58.1	59.5
0600	58.9	59.4	88.9	100.3	58.6		58.1	59.4
0700	59.0	59.4	88.9	100.1	58.7		58.1	59.3
0800	59.1	59.4	88.7	100.0	58.7		58.1	59.3
0900	59.1	59.4	88.4	99.9	58.6		58.1	59.3
1000	59.1	59.4	87.9	99.9	58.6		58.1	59.4
1100 ^{1/}	59.1	59.4	87.4	99.4	58.7		60.0	59.4
1200	59.1	59.4	87.0	99.3	58.7		60.2	59.3
1300	59.1	59.4	86.6	99.1	58.6		60.1	59.3
1400	59.1	59.4	86.1	98.9	58.6		60.4	59.1
1500	59.1	59.5	86.0	98.9	58.6		60.5	59.1
1600	59.1	59.5	85.9	98.5	58.6		60.4	59.0
1700	59.1	59.5	85.8	98.4	58.6		60.5	58.9
1800	59.0	59.4	85.9	98.4	58.6		60.2	58.6
1900	59.0	59.5	86.0	98.4	58.6		60.3	58.9
2000	58.9	59.4	86.0	98.4	58.4		60.2	58.9
2100	58.9	59.1	86.4	98.4	58.4		60.2	58.6
2200	58.9	59.1	86.7	98.7	58.4		60.3	58.6
2300	58.7	59.0	86.6	99.0	58.4		60.4	58.6
2400	58.6	58.9	86.6	98.9	58.2		60.6	58.6

^{1/} Instruments zeroed to ground truth data.

TABLE 126
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 6, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	58.5	58.6	86.0	98.5	58.0		60.6	58.4
0200	58.4	58.5	85.1	98.1	58.0		60.6	58.2
0300	58.1	58.2	84.5	97.4	57.7		60.5	58.1
0400	58.0	58.0	83.9	97.1	57.7		60.6	58.0
0500	57.9	57.8	83.0	96.5	57.5		60.6	57.9
0600	57.6	57.6	82.4	96.1	57.3		60.6	57.9
0700	57.4	57.4	81.6	95.6	57.0		60.6	57.7
0800	57.4	57.3	81.0	95.4	57.2		60.5	57.6
0900	57.4	57.3	80.6	94.9	57.1		60.4	57.6
1000	57.4	57.4	80.4	94.9	57.1		60.5	57.6
1100	57.6	57.8	80.6	95.2	57.4		60.4	57.6
1200	57.6	57.9	80.9	95.1	57.4		60.4	57.6
1300	57.9	58.4	81.4	95.5	57.6		60.5	57.9
1400	58.1	58.6	81.6	96.0	57.6		60.5	57.9
1500	58.0	59.0	81.9	95.9	57.6		60.5	57.9
1600	58.0	59.0	82.1	96.3	57.6		60.4	57.8
1700	57.9	58.9	82.1	96.4	57.4		60.2	57.6
1800	57.9	58.7	82.4	96.2	57.4		60.1	57.2
1900	57.4	58.4	82.2	96.0	57.0		60.1	57.1
2000	57.2	58.0	82.1	95.9	56.9		60.2	57.0
2100	57.0	57.6	82.0	95.5	56.6		60.1	56.9
2200	56.6	57.0	82.1	95.4	56.2		60.1	56.9
2300	56.5	56.7	81.9	95.4	56.1		60.1	57.0
2400	56.5	56.6	81.9	95.2	56.1		60.0	57.1

TABLE 127

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

May 7, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	56.6	56.6	81.6	95.1	56.1		60.0	57.4
0200	56.6	56.5	81.6	95.1	56.4		60.0	57.5
0300	56.8	56.6	81.5	95.1	56.6		60.3	57.9
0400	57.0	56.7	81.5	95.1	56.6		60.3	58.1
0500	57.1	57.0	81.4	95.1	56.9		60.4	58.1
0600	57.2	57.0	81.4	95.0	57.0		60.3	57.9
0700	57.4	57.1	81.1	95.1	57.0		60.4	57.9
0800	57.4	57.1	81.1	95.1	57.0		60.4	57.6
0900	57.4	57.4	81.5	95.1	57.0		60.4	57.6
1000	57.4	57.6	81.9	95.5	57.1		60.3	57.6
1100	57.4	57.8	82.3	96.1	57.1		60.4	57.4
1200	57.4	58.0	82.8	96.4	57.1		60.5	57.6
1300	57.6	58.4	83.3	97.0	57.1		60.4	57.6
1400	57.4	58.5	83.6	96.7	57.1		60.0	57.6
1500	57.6	58.4	84.0	97.1	57.2		60.1	57.6
1600	57.6	58.6	84.6	97.5	57.4		60.4	57.6
1700	57.7	58.6	84.6	97.4	57.4		60.2	57.6
1800	57.7	58.5	84.9	97.4	57.4		60.2	57.4
1900	57.6	58.4	84.8	97.1	57.3		60.2	57.4
2000	57.4	58.2	84.7	97.0	57.1		60.1	57.6
2100	57.5	58.1	84.8	96.9	57.0		60.1	57.6
2200	57.4	57.7	84.8	97.1	56.9		60.1	57.9
2300	57.4	57.6	84.5	97.0	56.9		60.2	58.1
2400	57.6	57.6	84.4	96.7	57.0		60.1	59.4

TABLE 128
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 May 8, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	57.8	57.8	84.0	96.5	57.4	.	60.1	58.7
0200	57.9	57.8	83.6	96.4	57.6	.	60.1	59.0
0300	58.1	58.0	83.5	96.2	57.6	.	60.4	59.4
0400	58.4	58.1	83.2	96.4	57.8	.	60.5	59.6
0500	58.5	58.1	83.0	96.1	58.0	.	60.6	59.8
0600	58.9	58.4	82.6	96.0	58.3	.	60.6	59.8
0700	58.9	58.5	82.5	95.9	58.3	.	61.2	59.6
0800	59.1	58.6	82.5	96.1	58.6	.	61.9	59.6
0900	59.0	59.0	82.5	96.1	58.5	.	61.8	59.4
1000	58.9	59.0	82.8	96.4	58.4	.	61.6	59.1
1100	58.9	58.9	82.9	96.6	58.1	.	61.4	58.9
1200	58.6	59.0	83.6	97.1	58.1	.	61.4	58.4
1300	58.4	58.9	83.6	97.1	57.9	.	61.5	58.1
1400	59.2	58.7	83.9	97.1	57.9	.	61.4	58.0
1500	58.1	58.9	84.4	97.4	57.7	.	61.4	58.0
1600	58.1	58.8	84.8	97.7	57.6	.	61.4	57.9
1700	58.0	58.7	85.2	97.5	57.6	.	61.4	57.7
1800	57.9	58.5	85.4	97.9	57.4	.	61.1	57.6
1900	57.6	58.1	85.4	97.5	57.1	.	61.1	57.6
2000	57.6	58.1	85.5	97.6	57.1	.	61.1	57.6
2100	57.6	58.0	85.6	97.5	57.1	.	61.1	57.6
2200	57.5	57.6	85.5	97.4	57.0	.	61.2	57.6
2300	57.4	57.6	85.5	97.4	56.9	.	61.4	57.6
2400	57.4	57.6	85.4	97.4	56.9	.	61.4	57.6

TABLE 120
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 9, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	57.4	57.6	85.2	95.8	56.9		61.1	57.6
0200	57.4	57.5	85.1	95.4	57.1		61.1	57.6
0300	57.6	57.6	85.1	95.5	57.0		61.1	57.6
0400	57.8	57.7	85.1	94.9	57.4		61.4	57.6
0500	57.9	57.8	85.1	94.6	57.4		61.6	57.7
0600	58.1	58.0	84.4	94.6	57.6		61.6	57.9
0700	58.2	58.1	84.0	94.6	57.7		61.6	57.9
0800	58.4	58.3	84.0	94.5	57.9		61.6	57.9
0900	58.5	58.5	94.0	94.9	58.0		61.6	58.0
1000	58.6	58.7	84.1	95.1	58.1		61.6	58.1
1100	58.7	59.0	84.4	95.6	58.1		61.7	58.6
1200	59.0	59.5	84.6	95.8	58.4		61.9	58.2
1300	59.1	59.9	85.4	96.4	58.6		61.6	58.2
1400	59.4	60.1	85.6	96.9	58.7		61.8	58.4
1500	59.5	60.4	85.9	97.0	58.9		61.9	58.4
1600	59.6	60.3	86.0	97.1	58.8		61.8	58.4
1700	59.6	60.2	86.0	97.1	58.9		61.9	58.6
1800	59.6	60.1	85.9	97.1	58.8		61.9	58.6
1900	59.4	60.0	85.6	97.1	58.6		61.7	58.6
2000	59.3	59.8	85.9	97.1	58.6		61.6	58.6
2100	59.1	59.6	85.6	97.1	58.3		61.7	58.9
2200	59.1	59.6	85.4	97.1	58.6		61.9	58.6
2300	59.4	59.6	85.1	97.1	58.9		62.0	58.6
2400	59.6	59.6	84.0	96.0	58.9		62.0	58.6

TABLE 130
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 10, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	59.6	59.6	82.9	94.9	59.0		62.0	59.0
0200	59.9	59.7	81.6	93.9	59.2		61.8	59.1
0300	60.1	59.9	81.4	93.1	59.4		62.0	59.2
0400	60.0	59.9	79.6	92.8	59.3		62.1	59.2
0500	60.0	59.9	78.8	92.4	59.4		62.4	59.4
0600	59.9	59.9	77.4	91.9	59.2		62.4	59.6
0700	59.6	59.6	76.8	92.1	58.9		62.4	59.6
0800	59.4	59.4	76.2	91.9	58.6		62.5	59.6
0900	59.0	59.0	76.0	90.1	58.4		62.4	59.4
1000	58.6	58.9	75.9	89.1	58.2		62.4	59.4
1100	58.4	58.6	75.9	87.9	57.9		62.4	59.4
1200	57.9	58.4	76.0	86.4	57.4		62.0	58.9
1300	57.4	57.9	76.1	86.2	57.0		62.0	58.6
1400	57.1	57.6	75.5	85.9	56.9		61.9	58.4
1500	56.0	57.0	74.4	86.1	56.4		61.7	58.1
1600	55.3	56.8	73.6	87.4	56.1		61.6	57.9
1700	55.9	56.4	73.0	87.7	55.6		61.6	57.7
1800	55.6	56.1	72.9	87.6	55.2		61.6	57.4
1900	55.4	55.6	72.9	87.7	55.0		61.0	57.1
2000	55.1	55.4	72.9	87.6	54.9		61.0	56.9
2100	55.0	55.0	73.0	87.9	54.7		60.9	56.6
2200	54.9	54.9	73.9	88.4	54.6		60.9	56.6
2300	54.6	54.6	73.9	88.2	54.4		61.0	56.4
2400	54.5	54.5	73.9	88.5	54.4		60.6	56.1

TABLE 131
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 11, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	54.2	54.4	74.1	88.4	54.1		61.1	55.9
0200	54.2	54.2	74.1	88.4	53.9		60.9	56.0
0300	54.0	54.0	74.4	88.4	53.9		60.6	56.1
0400	53.9	53.9	74.4	86.8	53.7		60.8	56.6
0500	53.9	53.9	74.4	86.7	53.6		60.6	55.6
0600	53.5	53.5	74.5	86.9	53.5		60.6	55.4
0700	53.4	53.4	74.5	87.5	53.2		60.4	55.5
0800	53.3	53.2	74.6	87.7	53.1		60.4	55.4
0900	53.1	53.0	74.0	88.0	53.0		60.4	55.2
1000	53.1	53.1	74.4	88.2	53.0		60.1	55.1
1100	53.2	53.4	75.2	91.9	52.9		60.3	54.9
1200	53.3	53.7	77.6	94.9	53.1		60.1	54.9
1300	53.4	54.1	79.1	96.5	53.3		60.1	55.0
1400	53.6	54.4	80.4	97.8	53.4		60.1	55.0
1500	53.9	54.6	83.0	99.1	53.6		60.0	54.9
1600	54.2	54.9	85.5	101.6	53.9		60.0	55.0
1700	54.5	55.0	86.6	102.8	54.1		59.9	55.1
1800	54.5	55.0	88.0	103.3	54.1		59.9	55.1
1900	54.5	54.9	88.5	103.9	54.1		59.8	55.1
2000	54.5	54.8	89.3	104.5	54.1		59.8	55.3
2100	54.4	54.5	90.4	105.0	54.1		59.6	55.3
2200	54.5	54.5	90.1	105.5	54.1		59.6	55.4
2300	54.7	54.5	90.5	105.4	54.4		59.6	55.6
2400	55.1	54.7	91.0	106.0	54.4		59.6	56.1

TABLE 132
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 12, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	55.3	54.9	91.1	106.3	55.0		59.6	56.6
0200	55.9	55.1	91.4	106.6	55.4		59.6	57.0
0300	56.0	55.2	91.0	106.6	55.6		59.6	57.0
0400	56.1	55.5	91.4	106.6	55.8		59.6	57.4
0500	56.6	55.7	91.1	106.4	55.9		59.6	57.2
0600	56.4	55.9	91.3	106.6	55.9		59.7	57.0
0700	56.1	56.0	91.0	106.5	55.7		59.6	56.7
0800	56.1	56.1	91.1	106.6	55.7		59.6	56.5
0900	56.1	56.1	91.4	103.2	55.6		59.6	56.4
1000	56.0	56.1	91.1	100.7	55.6		59.5	56.4
1100	56.0	56.4	91.1	100.1	55.6		59.5	56.0
1200	56.0	56.4	90.9	99.9	55.5		59.4	56.0
1300	56.0	56.4	90.4	99.7	55.5		59.6	55.9
1400	55.9	56.4	89.6	99.6	55.4		59.6	55.9
1500	55.9	56.3	87.0	98.4	55.4		59.5	55.7
1600	55.9	56.1	86.4	97.6	55.4		59.5	55.6
1700	55.7	56.0	86.4	97.4	55.2		59.5	55.6
1800	55.6	56.0	86.0	97.0	55.2		59.4	55.6
1900	55.6	56.0	85.9	97.1	55.1		59.4	55.8
2000	55.9	55.9	85.1	96.7	55.2		59.4	56.1
2100	55.9	55.9	84.6	96.4	55.4		59.4	56.4
2200	56.0	56.0	84.2	96.1	55.7		59.5	56.6
2300	56.4	56.0	84.0	96.4	55.9		59.5	56.9
2400	56.6	56.4	83.9	96.0	56.1		59.4	57.0

TABLE 133
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 13, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	56.7	56.5	83.5	96.1	56.1		59.4	57.1
0200	56.7	56.6	83.1	95.9	56.1		59.6	57.0
0300	56.9	56.8	82.9	95.9	56.4		59.6	57.0
0400	56.7	56.7	83.1	95.6	56.1		59.4	56.9
0500	56.6	56.6	83.1	95.9	56.1		59.4	56.7
0600	56.5	56.6	82.7	95.4	56.1		59.4	56.4
0700	56.5	56.5	82.9	95.5	56.0		59.4	56.6
0800	56.4	56.5	82.7	95.4	55.9		59.4	56.1
0900	56.1	56.5	82.8	95.4	55.8		59.4	55.6
1000	56.1	56.4	83.0	95.5	55.9		59.4	55.9
1100	56.1	56.6	83.0	95.6	55.9		59.5	56.0
1200	56.1	56.6	83.4	95.6	55.8		59.5	56.0
1300	56.1	56.7	83.4	95.7	55.9		59.4	55.9
1400	56.2	56.7	83.4	95.7	55.9		59.5	56.3
1500	56.1	56.6	83.4	95.7	55.9		59.4	56.3
1600	56.4	56.6	83.4	95.6	56.0		59.4	56.1
1700	56.5	56.6	83.1	95.6	55.9		59.4	56.4
1800	56.4	56.6	83.0	94.9	56.0		59.4	56.6
1900	56.4	56.6	82.9	94.9	56.0		59.5	56.6
2000	56.4	56.6	82.5	94.9	56.1		59.6	56.6
2100	56.5	56.5	82.1	94.6	56.0		59.5	56.9
2200	56.6	56.6	82.1	95.0	56.4		59.6	57.1
2300	56.9	56.8	81.8	94.9	56.4		59.9	57.1
2400	56.9	56.8	81.5	94.6	54.4		59.9	57.1

TABLE 134
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 14, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	57.1	57.0	81.6	95.0	56.6		60.0	57.3
0200	57.1	57.1	81.5	95.0	56.6		60.1	57.3
0300	57.2	57.1	81.6	95.0	56.6		60.1	57.1
0400	57.0	57.0	81.6	95.0	56.4		59.8	56.9
0500	56.9	57.0	81.6	95.0	56.4		60.0	56.7
0600	56.4	56.9	81.4	94.6	56.2		60.0	56.4
0700	55.9	56.6	81.4	95.5	55.9		60.0	56.4
0800	55.9	56.4	81.0	94.2	55.6		59.6	56.1
0900	56.4	56.4	80.5	94.1	55.7		59.9	55.9
1000	55.4	56.1	80.4	93.9	55.5		59.6	55.9
1100	55.4	56.1	80.5	93.9	55.4		59.6	55.9
1200	54.9	55.9	80.1	96.6	55.2		59.6	55.6
1300	54.9	55.7	80.9	98.4	55.0		59.4	55.3
1400	54.5	55.6	81.1	99.0	54.9		59.5	55.1
1500	55.1	55.5	81.7	99.5	55.0		59.6	55.0
1600	55.4	55.5	83.4	100.6	54.9		59.6	54.9
1700	55.2	55.3	85.0	101.9	54.9		59.6	54.9
1800	55.1	55.2	86.0	102.6	54.9		59.4	54.9
1900	55.1	55.1	87.0	103.4	54.8		59.4	54.9
2000	55.0	55.0	87.9	104.0	54.7		59.5	54.9
2100	54.9	55.0	89.5	105.0	54.6		59.4	54.9
2200	54.8	54.9	90.0	105.4	54.6		59.2	54.6
2300	54.6	54.9	90.4	105.1	54.4		58.6	54.9
2400	54.6	54.6	90.0	106.0	54.4		59.2	54.4

TABLE 135
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 15, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	54.6	54.6	91.5	106.2	54.4		58.4	54.4
0200	54.6	54.5	91.5	106.4	54.5		59.4	54.4
0300	54.4	54.4	91.6	106.2	54.3		59.4	54.5
0400	54.4	54.5	91.7	106.7	54.3		59.4	54.5
0500	54.5	54.5	91.9	106.7	54.4		59.4	54.5
0600	54.5	54.5	92.9	106.8	54.5		59.3	54.6
0700	54.4	54.4	92.5	106.9	54.2		59.1	54.6
0800	54.4	54.4	94.6	107.0	54.4		59.1	54.6
0900	54.7	54.7	93.0	107.3	54.4		59.0	54.6
1000	54.9	54.9	93.3		54.6		59.1	55.0
1100	55.0	55.0	93.1	101.2	54.9		59.1	55.3
1200	55.4	55.5	93.4	100.6	55.0		59.1	55.6
1300	55.6	56.0	93.5	100.9	55.4		59.0	55.9
1400	55.9	56.2	93.4	100.8	55.5		59.1	56.0
1500	56.1	56.6	92.9	100.9	55.8		59.1	56.2
1600	56.4	56.8	90.1	99.6	55.9		59.4	56.4
1700	56.5	57.0	89.6	99.5	56.0		59.4	56.4
1800	56.7	57.1	89.4	99.2	56.1		59.1	56.9
1900	56.9	57.0	88.5	98.9	56.3		59.3	57.1
2000	57.0	57.0	88.4	98.5	56.5		59.6	57.1
2100	57.1	57.0	87.7	98.3	56.6		59.5	57.6
2200	57.6	57.4	87.1	98.2	57.0		59.4	58.0
2300	57.8	57.5	86.9	97.8	57.1		59.5	58.4
2400	59.2	57.6	86.6	97.8	57.6		59.6	58.5

TABLE 136
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 16, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	58.5	58.0	86.1	97.8	57.9		59.9	59.0
0200	58.6	58.4	86.0	97.5	58.0		59.7	59.0
0300	58.9	58.4	85.6	96.7	58.2		60.0	59.0
0400	58.9	58.6	85.4	96.5	58.1		60.0	59.1
0500	59.3	58.7	85.3	96.8	58.0		60.1	59.1
0600	59.3	58.7	85.2	96.5	58.0		60.4	58.6
0700	59.1	58.7	85.1	96.6	58.0		61.1	58.5
0800	59.1	58.7	85.0	96.5	57.9		61.0	58.1
0900	59.2	58.7	85.0	96.9	57.9		60.7	58.0
1000 ^{1/}	59.4	59.0	85.7	97.6	57.8		60.9	58.0
1100	59.4	59.1	86.4	97.8	57.9		60.9	58.1
1200	59.6	59.4	86.7	98.1	57.9		61.0	58.1
1300	60.0	59.7	87.0	98.6	58.1		60.9	58.4
1400	60.1	60.0	87.1	98.6	58.1		61.0	58.4
1500	60.5	60.2	87.1	98.9	58.4		61.1	58.6
1600	60.6	60.4	87.4	99.3	58.6		61.0	58.7
1700	60.9	60.4	87.4	99.4	58.6		61.0	58.9
1800	61.0	60.4	87.1	99.4	58.6		61.3	58.9
1900	61.0	60.4	87.0	99.1	58.6		61.2	59.0
2000	61.1	60.0	86.7	98.9	58.6		61.1	59.1
2100	61.4	60.0	86.9	98.9	58.9		61.1	59.6
2200	61.6	60.1	86.8	99.0	59.1		61.5	60.0
2300	61.7	60.0	86.8	98.2	59.4		61.5	60.1
2400	62.0	60.2	86.7	97.5	59.4		61.6	60.5

^{1/} Instruments zeroed to ground truth data.

TABLE 137
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 17, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	62.4	60.6	86.4	97.6	59.7		62.0	60.9
0200	62.6	60.6	86.1	97.6	59.9		62.2	60.9
0300	62.7	60.9	85.5	95.9	59.9		62.6	60.9
0400	62.6	61.1	84.7	94.1	59.9		62.7	60.9
0500	62.6	61.2	84.4	93.0	59.8		62.9	60.8
0600	62.4	61.1	84.1	93.0	59.6		63.0	60.6
0700	62.1	61.1	83.7	92.7	59.4		63.0	60.1
0800	62.0	61.0	83.1	93.7	59.2		62.9	60.1
0900	61.9	60.8	81.9	94.2	59.1		62.6	59.9
1000	61.7	60.6	80.7	93.7	59.1		62.4	59.6
1100	61.6	60.6	80.7	93.7	59.0		62.7	59.4
1200	61.4	60.6	80.8	93.9	58.9		62.9	59.4
1300	61.4	60.5	81.6	94.4	58.7		62.6	59.2
1400	61.1	60.5	82.1	94.9	58.7		62.5	59.1
1500	61.1	60.4	82.1	95.1	58.6		62.4	59.1
1600	61.0	60.3	82.1	95.4	58.6		62.4	59.1
1700	60.9	60.0	82.0	95.2	58.4		62.4	59.2
1800	60.9	60.0	81.8	95.1	58.4		62.4	59.1
1900	60.7	59.9	81.9	95.1	58.4		62.4	59.1
2000	60.9	59.8	82.0	95.0	58.4		62.4	59.1
2100	60.6	59.6	82.3	95.4	58.4		62.4	59.1
2200	60.6	59.4	82.1	95.9	58.2		62.4	59.1
2300	60.6	59.4	81.8	95.6	58.1		62.4	59.4
2400	60.6	59.4	81.4	95.7	58.1		62.4	59.4

TABLE 138
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 18, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	60.5	59.3	81.3	95.4	58.1		62.1	59.1
0200	60.6	59.2	81.4	95.6	58.1		62.4	59.4
0300	60.5	59.0	81.1	95.6	58.1		62.2	59.1
0400	60.4	59.0	80.6	95.4	58.2		62.4	59.1
0500	60.4	59.0	80.4	95.2	58.1		62.4	58.9
0600	60.2	58.9	80.2	95.0	57.9		62.4	58.5
0700	60.0	58.6	80.0	94.7	57.7		62.0	58.5
0800	60.0	58.5	80.1	94.9	57.7		62.1	58.1
0900	59.8	58.4	80.0	95.0	57.6		61.9	57.9
1000	59.7	58.4	79.8	94.7	57.4		61.9	57.9
1100	59.4	58.4	79.1	94.3	57.4		62.0	57.6
1200	59.2	58.1	78.4	93.6	57.1		61.9	57.4
1300	59.1	58.1	78.1	93.6	57.0		61.8	57.2
1400	59.0	58.1	77.0	93.3	56.9		61.6	57.2
1500	58.9	58.0	78.1	93.2	56.7		61.6	57.2
1600	58.6	57.6	77.9	92.9	56.6		61.4	57.2
1700	58.9	57.6	77.9	93.0	56.6		61.4	57.1
1800	58.6	57.3	78.2	92.9	56.6		61.4	57.1
1900	58.4	57.0	78.2	92.8	56.4		61.1	57.0
2000	58.4	56.0	78.4	92.6	56.4		61.2	57.1
2100	58.3	56.7	78.7	92.9	56.2		61.2	57.1
2200	58.3	56.6	78.9	93.1	56.2		61.1	57.1
2300	58.3	56.4	79.1	93.1	56.4		61.1	57.1
2400	58.4	56.4	79.0	93.0	56.4		61.0	57.1

TABLE 139
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 19, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	58.4	56.4	78.8	93.0	56.4		61.0	57.4
0200	58.4	56.5	78.9	93.0	56.4		61.0	57.4
0300	58.2	56.4	78.9	93.0	56.4		61.1	57.4
0400	58.4	56.4	79.1	93.3	56.2		61.0	57.6
0500	58.2	56.4	79.4	93.4	56.1		61.0	57.4
0600	58.1	56.4	79.6	93.4	56.1		61.1	57.4
0700	58.0	56.4	79.6	93.5	56.1		61.1	57.3
0800	58.4	56.7	80.0	93.9	56.4		61.4	57.6
0900	58.4	56.8	80.6	94.0	56.4		61.4	57.6
1000	58.6	57.1	80.8	94.4	56.6		61.4	57.6
1100	58.7	57.5	81.3	94.9	56.8		61.4	57.9
1200	59.0	57.6	81.6	95.0	57.0		61.4	57.9
1300	59.0	58.0	81.0	95.2	57.1		61.4	58.1
1400 ^{1/}	59.4	58.4	82.5	95.9	57.4		61.4	58.2
1500	57.9	57.1	83.0	96.4	57.6		58.9	57.9
1600	58.0	57.4	83.4	96.6	58.3		59.7	57.7
1700	58.1	57.5	83.8	97.1	57.9		59.1	58.1
1800	58.2	57.6	83.9	97.1	58.1		59.4	58.0
1900	58.4	57.6	84.0	97.1	58.1		59.4	57.9
2000	58.4	57.5	84.1	97.2	58.0		59.2	57.9
2100	58.1	57.2	84.0	97.1	58.0		59.3	57.8
2200	58.0	57.1	84.0	97.1	58.0		59.4	57.8
2300	57.9	57.0	84.0	97.1	57.9		59.5	57.8
2400	57.9	56.9	83.9	96.9	57.8		59.4	58.0

^{1/} Instruments zeroed to ground truth data.

TABLE 140
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 20, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	57.9	56.7	84.0	97.1	57.9		59.3	58.3
0200	58.1	56.6	83.9	97.0	58.3		59.8	58.7
0300	58.1	56.6	83.8	96.9	58.1		59.4	58.9
0400	58.4	56.6	83.6	96.9	58.4		59.6	59.4
0500	58.6	56.6	83.3	96.9	58.6		59.5	59.5
0600	58.9	57.0	83.3	96.9	58.9		59.9	59.9
0700	59.0	57.0	83.1	96.6	58.9		59.9	59.9
0800	59.4	57.6	83.5	96.9	59.4		60.0	60.0
0900	59.7	58.1	84.0	97.4	59.4		60.0	60.0
1000	60.0	58.7	84.4	97.6	59.9		60.0	60.4
1100	60.4	59.3	84.9	98.2	60.0		60.0	60.6
1200	60.6	60.0	85.9	99.1	60.3		60.3	60.9
1300	60.9	60.5	86.3	99.6	60.6		60.4	60.9
1400	61.3	61.0	87.0	100.1	60.6		60.6	61.6
1500	61.6	61.4	87.7	100.8	61.1		60.7	61.1
1600	61.7	61.7	88.0	101.4	61.1		60.6	61.3
1700	62.0	62.0	88.5	101.6	61.4		60.6	61.4
1800	62.0	52.0	88.6	101.9	61.4		60.9	61.1
1900	62.0	62.0	88.9	101.9	61.4		60.9	61.0
2000	61.9	61.9	88.9	101.9	61.4		60.9	60.9
2100	61.5	61.5	88.9	101.7	61.1		60.9	60.7
2200	61.6	61.4	88.7	101.5	60.9		60.9	60.6
2300	61.4	61.2	88.6	101.4	61.0		61.0	60.6
2400	61.2	60.9	88.1	101.1	60.6		61.1	60.4

TABLE 141
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 21, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	61.0	60.6	88.0	100.9	60.6		61.1	60.5
0200	61.0	60.6	87.5	99.2	60.6		61.0	60.6
0300	61.1	60.4	87.2	98.0	60.6		61.0	60.9
0400	61.1	60.4	87.2	98.0	60.6		61.0	61.1
0500	61.1	60.4	87.0	97.9	60.9		61.1	61.4
0600	61.4	60.4	86.7	98.7	60.9		61.1	61.6
0700	61.4	60.4	86.1	99.0	61.2		61.1	62.0
0800	61.6	60.5	85.5	98.9	61.1		61.4	62.1
0900	62.1	60.9	85.5	99.4	61.3		61.5	62.9
1000	62.5	61.4	86.0	100.0	61.9		61.7	63.0
1200	62.7	62.0	86.9	100.6	62.2		61.9	63.4
1300	63.4	62.8	87.6	101.6	62.8		62.1	63.8
1400	63.7	63.2	87.9	102.0	63.1		62.4	64.2
1500	64.1	63.9	88.4	102.5	63.4		62.9	64.1
1600	64.2	64.2	88.5	102.9	63.6		62.4	64.4
1700	64.9	64.7	88.2	103.1	64.0		62.4	64.1
1800	65.0	64.9	89.0	103.4	64.4		62.9	64.2
1900	65.0	65.1	89.0	103.6	64.2		62.9	64.1
2000	64.9	65.0	89.1	103.4	63.9		63.0	63.7
2100	64.6	64.7	89.1	103.4	63.9		63.0	63.5
2200	64.4	64.4	89.1	103.2	63.6		63.0	63.0
2300	64.1	64.1	89.1	103.1	63.6		63.0	63.0
2400	64.0	64.0	89.1	103.0	63.4		62.9	62.9

TABLE 142
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 22, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	63.9	63.8	89.0	103.0	63.1		63.0	62.9
0200	63.6	63.6	89.0	102.9	63.0		63.0	62.9
0300	63.6	63.4	88.9	101.1	62.9		62.9	62.9
0400	63.6	63.2	88.6	101.9	62.9		63.0	62.9
0500	63.5	63.0	88.6	100.6	62.9		63.0	62.9
0600	63.5	63.0	88.6	100.6	62.8		63.0	63.0
0700	63.5	63.0	88.7	101.6	62.9		63.1	63.1
0800	63.5	63.0	88.4	101.9	62.9		63.2	63.5
0900	63.5	63.0	87.8	101.6	62.9		63.2	63.6
1000	63.5	63.0	87.6	101.6	63.0		63.4	63.9
1100	63.6	63.0	87.8	101.6	63.0		63.3	64.0
1200	63.9	63.4	83.4	102.1	63.2		63.5	64.3
1300	64.1	63.5	88.6	102.7	63.5		63.6	64.5
1400	64.2	63.9	88.9	103.0	63.9		63.5	64.7
1500	64.9	64.5	88.6	103.0	64.1		63.6	65.0
1600	65.0	65.0	88.5	102.7	64.4		63.8	65.0
1700	65.1	65.1	87.9	102.7	64.5		63.8	65.1
1800	65.3	65.3	87.6	102.7	64.4		63.9	65.1
1900	65.4	65.3	87.4	102.4	64.5		63.9	65.1
2000	65.4	65.4	87.4	100.7	64.4		63.9	65.0
2100	65.4	65.2	87.9	98.4	64.4		64.0	65.0
2200	65.1	65.1	86.1	98.2	64.4		64.0	64.6
2300	65.3	65.1	88.9	94.1	64.4		64.1	64.6
2400	65.1	65.0	89.0	93.1	64.4		64.5	64.6

TABLE 143
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 23, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	65.1	65.0	88.1	92.1	64.1		64.0	64.4
0200	65.0	64.9	87.1	90.6	64.0		64.0	64.4
0300	64.6	64.7	85.1	89.2	63.9		64.0	64.1
0400	64.7	64.7	83.7	88.4	63.9		64.0	64.0
0500	64.5	64.5	82.9	87.7	63.9		64.0	64.0
0600	64.4	64.4	82.0	87.1	63.0		64.0	63.9
0700	64.4	64.3	80.9	86.7	63.7		64.0	63.9
0800	64.4	64.2	80.1	86.1	63.6		64.0	63.8
0900	64.1	64.2	79.4	85.4	63.5		64.0	63.8
1000	64.5	64.4	79.1	85.6	63.6		64.0	64.0
1100	64.5	64.4	78.5	85.0	63.6		63.6	64.1
1200	62.4	64.1	78.1	85.0	63.4		62.4	64.0
1300	62.1	64.2	78.1	85.1	63.6		62.6	64.1
1400	64.3	64.3	78.1	84.6	63.6		63.1	64.1
1500	64.6	64.4	78.1	85.1	63.9		62.8	64.4
1600	64.6	64.6	78.4	85.1	63.9		63.0	64.6
1700	64.9	64.9	78.6	85.6	64.1		63.0	64.9
1800	65.0	65.0	78.9	85.6	64.6		62.9	65.0
1900	65.1	65.1	78.9	85.5	64.6		63.0	65.0
2000	65.1	65.2	78.6	85.2	64.5		63.0	65.1
2100	65.1	65.0	78.6	85.6	64.4		62.9	65.0
2200	65.1	65.0	78.6	85.6	64.4		62.9	64.9
2300	65.1	65.1	78.6	100.0	64.6		63.1	64.9
2400	65.1	65.1	78.2	98.6	64.4		63.5	64.9

TABLE 144
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 24, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	65.0	65.0	77.5	97.4	64.4		62.9	64.6
0200	65.0	64.9	77.2	95.9	64.4		62.9	64.6
0300	64.7	64.7	77.1	95.4	64.2		63.1	64.6
0400	64.6	64.6	76.4	95.3	64.2		63.1	64.4
0500	64.4	64.5	76.1	95.4	64.0		63.1	64.4
0600	64.2	64.5	83.0	97.9	63.9		63.0	64.4
0700	64.6	64.6	85.2	101.1	64.1		63.1	64.5
0800	64.7	64.6	85.1	102.1	64.1		63.3	64.4
0900	64.9	64.6	84.7	102.0	64.4		63.0	64.4
1000	65.0	64.9	83.9	101.6	64.4		63.4	64.6
1100	65.1	65.4	83.9	101.8	64.6		63.4	64.9
1200	65.4	65.4	83.9	84.2	64.6		63.2	65.0
1300	65.5	65.6	84.1	84.4	64.6		63.4	65.1
1400	65.8	66.0	85.8	84.9	65.0		63.1	65.6
1500	65.9	66.4	87.1	86.1	65.2		63.7	65.8
1600	66.0	66.2	88.1	90.0	64.4		64.0	65.9
1700	66.1	66.3	88.8	90.9	64.4		64.0	65.9
1800	66.4	66.1	80.4	87.7	65.6		63.9	66.1
1900	66.4	66.2	77.6	84.4	65.6		63.6	66.1
2000	66.5	66.2	78.3	84.9	65.8		63.6	65.9
2100	66.4	66.2	80.4	86.1	65.9		63.9	65.9
2200	66.3	66.1	81.1	86.7	65.7		63.1	65.9
2300	66.1	66.1	79.9	86.6	65.6		63.5	65.6
2400	65.8	66.0	77.6	85.0	65.1		53.4	65.2

TABLE 145

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

May 25, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	65.6	65.7	76.3	84.5	65.0		63.5	65.2
0200	65.6	65.6	76.8	84.4	64.9		63.6	65.0
0300	65.6	65.6	77.1	84.6	64.9		63.9	65.0
0400	65.5	65.4	77.1	86.9	64.9		63.9	64.6
0500	65.2	65.1	76.2	86.2	64.7		63.9	65.0
0600	65.3	65.0	76.8	87.4	64.6		64.1	65.0
0700	65.1	64.9	75.7	87.1	64.7		63.9	65.1
0800	65.1	64.9	75.7	87.1	64.9		63.9	65.1
0900	65.2	64.8	77.4	87.6	64.9		64.1	65.4
1000	65.5	65.1	78.0	88.4	65.1		63.5	65.6
1100	65.7	65.6	79.2	89.2	65.4		63.6	65.7
1200	65.9	66.0	79.9	89.9	65.6		63.9	65.7
1300	66.3	66.6	80.5	92.6	65.9		64.4	65.7
1400	66.6	67.0	81.1	93.7	66.1		64.4	65.9
1500	66.9	67.4	81.6	94.6	66.1		64.5	66.0
1600	67.1	68.0	82.1	95.6	66.5		64.4	66.2
1700	67.1	68.1	82.7	95.9	66.6		64.4	66.3
1800	67.4	68.0	84.2	97.1	66.4		64.6	66.1
1900	67.2	68.1	84.9	97.5	66.4		64.6	66.7
2000	67.1	67.9	85.1	97.5	66.4		64.1	66.0
2100	66.9	67.4	85.4	97.5	66.2		64.1	65.7
2200	66.7	67.2	85.3	97.5	66.1		64.1	65.6
2300	66.7	67.0	85.9	97.5	66.1		64.1	65.7
2400	66.4	66.9	86.1	97.9	65.9		64.4	65.4

TABLE 146
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 26, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	66.4	66.6	86.1	97.9	65.9		64.5	65.4
0200	66.1	66.4	86.1	97.6	65.6		64.4	65.2
0300	66.1	66.1	86.1	97.5	65.4		64.5	65.4
0400	66.0	66.0	86.3	97.4	65.4		64.4	65.4
0500	66.0	66.0	86.4	97.4	65.4		64.4	65.6
0600	66.0	66.0	86.4	97.5	65.6		64.5	65.7
0700	66.1	66.0	86.0	97.2	65.6		64.6	66.0
0800	66.1	66.0	86.0	97.3	65.9		64.7	66.4
0900	66.6	66.3	86.4	97.6	66.0		65.1	66.9
1000	66.8	66.6	86.8	97.9	66.4		65.2	67.1
1100 ^{1/}	67.1	67.1	4	98.3	66.6		65.5	67.5
1200	67.5	67.5	84.9	99.6	67.0		69.2	67.5
1300	67.9	67.9	85.1	100.1	67.2		69.4	67.9
1400	68.2	68.2	85.6	100.6	67.6		69.4	67.9
1500	68.6	68.9	86.0	101.2	68.0		69.9	68.1
1600	68.7	69.0	85.5	101.2	68.0		69.9	68.4
1700	67.0	68.9	85.8	101.7	67.2		69.5	68.0
1800	67.0	68.7	85.9	101.5	67.6		69.4	68.1
1900	67.6	68.9	85.9	101.5	67.6		69.4	68.7
2000	67.9	68.9	86.2	101.5	67.7		69.9	68.2
2100	68.0	68.8	86.2	101.8	67.7		69.9	68.0
2200	67.7	68.6	86.6	102.0	67.4		70.0	67.9
2300	67.5	68.5	86.6	101.0	67.4		70.0	67.7
2400	67.1	68.1	86.6	102.1	67.2		70.0	67.9

^{1/} Instruments zeroed to ground truth data.

TABLE 147
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 May 27, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	67.0	68.0	86.0	102.0	67.0		70.0	67.8
0200	67.0	68.0	86.6	102.0	67.0		70.0	67.8
0300	67.0	67.9	86.6	102.0	67.0		69.6	67.0
0400	65.9	67.7	86.6	102.1	67.0		70.1	67.9
0500	66.9	67.6	86.1	102.0	66.8		70.4	68.0
0600	66.9	67.4	85.9	101.9	66.7		70.9	66.4
0700	66.9	67.4	85.9	101.9	66.7		70.4	67.9
0800	67.0	67.4	85.6	101.7	67.0		70.1	67.9
0900	67.4	67.5	85.8	102.1	67.0		70.1	67.9
1000	67.5	67.8	86.0	102.4	67.0		70.4	68.0
1100	67.6	68.1	86.8	103.0	67.4		70.6	68.3
1200	68.1	68.6	87.2	103.6	67.7		70.6	68.5
1300	68.4	69.1	88.0	104.3	68.1		70.6	68.8
1400	68.6	69.1	88.6	104.6	68.3		70.8	68.9
1500	68.9	69.5	89.0	105.1	68.6		70.9	69.0
1600	69.3	69.6	89.1	105.3	68.6		70.9	69.0
1700	69.5	70.0	89.7	106.1	69.0		70.9	69.1
1800	69.6	70.1	90.0	106.5	69.0		70.8	69.4
1900	69.6	70.6	90.0	106.8	69.0		71.0	69.4
2000	69.4	70.2	90.0	106.6	68.9		71.1	69.1
2100	69.1	70.0	89.9	106.6	68.8		71.1	68.9
2200	69.1	69.9	90.1	106.9	68.7		71.4	68.8
2300	69.0	69.6	90.1	107.0	68.6		71.3	68.5
2400	68.0	69.6	90.0	106.7	68.3		71.1	68.5

TABLE 148
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 28, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	68.7	69.3	89.9	106.5	68.2		72.1	67.8
0200	68.6	69.1	89.4	105.4	68.1		71.1	68.1
0300	68.5	69.0	89.4	103.6	67.9		71.1	68.1
0400	68.4	68.8	89.0	103.4	67.9		71.1	68.2
0500	68.1	68.8	88.8	103.1	67.7		71.1	68.1
0600	68.1	68.7	88.4	103.1	67.8		71.2	68.4
0700	68.1	68.7	88.0	103.6	67.7		71.1	68.5
0800	68.1	68.6	87.0	103.4	67.8		71.1	68.6
0900	68.0	68.6	87.0	103.9	67.9		71.1	68.6
1000	68.4	68.9	87.0	104.6	68.0		72.0	69.1
1100	68.6	69.1	87.4	105.0	68.1		71.4	69.4
1200	68.9	69.4	88.2	105.6	68.6		71.5	69.8
1300	69.1	70.0	89.1	106.4	68.9		71.5	69.9
1400	69.5	70.4	90.0	107.1	69.0		71.9	70.0
1500	69.9	70.6	90.4	107.9	69.4		72.0	70.4
1600	70.0	71.1	90.9	108.1	69.4		71.9	70.4
1700	70.0	71.1	91.1	108.4	69.5		72.4	70.3
1800	70.0	71.0	91.7	108.4	69.9		72.0	70.0
1900	70.1	70.9	92.0	108.6	69.9		72.0	70.0
2000	70.1	71.0	92.4	108.7	69.8		71.9	69.9
2100	70.0	71.0	92.6	108.9	69.4		71.9	69.9
2200	70.0	70.9	92.6	108.9	69.1		72.0	70.0
2300	69.8	70.7	92.6	108.9	69.1		71.9	69.6
2400	69.5	70.6	92.9	108.6	69.1		71.9	69.2

TABLE 149
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 29, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	69.6	70.3	92.6	108.4	69.2		71.8	68.9
0200	69.4	70.0	92.4	108.2	69.0		72.0	68.7
0300	69.2	70.0	92.2	107.4	68.8		71.5	68.6
0400	69.0	69.9	92.0	107.3	68.8		71.6	68.5
0500	79.0	69.7	91.8	107.3	68.6		71.7	68.7
0600	68.9	69.5	91.8	107.4	68.6		71.5	67.7
0700	68.7	69.5	92.0	107.5	68.6		71.7	68.6
0800	68.8	69.4	91.7	107.5	68.6		71.7	68.6
0900	68.9	69.5	91.6	107.4	68.7		71.7	69.0
1000	69.0	69.6	92.7	108.0	68.8		72.0	71.4
1100	69.4	70.0	93.2	96.4	69.4		72.0	71.3
1200	69.5	70.4	92.3	94.4	69.6		72.2	72.5
1300	70.0	70.6	90.0	94.2	70.0		72.3	73.3
1400	70.2	71.2	90.0	94.3	70.4		72.3	73.0
1500	70.4	71.3	88.7	94.3	70.5		72.3	73.5
1600	70.4	71.3	87.4	94.2	70.3		72.3	73.8
1700	70.6	71.2	87.3	94.2	70.6		72.6	74.3
1800	70.6	71.5	87.1	94.3	70.6		72.6	73.8
1900	71.1	71.7	86.7	94.5	70.8		72.5	74.1
2000	71.3	71.8	85.7	94.5	71.1		72.8	73.8
2100	71.4	71.8	84.8	94.6	71.2		72.8	74.0
2200	71.3	71.8	83.3	94.5	71.0		72.8	73.5
2300	71.3	72.0	82.5	95.2	71.1		73.1	72.6
2400	71.2	72.0	76.0	95.0	71.1		73.0	71.9

TABLE 150
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 30, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	71.2	71.8	79.9	96.2	71.0		73.5	71.4
0200	71.0	71.7	88.0	99.8	71.0		73.4	71.3
0300	70.9	71.5	85.0	101.6	70.8		73.3	71.0
0400	70.7	71.4	79.0	99.0	70.7		73.2	70.7
0500	70.6	71.3	73.2	96.0	70.6		73.2	70.4
0600	70.6	71.0	82.2	98.8	70.5		73.3	70.2
0700	70.5	70.9	86.2	101.9	70.4		73.3	70.3
0800	70.4	70.8	87.7	103.4	70.4		74.2	70.3
0900	70.2	70.7	87.4	103.7	70.4		73.8	70.2
1000	70.1	70.6	85.0	102.6	70.3		73.2	70.2
1100	70.0	70.7	84.9	102.0	70.2		73.3	70.3
1200	70.3	71.0	88.3	104.1	70.6		73.5	70.5
1300	70.5	71.5	90.0	105.5	70.6		73.2	71.0
1400	70.6	71.6	90.6	105.9	70.7		73.6	71.3
1500	70.7	71.6	90.2	105.9	71.0		73.6	71.4
1600	70.8	71.7	90.0	105.8	71.0		73.6	71.6
1700	71.1	71.8	91.2	106.3	71.3		73.3	71.6
1800	71.3	72.0	92.2	107.3	71.4		73.2	71.6
1900	71.5	72.1	92.6	107.5	71.5		73.4	71.7
2000	71.4	72.2	92.6	107.5	71.5		73.4	71.6
2100	71.3	72.6	92.6	107.6	71.4		73.6	71.4
2200	71.2	71.8	93.0	107.6	71.3		73.5	71.1
2300	71.1	71.7	93.3	107.9	71.2		73.5	71.0
2400	70.8	71.6	93.5	107.9	71.0		73.6	70.4

TABLE 151
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
May 31, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	70.6	71.4	93.4	108.1	70.9		73.5	70.1
0200	70.4	71.1	93.4	108.0	70.6		73.4	69.9
0300	70.1	70.7	93.3	108.0	70.4		73.4	69.5
0400	69.9	70.6	93.2	108.0	70.1		73.4	69.4
0500	69.5	70.2	93.0	107.5	70.1		73.0	69.1
0600	69.4	70.0	93.0	106.0	69.9		73.0	69.0
0700	69.1	69.9	92.6	105.9	69.8		72.9	68.9
0800	69.1	69.9	92.6	106.4	69.5		72.9	68.6
0900	69.1	69.9	92.9	106.6	69.6		72.9	68.6
1000	69.1	70.0	93.0	107.1	69.8		72.6	68.9
1100	69.4	70.5	92.6	107.4	69.9		72.9	69.1
1200	69.6	70.6	92.9	107.4	70.0		72.6	69.5
1300	69.7	71.0	93.6	108.2	70.4		72.9	70.0
1400	70.0	71.4	94.6	109.0	70.4		72.5	70.5
1500	70.5	71.6	95.0	109.5	70.8		72.8	70.5
1600	70.6	72.0	95.4	110.0	71.0		72.5	70.6
1700	70.9	72.1	95.4	110.0	71.4		73.0	71.0
1800	71.1	72.4	95.6	110.4	71.6		73.0	71.2
1900	71.1	72.4	96.0	110.8	71.4		73.4	71.1
2000	71.4	72.4	95.9	110.9	71.5		73.4	71.0
2100	71.1	72.1	95.5	110.7	71.1		73.4	70.9
2200	71.1	72.0	95.2	110.8	71.1		73.5	70.9
2300	71.0	71.9	95.2	110.7	71.1		73.4	70.6
2400	71.0	71.9	95.5	110.7	70.9		73.5	70.4

TABLE 152
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 1, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	70.7	71.6	95.6	110.6	70.7		73.4	70.2
0200	70.6	71.5	95.4	110.6	70.6		73.4	70.0
0300	70.4	71.2	95.1	110.6	70.4		73.4	69.9
0400	70.1	71.1	95.1	110.4	70.1		73.4	69.6
0500	70.0	70.8	95.0	110.0	70.0		73.4	69.6
0600	70.0	70.6	94.8	109.9	70.0		73.4	69.6
0700	69.9	70.6	94.6	109.7	69.9		73.4	69.7
0800	69.9	70.4	94.4	109.4	69.9		73.1	69.9
0900	69.9	70.4	94.1	109.5	70.0		73.2	70.2
1000	70.1	70.6	94.1	109.8	70.3		73.3	70.5
1100	70.4	70.9	94.3	109.9	70.5		73.5	70.9
1200	70.6	71.5	94.9	110.3	70.8		73.6	71.4
1300	71.0	71.8	95.5	110.7	71.1		73.9	71.6
1400	71.4	72.5	96.1	111.5	71.4		73.9	72.2
1500	71.7	72.5	96.2	111.6	71.4		74.0	72.1
1600	71.9	72.6	96.4	111.6	71.7		74.1	72.3
1700	72.1	72.7	96.5	111.8	71.9		74.0	72.0
1800	72.1	72.8	96.7	111.9	72.0		74.1	71.7
1900	71.9	72.9	96.9	112.0	71.9		74.0	71.4
2000	71.9	72.9	96.9	112.0	71.9		74.0	71.4
2100	71.6	72.5	96.9	111.9	71.5		73.9	71.0
2200	71.4	72.4	92.0	111.9	71.4		73.9	70.5
2300	71.1	72.1	97.1	111.9	71.1		73.9	70.3
2400	70.9	71.8	97.1	111.7	70.9		73.6	69.9

TABLE 153
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 2, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	70.6	71.6	97.11	111.7	70.7		73.8	69.9
0200	70.4	71.4	97.0	111.4	70.5		73.6	69.9
0300	70.0	71.0	96.8	111.4	70.4		73.2	69.9
0400	69.9	70.8	96.7	111.2	70.1		73.1	70.1
0500	69.6	70.6	96.5	111.0	70.0		73.1	70.3
0600	69.4	70.5	96.3	111.8	70.0		73.1	70.3
0700	69.4	70.4	96.3	111.6	70.0		73.1	70.6
0800	70.0	70.6	96.3	111.6	70.0		73.1	70.4
0900	70.0	70.6	96.3	111.8	70.3		73.1	70.6
1000	70.1	70.6	96.6	111.4	70.6		73.1	70.6
1100	70.4	71.0	96.8	111.9	70.6		73.5	70.9
1200	70.7	71.5	97.1	112.1	70.9		73.5	71.1
1300	71.1	72.1	92.5	112.6	71.3		73.5	71.5
1400 ^{1/}	71.4	72.4	97.9	113.0	71.6		73.6	71.7
1500	71.7	72.6	83.0	102.1	72.0		73.9	71.9
1600	72.0	72.6	83.3	102.4	72.0		73.9	72.0
1700	72.1	72.9	83.4	102.4	72.1		74.0	71.8
1800	72.1	73.1	83.3	102.4	72.0		73.9	71.7
1900	72.1	73.1	83.5	102.5	72.0		73.9	71.5
2000	72.1	73.1	83.6	102.5	72.0		74.0	71.5
2100	72.1	73.0	83.5	102.6	72.0		74.0	71.5
2200	72.0	72.9	83.4	102.6	71.8		74.0	71.2
2300	71.6	72.6	83.4	102.4	71.6		73.9	71.1
2400	71.6	72.5	83.2	102.4	71.5		73.9	71.0

^{1/} Instruments zeroed to ground truth data.

TABLE 154
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 3, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	71.4	72.4	83.0	102.1	71.4		73.9	71.0
0200	71.4	72.1	83.0	102.0	71.3		74.1	71.0
0300	71.4	72.1	82.8	101.8	71.1		73.8	71.0
0400	71.1	72.0	82.6	101.8	71.1		73.9	71.1
0500	71.1	71.7	82.6	101.5	71.1		73.8	71.2
0600	71.0	71.6	82.5	101.4	71.1		73.8	71.3
0700	70.9	71.6	82.4	101.4	71.1		74.0	71.4
0800	71.1	71.6	82.4	101.3	71.1		73.9	71.4
0900	71.3	71.9	82.9	101.6	71.4		73.9	71.7
1000	71.6	72.1	82.9	101.8	71.6		74.4	72.0
1100	71.6	72.5	82.6	101.4	71.9		75.0	72.1
1200	72.1	72.6	82.4	96.1	72.0		74.6	72.4
1300	72.4	73.3	82.6	97.4	72.1		75.0	72.4
1400	72.5	73.6	82.6	99.8	72.5		74.6	72.6
1500	72.9	74.0	83.1	101.2	72.6		74.9	72.6
1600	73.1	74.5	82.6	101.2	72.9		75.0	72.6
1700	73.4	74.5	79.5	100.3	73.0		75.1	72.6
1800	73.4	74.6	79.1	99.8	73.0		75.1	72.9
1900	73.4	74.5	80.8	100.5	73.0		75.0	72.6
2000	73.4	74.4	81.6	101.0	73.0		75.0	72.6
2100	73.3	74.1	81.6	101.2	72.9		75.1	72.5
2200	73.1	74.0	81.1	101.2	72.8		75.0	72.4
2300	73.1	73.9	80.5	100.8	72.7		74.9	72.1
2400	72.9	73.7	81.1	100.8	72.6		74.4	71.8

TABLE 155
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 4, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.7	73.7	81.4	101.0	72.4		75.0	72.0
0200	72.4	73.3	81.6	100.7	72.2		74.9	71.9
0300	72.4	73.1	81.6	100.9	72.1		74.9	71.9
0400	72.3	72.9	81.1	101.1	72.0		75.0	71.9
0500	72.2	72.8	81.1	100.9	72.0		74.9	71.9
0600	72.1	72.6	81.1	101.2	72.0		75.0	72.0
0700	72.1	72.8	81.1	101.2	72.0		75.1	72.1
0800	72.2	72.7	81.1	101.1	72.1		75.1	72.3
0900	72.4	73.0	81.4	101.3	72.3		75.2	72.4
1000	72.6	73.1	82.1	101.6	72.4		75.4	72.6
1100	72.7	73.5	82.3	102.0	72.6		75.5	72.8
1200	73.0	73.9	82.8	102.5	72.9		75.4	72.9
1300	73.3	74.4	82.1	102.6	73.2		75.4	72.9
1400	73.5	74.6	80.4	101.9	73.4		75.6	73.0
1500	73.4	75.2	80.3	101.8	73.7		75.5	73.4
1600	74.1	75.4	80.5	102.0	73.7		75.4	73.4
1700	74.1	75.6	80.8	102.3	73.9		75.3	73.4
1800	74.1	75.8	80.6	102.0	73.8		75.4	73.4
1900	74.1	75.6	80.2	101.9	73.9		75.3	73.0
2000	73.9	75.4	80.0	101.5	73.6		75.4	73.4
2100	73.9	75.1	80.0	101.4	73.5		75.4	72.9
2200	73.5	74.8	79.9	101.1	73.1		75.4	72.6
2300	73.6	74.6	79.9	101.1	73.1		75.5	72.6
2400	73.3	74.4	79.6	100.8	72.9		75.7	72.4

TABLE 156
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 5, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.1	74.0	79.1	100.6	72.8		75.3	72.4
0200	73.0	74.0	78.7	100.2	72.7		75.0	72.3
0300	72.9	73.9	78.5	100.1	72.6		74.9	72.3
0400	72.9	73.6	77.9	99.9	72.5		74.9	72.1
0500	72.7	73.5	77.7	99.7	72.4		75.2	72.4
0600	72.4	73.3	78.0	99.7	72.3		75.2	72.7
0700	72.1	73.1	77.6	99.6	72.1		75.1	72.9
0800	72.1	73.3	77.9	99.6	72.3		75.3	73.1
0900	72.7	73.6	78.7	99.9	72.5		75.4	73.0
1000	72.9	73.9	78.9	100.1	72.6		75.4	73.4
1100	73.1	74.0	79.1	100.5	72.9		75.5	73.6
1200	73.4	74.4	79.5	101.0	73.1		75.3	73.9
1300	73.4	74.6	81.6	102.1	73.4		75.5	74.1
1400	73.8	74.9	84.3	103.5	73.4		75.7	74.1
1500	74.1	75.2	84.6	103.5	73.9		75.5	74.1
1600	74.6	75.5	84.5	102.4	74.0		75.4	74.5
1700	74.6	75.9	83.6	101.6	74.4		75.9	74.1
1800	74.9	75.9	82.3	101.8	74.4		75.2	74.3
1900	74.9	75.9	82.3	101.1	74.5		76.0	74.3
2000	74.9	75.9	82.3	101.4	74.5		75.9	74.1
2100	74.6	75.8	81.7	101.1	74.4		75.9	74.1
2200	74.7	75.6	81.2	100.6	74.4		76.1	74.1
2300	74.6	75.4	81.2	100.4	74.3		76.1	73.9
2400	74.4	75.4	80.6	100.1	74.1		76.0	73.7

TABLE 157
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 June 6, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	74.1	75.3	80.4	100.0	74.0		76.1	73.4
0200	74.0	75.1	79.7	99.6	73.8		76.0	73.2
0300	73.9	75.0	79.0	99.2	73.6		75.8	73.0
0400	73.7	74.8	78.4	98.9	73.3		75.8	73.0
0500	73.6	74.5	77.9	98.5	73.2		75.8	73.0
0600	73.5	74.5	77.6	98.2	72.9		75.9	73.0
0700	73.4	74.0	77.4	98.0	72.9		75.9	73.0
0800	73.4	74.0	77.1	98.0	72.9		75.9	73.1
0900	73.5	74.3	76.8	98.1	73.0		*76.0	73.4
1000	73.5	74.5	76.6	97.9	73.0		76.3	73.4
1100	73.7	74.8	76.4	98.0	73.3		76.1	73.7
1200	74.0	75.2	76.8	98.4	73.6		76.6	74.1
1300	74.3	75.4	76.8	98.6	73.9		76.6	74.4
1400	74.6	75.9	76.9	98.9	74.1		76.6	74.6
1500	74.7	76.1	77.1	99.1	74.1		76.6	75.0
1600	75.1	76.7	77.1	99.5	74.6		76.9	75.2
1700	75.4	76.9	77.2	99.6	6		76.9	75.4
1800	75.4	77.0	77.1	99.6	4.9		76.9	75.4
1900	75.6	77.0	77.0	99.5	75.0		77.0	75.8
2000	75.6	76.9	77.0	99.4	75.0		77.1	75.6
2100	75.5	76.7	76.9	99.4	74.9		77.3	75.4
2200	75.5	76.6	76.8	99.1	74.9		77.4	75.4
2300	75.5	76.5	76.6	99.0	74.9		77.4	75.0
2400	75.5	76.3	76.7	98.9	74.7		77.2	74.9

TABLE 158
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 7, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	75.3	76.2	76.6	98.7	74.6		77.1	74.9
0200	75.1	76.0	76.6	97.8	74.5		77.1	74.6
0300	74.9	75.9	76.5	95.8	74.4		77.1	74.4
0400	74.5	75.4	76.1	94.8	74.1		77.6	74.0
0500	74.4	75.4	76.0	93.4	74.0		77.1	74.0
0600	74.0	75.1	75.5	91.0	72.9		77.1	74.1
0700	74.1	75.0	75.0	90.4	73.7		77.1	73.6
0800	74.1	75.0	74.0	89.9	73.6		77.2	73.5
0900	74.0	75.1	73.9	89.5	73.5		77.1	73.5
1000	74.1	75.4	72.7	89.5	73.5		77.0	73.6
1100	74.3	75.5	71.6	90.0	73.6		77.2	74.0
1200	74.4	75.7	71.4	91.4	73.9		77.1	74.4
1300	74.8	76.0	71.1	93.3	74.5		77.8	74.8
1400	75.0	76.4	71.0	94.1	74.5		78.1	75.3
1500	75.1	76.5	71.1	94.2	74.9		78.8	74.9
1600	75.3	76.6	71.4	94.6	74.6		72.0	75.6
1700	75.4	76.6	72.0	95.1	74.9		76.9	75.6
1800	75.4	76.5	73.1	95.9	74.9		77.0	75.6
1900	75.4	76.4	73.6	96.4	74.6		77.4	75.7
2000	75.1	76.3	73.5	96.4	74.9		77.3	75.2
2100	75.4	76.1	73.6	96.4	74.5		77.6	75.2
2200	74.9	76.1	73.9	96.6	74.4		77.6	75.1
2300	74.9	75.9	74.1	95.9	74.1		77.5	74.9
2400	75.0	75.5	74.6	97.0	74.4		77.6	74.6

TABLE 159
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 8, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	75.0	75.5	75.0	97.4	74.4		77.1	74.4
0200	74.8	75.6	75.1	97.6	74.1		77.4	73.9
0300	74.6	75.5	75.4	97.8	74.0		77.2	73.9
0400	74.3	75.6	75.9	98.3	73.9		77.0	73.6
0500	74.1	75.3	76.1	98.1	73.7		77.2	73.5
0600	74.0	75.1	76.2	98.1	73.6		77.1	73.6
0700	73.9	75.0	76.8	98.4	73.4		76.7	73.4
0800	73.9	75.0	77.0	98.9	73.5		77.0	73.2
0900	74.1	74.9	78.0	99.6	73.6		77.0	73.1
1000	74.1	75.1	78.6	99.9	73.9		76.9	73.4
1100	74.4	75.4	79.1	100.2	74.0		77.0	73.5
1200	74.6	75.9	79.6	100.6	74.1		77.0	74.0
1300	74.7	76.1	80.4	101.1	74.4		76.6	74.4
1400	75.0	76.4	80.6	101.4	74.4		77.1	74.4
1500	75.0	76.1	80.7	101.8	74.6		77.1	74.9
1600	74.9	76.3	80.9	101.9	74.4		77.0	74.9
1700	75.1	76.1	80.8	101.7	74.4		77.4	74.6
1800	75.1	76.1	80.6	101.4	74.4		77.1	74.6
1900	75.0	75.9	80.0	101.4	74.4		77.4	74.6
2000	74.9	75.9	79.9	101.1	74.4		77.7	74.4
2100	74.9	75.7	79.4	100.7	74.1		77.6	74.4
2200	74.7	75.5	78.8	100.4	74.1		77.3	74.1
2300	74.6	75.4	78.6	100.2	74.0		77.6	74.0
2400	74.4	75.2	78.5	99.4	73.9		77.4	74.0

TABLE 160
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 9, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	74.1	74.9	78.0	99.1	73.6		77.2	73.5
0200	73.9	74.9	77.9	99.0	73.5		77.1	73.4
0300	73.7	74.6	77.4	98.6	73.4		76.9	73.1
0400	73.3	74.4	77.4	98.4	73.1		77.0	72.9
0500	73.1	74.1	76.9	98.0	72.9		76.9	72.6
0600	72.9	73.9	76.9	97.9	72.6		76.9	72.4
0700	72.6	73.6	76.9	97.6	72.5		76.9	72.1
0800	72.7	73.6	76.6	98.2	72.5		76.9	72.0
0900	72.8	73.6	76.6	98.6	72.4		76.6	72.0
1000	72.9	73.8	77.0	98.8	72.6		76.6	72.2
1100	73.0	73.9	77.1	98.9	72.9		76.5	72.6
1200	73.1	74.1	77.5	99.2	72.9		76.7	72.6
1300	73.4	74.6	78.6	99.9	73.0		76.4	73.2
1400	73.5	74.5	78.6	100.1	73.1		76.9	73.4
1500	73.4	74.5	78.6	99.9	72.6		76.9	73.0
1600 ^{1/}								
1700								
1800								
1900								
2000								
2100								
2200								
2300								
2400								

^{1/} Recorder not printing.

TABLE 161
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 June 10, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100 ^{1/}								
0200								
0300								
0400								
0500								
0600								
0700								
0800								
0900								
1000								
1100								
1200								
1300								
1400								
1500								
1600								
1700								
1800								
1900								
2000								
2100								
2200								
2300								
2400								

^{1/}Recorder not printing.

TABLE 162
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 11, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.1	73.0	74.8	97.4	71.9		75.1	71.3
0200	71.7	72.6	74.9	97.4	71.5		75.0	71.0
0300	71.4	72.5	75.2	97.4	71.4		74.9	71.0
0400	71.4	72.2	75.1	97.3	71.2		74.9	70.8
0500	71.4	72.1	75.4	97.4	71.1		74.9	70.6
0600	71.3	71.9	75.3	97.3	70.9		74.9	70.6
0700	71.2	71.9	75.6	97.2	71.1		74.9	70.5
0800	71.3	71.8	75.9	97.3	71.0		74.8	70.6
0900	71.4	71.8	75.9	97.6	71.0		74.9	70.9
1000	71.4	71.9	75.9	97.4	71.1		74.9	70.8
1100 ^{1/}	71.4	72.0	76.6	97.7	71.4		74.9	71.0
1200	71.6	72.1	76.6	97.7	71.4		74.9	71.1
1300	71.8	72.4	76.8	98.1	71.6		75.1	71.4
1400	72.0	72.6	77.6	98.2	71.9		75.1	71.7
1500	72.1	72.7	77.4	98.5	72.0		75.0	72.0
1600	72.4	73.1	77.9	98.8	72.1		75.1	72.1
1700	72.6	73.6	77.9	99.0	72.3		75.4	72.4
1800	72.7	73.6	77.4	98.9	72.4		75.4	72.4
1900	72.7	73.7	77.4	99.0	72.4		75.6	72.4
2000	72.9	73.7	77.4	98.0	72.3		75.6	72.3
2100	72.7	73.6	77.1	98.0	72.1		75.4	72.2
2200	72.8	73.5	77.2	98.6	72.1		75.4	72.1
2300	72.8	73.2	77.0	98.4	72.1		75.4	71.9
2400	72.6	73.1	76.1	98.3	72.1		75.4	71.6

^{1/} Instruments zeroed to ground truth data.

TABLE 163
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 12, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.7	73.1	76.9	98.0	72.1		75.1	71.6
0200	72.4	73.0	76.4	94.9	72.0		75.1	71.6
0300	72.1	72.8	76.2	93.1	71.9		75.0	71.5
0400	72.1	72.7	76.4	93.1	71.6		74.9	71.4
0500	72.0	72.7	76.4	95.1	71.6		75.0	71.2
0600	71.9	72.5	76.4	96.7	71.6		74.6	71.1
0700	71.9	72.5	75.4	96.5	71.6		74.9	71.1
0800	71.9	72.4	74.9	95.8	71.5		74.9	71.0
0900	71.9	72.5	74.6	95.7	71.6		74.9	71.1
1000	72.1	72.6	76.0	96.8	71.7		74.9	71.3
1100	72.1	72.9	77.4	97.4	71.7		74.9	71.6
1200	72.4	73.1	77.4	98.0	72.0		75.0	71.9
1300	72.4	73.3	77.6	98.4	72.0		74.9	72.4
1400	72.6	73.5	77.4	98.8	72.1		75.0	72.6
1500	72.8	73.5	77.9	98.2	72.3		75.0	72.6
1600	73.1	73.7	78.8	99.9	72.6		75.6	72.7
1700	73.5	73.9	79.1	100.1	72.9		75.5	73.0
1800	73.6	74.0	79.1	100.0	73.0		75.5	73.4
1900	73.6	74.1	79.1	100.3	73.0		75.8	73.1
2000	73.6	74.1	79.5	100.2	72.9		75.5	73.1
2100	73.6	74.1	79.6	100.4	72.9		75.5	72.9
2200	73.5	74.1	79.6	100.1	72.8		75.6	73.0
2300	73.2	74.0	79.6	100.2	72.7		75.6	72.8
2400	73.1	74.0	79.6	100.2	72.6		75.7	72.6

TABLE 164
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 13, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.0	74.0	79.4	99.4	72.6		75.9	72.2
0200	72.9	73.9	79.4	97.9	72.6		75.6	72.4
0300	72.9	73.7	79.6	96.3	72.4		75.6	72.2
0400	72.8	73.6	78.9	95.2	72.2		75.4	72.4
0500	72.6	73.3	78.4	94.6	71.9		75.4	71.7
0600	72.6	73.0	77.4	94.5	71.7		75.2	71.6
0700	70.7	72.9	75.7	93.4	71.8		75.1	72.1
0800	69.6	73.1	75.0	92.9	71.6		75.2	72.4
0900	70.4	73.5	74.8	92.9	71.9		74.9	72.9
1000	70.9	73.4	74.8	92.9	72.0		75.3	72.7
1100	71.1	73.3	75.1	94.0	72.0		75.5	72.9
1200	72.9	73.6	76.0	95.1	72.5		75.5	72.9
1300	73.5	74.2	76.3	95.7	72.9		75.4	73.4
1400	73.7	74.7	76.7	96.4	73.1		75.4	73.6
1500	74.0	75.0	77.1	96.9	73.4		75.6	74.0
1600	74.1	75.3	77.5	97.4	73.5		76.0	74.1
1700	74.5	75.6	78.1	98.1	73.9		76.1	74.6
1800	74.8	75.9	78.1	98.1	73.9		76.0	74.9
1900	74.9	75.9	78.4	98.5	74.0		76.3	74.8
2000	75.0	75.9	78.5	98.6	74.0		76.1	74.8
2100	75.0	75.8	78.6	98.5	74.0		76.1	74.1
2200	74.9	75.8	78.9	98.6	73.9		76.1	74.1
2300	74.7	75.6	78.9	98.6	73.8		76.1	73.6
2400	74.5	75.5	78.9	98.6	73.7		76.0	73.9

TABLE 165
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 14, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	74.4	75.4	78.4	96.1	73.5		76.0	73.5
0200	74.4	75.1	78.2	95.3	73.5		76.0	73.5
0300	74.1	75.0	78.2	95.5	73.4		75.9	73.5
0400	74.1	74.9	78.1	97.2	73.2		75.9	73.4
0500	74.1	74.7	78.1	97.7	73.3		75.9	73.5
0600	74.1	74.7	77.6	97.6	73.1		75.9	73.4
0700	74.1	74.8	76.6	97.1	73.4		76.0	73.7
0800	74.1	74.9	76.6	97.1	73.4		75.9	74.1
0900	74.4	74.9	77.0	97.4	73.6		76.0	74.4
1000	74.6	75.1	77.8	98.1	73.7		76.5	74.7
1100	74.9	75.6	77.9	98.6	74.0		76.1	75.0
1200	75.0	75.9	77.6	98.4	74.3		76.6	75.9
1300	75.4	76.6	78.1	98.9	74.5		76.6	76.0
1400	75.9	76.6	78.4	99.2	74.6		76.8	75.9
1500	75.9	77.0	78.9	99.6	74.9		76.9	76.0
1600	76.1	77.4	79.5	100.1	75.1		76.9	75.9
1700	76.2	77.4	79.3	100.1	75.4		77.1	75.9
1800	76.1	77.4	79.3	100.4	75.2		77.1	76.0
1900	76.1	77.4	79.1	100.4	75.1		77.1	75.9
2000	76.0	77.4	79.5	100.6	74.9		77.0	75.6
2100	75.9	77.1	80.0	100.8	74.9		77.4	75.4
2200	75.7	77.1	80.6	101.1	74.8		77.4	75.3
2300	75.6	76.9	80.4	101.0	74.6		77.1	75.1
2400	75.4	76.6	80.6	101.2	74.6		77.4	75.0

TABLE 166
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 15, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	75.4	76.5	80.4	101.0	74.5		77.1	75.0
0200	75.4	76.3	80.4	100.9	74.5		77.4	75.2
0300	75.4	76.3	80.0	100.9	74.6		77.4	75.2
0400	75.4	76.3	79.6	100.6	74.4		76.9	75.2
0500	75.4	76.2	79.4	100.5	74.4		77.1	75.4
0600	75.4	76.2	79.3	100.4	74.5		77.1	75.2
0700	75.4	76.4	79.6	100.6	74.5		77.2	75.4
0800	75.5	76.2	79.9	100.6	74.6		77.4	75.4
0900	75.6	76.4	79.9	100.6	74.6		77.7	75.4
1000	75.5	76.5	80.0	100.5	74.6		77.8	76.0
1100	75.5	76.2	80.0	100.6	74.4		77.4	75.2
1200	75.6	76.5	79.5	100.1	74.9		78.4	75.2
1300	75.6	76.6	79.1	100.2	74.9		78.4	75.4
1400	75.9	77.0	79.5	100.4	75.1		78.6	75.5
1500	76.0	77.1	79.4	100.6	75.1		78.6	75.9
1600	76.0	77.1	79.5	100.8	75.0		78.8	75.9
1700	75.9	77.0	79.7	100.6	75.0		78.4	75.9
1800	75.9	76.8	79.1	100.4	75.0		78.1	75.9
1900	75.9	76.5	78.6	100.1	74.9		78.1	75.6
2000	75.6	76.5	78.6	100.0	74.8		78.0	75.4
2100	75.6	76.0	78.7	100.0	74.4		78.0	75.0
2200	75.4	75.9	78.7	99.9	74.5		78.0	74.9
2300	75.4	75.9	78.1	99.6	74.4		78.9	74.7
2400	75.3	75.9	78.0	99.6	74.5		78.7	74.6

TABLE 167
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 16, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	75.1	75.9	77.6	99.1	74.4		78.6	74.6
0200	75.1	75.6	77.6	98.8	74.3		79.0	74.6
0300	75.0	75.4	77.0	98.6	74.3		78.9	74.6
0400	75.1	75.5	76.6	98.4	74.2		78.6	74.6
0500	75.0	75.4	76.2	98.2	74.1		78.9	74.5
0600	75.0	75.2	75.9	98.0	74.0		77.4	74.4
0700	74.9	75.1	75.4	97.7	74.0		77.9	74.2
0800	74.6	75.1	75.2	97.7	73.9		78.1	74.1
0900	74.5	75.0	75.0	97.6	73.8		77.4	73.8
1000	74.4	75.0	75.0	97.6	73.6		77.9	73.6
1100	74.2	75.2	74.6	97.5	73.6		78.1	73.6
1200	74.4	75.1	74.6	97.4	73.5		75.7	73.6
1300	74.2	75.2	74.2	97.4	73.5		76.0	73.6
1400	74.1	75.0	73.9	97.1	73.5		77.1	73.5
1500	74.0	74.9	73.6	97.0	73.4		75.0	73.5
1600	73.9	74.6	73.6	96.8	73.2		72.0	73.3
1700	73.6	74.5	73.4	96.4	73.0		74.0	72.9
1800	73.4	74.4	73.4	96.6	72.9		75.0	72.7
1900	73.4	74.1	73.0	96.6	72.6		75.9	72.7
2000	73.0	73.9	73.0	96.3	72.4		76.5	72.6
2100	72.8	73.5	73.1	96.3	72.1		71.9	72.2
2200	72.6	73.4	73.4	96.2	72.0		73.6	72.2
2300	72.1	73.0	73.8	96.3	71.9		75.0	72.0
2400	72.1	72.8	74.1	96.2	71.6		75.0	71.9

TABLE 168
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 17, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.0	72.5	74.1	95.9	71.6		74.7	71.6
0200	71.7	72.2	73.9	94.6	71.4		73.9	71.5
0300	71.6	72.1	73.6	93.0	71.1		74.6	71.4
0400	71.5	71.9	73.5	92.4	71.1		74.0	71.0
0500	71.3	71.6	73.6	92.6	71.0		74.0	70.6
0600	71.0	71.5	73.5	93.0	70.8		73.8	70.6
0700	71.0	71.5	72.9	93.4	70.6		73.6	70.4
0800	71.0	71.5	72.1	93.7	70.7		73.6	70.4
0900	71.1	71.6	72.3	93.8	70.6		73.6	70.4
1000	71.1	71.6	73.1	94.1	70.9		73.6	70.5
1100	71.3	71.9	73.5	94.7	70.9		73.6	70.6
1200	71.5	72.1	74.3	95.1	71.0		73.7	70.9
1300	71.6	72.5	74.6	95.5	71.4		73.9	71.2
1400	71.9	72.6	75.0	96.0	71.4		73.7	71.4
1500	71.9	72.9	75.0	96.5	71.4		74.0	71.4
1600	72.1	72.9	75.1	96.5	71.5		74.1	71.9
1700	72.1	73.0	75.1	96.6	71.6		74.1	71.9
1800	72.1	73.0	74.8	96.8	71.5		74.1	71.9
1900	72.0	72.9	75.0	96.7	71.4		74.4	71.6
2000	72.0	72.6	75.0	96.7	71.3		74.1	71.4
2100	71.8	72.5	74.9	96.7	71.3		74.5	71.1
2200	71.6	72.2	75.0	96.9	71.0		74.8	71.0
2300	71.4	72.0	74.9	96.9	70.9		74.8	71.0
2400	71.4	71.9	74.8	96.7	70.9		75.0	70.8

TABLE 169
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 18, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	71.4	71.6	74.1	96.1	70.9		75.0	71.0
0200	71.2	71.5	73.9	93.1	70.8		75.0	71.0
0300	71.4	71.5	73.8	91.4	70.8		75.3	71.0
0400	71.4	71.4	73.6	91.2	70.8		75.4	71.0
0500	71.4	71.5	73.6	91.2	70.9		75.5	71.0
0600	71.4	71.5	73.9	92.1	70.9		75.5	71.1
0700	71.5	71.5	72.4	92.8	71.0		75.5	71.0
0800	71.4	71.5	71.9	92.6	71.0		75.4	70.8
0900	71.6	71.6	71.9	92.9	71.1		75.4	70.8
1000	71.7	72.1	72.3	93.5	71.2		75.4	70.5
1100	71.9	72.4	73.4	92.4	71.4		75.4	70.5
1200	72.0	72.7	74.4	95.1	71.6		75.4	70.9
1300	72.4	73.2	75.2	96.0	71.9		75.6	71.1
1400 ^{1/}	72.6	73.5	76.0	96.9	72.1		75.9	71.4
1500	72.9	74.0	94.8	107.9	72.2		74.4	73.1
1600	72.9	74.0	95.0	108.1	72.2		74.5	73.1
1700	73.0	74.1	95.5	108.5	72.4		74.8	73.4
1800	73.1	74.1	95.5	108.7	72.4		74.6	73.5
1900	73.0	74.0	95.4	108.7	72.2		74.6	73.4
2000	73.0	73.6	95.1	108.7	72.2		74.3	73.3
2100	72.6	73.5	95.0	108.6	72.1		74.0	73.2
2200	72.5	73.4	94.8	108.4	72.0		73.9	72.9
2300	72.2	73.0	94.6	108.4	71.7		74.1	72.7
2400	72.1	72.9	94.6	108.1	71.6		73.2	72.7

^{1/} Instruments zeroed to ground truth data.

TABLE 170
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 19, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.0	72.6	94.5	108.1	71.5		74.2	72.6
0200	72.1	72.6	94.0	107.9	71.5		74.5	72.6
0300	72.0	72.6	93.9	107.7	71.5		74.9	72.6
0400	72.1	72.5	93.9	107.5	71.5		75.0	72.9
0500	72.0	72.4	93.6	107.4	71.4		75.4	72.8
0600	72.1	72.1	93.6	107.3	71.6		75.6	72.8
0700	72.2	72.4	93.5	107.1	71.6		75.5	72.7
0800	72.4	72.5	93.4	107.4	71.9		75.6	72.7
0900	72.5	72.6	93.4	107.2	71.9		75.6	72.7
1000	72.5	73.0	93.7	107.2	72.0		75.6	72.8
1100 ^{1/}								
1200								
1300								
1400	74.4	75.2	95.6	109.1	73.9		76.5	74.4
1500	74.8	75.5	95.8	109.6	74.0		76.5	75.1
1600	74.9	76.0	95.9	109.8	74.2		76.6	75.4
1700	75.0	76.0	95.9	109.9	74.3		76.6	75.0
1800	75.0	76.0	95.9	109.9	74.3		77.0	75.0
1900	74.9	75.9	95.6	109.9	74.1		76.7	74.7
2000	74.7	75.6	95.6	109.5	74.0		76.2	74.5
2100	74.5	75.4	95.6	109.5	73.9		76.1	74.4
2200	74.4	75.2	95.4	109.4	73.6		76.0	74.2
2300	74.0	74.9	94.9	108.8	73.4		75.9	74.0
2400	73.9	74.6	94.8	108.6	73.1		76.0	73.9

^{1/} Recorder turned off.

TABLE 171
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 20, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.7	74.5	94.4	108.5	73.0		76.0	73.9
0200	73.6	74.4	94.1	108.2	73.0		76.1	73.9
0300	73.4	74.1	93.9	106.0	72.9		76.4	73.9
0400	73.4	74.0	93.6	104.7	72.8		76.6	73.9
0500	73.5	73.8	93.4	103.3	72.8		76.8	74.0
0600	73.4	73.7	93.4	103.0	72.9		76.7	74.0
0700	73.4	73.7	93.4	102.9	73.4		72.8	76.8
0800	73.6	73.6	92.4	103.4	73.0		77.0	74.1
0900	73.7	73.6	91.8	103.6	72.9		76.7	74.1
1000	73.7	73.8	91.4	104.0	73.0		76.5	73.9
1100	73.8	73.9	91.8	105.0	73.1		76.4	74.6
1200	74.0	74.1	92.3	105.8	73.4		76.3	74.0
1300	74.1	74.4	93.2	106.4	73.6		76.1	74.0
1400	74.4	74.8	93.9	107.0	73.7		76.4	74.1
1500	74.4	75.2	94.9	107.6	73.9		76.3	74.5
1600	74.6	75.5	95.5	108.3	74.0		76.1	74.6
1700	74.6	75.7	95.8	108.7	74.0		76.1	74.5
1800	74.6	75.7	95.8	108.9	74.0		76.0	74.5
1900	74.5	75.6	95.5	108.9	73.9		76.0	74.1
2000	74.2	75.3	95.1	108.7	73.7		75.8	74.0
2100	74.0	75.0	95.2	108.7	73.4		75.7	73.9
2200	73.8	74.8	85.3	108.7	73.1		75.5	73.6
2300	73.4	74.4	95.3	108.4	72.9		75.4	73.5
2400	73.2	74.1	95.5	108.6	72.7		75.7	73.1

TABLE 172
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 21, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.1	73.9	95.5	108.6	72.6		75.4	73.2
0200	73.0	73.6	95.3	108.0	72.5		75.6	73.1
0300	73.0	73.4	95.1	106.9	72.4		76.0	73.1
0400	73.0	73.5	95.0	105.5	72.5		76.1	73.4
0500	72.9	73.4	95.0	103.9	72.5		76.4	73.5
0600	73.0	73.4	95.0	103.1	72.6		76.6	73.8
0700	73.1	83.3	94.4	102.0	72.6		76.4	73.9
0800	73.3	93.5	93.8	103.1	72.8		76.6	74.0
0900	73.4	73.6	93.1	103.1	72.9		78.9	73.9
1000	73.4	73.6	92.3	103.7	72.9		76.6	73.9
1100	73.4	73.7	92.0	104.0	72.9		76.4	73.7
1200	73.4	73.9	91.4	104.2	73.0		76.3	73.4
1300	73.4	74.0	91.8	104.3	73.0		76.3	73.6
1400	73.5	74.0	92.2	104.7	72.9		74.6	73.7
1500	73.4	64.0	92.5	105.0	72.9		76.1	73.6
1600	73.4	74.0	92.8	105.2	72.9		76.1	73.6
1700	73.4	74.1	93.1	105.9	72.9		76.0	73.5
1800	73.4	74.0	93.4	106.0	72.9		76.0	73.4
1900	73.2	74.0	93.6	105.7	72.9		75.9	73.4
2000	73.1	73.7	93.6	104.5	72.2		75.6	73.0
2100	72.9	73.4	93.6	103.5	72.1		75.1	72.6
2200	72.6	73.1	93.5	103.2	72.0		75.1	72.8
2300	72.4	73.1	93.2	103.1	72.0		75.1	72.8
2400	72.3	73.0	92.4	102.4	71.9		75.1	72.8

TABLE 173
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 22, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.1	72.9	91.4	100.1	71.7		75.1	72.6
0200	72.0	72.6	90.5	98.1	71.6		74.9	72.6
0300	71.8	72.4	90.2	96.9	71.4		74.7	72.4
0400	71.7	72.2	90.1	95.4	71.4		74.6	72.2
0500	71.4	72.0	89.7	95.0	71.1		74.5	72.1
0600	71.3	71.6	88.3	94.9	71.0		74.4	72.0
0700	71.1	71.6	87.1	94.8	71.0		74.4	71.9
0800	71.1	71.6	86.4	95.1	70.9		74.4	71.7
0900	71.1	71.7	85.8	95.4	71.0		74.2	71.7
1000	71.1	71.8	85.6	95.9	70.9		74.1	71.6
1100	71.4	72.0	85.9	97.8	71.0		74.1	72.0
1200	71.5	72.4	86.2	99.0	71.1		74.2	71.8
1300	71.6	72.6	86.5	99.9	71.2		74.1	71.9
1400	71.6	72.9	86.9	100.9	71.3		74.1	71.8
1500	71.7	72.9	87.0	101.4	71.4		74.1	72.0
1600	72.1	73.3	88.4	102.6	71.6		74.4	72.1
1700	72.4	73.3	89.1	102.9	71.8		74.4	72.4
1800	72.0	73.1	89.3	103.4	71.6		74.3	72.0
1900	72.0	73.1	89.6	103.4	71.6		74.1	71.9
2000	71.9	72.6	89.8	103.6	71.4		74.2	71.9
2100	71.6	72.5	90.0	104.7	71.3		74.2	71.9
2200	71.4	72.1	90.0	103.9	71.1		74.3	71.6
2300	71.6	71.9	90.2	104.0	71.0		74.4	71.9
2400	71.4	71.6	90.6	104.1	70.9		74.6	71.7

TABLE 174
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 23, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	71.4	71.6	90.8	104.4	71.0		75.0	71.9
0200	71.4	71.6	90.8	104.4	71.1		75.1	71.6
0300	71.6	71.6	90.9	104.6	71.1		75.1	72.2
0400	71.7	71.6	90.9	104.6	71.3		75.4	72.4
0500	71.7	71.6	90.9	104.6	71.4		75.2	72.4
0600	71.8	71.7	91.0	104.8	71.4		75.1	72.4
0700	71.9	71.7	91.0	104.9	71.4		75.0	72.4
0800	71.9	71.9	91.3	105.0	71.5		74.4	72.3
0900	72.0	72.0	91.6	105.3	71.5		74.0	72.3
1000	72.0	72.4	92.1	105.6	71.6		74.1	72.3
1100	72.1	72.6	92.8	106.4	71.7		76.6	72.4
1200	72.4	73.0	93.6	106.9	71.9		74.4	72.4
1300 ^{1/}	72.6	73.4	93.9	107.4	72.0		74.4	72.6
1400	72.6	73.8	94.6	107.9	72.1		74.5	72.6
1500	72.9	74.0	95.1	108.2	72.4		75.0	72.7
1600	72.9	74.0	95.4	108.6	72.5		75.1	72.9
1700	73.0	74.0	95.2	108.6	72.4		75.0	72.9
1800	73.0	74.1	95.1	108.6	72.4		74.6	72.9
1900	72.9	73.9	94.9	108.1	72.3		74.8	72.7
2000	72.6	73.6	94.6	108.0	72.1		74.1	72.6
2100	72.5	73.2	94.5	107.6	72.0		76.0	72.4
2200	72.5	73.1	94.6	107.7	72.0		75.0	72.6
2300	72.5	73.0	94.4	107.6	71.9		74.8	72.9
2400	72.6	73.0	94.4	107.4	72.0		73.8	73.4

^{1/} Instruments zeroed to ground truth data

TABLE 175
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 24, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.7	73.0	92.3	104.3	72.1		74.9	73.6
0200	72.7	72.6	92.9	101.0	72.0		75.4	73.5
0300	72.7	72.6	92.5	99.6	72.0		74.9	73.8
0400	72.7	72.7	92.2	99.4	72.0		73.9	73.8
0500	72.8	72.8	92.4	99.6	72.1		72.4	73.8
0600	72.9	73.0	91.1	101.0	72.3		71.8	73.5
0700	72.1	72.9	90.0	101.6	72.1		71.6	73.4
0800	72.4	72.8	89.4	102.1	72.0		71.4	73.1
0900	72.6	73.1	89.2	102.4	72.0		71.4	72.9
1000	72.0	73.4	89.9	103.2	72.3		73.2	73.4
1100	72.6	73.4	90.6	103.9	72.1		73.6	73.4
1200	72.5	73.5	91.7	104.6	72.1		73.4	73.3
1300	72.4	73.4	93.1	105.5	72.9		72.4	72.8
1400	72.4	73.7	93.7	106.0	72.0		72.9	72.8
1500	72.6	73.9	94.7	106.6	72.0		73.0	72.7
1600	72.4	73.9	95.5	107.2	71.9		72.9	72.6
1700	72.4	73.9	95.9	107.7	71.9		72.6	72.6
1800	72.4	73.6	96.4	108.1	71.9		72.5	72.5
1900	72.3	73.4	96.8	108.2	71.9		72.4	72.5
2000	72.1	73.4	96.9	108.2	71.7		72.4	72.6
2100	72.1	73.1	97.0	108.4	71.6		72.4	72.5
2200	72.1	73.0	97.1	108.6	71.6		72.9	72.7
2300	72.0	72.9	96.9	108.6	71.6		72.9	72.8
2400	72.1	72.8	96.7	108.7	71.6		73.0	72.9

TABLE 176
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 25, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.1	72.6	96.1	108.6	71.9		73.1	73.1
0200	72.2	72.7	95.8	108.6	71.9		73.3	73.2
0300	72.4	72.7	95.4	108.4	72.0		73.3	73.4
0400	72.4	72.7	95.0	107.4	72.0		73.4	73.4
0500	72.5	72.8	95.0	105.0	72.0		73.4	73.4
0600	72.4	72.6	94.7	105.2	72.0		73.1	73.3
0700	72.1	72.6	94.5	106.0	71.8		72.9	73.0
0800	72.0	72.8	95.6	106.9	71.8		72.9	72.9
0900	71.9	72.9	97.6	107.7	71.7		72.6	72.9
1000	71.9	63.0	96.5	108.4	71.6		72.5	72.9
1100	71.9	73.0	94.8	106.5	71.6		72.2	72.6
1200	72.0	73.4	94.0	107.0	71.7		72.1	72.6
1300	72.0	73.6	95.2	107.1	71.9		72.4	72.6
1400	72.2	73.6	95.6	107.6	71.9		72.1	72.4
1500	72.4	74.0	95.6	108.0	71.9		72.4	72.6
1600	72.4	74.0	94.6	107.6	72.2		72.3	72.3
1700	72.4	74.0	94.7	107.6	72.2		72.4	72.2
1800	72.3	73.8	94.6	107.4	72.1		72.5	72.4
1900	72.1	73.5	94.6	107.5	72.1		72.3	72.4
2000	72.1	73.2	94.6	107.5	72.0		72.3	72.3
2100	72.1	73.1	94.6	107.6	72.0		72.3	72.6
2200	72.2	72.9	94.4	107.5	72.0		72.8	72.8
2300	72.3	72.9	94.4	107.4	72.1		73.2	73.0
2400	72.4	72.7	94.5	105.3	72.3		73.8	73.4

TABLE 177
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 June 26, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.5	72.7	94.5	102.2	72.4		73.5	73.4
0200	72.6	73.0	94.4	101.8	72.5		73.6	73.5
0300	72.9	73.0	94.1	101.8	72.6		73.5	73.8
0400	72.9	73.1	94.0	101.8	72.7		73.6	73.8
0500	72.9	73.1	92.6	101.3	72.7		73.5	73.5
0600	72.9	73.1	91.1	101.6	72.8		73.4	73.4
0700	72.7	73.1	90.4	102.9	72.5		73.1	73.0
0800	72.6	73.1	90.4	103.3	72.4		73.1	73.1
0900	72.6	73.4	90.7	104.0	72.4		73.1	73.0
1000	72.6	73.5	91.0	104.4	72.4		73.1	73.0
1100	72.6	73.6	92.1	104.7	72.4		72.7	73.0
1200	72.7	74.0	94.1	106.1	72.5		72.9	73.0
1300	72.8	74.3	95.2	107.3	72.7		72.9	73.1
1400	72.9	74.4	95.6	107.7	72.8		72.8	73.0
1500	72.9	74.4	96.0	108.1	72.8		72.8	73.0
1600	73.1	74.6	96.5	108.6	72.9		73.1	73.4
1700	73.1	74.8	95.8	108.5	72.9		73.1	73.4
1800	73.0	74.6	96.1	108.6	72.9		73.1	73.3
1900	73.0	74.4	96.4	108.8	73.4		73.1	72.9
2000	73.1	74.3	96.5	108.8	73.4		73.8	73.1
2100	73.0	74.1	96.5	108.8	73.3		74.1	73.4
2200	73.0	73.9	96.4	108.9	72.8		74.1	73.9
2300	73.1	73.9	96.4	108.9	72.9		73.9	74.0
2400	73.2	73.9	96.2	108.0	73.0		74.1	74.2

TABLE 178
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 27, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.4	73.7	95.4	104.1	73.2		74.4	74.6
0200	73.6	73.9	95.1	102.5	73.4		74.1	74.8
0300	73.6	74.0	94.7	101.9	73.4		75.1	74.9
0400	73.8	74.0	94.4	101.6	73.5		75.2	74.9
0500	73.9	74.0	93.9	101.5	73.5		74.9	74.9
0600	73.7	74.0	92.4	100.9	73.4		74.9	74.9
0700	73.6	74.1	90.5	100.0	73.4		74.6	74.5
0800	73.4	74.1	90.1	101.1	73.1		74.4	74.3
0900	73.4	74.1	90.4	102.1	73.1		74.0	73.9
1000	73.1	74.3	90.7	103.0	73.0		73.8	73.9
1100	73.1	74.4	71.0	103.5	73.0		73.8	73.8
1200	73.1	74.5	90.9	103.5	73.0		73.6	73.6
1300	73.3	74.6	92.2	104.2	73.1		73.6	73.1
1400	73.5	74.8	93.0	105.0	73.1		73.4	73.1
1500	73.4	75.0	94.7	105.5	73.3		73.2	73.5
1600	73.5	75.0	94.1	106.0	73.3		73.1	73.4
1700	73.4	75.0	94.1	106.1	73.2		73.4	73.4
1800	73.4	74.9	94.3	106.4	73.2		73.4	73.5
1900	73.4	74.8	94.5	106.6	73.1		73.5	73.4
2000	73.3	74.5	95.0	106.7	73.1		73.8	74.3
2100	73.1	74.1	95.0	106.8	72.9		73.9	73.4
2200	73.1	74.0	95.2	107.0	72.9		74.1	73.5
2300	73.1	73.9	95.1	107.1	73.0		74.2	73.6
2400	73.1	73.8	95.0	107.3	73.0		74.6	73.9

TABLE 179
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 June 28, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.1	73.8	95.0	107.4	73.1		75.0	74.1
0200	73.4	73.8	95.0	107.7	73.3		75.1	74.2
0300	73.6	74.0	95.0	107.9	73.4		75.0	74.5
0400	73.6	73.9	95.0	107.8	73.4		74.9	74.5
0500	73.9	74.0	95.0	108.0	73.5		75.0	74.5
0600	73.6	74.1	94.8	107.7	73.4		74.9	74.2
0700	73.6	74.0	94.6	107.7	73.4		74.4	74.1
0800	73.5	74.1	94.4	107.6	73.1		74.0	73.9
0900	73.4	74.0	94.1	107.5	73.1		74.0	73.9
1000	73.2	74.2	94.4	107.6	73.1		73.8	73.8
1100	73.2	74.3	94.6	107.6	73.1		73.6	73.6
1200	73.5	74.6	95.2	108.5	73.3		73.9	73.9
1300	73.6	75.0	95.5	108.8	75.4		73.9	73.9
1400	73.9	75.2	96.0	109.1	73.6		74.6	73.6
1500	74.0	75.5	96.2	109.5	73.8		74.1	74.2
1600	74.1	75.7	96.5	109.6	73.9		74.5	74.4
1700	74.2	75.9	96.7	109.6	74.0		74.5	74.5
1800	74.4	76.0	96.8	109.8	74.1		74.7	74.5
1900	74.2	75.8	97.0	109.7	74.1		74.7	74.6
2000	74.2	75.6	97.2	109.8	74.0		74.7	74.4
2100	74.1	75.4	97.4	109.8	74.0		74.9	74.4
2200	74.0	75.1	97.1	109.5	73.9		75.0	74.5
2300	74.0	75.0	97.0	109.4	73.9		75.4	74.7
2400	74.0	74.9	96.8	109.1	73.9		75.5	74.9

TABLE 180
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 29, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	74.1	74.8	96.4	109.0	74.0		76.0	75.0
0200	74.1	74.8	96.4	109.0	74.0		75.9	75.2
0300	74.4	74.7	96.1	108.9	74.0		75.8	75.1
0400	74.4	74.8	96.1	108.9	74.1		75.9	75.3
0500	74.4	74.8	96.0	108.6	74.3		75.9	75.2
0600	75.4	74.9	96.1	109.0	74.4		75.2	75.2
0700	74.4	74.9	96.1	109.0	74.1		75.4	75.1
0800	74.4	75.0	96.4	109.0	74.2		74.9	74.9
0900	74.4	75.0	96.6	109.1	74.1		74.6	74.8
1000	74.4	75.4	97.1	109.4	74.1		74.6	74.7
1100	74.6	75.7	97.8	109.6	74.4		74.2	74.9
1200	74.7	75.9	98.2	110.0	74.4		74.3	74.8
1300	74.9	76.4	99.0	110.8	74.7		74.5	75.0
1400	75.0	76.4	99.6	110.0	74.7		74.5	75.0
1500	75.0	76.6	110.0	111.4	74.9		74.7	75.0
1600	75.1	76.6	100.6	111.6	74.9		74.9	75.0
1700	75.2	76.5	100.4	111.9	74.9		75.0	75.0
1800	75.0	76.2	100.9	112.2	74.7		75.0	74.9
1900	75.2	76.0	100.7	111.8	74.4		74.9	74.0
2000	75.0	75.8	100.4	111.7	74.4		74.5	74.0
2100	75.2	75.6	100.4	111.3	74.4		74.4	74.0
2200	75.4	75.5	99.9	111.0	74.3		74.4	74.5
2300	74.6	75.5	100.0	110.9	74.3		74.4	74.9
2400	74.6	75.5	100.0	110.0	74.5		74.6	75.1

TABLE 181
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
June 30, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.9	75.6	99.7	110.0	74.6		74.4	75.4
0200	75.4	75.6	99.8	111.1	74.8		75.4	75.8
0300	75.1	75.6	99.4	111.0	74.9		76.0	75.1
0400	76.0	76.0	99.2	111.0	75.0		75.7	75.3
0500	76.0	76.0	99.2	111.0	75.0		75.5	75.5
0600	76.0	76.0	99.2	111.0	75.0		75.0	75.4
0700	75.3	76.0	99.2	111.0	75.0		74.9	75.9
0800	75.5	76.2	99.2	110.9	75.1		75.1	76.0
0900	75.4	76.3	99.0	110.8	75.0		74.8	75.9
1000	75.1	76.3	98.9	110.8	74.9		75.0	75.7
1100	75.1	76.4	98.9	110.0	74.9		75.1	75.7
1200	75.1	76.6	99.0	110.8	74.8		75.9	75.6
1300	75.3	76.6	99.5	111.1	74.9		75.1	75.6
1400	75.5	76.9	99.6	111.2	75.0		75.2	75.6
1500	75.5	76.9	99.7	111.3	75.0		75.0	75.7
1600	75.6	77.1	99.6	111.4	75.0		74.8	75.9
1700	75.6	77.0	99.1	111.1	75.0		75.0	75.8
1800	75.6	77.1	99.0	111.0	75.1		75.2	75.8
1900	75.6	77.1	98.5	110.9	75.1		75.1	75.8
2000	75.6	77.0	98.4	110.6	75.1		74.9	76.0
2100	75.5	76.7	98.0	110.5	75.0		75.1	76.0
2200	75.6	76.5	97.6	110.4	75.0		75.4	75.9
2300	75.4	76.5	97.5	110.3	75.0		75.6	76.1
2400	75.4	76.3	97.3	110.0	75.0		75.6	76.1

TABLE 182
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 1, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	75.4	76.1	96.9	109.9	75.0		75.4	76.1
0200	75.5	76.1	96.5	109.6	75.0		75.6	76.1
0300	75.6	76.0	96.1	109.4	75.1		75.3	76.4
0400	75.6	76.0	96.0	109.2	75.1		75.4	76.4
0500	75.6	76.1	95.7	109.1	75.2		75.4	76.6
0600	75.8	76.0	94.6	109.0	75.2		75.3	76.4
0700	76.5	76.1	95.6	109.0	75.2		75.1	76.3
0800	75.5	76.1	95.9	109.0	75.0		74.9	76.1
0900	75.6	76.1	96.1	109.1	75.1		75.1	76.0
1000 ^{1/}	75.6	76.1	96.1	109.4	75.3		75.0	75.9
1100	75.4	76.4	96.4	109.6	75.0		75.0	75.6
1200	75.4	76.6	96.9	109.9	75.0		75.3	75.5
1300	75.4	76.8	97.5	110.3	75.0		75.1	75.5
1400	75.5	77.1	98.0	110.6	75.0		75.0	75.7
1500	75.6	77.4	98.5	111.0	75.1		75.1	75.9
1600	75.9	77.4	98.6	111.0	75.4		75.1	76.0
1700	75.9	77.5	98.7	111.1	75.4		74.6	77.0
1800	76.0	77.5	98.7	111.2	75.4		74.7	76.1
1900	76.0	77.3	98.8	111.2	75.4		74.8	76.4
2000	75.9	77.1	98.9	111.0	75.4		74.9	76.4
2100	75.9	77.0	98.9	111.0	75.4		75.1	76.4
2200	75.8	76.9	98.6	111.0	75.4		75.0	76.6
2300	75.9	76.8	98.1	110.7	75.4		75.0	77.0
2400	76.0	76.6	98.0	110.5	75.4		75.0	77.1

^{1/} Instruments zeroed to ground truth data.

TABLE 183
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 2, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.1	76.6	98.1	110.6	75.6		74.7	77.4
0200	76.3	76.8	97.9	110.5	75.9		74.7	77.9
0300	76.5	77.0	97.9	110.6	76.0		74.9	78.0
0400	76.6	77.0	97.9	110.5	76.1		75.4	78.1
0500	76.7	77.1	97.6	110.5	76.2		75.6	78.3
0600	76.9	77.1	97.9	110.5	76.3		75.3	78.3
0700	76.9	77.2	97.6	110.4	76.3		75.6	78.2
0800	76.9	77.4	98.1	110.6	76.3		75.0	78.1
0900	76.9	77.4	98.4	110.9	76.3		75.5	77.9
1000	76.7	77.6	98.4	110.9	76.2		75.5	77.9
1100	76.7	77.9	98.8	111.1	76.1		75.6	77.5
1200	76.6	77.9	98.7	111.3	76.0		75.7	77.4
1300	76.5	77.9	99.1	111.3	76.0		75.4	77.3
1400	76.5	78.0	99.5	111.5	76.0		75.4	77.2
1500	76.6	78.1	100.0	112.0	76.1		75.4	77.1
1600	76.6	78.4	100.2	112.1	76.1		75.2	77.1
1700	76.9	78.4	100.4	112.4	76.1		75.4	77.4
1800	76.9	78.4	100.3	112.3	76.2		75.6	77.4
1900	77.0	78.4	100.5	112.2	76.3		75.6	77.6
2000	77.0	78.4	100.5	112.2	76.3		75.6	77.6
2100	76.9	78.1	100.1	111.9	76.1		75.6	77.6
2200	76.9	77.9	100.0	111.1	76.1		75.6	77.6
2300	76.8	77.9	99.9	110.9	76.1		75.5	77.6
2400	76.9	77.6	99.6	110.6	76.1		75.6	77.9

TABLE 184

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

July 3, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.7	77.6	99.1	109.4	75.3		75.4	77.8
0200	76.7	77.5	99.0	107.5	76.3		75.5	78.0
0300	77.0	77.5	98.0	106.6	76.4		75.9	78.2
0400	77.0	77.6	97.7	106.2	76.4		75.8	78.3
0500	77.0	77.5	97.3	105.8	76.5		76.0	78.5
0600	77.0	77.5	97.5	105.6	76.5		75.5	78.5
0700	77.0	77.5	95.0	105.0	76.5		75.9	78.4
0800	77.0	77.6	94.5	105.2	76.5		75.6	78.2
0900	77.0	77.7	94.8	106.0	76.5		75.8	78.0
1000	77.0	78.1	95.3	106.8	76.5		75.5	78.0
1100	77.2	78.4	95.4	107.5	76.5		75.6	77.8
1200	77.2	78.6	95.5	107.5	76.5		76.0	77.8
1300	77.3	78.8	96.0	108.5	76.5		75.7	77.9
1400	77.4	79.0	97.0	109.2	76.7		75.6	78.0
1500	77.5	79.2	97.7	109.8	77.8		75.5	77.8
1600	77.4	79.2	98.1	110.1	76.6		75.5	77.7
1700	77.4	79.0	98.3	110.2	76.6		70.3	77.8
1800	77.4	79.0	98.6	110.4	77.6		75.5	77.8
1900	77.2	78.7	99.0	110.5	76.5		75.4	77.6
2000	77.2	78.6	99.1	110.6	76.5		75.4	77.6
2100	77.0	78.5	99.2	110.5	76.4		74.9	77.8
2200	77.0	78.3	99.0	110.6	76.4		74.6	77.8
2300	77.4	77.9	99.0	110.6	76.2		79.2	77.5
2400	77.3	77.8	98.8	110.5	76.3		75.4	77.7

TABLE 185
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 July 4, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	77.3	77.6	98.6	108.6	76.5		74.6	78.3
0200	77.2	77.7	98.0	108.6	77.5		75.1	78.3
0300	77.5	78.0	97.8	104.9	76.7		75.5	78.6
0400	77.5	78.1	97.8	102.4	76.7		75.8	78.9
0500	78.0	78.6	97.7	102.5	77.0		74.7	78.2
0600	77.8	78.2	97.6	102.5	77.0		76.4	79.2
0700	77.8	78.3	97.3	103.0	77.0		75.9	79.1
0800	77.6	78.3	94.7	103.8	77.0		75.8	79.0
0900	77.5	78.5	93.6	104.1	76.8		76.0	78.8
1000	77.5	78.8	93.6	105.6	77.0		75.6	78.6
1100	77.6	79.0	93.7	106.3	77.8		75.6	78.0
1200	77.5	79.0	94.2	106.4	76.8		75.5	78.4
1300	77.5	79.0	94.7	107.8	76.8		75.7	78.3
1400	77.6	79.2	95.0	107.2	77.0		76.0	78.1
1500	77.6	79.3	95.8	107.8	77.0		74.8	78.2
1600	77.8	79.5	92.5	108.3	77.0		75.8	78.3
1700	77.8	79.5	96.9	108.8	77.0		74.8	78.3
1800	77.8	79.5	97.3	109.4	77.0		75.6	78.4
1900	77.7	79.5	97.5	109.4	77.0		77.5	78.3
2000	77.7	79.3	97.7	109.6	77.0		76.5	78.3
2100	77.7	79.2	98.0	109.8	76.9		76.0	78.3
2200	77.7	78.9	97.8	109.9	76.9		75.6	78.3
2300	77.7	78.9	97.9	110.1	77.0		76.1	78.5
2400	77.7	78.8	97.8	110.3	77.0		76.1	78.7

TABLE 186
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 5, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	77.7	78.6	97.9	110.3	77.0		76.7	78.9
0200	78.0	78.6	97.9	110.3	77.2		76.6	79.0
0300	78.0	78.6	97.8	110.2	77.3		76.4	79.2
0400	78.1	78.6	97.7	110.2	77.4		76.2	79.4
0500	78.1	78.7	97.5	109.5	77.4		75.9	79.5
0600	78.3	78.7	97.5	107.6	77.5		75.8	79.6
0700	78.3	78.8	97.4	107.5	77.5		77.4	79.5
0800	78.3	79.0	97.4	107.6	77.6		76.8	79.5
0900	78.3	79.2	98.0	109.1	77.5		76.3	79.4
1000	78.3	79.5	98.2	110.0	77.6		76.3	79.4
1100	78.3	79.7	97.9	110.3	77.6		76.2	79.4
1200	78.4	80.0	98.5	110.7	77.7		76.0	79.3
1300	78.6	80.4	98.8	111.0	77.8		76.5	79.3
1400	78.7	80.6	99.5	111.5	77.9		76.7	79.4
1500	79.0	80.6	100.3	112.3	78.2		77.8	79.5
1600	79.0	80.1	100.3	112.5	78.3		77.6	79.5
1700	79.0	80.1	100.5	112.7	78.2		78.3	79.4
1800	79.0	81.6	100.5	113.0	78.2		78.3	79.4
1900	79.0	80.9	100.6	113.2	78.1		78.2	79.4
2000	79.0	80.7	100.7	113.3	78.2		77.7	79.4
2100	79.0	80.5	101.0	113.3	78.0		77.4	79.5
2200	79.0	80.3	100.8	113.5	78.1		78.0	79.6
2300	79.0	80.2	101.0	113.4	78.0		77.8	79.8
2400	79.2	80.2	101.0	113.6	78.2		77.9	80.1

TABLE 187
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 July 6, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	79.3	80.3	100.7	113.4	78.4		78.9	80.5
0200	79.6	80.3	100.5	111.5	78.5		78.6	80.7
0300	79.7	80.3	100.2	110.1	78.6		78.3	80.9
0400	79.8	80.4	99.8	108.8	78.7		78.0	81.2
0500	79.9	80.4	99.7	108.6	78.7		78.4	81.2
0600	79.9	80.4	99.7	108.6	78.7		78.8	81.2
0700	80.0	80.6	98.7	109.4	78.7		79.4	81.1
0800	79.9	80.6	98.0	109.5	78.8		79.0	81.0
0900	79.8	80.6	98.0	109.7	78.7		78.0	80.8
1000	79.7	81.1	97.6	109.6	79.4		77.4	80.0
1100	79.8	81.3	97.8	109.8	79.3		71.4	80.5
1200	80.1	81.5	98.6	110.3	79.4		77.7	80.5
1300	80.1	81.8	98.3	111.3	79.5		77.2	80.5
1400	80.1	81.8	98.8	111.3	79.6		76.7	80.4
1500	80.2	81.9	98.5	111.2	79.6		77.0	80.5
1600	88.9	82.1	98.2	111.1	79.8		77.2	80.5
1700	80.5	82.2	99.4	111.3	79.3		78.2	80.5
1800	80.5	82.4	99.5	111.5	79.9		77.6	80.6
1900	80.4	82.1	99.3	111.4	79.7		78.3	80.5
2000	80.4	82.0	99.3	110.2	79.8		78.3	80.4
2100	80.2	81.8	99.2	111.0	79.7		78.5	80.4
2200	80.1	81.6	98.8	110.8	79.6		77.3	80.6
2300	80.3	81.5	98.8	110.8	79.6		78.9	80.8
2400	80.4	81.4	98.8	110.8	79.7		79.0	81.0

TABLE 188
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 7, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	80.6	81.3	98.6	110.6	80.6		78.8	81.5
0200	80.6	81.4	98.5	110.5	80.6		79.6	81.7
0300	81.0	81.6	98.0	110.5	80.4		79.2	82.0
0400	81.0	81.5	97.8	110.2	80.5		80.1	82.4
0500	81.3	81.5	97.5	110.1	80.6		80.1	82.5
0600	81.2	81.5	97.2	110.0	80.6		79.8	82.6
0700	81.3	81.6	96.6	109.8	80.6		80.2	82.5
0800	81.2	81.8	96.8	99.2	80.5		80.0	82.4
0900	81.0	82.1	96.8	100.2	80.6		80.1	82.1
1000 ^{1/}	81.0	82.3	97.3	100.5	80.5		80.3	82.0
1100	81.1	80.8	97.9	101.1	80.5		80.2	81.7
1200	81.0	81.0	94.6	100.6	80.6		80.4	81.6
1300	81.2	81.2	92.6	98.8	80.6		80.5	81.5
1400	81.2	81.3	93.2	99.0	80.7		80.4	81.5
1500	81.3	81.4	93.6	99.2	80.7		80.2	81.4
1600	81.3	81.3	94.0	98.5	80.5		80.5	81.2
1700	81.5	81.5	94.0	98.6	80.8		80.8	81.3
1800	81.3	81.3	92.7	99.5	80.7		81.0	81.4
1900	81.3	81.3	92.2	101.6	80.6		80.7	81.2
2000	81.3	81.2	92.3	101.7	80.5		80.7	81.1
2100	81.0	80.8	92.6	103.3	80.5		81.0	81.0
2200	81.1	80.6	92.4	104.4	80.4		81.0	81.0
2300	81.0	80.5	92.5	105.0	80.3		81.2	81.4
2400	81.1	80.3	93.4	105.6	80.3		81.0	81.6

^{1/} Instruments zeroed to ground truth data.

TABLE 189
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 8, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	81.2	80.3	93.5	106.4	80.5		80.5	82.0
0200	81.3	80.3	94.0	107.0	80.5		81.0	82.1
0300	81.5	80.3	95.0	107.6	80.7		81.7	82.3
0400	81.5	80.3	95.2	107.8	80.8		81.8	82.5
0500	81.7	80.4	95.4	107.8	81.0		81.9	82.7
0600	81.9	80.5	95.9	108.3	81.2		81.9	82.7
0700	81.9	80.6	90.0	108.5	81.2		81.8	82.6
0800	81.9	80.2	96.4	108.7	81.2		81.7	87.7
0900	81.8	81.0	96.6	108.6	81.2		81.4	82.5
1000	81.8	81.2	96.5	109.2	81.3		81.3	82.5
1100	81.8	81.9	97.0	109.2	81.2		81.3	82.4
1200	82.9	81.7	97.8	109.9	81.3		81.2	82.3
1300	82.0	82.0	98.5	110.3	81.4		81.0	82.2
1400	82.0	82.0	99.0	110.7	81.5		80.7	82.3
1500	82.2	82.3	99.6	111.3	81.5		80.5	82.2
1600	82.2	82.3	99.6	111.3	81.5		80.5	82.2
1700	82.2	82.3	99.7	111.6	81.6		80.5	82.2
1800	82.3	82.3	99.8	111.5	81.5		80.1	82.0
1900	82.2	82.2	100.0	111.5	81.4		80.5	82.0
2000	82.1	82.0	100.1	111.5	81.4		80.4	82.0
2100	82.0	81.8	100.0	111.3	81.2		80.7	82.0
2200	82.0	81.7	100.1	111.4	81.1		80.5	82.0
2300	81.8	81.6	100.1	111.4	81.0		80.8	82.3
2400	81.9	81.4	100.0	111.0	81.0		80.8	82.3

TABLE 190
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 9, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	81.9	81.3	99.7	111.0	81.2		81.1	82.5
0200	82.2	81.3	99.6	110.8	81.4		81.5	82.7
0300	82.3	81.3	99.4	110.7	81.5		81.6	83.0
0400	82.4	81.3	99.3	110.4	81.7		81.7	83.3
0500	82.5	81.3	99.2	110.8	81.8		81.8	83.2
0600	82.5	81.4	99.2	110.6	81.7		81.3	83.2
0700	82.5	81.5	99.0	110.5	81.8		81.5	83.1
0800	82.3	81.8	99.8	110.7	81.8		81.1	83.1
0900	82.5	81.8	99.0	100.6	81.7		81.3	83.0
1000	82.3	81.9	99.1	110.5	81.7		81.1	82.9
1100	82.4	82.0	99.4	110.7	81.8		80.9	82.8
1200	82.5	82.3	99.9	111.0	81.9		80.8	82.8
1300	82.8	82.4	100.2	111.5	81.7		80.6	82.6
1400	83.0	82.5	100.5	111.5	82.0		80.6	82.7
1500	83.0	83.0	100.9	111.8	82.1		80.6	82.6
1600	83.0	83.0	100.8	111.0	82.0		80.6	82.7
1700	83.0	83.0	100.6	112.0	82.0		80.8	82.8
1800	83.0	82.8	100.5	112.0	82.0		81.0	82.7
1900	83.0	82.7	100.4	112.0	82.0		81.1	82.6
2000	82.9	92.5	100.0	111.7	82.0		81.1	82.6
2100	82.6	82.4	100.0	111.5	81.5		81.7	82.5
2200	82.5	82.4	99.4	111.4	81.6		81.4	82.5
2300	82.5	82.3	99.0	111.1	81.5		81.5	82.5
2400	82.5	82.0	98.5	110.8	81.6		81.9	82.6

TABLE 191
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 10, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	82.5	81.9	98.2	110.4	81.8		82.0	82.9
0200	82.6	81.7	97.6	108.6	81.8		82.4	83.0
0300	82.6	81.6	97.0	106.1	82.0		82.1	83.2
0400	82.8	81.5	86.6	105.0	82.0		82.5	83.4
0500	82.9	81.5	96.3	104.8	82.1		82.5	83.5
0600	83.0	81.5	97.0	104.6	82.2		82.1	83.5
0700	83.0	81.5	95.0	105.6	82.1		81.9	83.4
0800	83.0	81.5	94.0	105.5	82.1		81.7	83.2
0900	83.0	81.7	94.0	107.0	82.3		81.6	83.3
1000	83.0	82.0	94.6	108.2	82.4		81.6	83.2
1100	83.1	82.3	95.5	108.6	82.4		81.2	83.1
1200	83.2	82.5	96.2	109.3	82.5		80.9	83.1
1300	83.3	82.8	96.7	109.9	82.6		80.8	83.1
1400	83.5	83.1	97.1	110.3	82.8		80.9	83.1
1500	83.5	83.4	98.8	111.4	82.4		80.5	83.1
1600	93.7	93.5	99.0	111.5	82.9		81.1	83.0
1700	83.7	83.5	99.1	111.6	83.0		81.1	83.2
1800	83.8	83.5	99.4	111.8	82.7		81.2	83.0
1900	83.5	83.2	99.7	111.7	82.7		81.3	82.7
2000	83.5	83.0	99.7	111.7	82.6		81.3	82.8
2100	83.3	82.7	99.6	111.6	82.4		81.4	82.7
2200	83.1	82.5	99.4	111.5	82.3		81.7	82.6
2300	83.0	82.3	99.2	111.2	82.0		82.2	82.7
2400	82.7	82.2	99.0	111.0	81.8		82.4	82.8

TABLE 192
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 11, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	82.8	82.0	98.5	109.6	81.8	1/	1/	83.0
0200	82.7	81.7	97.7	104.8	81.8			83.2
0300	82.8	81.8	96.2	98.1	82.0			84.3
0400	83.0	81.8	92.8	94.8	82.2			84.5
0500	83.0	81.7	90.6	94.1	82.2			84.5
0600	83.2	81.8	89.4	93.9	82.3			84.6
0700	83.3	81.9	89.7	94.0	82.4			84.4
0800	83.4	82.0	89.8	94.0	82.5			84.5
0900	83.3	82.1	89.4	94.2	82.5			84.6
1000	83.4	82.3	89.4	94.5	82.7			84.5
1100	83.4	82.4	89.3	94.6	82.8			84.3
1200	83.5	82.5	89.6	95.0	82.8			84.4
1300	83.4	82.6	90.1	95.1	82.9			84.2
1400	83.4	82.6	90.3	95.4	82.8			84.0
1500	83.3	82.8	90.1	95.3	82.7			83.8
1600	83.5	82.8	90.4	95.4	82.8			83.5
1700	83.2	82.8	90.0	95.2	82.2			83.3
1800	82.8	82.5	90.0	95.2	82.2			83.0
1900	82.5	82.2	89.7	95.0	82.0			83.0
2000	82.0	81.8	89.5	94.6	81.8			82.5
2100	81.7	81.5	88.8	94.4	81.5			82.5
2200	81.5	81.3	88.3	94.2	81.3			82.2
2300	81.4	80.9	87.7	93.9	81.0			81.9
2400	81.3	80.7	87.0	93.7	80.8			81.9

1/ Sensor malfunction.

TABLE 193
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 July 12, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	81.0	80.5	86.3	93.1	80.6			81.8
0200	80.9	80.4	86.0	93.0	80.6			81.9
0300	80.8	80.2	85.6	92.8	80.6			81.8
0400	80.8	80.2	85.4	92.8	80.7			81.9
0500	80.6	80.0	84.9	92.6	80.7			81.9
0600	80.8	79.9	84.9	92.7	80.6			82.0
0700	80.6	79.9	84.5	92.7	80.7			82.1
0800	80.7	80.0	84.5	92.9	80.8			82.4
0900	80.7	80.2	84.6	93.0	80.8			82.5
1000	80.9	80.5	85.6	93.3	81.2			82.8
1100	81.3	81.2	86.1	94.0	81.2			83.2
1200	81.5	81.5	87.1	94.4	81.5			83.5
1300	81.8	81.8	88.0	94.9	81.6			83.8
1400	82.1	82.0	88.6	95.2	81.8			84.0
1500	82.5	82.5	90.0	95.7	82.3			84.5
1600	82.6	82.6	90.0	95.9	82.3			84.4
1700	82.6	83.3	90.5	96.2	82.5			84.6
1800	82.7	83.3	91.8	96.3	82.6			84.8
1900	82.8	83.1	92.1	96.3	82.6			84.6
2000	82.8	83.0	92.1	96.1	82.6			84.5
2100	82.7	82.9	91.9	95.9	82.5			84.4
2200	82.5	82.6	90.9	95.7	82.7			84.3
2300	82.4	82.5	90.2	95.5	82.3			84.2
2400	82.4	82.4	89.5	95.3	82.2			84.2

TABLE 194
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 13, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	82.3	82.3	89.3	95.2	82.2			84.2
0200	82.3	82.3	88.8	95.1	82.3			84.3
0300	82.4	82.2	88.5	95.4	82.3			84.4
0400	82.4	82.2	88.5	95.4	82.3			84.4
0500	82.5	82.1	87.5	98.5	82.6			84.0
0600	82.5	82.0	88.2	100.4	82.8			84.2
0700	82.8	82.1	89.2	104.7	82.9			84.4
0800	83.0	82.3	88.5	104.8	83.2			84.5
0900	83.0	82.6	89.6	105.0	83.4			84.6
1000	83.3	83.0	93.7	107.7	83.5			84.9
1100	83.4	83.3	95.5	108.5	83.6			84.9
1200	83.3	83.2	96.4	109.6	83.7			84.9
1300	83.6	83.4	98.0	110.1	84.0			84.7
1400	83.6	83.5	97.5	110.8	83.9			84.7
1500	83.8	83.7	97.6	110.5	84.0			84.9
1600	83.7	83.8	99.0	111.3	84.0			84.5
1700	83.8	83.9	99.7	111.7	84.0			84.4
1800	83.7	83.8	100.0	111.7	83.9			84.4
1900	83.6	83.7	100.3	111.9	83.6			84.1
2000	83.5	83.5	100.4	111.8	83.5			83.8
2100	83.5	83.5	100.3	111.7	83.6			83.8
2200	83.2	83.3	100.7	112.1	83.4			83.7
2300	83.1	83.1	100.8	112.2	83.3			83.6
2400	82.9	82.9	100.7	112.0	83.0			83.6

TABLE 195
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 14, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	82.9	82.8	100.7	111.8	83.0			83.5
0200	82.7	82.6	100.7	111.5	82.7			83.3
0300	82.7	82.5	100.7	111.5	82.7			83.5
0400	82.6	82.4	100.7	111.4	82.6			83.5
0500	82.5	82.4	100.2	110.7	82.6			83.5
0600	82.4	82.2	99.5	111.2	82.6			83.5
0700	82.2	81.9	98.5	110.5	82.5			83.3
0800	82.1	81.8	98.0	110.0	82.5			83.0
0900	82.1	81.8	97.6	109.8	82.4			83.0
1000	82.2	82.0	97.0	109.5	82.5			83.0
1100	82.2	82.2	97.0	109.5	82.5			82.9
1200	82.3	82.3	97.0	109.5	82.6			83.1
1300 ^{1/}	82.3	82.3	96.8	109.5	82.6			82.9
1400	82.5	82.6	96.8	109.6	82.8			83.0
1500	82.5	82.5	96.6	109.4	82.6			82.7
1600	82.5	82.5	96.6	109.5	82.6			82.7
1700	82.5	82.6	96.5	109.4	82.5			82.5
1800	82.3	82.5	96.4	109.3	82.4			82.4
1900	82.0	82.2	96.4	108.9	82.2			82.3
2000	81.6	81.9	96.5	108.8	81.9			81.9
2100	81.4	81.5	96.3	108.8	81.5			81.5
2200	81.1	81.2	96.3	108.5	81.4			81.4
2300	80.7	80.7	96.0	108.3	81.0			81.0
2400	80.4	80.5	95.6	107.9	80.6			81.0

^{1/} Instruments zeroed to ground truth data.

TABLE 196
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 15, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	80.2	80.2	95.3	106.5	80.5			80.8
0200	80.2	80.0	94.9	104.3	80.3			80.7
0300	79.9	79.7	94.5	103.5	80.1			80.7
0400	80.9	79.0	94.0	103.4	79.7			80.6
0500	80.8	78.8	93.8	103.8	79.5			80.5
0600	81.0	78.6	93.1	104.1	79.4			80.3
0700	80.2	78.5	92.2	104.2	79.3			80.3
0800	80.1	78.7	92.5	104.8	79.4			80.4
0900	79.5	78.8	92.5	105.3	79.5			80.5
1000	79.6	79.1	93.3	106.0	79.6			80.6
1100	79.7	79.4	93.8	106.5	79.7			80.6
1200	80.0	79.7	94.5	107.2	80.0			80.1
1300	80.2	80.2	95.2	107.8	80.2			81.0
1400	80.5	80.5	95.7	108.3	80.3			81.1
1500	80.4	80.5	96.3	108.6	78.6			80.6
1600	80.2	80.3	96.6	108.9	78.4			80.5
1700	80.3	80.3	97.3	109.6	78.0			80.4
1800	79.9	80.1	97.2	109.3	78.0			79.9
1900	79.6	79.6	97.3	108.9	77.6			79.6
2000	79.4	79.5	96.8	108.8	77.6			79.4
2100	79.4	79.3	96.7	108.5	77.4			79.2
2200	79.1	78.9	96.7	108.3	77.3			79.1
2300	78.9	78.8	96.5	108.0	77.2			79.2
2400	78.8	78.5	96.1	107.8	77.0			79.2

TABLE 197
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 16, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	78.6	78.4	95.7	107.6	76.8			79.4
0200	78.7	78.3	95.6	107.6	76.9			79.6
0300	79.0	78.3	95.5	107.3	77.0			79.9
0400	78.9	78.2	95.2	107.2	77.2			80.0
0500	79.3	78.2	95.0	107.0	77.2			80.1
0600	79.1	78.3	95.0	107.0	77.3			80.2
0700	79.3	78.4	94.9	106.9	77.2			80.1
0800	79.1	78.4	95.1	106.9	77.1			79.9
0900	79.1	78.5	94.7	106.9	77.3			79.9
1000	79.2	78.7	94.9	107.0	77.3			79.7
1100	79.2	79.0	95.0	107.4	77.4			80.0
1200	79.3	79.3	95.5	107.6	77.4			80.0
1300	79.5	79.5	96.1	108.1	77.5			80.0
1400	79.6	79.6	96.5	108.5	77.5			80.2
1500	79.7	80.0	96.7	108.7	77.5			80.1
1600	79.8	80.0	97.0	109.0	77.6			80.0
1700	79.9	80.0	97.1	109.0	77.6			80.0
1800	79.6	79.7	97.2	109.0	77.5			79.9
1900	79.6	79.6	97.3	109.0	77.4			79.7
2000	79.4	79.4	97.3	108.5	77.3			79.6
2100	79.3	79.3	97.0	108.3	77.3			77.6
2200	79.0	79.0	97.0	108.1	77.1			79.5
2300	79.0	78.8	96.9	108.0	77.3			79.8
2400	79.0	78.8	96.7	107.8	77.3			80.0

TABLE 198
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 17, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	79.3	78.7	96.5	107.9	77.4			80.4
0200	79.3	78.6	96.3	107.7	77.4			80.6
0300	79.5	78.5	96.2	107.7	77.5			80.9
0400	79.3	78.5	95.6	107.5	77.8			81.3
0500	79.5	78.7	95.6	107.5	77.8			81.4
0600	80.0	78.6	95.9	107.6	77.9			81.4
0700	81.0	78.9	95.9	107.6	78.0			81.4
0800	80.0	79.1	95.9	107.7	78.0			81.4
0900	80.2	79.5	96.2	108.0	78.2			81.3
1000	80.2	79.7	96.5	108.2	78.3			80.9
1100	80.2	80.0	96.7	108.6	78.3			81.0
1200	80.1	80.0	97.0	109.0	78.1			80.9
1300	80.3	80.4	97.3	109.1	78.3			80.7
1400	80.2	80.2	97.5	109.3	78.3			80.6
1500	80.2	80.3	97.4	109.2	78.2			80.3
1600	80.2	80.2	97.8	109.6	78.2			80.3
1700	80.0	80.2	97.9	109.7	78.0			80.0
1800	79.7	80.1	98.0	109.6	77.8			80.0
1900	79.5	79.6	98.2	109.7	77.6			79.7
2000	79.5	79.5	98.3	109.5	77.5			79.6
2100	79.3	79.3	98.3	109.3	77.5			79.6
2200	79.2	79.1	98.3	109.2	77.5			79.6
2300	79.0	78.9	98.1	109.0	77.3			79.8
2400	79.1	78.7	98.0	109.0	77.3			79.9

TABLE 199
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 18, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	79.3	78.5	97.8	10817	77.3			80.0
0200	79.1	78.5	97.5	108.3	77.4			80.1
0300	79.1	78.4	97.4	108.3	77.5			80.2
0400	79.4	78.5	97.3	108.3	77.6			80.3
0500	79.5	78.3	96.7	108.0	77.5			80.5
0600	79.3	78.3	96.6	108.9	77.5			80.4
0700	79.5	78.5	96.0	107.7	77.6			80.3
0800	79.6	78.8	95.9	107.7	77.6			80.5
0900	79.6	79.0	96.3	107.9	77.8			80.4
1000	79.7	79.3	96.7	108.3	77.8			80.5
1100	80.0	79.7	97.4	108.8	78.1			80.5
1200	80.0	80.0	98.3	109.4	78.3			80.5
1300	80.1	80.1	98.5	109.7	78.2			79.6
1400	80.3	80.3	98.9	109.7	78.4			80.5
1500	80.3	80.3	99.3	110.0	78.4			80.5
1600	80.4	80.5	99.1	110.1	78.4			80.5
1700	80.1	80.2	99.3	109.9	78.3			80.2
1800	80.0	80.0	99.1	109.9	78.0			80.0
1900	79.9	79.9	99.1	109.7	78.0			79.8
2000	79.7	79.6	99.3	109.7	77.8			79.9
2100	79.5	79.5	99.2	109.5	77.6			77.9
2200	79.5	79.3	99.0	109.5	77.6			80.0
2300	79.5	79.2	98.9	108.5	77.6			80.2
2400	79.5	79.1	98.8	108.3	77.7			80.4

TABLE 200
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 19, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	79.6	79.0	98.9	109.5	77.8			80.7
0200	79.7	79.0	99.0	109.4	77.9			80.9
0300	79.9	78.8	98.8	109.3	78.0			81.2
0400	80.0	79.0	98.6	109.0	78.1			81.0
0500	80.0	79.0	98.4	109.2	78.4			81.5
0600	80.3	79.0	98.0	109.1	78.5			81.5
0700	80.4	79.3	98.3	109.0	78.5			81.5
0800	80.5	79.5	98.0	109.3	78.5			81.3
0900	80.6	79.6	98.2	109.4	78.6			81.3
1000	80.6	80.0	98.5	109.4	78.6			81.2
1100	80.7	80.0	99.3	109.7	78.9			81.2
1200	80.7	80.7	99.7	110.1	79.0			81.4
1300	80.6	80.7	100.2	110.2	79.0			81.4
1400	80.9	81.0	100.5	110.7	79.0			81.4
1500	80.9	81.0	100.7	111.0	79.0			81.3
1600	80.7	80.8	100.0	110.0	78.9			81.0
1700	80.7	80.7	100.2	108.8	78.9			81.1
1800	80.5	80.5	100.3	108.4	78.7			80.8
1900	80.5	80.4	100.1	108.2	78.5			80.9
2000	80.3	80.3	99.7	108.1	78.5			80.5
2100	80.0	80.0	99.0	107.5	78.4			80.5
2200	79.9	79.9	98.0	107.0	78.3			80.4
2300	80.0	79.8	97.7	106.8	78.2			80.4
2400	79.9	79.6	97.5	107.0	78.1			80.5

TABLE 201
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 20, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	79.9	79.5	97.5	107.4	78.2			80.6
0200	79.4	79.3	97.2	107.9	77.6			81.1
0300	79.0	79.1	96.9	108.2	77.7			81.1
0400	79.0	79.0	96.7	108.2	77.8			81.0
0500	79.0	79.0	96.5	108.0	77.9			81.1
0600	79.0	79.0	96.7	108.2	77.8			81.2
0700	79.0	78.9	97.0	108.3	77.7			81.2
0800	79.0	79.0	97.5	108.5	77.8			81.4
0900	80.1	79.6	97.6	108.9	78.5			81.0
1000	80.4	79.8	97.8	109.2	78.6			81.0
1100	80.6	80.2	98.1	109.4	78.8			81.1
1200	80.6	80.4	98.3	109.5	78.9			81.1
1300	80.8	80.7	98.5	109.9	79.0			81.4
1400	81.0	81.0	98.5	110.0	79.2			81.4
1500	81.3	81.3	98.5	110.2	79.5			81.5
1600	81.4	81.4	98.5	110.0	79.5			81.5
1700	81.5	81.5	97.9	110.0	79.5			81.5
1800	81.5	81.5	97.9	109.9	79.5			81.4
1900	81.4	81.3	98.0	110.0	79.5			81.2
2000	81.3	81.3	98.0	110.0	79.4			81.1
2100	81.0	81.0	97.5	109.8	79.1			81.0
2200	80.5	80.5	97.2	109.4	79.0			80.7
2300	80.5	80.1	97.2	109.1	78.7			80.7
2400	80.4	79.9	97.0	108.9	78.6			80.9

TABLE 202
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 21, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	80.3	79.6	96.5	108.7	78.5			80.9
0200	80.2	79.5	96.4	108.5	78.5			80.9
0300	80.0	79.2	95.0	108.0	78.4			80.4
0400	80.0	79.1	95.8	107.8	78.5			81.0
0500	80.0	79.0	95.7	107.7	78.5			81.0
0600	80.0	78.8	95.4	107.5	78.5			81.0
0700	80.0	78.8	95.3	107.5	78.4			81.0
0800	80.0	79.0	95.5	107.4	78.5			81.0
0900	80.2	79.2	95.2	107.5	78.6			80.9
1000	80.4	79.5	95.4	107.5	78.7			80.9
1100	80.4	80.0	95.7	107.8	79.0			80.0
1200	80.4	79.9	96.1	108.0	78.8			80.7
1300	80.5	80.2	96.5	108.3	78.9			80.6
1400	80.4	80.4	96.7	108.7	79.0			80.5
1500	80.5	80.5	97.0	109.2	79.0			80.5
1600	80.5	80.5	97.2	109.5	78.9			80.5
1700	80.4	80.5	97.5	109.5	78.7			80.5
1800	80.4	80.4	97.3	109.6	78.6			80.3
1900	80.2	80.2	97.5	109.5	78.5			80.1
2000	80.0	80.0	97.8	109.5	78.4			77.8
2100	79.5	79.5	97.5	109.3	78.0			79.6
2200	79.4	79.4	97.1	109.0	78.0			79.5
2300	79.0	79.0	97.0	108.8	77.8			79.4
2400	78.8	78.8	96.6	108.5	77.6			79.3

TABLE 203
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 22, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	78.6	78.6	96.5	108.2	77.5			79.3
0200	78.5	78.4	95.7	107.5	77.4			79.3
0300	78.5	78.0	95.2	105.1	77.3			79.4
0400	78.6	78.1	95.0	104.8	77.3			79.5
0500	78.5	78.0	94.9	104.9	77.3			79.6
0600	78.5	77.9	94.5	104.9	77.3			79.5
0700	78.5	77.9	94.3	106.0	77.4			80.0
0800	78.6	77.8	93.0	105.5	77.4			79.9
0900	78.5	78.0	92.9	105.4	77.5			79.9
1000	78.9	78.0	92.8	105.5	77.5			79.8
1100	79.0	78.4	93.0	105.6	77.8			79.9
1200	79.0	78.6	93.2	106.3	78.0			80.0
1300	79.3	79.0	93.5	106.6	78.1			80.1
1400	79.5	79.4	93.6	106.9	78.2			80.0
1500	79.6	79.5	93.9	107.0	78.2			80.0
1600	79.6	79.6	93.2	106.8	78.1			80.1
1700	79.7	79.6	93.5	106.9	78.2			79.9
1800	79.7	79.6	93.5	107.0	78.1			79.9
1900	79.6	79.5	93.6	107.0	78.1			79.8
2000	79.3	79.3	93.6	107.0	78.0			79.5
2100	79.0	79.0	93.5	106.9	77.6			79.2
2200	78.9	78.7	93.4	106.6	77.5			78.6
2300	78.5	78.5	93.4	106.6	77.3			78.5
2400	78.3	78.0	93.4	106.3	77.0			78.3

TABLE 204
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 23, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	78.0	77.9	93.0	106.1	77.0			78.3
0200	77.9	77.5	92.5	105.6	76.6			78.3
0300	77.9	77.4	92.0	105.3	76.5			78.4
0400	77.6	77.0	91.8	103.4	76.4			78.3
0500	77.5	77.0	91.5	103.5	76.4			78.4
0600	77.5	76.6	91.0	103.6	76.3			78.5
0700	77.3	76.5	91.6	104.5	76.3			78.5
0800	77.5	76.5	91.6	104.9	76.2			78.5
0900	77.5	76.6	91.0	104.5	76.3			78.6
1000	77.5	76.5	91.0	104.4	76.4			78.5
1100	77.5	76.9	91.7	104.9	76.5			78.3
1200	77.6	77.1	92.5	105.5	76.5			78.2
1300	77.9	77.7	93.5	106.5	76.9			78.5
1400 ^{1/}	78.0	77.9	94.0	107.0	77.0			78.5
1500	78.1	78.0	92.5	107.2	77.0			78.3
1600	78.1	78.4	93.1	107.8	77.0			78.4
1700	78.1	78.2	93.0	108.0	77.1			78.0
1800	78.0	78.0	92.8	107.8	76.9			77.9
1900	77.8	77.8	93.0	107.9	76.6			77.8
2000	77.6	77.6	93.3	107.8	76.5			77.5
2100	77.3	77.4	93.2	107.5	76.2			77.4
2200	76.9	76.8	93.3	107.7	75.9			76.9
2300	76.8	76.9	93.2	107.8	75.9			76.9
2400	76.4	76.4	93.1	107.8	75.5			76.5

^{1/} Instruments zeroed to ground truth data.

TABLE 205
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 24, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.1	76.0	93.1	107.6	75.4			76.4
0200	76.1	76.1	93.0	107.5	75.3			76.3
0300	75.9	75.5	92.5	106.0	76.1			76.5
0400	75.9	75.4	92.4	105.8	75.1			76.5
0500	76.0	75.3	92.5	105.9	75.1			76.8
0600	76.0	75.3	92.0	106.2	75.3			77.0
0700	76.0	75.1	92.0	106.7	75.3			77.2
0800	76.0	75.5	92.8	106.4	75.4			77.2
0900	76.1	75.5	92.7	106.4	75.6			77.5
1000	76.4	76.0	92.9	106.5	75.7			77.6
1100	76.5	76.5	93.5	107.8	76.1			77.9
1200	76.6	76.5	93.5	107.9	76.1			77.9
1300	76.8	76.8	94.0	108.2	76.2			77.9
1400	76.9	76.8	94.2	108.5	76.3			78.0
1500	77.1	77.4	94.5	109.0	76.6			78.0
1600	77.1	77.4	94.5	109.2	76.6			78.2
1700	77.5	77.6	95.0	109.5	76.8			78.3
1800	77.5	77.6	95.3	109.5	76.9			78.3
1900	77.5	77.7	95.4	109.5	77.0			78.2
2000	77.4	77.2	95.2	109.4	77.0			78.2
2100	77.0	77.4	95.2	109.2	76.5			77.9
2200	77.0	76.9	95.1	109.2	76.4			77.8
2300	76.6	76.8	95.0	109.0	76.2			77.5
2400	76.6	76.8	95.0	109.0	76.2			77.5

TABLE 206
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 25, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.0	76.4	94.0	103.9	74.0			77.0
0200	76.1	76.4	94.0	98.2	74.0			77.8
0300	76.1	76.3	92.5	94.9	74.0			78.0
0400	76.1	76.3	91.0	94.0	74.0			78.0
0500	76.1	76.2	89.0	89.0	74.0			78.1
0600	76.0	76.2	88.7	88.9	74.1			78.2
0700	76.0	76.0	88.0	88.5	74.2			78.4
0800	76.0	76.2	88.0	88.5	74.0			78.9
0900	76.2	76.2	97.1	88.5	73.0			79.4
1000	76.2	76.2	78.1	88.9	73.9			79.4
1100	76.5	76.5	81.0	88.9	74.5			79.0
1200	77.0	76.9	87.4	88.9	74.2			79.0
1300	77.0	77.0	87.4	89.5	74.2			79.2
1400	77.2	77.2	87.9	89.9	74.8			79.2
1500	77.5	77.5	88.0	90.0	75.0			79.2
1600	77.5	77.5	88.2	90.2	75.0			79.0
1700	77.5	77.5	88.2	90.2	74.9			79.0
1800	77.2	77.4	88.2	90.2	74.5			79.5
1900	^{2/}	77.4	87.2	90.2	73.2			81.0
2000		76.5	85.2	90.0	73.2			81.0
2100		76.5	82.5	90.0	73.0			81.2
2200		76.3	82.3	90.0	73.2			81.0
2300		76.3	81.3	90.0	73.6			80.9
2400		76.0	81.0	90.0	73.2			82.3

^{2/} Temporary malfunction, cause unknown.

TABLE 207
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 26, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		75.9	81.0	89.6	73.0			83.5
0200		75.9	81.0	89.0	73.0			83.0
0300		75.5	81.0	88.4	73.0			83.0
0400		75.2	80.2	88.4	73.0			82.0
0500		75.2	80.2	88.0	73.2			77.6
0600		75.0	80.0	88.0	73.2			79.6
0700		75.0	80.0	88.0	73.1			80.1
0800		75.0	80.0	88.0	73.1			80.1
0900	75.0	75.0	80.0	87.9	73.1			77.5
1000	75.2	75.1	80.8	87.9	73.2			77.2
1100	75.2	75.1	81.0	88.0	73.2			77.0
1200	75.0	75.0	81.0	88.0	73.0			77.5
1300	74.0	75.0	79.9	88.0	72.5			77.9
1400	73.2	75.0	79.5	88.1	72.5			77.5
1500	72.2	75.0	79.5	88.1	73.0			77.2
1600	73.2	75.0	79.4	87.9	73.0			77.0
1700	75.0	75.0	79.4	87.9	73.0			76.5
1800	75.0	74.9	79.4	87.8	73.0			76.2
1900	74.6	74.8	79.0	87.8	72.6			76.2
2000	74.6	74.7	78.9	87.5	72.6			76.0
2100	74.0	74.5	78.5	87.5	72.6			76.0
2200	74.0	74.4	78.2	87.4	72.4			75.8
2300	73.6	74.2	78.0	87.0	72.4			75.5
2400	73.5	74.1	78.1	87.1	72.4			75.6

TABLE 208
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 27, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.0	73.6	78.0	87.0	72.1			75.6
0200	72.8	73.5	78.0	86.8	72.0			75.6
0300	72.5	73.4	77.0	86.5	71.6			75.5
0400	72.5	73.2	76.8	86.5	71.5			74.8
0500	72.7	73.0	76.5	86.5	71.5			74.6
0600	72.9	73.1	77.1	87.2	71.6			74.0
0700	73.2	73.1	78.0	98.0	71.6			73.2
0800	73.1	73.0	77.8	89.9	71.4			73.0
0900	73.0	72.6	76.4	93.5	71.1			72.9
1000	72.1	72.3	76.5	93.6	71.0			73.0
1100	70.5	72.2	76.7	93.7	70.9			73.0
1200	70.0	72.3	82.0	94.2	71.0			73.3
1300	69.0	72.3	82.0	97.4	71.0			74.4
1400	71.1	72.3	81.9	97.8	71.0			73.8
1500	72.0	72.2	81.8	98.0	71.0			72.9
1600	71.8	72.1	82.1	98.1	71.1			72.8
1700	71.5	72.0	82.5	98.2	71.1			72.8
1800	71.8	72.0	83.6	98.5	70.9			72.3
1900	72.0	72.0	84.0	99.5	70.9			72.1
2000	71.8	71.9	83.8	98.5	70.7			72.3
2100	71.6	71.5	83.6	99.5	70.5			72.5
2200	71.3	71.4	83.7	99.8	70.3			72.0
2300	71.1	71.0	83.8	100.0	70.1			71.5
2400	70.6	70.8	84.1	99.8	70.0			71.4

TABLE 209
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 July 28, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	70.3	70.2	84.5	99.6	69.9			71.1
0200	68.1	70.1	84.4	98.1	69.5			71.1
0300	67.5	70.0	84.2	97.4	69.2			71.2
0400	66.2	69.8	84.3	97.4	69.1			71.1
0500	65.9	69.5	94.5	97.4	69.0			71.0
0600	65.6	69.3	84.4	97.9	68.8			71.0
0700	65.5	69.2	84.3	98.2	68.5			71.0
0800	65.5	68.9	84.0	98.3	68.5			70.8
0900	65.5	68.9	83.2	98.4	68.4			70.5
1000	66.4	68.8	83.3	98.5	68.4			70.2
1100	67.5	68.8	83.5	98.6	68.4			70.0
1200	68.2	68.9	83.8	98.9	68.2			69.1
1300	69.8	68.9	84.1	99.1	68.1			68.6
1400	69.8	68.9	84.2	99.4	68.1			69.4
1500	69.9	69.0	84.8	99.6	68.1			69.5
1600	69.8	69.0	85.0	100.0	68.0			69.2
1700	69.6	69.0	85.5	100.2	68.1			69.2
1800	69.5	68.9	85.6	100.5	68.0			69.2
1900	69.5	68.8	86.0	100.8	68.0			69.0
2000	69.3	68.8	86.2	101.0	68.0			69.2
2100	69.4	68.6	86.4	101.0	67.9			69.0
2200	69.1	68.5	86.5	101.0	67.9			69.0
2300	69.0	68.1	86.8	101.1	67.6			69.9
2400	68.9	68.0	86.6	101.2	67.5			69.4

TABLE 210
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 29, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	68.5	68.0	86.6	100.0	67.5			68.6
0200	68.2	67.6	86.5	99.9	67.3			68.6
0300	68.1	67.4	86.4	98.7	67.3			68.5
0400	68.0	67.3	86.0	97.9	67.2			68.4
0500	68.0	67.2	85.8	96.8	67.2			68.4
0600	67.5	67.2	85.1	91.9	67.0			68.3
0700	67.1	67.2	85.0	89.3	67.0			68.4
0800	66.9	66.9	84.3	87.0	66.9			68.9
0900	67.2	67.2	84.3	87.0	66.9			68.9
1000	68.4	67.4	84.6	88.0	67.1			68.0
1100	68.5	67.8	82.3	86.1	67.4			68.5
1200	69.0	61.2	78.5	85.2	67.6			68.9
1300 ^{1/}	69.4	68.5	79.0	85.0	67.9			69.5
1400	69.6	69.0	82.5	85.8	69.5			70.0
1500	70.2	69.6	83.3	86.6	69.9			70.5
1600	70.4	70.0	83.1	87.0	70.0			71.5
1700	70.9	70.2	81.9	85.6	70.5			72.0
1800	71.0	70.6	81.5	86.6	70.4			71.9
1900	71.0	70.8	81.5	86.4	70.5			72.0
2000	71.0	70.5	81.6	86.4	70.4			71.8
2100	70.9	70.3	81.5	86.3	70.4			71.7
2200	70.9	70.2	81.2	86.0	70.3			71.5
2300	70.4	70.2	81.0	85.8	70.3			71.4
2400	70.6	70.0	80.8	85.6	70.2			71.4

^{1/} Instruments zeroed to ground truth data.

TABLE 211
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 July 30, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	70.5	70.0	80.5	85.5	70.1			71.5
0200	70.2	69.8	80.5	85.5	70.1			71.5
0300	70.3	69.5	80.3	85.0	70.0			71.5
0400	70.3	69.5	79.8	85.0	70.0			72.0
0500	70.3	69.5	79.5	84.5	70.0			72.0
0600	70.5	79.4	79.4	85.0	70.0			72.2
0700	70.5	69.3	79.2	84.2	70.1			72.6
0800	70.8	69.3	79.9	84.2	70.2			72.8
0900	70.9	69.4	89.0	84.2	70.4			73.0
1000	71.0	69.9	79.3	84.0	70.6			73.0
1100	71.2	70.2	79.5	84.8	70.9			73.0
1200	71.5	70.0	79.9	85.0	71.2			73.1
1300	72.0	71.1	80.0	85.3	71.5			74.2
1400	72.1	71.5	80.5	85.6	71.5			74.2
1500	72.6	72.2	81.0	86.0	72.1			74.5
1600	73.0	72.5	81.4	86.6	72.4			74.5
1700	73.0	72.8	81.6	87.4	72.5			74.5
1800	73.2	73.0	81.8	87.0	72.5			74.6
1900	73.1	73.0	81.6	86.9	72.4			74.4
2000	73.1	73.0	81.8	87.0	72.5			74.0
2100	72.8	72.5	82.0	86.9	72.3			74.0
2200	72.7	72.4	82.1	87.0	72.1			75.8
2300	72.5	72.0	82.0	87.0	72.0			73.4
2400	72.1	71.8	81.5	76.5	71.9			72.9

TABLE 212
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
July 31, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.0	71.8	81.4	86.2	71.6			73.0
0200	72.0	71.5	81.0	86.0	71.5			73.0
0300	71.5	71.3	81.0	86.0	71.4			73.0
0400	71.5	71.0	80.6	85.5	71.2			73.5
0500	71.4	70.9	80.1	85.4	71.1			72.8
0600	71.3	70.5	80.0	85.0	71.0			72.9
0700	71.2	70.4	79.5	85.0	71.0			72.9
0800	71.2	70.4	79.5	84.9	71.0			73.0
0900	71.4	70.5	79.8	85.0	71.1			73.3
1000	71.5	70.5	79.9	85.1	71.4			73.5
1100	71.6	71.0	80.4	85.6	71.5			73.9
1200	72.6	71.4	81.0	86.4	71.9			74.2
1300	72.4	71.9	81.5	86.6	72.0			74.5
1400	72.6	72.0	82.0	87.0	72.4			74.5
1500	73.1	72.9	82.4	87.5	72.6			75.0
1600	73.5	73.0	82.6	87.7	72.9			75.0
1700	73.6	73.4	82.8	88.0	73.0			75.8
1800	74.0	73.5	82.9	90.5	73.1			75.0
1900	74.0	73.6	83.0	91.0	73.1			75.0
2000	73.9	73.6	83.0	92.6	73.1			74.9
2100	73.6	73.4	83.0	92.5	73.2			74.6
2200	73.6	73.2	83.0	92.5	73.0			74.4
2300	73.5	73.1	84.1	92.9	73.0			74.3
2400	73.2	72.9	84.6	92.9	72.9			74.0

TABLE 213
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 1, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.1	72.6	85.4	93.6	72.6			74.0
0200	73.0	72.5	85.3	93.6	72.5			74.0
0300	73.0	72.4	85.2	93.3	72.4			73.9
0400	72.5	72.0	85.1	93.1	72.3			74.0
0500	72.4	71.9	85.2	93.1	72.0			74.0
0600	72.0	71.8	85.1	93.4	72.0			74.1
0700	72.4	71.6	85.0	93.0	72.0			74.1
0800	72.4	71.6	85.0	93.0	72.0			74.4
0900	72.5	71.6	85.0	92.8	72.0			74.5
1000	72.6	71.8	85.5	93.1	72.3			74.7
1100	73.0	72.1	86.2	93.6	72.6			75.0
1200	73.4	72.5	86.6	94.4	73.0			75.5
1300	73.8	73.0	87.4	95.0	73.0			76.0
1400	74.2	73.5	87.6	95.1	73.5			76.0
1500	74.6	74.0	88.1	95.6	73.9			76.0
1600	75.0	74.4	88.4	96.0	74.0			76.4
1700	75.3	74.8	88.6	94.5	74.4			76.5
1800	75.5	74.9	89.0	94.5	74.5			76.2
1900	75.5	75.0	89.0	94.5	74.5			76.5
2000	75.4	74.9	89.1	96.5	74.5			76.0
2100	75.3	74.9	88.6	97.0	74.4			76.0
2200	75.3	74.9	88.6	97.0	74.4			76.0
2300	75.1	74.5	87.5	98.0	74.3			75.5
2400	75.0	74.5	87.5	98.0	74.0			75.6

TABLE 214
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 2, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	74.9	74.1	87.5	98.1	74.0			75.5
0200	74.6	74.0	88.4	99.4	74.0			75.4
0300	74.5	73.9	88.5	99.5	73.8			75.2
0400	74.3	73.8	89.4	99.5	73.5			75.4
0500	74.1	73.5	89.4	97.4	73.5			75.4
0600	74.1	73.5	89.5	96.8	73.5			75.4
0700	74.1	73.3	90.0	97.0	73.5			75.5
0800	74.1	73.4	90.0	98.3	73.5			75.5
0900	74.2	73.3	90.5	99.5	73.6			76.0
1000	74.0	73.1	89.9	99.9	73.6			76.0
1100	74.5	73.5	89.8	99.8	74.0			76.1
1200	74.6	73.5	90.0	100.0	73.6			76.3
1300	74.0 ^{1/}	73.5	90.5	100.5	73.1			76.5
1400		73.4	91.4	101.4	73.5			76.9
1500		73.5	91.4	101.5	73.5			77.0
1600		73.5	91.4	101.4	73.5			77.4
1700		73.7	91.6	101.9	73.6			77.5
1800		74.0	91.8	101.9	74.0			78.0
1900		74.0	92.1	102.5	74.0			75.9
2000		73.5	92.5	103.0	74.1			76.4
2100		73.9	92.6	103.0	74.1			76.1
2200		73.9	92.5	103.4	74.0			75.9
2300		73.6	93.0	103.8	74.0			75.6
2400		73.6	92.8	103.9	73.9			75.5

¹Sensor malfunction.

TABLE 215
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 3, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		73.3	93.2	104.1	73.7			75.5
0200		73.3	93.0	104.0	73.7			75.5
0300		73.1	93.0	104.1	73.4			75.3
0400		72.9	93.2	104.2	73.3			75.6
0500		72.8	93.3	104.2	73.3			75.5
0600		72.7	93.0	104.0	72.9			75.3
0700		72.5	93.2	104.0	72.6			75.6
0800		72.4	93.4	104.3	72.6			75.1
0900		72.3	93.4	104.7	72.5			75.0
1000		72.3	93.4	104.0	72.6			75.3
1100		72.7	93.2	104.0	73.0			75.0
1200	^{1/} 74.0	73.4	94.1	105.0	73.5			74.6
1300	74.2	73.8	92.6	105.0	73.5			74.9
1400	74.5	74.0	93.0	105.9	73.9			75.1
1500	74.8	74.4	93.8	106.0	74.0			75.5
1600	75.1	74.6	94.0	106.4	74.3			75.5
1700	75.3	75.0	94.5	106.9	74.5			75.9
1800	75.5	75.0	94.6	107.0	74.5			75.9
1900	75.5	75.0	94.8	107.0	74.6			76.0
2000	75.5	75.0	94.8	107.0	74.7			75.9
2100	75.4	74.9	94.6	107.0	74.7			75.9
2200	75.2	74.8	94.5	107.1	74.6			75.9
2300	75.0	74.6	94.8	107.1	74.5			75.6
2400	74.9	74.5	94.8	107.3	74.5			75.9

^{1/} Sensors adjusted to ground truth.

TABLE 216
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 4, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	75.0	74.4	94.6	107.1	74.4			76.0
0200	74.9	74.0	94.2	107.0	74.3			76.3
0300	74.5	74.0	94.0	106.6	74.5			76.6
0400	74.5	73.9	94.0	106.9	74.5			76.5
0500	74.6	73.9	93.6	106.8	74.8			76.5
0600	74.5	73.9	93.6	106.9	74.9			76.9
0700	74.3	74.0	93.6	106.9	74.9			77.0
0800	74.2	74.2	94.0	107.0	75.0			77.0
0900	75.9	74.6	94.1	107.0	75.0			76.5
1000	76.1	75.0	94.4	107.0	75.3			76.5
1100	76.0	75.3	94.9	107.4	75.4			76.4
1200	75.9	75.6	95.1	108.0	75.5			76.1
1300	76.5	76.0	95.9	108.5	75.5			76.2
1400	76.6	76.4	96.4	109.0	76.0			76.0
1500	77.0	76.8	97.0	109.3	76.0			76.1
1600	77.0	76.9	97.3	109.4	76.0			76.0
1700	77.4	77.1	97.5	109.5	76.1			76.0
1800	77.2	77.0	98.0	110.0	76.2			76.0
1900	77.2	77.1	98.0	110.1	76.2			76.0
2000	77.2	77.0	98.0	110.1	76.2			76.0
2100	77.0	76.6	98.0	110.0	76.0			76.0
2200	76.8	76.6	98.0	109.0	76.0			76.0
2300	76.6	76.5	98.0	110.0	76.0			76.0
2400	76.3	76.2	98.0	109.8	75.9			76.0

TABLE 217
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 5, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.4	76.3	97.6	109.6	75.9			76.0
0200	76.4	76.0	97.3	109.4	76.0			76.0
0300	76.1	76.0	97.0	109.4	76.0			76.0
0400	76.0	76.0	97.0	109.0	76.1			76.1
0500	76.0	76.0	96.5	109.0	76.4			76.3
0600	76.0	76.0	96.2	108.9	76.4			76.4
0700	77.0	76.4	95.9	108.6	76.5			76.0
0800	77.5	76.6	95.5	108.5	76.6			76.0
0900	77.6	76.6	95.1	108.0	76.9			76.0
1000	77.6	76.6	94.4	107.5	76.5			76.4
1100	75.6	76.1	94.0	107.5	76.0			76.2
1200	75.9	76.5	94.0	107.4	76.4			76.3
1300	77.4	76.9	94.0	107.1	76.4			76.4
1400	76.1	76.4	93.6	107.1	75.9			76.1
1500	76.9	76.0	93.6	107.5	76.6			76.8
1600	76.6	76.0	93.4	107.9	75.5			76.5
1700	76.0	76.0	93.2	107.5	75.5			76.9
1800	76.4	76.2	93.4	107.4	75.6			76.0
1900	76.1	76.0	93.5	107.1	75.5			76.5
2000	76.0	76.0	94.5	107.5	75.5			75.0
2100	75.9	75.8	94.0	107.4	75.4			76.4
2200	75.5	75.5	94.0	107.5	75.3			76.4
2300	74.6	75.1	94.1	107.5	75.0			76.6
2400	74.5	75.0	93.8	107.4	75.0			76.6

TABLE 218
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 6, 1981

Time	Upscream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	74.0	74.6	94.0	107.0	74.9			76.9
0200	73.6	74.9	93.9	107.0	74.9			76.9
0300	73.6	74.5	93.6	106.9	74.8			76.8
0400	73.4	74.5	93.5	106.8	74.7			76.8
0500	73.1	74.4	93.3	106.5	74.5			76.9
0600	73.0	74.1	93.0	106.5	74.5			76.7
0700	76.0	74.0	93.4	106.5	74.5			76.8
0800	72.5	74.0	93.4	106.5	74.4			76.9
0900	72.2	74.0	92.8	95.5	74.5			76.5
1000	72.5	74.5	92.6	95.0	74.6			76.6
1100	75.5	74.6	93.3	95.4	74.8			76.1
1200	75.5	74.8	93.6	95.9	75.0			76.1
1300	75.6	75.1	94.3	96.1	75.0			76.0
1400	76.0	75.1	89.5	94.6	75.0			76.0
1500	76.1	76.0	88.0	93.3	75.4			76.2
1600	76.4	76.4	88.4	94.5	75.5			76.2
1700	76.5	76.4	88.4	96.5	75.5			76.2
1800	76.6	76.5	88.9	97.0	75.5			76.5
1900	76.6	76.3	87.9	97.9	75.6			76.4
2000	76.8	76.1	87.0	97.9	75.9			76.4
2100	76.5	76.0	87.0	98.6	75.5			76.4
2200	73.2	75.5	88.1	99.9	74.8			75.4
2300	71.4	75.4	88.2	100.6	74.5			75.5
2400	71.4	75.0	88.0	101.0	74.1			76.0

TABLE 219
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 August 7, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.0	74.9	87.7	100.6	74.0			76.6
0200	72.1	74.6	88.0	100.5	74.4			76.9
0300	73.4	74.6	83.2	100.8	74.1			76.6
0400	74.0	74.8	88.6	101.0	74.3			76.5
0500	74.5	74.5	88.5	100.8	74.5			76.4
0600	74.6	74.5	88.0	100.5	74.6			76.4
0700	74.6	74.4	88.0	100.5	74.8			76.4
0800	74.8	74.3	87.9	100.5	75.0			76.5
0900	75.9	74.4	87.7	99.9	74.6			75.8
1000	76.0	74.5	88.0	100.0	74.9			76.0
1100	76.1	74.9	88.0	101.0	74.9			75.9
1200	76.2	75.0	87.9	100.6	75.0			76.0
1300	76.4	75.2	88.6	101.4	75.1			76.0
1400	76.4	75.4	88.6	101.4	75.2			76.0
1500	76.4	75.4	88.6	101.9	75.2			76.2
1600	76.5	75.6	89.0	102.0	75.2			76.1
1700	76.5	75.8	89.0	102.2	75.1			76.1
1800	76.4	75.8	89.1	102.6	75.1			76.1
1900	76.1	75.5	89.4	102.4	75.0			76.1
2000	76.1	75.5	90.0	103.0	75.0			76.0
2100	76.0	75.4	90.0	103.1	75.0			76.0
2200	75.6	75.0	90.0	103.1	74.8			76.1
2300	75.4	74.9	90.0	103.1	74.5			76.1
2400	75.2	74.5	90.0	103.1	74.3			76.1

TABLE 220
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 8, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	75.0	74.2	89.9	103.0	74.1			76.0
0200	74.8	74.0	89.9	103.0	74.0			76.0
0300	74.7	73.9	89.6	102.9	73.9			76.0
0400	74.6	73.9	89.9	103.0	74.0			76.1
0500	74.6	73.6	89.5	102.9	74.0			76.1
0600	74.5	73.5	89.5	103.0	74.0			76.0
0700	74.5	73.5	84.4	103.0	73.9			75.9
0800	74.8	73.5	89.4	103.0	74.0			75.9
0900	75.0	73.5	89.6	103.0	74.0			75.8
1000	75.0	73.6	89.9	103.1	74.0			75.6
1100	75.0	74.0	90.0	103.5	74.2			75.6
1200	75.1	74.1	90.5	103.9	74.2			75.6
1300	75.4	74.6	91.0	104.5	74.5			75.6
1400	75.5	74.9	91.1	104.9	74.5			75.6
1500	75.6	75.0	91.6	105.0	74.6			75.6
1600	75.9	75.5	92.4	105.6	74.9			75.5
1700	75.7	75.5	92.4	106.0	74.9			75.5
1800	75.6	75.2	92.5	106.0	74.6			75.5
1900	75.6	75.0	92.6	106.0	74.6			75.5
2000	75.6	75.0	93.0	106.4	74.5			75.4
2100	75.5	74.9	93.0	106.4	74.5			75.4
2200	75.4	74.6	93.0	106.4	74.5			75.5
2300	75.2	74.5	92.9	106.5	74.4			75.5
2400	75.1	74.4	92.8	106.2	74.2			75.4

TABLE 221
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 9, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	75.0	74.1	92.8	106.5	74.2			75.4
0200	74.9	74.9	92.5	106.2	74.0			75.4
0300	74.9	74.0	92.4	106.2	74.1			75.4
0400	75.0	73.9	92.3	106.3	74.1			75.4
0500	74.9	73.8	92.1	106.2	74.4			75.4
0600	74.9	73.5	92.0	106.1	74.4			75.4
0700	75.0	73.8	92.0	106.1	74.4			75.3
0800	75.4	73.9	92.1	106.2	74.5			75.2
0900	75.6	74.0	92.5	106.6	74.6			75.4
1000	76.0	74.5	93.0	107.0	74.9			75.4
1100	76.0	74.9	93.5	107.5	75.0			75.3
1200	76.1	75.0	94.0	107.9	75.1			75.1
1300	76.5	75.5	94.6	108.4	75.6			75.1
1400	76.6	75.9	94.9	108.8	75.9			75.1
1500	76.6	76.0	95.0	108.6	75.9			75.2
1600	77.1	76.4	95.5	109.4	76.0			75.4
1700	77.1	76.6	95.5	109.1	76.2			75.4
1800	77.0	76.6	95.1	109.1	76.0			75.5
1900	77.1	76.5	95.1	109.1	76.0			75.5
2000	77.0	76.4	95.0	109.0	76.0			75.5
2100	77.0	76.3	95.0	109.0	76.0			75.5
2200	76.6	76.0	95.0	108.5	75.6			75.5
2300	76.4	75.8	94.9	108.6	75.4			75.3
2400	77.4	76.5	95.9	109.5	76.4			76.5

TABLE 222
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 10, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.2	75.2	94.5	108.4	75.2			75.5
0200	76.2	75.1	94.0	108.0	75.2			75.5
0300	76.0	75.0	94.0	108.0	75.0			75.6
0400	76.0	75.0	93.6	107.9	75.4			75.6
0500	76.0	75.0	93.5	107.6	75.4			75.6
0600	76.1	75.0	93.2	107.5	75.4			75.5
0700	76.0	75.0	93.1	107.4	75.4			75.5
0800	76.2	75.0	93.0	107.4	75.4			75.5
0900	76.5	75.0	93.0	107.4	75.4			75.5
1000	76.6	75.4	91.1	107.4	75.5			75.5
1100	76.9	75.6	93.5	107.7	75.6			75.4
1200	77.0	75.9	93.6	107.9	75.6			75.5
1300	77.0	76.4	94.0	108.2	76.0			75.5
1400	77.4	76.5	94.0	108.2	76.0			75.5
1500	77.5	76.8	94.0	108.4	76.0			75.5
1600	77.5	77.0	94.1	108.5	76.0			75.5
1700	77.5	77.1	94.0	108.5	76.0			75.5
1800	77.5	77.0	93.9	108.4	75.9			75.5
1900	77.4	76.9	93.5	108.0	75.9			75.6
2000	77.0	76.6	93.4	108.0	75.8			75.8
2100	77.0	76.4	93.2	107.9	75.6			75.5
2200	76.5	76.5	93.0	107.5	75.5			75.7
2300	76.4	75.8	92.8	107.1	75.1			75.6
2400	76.0	75.4	92.4	107.7	75.0			75.6

TABLE 223
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 11, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	75.9	75.0	92.4	106.9	74.9			75.6
0200	75.6	74.8	92.0	106.5	74.8			75.6
0300	75.6	74.6	91.9	106.4	74.8			75.6
0400	75.6	74.5	91.5	106.0	74.6			75.6
0500	75.5	74.3	91.4	106.0	74.5			75.5
0600	75.6	74.4	91.0	106.0	74.5			75.5
0700	75.6	74.0	91.0	105.9	74.6			75.5
0800	76.0	74.2	91.0	105.9	74.9			75.5
0900	76.0	74.4	91.1	105.9	74.9			75.5
1000	76.1	74.6	91.5	106.1	75.0			75.5
1100	76.4	74.9	92.0	106.5	75.0			75.5
1200	76.4	75.1	92.1	106.9	75.0			75.5
1300	76.5	75.6	92.8	107.1	75.4			75.5
1400	76.7	76.0	93.1	107.6	75.5			75.4
1500	76.6	76.0	93.1	107.9	75.6			75.4
1600	76.8	76.4	93.5	108.1	75.5			75.4
1700	76.6	76.4	93.5	108.1	75.5			75.5
1800	76.6	76.0	93.5	108.0	75.4			75.4
1900	76.5	76.0	93.6	108.0	75.1			75.2
2000	76.4	75.8	93.9	108.0	74.9			75.1
2100	76.0	75.4	93.9	107.9	75.0			75.2
2200	75.6	75.0	93.6	107.8	74.5			75.2
2300	75.5	74.8	93.5	107.6	74.5			75.1
2400	75.4	74.5	93.2	107.4	74.4			75.3

TABLE 224
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 12, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	75.4	74.3	93.0	107.1	74.0			75.0
0200	75.2	74.0	93.0	107.0	74.0			75.1
0300	75.0	73.9	92.8	106.8	74.0			75.1
0400	75.0	73.8	92.6	106.6	74.0			75.1
0500	75.0	73.6	92.5	106.5	73.9			75.1
0600	75.0	73.5	92.2	106.3	73.9			75.1
0700	75.0	73.5	91.9	106.2	74.0			75.4
0800	74.9	73.2	91.9	105.9	73.9			75.0
0900	75.0	73.4	91.9	106.0	73.9			75.0
1000	75.0	73.4	92.1	106.0	73.9			75.0
1100	75.2	73.9	92.5	106.4	74.0			74.9
1200	75.5	74.3	93.0	106.9	74.4			74.9
1300	75.6	74.5	93.6	107.4	74.5			74.6
1400	76.0	75.0	95.0	108.0	75.6			74.8
1500	76.2	75.5	95.5	108.0	75.8			74.9
1600	76.5	75.7	95.9	108.4	76.0			74.9
1700	76.6	76.0	95.4	108.4	75.1			74.8
1800	76.0	76.0	95.2	108.4	75.4			74.8
1900	76.5	76.0	95.5	108.9	75.4			73.0
2000	76.4	75.6	95.5	108.8	75.0			75.0
2100	75.9	75.5	95.5	108.8	75.0			74.9
2200	76.0	75.4	95.5	108.6	75.0			74.8
2300	75.9	75.1	95.2	108.4	74.8			74.8
2400	75.6	75.0	95.2	108.3	74.7			74.7

TABLE 225
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 13, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.1	74.8	94.9	108.0	74.4			74.6
0200	75.4	74.4	94.6	107.9	74.3			74.6
0300	75.3	74.2	94.4	107.6	74.2			74.6
0400	75.2	74.1	94.0	107.5	74.2			74.6
0500	75.0	74.0	94.6	107.1	74.1			74.6
0600	75.0	73.9	93.8	107.1	74.0			74.6
0700	75.0	73.9	93.9	107.1	74.3			74.6
0800	75.0	74.0	94.0	107.4	74.2			74.6
0900	75.6	74.0	94.0	107.2	74.4			74.6
1000	75.8	74.2	94.4	107.5	74.6			74.6
1100	76.1	74.9	94.5	107.9	75.0			74.8
1200	76.4	75.6	94.9	108.1	75.1			74.6
1300	76.6	75.4	95.4	108.3	75.5			74.5
1400	77.0	75.8	95.5	108.7	75.6			74.6
1500	77.1	76.0	95.5	108.9	75.9			74.6
1600	77.4	76.4	95.9	109.1	75.6			74.8
1700	77.5	76.5	95.9	109.4	75.5			74.7
1800	77.5	76.5	95.9	109.4	75.4			74.8
1900	77.5	76.5	96.0	109.4	75.5			74.9
2000	77.4	76.5	96.0	109.4	75.4			74.9
2100	77.2	76.4	95.9	109.4	75.4			74.9
2200	77.0	76.2	96.0	109.4	75.4			75.0
2300	77.0	76.0	96.0	109.1	75.3			75.0
2400	76.8	76.0	96.0	109.3	75.2			75.0

TABLE 226
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 14, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.6	75.7	96.0	109.0	75.2			75.0
0200	76.5	75.5	95.5	109.0	75.0			75.1
0300	76.1	75.4	95.3	108.7	75.0			75.0
0400	76.0	75.2	95.1	108.4	74.9			75.1
0500	75.8	75.1	95.0	108.5	74.8			75.4
0600	75.8 _{1/}	75.0	94.9	108.1	74.4			75.3
0700		74.9	94.6	108.1	74.2			75.2
0800		74.9	94.9	108.1	74.0			75.2
0900		74.6	94.5	108.0	74.2			75.4
1000		74.4	94.0	108.0	73.9			75.5
1100		74.3	93.6	107.9	73.6			75.2
1200		74.1	93.1	107.5	73.5			75.7
1300	76.1	75.0	93.4	107.5	74.5			75.0
1400	76.2	75.3	93.7	107.5	75.1			75.0
1500	76.5	75.6	94.0	108.0	75.5			74.9
1600	76.6	76.0	94.5	108.4	75.8			74.8
1700	76.8	76.2	94.9	108.4	75.9			74.9
1800	77.1	76.5	95.0	107.6	74.7			74.9
1900	77.2	76.5	95.5	107.0	74.5			74.7
2000	77.1	76.5	95.9	107.3	74.4 _{1/}			74.9
2100	76.6 _{1/}	76.0	94.9	107.6				74.0
2200		75.0	94.0	108.0				75.9
2300		74.9	92.4	107.0				75.9
2400								

_{1/} Sensor malfunction--probably due to electrical storm.

TABLE 227
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 15, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		74.5	91.6	106.0				76.5
0200		74.4	92.0	106.0				76.4
0300		74.2	93.0	106.4				76.3
0400		74.0	93.1	106.9				76.3
0500		73.8	92.8	106.6				76.0
0600		73.5	92.5	106.4				76.0
0700		73.4	92.5	106.2				76.0
0800		73.3	92.7	106.4				76.0
0900		73.2	93.1	106.6				75.9
1000		73.9	93.0	106.8				76.7
1100		73.8	93.0	106.9				75.2
1200	75.5	74.0	93.2	107.0				74.4
1300	75.6	74.5	94.0	107.6				74.1
1400	76.1	75.2	94.5	108.2				74.0
1500	76.5	75.4	95.0	108.6				74.0
1600	76.6	75.6	95.1	109.0				73.9
1700	77.0	76.0	95.5	109.4				74.0
1800	77.1	76.0	96.0	109.6				74.0
1900	77.2	76.1	96.2	109.8				73.9
2000	77.2	76.2	96.4	109.9				73.9
2100	77.1	76.1	96.4	109.9				74.0
2200	77.0	76.0	96.0	109.6				74.0
2300	76.9	75.9	96.0	109.5				74.0
2400	76.9	75.6	95.6	109.4				74.0

TABLE 228
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 16, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.7	75.5	95.4	109.1				74.0
0200	76.8	75.4	94.5	108.5				74.0
0300	76.8	75.4	94.0	108.1				74.0
0400	76.9	75.1	93.5	107.9				74.0
0500	76.8	75.0	93.0	107.9				74.0
0600	76.8	75.0	92.5	107.5				74.0
0700	76.6	75.0	92.0	107.1				74.1
0800	76.8	75.0	91.1	107.0				74.1
0900	76.5	75.0	91.4	106.5				74.1
1000	76.5	75.0	91.1	106.5				74.8
1100	76.5	75.0	91.0	106.1				74.0
1200	76.3	74.9	90.5	106.0				74.0
1300	76.3	75.0	90.5	106.0				74.0
1400	76.1	75.0	90.4	106.0				74.0
1500	76.0	75.0	90.3	106.0				74.0
1600	76.0	75.0	90.5	106.0				74.0
1700	76.1	75.2	90.5	106.2				74.0
1800	76.0	75.0	90.5	106.1				73.9
1900	76.0	75.0	90.4	106.0				74.0
2000	75.8	74.9	90.4	105.6				73.9
2100	75.5	74.4	90.1	105.5				73.8
2200	75.4	74.0	90.0	105.3				73.8
2300	75.1	73.8	90.0	105.1				73.6
2400	75.0	73.4	89.9	105.0				73.6

TABLE 229
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 17, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	^{1/} 74.9	73.0	89.4	104.9				73.6
0200	74.5	72.6	89.2	104.4				73.5
0300	74.4	72.5	89.0	104.0				73.4
0400	74.2	72.3	89.0	104.0				73.4
0500	74.1	72.3	88.6	104.0				73.4
0600	74.0	72.0	88.5	103.9				73.1
0700	74.0	71.8	88.0	103.5				73.0
0800	74.0	71.5	87.5	103.0				72.9
0900	73.9	71.5	87.6	103.0				72.9
1000	73.8	71.6	87.9	103.0				72.9
1100	73.9	72.0	88.4	103.5				72.6
1200	74.0	72.2	88.4	103.8				72.5
1300	74.0	72.5	88.9	104.0				72.5
1400	74.1	72.9	89.0	104.2				72.4
1500	74.2	73.0	89.8	104.9				72.4
1600	74.4	73.0	90.1	105.0				72.4
1700	74.5	73.2	90.5	105.2				72.2
1800	74.4	73.0	90.5	105.4				72.2
1900	74.2	73.0	90.5	105.4				72.2
2000	74.0	72.8	90.6	105.1				72.1
2100	74.0	72.5	90.6	105.1				72.1
2200	73.5	72.0	90.2	105.0				72.0
2300	73.1	71.9	90.0	104.6				72.0
2400	72.9	71.5	89.6	104.4				72.0

^{1/}Manual temperatures initiated for downstream sensors A, B, and C.

TABLE 230
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 18, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.6	71.1	89.4	104.0				<u>1/</u>
0200	72.5	71.0	89.0	103.6				
0300	72.5	70.9	88.6	103.5				
0400	72.4	70.6	88.3	103.4				
0500	72.4	70.3	88.0	103.0				
0600	72.5	70.4	87.6	102.6				
0700	72.5	70.2	87.7	102.6				
0800	72.5	70.4	87.5	102.6				
0900	72.8	70.5	87.9	102.6				
1000	73.0	71.0	88.0	102.4				
1100	73.1	71.2	88.8	101.0				
1200	73.5	71.6	89.0	100.0				
1300	73.6	72.0	89.5	99.2				
1400	73.9	72.4	89.9	98.8				
1500	74.0	72.6	89.9	99.4				
1600	74.3	73.0	89.4	100.8				
1700	74.5	73.0	88.6	101.6				
1800	74.5	73.2	87.6	101.1				
1900	74.2	73.1	87.3	100.8				
2000	74.1	73.0	87.5	100.9				
2100	74.4	72.8	88.0	101.0				
2200	74.0	72.5	88.5	101.5				
2300	74.0	72.1	88.0	101.4				
2400	73.5	72.0	87.6	101.4				

^{1/} Sensor taken out of service at 0100 based on data review after outage on 08/19.

TABLE 231
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 19, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.5	71.9	87.3	101.0				^{1/}
0200	73.4	71.6	87.3	101.0				
0300	73.4	71.5	87.4	101.0				
0400	73.4	71.2	87.0	100.8				
0500	73.5	71.2	86.9	100.6				
0600	73.5	71.0	86.5	100.4				
0700	73.5	71.0	86.3	100.2				
0800	73.5	71.0	86.4	100.1				
0900	73.9	71.1	86.3	99.6				
1000	74.0	71.5	86.9	90.9				
1100	74.5	72.0	87.6	89.0				
1200	74.9	72.5	88.1	89.4				
1300	74.9	72.8	88.4	89.6				
1400	75.0	73.0	85.0	89.5				
1500	75.0	73.5	82.4	86.4				
1600	75.0	73.5	82.4	86.5				
1700	75.1	73.9	82.5	86.5				
1800	75.0	73.9	82.5	87.5				
1900	75.0	73.8	82.0	89.5				
2000	75.0	73.5	81.0	88.1				
2100	74.8	73.5	80.5	88.5				
2200	74.4	73.0	80.4	89.5				
2300	74.0	72.8	80.6	90.0				
2400	73.8	72.6	81.5	91.4				

^{1/} Manual temperatures initiated for downstream sensor D.

TABLE 232
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 20, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.6 ^{1/}	72.4	81.0	92.5				
0200	73.5	72.1	81.1	92.9				
0300	73.4	72.0	81.3	93.0				
0400	73.0	71.6	81.5	93.0				
0500	73.0	71.5	82.0	93.3				
0600	73.0	71.5	82.0	93.3				
0700	73.0	71.2	82.6	93.5				
0800	73.0	71.1	82.9	93.5				
0900	73.1	71.1	83.0	94.0				
1000	73.4	71.4	84.0	94.4				
1100	73.8	72.0	84.9	95.0				
1200	74.0	72.4	85.5	95.5				
1300	74.2	72.9	86.1	96.4				
1400	74.5	73.0	86.6	96.7				
1500	74.9	73.5	87.0	97.4				
1600	75.0	74.0	87.5	97.8				
1700	75.1	74.1	87.9	98.0				
1800	75.4	74.0	87.0	97.0				
1900	75.4	74.2	88.0	96.4				
2000	75.3	74.2	88.1	97.7				
2100	75.0	74.0	88.4	98.5				
2200	74.8	73.6	88.5	98.6				
2300	74.4	73.5	87.6	98.6				
2400	74.4	73.0	87.3	98.1				

^{1/} Manual temperatures initiated on upstream sensor due to observance of temporary malfunctions in previous data.

TABLE 233

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

August 21, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	74.0	72.9	87.8	98.0				
0200	74.0	72.9	87.6	98.5				
0300	74.0	72.4	87.6	98.5				
0400	74.0	72.2	87.5	98.4				
0500	74.0	72.4	87.2	98.8				
0600	74.0	72.2	87.0	98.0				
0700	74.0	72.0	87.0	98.1				
0800	74.0	72.0	87.0	98.1				
0900	74.4	72.3	87.3	98.0				
1000	74.6	72.6	87.9	99.0				
1100	75.0	73.1	88.5	99.6				
1200	75.3	73.5	89.0	100.4				
1300	75.5	73.8	89.6	100.6				
1400	76.0	74.4	90.1	101.6				
1500	76.1	74.6	90.8	102.0				
1600	76.5	75.2	91.1	102.6				
1700	76.5	75.4	91.4	102.9				
1800	76.6	75.1	91.4	102.9				
1900	76.6	75.3	91.5	103.0				
2000	76.5	75.1	91.6	103.1				
2100	76.4	74.9	92.0	103.5				
2200	76.0	74.9	91.6	103.4				
2300	75.6	74.5	91.6	103.4				
2400	75.8	74.5	91.6	103.2				

TABLE 234
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 August 22, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	75.5	74.4	91.5	103.2				
0200	75.4	74.0	91.3	103.0				
0300	75.3	73.8	91.0	102.9				
0400	75.1	73.5	90.9	102.6				
0500	75.0	73.5	90.5	102.5				
0600	75.0	73.3	90.3	102.5				
0700	75.0	73.3	90.2	102.4				
0800	75.0	73.0	90.0	102.3				
0900	75.0	73.0	90.1	102.5				
1000	75.0	73.3	90.5	102.6				
1100	75.4	73.6	91.3	103.3				
1200	75.6	74.1	91.9	104.0				
1300	75.9	74.5	92.3	104.4				
1400	76.5	75.0	92.8	104.9				
1500	76.6	75.1	93.0	105.1				
1600	77.0	75.5	93.3	105.5				
1700	77.0	75.6	93.5	106.0				
1800	77.4	75.8	93.4	105.6				
1900	77.2	75.8	93.5	105.8				
2000	77.0	75.6	93.6	105.6				
2100	77.0	75.6	93.5	105.7				
2200	77.0	75.5	93.5	105.7				
2300	76.4	75.4	93.5	105.7				
2400	76.5	75.0	93.3	105.4				

TABLE 235
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 23, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.4	75.0	93.0	105.1				
0200	77.0	75.0	92.9	105.0				
0300	76.0	74.6	92.5	104.8				
0400	75.9	74.5	92.2	104.6				
0500	75.6	74.2	92.0	104.1				
0600	75.5	74.0	91.6	104.0				
0700	75.5	73.9	91.5	102.0				
0800	75.4	73.8	91.4	102.1				
0900	75.4	73.6	91.5	102.2				
1000	75.5	73.8	91.9	102.5				
1100	75.5	74.1	92.5	103.6				
1200	75.8	74.3	92.0	104.0				
1300	76.0	74.6	92.5	104.0				
1400	76.4	75.0	93.0	104.5				
1500	76.5	75.4	93.4	104.8				
1600	76.6	75.5	93.8	105.1				
1700	77.0	75.8	94.1	105.6				
1800	77.0	75.6	94.0	105.6				
1900	77.0	75.6	94.0	105.6				
2000	77.0	75.6	94.0	105.6				
2100	77.0	75.5	94.0	105.8				
2200	76.8	75.4	94.3	105.9				
2300	76.6	75.1	94.1	105.9				
2400	76.6	75.0	94.0	105.6				

TABLE 236
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 August 24, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.5	75.0	93.5	105.4				
0200	76.3	75.0	93.5	105.5				
0300	76.0	74.6	93.4	105.0				
0400	76.0	74.6	93.4	105.0				
0500	75.6	74.4	93.0	104.9				
0600	75.5	74.1	92.9	104.5				
0700	75.4	74.0	92.6	104.3				
0800	75.1	73.8	92.6	104.1				
0900	75.2	73.8	93.0	104.4				
1000	75.0	73.6	93.0	104.4				
1100	75.1	73.6	93.3	104.1				
1200	75.4	73.9	93.8	104.5				
1300	75.5	74.1	94.0	105.0				
1400	75.8	74.2	94.8	104.8				
1500	75.9	74.5	94.9	105.1				
1600	76.0	74.5	95.0	105.4				
1700	76.4	75.0	95.1	105.5				
1800	76.5	75.0	95.5	105.9				
1900	76.6	75.1	95.5	105.9				
2000	76.6	75.1	95.6	105.8				
2100	76.5	75.0	95.5	105.8				
2200	76.6	75.0	95.4	105.7				
2300	76.5	75.0	95.1	105.5				
2400	76.5	75.0	94.9	105.5				

TABLE 237

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

August 25, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.4	75.0	94.5	105.1				
0200	76.1	74.6	94.5	104.9				
0300	76.0	74.8	94.4	104.8				
0400	76.0	74.8	94.0	104.5				
0500	75.8	74.5	93.9	104.4				
0600	75.6	74.2	93.6	104.0				
0700	75.4	74.0	93.5	104.0				
0800	75.5	74.0	93.0	104.0				
0900	75.5	74.3	93.4	104.4				
1000	75.6	74.3	93.9	104.5				
1100	75.9	74.5	94.1	104.6				
1200	76.1	74.8	94.8	105.2				
1300	76.4	75.2	95.5	105.5				
1400	76.6	75.5	96.1	106.1				
1500	76.9	75.8	96.0	106.1				
1600	76.8	75.8	96.1	106.3				
1700	77.1	75.8	96.1	106.4				
1800	77.3	75.8	96.0	106.2				
1900	77.5	75.9	95.9	106.3				
2000	77.4	75.8	95.3	106.0				
2100	77.5	75.8	94.8	106.0				
2200	77.4	75.7	94.5	105.6				
2300	77.4	75.9	94.3	105.4				
2400	77.2	75.6	93.9	105.2				

TABLE 238

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

August 26, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	77.0	75.5	93.9	105.0				
0200	76.8	75.5	98.6	104.8				
0300	76.6	75.2	93.5	104.4				
0400	76.5	75.1	93.5	104.6				
0500	76.4	75.0	93.4	104.4				
0600	76.1	74.9	93.3	104.5				
0700	76.0	74.7	93.4	104.3				
0800	76.4	75.1	93.2	104.5				
0900	76.5	75.0	93.5	104.6				
1000	76.6	75.0	93.8	105.1				
1100	76.8	75.4	94.2	105.1				
1200	77.0	75.5	94.4	105.4				
1300	77.0	75.8	94.9	105.5				
1400	77.3	76.0	95.3	105.8				
1500	77.5	76.1	95.6	106.0				
1600	77.6	76.1	95.6	106.1				
1700	77.6	76.2	95.6	106.1				
1800	77.6	76.3	95.6	106.2				
1900	77.8	76.2	94.6	106.2				
2000	77.6	76.1	95.4	106.0				
2100	77.6	76.1	95.0	105.9				
2200	77.6	76.1	94.9	105.9				
2300	77.5	76.0	94.8	105.6				
2400	77.6	75.9	94.6	105.4				

TABLE 239

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

August 27, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	77.3	75.7	94.4	105.3				
0200	77.2	75.5	94.4	105.2				
0300	77.0	75.4	94.3	105.2				
0400	76.6	75.0	94.0	105.0				
0500	76.4	74.9	94.0	104.9				
0600	76.1	74.8	94.0	104.6				
0700	76.1	74.6	94.0	104.7				
0800	76.4	74.8	93.9	104.6				
0900	76.4	74.7	94.0	104.5				
1000	76.5	74.8	94.0	104.6				
1100	76.8	74.8	94.4	104.6				
1200	77.0	75.0	94.6	104.8				
1300	77.3	75.2	94.9	105.1				
1400	77.5	75.6	95.0	105.4				
1500	77.5	75.7	95.2	105.4				
1600	77.6	75.8	95.1	105.6				
1700	78.0	75.6	95.1	105.4				
1800	78.1	75.8	95.1	105.6				
1900	78.0	75.8	95.1	105.5				
2000	78.0	75.8	95.0	105.4				
2100	78.0	75.7	95.0	105.5				
2200	77.9	75.6	95.1	105.4				
2300	77.6	75.5	95.0	105.4				
2400	77.5	75.4	94.8	105.2				

TABLE 240
HOURLY WATER TEMPERATURE (°F) DATA, QUAL-CITIES STATION
August 28, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	77.4	75.3	94.9	105.4				
0200	77.1	75.1	94.7	105.1				
0300	77.0	75.2	94.5	105.1				
0400	76.9	74.9	94.4	104.9				
0500	76.9	74.9	94.1	104.9				
0600	76.8	74.9	94.1	104.7				
0700	76.4	74.8	94.0	104.6				
0800	76.5	74.8	94.1	104.6				
0900	76.8	74.9	94.0	104.4				
1000	77.0	75.0	94.1	104.6				
1100	77.0	75.1	94.4	104.6				
1200	77.3	75.4	94.9	105.0				
1300	77.6	76.0	95.0	105.3				
1400	77.6	76.2	95.3	105.5				
1500	77.8	76.4	95.3	106.0				
1600	77.8	76.3	95.2	105.5				
1700	77.8	76.1	95.0	105.4				
1800	77.9	76.0	95.1	105.4				
1900	77.9	76.1	95.1	105.6				
2000	77.8	76.0	95.0	105.5				
2100	77.6	76.0	94.9	105.8				
2200	77.4	75.6	94.5	105.3				
2300	77.0	75.5	94.5	105.3				
2400	76.7	75.4	94.4	105.1				

TABLE 241
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 29, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.5	75.3	94.0	103.6				
0200	76.4	75.0	93.6	100.9				
0300	76.1	74.9	94.3	97.6				
0400	75.1	74.7	95.0	93.2				
0500	75.5	74.4	95.1	87.7				
0600	75.2	74.3	93.9	85.6				
0700	75.0	74.1	93.0	85.0				
0800	75.3	74.1	91.9	84.6				
0900	75.9	74.3	91.1	84.5				
1000	75.9	74.4	90.6	84.6				
1100	75.9	74.4	90.0	84.5				
1200	75.9	74.4	89.6	84.5				
1300	76.1	74.5	89.9	84.7				
1400	76.2	74.6	89.6	85.0				
1500	76.4	74.9	89.8	85.1				
1600	76.6	75.0	89.5	85.4				
1700	76.6	75.0	89.5	85.6				
1800	76.9	75.0	89.1	85.6				
1900	76.8	74.9	88.9	85.5				
2000	76.8	74.9	88.4	85.4				
2100	76.7	74.9	88.1	85.4				
2200	76.7	74.8	87.6	85.4				
2300	76.5	74.4	87.0	85.4				
2400	76.4	74.3	86.4	85.1				

TABLE 242
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 30, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	76.0	73.9	85.6	85.0				
0200	75.9	73.6	85.2	84.6				
0300	75.6	73.4	84.9	84.6				
0400	75.5	73.1	84.1	84.6				
0500	75.4	73.0	83.9	84.4				
0600	75.4	73.0	83.5	84.3				
0700	75.4	73.0	83.4	84.2				
0800	75.5	73.0	83.3	84.8				
0900	75.6	73.0	84.0	86.1				
1000	75.8	73.2	86.9	87.5				
1100	76.7	73.4	89.6	93.9				
1200	76.4	73.7	90.9	99.0				
1300	76.9	73.9	89.5	99.7				
1400	77.0	74.1	88.7	99.6				
1500	77.0	74.1	86.3	98.6				
1600	76.8	74.3	89.0	99.1				
1700	76.7	74.1	91.5	101.4				
1800	76.4	74.0	92.4	102.2				
1900	76.4	73.9	92.2	102.1				
2000	76.0	73.7	91.4	101.6				
2100	76.0	73.6	91.5	101.4				
2200	75.6	73.4	92.6	102.0				
2300	75.4	73.2	93.0	102.5				
2400	75.3	73.2	92.8	102.3				

TABLE 243
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
August 31, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	75.3	73.2	92.6	102.2				
0200	75.1	73.0	92.1	101.9				
0300	75.1	73.0	92.4	102.0				
0400	74.9	72.6	92.1	101.9				
0500	74.0	72.4	91.9	102.2				
0600	74.0	72.4	91.5	102.0				
0700	73.8	72.4	91.4	101.6				
0800	74.0	72.9	91.6	101.7				
0900	75.4	73.0	92.0	102.0				
1000	75.6	73.4	92.9	102.8				
1100	75.8	73.7	93.8	103.4				
1200	76.1	74.1	94.1	103.6				
1300	76.4	74.5	94.8	104.1				
1400	77.9	75.0	95.4	104.8				
1500	77.2	75.0	95.9	105.1				
1600	76.6	74.8	96.0	105.2				
1700	76.2	74.6	95.9	105.1				
1800	75.8	74.3	95.9	104.9				
1900	75.6	74.0	95.7	104.7				
2000	75.3	73.6	95.1	104.4				
2100	75.2	73.4	94.9	104.1				
2200	75.0	73.2	93.6	103.4				
2300	74.8	73.1	92.8	103.0				
2400	74.9	73.0	92.0	102.0				

TABLE 244

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 1, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		72.9	91.5	101.6	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>
0200		73.0	91.6	101.8				
0300		73.0	91.8	102.0				
0400		73.3	92.1	102.2				
0500		73.3	92.4	102.5				
0600		73.5	92.2	102.3				
0700		73.5	92.1	102.3				
0800		73.5	92.0	102.2				
0900		73.5	91.6	102.1				
1000		73.4	91.4	102.0				
1100		73.4	91.4	101.9				
1200		73.3	91.6	101.8				
1300		73.0	91.6	101.8				
1400		72.0	91.6	101.6				
1500		72.8	91.6	101.6				
1600		72.9	91.6	101.6				
1700		72.9	91.6	101.7				
1800		72.7	91.5	101.6				
1900		72.5	91.2	101.4				
2000		72.3	90.9	101.1				
2100		72.0	90.9	100.9				
2200		71.7	90.6	100.7				
2300		71.4	90.1	100.4				
0000		71.4	90.0	100.2				

1/ Sensor malfunction--temperatures being taken three times per day manually.

TABLE 245
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 September 2, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		71.3	89.9	100.0				
0200		71.1	89.8	99.9				
0300		71.0	89.5	99.7				
0400		70.9	89.1	99.5				
0500		70.9	89.0	99.5				
0600		70.9	88.9	99.4				
0700		70.9	88.9	99.4				
0800		70.8	88.9	99.4				
0900		70.8	89.0	99.7				
1000		70.6	89.1	99.7				
1100		70.6	89.3	99.5				
1200		70.5	89.4	99.6				
1300		70.5	89.6	99.8				
1400		70.5	90.3	100.0				
1500		70.6	90.6	100.4				
1600		70.6	90.6	100.4				
1700		70.6	90.9	100.5				
1800		70.5	91.0	100.5				
1900		70.4	91.2	100.5				
2000		70.2	91.2	100.4				
2100		70.1	91.1	100.4				
2200		70.0	91.0	100.4				
2300		70.0	90.8	100.3				
2400		69.9	90.6	100.1				

TABLE 246
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
September 3, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		69.9	90.1	99.9				
0200		70.0	89.9	99.7				
0300		70.1	89.5	99.5				
0400		70.4	89.5	99.6				
0500		70.6	89.3	99.5				
0600		70.6	89.0	99.4				
0700		70.7	88.8	99.3				
0800		70.7	88.8	99.3				
0900		70.9	88.9	99.3				
1000		70.9	89.0	99.3				
1100		70.9	89.4	99.5				
1200		70.9	90.0	100.0				
1300		71.2	90.4	100.2				
1400		71.2	90.9	100.6				
1500		71.4	91.2	100.9				
1600		71.3	91.3	100.8				
1700		71.2	91.4	100.7				
1800		71.1	91.2	100.0				
1900		70.9	91.1	99.8				
2000		70.7	90.8	99.9				
2100		70.6	90.6	100.0				
2200		70.6	90.4	100.0				
2300		70.6	90.2	100.1				
2400		70.6	90.2	100.1				

TABLE 247
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
September 4, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		70.8	89.6	99.7				
0200		71.0	89.7	99.9				
0300		71.0	89.8	100.0				
0400		71.0	89.5	99.8				
0500		71.0	89.3	99.6				
0600		70.9	89.2	99.5				
0700		70.9	89.0	99.4				
0800		70.8	89.0	99.3				
0900		70.8	89.1	99.3				
1000		70.7	89.4	99.5				
1100		70.6	89.6	99.8				
1200		70.6	89.9	99.9				
1300		70.7	90.2	100.2				
1400		70.8	90.4	100.3				
1500		70.9	90.6	100.4				
1600		73.1 ^{1/}	90.9	103.5 ^{1/}				
1700		73.0	90.9	104.1				
1800		73.0	90.9	104.0				
1900		72.6	90.8	104.0				
2000		72.6	90.8	103.9				
2100		72.5	90.8	103.9				
2200		72.4	90.8	103.7				
2300		72.3	90.7	103.8				
2400		72.1	90.6	103.7				

^{1/} Instruments adjusted to ground truth.

TABLE 248
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
September 5, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		72.2	90.4	100.4				
0200		72.4	90.4	99.8				
0300		72.4	90.0	99.6				
0400		72.5	89.9	99.6				
0500		72.6	89.7	99.6				
0600		72.6	87.9	98.9				
0700		72.6	86.6	98.0				
0800		72.6	86.5	98.0				
0900		72.6	86.4	98.0				
1000		72.6	86.5	98.2				
1100		72.7	86.6	98.4				
1200		72.9	86.9	98.4				
1300	71.2 ^{1/}	73.0	87.0	98.4	72.9 ^{1/}	72.5 ^{1/}		
1400	71.8	73.0	87.4	98.9	72.9	72.5		
1500	72.3	73.1	87.7	99.2	73.0	72.6		
1600	72.2	73.2	87.7	99.3	73.0	72.8		
1700	72.2	73.3	87.6	99.4	73.1	72.9		
1800	72.2	73.3	87.6	99.4	73.0	72.8		
1900	72.1	73.2	87.7	99.5	72.9	72.7		
2000	72.0	72.9	87.5	99.3	72.7	72.4		
2100	71.9	72.6	87.2	99.1	72.5	72.1		
2200	71.9	72.4	86.9	98.8	72.5	72.1		
2300	71.9	72.2	86.4	98.6	72.4	72.5		
2400	71.9	72.1	86.3	98.6	72.6	72.9		

^{1/} New sensor installed and adjusted to ground truth.

TABLE 249

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 6, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.0	72.1	85.9	98.5	72.9	73.2		
0200	72.2	72.1	85.5	98.3	73.1	73.3		
0300	72.4	72.1	85.1	98.0	73.3	73.4		
0400	72.6	72.2	84.8	98.0	73.4	73.5		
0500	72.8	72.4	84.6	97.9	73.6	73.6		
0600	72.7	72.4	84.5	97.9	73.6	73.6		
0700	72.6	72.5	84.4	97.8	73.5	73.5		
0800	72.4	72.5	84.4	97.7	73.0	73.0		
0900	72.1	72.4	84.4	97.6	72.9	72.8		
1000	71.8	72.4	85.0	97.9	72.5	72.7		
1100	71.6	72.5	85.4	98.4	72.2	72.6		
1200	71.5	72.7	85.9	98.7	72.3	72.3		
1300	71.5	72.8	86.5	98.9	72.4	72.0		
1400	71.5	72.8	87.0	99.1	72.3	71.9		
1500	71.5	72.8	87.7	99.6	72.3	71.9		
1600	71.4	72.7	87.9	99.8	72.2	72.0		
1700	71.4	72.8	88.0	99.9	72.1	72.0		
1800	71.2	72.5	88.0	99.9	72.0	71.8		
1900	71.1	72.2	88.0	99.9	71.9	71.6		
2000	71.0	72.0	87.9	98.0	71.5	71.5		
2100	70.9	71.6	87.8	97.8	71.5	71.5		
2200	70.9	71.5	87.4	94.7	71.4	71.4		
2300	71.0	71.4	87.2	92.9	71.4	71.4		
2400	71.0	71.3	86.9	92.4	71.5	71.5		

TABLE 250
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
September 7, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	70.8	71.1	86.4	92.8	71.5	71.6		
0200	71.0	71.3	84.8	89.0	71.4	72.0		
0300	71.3	71.4	83.6	87.9	72.0	72.3		
0400	71.4	71.4	82.6	87.0	72.2	72.4		
0500	71.5	71.4	81.6	86.5	72.4	72.5		
0600	71.6	71.5	80.8	86.1	72.4	72.5		
0700	71.7	71.6	80.1	85.9	72.5	72.6		
0800	71.7	71.7	80.0	85.4	72.5	72.6		
0900	71.6	71.8	79.2	85.2	72.4	72.5		
1000	71.4	71.7	79.1	85.4	72.2	72.3		
1100	71.2	71.6	79.1	85.5	72.0	72.0		
1200	71.1	71.6	78.9	85.5	71.8	71.9		
1300	71.0	71.5	78.8	85.4	71.4	71.5		
1400	70.8	71.3	78.8	85.5	71.0	71.0		
1500	70.4	71.0	78.9	85.6	70.8	70.8		
1600	70.3	71.2	79.1	85.6	70.7	70.7		
1700	70.1	71.4	79.4	85.7	70.6	70.6		
1800	69.9	71.2	79.0	85.6	70.3	70.4		
1900	69.7	71.0	78.9	85.5	70.0	70.1		
2000	69.5	70.8	78.9	85.5	69.8	69.9		
2100	69.4	70.4	78.8	85.4	69.6	69.8		
2200	69.3	69.9	78.5	85.2	69.4	69.7		
2300	69.2	69.8	78.1	84.9	69.3	69.6		
2400	69.0	69.6	77.8	84.9	69.0	69.5		

TABLE 251

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 8, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	69.0	69.4	77.5	84.6	68.9	69.3		
0200	68.9	69.3	77.3	84.6	68.9	69.4		
0300	68.8	69.0	76.8	84.1	68.6	69.2		
0400	68.7	68.7	76.5	83.9	68.6	69.3		
0500	68.6	68.5	76.0	83.5	68.5	69.0		
0600	68.7	68.5	75.9	83.4	68.5	68.9		
0700	68.5	68.4	75.5	83.0	68.4	68.9		
0800	68.4	68.3	75.1	83.1	68.2	68.8		
0900	68.4	68.4	75.3	83.2	68.1	68.8		
1000	68.4	68.7	75.9	83.8	68.2	68.8		
1100	68.5	68.9	76.4	84.1	68.4	68.7		
1200	68.5	69.1	76.6	84.3	68.4	68.9		
1300	69.0	69.6	77.2	99.6	68.3	68.9		
1400	69.0	69.6	77.2	98.4	68.5	68.9		
1500	69.0	69.8	77.0	98.4	68.8	68.9		
1600	69.1	70.0	77.2	98.3	68.7	68.7		
1700	69.0	69.9	77.0	98.1	68.5	68.6		
1800	68.9	69.5	77.0	98.4	68.5	68.5		
1900	68.8	69.4	76.8	98.4	68.4	68.5		
2000	68.5	69.1	81.9	99.6	68.0	68.2		
2100	68.4	68.8	83.4	102.9	67.8	68.1		
2200	68.1	68.5	83.1	102.5	67.6	67.8		
2300	68.0	68.2	82.9	102.4	67.4	67.6		
2400	68.0	68.0	82.6	102.0	67.2	67.6		

TABLE 252

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 9, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	68.0	67.8	82.6	101.9	67.2	67.8		
0200	68.0	67.8	82.6	101.7	67.3	68.0		
0300	68.2	67.6	82.9	101.6	67.4	68.2		
0400	68.1	67.5	84.5	102.2	67.5	68.3		
0500	68.4	67.5	84.6	103.0	67.8	68.7		
0600	68.5	67.6	84.6	102.9	67.9	68.7		
0700	68.6	67.6	84.5	102.8	68.0	68.9		
0800	68.8	68.0	84.5	103.0	68.1	68.9		
0900	69.0	68.4	84.6	103.4	68.2	69.0		
1000	68.8	68.8	85.6	103.9	68.3	68.9		
1100	68.8	68.8	85.6	104.2	68.4	68.8		
1200	68.9	68.9	86.2	104.5	68.4	68.8		
1300	69.0	69.2	87.1	105.2	68.5	68.9		
1400	69.0	69.6	87.4	105.3	68.8	69.0		
1500	69.1	69.9	87.6	105.6	69.0	69.2		
1600	69.3	69.9	87.8	105.8	69.0	69.2		
1700	69.4	70.1	88.0	106.0	69.0	69.2		
1800	69.4	70.0	88.0	106.0	68.9	69.2		
1900	69.3	69.6	88.0	105.9	68.8	69.2		
2000	69.2	69.4	88.0	105.9	68.6	69.0		
2100	69.0	69.3	88.0	105.9	68.4	68.8		
2200	68.8	68.9	87.9	105.6	68.0	68.6		
2300	68.6	68.9	87.9	105.6	68.0	68.6		
2400	68.6	68.7	87.6	105.4	68.0	68.5		

TABLE 253

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 10, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	68.5	68.5	87.4	105.1	68.0	68.5		
0200	68.6	68.4	86.9	104.9	68.0	68.7		
0300	68.6	68.4	86.7	104.7	68.0	68.9		
0400	68.9	68.3	86.6	104.6	68.1	69.1		
0500	69.0	68.2	86.5	104.5	68.2	69.4		
0600	69.1	68.2	86.5	104.5	68.3	69.5		
0700	69.2	68.2	86.4	104.4	68.5	69.6		
0800	69.2	68.3	86.5	104.4	68.6	69.6		
0900	69.2	68.5	86.6	104.5	68.8	69.6		
1000	69.4	69.0	86.9	104.8	68.8	69.6		
1100	69.4	69.4	87.4	105.0	69.1	69.5		
1200	69.6	69.8	88.0	105.5	69.3	69.7		
1300	69.8	70.2	88.5	106.0	69.5	69.9		
1400	69.9	70.8	89.0	106.5	69.8	69.9		
1500	70.0	71.0	89.6	107.1	69.9	70.0		
1600	70.0	71.1	89.8	107.3	70.0	70.1		
1700	70.0	71.2	90.0	107.5	70.1	70.2		
1800	70.0	71.2	90.0	107.7	70.1	70.2		
1900	70.1	71.2	90.1	107.9	70.1	70.2		
2000	70.0	70.8	90.3	107.9	70.0	70.1		
2100	69.9	70.5	90.4	108.0	69.5	69.6		
2200	69.7	70.3	90.3	107.9	69.4	69.6		
2300	69.5	70.0	90.1	107.8	68.7	69.5		
2400	69.2	69.7	90.0	107.4	68.9	69.2		

TABLE 254

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 11, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	69.3	69.7	90.0	107.2	68.8	69.3		
0200	69.3	69.5	89.8	107.2	68.8	69.4		
0300	69.3	69.3	89.6	107.1	68.8	69.5		
0400	69.3	69.3	89.5	107.0	68.8	69.7		
0500	69.4	69.3	89.4	106.9	68.9	69.8		
0600	69.5	69.3	89.2	106.7	69.2	69.9		
0700	69.9	69.4	89.0	106.6	69.4	70.3		
0800	70.0	69.6	89.0	106.6	69.7	70.4		
0900	70.1	69.7	89.0	106.6	70.0	70.6		
1000	70.3	69.9	89.4	107.0	70.3	70.9		
1100	70.5	70.6	89.8	107.4	70.6	71.3		
1200	70.8	71.0	90.3	107.8	71.0	71.4		
1300	71.1	71.5	90.9	108.2	71.4	71.6		
1400	71.4	71.8	91.3	108.8	71.8	72.0		
1500	71.8	72.3	91.6	109.0	72.0	72.3		
1600	71.8	72.5	91.8	109.2	72.2	72.3		
1700	71.9	72.8	91.9	109.4	72.3	72.3		
1800	71.9	72.8	91.9	109.4	72.2	72.3		
1900	71.9	72.8	92.0	109.5	72.1	72.3		
2000	71.7	72.6	92.0	109.5	71.9	72.2		
2100	71.5	72.4	92.1	109.5	71.8	72.0		
2200	71.2	72.2	92.3	109.5	71.6	71.7		
2300	71.2	72.0	92.2	109.6	71.4	71.5		
2400	71.0	71.8	92.3	109.4	71.2	71.4		

TABLE 255

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 12, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	71.0	71.6	92.0	109.3	71.0	71.4		
0200	71.0	71.5	92.0	109.1	70.9	71.3		
0300	71.0	71.4	91.8	109.0	70.9	71.2		
0400	71.0	71.4	91.8	108.9	71.0	71.4		
0500	71.0	71.2	91.8	108.9	71.0	71.5		
0600	71.3	71.2	91.7	108.9	71.1	71.8		
0700	71.3	71.3	91.5	108.7	71.1	71.7		
0800	71.4	71.2	91.4	108.8	71.4	72.0		
0900	71.5	71.2	91.1	108.6	71.6	72.3		
1000	71.6	71.6	91.4	108.6	72.0	72.4		
1100	71.9	72.0	91.7	108.8	72.3	72.6		
1200	72.2	72.3	92.0	109.2	72.5	72.8		
1300	72.4	72.6	92.6	109.5	72.8	73.2		
1400	72.8	73.5	93.0	110.0	73.4	73.5		
1500	73.0	73.6	93.4	110.4	73.6	73.8		
1600	73.1	73.9	93.5	110.6	73.9	74.0		
1700	73.4	74.2	93.8	110.9	74.0	74.1		
1800	73.4	74.2	93.6	111.0	74.2	74.2		
1900	73.4	74.1	93.4	110.9	74.0	74.0		
2000	73.0	73.9	93.0	110.6	73.8	73.8		
2100	73.0	73.7	92.9	110.4	73.6	73.6		
2200	72.8	73.7	92.8	110.4	73.5	73.6		
2300	72.6	73.5	92.6	110.2	73.3	73.3		
2400	72.6	73.5	92.6	110.1	73.1	73.2		

TABLE 256

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 13, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	72.4	73.1	92.4	109.9	72.9	73.0		
0200	72.4	73.1	92.4	109.9	72.8	72.9		
0300	72.4	73.0	92.1	109.6	72.8	72.9		
0400	72.4	72.8	91.6	108.1	72.6	72.8		
0500	72.3	72.7	91.3	106.4	72.6	72.9		
0600	72.3	72.6	90.9	106.6	72.5	73.0		
0700	72.4	72.5	90.7	107.4	72.8	73.1		
0800	72.5	72.5	90.4	107.4	72.9	73.3		
0900	72.4	72.4	90.5	107.5	72.9	73.3		
1000	72.7	72.6	90.8	107.9	73.1	73.6		
1100	72.9	73.1	91.2	108.3	73.4	73.9		
1200	73.0	73.4	90.9	108.6	73.8	73.9		
1300	73.4	73.7	91.4	108.8	74.2	74.3		
1400	73.6	74.2	92.3	109.4	74.4	74.5		
1500	73.8	74.5	92.5	110.3	74.9	74.9		
1600	74.1	74.8	92.9	110.8	75.1	75.2		
1700	74.1	75.0	92.8	110.9	75.2	75.2		
1800	74.1	75.0	93.0	111.0	75.2	75.2		
1900	74.1	75.0	93.0	111.0	75.1	75.1		
2000	74.0	75.0	92.8	111.0	75.1	75.0		
2100	73.9	74.7	92.9	110.9	74.9	74.9		
2200	73.7	74.7	93.4	111.0	74.4	74.4		
2300	73.5	74.3	93.5	111.0	74.4	74.4		
2400	73.4	74.1	93.3	110.8	74.1	74.2		

TABLE 257

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 14, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.4	73.9	93.0	110.6	74.0	74.0		
0200	73.2	73.8	92.9	110.6	73.9	73.9		
0300	73.2	73.5	92.5	110.1	73.8	73.8		
0400	73.2	73.3	92.4	109.9	73.7	73.6		
0500	73.2	73.1	92.0	109.8	73.6	73.6		
0600	73.2	73.0	92.0	109.7	73.7	73.8		
0700	73.4	73.0	92.1	109.4	73.9	74.0		
0800	73.3	73.0	92.1	109.5	73.6	73.5		
0900	73.4	73.0	91.9	109.3	73.7	73.6		
1000	73.3	73.5	91.5	109.4	74.0	74.5		
1100	73.5	73.9	91.9	109.9	74.4	74.5		
1200	73.7	74.4	92.1	110.0	74.6	75.0		
1300	73.9	74.5	92.1	110.3	74.9	75.0		
1400	74.0	74.6	92.3	110.4	75.1	75.3		
1500	74.4	75.0	92.0	110.4	75.4	75.5		
1600	74.6	75.3	91.6	110.4	75.5	75.7		
1700	74.5	75.3	91.1	110.1	75.6	75.6		
1800	74.4	75.2	90.6	109.8	75.5	75.5		
1900	74.3	75.1	90.4	109.5	75.4	75.5		
2000	74.2	74.9	90.1	109.1	75.2	75.3		
2100	73.9	74.5	89.9	108.9	74.8	74.8		
2200	73.7	74.4	89.6	108.9	74.6	74.6		
2300	73.5	74.2	89.5	108.8	74.4	74.4		
2400	73.3	73.9	89.3	108.4	74.0	74.2		

TABLE 258

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 15, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	73.0	73.8	88.9	108.2	73.7	73.9		
0200	72.8	73.4	88.5	107.8	73.5	73.6		
0300	72.5	73.1	88.1	107.6	73.1	73.4		
0400	72.6	72.8	88.0	107.4	73.0	73.4		
0500	72.5	72.8	87.8	107.3	72.9	73.2		
0600	72.4	72.5	87.9	107.0	72.8	73.4		
0700	72.4	72.4	87.6	106.8	72.7	73.5		
0800	72.3	72.3	87.4	106.9	72.6	73.3		
0900	72.3	72.3	87.4	106.6	72.6	73.5		
1000	72.2	72.2	87.3	106.6	72.6	73.4		
1100	72.4	72.4	87.4	106.9	72.6	73.3		
1200	72.5	72.8	87.6	107.2	72.9	73.5		
1300	72.6	73.2	87.7	107.3	73.1	73.6		
1400	72.7	73.4	87.9	107.5	73.3	73.6		
1500	72.7	73.4	87.9	107.3	73.1	73.3		
1600	72.7	73.4	87.9	107.4	73.1	73.4		
1700	72.6	73.2	87.6	107.4	73.0	73.4		
1800	72.6	73.0	87.5	107.0	72.8	73.3		
1900	72.4	72.9	87.4	107.1	72.6	73.0		
2000	72.1	72.3	87.4	106.9	72.3	72.7		
2100	71.9	72.3	87.2	107.0	72.0	72.5		
2200	71.6	71.9	86.6	106.7	71.6	72.4		
2300	71.4	71.5	86.4	106.3	71.3	72.0		
2400	70.9	71.2	86.2	106.2	70.8	71.5		

TABLE 259

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 16, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	70.8	71.0	85.9	105.9	70.5	71.3		
0200	70.6	70.6	85.8	105.6	70.2	70.9		
0300	70.5	70.5	85.6	105.6	70.1	70.8		
0400	70.3	70.3	85.5	105.4	69.9	71.0		
0500	70.1	70.0	85.3	105.3	69.6	71.6		
0600	70.0	69.9	85.0	104.9	69.5	70.5		
0700	69.9	69.8	84.9	105.0	69.5	70.6		
0800	69.8	69.7	84.6	104.6	69.1	70.5		
0900	69.8	69.6	84.5	104.5	69.1	70.5		
1000	69.9	69.5	84.4	104.4	69.1	70.5		
1100	70.0	69.8	84.4	104.5	69.3	70.7		
1200	70.1	70.0	84.3	104.6	69.5	70.9		
1300	70.2	70.3	84.2	104.6	69.6	70.9		
1400	70.2	70.4	84.0	104.6	69.6	70.9		
1500	70.2	70.3	84.0	104.5	69.5	70.8		
1600	70.2	70.2	84.0	104.4	69.4	70.6		
1700	70.1	70.1	84.0	104.3	69.4	70.6		
1800	70.1	70.0	83.9	104.2	69.3	70.5		
1900	69.7	69.8	83.6	104.0	69.0	70.0		
2000	69.6	69.4	83.4	103.8	68.8	69.8		
2100	69.0	68.9	83.2	103.6	68.1	69.0		
2200	68.6	68.6	83.0	103.4	67.6	68.6		
2300	68.5	68.3	82.9	103.1	67.3	68.4		
2400	68.4	68.0	82.5	102.9	67.0	68.2		

TABLE 260

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 17, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	68.0	67.8	82.5	102.7	66.9	68.0		
0200	67.8	67.6	82.5	102.6	66.7	68.0		
0300	67.6	67.3	82.4	102.5	66.4	67.9		
0400	67.0	66.9	82.2	102.3	65.8	67.5		
0500	66.9	66.5	82.0	102.0	65.4	67.0		
0600	66.5	66.3	82.0	101.9	65.2	66.8		
0700	66.4	66.0	81.9	101.7	64.9	66.4		
0800	66.4	65.9	81.8	101.6	64.8	66.4		
0900	66.4	65.8	81.6	101.5	64.6	66.3		
1000	66.4	65.9	81.9	101.5	64.6	66.4		
1100	66.4	66.0	82.1	101.6	64.6	66.5		
1200	66.4	66.2	82.4	101.9	64.7	66.5		
1300	66.4	66.4	82.6	102.3	64.8	66.5		
1400	66.5	66.4	82.7	102.3	64.8	66.5		
1500	66.6	66.5	82.9	102.4	64.9	66.6		
1600	66.6	66.5	82.9	102.4	64.9	66.6		
1700	66.5	66.5	82.8	102.4	64.9	66.6		
1800	66.4	66.3	82.8	102.2	64.7	66.5		
1900	66.4	66.0	82.8	102.0	64.4	66.4		
2000	66.3	65.8	82.8	102.2	64.3	66.3		
2100	66.3	65.5	82.8	102.4	64.3	66.2		
2200	66.2	65.5	82.8	102.4	64.2	66.2		
2300	66.1	65.4	82.7	102.5	64.1	66.2		
2400	65.8	65.2	82.5	102.4	63.9	65.9		

TABLE 261
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
September 18, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	65.9	65.0	82.5	102.3	63.8	65.6		
0200	65.7	64.9	82.3	102.1	63.6	65.4		
0300	65.5	64.8	82.0	102.0	63.3	65.3		
0400	65.3	64.6	82.0	101.9	63.2	65.0		
0500	65.0	64.5	82.0	101.8	63.0	64.8		
0600	64.8	64.3	82.0	101.7	62.5	64.4		
0700	64.4	64.0	81.9	101.5	62.0	63.9		
0800	64.3	63.8	81.9	101.5	61.8	63.9		
0900	64.2	63.6	81.9	101.4	61.6	63.8		
1000	64.0	63.6	82.0	101.4	61.5	64.1		
1100	63.9	63.5	82.2	101.5	61.4	64.4		
1200	63.9	63.5	85.0	100.8	62.3	64.0		
1300	63.9	63.4	85.8	100.0	63.4	63.6		
1400	64.0	63.5	85.7	100.1	63.5	64.0		
1500	64.2	63.6	85.6	100.2	63.6	64.3	63.5 ^{1/}	62.3 ^{1/}
1600	64.3	63.8	85.7	100.4	63.8	64.2	63.4	63.0
1700	64.4	64.0	85.8	100.7	64.0	64.0	63.4	63.2
1800	64.4	64.0	85.8	101.5	64.0	64.1	63.4	63.1
1900	64.5	63.9	85.8	102.6	64.0	64.2	63.5	63.0
2000	64.5	63.7	85.6	102.5	64.0	64.1	63.4	63.1
2100	64.5	63.6	85.5	102.4	63.9	64.0	63.3	63.2
2200	64.3	63.4	85.4	102.5	63.7	63.8	63.2	63.1
2300	64.2	63.2	85.3	102.6	63.6	63.7	63.0	62.9
2400	64.4	62.8	85.4	102.5	63.5	64.0	63.0	62.5

^{1/} New sensors installed and adjusted to ground truth.

TABLE 262

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 19, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	64.3	63.6	85.5	102.6	63.5	63.9	62.8	62.6
0200	64.2	63.0	85.5	102.6	63.3	63.7	62.6	62.4
0300	64.1	62.4	85.5	102.6	63.0	63.5	62.5	62.2
0400	63.9	62.3	85.3	102.4	62.8	63.3	62.1	61.8
0500	63.6	62.2	85.0	102.2	62.6	63.0	61.8	61.5
0600	63.5	62.0	84.8	102.0	62.4	62.7	61.6	61.3
0700	63.3	61.9	84.6	101.8	62.2	62.5	61.4	61.2
0800	63.2	61.8	84.6	101.6	62.1	62.5	61.4	61.0
0900	63.1	61.6	84.5	101.5	62.0	62.5	61.4	60.9
1000	63.2	61.9	84.9	101.8	62.2	62.5	61.4	60.9
1100	63.4	62.4	85.4	102.1	62.3	62.5	61.3	60.9
1200	63.6	62.8	86.0	102.8	62.7	62.8	61.5	61.2
1300	63.8	63.4	86.8	103.4	62.9	63.0	61.8	61.5
1400	64.0	63.8	87.1	103.9	63.6	63.3	62.0	62.4
1500	64.2	64.2	88.0	104.2	63.5	63.6	62.4	63.0
1600	64.3	64.3	88.4	104.6	63.6	63.8	62.6	63.1
1700	64.5	64.5	88.8	104.9	63.8	63.9	62.8	63.2
1800	64.5	64.4	89.0	105.5	63.8	63.9	63.1	63.6
1900	64.5	64.3	89.1	105.1	63.8	64.0	63.4	63.8
2000	64.5	64.2	89.6	105.2	63.8	64.0	63.4	63.7
2100	64.6	64.1	89.8	105.3	63.8	64.0	63.5	63.7
2200	64.7	64.0	89.9	105.4	63.9	64.2	63.5	64.0
2300	64.8	63.9	90.0	105.5	64.0	64.4	63.5	64.4
2400	64.8	64.0	90.0	105.6	64.1	64.4	63.4	63.6

TABLE 263

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 20, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	64.9	64.2	90.0	102.9	64.1	64.2	63.1	63.6
0200	65.0	63.6	89.9	102.4	64.0	64.4	63.1	64.1
0300	64.8	63.5	89.5	99.9	64.1	64.2	63.0	63.4
0400	64.7	63.6	89.5	99.1	63.8	64.1	62.8	63.2
0500	64.6	63.7	89.4	98.0	63.7	64.0	62.4	63.0
0600	64.5	63.4	89.1	99.1	63.5	63.9	62.4	62.8
0700	64.4	63.2	88.8	101.4	63.3	63.8	62.4	62.6
0800	64.2	63.1	88.1	101.6	63.2	63.5	62.2	62.4
0900	63.9	63.0	87.0	101.8	63.0	63.3	62.0	62.2
1000	63.8	63.2	86.2	101.1	63.0	63.2	62.1	62.4
1100	63.8	63.4	85.6	100.8	63.0	63.1	62.1	62.6
1200	64.0	63.6	85.9	101.1	63.3	63.6	62.7	63.1
1300	64.1	63.8	86.0	101.3	63.4	63.8	63.0	63.7
1400	64.3	63.9	87.1	102.2	63.7	64.0	63.6	63.9
1500	64.5	64.0	88.5	103.0	63.9	64.2	63.9	64.4
1600	64.8	64.3	88.8	103.8	64.1	64.6	64.3	64.8
1700	65.1	64.5	89.0	104.4	64.4	64.8	64.8	65.2
1800	65.3	64.6	88.7	104.3	64.5	64.9	65.1	65.4
1900	65.5	64.7	88.5	104.1	64.6	65.2	65.3	65.7
2000	65.7	64.7	88.5	104.3	64.8	65.4	65.5	66.0
2100	65.9	64.7	88.5	104.5	65.2	65.7	65.8	66.2
2200	65.9	64.7	88.5	104.9	65.3	65.9	65.7	66.4
2300	66.0	64.7	88.5	104.9	65.4	66.0	65.6	66.6
2400	66.1	64.6	88.4	104.6	65.4	66.0	65.6	66.5

TABLE 264
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
September 21, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	66.1	64.6	88.3	104.4	65.5	66.0	65.4	65.7
0200	66.1	64.7	88.4	104.2	65.5	66.0	65.3	65.5
0300	66.0	64.8	88.5	104.0	65.4	65.9	64.9	65.4
0400	66.0	64.8	88.0	104.0	65.4	65.8	64.8	65.3
0500	65.9	64.9	87.2	104.1	65.3	65.6	64.7	65.2
0600	65.7	64.6	87.1	103.9	65.2	65.1	64.8	65.2
0700	65.5	64.5	87.0	103.8	65.0	65.4	64.9	64.9
0800	65.5	64.7	87.3	104.0	65.0	65.3	65.2	65.4
0900	65.6	64.9	87.6	104.2	65.1	65.2	65.5	65.7
1000	65.8	65.1	88.0	104.6	65.3	65.4	65.8	66.0
1100	65.9	65.2	88.4	104.9	65.4	65.5	66.0	66.2
1200	66.1	65.4	89.1	105.2	65.9	66.0	66.3	66.8
1300	66.3	65.6	89.9	105.6	66.1	66.4	66.5	66.9
1400	66.6	66.0	90.6	106.4	66.3	66.5	66.8	67.4
1500	66.9	66.4	90.9	106.8	66.5	66.8	67.0	67.9
1600	67.0	66.7	91.0	106.9	66.9	67.3	67.1	68.4
1700	67.2	66.7	90.9	106.9	66.9	67.3	67.3	68.4
1800	67.3	66.5	90.4	106.6	66.9	67.5	67.3	68.6
1900	67.3	66.4	89.5	106.1	67.0	67.5	67.2	68.5
2000	67.3	66.2	88.4	105.6	67.0	67.4	67.1	68.2
2100	67.3	66.1	87.6	104.9	66.9	67.5	66.9	68.2
2200	67.1	65.9	86.1	103.6	66.6	67.0	66.3	67.3
2300	67.0	65.7	86.1	103.6	66.6	67.0	66.3	67.3
2400	67.0	65.5	86.0	103.2	66.6	67.0	66.1	66.9

TABLE 265

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 22, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	66.8	65.4	85.9	103.2	66.4	67.0	65.9	67.0
0200	66.5	65.4	86.0	103.1	66.0	65.0	65.6	66.4
0300	66.4	65.2	86.0	103.1	65.9	66.1	65.0	66.1
0400	66.2	65.2	86.0	103.1	65.6	66.0	65.0	66.0
0500	65.9	64.8	85.6	103.1	65.2	65.9	64.9	65.2
0600	65.6	64.6	85.3	102.9	65.0	65.4	65.0	65.6
0700	65.5	64.4	85.0	102.4	64.7	65.4	65.1	64.7
0800	65.4	64.3	84.9	102.2	64.5	65.1	65.1	65.1
0900	65.3	64.1	84.9	102.2	64.4	64.9	65.0	65.1
1000	65.4	64.4	85.0	102.4	64.5	65.0	65.4	65.6
1100	65.5	64.4	85.2	102.9	64.6	65.2	65.6	65.9
1200	65.5	64.4	85.3	102.9	64.8	65.4	65.7	65.8
1300	65.7	64.6	85.5	103.2	65.0	65.5	65.6	66.2
1400	65.6	64.9	85.8	103.4	65.0	65.5	65.4	65.9
1500	65.9	64.9	86.1	103.7	65.1	65.6	65.4	65.8
1600	65.9	64.9	86.2	103.9	65.4	65.6	65.3	66.1
1700	65.8	65.0	86.1	104.1	65.3	65.6	65.3	66.0
1800	65.7	64.8	86.1	104.0	65.2	65.5	65.0	66.0
1900	65.7	64.8	86.1	104.0	65.2	65.5	65.0	66.0
2000	65.6	64.6	86.3	104.0	65.0	65.3	64.5	65.4
2100	65.5	64.4	86.1	104.0	64.9	65.0	64.4	65.2
2200	65.3	64.4	85.9	103.7	64.8	64.9	64.0	65.0
2300	64.9	64.0	85.4	103.2	64.5	64.6	63.5	64.4
2400	65.0	63.9	85.3	103.0	64.1	64.8	63.4	64.1

TABLE 266

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 23, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	64.6	63.7	83.5	93.0	63.9	64.5	63.6	64.9
0200	64.5	63.4	82.3	95.1	63.6	64.2	63.1	64.7
0300	64.3	63.0	81.4	97.9	63.0	63.8	62.4	64.5
0400	63.9	62.9	80.9	66.6	62.8	63.5	61.3	63.5
0500	63.5	62.6	79.8	63.0	62.5	62.8	61.0	62.6
0600	63.0	62.4	79.0	62.0	62.2	62.6	60.8	62.5
0700	62.9	62.0	78.2	62.0	61.9	62.4	61.0	62.4
0800	62.9	61.6	77.4	61.5	61.5	62.4	60.8	61.9
0900	62.9	61.6	77.0	61.2	61.6	62.3	61.3	61.6
1000	62.8	61.5	76.9	60.9	61.5	62.3	61.1	62.0
1100	62.9	61.6	77.2	61.2	61.7	62.3	61.6	62.3
1200	63.0	61.9	77.6	61.2	61.8	62.5	61.9	62.6
1300	63.3	62.1	78.5	61.5	62.1	62.8	62.3	62.9
1400	63.4	62.4	78.8	64.3	62.4	63.3	62.9	63.6
1500	63.5	62.6	79.4	63.0	62.6	63.6	63.2	64.1
1600	64.0	62.7	79.5	67.2	62.9	63.6	63.4	64.5
1700	64.1	62.8	78.9	70.7	62.9	63.9	63.4	64.9
1800	64.3	62.8	78.7	73.8	63.0	64.0	63.5	65.1
1900	64.4	62.9	78.1	76.2	63.2	64.3	63.6	65.0
2000	64.4	62.9	80.1	77.5	63.4	64.0	62.9	64.0
2100	64.4	62.9	80.1	77.5	63.4	64.0	62.9	64.0
2200	64.4	62.9	80.6	85.9	63.4	64.0	62.8	63.9
2300	64.2	62.7	81.0	89.9	63.1	63.7	62.6	63.5
2400	64.0	62.6	81.4	90.9	62.9	63.5	62.4	63.3

TABLE 267
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
September 24, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	63.9	62.6	82.7	91.5	62.9	63.5	62.1	63.0
0200	63.6	62.5	83.8	92.1	62.5	63.2	61.6	62.6
0300	63.6	62.4	82.3	92.3	62.3	63.0	61.6	62.6
0400	63.4	62.1	75.5	89.3	62.0	62.7	61.4	62.2
0500	63.4	62.0	77.8	86.6	61.9	62.7	61.4	62.0
0600	63.1	61.8	80.8	89.4	61.6	62.5	61.1	61.9
0700	63.0	61.6	82.0	90.6	61.5	62.4	61.4	61.9
0800	62.9	61.6	82.6	91.1	61.5	62.4	61.4	61.7
0900	62.7	61.5	83.2	92.2	61.4	62.3	61.5	61.6
1000	62.8	61.6	83.5	92.6	61.5	62.3	61.7	61.8
1100	62.9	61.8	83.9	93.1	61.6	62.3	61.9	62.1
1200	63.0	62.1	82.8	92.1	61.7	62.5	62.2	62.4
1300	63.1	62.3	82.3	91.6	61.9	62.6	62.5	62.7
1400	63.2	62.3	83.1	92.9	61.9	62.9	62.7	62.9
1500	63.4	62.3	85.3	94.4	62.0	63.1	62.9	63.4
1600	63.4	62.3	85.8	95.1	62.0	63.0	62.7	63.0
1700	63.5	62.4	86.1	95.9	62.1	63.0	62.5	62.3
1800	65.0	62.2	86.3	96.8	62.1	62.9	62.2	62.8
1900	66.1	62.0	86.4	98.4	62.0	62.6	61.9	63.2
2000	66.5	62.0	86.3	97.9	62.0	62.8	61.9	63.2
2100	66.9	61.9	86.1	97.5	62.0	63.0	61.9	63.1
2200	67.2	61.9	86.8	98.2	62.0	63.0	61.5	63.2
2300	67.5	61.9	87.5	99.0	62.0	62.9	61.2	63.4
2400	66.9	61.9	87.6	99.4	62.0	62.8	61.2	63.5

TABLE 268
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 September 25, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	66.2	62.0	88.8	100.2	61.9	63.1	60.9	63.4
0200	65.7	62.1	88.9	100.6	61.7	63.0	60.9	63.1
0300	65.0	62.3	89.0	100.9	61.6	62.8	60.8	62.7
0400	65.7	62.3	88.8	100.7	61.6	62.6	60.8	62.4
0500	66.1	62.4	88.4	100.5	61.6	62.5	60.8	62.1
0600	65.0	62.0	88.6	100.7	61.5	62.3	60.7	62.2
0700	64.8	61.8	89.0	100.8	61.5	62.1	60.6	62.3
0800	64.8	61.8	85.3	101.1	61.5	62.0	60.8	61.9
0900	64.9	61.9	89.6	102.0	61.4	61.9	60.9	61.6
1000	63.1	61.9	89.7	102.2	61.3	62.1	61.1	61.9
1100	62.6	61.9	89.9	102.4	61.5	62.3	61.4	62.2
1200	63.1	61.9	90.2	102.5	61.5	62.3	61.7	62.3
1300	64.4	61.9	90.5	102.7	61.6	62.4	61.9	62.4
1400	63.1	62.1	90.7	102.9	61.7	62.5	62.1	62.6
1500	62.6	62.3	90.9	103.2	61.8	62.6	62.4	62.8
1600	62.8	62.3	91.2	103.6	61.9	62.6	62.5	62.7
1700	62.9	62.2	91.8	103.9	62.0	62.7	62.8	62.6
1800	63.1	62.0	91.9	104.1	62.0	62.9	62.7	62.5
1900	63.4	61.8	92.1	104.5	62.0	63.2	62.6	62.3
2000	63.5	61.9	92.6	104.7	62.0	63.2	62.6	62.3
2100	63.6	62.0	92.9	104.9	62.1	63.2	62.6	62.3
2200	63.6	62.0	93.2	105.1	62.2	63.2	62.6	62.3
2300	63.6	62.0	93.6	106.0	62.3	63.3	62.7	62.4
2400	63.7	62.0	93.9	107.2	62.2	63.3	62.6	62.2

TABLE 269
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
September 26, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	63.6	62.3	94.0	106.4	62.4	63.2	62.5	62.3
0200	63.6	62.3	94.2	106.8	62.4	63.4	62.5	62.2
0300	63.5	62.4	94.4	107.0	62.4	63.5	62.5	62.1
0400	63.5	62.3	93.9	106.2	62.4	63.4	62.4	62.3
0500	63.5	62.2	93.4	105.3	62.4	63.3	62.3	62.4
0600	<u>1/</u>	62.0	92.9	106.2	62.2	62.9	<u>1/</u>	<u>1/</u>
0700		61.9	92.3	107.1	62.0	62.6		
0800		61.9	92.3	106.2	62.4	62.6		
0900		62.0	92.3	105.6	62.6	62.6		
1000		61.8	92.1	105.5	61.5	62.3		
1100		61.6	91.9	105.4	60.8	61.9		
1200		61.8	91.6	105.4	61.2	62.2		
1300		62.2	91.3	105.1	62.4	62.4		
1400		62.3	91.8	105.3	62.5	62.6		
1500		62.4	92.4	105.6	62.6	62.7		
1600		62.7	92.7	105.8	62.8	62.7		
1700		62.9	93.0	105.9	62.9	62.7		
1800		62.7	92.8	106.2	62.9	62.7		
1900		62.4	92.6	106.4	62.9	62.7		
2000		62.3	91.8	106.1	62.8	62.9		
2100		62.3	91.5	105.8	62.8	62.9		
2200		62.2	91.1	105.4	62.8	62.9		
2300		62.1	90.8	105.1	62.8	62.8		
2400		61.9	90.1	104.8	62.8	62.8		

1/ Sensor malfunction.

TABLE 270

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

September 27, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		62.0	90.0	103.6	62.8	62.8		
0200		61.8	90.0	102.2	62.6	62.7		
0300		61.6	89.9	101.7	62.4	62.6		
0400		61.6	89.6	101.6	62.2	62.4		
0500		61.6	89.1	101.4	62.0	62.3		
0600		61.4	88.7	101.7	61.9	62.1		
0700		61.2	88.1	101.9	61.7	62.0		
0800		60.9	87.2	101.8	61.6	62.0		
0900		60.7	86.5	101.6	61.5	61.9		
1000		60.9	86.4	101.5	61.6	62.1		
1100		61.2	86.1	101.3	61.7	62.2		
1200		61.4	85.8	101.3	61.9	62.4		
1300		61.6	85.6	101.2	62.1	62.6		
1400		61.8	85.3	101.2	62.3	62.6		
1500		62.1	85.0	101.2	62.4	62.7		
1600		62.1	84.1	101.3	62.5	62.9		
1700		62.1	83.9	101.4	62.6	63.0		
1800		61.9	83.7	101.2	62.5	63.0		
1900		61.8	83.6	100.8	62.4	63.0		
2000		61.6	83.9	100.9	62.3	62.9		
2100		61.4	84.4	101.1	62.2	62.8		
2200		61.2	84.8	101.3	62.2	62.5		
2300		61.0	85.1	101.5	62.1	62.3		
2400		61.1	85.4	101.7	61.9	62.1		

TABLE 271
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
September 28, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		61.1	85.3	101.9	61.5	61.6		
0200		60.9	85.2	101.9	61.3	61.4		
0300		60.8	85.1	101.8	61.0	61.3		
0400		60.6	85.0	101.6	60.7	60.9		
0500		60.4	84.9	101.4	60.4	60.6		
0600		60.1	84.9	101.3	60.2	60.5		
0700		59.6	84.8	101.2	59.9	60.4		
0800		59.5	84.8	101.1	59.8	60.4		
0900		59.4	84.9	101.0	59.7	60.3		
1000		59.5	85.1	101.2	59.8	60.3		
1100		59.6	85.5	101.5	59.9	60.4		
1200		59.8	85.8	101.7	60.1	60.5		
1300		59.9	86.2	101.9	60.3	60.6		
1400		60.2	86.9	102.3	60.6	60.9		
1500		60.4	87.3	102.8	60.8	61.2		
1600		60.5	87.6	103.1	60.9	61.3		
1700	60.7 ^{1/}	60.6	87.7	103.5	61.1	61.5		
1800	60.8	60.5	87.8	103.5	61.1	61.5		
1900	60.9	60.4	87.8	103.5	61.2	61.5		
2000	60.8	60.2	87.7	103.4	61.0	61.3		
2100	60.7	60.0	87.6	103.2	60.9	61.0		
2200	60.6	60.0	87.6	103.2	60.7	60.9		
2300	60.5	60.0	87.6	103.1	60.6	60.7		
2400	60.4	60.0	87.6	103.2	60.4	60.5		

^{1/} Instrument adjusted to ground truth after repair.

TABLE 272
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
September 29, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	60.1	59.9	87.5	103.0	60.2	60.2		
0200	60.0	59.8	87.3	102.8	60.0	60.1		
0300	59.9	59.6	87.1	102.5	59.9	60.0		
0400	59.9	59.9	87.0	102.4	59.8	60.0		
0500	59.0	59.5	86.7	102.4	59.5	59.3		
0600	<u>1/</u>	59.1	86.4	102.4	59.1	59.8		
0700		58.8	86.0	101.5	59.0	59.5		
0800		58.6	85.6	101.0	59.0	59.5		
0900		58.6	85.5	101.2	59.4	59.5		
1000		58.6	85.1	101.0	59.3	59.6		
1100		58.6	85.4	100.9	59.4	59.8		
1200		59.0	85.7	101.2	59.5	60.0		
1300		59.4	86.7	101.9	59.9	60.3		
1400		59.8	87.4	102.5	60.1	60.4		
1500	60.6 <u>2/</u>	59.8	87.8	102.6	60.4	60.7		
1600	60.9	60.2	88.8	103.4	60.7	60.9		
1700	61.3	60.1	89.1	103.9	60.9	61.3		
1800	61.4	60.0	89.4	103.8	61.1	61.5		
1900	61.6	60.1	89.6	104.0	61.3	61.5		
2000	61.8	60.3	89.9	104.3	61.4	61.8		
2100	61.9	60.5	90.1	104.5	61.5	61.7		
2200	62.0	60.5	90.0	104.5	61.5	61.9		
2300	62.0	60.5	89.9	104.4	61.4	61.8		
2400	61.9	60.4	89.9	104.3	61.2	61.5		

1/ Instrument malfunction. 2/ Adjusted to ground truth.

TABLE 273
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
September 30, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	61.7	60.2	89.7	104.1	61.0	61.3		
0200	61.6	60.1	89.5	103.9	60.7	61.9		
0300	61.4	60.0	89.5	103.9	60.5	61.0		
0400	61.3	59.7	89.6	104.0	60.2	60.5		
0500	61.0	59.4	89.4	103.9	60.0	60.3		
0600	60.8	59.0	89.0	103.5	59.6	60.0		
0700	60.5	58.6	89.9	103.4	59.3	59.8		
0800	60.4	58.5	89.9	103.2	59.2	59.5		
0900	60.4	58.6	89.2	103.2	59.1	59.5		
1000	60.4	58.6	89.9	103.6	59.3	59.7		
1100	60.5	59.0	90.5	104.0	59.5	60.0		
1200	60.6	59.4	91.0	102.5	59.6	60.3		
1300	60.9	59.9	91.1 ^{1/}	102.4	60.0	60.6	61.0 ^{1/}	60.9 ^{1/}
1400	61.2	60.1	89.6	102.8	60.4	61.0	61.1	61.2
1500	61.6	60.4	89.9	102.9	60.9	61.3	61.5	61.7
1600	62.0	60.9	90.3	103.3	61.5	61.9	61.9	62.3
1700	62.4	61.4	90.5	103.5	61.9	62.4	62.2	62.6
1800	62.4	61.3	90.5	103.6	62.0	62.4	61.9	62.7
1900	62.5	61.4	90.4	103.5	62.2	62.3	62.1	62.8
2000	62.6	61.4	90.0	105.0	62.3	62.3	62.1	63.1
2100	62.6	61.4	89.7	105.5	62.4	62.4	62.3	62.7
2200	62.6	61.5	89.8	105.4	62.5	62.7	62.4	62.6
2300	62.6	61.8	89.6	105.2	62.5	62.7	62.4	62.6
2400	62.6	61.5	88.9	105.0	62.4	62.5	62.2	62.6

^{1/} Instruments adjusted to ground truth.

TABLE 274
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 1, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	62.5	61.2	86.6	104.4	62.0	62.3	61.8	62.5
0200	62.3	60.9	86.1	103.0	61.8	62.1	61.6	62.5
0300	62.0	60.5	86.0	102.9	61.6	61.8	61.4	61.9
0400	62.1	60.4	84.8	102.1	61.4	61.5	61.4	61.9
0500	61.9	60.1	84.0	101.9	61.1	61.5	61.5	61.9
0600	61.8	60.1	83.4	101.5	61.0	61.3	61.6	61.7
0700	61.6	59.8	82.9	101.2	60.8	61.2	61.8	61.7
0800	61.6	59.5	82.9	100.6	60.7	61.2	61.9	61.7
0900	61.8	59.5	82.4	100.8	60.9	61.0	62.2	61.7
1000	62.0	59.8	82.2	100.4	61.0	61.4	62.6	61.9
1100	62.0	59.9	82.0	100.5	61.3	61.6	62.9	61.9
1200	62.3	60.0	81.6	100.2	61.4	61.8	63.0	62.1
1300	62.4	60.2	81.3	100.2	61.5	61.9	63.1	62.1
1400	62.5	60.4	81.1	100.1	61.7	62.1	63.3	62.1
1500	62.5	60.3	80.6	99.8	61.6	62.0	63.2	62.3
1600	62.4	60.2	79.9	99.3	61.5	61.9	63.0	62.4
1700	62.4	60.0	79.3	99.0	61.5	61.9	62.8	62.3
1800	62.4	59.6	78.9	98.7	61.5	62.0	62.6	62.1
1900	62.2	59.3	78.2	98.1	61.1	61.8	62.2	61.8
2000	62.0	59.0	77.9	97.8	60.9	61.5	61.9	61.0
2100	61.8	58.8	77.9	97.7	60.4	60.9	60.9	60.7
2200	61.5	58.5	77.9	97.6	60.3	60.7	60.5	60.2
2300	61.6	58.3	78.1	97.6	59.9	60.3	60.0	59.8
2400	61.7	58.0	78.4	97.6	59.7	60.0	59.5	59.4

TABLE 275
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 2, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	61.1	58.0	78.4	97.9	59.6	59.8	59.0	59.2
0200	60.9	57.6	78.6	98.0	59.2	59.7	58.8	58.4
0300	60.7	57.5	78.6	98.0	58.8	59.2	58.6	57.9
0400	60.5	57.4	78.6	97.9	58.5	58.6	58.4	57.3
0500	60.2	57.3	78.7	98.0	58.3	58.5	58.1	57.3
0600	60.0	57.3	78.9	98.2	58.0	58.4	57.7	57.2
0700	59.9	56.8	79.1	98.2	57.8	57.9	57.6	57.1
0800	59.9	56.7	79.2	98.2	57.3	57.7	57.5	56.9
0900	59.7	56.6	79.5	98.4	57.1	57.5	57.1	56.7
1000	59.4	56.5	79.8	98.6	56.8	57.4	56.9	56.5
1100	59.4	56.6	80.2	98.9	56.8	57.2	56.8	56.5
1200	59.3	56.7	80.6	99.2	56.9	57.1	56.7	56.6
1300	58.1	56.7	81.1	99.7	56.7	57.0	56.1	56.4
1400	57.2 ^{1/}	56.8	81.5	99.9	56.6	57.0	55.7	56.2
1500		56.7	81.9	100.0	56.3	56.8	55.2	56.2
1600		56.6	82.3	100.1	56.0	56.5	54.8	56.2
1700		56.3	82.4	100.2	55.8	56.3	54.6	56.1
1800		56.1	82.6	100.4	55.5	56.1	54.3	56.1
1900		55.8	82.8	100.5	55.4	56.0	54.1	56.0
2000		55.4	82.9	100.6	55.3	56.0	53.9	55.8
2100		55.2	82.9	100.4	55.1	55.8	53.7	55.7
2200		54.9	82.9	100.2	54.9	55.5	53.4	55.5
2300		54.7	82.8	100.4	54.7	55.3	53.3	55.3
2400		54.5	82.8	100.6	54.4	55.0	53.2	55.0

^{1/} Instrument malfunction

TABLE 276
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 3, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		54.5	82.8	100.0	54.2	54.9	53.0	55.1
0200		54.4	82.8	100.0	54.1	54.9	53.0	54.9
0300		54.3	82.8	100.0	54.0	54.8	53.0	54.8
0400		54.1	82.6	99.9	53.9	54.7	53.0	54.6
0500		53.8	82.4	99.7	53.7	54.7	53.0	54.4
0600		53.7	81.7	99.5	53.6	54.7	53.2	54.2
0700		53.6	81.7	99.3	53.5	54.7	53.5	53.9
0800		53.5	81.6	98.9	53.5	54.5	53.5	53.7
0900		53.4	81.3	98.9	53.4	54.6	53.9	53.6
1000		53.4	81.0	98.6	53.4	54.5	54.1	53.3
1100		53.4	81.1	98.5	53.6	54.4	54.2	53.4
1200		54.0	81.6	98.8	54.0	54.9	54.4	53.5
1300		54.1	81.6	99.8	54.5	55.4	54.8	54.0
1400		54.4	81.8	99.4	54.5	55.6	55.0	54.2
1500		54.6	82.0	99.5	54.7	55.6	55.1	54.6
1600		54.6	82.3	99.8	54.9	55.9	55.3	54.8
1700		54.7	82.4	99.8	55.2	56.1	55.3	54.9
1800		54.8	82.5	99.9	55.4	56.4	55.4	55.0
1900		54.9	82.6	100.0	55.5	56.5	55.4	55.1
2000		55.0	82.7	100.1	55.6	56.1	55.3	55.2
2100		55.2	83.1	100.4	55.9	56.9	55.4	55.2
2200		55.4	83.3	100.6	56.2	57.0	55.5	55.2
2300		55.5	83.3	100.7	56.2	57.0	55.4	55.3
2400		55.6	83.3	100.8	56.2	56.9	55.4	55.4

TABLE 277

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

October 4, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		55.6	83.0	96.9	56.1	56.9	55.1	55.1
0200		55.6	82.9	91.5	56.0	56.6	55.0	55.1
0300		55.5	82.7	91.4	55.8	56.4	54.8	54.9
0400		55.4	82.6	91.4	55.6	56.3	54.4	54.6
0500		55.2	82.5	91.4	55.3	55.8	54.1	54.3
0600		54.9	82.4	91.3	55.0	55.6	53.7	54.0
0700		54.8	82.1	91.3	54.9	55.4	53.8	54.0
0800		54.6	81.8	91.3	54.7	55.3	53.9	54.0
0900		54.7	78.1	89.1	54.7	55.3	54.0	53.8
1000		54.8	77.5	88.6	54.7	55.3	54.0	53.4
1100		55.1	78.1	88.7	54.9	55.6	54.2	53.7
1200		55.4	78.6	88.8	55.0	55.8	54.4	53.9
1300		55.8	79.1	89.1	55.4	56.1	54.7	54.4
1400		56.0	80.0	90.9	55.7	56.4	55.1	55.0
1500		56.4	80.8	91.1	55.8	56.5	55.3	55.4
1600		56.8	81.2	92.0	56.0	56.6	55.6	55.7
1700		56.8	81.1	92.2	56.2	57.1	55.7	56.2
1800		56.8	80.9	92.4	56.4	57.3	55.9	56.7
1900		56.7	81.0	92.6	56.5	57.3	56.0	56.9
2000		56.7	81.0	92.7	56.6	57.4	56.1	57.1
2100		56.5	81.5	93.0	56.6	57.5	56.1	57.1
2200		56.4	82.0	93.3	56.6	57.6	56.1	57.1
2300		56.3	82.1	93.4	56.7	57.5	56.1	57.0
2400		56.3	82.2	93.5	56.9	57.4	56.2	57.0

TABLE 278

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

October 5, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100		56.2	81.9	93.5	56.9	57.3	55.7	56.9
0200		56.1	81.7	93.4	56.8	57.1	55.6	56.9
0300		56.0	81.5	93.3	56.4	56.7	55.4	56.9
0400		55.8	81.3	93.2	56.1	56.6	55.2	56.5
0500		55.4	81.2	93.2	55.8	56.4	55.0	56.1
0600		55.2	81.1	93.3	55.7	56.4	54.8	56.1
0700		55.0	80.9	93.4	55.5	56.3	54.6	56.0
0800		55.0	81.0	93.5	55.5	56.2	54.5	56.1
0900		55.1	81.0	93.7	55.5	56.2	54.5	56.2
1000		55.4	81.3	94.0	55.6	56.3	54.6	56.2
1100 ^{1/}								
1200								
1300								
1400	56.8 ^{2/}	55.8	82.3	96.0	56.0	^{2/}	55.8	56.4
1500	56.8	55.7	82.7	95.8	56.2		56.0	56.5
1600	56.8	56.3	83.1	96.7	56.5		56.3	56.7
1700	57.1	56.5	83.8	97.1	56.7		56.5	56.9
1800	57.2	56.6	84.1	97.6	56.8		56.6	57.2
1900	57.2	56.5	84.3	98.1	56.9		56.6	57.3
2000	57.3	56.4	84.6	98.4	57.0		56.6	57.4
2100	57.3	56.4	85.1	98.6	57.2		56.6	57.5
2200	57.3	56.3	85.8	98.8	57.3		56.6	57.6
2300	57.2	56.4	85.9	99.1	57.3		56.5	57.6
2400	57.0	56.6	86.0	99.9	57.4		56.4	57.5

^{1/} Recorder turned off for repair^{2/} Parts removed from Downstream B to repair instrument for upstream

TABLE 279

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

October 6, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	57.2	56.8	85.7	99.4	57.4		56.6	57.8
0200	57.3	56.7	85.1	99.4	57.4		56.5	57.7
0300	57.4	56.6	84.1	99.4	57.3		56.4	57.6
0400	57.4	56.5	83.2	99.1	57.2		56.2	57.5
0500	57.4	56.5	82.6	98.6	57.0		56.0	57.4
0600	57.3	56.4	82.4	98.6	56.9		56.0	57.4
0700	57.3	56.4	82.4	98.5	56.8		56.0	57.4
0800	57.2	56.3	82.3	98.7	56.7		55.9	57.2
0900	57.1	56.2	82.1	98.8	56.6		55.8	56.9
1000	57.1	56.3	81.8	99.1	56.5		55.8	56.9
1100	57.0	56.5	81.6	99.2	56.5		55.9	56.9
1200	57.0	56.8	81.5	99.1	56.6		56.1	57.2
1300	57.1	57.0	81.5	98.9	56.7		56.3	57.4
1400	57.1	57.6	81.7	99.4	57.2		57.2	57.8
1500	57.2	58.3	81.8	101.0	57.9		58.6	58.2
1600	57.3	58.1	81.8	101.1	57.9		58.6	58.4
1700	57.4	57.9	81.8	101.2	57.9		58.6	58.6
1800	57.4	57.0	81.8	101.2	57.8		58.6	58.6
1900	57.4	57.4	81.4	101.1	57.8		58.7	58.6
2000	57.4	57.1	81.4	100.9	57.7		58.6	58.5
2100	57.4	56.9	81.5	100.7	57.7		58.5	58.4
2200	57.3	56.8	81.7	100.8	57.7		58.5	58.2
2300	57.2	56.6	81.9	100.9	57.6		58.4	58.0
2400	57.0	56.4	81.9	100.8	57.5		57.7	57.7

TABLE 280
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 7, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	57.0	56.4	82.0	100.9	57.4		57.6	57.5
0200	56.9	56.3	82.0	100.9	57.2		57.5	57.1
0300	56.8	56.3	81.9	100.8	57.0		57.3	56.6
0400	56.6	56.1	81.7	100.5	56.8		56.9	56.4
0500	56.4	55.8	81.4	100.3	56.4		56.7	56.2
0600	56.2	55.6	81.3	100.3	56.1		56.7	56.0
0700	56.0	55.3	81.2	100.2	55.9		56.7	55.8
0800	55.9	55.1	81.1	100.1	55.7		56.8	55.6
0900	55.8	54.9	81.0	99.9	55.4		56.9	55.4
1000	55.8	55.1	81.5	100.1	55.5		57.2	55.4
1100	55.8	55.3	81.9	100.2	55.6		57.4	55.5
1200	55.8	55.6	82.3	100.8	55.8		57.4	55.9
1300	55.9	55.9	82.8	101.0	56.0		57.4	56.4
1400	56.1	56.1	82.9	101.4	56.3		57.3	56.6
1500	56.3	56.3	83.2	101.8	56.5		57.2	56.8
1600	56.4	56.4	83.5	101.9	56.8		57.2	56.8
1700	56.5	56.5	83.7	102.0	56.9		57.2	56.8
1800	56.5	56.5	83.6	102.0	56.7		57.1	56.7
1900	56.4	56.5	83.5	102.0	56.6		56.9	56.6
2000	56.6	56.7	83.4	101.8	56.4		56.7	56.0
2100	55.8	55.9	83.4	101.5	56.2		56.4	55.6
2200	55.6	55.7	83.3	101.3	55.9		56.0	55.2
2300	55.3	55.4	83.2	101.2	55.5		55.6	54.9
2400	55.1	55.2	83.2	101.4	55.3		55.4	55.0

TABLE 281
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 8, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	54.6	55.0	83.2	101.0	54.8		55.1	54.4
0200	54.0	54.8	83.4	101.4	54.6		55.0	54.1
0300	54.4	54.4	83.0	101.2	54.3		55.2	54.1
0400	54.4	54.1	82.8	101.0	54.1		55.4	53.8
0500	54.4	54.0	82.5	100.8	54.0		55.5	53.9
0600	54.3	54.2	82.2	100.6	54.0		55.9	54.1
0700	54.5	54.0	82.2	100.6	54.0		56.4	54.3
0800	54.3	54.2	82.4	100.6	54.2		56.7	54.6
0900	54.5	53.9	82.2	100.5	54.3		56.8	54.6
1000	55.1	54.0	82.4	100.1	54.8		56.8	55.1
1100	55.3	54.0	82.6	100.5	54.8		56.9	55.4
1200	55.5	54.5	83.0	100.9	55.2		57.0	55.8
1300	55.6	55.0	83.4	101.2	55.5		57.0	56.0
1400	56.0	55.3	83.8	101.4	55.8		57.1	56.4
1500	55.8	55.9	84.0	101.9	56.0		57.0	56.4
1600	55.8	55.8	84.0	100.8	56.0		56.8	56.4
1700	55.9	55.9	83.8	99.6	56.0		56.8	56.4
1800	55.8	55.8	83.3	98.8	56.0		56.8	56.2
1900	55.6	55.7	83.0	98.5	56.0		56.5	55.8
2000	55.6	55.7	83.0	98.5	56.0		56.5	55.9
2100	55.5	55.6	82.8	98.6	55.9		56.3	55.7
2200	55.4	55.5	82.3	98.8	55.7		56.1	55.5
2300	55.4	55.5	82.3	99.4	55.6		56.1	55.4
2400	55.4	55.4	82.3	100.8	55.4		56.1	55.4

TABLE 282
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 October 9, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	55.2	55.2	81.5	99.5	55.1		56.3	55.4
0200	55.2	55.1	81.2	99.3	55.1		56.6	55.3
0300	55.3	55.1	80.9	99.1	55.0		56.8	55.3
0400	55.3	55.0	80.9	98.8	54.9		57.1	55.4
0500	55.3	54.8	80.9	98.5	54.8		57.2	55.5
0600	55.2	54.6	81.3	98.9	54.8		57.3	55.6
0700	55.2	54.5	81.8	99.4	54.8		57.4	55.7
0800	55.2	54.3	80.9	99.3	54.7		57.2	55.7
0900	55.1	54.2	80.3	99.1	54.6		57.0	55.7
1000	55.2	54.3	80.6	99.0	54.9		56.8	55.7
1100	55.3	54.3	80.9	98.0	55.1		56.7	55.7
1200	55.5	54.8	81.1	99.1	55.3		56.7	56.1
1300	55.6	55.0	81.6	99.3	55.6		56.7	56.3
1400	55.9	55.4	82.2	99.9	55.8		56.7	56.4
1500	55.9	55.8	82.9	100.6	55.9		56.6	56.4
1600	56.1	55.8	82.9	100.6	56.0		56.5	56.2
1700	56.3	55.7	82.8	100.6	56.0		56.4	56.0
1800	56.1	55.6	83.1	100.6	56.0		56.3	55.9
1900	55.7	55.6	83.3	100.6	56.0		56.2	55.9
2000	55.7	55.7	83.6	100.9	56.0		56.3	55.8
2100	55.8	55.8	83.9	101.2	56.0		56.3	55.7
2200	55.7	55.7	84.1	101.4	55.8		56.2	55.7
2300	55.6	55.6	84.4	101.6	55.6		56.1	55.6
2400	55.6	55.4	84.4	101.7	55.4		56.0	55.3

TABLE 283

HOURLY WATER TEMPERATURE (°F); DATA, QUAD-CITIES STATION

October 10, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	55.4	55.2	84.5	101.6	55.4		55.1	55.5
0200	55.4	55.1	84.5	101.6	55.2		55.8	55.5
0300	55.4	54.9	84.4	101.6	54.9		56.4	55.5
0400	55.3	54.9	84.4	101.6	54.8		56.4	55.6
0500	55.2	54.8	84.4	101.5	54.8		56.6	55.6
0600	55.2	54.6	84.4	101.4	54.7		56.6	55.6
0700	55.2	54.3	84.4	101.4	54.6		56.6	55.7
0800	55.1	54.2	84.3	101.2	54.6		56.5	55.7
0900	55.0	54.0	84.1	101.0	54.6		56.4	55.7
1000	55.0	54.1	84.1	101.0	54.6		56.3	55.7
1100	55.0	54.2	84.1	101.0	54.6		56.2	55.7
1200	55.1	54.4	84.2	101.2	54.9		56.3	55.8
1300	55.3	54.6	84.6	101.4	55.2		56.4	55.9
1400	55.4	55.1	85.1	101.7	55.3		56.5	56.1
1500	55.5	55.3	85.3	101.9	55.5		56.6	56.1
1600	55.5	55.3	85.3	102.1	55.6		56.6	56.1
1700	55.5	55.3	85.3	102.2	55.6		56.6	56.1
1800	55.7	55.2	85.3	102.3	55.7		56.6	56.1
1900	55.8	55.1	85.4	102.5	55.9		56.6	56.1
2000	55.8	55.2	85.4	102.4	55.9		56.5	56.1
2100	55.8	55.3	85.4	102.4	55.9		56.4	56.0
2200	55.8	55.3	85.4	102.2	55.8		56.4	55.9
2300	55.8	55.3	85.4	102.1	55.7		56.4	55.8
2400	55.8	55.2	85.1	102.1	55.6		56.3	55.7

TABLE 284

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

October 11, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	55.5	55.0	85.1	99.8	55.5		56.4	55.5
0200	55.4	54.9	84.8	99.7	55.3		56.4	55.5
0300	55.3	54.9	84.6	99.5	55.1		56.5	55.5
0400	55.3	54.8	84.5	99.4	55.1		56.5	55.6
0500	55.3	54.7	84.4	99.4	55.0		56.6	55.6
0600	55.2	54.5	83.9	99.3	54.9		56.5	55.6
0700	55.1	54.3	83.8	99.3	54.8		56.5	55.6
0800	55.1	54.3	82.9	98.8	54.8		56.4	55.6
0900	55.1	54.3	82.5	98.3	54.8		56.3	55.6
1000	55.3	54.6	82.6	98.7	55.1		56.4	55.7
1100	55.4	54.8	82.7	99.0	55.3		56.6	55.8
1200	55.5	55.1	83.1	99.6	55.4		56.6	55.9
1300	55.6	55.4	83.5	100.0	55.6		56.6	56.1
1400	55.9	55.8	83.9	100.4	55.9		56.7	56.2
1500	56.0	56.0	84.3	101.0	56.2		56.8	56.4
1600	56.1	56.1	84.1	101.1	56.3		56.8	56.5
1700	56.2	56.1	84.0	101.2	56.5		56.8	56.6
1800	56.1	56.1	84.2	101.4	56.5		56.7	56.5
1900	56.1	56.0	84.4	101.6	56.5		56.6	56.4
2000	56.0	55.9	84.4	101.6	56.3		56.5	56.1
2100	55.9	55.9	84.4	101.7	56.2		56.4	55.9
2200	55.0	55.8	84.4	101.8	56.0		56.3	55.9
2300	55.8	55.7	84.1	101.4	55.7		56.2	55.7
2400	55.3	55.6	83.7	101.2	55.5		56.1	55.5

TABLE 285

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

October 12, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	54.9	55.4	83.4	100.9	55.2		56.1	55.4
0200	54.9	55.2	83.3	100.7	55.1		56.3	55.4
0300	54.8	54.9	83.3	100.6	54.9		56.5	55.4
0400	54.8	54.7	83.3	100.6	54.8		56.7	55.4
0500	54.8	54.5	83.3	100.6	54.7		56.8	55.5
0600	54.8	54.4	83.1	100.6	54.7		56.8	55.6
0700	54.8	54.3	83.9	100.5	54.7		56.8	55.7
0800	54.9	54.3	82.9	100.4	54.8		56.8	55.8
0900	55.0	54.2	82.9	100.4	54.9		56.8	55.9
1000	55.1	54.4	82.9	100.3	55.1		56.8	55.9
1100	55.2	54.6	82.9	100.3	55.4		56.8	56.0
1200	55.3	54.9	82.9	100.4	55.6		56.8	56.1
1300	55.4	55.3	82.9	100.6	55.8		56.8	56.3
1400	55.7	55.6	83.1	100.6	55.9		56.8	56.4
1500	55.9	55.9	83.4	100.6	56.2		56.8	56.5
1600	55.9	55.9	83.4	100.7	56.3		56.8	56.5
1700	55.9	55.9	83.4	100.9	56.4		56.8	56.5
1800	55.9	55.8	83.6	100.9	56.4		56.7	56.3
1900	55.9	55.8	83.8	101.0	56.4		56.7	56.2
2000	55.9	55.8	83.8	101.2	56.2		56.5	56.1
2100	55.8	55.7	83.8	101.2	56.2		56.4	55.9
2200	55.7	55.7	83.8	101.3	56.0		56.3	55.9
2300	55.4	55.3	83.6	101.1	56.2		56.6	55.6
2400	55.3	55.2	83.5	101.0	56.4		56.7	55.3

TABLE 236
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 13, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	55.3	55.1	83.6	100.8	55.3		56.1	55.4
0200	55.2	54.9	83.7	100.8	55.2		56.3	55.3
0300	55.0	54.8	83.9	100.8	55.0		56.4	55.2
0400	55.0	54.6	83.9	100.8	54.9		56.6	55.3
0500	54.9	54.4	83.9	100.8	54.8		56.6	55.5
0600	54.9	54.3	83.6	100.8	54.8		56.7	55.6
0700	54.9	54.2	83.5	100.8	54.8		56.8	55.7
0800	54.9	54.2	83.4	100.7	54.9		56.8	55.7
0900	55.0	54.3	83.4	100.6	54.9		56.8	55.7
1000	55.0	54.4	83.7	100.6	55.2		56.8	55.9
1100	55.0	54.6	83.9	100.8	55.5		56.8	56.0
1200	55.2	54.8	84.2	101.1	55.7		56.8	56.2
1300	55.3	55.0	84.4	101.3	55.9		56.8	56.3
1400	55.7	55.4	84.8	101.8	56.2		56.9	56.8
1500	55.9	55.8	85.1	102.0	56.4		57.2	56.7
1600	56.0	55.9	85.3	102.1	56.5		57.2	56.7
1700	56.0	56.0	85.5	102.3	56.6		57.2	56.7
1800	56.0	56.0	85.8	102.6	56.7		57.2	56.7
1900	56.0	56.0	86.0	102.8	56.7		57.2	56.7
2000	56.1	55.9	86.4	103.1	56.7		57.1	56.7
2100	56.1	55.9	86.9	103.2	56.7		56.9	56.7
2200	56.1	55.8	87.2	103.3	56.7		56.9	56.7
2300	56.0	55.8	87.4	103.4	56.7		56.8	56.8
2400	55.9	55.9	87.4	103.4	56.6		56.8	56.7

TABLE 287

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES^c STATION

October 14, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	55.9	55.9	87.4	103.6	56.6		56.7	56.7
0200	55.8	55.7	87.4	103.5	56.6		56.8	56.7
0300	55.7	55.6	87.4	103.4	56.5		56.9	56.7
0400	55.7	55.6	87.3	103.3	56.4		57.1	56.8
0500	55.7	55.6	87.1	103.2	56.4		57.4	56.9
0600	55.0	55.5	87.1	103.2	56.4		57.1	56.8
0700	54.3	55.4	87.0	103.2	56.4		56.9	56.8
0800	54.6	55.4	86.9	103.3	56.4		56.8	57.1
0900	55.8	55.5	86.9	103.5	56.4		56.8	57.2
1000	55.6	55.4	86.9	103.3	56.4		56.7	57.3
1100	55.0	55.4	86.9	103.0	56.6		56.6	57.5
1200	55.1	55.6	86.7	102.9	56.7		56.7	57.6
1300	55.1	55.7	86.4	102.8	56.8		56.8	57.7
1400	54.9	55.8	86.4	102.8	56.8		56.7	57.7
1500	54.8	55.9	86.4	102.8	56.9		56.6	57.8
1600	54.4	56.1	86.5	102.9	56.9		56.7	57.9
1700	54.0	56.2	86.6	103.0	57.0		56.9	58.1
1800	54.1	56.2	86.6	103.0	57.0		56.9	57.9
1900	54.1	56.2	86.6	103.0	57.0		57.0	57.9
2000	53.9	56.2	86.4	103.0	57.0		56.9	57.9
2100	53.3	56.2	86.4	103.0	57.0		56.9	58.0
2200	53.1	56.2	86.4	102.9	57.0		56.8	58.0
2300	52.9	56.2	86.4	102.9	57.0		56.6	58.0
2400	53.1	56.2	86.4	102.9	57.0		56.6	58.0

TABLE 288
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 15, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	52.8	56.1	86.6	103.0	56.9		56.6	57.6
0200	52.9	56.1	86.6	103.0	56.9		56.6	57.6
0300	53.0	56.1	86.6	103.0	56.9		56.6	57.6
0400	53.1	56.1	86.7	103.1	56.9		56.6	57.5
0500	53.2	56.1	86.8	103.2	56.9		56.6	57.4
0600	53.1	56.1	86.9	103.1	56.9		56.6	57.4
0700	52.8	56.0	87.0	102.8	56.9		56.6	57.5
0800	53.2	56.0	86.9	103.1	56.9		56.9	57.4
0900	53.6	56.0	86.8	103.2	57.0		57.0	57.3
1000	54.2	56.3	86.7	103.1	57.2		57.3	57.2
1100	54.8	56.5	86.5	102.9	57.3		57.5	57.2
1200	55.5	56.7	86.5	102.9	57.4		57.6	57.3
1300	56.0	56.9	86.5	103.0	57.5		57.9	57.5
1400	56.2	57.2	86.6	102.8	57.5		57.9	57.6
1500	56.4	57.5	86.7	102.7	57.8		58.0	58.0
1600	56.6	57.5	86.6	102.6	57.8		58.0	57.9
1700	56.6	57.4	86.4	102.4	57.9		58.0	57.8
1800	56.6	57.4	86.1	102.1	57.9		58.0	57.8
1900	56.6	57.4	85.8	102.0	58.0		58.0	57.8
2000	56.6	57.2	85.7	102.3	57.9		58.0	57.8
2100	56.6	57.0	85.6	102.5	57.9		58.0	57.8
2200	56.7	57.0	85.2	102.4	57.8		58.0	57.6
2300	56.9	57.0	84.9	102.3	57.7		58.0	57.4
2400	56.9	56.8	84.7	102.0	57.7		58.0	57.4

TABLE 289

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

October 16, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	56.9	56.4	84.4	101.8	57.5		58.0	57.3
0200	56.9	56.6	84.2	101.6	57.4		58.2	57.3
0300	56.9	56.6	84.0	101.3	57.4		58.3	57.3
0400	56.8	56.4	84.0	101.3	57.4		58.4	57.3
0500	56.7	56.3	84.0	101.4	57.4		58.5	57.3
0600	56.7	56.1	83.9	101.3	57.4		58.3	57.3
0700	56.7	56.0	83.9	101.3	57.4		58.4	57.4
0800	56.7	56.0	83.7	101.4	57.3		58.3	57.4
0900	56.6	56.0	83.5	101.6	57.3		58.2	57.4
1000	56.7	56.1	83.5	101.4	57.3		58.2	57.4
1100	56.7	56.2	83.3	101.2	57.3		58.2	57.3
1200	56.9	56.3	83.1	101.0	57.5		58.2	57.3
1300	56.9	56.8	83.8	101.4	57.7		58.1	57.3
1400	57.0	57.0	84.5	101.8	57.9		58.0	57.4
1500	57.1	57.2	84.8	102.1	57.9		58.0	57.5
1600	57.3	57.4	85.4	102.4	58.0		58.0	57.6
1700	57.1	57.2	85.6	102.2	58.0		57.9	57.6
1800	57.0	57.0	85.7	102.0	58.0		57.8	57.5
1900	57.0	57.0	85.7	102.4	58.0		57.6	57.3
2000	57.0	57.0	85.7	102.8	57.8		57.5	57.1
2100	56.8	56.8	85.7	102.8	57.6		57.4	56.9
2200	56.6	56.6	85.7	102.8	57.4		57.4	56.8
2300	56.6	56.4	85.4	102.6	57.2		57.4	56.7
2400	56.5	56.3	85.3	102.4	57.0		57.4	56.5

TABLE 290
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 17, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	56.4	56.2	85.1	102.2	56.9		57.4	56.6
0200	56.5	56.0	84.9	102.0	56.8		57.5	56.6
0300	56.4	56.0	84.7	101.9	56.7		57.8	56.6
0400	56.3	56.0	84.6	101.6	56.6		58.0	56.6
0500	56.3	55.9	84.4	101.6	56.6		58.1	56.7
0600	56.3	55.8	84.3	101.5	56.6		58.2	56.8
0700	56.3	55.8	84.3	101.5	56.7		58.2	56.8
0800	56.3	55.8	84.2	101.5	56.9		58.2	56.8
0900	56.2	55.8	84.3	101.3	57.1		58.1	56.9
1000	56.1	55.9	84.4	101.2	57.2		58.5	57.0
1100	56.1	55.7	84.6	102.1	57.1		57.1	56.9
1200	54.9	55.5	84.8	102.5	57.0		56.4	56.7
1300	56.1	55.9	85.2	102.4	57.3		57.1	56.8
1400	56.5	56.3	85.4	102.4	57.7		57.9	57.2
1500	56.5	56.4	85.6	102.6	57.7		57.8	57.3
1600	56.3	56.4	85.8	102.6	57.7		57.8	57.3
1700	56.1	56.6	86.0	102.8	57.7		57.7	57.5
1800	52.3	56.6	86.3	103.1	57.4		57.5	57.3
1900	53.1	56.6	86.3	103.2	57.3		57.1	57.3
2000	53.3	56.6	86.5	103.4	57.3		56.8	57.1
2100	54.0	56.6	86.1	102.8	57.1		56.9	56.9
2200	54.3	56.6	85.4	101.9	56.9		57.1	56.9
2300	54.9	56.6	84.3	101.4	56.9		57.4	56.9
2400	54.9	56.4	83.5	101.2	56.8		57.3	56.7

TABLE 291

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

October 18, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	54.6	55.9	82.3	97.7	56.5		57.2	56.5
0200	58.6	55.7	82.1	97.7	56.3		57.2	56.4
0300	54.6	55.3	81.6	97.7	56.3		57.2	56.3
0400	54.5	55.2	81.1	98.2	56.0		57.3	56.3
0500	54.4	54.9	79.4	97.8	55.8		57.3	56.1
0600	54.4	54.7	79.4	97.6	55.8		57.3	55.9
0700	54.4	54.6	79.1	97.4	55.6		57.3	55.9
0800	54.3	54.6	78.4	96.7	55.6		57.3	55.7
0900	54.3	54.3	77.2	96.1	55.4		57.1	55.7
1000	54.1	54.1	75.9	95.2	55.4		57.0	55.5
1100	53.9	54.1	75.7	95.2	55.2		56.7	55.3
1200	53.9	53.9	75.5	95.2	55.2		56.7	55.3
1300	53.8	53.9	75.1	95.2	55.1		56.5	55.1
1400	53.7	53.8	74.8	94.9	54.7		56.1	54.8
1500	53.7	53.7	74.6	94.7	54.7		56.1	54.8
1600	53.7	53.7	74.0	94.4	54.5		55.9	54.6
1700	53.4	53.4	73.8	94.1	54.2		55.7	54.3
1800	53.4	53.2	73.8	94.1	53.9		55.4	54.2
1900	53.3	53.2	73.5	93.9	53.8		55.0	53.9
2000	53.1	52.9	73.8	94.1	53.4		54.6	53.6
2100	52.8	52.7	73.9	94.2	52.8		54.6	53.3
2200	52.8	52.6	74.5	94.4	52.8		54.1	52.8
2300	52.6	52.4	75.1	94.6	52.4		53.9	52.4
2400	52.4	52.0	75.4	94.8	52.1		53.8	52.2

TABLE 292
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 19, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	52.2	51.8	75.3	94.6	51.8		53.7	51.9
0200	51.9	51.7	75.6	94.6	51.6		53.6	51.8
0300	51.9	51.3	75.6	94.6	51.4		53.4	51.7
0400	51.7	51.0	75.7	94.6	51.0		53.3	51.4
0500	51.6	50.8	75.7	94.6	50.8		53.2	51.1
0600	51.4	50.6	75.7	94.9	50.6		53.0	50.6
0700	51.4	50.5	75.7	94.9	50.6		53.0	50.6
0800	51.2	50.4	75.9	94.9	50.4		52.9	50.4
0900	51.2	50.3	75.9	94.9	50.2		52.9	50.3
1000	51.0	50.2	76.2	94.9	50.0		52.8	50.3
1100	51.1	50.4	76.9	95.4	50.3		52.8	50.3
1200	51.1	50.6	77.4	95.8	50.3		52.8	50.3
1300	51.2	50.7	78.0	96.0	50.4		52.8	50.3
1400	51.2	50.7	78.4	96.2	50.4		52.8	50.8
1500	51.3	50.9	78.6	96.4	50.5		52.8	50.8
1600	51.4	51.0	78.8	96.6	50.6		52.8	52.2
1700	51.3	50.8	78.9	96.6	50.5		52.8	52.2
1800	51.1	50.6	78.9	96.6	50.4		52.6	50.9
1900	51.0	50.5	79.0	96.6	50.3		52.4	50.8
2000	50.9	50.4	79.1	96.9	50.1		52.4	50.6
2100	50.8	50.3	79.2	97.1	49.8		52.4	50.4
2200	50.8	50.2	79.4	97.1	49.6		52.4	50.4
2300	50.7	50.1	79.4	97.1	49.5		52.6	50.1
2400	50.6	49.9	79.4	96.9	49.4		52.6	50.0

TABLE 293
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 20, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	50.6	49.9	79.6	96.9	49.4		52.9	50.2
0200	50.7	49.7	79.4	96.7	49.4		53.1	50.2
0300	50.8	49.1	79.2	96.7	49.4		52.3	50.2
0400	50.9	49.4	79.0	96.6	49.4		53.4	50.3
0500	50.9	49.8	79.0	96.8	49.6		53.3	50.3
0600	50.9	50.0	79.1	97.1	49.6		53.2	50.3
0700	50.9	50.0	79.1	97.3	49.8		53.2	50.3
0800	50.9	50.0	79.3	97.6	49.9		53.1	50.6
0900	50.9	50.0	79.8	97.8	49.9		53.1	50.9
1000	50.9	50.0	80.0	97.9	50.0		53.0	51.0
1100	51.1	50.4	80.6	98.3	50.2		53.0	51.0
1200	51.3	50.6	80.8	98.7	50.4		53.1	51.0
1300	51.4	50.9	81.4	99.1	50.4		53.2	51.0
1400	51.5	51.1	82.2	99.4	50.6		53.2	51.0
1500	51.6	51.2	82.6	99.8	50.9		53.2	51.8
1600	51.7	51.2	82.9	100.6	51.1		53.2	51.6
1700	51.8	51.2	83.4	100.8	51.2		53.2	51.9
1800	51.8	51.3	84.3	101.1	51.2		53.2	52.2
1900	51.6	51.3	84.2	100.8	51.1		53.3	52.1
2000	51.4	51.1	84.1	100.7	50.9		53.1	51.9
2100	51.3	50.9	84.1	100.2	50.8		52.9	51.9
2200	51.2	50.9	84.0	100.1	50.8		52.9	51.8
2300	51.2	50.9	83.9	99.9	50.7		53.1	51.7
2400	51.2	50.8	83.7	99.8	50.6		53.2	51.7

TABLE 294
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 21, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	51.3	51.1	83.4	99.3	50.6		53.5	51.6
0200	51.4	51.1	83.2	99.3	50.8		53.7	51.9
0300	51.5	50.9	82.4	99.4	50.9		53.9	52.2
0400	51.6	50.8	82.8	99.4	51.2		54.4	52.5
0500	51.8	50.8	82.6	99.3	51.3		54.4	52.7
0600	51.9	50.8	82.4	99.2	51.3		54.3	52.8
0700	51.9	50.8	82.1	99.1	51.4		54.3	52.9
0800	52.0	50.8	81.8	99.0	51.5		54.2	52.9
0900	51.9	50.9	81.6	99.1	51.5		54.1	52.8
1000	51.8	50.9	81.4	99.2	51.5		53.8	52.6
1100	51.8	51.1	81.3	99.2	51.5		53.7	52.2
1200	51.6	51.3	81.2	99.2	51.5		53.6	52.4
1300	51.4	51.3	80.8	99.1	51.4		53.4	52.3
1400	51.1	51.2	80.2	99.0	51.3		53.2	52.0
1500	50.9	51.1	90.2	99.0	51.1		53.1	52.0
1600	50.9	51.1	80.3	98.9	50.9		52.7	51.8
1700	50.8	50.9	80.4	98.9	50.7		52.6	51.6
1800	50.8	50.9	80.4	98.9	50.6		52.5	51.5
1900	50.8	50.8	80.6	98.9	50.6		52.4	51.3
2000	50.8	50.7	80.7	98.9	50.5		52.3	51.1
2100	50.8	50.7	80.8	99.0	50.4		52.3	50.9
2200	50.8	50.7	80.9	99.0	50.4		52.2	50.8
2300	50.6	50.3	90.8	98.7	50.2		52.1	50.4
2400	50.4	50.4	81.0	98.3	49.8		51.9	50.2

TABLE 295

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

October 22, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	50.3	49.9	80.9	98.3	49.7		51.8	50.2
0200	50.2	49.9	80.8	98.1	49.6		51.7	50.1
0300	50.1	49.9	80.7	97.7	49.4		51.7	49.9
0400	49.9	49.8	80.4	97.5	49.3		51.6	49.8
0500	49.9	49.6	80.1	97.3	49.1		51.6	49.7
0600	49.9	49.5	79.9	97.1	48.9		51.5	49.3
0700	49.9	49.2	79.4	96.8	48.8		51.5	49.4
0800	49.9	49.2	79.2	96.7	48.7		51.5	49.4
0900	49.9	49.1	78.6	96.6	48.7		51.5	49.4
1000	49.9	49.0	78.2	96.4	48.6		51.5	49.4
1100	49.9	49.1	78.2	96.4	48.6		51.6	49.6
1200	50.0	49.3	78.2	96.5	48.7		51.7	49.6
1300	50.0	49.4	78.1	96.4	48.9		51.7	49.6
1400	50.1	49.6	77.8	96.3	49.2		51.7	49.8
1500	50.2	49.9	77.6	95.8	49.3		51.8	50.1
1600	50.3	50.0	77.4	95.6	49.4		51.8	50.3
1700	50.2	49.8	77.4	95.8	49.2		51.7	50.1
1800	50.1	49.7	77.4	96.1	49.1		51.6	49.9
1900	49.9	49.5	77.4	96.2	48.9		51.4	49.8
2000	49.7	49.4	77.4	96.3	48.8		51.2	49.7
2100	49.6	49.3	77.2	96.1	48.6		51.2	49.6
2200	49.4	48.9	76.6	95.4	48.4		51.1	49.3
2300	49.3	48.7	76.0	95.0	47.9		51.0	48.9
2400	49.0	48.3	75.6	95.1	47.7		51.2	48.8

TABLE 296
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 23, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	49.0	48.0	75.2	94.4	47.5		51.2	48.7
0200	49.0	47.9	75.1	94.1	47.4		51.2	48.7
0300	49.1	47.7	74.8	93.7	47.4		51.2	48.8
0400	49.2	47.4	74.1	93.3	47.3		51.2	48.8
0500	49.2	47.0	73.4	92.9	47.3		51.2	48.9
0600	49.2	46.9	73.1	92.7	47.3		51.1	48.7
0700	49.1	46.9	72.9	92.3	47.2		50.8	48.4
0800	48.9	46.8	72.9	91.7	47.2		50.7	48.3
0900	48.9	46.7	72.0	91.7	47.1		50.5	48.2
1000	48.9	48.4 ^{1/}	71.9	91.6	47.4 ^{1/}	1/	50.4	48.1 ^{1/}
1100	48.9	48.5	71.9	91.6	47.9	47.2	49.2	49.3
1200	48.9	49.1	71.6	91.5	48.3	48.6	49.3	49.4
1300	48.9	49.3	71.5	90.9	48.9	49.0	49.4	49.6
1400	48.7	49.1	71.5	90.0	48.7	48.9	49.2	49.2
1500	48.6	48.9	71.5	90.9	48.3	48.7	48.8	48.9
1600	48.3	48.8	71.5	90.9	48.2	48.4	48.6	48.8
1700	48.1	48.8	71.5	90.9	48.0	48.2	48.5	48.6
1800	47.9	48.6	71.4	90.8	47.8	48.2	48.2	48.4
1900	47.7	48.2	71.4	90.6	47.1	47.6	47.8	47.9
2000	47.4	47.4	71.4	90.3	46.8	47.3	47.4	47.6
2100	47.3	47.6	71.3	90.3	46.5	47.2	47.4	47.4
2200	47.1	47.3	71.7	90.7	46.2	47.1	47.4	47.2
2300	46.9	47.1	71.8	90.9	45.8	46.8	47.4	46.9
2400	46.9	46.9	71.9	91.2	45.6	46.5	47.4	46.6

^{1/} Instruments adjusted to ground truth data

TABLE 297
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 October 24, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	46.8	46.5	72.0	91.3	45.4	46.6	47.5	46.6
0200	46.8	46.4	71.9	91.1	45.3	46.6	47.4	46.6
0300	46.7	46.1	71.8	90.9	45.2	46.5	541.4	46.7
0400	46.6	45.9	71.4	90.8	45.1	46.4	47.3	46.7
0500	46.4	45.9	71.0	90.4	45.0	46.4	47.3	46.7
0600	46.2	45.8	70.9	90.4	44.9	46.3	47.1	46.6
0700	45.9	45.7	70.8	90.4	44.7	46.3	46.9	46.4
0800	45.8	45.6	70.7	90.3	44.6	46.2	46.7	46.3
0900	45.6	45.5	70.6	90.3	44.5	46.2	46.5	46.1
1000	45.6	45.4	70.4	90.1	44.3	46.1	46.3	45.9
1100	45.6	45.3	70.2	89.8	43.9	45.8	46.1	45.7
1200	45.5	45.2	69.8	89.4	43.8	45.7	45.9	45.6
1300	45.5	45.1	69.1	89.0	43.8	45.5	45.8	45.4
1400	45.4	45.1	69.2	89.1	43.7	45.4	45.7	45.4
1500	45.4	44.9	69.3	89.1	43.6	45.3	45.6	45.1
1600	45.3	44.8	69.3	89.2	43.4	45.2	45.4	44.9
1700	45.3	44.8	69.4	89.3	43.2	45.0	45.3	44.9
1800	45.1	44.6	69.7	89.3	43.1	44.9	45.1	43.9
1900	44.9	44.4	69.9	89.2	42.8	44.7	44.8	43.8
2000	44.8	44.2	70.3	89.1	42.6	44.6	44.6	43.7
2100	44.7	44.1	70.4	89.3	42.4	44.4	44.6	43.7
2200	44.6	43.9	70.8	89.8	42.2	44.3	44.6	43.7
2300	44.3	43.8	70.9	90.1	42.0	44.1	44.6	43.7
2400	44.3	43.5	71.2	89.9	42.0	44.4	44.5	43.6

TABLE 298
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 25, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	44.2	43.4	71.5	90.0	41.9	44.2	44.5	43.6
0200	44.3	43.3	71.9	88.3	41.9	44.3	44.5	43.6
0300	44.4	43.2	72.2	86.2	42.0	44.3	44.6	43.5
0400	44.5	43.2	72.5	84.4	42.0	44.4	44.5	43.5
0500	44.6	43.2	72.7	84.6	42.0	44.3	44.4	43.5
0600	44.4	43.3	72.8	84.9	42.0	44.3	44.4	43.4
0700	44.4	43.4	73.1	85.2	42.0	44.2	44.3	43.4
0800	44.4	43.5	73.2	85.4	42.0	44.2	44.3	43.4
0900	44.3	43.4	73.1	85.4	41.9	44.2	44.3	43.4
1000	44.3	43.4	72.7	85.6	41.8	44.1	44.2	43.4
1100	44.2	43.3	72.1	85.7	41.7	44.1	44.2	43.5
1200	44.2	43.3	70.3	85.8	41.7	44.1	44.3	43.6
1300	44.3	43.3	70.9	86.1	41.7	44.1	44.3	43.6
1400	44.3	43.3	71.1	86.8	41.8	44.2	44.3	43.6
1500	44.8	43.3	71.3	87.1	41.8	44.2	44.4	43.6
1600	44.4	43.3	71.5	87.4	41.9	44.2	44.4	43.6
1700	44.4	43.3	71.8	87.6	41.9	44.2	44.4	43.6
1800	44.3	43.4	71.9	87.9	41.7	44.2	44.3	43.7
1900	44.4	43.3	72.1	88.2	41.9	44.3	44.4	43.7
2000	44.4	43.3	72.3	88.5	41.9	44.3	44.4	43.8
2100	44.4	43.3	72.4	88.8	41.8	44.3	44.4	43.8
2200	44.4	43.2	72.6	89.1	41.9	44.2	44.4	43.8
2300	44.3	43.2	72.7	89.1	41.9	44.2	44.3	43.8
2400	44.4	43.1	72.9	89.6	41.9	44.1	44.0	43.8

TABLE 299

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

October 26, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	44.2	43.1	72.8	89.5	41.8	44.3	44.8	43.8
0200	44.3	43.1	72.9	89.7	41.8	44.2	44.8	43.9
0300	44.4	43.1	73.1	89.9	41.9	44.3	44.8	44.1
0400	44.4	43.0	73.2	90.1	42.1	44.4	44.9	44.3
0500	44.5	43.0	73.3	90.2	42.1	44.5	44.9	44.5
0600	44.6	43.1	73.4	90.3	42.2	44.6	44.9	44.5
0700	44.6	43.2	73.6	90.8	42.3	44.6	44.9	44.5
0800	44.7	43.3	73.6	91.1	42.4	44.7	44.8	44.5
0900	44.7	43.3	73.7	91.4	42.5	44.8	44.8	44.5
1000	44.7	43.6	73.8	91.6	42.6	44.8	44.8	44.6
1100	44.8	43.7	73.9	91.8	42.7	44.8	44.8	44.7
1200	44.8	43.9	74.2	92.1	42.7	44.8	44.9	44.7
1300	44.9	44.1	74.9	92.3	42.8	44.8	44.9	44.8
1400	44.9	44.2	74.9	92.6	42.8	44.8	44.9	44.8
1500	45.1	44.3	76.1	92.9	42.9	44.8	44.9	44.9
1600	45.2	44.4	76.3	93.2	42.9	44.9	44.9	45.1
1700	45.2	44.6	76.4	93.6	43.0	44.9	44.9	45.1
1800	45.2	44.6	76.4	93.7	43.0	44.9	44.9	45.1
1900	44.9	44.4	76.4	93.8	42.9	44.8	44.9	45.1
2000	44.9	44.4	76.4	93.9	42.8	44.8	44.9	45.0
2100	44.9	44.4	76.4	94.0	42.8	44.8	44.9	45.0
2200	44.9	44.4	76.4	93.9	42.7	44.7	44.9	44.8
2300	44.9	44.4	76.6	93.8	42.7	44.7	44.9	44.8
2400	44.9	44.4	76.6	93.8	42.6	44.6	44.9	44.8

TABLE 300
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 27, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	44.8	44.0	76.2	93.5	42.5	44.6	44.9	44.8
0200	44.7	44.0	76.1	93.4	42.5	44.6	44.9	44.8
0300	44.6	43.9	75.9	93.4	42.6	44.7	45.1	44.9
0400	44.4	43.9	75.8	93.4	42.6	44.7	45.1	45.0
0500	44.6	43.7	75.7	93.3	42.6	44.7	45.1	44.9
0600	44.8	43.6	75.6	93.2	42.7	44.6	44.9	44.8
0700	45.0	43.5	75.4	93.0	42.8	44.6	44.8	44.8
0800	45.0	43.6	75.5	93.1	42.8	44.7	44.8	44.9
0900	45.0	43.7	75.6	93.2	42.8	44.8	44.8	44.9
1000	45.2	43.9	76.1	93.4	42.9	44.9	44.9	44.9
1100	45.4	44.5	76.6	93.6	43.2	45.0	44.9	45.0
1200	45.6	45.0	77.4	94.2	43.5	45.4	45.2	45.2
1300	45.1	45.2	78.2	94.1	43.8	45.5	45.3	45.3
1400	45.8	45.4	78.6	95.0	44.0	45.5	45.3	45.4
1500	45.8	45.6	78.9	95.4	44.0	45.4	45.2	45.4
1600	45.9	45.7	79.3	95.7	44.0	45.4	45.1	45.4
1700	45.7	45.6	79.4	95.7	43.9	45.3	45.1	45.4
1800	45.6	45.4	79.6	95.8	43.7	45.2	44.9	45.4
1900	45.5	45.2	79.6	95.9	43.6	45.2	44.8	45.4
2000	45.4	45.2	79.6	95.9	43.4	45.1	44.8	45.3
2100	45.2	45.1	79.6	95.9	43.4	45.1	44.8	45.3
2200	45.0	45.0	79.5	95.9	43.2	44.8	44.8	45.3
2300	45.1	44.8	79.4	95.8	43.2	44.8	44.9	45.3
2400	45.2	44.5	79.4	95.6	43.1	44.9	45.4	45.4

TABLE 301

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

October 28, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	45.2	44.9	79.1	95.7	43.2	45.0	45.5	45.4
0200	45.4	44.8	78.9	95.6	43.3	45.3	45.7	45.5
0300	45.6	44.7	78.8	95.4	43.5	45.5	45.8	45.6
0400	45.7	44.8	78.6	95.4	43.8	45.6	45.8	45.7
0500	45.8	44.9	78.4	95.3	44.1	45.8	45.9	45.8
0600	45.9	45.0	78.0	95.3	44.3	45.9	45.9	45.9
0700	45.9	45.1	77.9	95.1	44.3	45.9	45.9	45.9
0800	46.0	45.3	77.7	94.5	44.5	45.9	45.9	46.1
0900	46.0	45.3	77.7	94.5	44.5	45.9	45.9	46.1
1000	46.1	45.8	78.1	95.1	44.6	45.9	45.9	46.1
1100	46.2	46.1	78.8	95.4	44.7	46.0	45.8	46.1
1200	46.3	46.2	79.3	95.8	44.8	46.0	45.8	46.1
1300	46.2	^{1/}	79.7	96.1	44.8	45.9	45.6	46.1
1400	46.1		80.0	96.5	44.8	45.9	45.6	46.0
1500	46.1		80.1	96.5	44.7	45.8	45.3	46.0
1600	46.0		80.2	96.6	44.6	45.7	45.2	46.0
1700	46.0		80.4	96.6	44.5	45.6	45.0	46.0
1800	45.9		80.4	96.7	44.3	45.6	44.9	46.0
1900	45.7		80.4	96.7	44.2	45.4	44.9	46.0
2000	45.6		80.4	96.8	44.0	45.3	44.9	45.9
2100	45.6		80.3	96.7	43.9	45.3	45.1	45.9
2200	45.6		80.2	96.7	43.9	45.3	45.2	45.9
2300	45.6		80.1	96.6	43.9	45.3	45.3	46.0
2400	45.6		79.8	96.3	43.9	45.4	45.4	46.0

^{1/} Sensor cable severed.

TABLE 302
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 29, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	46.0		79.2	96.4	44.2	45.6	45.7	46.3
0200	46.1		79.1	96.2	44.2	45.7	45.8	46.3
0300	46.2		79.1	96.1	44.3	45.8	45.9	46.3
0400	46.2		79.0	96.0	44.4	46.0	46.0	46.3
0500	46.2		78.8	95.9	44.4	46.0	46.0	46.3
0600	46.2		78.6	95.8	44.6	46.0	46.0	46.3
0700	46.2		78.4	95.6	44.6	46.1	46.0	46.4
0800	46.2		78.3	95.5	44.6	46.1	45.9	46.4
0900	46.1		78.2	95.4	44.7	46.1	45.8	46.3
1000	46.1		78.0	95.3	44.8	46.1	45.7	46.3
1100	46.1		78.2	95.3	44.8	46.1	45.7	46.2
1200	46.1		78.4	95.4	44.9	46.1	45.6	46.2
1300	46.2		78.6	95.5	45.0	46.1	45.5	46.2
1400	46.2		78.6	95.6	45.1	46.2	45.6	46.3
1500	46.3		78.6	95.7	45.3	46.3	45.6	46.3
1600	46.4		78.5	95.8	45.5	46.4	45.7	46.4
1700	46.3		78.7	95.8	45.4	46.2	45.5	46.4
1800	46.3		78.9	95.8	45.3	46.1	45.4	46.4
1900	46.2		79.0	95.9	45.3	45.9	45.4	46.4
2000	46.3		79.1	96.1	45.2	45.9	45.6	46.5
2100	46.4		79.2	96.3	45.1	45.9	45.8	46.7
2200	46.5		79.3	96.4	45.0	46.0	45.9	46.8
2300	46.4		79.3	96.2	45.0	46.1	46.1	46.7
2400	46.3		79.3	96.0	45.0	46.3	46.3	46.6

TABLE 303

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

October 30, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	46.3		79.0	96.0	45.1	46.3	46.5	46.6
0200	46.4		79.1	96.1	46.3	46.4	46.7	46.8
0300	46.6		79.1	96.1	45.4	46.6	46.8	46.9
0400	46.7		79.2	96.1	45.5	46.8	46.9	46.9
0500	46.6		78.8	95.8	45.5	46.8	46.8	46.8
0600	46.5		78.5	95.6	45.5	46.9	46.8	46.8
0700	46.4		78.3	95.4	45.5	46.9	46.6	46.6
0800	46.6		78.4	95.4	45.7	46.9	46.6	46.7
0900	46.7		78.7	95.4	45.9	46.8	46.7	46.7
1000	46.9		78.9	95.4	46.0	46.8	46.6	46.8
1100	47.1		79.2	95.9	46.3	46.9	46.8	46.8
1200	47.2		79.4	96.2	46.6	47.4	46.9	46.9
1300	47.4		79.6	96.9	46.9	47.5	47.0	47.0
1400	47.6		79.9	97.2	47.2	47.6	47.2	47.3
1500	47.8		80.1	97.4	47.4	47.7	47.3	47.4
1600	47.9		80.4	97.6	47.6	47.8	47.4	47.5
1700	47.9		81.0	97.9	47.7	47.9	47.3	47.6
1800	47.9		81.6	98.2	47.6	47.9	47.2	47.6
1900	47.9		82.0	98.4	47.6	48.0	47.1	47.6
2000	47.8		82.1	97.2	47.4	47.9	47.1	47.6
2100	47.7		82.3	95.1	47.3	47.7	47.1	47.6
2200	47.6		82.4	94.0	47.2	47.6	47.1	47.5
2300	47.4		82.2	93.3	47.1	47.4	47.1	47.3
2400	47.3		82.0	92.2	46.8	47.2	47.1	47.1

TABLE 304
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
October 31, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	47.2		81.9	92.0	46.8	47.4	47.4	47.2
0200	47.2		81.9	92.0	46.9	47.4	47.5	47.3
0300	47.3		81.9	92.0	47.0	47.5	47.6	47.4
0400	47.6		81.4	91.7	47.2	47.7	47.9	47.6
0500	47.7		79.9	91.5	47.4	47.9	48.1	47.7
0600	47.9		79.5	91.0	47.6	48.1	48.2	47.8
0700	47.9		79.4	91.1	47.9	48.1	48.2	47.8
0800	48.0		79.4	91.3	48.1	48.2	48.2	47.9
0900	48.1		79.3	91.4	48.1	48.3	48.2	48.0
1000	48.2		79.4	92.1	48.2	48.4	48.2	48.1
1100	48.4		79.6	92.9	48.4	48.7	48.3	48.3
1200	48.6		79.7	93.8	48.7	48.8	48.4	48.4
1300	48.8		79.9	94.5	48.8	48.9	48.6	48.5
1400	48.7		79.9	94.6	48.8	48.9	48.6	48.6
1500	48.1		80.0	94.9	48.8	48.9	48.4	48.7
1600	48.6		80.0	94.9	48.8	48.9	48.4	48.7
1700	48.4		80.8	95.4	48.7	48.8	48.3	48.7
1800	48.2		81.2	96.1	48.6	48.7	48.1	48.6
1900	48.0		81.8	96.7	48.4	48.6	48.0	48.5
2000	47.1		81.6	96.6	48.2	48.9	47.8	48.1
2100	46.2		81.3	96.6	47.9	47.3	47.6	47.9
2200	45.6		81.1	96.5	47.8	47.8	47.1	47.8
2300	45.3		81.1	96.6	47.8	47.8	47.1	47.8
2400	44.9		81.1	96.6	47.8	4.8	47.1	47.8

TABLE 305
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 1, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	45.4	<u>1/</u>	81.5	97.0	47.8	47.8	47.0	47.9
0200	45.4		81.6	97.3	47.8	47.9	47.1	47.9
0300	45.6		81.6	97.5	47.8	48.1	47.2	47.9
0400	45.8		81.7	97.8	48.0	48.2	47.3	47.9
0500	45.8		81.6	97.8	48.1	48.3	47.4	48.1
0600	46.3		81.4	98.1	48.3	48.4	47.6	48.6
0700	46.8		81.1	98.4	48.4	48.5	47.8	48.9
0800	47.5		81.4	98.4	48.7	48.8	48.2	49.1
0900	48.4		81.8	98.4	49.2	49.1	48.6	49.2
1000	48.8		81.9	98.2	49.3	49.2	49.1	49.2
1100	49.1		82.2	98.1	49.4	49.4	49.3	49.3
1200	49.2		82.3	97.4	49.4	49.4	49.3	49.3
1300	49.3		82.4	96.3	49.5	49.4	49.4	49.4
1400	49.2		82.8	97.1	49.6	49.6	49.4	49.4
1500	49.1		83.1	97.9	49.8	49.7	49.5	49.5
1600	49.1		83.0	97.9	49.7	49.6	49.4	49.4
1700	49.0		83.0	98.1	49.6	49.4	49.3	49.3
1800	48.9		83.0	98.2	49.6	49.3	49.2	49.2
1900	48.9		82.5	98.3	49.5	49.3	49.0	49.2
2000	48.9		82.3	98.1	49.5	49.4	49.1	49.2
2100	49.0		82.0	97.9	49.5	49.4	49.1	49.3
2200	48.6		82.1	98.2	49.5	49.4	49.2	49.3
2300	48.0		82.3	98.5	49.5	49.3	49.3	49.3
2400	49.1		82.5	98.8	49.5	49.3	49.3	49.4

1/ Sensor out of service

TABLE 306

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

November 2, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	49.0		82.6	98.6	49.5	49.4	49.4	49.4
0200	49.0		82.5	98.7	49.6	49.4	49.4	49.4
0300	49.0		82.4	98.8	49.6	49.5	49.5	49.5
0400	49.2		82.2	99.0	49.8	49.6	49.6	49.6
0500	49.4		82.3	99.0	50.0	49.9	49.9	49.9
0600	49.5		82.8	99.6	50.1	50.0	49.9	49.9
0700	49.4		82.7	99.6	50.1	49.9	49.9	50.0
0800	48.7		82.1	99.0	49.7	49.5	48.6	49.4
0900	48.4		82.0	99.0	49.8	49.4	48.6	49.5
1000	48.8		82.1	99.2	49.8	49.4	48.6	49.6
1100	48.5		82.2	99.3	50.0	49.6	48.9	49.8
1200	48.1		82.3	99.5	50.1	49.5	49.1	50.0
1300	49.0		82.4	99.4	50.4	49.9	49.6	50.1
1400	49.5		82.5	99.6	50.5	50.1	50.0	50.0
1500	49.8		82.9	99.5	50.8	50.1	50.0	50.1
1600	49.6		82.9	100.0	50.8	50.3	50.1	50.3
1700	49.9		83.1	99.9	50.9	50.5	50.4	50.6
1800	49.9		83.4	100.0	51.0	50.4	50.3	50.6
1900	49.8		83.4	100.0	50.9	50.8	50.3	50.6
2000	49.6		83.4	99.4	50.7	50.6	50.2	50.5
2100	49.0		83.4	99.1	50.8	50.5	50.2	50.6
2200	49.4		83.4	99.0	50.8	50.6	50.4	50.6
2300	49.8		82.8	98.6	50.9	50.8	50.5	50.6
2400	49.8		82.5	98.5	50.8	50.7	50.5	50.6

TABLE 307

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

November 3, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	49.9		82.2	98.1	50.8	50.6	50.5	50.6
0200	49.8		81.8	97.9	50.8	50.6	50.5	50.6
0300	49.7		81.5	97.8	50.8	50.7	50.7	50.7
0400	49.7		81.1	97.4	50.8	50.6	50.7	50.7
0500	49.8		80.4	97.0	50.8	50.5	50.7	50.7
0600	49.9		80.3	97.3	50.8	50.6	50.8	50.8
0700	49.9		80.1	97.7	50.9	50.6	50.8	50.9
0800	49.9		80.3	98.1	51.0	50.7	50.8	50.9
0900	50.0		80.4	98.2	51.0	50.8	50.9	50.9
1000	50.2		81.1	98.1	51.2	51.1	50.9	51.1
1100	50.3		81.6	98.0	51.4	51.2	51.2	51.2
1200	50.3		82.3	98.9	51.8	51.1	51.2	51.3
1300	50.5		82.8	99.6	52.0	51.8	51.4	51.5
1400	50.9		83.8	100.3	52.4	51.8	51.5	51.6
1500	51.0		84.2	100.6	52.6	51.8	51.5	51.6
1600	51.0		84.4	100.9	52.6	52.0	51.5	51.8
1700	50.9		84.5	101.0	52.6	51.9	51.5	51.8
1800	50.6		84.4	101.0	52.6	51.8	51.4	51.8
1900	50.8		84.4	101.0	52.5	51.8	51.3	51.9
2000	50.6		84.5	101.0	52.5	51.5	51.2	51.9
2100	50.8		84.5	101.0	52.4	51.5	51.1	52.0
2200	50.6		84.4	100.9	52.3	51.4	51.1	52.0
2300	50.4		84.4	101.0	52.3	51.4	51.1	52.0
2400	50.4		84.4	100.9	52.1	51.2	51.2	51.9

TABLE 308
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 November 4, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	50.2		84.3	100.8	52.1	51.4	51.4	51.9
0200	50.2		84.3	100.7	52.1	51.4	51.6	52.1
0300	50.3		84.3	100.6	52.3	51.4	51.8	52.3
0400	50.4		84.2	100.6	52.4	51.6	51.9	52.3
0500	50.5		84.0	100.6	52.5	51.8	52.0	52.4
0600	50.6		84.0	100.3	52.7	52.1	52.1	52.5
0700	50.7		84.0	99.8	52.8	52.3	52.2	52.6
0800	50.9		83.8	99.7	53.1	52.4	52.3	52.6
0900	51.0		83.4	99.6	53.2	52.6	52.4	52.6
1000	51.1		83.4	99.6	53.3	52.6	52.4	52.7
1100	51.3		83.5	99.5	53.4	52.6	52.5	52.8
1200	51.3		83.4	99.5	53.4	52.6	52.6	52.8
1300	51.3		83.3	99.5	53.5	52.6	52.6	52.8
1400	52.1		83.4	99.7	53.4	52.9	52.8	52.9
1500	53.3		83.5	99.8	52.6	53.7	53.6	53.0
1600	53.2		83.5	99.6	52.6	53.7	53.6	53.1
1700	53.1		83.5	99.4	52.7	53.5	53.5	53.3
1800	53.1		83.7	99.7	52.6	53.4	53.4	53.3
1900	53.0		83.8	100.0	52.5	53.3	53.3	53.3
2000	52.7		83.6	100.4	52.5	53.3	53.2	53.3
2100	52.5		83.5	100.8	52.5	53.2	53.2	53.2
2200	52.8		83.5	100.6	52.4	53.0	53.0	53.1
2300	52.8		83.0	100.5	52.3	53.0	53.0	53.0
2400	52.6		83.1	100.3	52.2	53.0	53.0	53.0

TABLE 309

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

November 5, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	52.4		83.0	99.9	52.1	53.1	53.1	53.1
0200	52.4		82.9	99.9	52.1	52.9	53.1	53.1
0300	52.4		82.9	99.9	52.0	52.8	53.0	53.0
0400	52.4		82.7	99.9	51.9	52.9	53.0	53.0
0500	52.4		82.6	99.8	51.8	53.1	53.1	53.0
0600	52.4		82.6	99.4	51.9	53.1	53.1	53.0
0700	52.3		82.1	98.8	51.9	53.0	53.0	53.0
0800	52.4		81.9	98.3	51.9	53.0	53.0	53.0
0900	52.6		81.2	98.0	51.9	52.9	52.9	52.9
1000	52.7		81.3	98.0	52.1	52.9	53.1	52.8
1100	52.8		81.4	98.0	52.3	53.0	53.3	52.8
1200	52.9		81.3	98.3	52.3	53.1	53.2	52.9
1300	53.0		81.1	98.5	52.4	53.1	53.1	53.0
1400	52.9		80.9	98.4	52.4	53.0	53.1	52.9
1500	52.8		80.6	98.4	52.4	53.0	53.0	52.9
1600	52.9		80.3	98.2	52.3	53.0	53.0	52.8
1700	53.0		79.9	98.0	52.2	53.0	53.0	52.8
1800	52.9		78.8	98.5	52.1	52.8	52.9	52.8
1900	52.8		78.1	97.0	52.0	52.8	52.8	52.7
2000	52.7		77.8	96.8	51.9	52.9	52.7	52.6
2100	52.6		77.4	96.3	51.4	53.0	52.5	52.5
2200	52.5		77.2	95.1	51.2	52.5	52.4	52.3
2300	52.4		77.0	93.4	51.0	52.2	52.2	52.2
2400	52.1		76.4	93.0	50.8	52.4	52.4	52.4

TABLE 310
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 6, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	52.0		76.1	92.4	50.6	52.4	52.3	52.2
0200	51.9		75.8	91.9	50.4	52.2	52.3	52.2
0300	51.9		75.1	91.5	50.3	51.9	52.1	52.1
0400	51.8		74.3	91.2	50.1	51.8	52.1	52.1
0500	51.8		73.6	91.0	50.0	51.8	52.0	52.0
0600	51.8		72.9	90.6	49.9	51.8	51.9	51.8
0700	51.7		72.0	89.9	49.8	51.8	51.8	51.7
0800	51.6		71.8	89.7	49.7	51.7	51.7	51.6
0900	51.6		71.5	89.3	49.6	51.5	51.5	51.5
1000	51.6		71.5	89.4	49.6	51.7	51.6	51.4
1100	51.5		71.3	89.6	49.6	51.8	51.6	51.4
1200	51.7		71.8	89.7	49.8	51.8	51.6	51.4
1300	51.8		72.3	89.9	49.9	51.8	51.6	51.4
1400	51.8		72.4	90.1	49.9	51.8	51.5	51.4
1500	51.9		72.5	90.4	50.0	51.9	51.4	51.4
1600	51.7		72.5	90.4	49.9	51.9	51.3	51.3
1700	51.6		72.5	90.4	49.8	51.9	51.1	51.1
1800	51.3		72.8	90.3	49.5	51.4	50.8	50.9
1900	50.9	49.2	73.0	90.1	49.2	51.2	50.6	50.9
2000	50.8	49.1	73.3	90.2	49.1	51.0	50.5	50.7
2100	50.8	48.9	73.5	90.4	48.8	51.0	50.4	50.6
2200	50.6	48.7	73.7	90.4	48.6	50.8	50.3	50.6
2300	50.5	48.6	73.8	90.4	48.5	50.6	50.2	50.5
2400	50.3	48.4	73.5	90.5	48.3	50.6	50.2	50.4

TABLE 311
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 7, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	F	C	D
0100	50.4	48.4	73.6	90.0	48.1	50.8	50.5	50.1
0200	50.3	48.1	73.4	90.0	47.9	50.6	50.5	50.1
0300	50.1	47.9	73.2	89.9	47.8	50.4	50.7	60.1
0400	50.0	47.8	73.1	90.0	47.8	50.4	50.7	50.1
0500	50.0	47.8	73.0	90.0	47.8	50.5	50.9	50.1
0600	50.2	57.7	72.8	89.8	47.9	50.7	50.8	50.1
0700	50.4	47.6	72.6	89.6	48.0	50.8	50.6	50.1
0800	50.4	47.7	72.8	89.6	48.1	50.8	50.7	50.3
0900	50.4	47.8	72.9	89.6	48.2	50.8	50.9	50.4
1000	50.5	48.1	73.2	90.1	48.4	50.9	51.0	50.5
1100	50.6	48.5	73.7	90.4	48.6	51.0	51.0	50.6
1200	50.8	48.7	74.3	90.9	48.9	51.1	51.2	50.8
1300	51.0	49.1	75.2	91.4	49.1	51.2	51.3	50.9
1400	51.2	49.3	75.3	91.6	49.3	51.5	51.4	51.1
1500	51.4	49.3	75.4	91.8	49.5	51.8	51.6	51.2
1600	51.4	49.3	75.4	91.8	49.5	51.5	51.4	51.2
1700	51.4	49.2	75.4	91.8	49.5	51.4	51.3	51.2
1800	51.3	49.2	75.4	91.9	49.4	51.4	51.3	51.2
1900	51.2	49.2	75.5	92.0	49.4	51.6	51.3	51.2
2000	51.1	49.1	75.5	91.9	49.2	51.4	51.2	51.2
2100	50.9	49.0	75.5	91.8	49.0	51.4	51.0	51.2
2200	50.8	48.9	75.4	91.7	48.8	51.2	50.9	51.1
2300	50.8	48.8	75.3	91.6	48.6	51.0	50.8	50.8
2400	50.5	48.7	75.4	91.8	48.5	50.9	50.8	50.8

TABLE 312

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

November 8, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	50.8	48.6	75.4	91.4	48.4	50.6	50.8	50.7
0200	50.7	48.5	75.4	91.4	48.3	50.6	50.9	50.7
0300	50.5	48.4	75.3	91.3	48.3	50.7	51.2	50.6
0400	50.4	48.3	75.3	92.1	48.2	50.6	51.1	50.6
0500	50.4	48.2	75.4	93.5	48.2	50.6	51.1	50.6
0600	50.5	48.2	75.6	93.6	48.3	50.7	51.4	50.7
0700	50.6	48.1	75.8	93.7	48.5	50.8	51.6	50.8
0800	50.8	48.2	75.8	93.7	48.7	50.9	51.6	50.9
0900	50.9	48.2	75.9	93.7	48.9	51.0	51.6	51.1
1000	51.1	48.6	76.1	93.9	49.1	51.3	51.6	51.1
1100	51.3	48.8	76.5	94.0	49.3	51.5	51.6	51.1
1200	51.3	49.1	77.1	94.8	49.6	51.5	51.7	51.2
1300	51.3	49.4	78.0	95.2	49.8	51.6	51.8	51.3
1400	51.4	49.6	78.1	95.4	49.9	51.7	51.8	51.5
1500	51.7	49.8	78.2	95.8	49.9	51.9	51.8	51.6
1600	51.6	49.8	78.1	95.7	49.9	51.8	51.7	51.6
1700	51.3	49.8	78.0	95.6	50.0	51.7	51.7	51.5
1800	51.1	49.8	77.6	95.7	49.9	51.5	51.6	51.4
1900	51.0	49.8	77.0	95.9	49.8	51.3	51.3	51.3
2000	51.1	49.6	76.8	95.7	49.4	51.1	51.2	51.2
2100	51.2	49.0	76.4	95.4	49.3	50.9	51.1	51.1
2200	51.1	48.8	76.1	95.2	49.1	50.7	50.8	50.9
2300	50.8	48.6	75.6	94.8	48.8	50.5	50.7	50.8
2400	50.6	48.4	75.4	94.4	48.5	50.5	50.6	50.7

TABLE 313

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

November 9, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	50.2	48.3	75.0	68.8	48.3	50.1	50.3	50.3
0200	50.2	48.1	74.8	68.4	48.1	50.1	50.4	50.3
0300	50.1	47.9	74.6	68.0	47.9	50.0	50.4	50.3
0400	50.1	47.7	74.6	68.0	47.9	50.0	50.4	50.3
0500	50.1	47.5	74.5	68.0	47.8	50.0	50.5	50.3
0600	50.2	47.4	74.1	67.9	47.8	50.0	50.4	50.3
0700	50.3	47.3	73.8	67.8	47.8	50.0	50.3	50.3
0800	50.1	47.1	63.8	64.4	47.4	49.9	50.1	50.1
0900	50.0	47.1	59.4	57.8	47.5	49.9	50.0	50.0
1000	50.0	47.4	59.1	56.8	47.6	49.9	50.0	50.0
1100	50.1	47.7	58.8	56.3	47.7	49.9	50.0	50.0
1200	50.1	47.9	57.6	56.8	47.9	49.9	50.0	50.0
1300	50.2	48.0	57.2	57.2	47.8	49.9	50.0	49.9
1400	50.2	48.1	57.8	59.2	47.8	49.8	49.6	49.9
1500	50.3	48.2	58.6	64.8	47.8	49.7	49.4	50.0
1600	50.1	48.1	54.6	60.6	47.6	49.6	49.1	49.6
1700	49.9	48.0	52.6	59.5	47.5	49.5	48.6	49.3
1800	49.7	47.8	52.1	61.2	47.3	48.8	48.4	49.1
1900	49.6	47.6	51.6	62.6	47.0	48.0	48.3	48.8
2000	49.5	47.5	52.1	64.7	46.7	48.3	48.1	48.6
2100	49.4	47.4	52.6	66.8	46.3	48.5	47.8	48.1
2200	49.1	47.1	53.7	68.8	45.9	48.2	47.6	47.9
2300	48.8	46.8	54.8	70.8	45.6	47.9	47.4	47.8
2400	48.4	46.5	53.2	69.4	45.3	47.6	47.3	47.5

TABLE 314
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 10, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	48.3	46.2	53.1	68.9	44.5	47.5	47.3	47.3
0200	48.1	45.9	54.2	69.3	44.4	47.4	47.4	47.2
0300	48.0	45.6	55.6	70.4	44.3	47.3	47.5	47.1
0400	47.9	45.5	56.5	70.9	44.2	47.3	47.5	47.1
0500	47.8	45.3	58.6	72.1	44.0	47.3	47.5	47.0
0600	47.8	45.1	58.8	72.8	43.9	47.6	47.7	47.1
0700	47.8	44.8	59.1	73.3	43.8	48.0	47.9	47.2
0800	47.9	44.8	58.9	72.8	43.9	47.7	47.9	47.2
0900	48.0	44.8	58.8	72.5	43.9	47.2	47.9	47.2
1000	48.1	44.9	59.2	73.9	44.1	47.2	47.9	47.2
1100	48.1	45.2	60.3	75.0	44.5	47.3	47.9	47.3
1200	48.2	45.4	61.1	76.2	44.7	47.4	48.1	47.4
1300	48.2	45.8	62.2	77.9	44.9	47.5	48.2	47.4
1400	48.4	45.9	62.6	78.8	45.1	47.7	48.3	47.4
1500	48.6	46.2	63.0	80.6	45.2	47.8	48.3	47.5
1600	48.6	46.2	63.2	80.7	45.2	47.8	48.3	47.5
1700	48.5	46.2	63.4	80.8	45.2	47.8	48.3	47.5
1800	48.5	46.1	64.3	81.3	45.2	47.7	48.2	47.5
1900	48.5	45.9	65.4	82.2	45.3	47.6	48.1	47.4
2000	48.5	45.9	66.5	83.1	45.2	47.6	47.9	47.4
2100	48.4	45.9	67.4	84.0	45.0	47.5	47.8	47.5
2200	48.3	45.4	67.6	84.6	44.9	47.4	47.6	47.4
2300	48.3	45.8	68.1	85.3	44.8	47.3	47.5	47.3
2400	48.0	45.6	68.2	85.4	44.5	47.0	47.3	47.2

TABLE 315
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 11, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	48.0	45.4	68.4	85.9	44.4	46.9	47.3	47.0
0200	47.9	45.8	68.6	86.1	44.2	46.9	47.3	46.9
0300	47.8	46.0	68.8	86.4	44.0	46.9	47.4	46.8
0400	47.7	45.6	69.3	86.7	43.9	46.9	47.5	46.7
0500	47.6	45.0	69.8	87.2	43.8	46.8	47.6	46.6
0600	47.5	44.8	69.9	87.4	43.7	46.7	47.5	46.6
0700	47.3	44.6	70.0	87.8	43.6	46.6	47.4	46.6
0800	47.3	44.7	70.3	87.9	43.6	46.7	47.6	46.5
0900	47.4	44.8	70.5	88.0	43.6	46.8	47.6	46.4
1000	47.6	44.9	71.1	89.3	43.8	46.9	47.7	46.6
1100	47.9	45.0	71.6	89.8	44.2	47.1	47.8	46.8
1200	48.1	45.6	72.5	89.9	44.4	47.3	47.9	46.8
1300	48.2	45.9	73.2	91.0	44.6	47.5	48.0	46.9
1400	48.2	46.1	73.6	91.7	44.7	47.6	48.1	47.1
1500	48.3	46.2	74.0	92.2	44.8	47.6	48.1	47.2
1600	48.4	46.1	74.3	92.7	44.9	47.6	48.1	47.2
1700	48.5	45.9	74.5	93.0	45.0	47.8	48.1	47.2
1800	48.5	45.9	74.4	93.2	45.1	47.8	48.1	47.2
1900	48.4	45.9	75.0	93.4	45.2	47.7	48.0	47.2
2000	48.3	45.8	75.1	92.8	45.1	47.9	48.0	47.1
2100	48.2	45.6	75.2	91.3	45.0	48.0	48.0	47.1
2200	48.1	45.4	75.0	91.3	44.7	48.1	47.8	47.1
2300	47.9	45.3	74.9	91.3	44.5	48.2	47.6	47.0
2400	47.8	45.4	74.5	89.9	44.5	47.8	47.8	47.0

TABLE 316
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 12, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	47.9	45.4	74.2	90.0	44.3	47.9	47.5	46.8
0200	47.7	45.2	74.1	89.7	44.2	47.9	47.5	46.8
0300	47.5	45.1	73.8	89.3	44.0	47.8	47.5	46.7
0400	47.4	45.1	73.1	89.1	43.9	47.6	47.7	46.7
0500	47.3	45.0	72.2	88.9	43.8	47.4	47.8	46.6
0600	47.1	44.9	71.8	88.3	43.7	47.6	47.8	46.7
0700	47.0	44.8	71.3	87.9	43.6	47.8	47.9	46.7
0800	47.0	44.6	70.8	87.5	43.6	47.6	47.7	46.5
0900	47.1	44.4	70.3	87.1	43.5	47.4	47.5	46.3
1000	47.2	44.6	70.5	87.2	43.7	47.5	47.6	46.5
1100	47.4	44.8	70.8	87.3	44.0	47.6	47.7	46.6
1200	47.6	45.1	71.2	87.7	44.2	47.7	47.7	46.7
1300	47.8	45.4	71.8	88.0	44.4	47.8	47.7	46.8
1400	47.8	45.6	71.9	88.3	44.6	47.9	47.8	46.9
1500	47.8	45.8	72.2	88.5	44.7	47.9	47.8	47.0
1600	48.0	45.6	72.3	88.5	44.8	47.9	47.8	47.0
1700	48.0	45.5	72.4	88.4	44.9	48.0	47.8	47.0
1800	48.0	45.5	72.4	88.6	44.9	48.0	47.7	47.0
1900	48.0	45.5	72.4	88.8	44.9	48.0	47.6	46.9
2000	48.0	45.6	72.3	88.7	44.8	48.0	47.5	46.8
2100	48.0	45.6	72.2	88.5	44.8	47.9	47.4	46.7
2200	48.0	45.6	72.4	88.5	44.6	47.8	47.3	46.7
2300	47.9	45.6	72.6	88.5	44.6	47.7	47.2	46.7
2400	47.9	45.6	72.9	88.4	44.4	47.7	47.1	46.6

TABLE 317

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

November 13, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	47.8	45.4	71.3	87.8	44.2	47.9	47.2	46.3
0200	47.6	45.3	71.2	87.9	44.1	47.7	47.2	46.3
0300	47.5	45.2	71.2	87.8	43.8	47.5	47.1	46.3
0400	47.4	45.1	70.9	87.6	43.7	47.5	47.3	46.3
0500	47.3	44.9	70.8	87.4	43.5	47.4	47.4	46.2
0600	47.3	44.8	70.4	87.2	43.4	47.3	47.3	46.2
0700	47.3	44.6	70.0	87.0	43.3	47.1	47.2	46.2
0800	47.3	44.6	70.0	87.0	43.4	47.5	47.4	46.2
0900	47.4	44.5	69.9	87.0	43.4	47.7	47.6	46.2
1000	47.3	44.8	70.2	87.1	43.7	47.6	47.6	46.2
1100	47.2	45.0	70.5	87.3	43.9	47.5	47.5	46.2
1200	47.5	45.4	71.1	87.9	44.1	47.5	47.5	46.3
1300	47.8	45.4	71.9	88.5	44.3	47.6	47.6	46.6
1400	47.9	45.5	72.6	89.2	44.4	47.6	47.6	46.7
1500	48.1	45.6	73.1	91.8	44.5	47.6	47.6	46.8
1600	48.2	45.7	73.4	92.1	44.6	47.6	47.6	46.8
1700	48.2	45.8	73.9	92.5	44.7	47.6	47.6	46.8
1800	48.2	45.7	74.1	92.7	44.7	47.6	47.6	46.7
1900	48.2	35.7	74.2	93.0	44.7	47.5	47.5	46.6
2000	48.1	45.7	74.4	93.0	44.6	47.5	47.4	46.6
2100	47.8	45.6	74.9	93.0	44.5	47.4	47.3	46.4
2200	47.7	45.6	75.1	93.4	44.3	47.2	47.1	46.3
2300	47.6	45.5	75.4	93.8	44.0	47.0	46.8	46.2
2400	47.4	45.1	75.1	93.7	43.9	46.0	46.8	46.1

TABLE 318
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 14, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	47.3	45.3	75.3	94.5	43.6	46.8	46.6	45.9
0200	47.4	45.1	75.2	94.1	43.5	46.7	46.6	45.8
0300	47.5	45.0	75.1	93.7	43.4	46.5	46.5	45.7
0400	47.2	44.8	74.8	93.3	43.6	46.4	46.5	45.6
0500	46.8	44.5	74.6	93.1	43.8	46.3	46.5	45.3
0600	46.7	44.4	74.7	93.1	43.2	46.2	46.7	45.3
0700	46.6	44.3	74.8	93.0	42.6	46.2	46.8	45.3
0800	46.7	44.3	74.6	92.9	42.7	46.3	46.9	45.3
0900	46.8	44.3	74.5	92.9	42.8	46.5	47.0	45.4
1000	46.9	44.5	45.1	92.9	42.9	46.6	47.0	45.6
1100	47.2	44.6	75.3	93.0	43.0	46.8	47.1	45.8
1200	47.4	44.9	75.9	93.8	43.5	46.9	47.1	45.9
1300	47.6	45.3	76.5	94.5	43.8	47.2	47.2	46.1
1400	47.8	45.3	77.8	94.9	43.9	47.3	47.2	46.2
1500	47.9	45.4	78.0	95.3	44.0	47.3	47.3	46.3
1600	48.1	45.6	78.2	95.5	44.1	47.3	47.3	46.2
1700	48.2	45.8	78.4	95.7	44.1	47.3	47.3	46.2
1800	48.1	45.8	78.5	95.9	44.2	47.3	47.2	46.1
1900	48.0	45.8	78.6	96.1	44.3	47.3	47.2	46.0
2000	47.9	45.6	78.7	96.1	44.2	47.2	47.1	46.0
2100	47.8	45.5	78.8	96.1	44.1	47.0	46.9	45.9
2200	47.7	45.5	78.8	96.2	44.4	46.9	46.8	45.9
2300	47.5	45.6	78.8	96.3	44.8	46.9	46.7	45.8
2400	47.4	45.3	78.8	95.3	43.7	46.9	46.7	45.8

TABLE 319
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 15, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	47.4	45.0	78.5	92.8	43.4	46.5	46.4	45.5
0200	47.3	44.9	78.4	93.4	43.3	46.5	46.4	45.4
0300	47.2	44.8	78.4	94.2	43.1	46.4	46.3	45.3
0400	47.1	44.7	78.2	94.2	42.9	46.3	46.4	45.3
0500	46.9	44.6	77.9	94.2	42.8	46.2	46.5	45.3
0600	46.8	44.6	77.5	94.1	42.8	46.2	46.7	45.3
0700	46.9	44.7	77.3	94.0	42.8	46.2	46.8	45.2
0800	46.8	44.7	76.4	93.6	42.8	46.3	46.8	45.3
0900	46.8	44.8	75.5	93.0	42.8	46.4	46.9	45.3
1000	46.0	44.9	76.1	93.2	42.9	46.7	46.9	45.3
1100	47.1	45.0	76.8	93.4	43.2	46.8	46.9	45.4
1200	47.2	45.1	77.3	93.7	43.4	46.9	47.0	45.6
1300	47.4	45.2	78.0	94.0	43.6	47.0	47.1	45.6
1400	47.4	45.3	78.0	94.0	43.6	47.0	47.1	45.7
1500	47.4	45.4	78.0	94.0	43.6	47.1	47.0	45.8
1600	47.4	45.3	78.0	94.0	43.7	47.1	47.0	45.8
1700	47.4	45.2	78.0	94.2	43.8	47.0	47.0	45.8
1800	47.4	45.2	78.0	94.3	43.9	47.1	47.0	45.8
1900	47.5	45.2	78.0	94.4	44.0	47.3	47.0	45.8
2000	47.4	45.3	78.0	94.7	44.1	47.3	46.9	45.8
2100	47.4	45.4	78.2	94.8	44.2	47.4	46.8	45.8
2200	47.4	45.4	78.3	94.9	44.1	47.1	46.7	45.1
2300	47.3	45.3	78.4	95.0	43.9	46.8	46.6	45.6
2400	47.5	45.3	78.6	95.8	43.9	46.8	46.6	45.6

TABLE 320
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 16, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	47.3	45.4	78.8	96.1	43.8	46.7	46.5	45.5
0200	46.9	45.3	78.8	96.1	43.8	46.8	46.6	45.4
0300	46.5	45.2	78.9	96.2	43.8	46.8	46.7	45.3
0400	46.3	45.2	79.0	96.3	43.7	46.8	46.8	45.3
0500	46.2	45.2	79.1	96.4	43.6	46.7	46.7	45.3
0600	46.3	45.3	79.2	96.4	43.6	46.6	46.7	45.3
0700	46.5	45.4	79.3	96.4	43.6	46.6	46.8	45.4
0800	46.3	45.3	79.3	96.5	43.6	46.7	46.8	45.5
0900	46.2	45.2	79.3	96.6	43.6	46.7	46.7	45.6
1000	46.7	45.4	79.3	96.6	44.1	46.8	46.9	45.7
1100	47.4	45.8	79.4	96.6	44.4	47.1	47.3	45.8
1200	47.4	45.9	79.9	96.7	44.5	47.2	47.4	45.9
1300	48.0	46.0	80.0	96.9	44.6	47.3	47.4	46.0
1400	48.1	46.2	79.9	97.1	44.7	47.3	47.5	46.2
1500	48.2	46.3	79.8	97.3	44.9	47.4	47.5	46.3
1600	48.2	46.1	79.5	97.3	44.9	47.4	47.5	46.3
1700	48.2	45.9	79.3	97.3	44.9	47.4	47.4	46.3
1800	48.2	46.3	79.3	97.1	45.0	47.5	47.5	46.3
1900	48.2	46.9	79.3	96.8	45.0	47.6	47.6	46.3
2000	48.2	46.9	79.3	96.8	45.0	47.7	47.7	46.3
2100	48.1	46.9	79.4	96.8	45.0	47.7	47.7	46.3
2200	48.1	45.9	79.2	96.6	44.9	47.4	47.2	46.3
2300	48.1	45.7	79.0	96.4	44.8	47.2	47.3	46.2
2400	48.0	45.4	78.8	96.2	44.6	47.1	47.2	46.0

TABLE 321
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 17, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	47.9	45.5	78.3	96.0	44.5	47.1	47.1	45.9
0200	47.8	45.3	77.9	95.8	44.3	47.1	47.1	45.8
0300	47.7	45.2	77.6	95.5	44.0	46.9	47.1	45.8
0400	47.6	45.2	77.4	95.2	44.0	46.8	47.2	45.8
0500	47.6	45.2	77.2	94.9	43.9	46.8	47.3	45.8
0600	47.6	45.1	77.1	94.7	43.8	46.8	47.4	45.7
0700	47.6	44.0	76.9	94.6	43.7	46.8	47.6	45.6
0800	47.6	44.9	76.8	94.4	43.6	46.8	47.6	45.5
0900	47.7	44.9	76.7	94.5	43.9	46.9	47.6	45.7
1000	47.8	44.9	76.4	94.5	44.0	47.0	47.6	45.9
1100	47.9	45.2	76.8	94.7	44.3	47.2	47.6	45.9
1200	48.0	45.4	77.0	95.0	44.5	47.3	47.5	45.9
1300	48.1	45.5	77.5	95.3	44.7	47.3	47.5	46.0
1400	48.2	45.6	77.8	95.7	44.8	47.3	47.5	46.1
1500	48.3	45.9	78.1	95.9	44.9	47.4	47.6	46.2
1600	48.4	46.2	78.5	96.4	45.2	47.6	47.6	46.3
1700 ^{1/}								
1800								
1900								
2000								
2100								
2200								
2300								
2400								

^{1/} Recorder not operational.

TABLE 322

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

November 18, 1981

Time	Upstream	Intake	Cooling Canal Col'd End	Discharge	Downstream Sensors			
					A	B	C	D
0100								
0200								
0300								
0400								
0500								
0600								
0700								
0800	47.3	44.8	77.4	95.2	43.4	46.4	47.0	45.0
0900	47.4	44.8	77.2	95.2	43.5	46.5	47.0	45.2
1000	47.4	44.9	76.9	95.2	43.7	46.6	47.1	45.3
1100	47.5	44.9	76.8	95.2	43.8	46.6	47.2	45.4
1200	47.5	45.1	76.6	95.1	43.9	46.6	47.2	45.4
1300	47.5	45.2	76.4	94.6	44.1	46.7	47.2	45.4
1400	47.5	45.3	76.3	94.3	44.1	46.8	47.2	45.6
1500	47.6	45.3	76.1	94.2	44.2	46.8	47.2	45.6
1600	47.7	45.3	75.9	93.1	44.3	46.8	47.1	45.6
1700	47.9	45.3	75.6	93.8	44.4	46.8	47.0	45.6
1800	47.9	45.3	75.6	93.9	44.4	46.8	47.0	45.6
1900	47.9	45.3	75.6	94.1	44.4	46.8	47.0	45.5
2000	47.8	45.3	75.6	94.2	44.4	46.9	47.0	45.5
2100	47.8	45.3	75.7	94.1	44.4	46.9	47.0	45.5
2200	47.9	45.4	94.1	44.4	47.1	47.0	47.0	45.6
2300	47.9	45.5	76.1	94.2	44.4	46.9	47.0	45.6
2400	48.0	45.6	76.3	94.3	44.4	46.9	47.0	45.6

TABLE 323
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 19, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	48.0	46.6	76.5	94.4	44.5	47.1	46.9	45.4
0200	48.0	46.1	76.5	94.4	44.4	46.9	46.9	45.1
0300	47.9	45.8	76.5	94.5	44.3	46.8	46.9	44.8
0400	47.9	45.5	76.5	94.7	44.1	46.6	46.9	44.1
0500	47.7	45.5	76.4	94.6	44.0	46.6	46.9	44.5
0600	47.4	45.6	76.3	94.5	43.9	46.6	46.9	44.8
0700	47.0	45.7	76.3	94.5	43.8	46.6	46.9	45.2
0800	46.9	45.7	76.1	94.1	43.7	46.5	46.9	45.2
0900	46.7	45.8	75.8	93.8	43.6	46.3	46.9	45.2
1000	46.5	45.9	75.0	93.5	43.4	46.4	46.9	45.2
1100	46.7	45.5	74.9	93.2	43.4	46.4	46.7	45.2
1200	46.9	44.8	74.7	92.9	43.4	46.3	46.6	45.2
1300	47.2	44.4	74.2	92.5	43.4	46.2	46.5	45.2
1400	46.9	44.4	74.2	92.6	43.3	46.2	46.4	45.1
1500	46.6	44.5	74.2	92.6	43.2	46.2	46.2	44.9
1600	46.4	44.6	74.2	92.8	43.1	46.2	46.0	44.8
1700	46.8	44.4	73.8	92.6	43.0	46.1	46.0	44.8
1800	47.1	44.1	73.2	92.2	42.9	46.1	45.9	44.8
1900	47.2	43.8	72.8	91.8	42.9	46.0	45.8	44.8
2000	47.2	43.8	72.4	91.3	42.9	46.0	45.9	44.7
2100	47.2	43.8	72.0	90.9	42.9	46.0	45.9	44.7
2200	47.2	43.8	71.8	90.8	42.9	46.0	45.9	44.6
2300	46.0	43.7	71.4	90.5	42.7	45.9	45.7	44.5
2400	46.6	43.6	71.0	90.1	42.6	45.8	45.5	44.4

TABLE 324
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 20, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	46.2	43.5	70.7	90.0	42.5	45.6	45.3	44.4
0200	46.1	43.3	70.4	89.9	42.4	45.4	45.3	44.2
0300	45.9	43.2	70.1	89.7	42.3	45.3	45.4	43.9
0400	45.9	43.2	69.8	89.5	42.2	45.3	45.4	43.8
0500	45.8	42.8	69.3	88.9	41.9	45.1	45.2	43.5
0600	45.7	42.6	68.7	88.4	41.8	44.8	44.9	43.3
0700	45.6	42.4	68.4	88.0	41.2	44.6	44.8	42.9
0800	45.6	42.3	68.1	87.8	41.1	44.5	44.6	42.7
0900	45.6	42.2	67.9	87.5	70.9	44.4	44.4	42.6
1000	45.5	42.2	67.6	87.2	40.6	44.3	44.3	42.5
1100	45.4	42.2	67.5	87.2	40.6	44.1	44.2	42.4
1200	45.2	42.2	67.4	87.1	40.5	44.0	44.0	42.3
1300	45.3	42.2	67.3	87.0	40.4	43.9	43.9	42.1
1400	45.3	42.1	67.2	87.0	40.2	43.8	43.8	42.1
1500	45.2	42.0	67.1	86.9	39.9	43.7	43.6	41.9
1600	45.2	41.9	67.0	86.8	39.9	43.6	43.5	41.6
1700	45.1	41.8	67.1	86.4	39.7	43.6	43.5	41.5
1800	45.0	41.8	67.3	85.6	39.6	43.6	43.4	41.4
1900	44.9	41.6	67.5	83.6	39.4	43.4	43.4	41.4
2000	44.9	41.5	67.5	81.2	39.1	43.1	43.2	41.1
2100	44.8	41.2	67.6	76.1	38.9	42.9	42.9	40.9
2200	44.8	41.0	67.6	71.0	38.8	42.9	42.8	40.9
2300	44.6	40.9	67.7	70.5	38.6	42.8	42.6	40.9
2400	44.5	40.8	67.8	68.8	38.4	42.7	42.5	40.8

TABLE 325

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

November 21, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	43.9	40.5	67.6	60.6	38.3	42.5	42.3	40.8
0200	43.7	40.2	66.1	54.1	38.1	42.2	42.1	40.7
0300	43.5	39.9	65.2	51.3	37.7	41.7	41.8	40.6
0400	53.4	39.6	64.7	43.4	37.2	41.6	41.6	40.5
0500	43.4	39.5	63.9	40.0	37.1	41.5	41.4	40.3
0600	43.3	39.4	62.2	37.8	36.9	41.4	41.2	40.1
0700	43.2	39.3	60.3	37.0	36.8	41.3	41.0	39.6
0800	43.2	39.2	59.8	37.0	36.8	41.3	40.9	39.4
0900	43.2	39.1	59.2	36.9	36.8	41.3	40.9	39.2
1000	43.2	38.9	58.5	36.8	36.8	41.3	40.8	39.0
1100	43.2	39.2	58.6	37.1	36.9	41.4	40.9	39.1
1200	43.1	39.5	58.6	37.4	37.1	41.5	41.1	39.3
1300	43.0	39.8	58.7	37.7	37.2	41.6	41.3	39.4
1400	43.0	39.8	58.6	37.6	37.2	41.6	41.3	39.4
1500	43.0	39.8	58.3	37.6	37.2	41.5	41.3	39.4
1600	43.0	39.8	58.2	37.5	37.0	41.5	41.3	39.4
1700	43.0	39.7	57.9	37.4	37.0	41.5	41.2	38.7
1800	42.9	39.5	57.1	37.1	36.9	41.4	41.1	37.7
1900	42.8	39.4	56.2	36.9	36.8	41.3	41.0	36.7
2000	42.7	39.1	55.6	36.7	36.4	41.1	40.9	37.2
2100	42.4	38.9	54.9	36.5	36.2	40.8	40.8	37.9
2200	42.3	38.8	54.3	36.2	35.8	40.3	40.1	38.3
2300	42.1	38.5	53.9	36.1	35.7	40.1	39.9	38.1
2400	42.0	38.2	53.5	35.9	35.5	40.0	39.8	37.9

TABLE 326
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 22, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	42.0	38.0	53.3	37.5	35.0	39.8	39.8	37.5
0200	42.0	38.0	53.1	39.2	35.0	39.8	39.8	37.6
0300	41.9	37.9	52.8	42.1	34.9	39.8	39.8	37.6
0400	41.8	37.8	52.5	43.8	34.8	39.7	39.8	37.7
0500	41.8	37.7	52.3	44.2	34.7	39.7	39.9	37.7
0600	41.8	37.6	52.1	44.6	34.6	39.7	40.0	37.7
0700	41.8	37.4	51.8	44.9	34.5	39.6	40.1	37.7
0800	41.9	37.4	51.8	45.3	34.6	39.7	40.1	37.9
0900	41.9	37.5	51.8	46.2	34.7	39.7	40.1	38.1
1000	42.0	37.6	51.8	47.0	34.8	39.8	40.1	38.2
1100	42.1	37.8	52.2	47.8	35.1	39.9	40.2	38.2
1200	42.2	38.1	52.8	48.3	35.3	40.1	40.2	38.2
1300	42.4	38.4	53.2	49.2	35.4	40.1	40.2	38.4
1400	42.4	38.4	53.2	49.3	35.4	40.2	40.2	38.4
1500	42.4	38.4	53.2	49.4	35.4	40.1	40.3	38.4
1600	42.5	38.4	53.2	49.5	35.4	40.2	40.3	38.4
1700	42.4	38.3	53.1	49.5	35.4	40.1	40.2	38.3
1800	42.3	38.1	52.8	49.4	35.3	40.0	40.1	38.1
1900	42.2	37.9	52.4	52.4	35.2	39.8	39.9	37.9
2000	41.9	37.7	51.8	49.2	35.1	39.6	39.7	37.7
2100	41.7	37.6	51.2	48.9	34.7	39.3	39.5	37.5
2200	41.5	37.5	50.8	48.5	34.4	39.2	39.4	37.0
2300	41.4	37.4	50.3	48.4	34.2	39.1	39.3	37.0
2400	41.3	37.3	49.8	48.3	34.0	39.0	39.1	36.9

TABLE 327

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

November 23, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	41.3	37.1	49.3	48.4	33.9	38.9	38.9	36.8
0200	41.3	37.1	49.1	48.4	33.9	38.8	38.9	36.7
0300	41.3	37.0	48.9	48.4	33.9	38.8	39.1	36.6
0400	41.2	37.0	48.8	48.5	33.8	38.8	39.1	36.5
0500	41.3	37.0	48.9	48.4	33.8	38.8	39.2	36.6
0600	41.4	36.9	48.6	48.3	33.8	38.9	39.3	36.8
0700	41.5	36.9	48.3	48.0	34.0	39.0	39.4	37.0
0800	41.7	36.9	48.3	48.0	34.1	39.1	39.5	37.2
0900	41.9	37.1	48.4	47.9	34.3	39.3	39.6	37.3
1000	42.0	37.2	48.4	47.8	34.4	39.4	39.6	37.5
1100	42.3	37.3	48.4	47.8	34.5	39.6	39.7	37.5
1200	42.4	37.3	48.4	47.8	34.6	39.7	39.7	37.4
1300	42.8	37.3	48.5	47.9	34.7	39.7	39.7	37.4
1400	42.8	37.3	48.5	47.8	34.7	39.7	39.6	37.3
1500	42.8	37.4	48.5	47.8	34.7	39.7	39.4	37.3
1600	42.8	37.4	48.5	47.8	34.8	39.6	39.4	37.3
1700	42.6	37.3	48.4	47.5	34.7	39.4	39.1	37.1
1800	42.3	37.3	48.3	47.3	34.5	39.3	38.8	36.9
1900	42.2	37.3	48.2	47.0	34.3	39.2	38.6	36.8
2000	41.8	37.2	48.1	47.3	34.3	39.2	38.5	36.7
2100	41.5	37.2	47.9	47.5	34.4	39.1	38.4	36.6
2200	41.3	37.2	47.9	47.8	34.2	39.0	38.4	36.6
2300	41.2	37.2	47.7	47.7	34.2	39.0	38.4	36.4
2400	40.9	37.2	47.4	47.6	34.2	39.0	38.4	36.3

TABLE 328

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

November 24, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	41.2	37.1	47.1	47.5	34.0	39.0	38.4	36.6
0200	41.3	37.2	46.9	47.6	34.0	39.0	38.5	36.6
0300	41.3	37.2	46.5	47.6	34.1	39.0	38.6	36.6
0400	41.4	37.2	46.0	47.6	34.1	39.0	38.6	36.6
0500	41.4	37.2	45.9	47.4	34.1	39.1	38.7	36.6
0600	41.5	37.2	45.8	47.2	34.2	39.1	38.7	36.6
0700	41.6	37.2	45.6	46.9	34.2	39.1	38.8	36.6
0800	41.4	37.2	45.4	47.2	34.2	39.1	38.8	36.6
0900	41.4	37.3	45.3	47.7	34.2	39.1	38.8	36.6
1000	41.4	37.3	45.0	47.8	34.2	39.1	38.8	36.5
1100	41.6	37.7	45.6	47.6	34.3	39.2	38.9	36.6
1200	41.7	37.9	46.1	47.5	34.7	39.3	38.9	36.7
1300	41.9	38.0	46.4	47.2	34.8	39.4	39.0	36.8
1400 ^{1/}	36.6	38.0	47.2	47.0	37.2	37.1	38.9	36.8
1500	36.6	37.9	47.1	47.2	37.2	37.6	38.3	36.8
1600	36.6	37.8	46.7	47.2	37.2	38.3	37.7	36.8
1700	36.5	37.7	46.4	47.2	37.2	38.6	37.2	36.8
1800	36.6	37.6	46.1	47.3	37.2	38.2	37.8	36.8
1900	36.7	37.5	45.9	46.9	37.3	37.5	38.4	36.7
2000	36.8	37.4	45.8	34.8	37.3	37.3	38.8	36.7
2100	36.7	37.3	45.7	34.9	37.2	37.2	38.7	36.7
2200	36.6	37.2	45.4	35.0	37.2	37.2	38.6	36.7
2300	36.6	37.2	45.3	34.7	37.1	37.2	38.5	36.6
2400	36.5	37.3	45.0	34.5	37.0	37.0	38.4	36.5

^{1/} Instruments adjusted to ground truth.

TABLE 329
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 25, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	36.5	37.3	45.0	34.5	36.9	37.0	38.4	36.3
0200	36.7	37.3	46.3	34.8	36.9	37.1	38.5	36.5
0300	36.8	37.4	47.1	35.1	37.1	37.2	38.6	36.6
0400	36.9	37.4	48.2	35.2	37.2	37.3	38.8	36.7
0500	36.9	37.4	48.2	41.8	37.1	37.4	38.9	36.8
0600	36.9	37.4	48.2	44.0	37.1	37.6	39.0	36.9
0700	36.8	37.4	48.2	44.8	37.0	37.0	39.1	37.0
0800	36.8	37.4	47.1	44.2	37.1	37.9	39.1	37.1
0900	36.9	37.4	43.2	44.0	37.1	37.9	39.2	37.1
1000	36.9	37.4	35.6	37.0	37.2	37.9	39.3	37.2
1100	36.8	37.3	35.8	37.9	37.2	37.7	39.1	37.1
1200	36.7	37.3	39.2	38.6	37.2	37.6	38.9	36.9
1300	36.5	37.2	42.1	39.5	37.2	37.5	38.8	36.8
1400	36.6	37.2	42.2	39.1	37.2	37.6	38.8	36.8
1500	36.6	37.2	42.3	40.8	37.2	37.6	38.8	36.8
1600	36.7	37.2	42.4	41.4	37.2	37.7	38.7	36.8
1700	36.7	37.2	42.3	39.0	37.2	37.7	38.6	36.6
1800	36.8	37.3	42.3	36.8	37.2	37.7	38.6	36.7
1900	36.8	37.4	42.2	36.5	37.3	37.7	38.5	36.6
2000	37.8	37.4	41.7	37.5	37.3	37.7	38.5	36.6
2100	37.8	37.4	41.5	39.9	37.3	37.7	38.5	36.6
2200	36.8	37.4	41.0	42.2	37.3	37.7	38.5	36.6
2300	37.9	37.5	40.8	42.6	37.4	37.8	38.5	36.7
2400	37.0	37.6	40.2	44.0	37.5	37.9	38.5	36.8

TABLE 330
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 26, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	37.1	37.8	38.1	44.8	37.6	38.0	38.7	36.9
0200	37.1	37.8	38.8	46.4	37.7	38.0	38.7	37.0
0300	37.1	37.9	39.5	47.3	37.7	38.0	38.7	37.1
0400	37.1	38.0	40.4	49.6	37.8	38.0	38.7	37.2
0500	37.1	38.1	42.0	53.6	37.8	38.1	38.7	37.3
0600	37.1	38.1	44.0	55.2	37.8	38.2	38.7	37.4
0700	37.1	38.2	44.6	57.8	37.8	38.3	38.7	37.5
0800	37.1	38.2	44.9	58.3	37.8	38.4	38.7	37.5
0900	37.1	38.1	45.0	59.1	37.8	38.4	38.7	37.5
1000	37.0	38.2	46.8	59.5	37.8	38.5	38.7	37.5
1100	36.9	38.2	48.2	60.6	37.8	38.4	38.7	37.6
1200	36.8	38.2	52.0	63.5	37.8	38.3	38.6	37.7
1300	36.4	47.9	53.8	65.2	37.8	38.2	38.7	37.8
1400	36.4	37.9	55.2	66.0	37.8	38.2	38.7	37.9
1500	36.4	38.1	56.8	67.6	37.8	38.2	38.7	38.1
1600	36.5	38.1	56.8	68.2	37.8	38.2	38.7	38.2
1700	36.9	37.9	57.3	68.4	37.8	38.2	38.7	38.1
1800	36.9	37.8	58.1	68.7	37.8	38.2	38.7	38.1
1900	37.0	37.7	58.8	69.0	37.8	38.2	38.7	38.0
2000	37.2	37.7	59.4	69.6	37.9	38.3	38.9	38.1
2100	37.3	37.8	59.9	71.1	37.9	38.6	39.1	38.1
2200	37.5	37.8	61.5	71.5	37.9	38.8	39.2	38.2
2300	37.4	37.8	61.9	71.8	37.9	38.7	39.2	38.3
2400	37.4	37.8	62.5	73.5	38.0	38.5	39.2	38.6

TABLE 331
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 27, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	37.3	37.8	62.8	72.9	38.0	38.8	39.2	38.8
0200	37.7	37.8	63.2	72.3	37.9	38.8	39.1	38.9
0300	37.9	37.7	63.8	73.9	37.9	38.7	39.2	39.2
0400	38.0	37.7	64.5	74.5	37.8	38.6	39.0	39.5
0500	37.7	37.6	64.8	74.9	37.7	38.6	39.0	39.4
0600	37.4	37.5	65.3	75.5	37.6	38.6	39.0	39.3
0700	36.9	37.4	65.8	75.9	37.5	38.5	39.0	39.1
0800	36.8	37.3	66.1	76.2	37.4	38.4	39.1	39.0
0900	36.8	37.3	66.2	76.6	37.3	38.4	39.2	38.9
1000	36.8	37.2	66.3	76.8	37.4	38.3	39.2	38.8
1100	36.8	37.3	66.9	76.7	37.4	38.6	39.2	38.8
1200	36.8	37.4	67.3	76.6	37.6	38.8	39.2	38.8
1300	36.8	37.5	68.4	76.5	37.6	39.2	39.2	38.8
1400	36.8	37.5	68.8	76.8	37.6	39.2	39.1	38.8
1500	36.9	37.5	69.1	77.3	37.6	39.1	38.9	38.8
1600	36.9	37.5	69.3	77.8	37.6	39.0	38.9	38.8
1700	36.7	37.4	69.3	77.8	37.6	39.1	38.8	38.7
1800	36.8	37.4	69.4	77.9	37.5	39.3	38.7	38.6
1900	36.7	37.3	69.5	78.0	37.4	39.4	38.4	38.3
2000	36.6	37.3	69.3	78.8	37.4	39.3	38.4	38.3
2100	36.6	37.3	69.4	79.6	37.4	39.3	38.4	38.4
2200	36.6	37.3	69.4	81.3	37.4	39.2	38.4	38.6
2300	36.6	37.4	69.8	82.1	37.3	38.7	38.4	38.1
2400	36.7	37.4	70.5	83.2	37.1	38.2	38.3	37.4

TABLE 332

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

November 28, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	36.5	37.4	70.8	83.4	36.9	38.1	38.2	37.6
0200	36.4	37.3	70.8	81.1	36.8	38.1	38.4	37.7
0300	36.3	37.3	70.8	78.3	36.7	38.1	38.6	37.7
0400	36.2	37.1	70.8	70.0	36.4	38.0	38.8	37.8
0500	36.1	36.9	70.4	70.6	36.1	37.9	38.8	37.6
0600	35.9	36.7	70.1	70.7	35.9	37.7	38.8	37.4
0700	35.8	36.5	69.9	70.9	35.8	37.5	38.8	37.3
0800	35.7	36.4	70.1	71.2	35.7	37.4	38.7	37.1
0900	35.6	36.3	70.3	71.8	35.6	37.3	38.4	36.9
1000	35.4	36.2	70.6	72.3	35.4	37.0	38.2	36.8
1100	35.4	36.3	70.7	72.3	35.4	37.1	38.2	36.8
1200	35.4	36.4	70.8	72.3	35.5	37.1	38.3	36.9
1300	35.4	36.5	71.0	72.3	35.6	37.2	38.4	36.9
1400	35.4	36.6	70.3	74.8	35.7	37.2	38.3	36.7
1500	35.5	36.7	69.1	78.2	35.7	37.2	38.2	36.4
1600	35.6	36.8	67.0	81.4	35.8	37.2	38.1	36.1
1700	35.6	36.7	66.2	81.2	35.8	37.3	38.2	36.0
1800	35.7	36.6	64.8	80.0	35.9	37.4	38.3	35.9
1900	35.8	36.6	63.9	80.6	35.9	37.5	38.4	35.8
2000	35.7	36.7	64.8	81.7	35.9	37.4	38.4	35.7
2100	35.8	36.6	66.1	82.4	35.9	37.4	38.4	35.6
2200	35.9	36.6	67.7	83.8	35.9	37.4	38.4	35.5
2300	35.8	36.5	71.3	84.8	35.7	37.3	38.4	35.4
2400	35.6	36.4	75.0	89.4	35.6	37.2	38.4	35.4

TABLE 333
 HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
 November 29, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	35.5	36.3	74.1	89.8	35.5	37.5	38.4	35.2
0200	35.4	36.2	74.8	89.9	35.4	37.3	38.3	35.2
0300	35.4	36.1	75.1	90.1	35.3	37.1	38.3	35.2
0400	35.4	36.0	75.4	90.4	35.2	37.0	38.3	35.2
0500	35.3	36.0	77.1	91.3	35.1	36.9	38.2	34.9
0600	35.3	36.0	78.2	92.1	34.9	36.9	38.3	34.7
0700	35.0	36.0	80.3	93.6	34.8	36.9	38.2	34.4
0800	35.0	35.9	80.5	94.1	34.7	36.9	39.2	34.4
0900	34.9	35.7	80.8	94.8	34.7	37.0	38.2	34.4
1000	34.9	35.6	81.2	95.0	34.6	37.0	38.2	34.5
1100	34.9	35.9	81.8	95.3	34.7	37.0	38.2	34.7
1200	35.1	36.3	82.6	95.7	34.9	37.0	38.2	34.8
1300	35.2	36.6	83.8	95.9	35.1	37.0	38.2	35.0
1400	35.3	36.3	84.4	96.4	35.2	37.2	38.2	35.1
1500	35.3	36.4	85.3	96.9	35.3	37.3	38.2	35.2
1600	35.4	36.3	86.4	97.7	35.4	37.4	38.2	35.2
1700	35.4	36.3	86.6	97.8	35.4	37.4	38.2	35.1
1800	35.6	36.3	86.7	97.9	35.5	37.3	38.2	35.1
1900	35.6	36.3	86.8	98.0	35.6	37.3	38.2	34.9
2000	35.6	36.3	87.2	98.3	35.6	37.3	38.2	34.9
2100	35.7	36.4	87.6	98.6	35.6	37.4	38.2	34.9
2200	35.8	36.4	87.6	98.8	35.6	37.5	38.2	34.9
2300	35.6	36.3	88.1	98.7	35.5	37.5	38.1	34.8
2400	35.5	36.4	88.2	98.6	35.4	37.5	37.8	34.7

TABLE 334
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
November 30, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	35.0	36.3	88.2	98.8	35.4	37.3	37.8	34.5
0200	35.2	36.2	85.9	97.6	35.2	37.3	37.6	34.4
0300	35.2	36.2	82.9	96.4	34.9	37.3	37.6	34.3
0400	35.0	35.9	78.8	95.0	34.8	37.0	37.8	34.2
0500	35.0	36.4	75.9	92.4	34.5	37.0	37.8	34.0
0600	34.8	35.4	75.4	91.7	34.3	36.7	37.7	34.0
0700	35.4	35.2	75.3	91.0	34.0	36.7	37.6	33.9
0800	34.0	35.0	75.0	90.0	33.8	36.5	37.5	33.9
0900	34.5	35.0	74.5	90.8	33.8	36.6	37.6	33.9
1000	34.8	34.9	73.9	90.0	34.0	36.8	37.6	34.0
1100	34.5	35.1	72.8	89.9	34.0	37.9	37.5	34.0
1200 ^{1/}	34.6	35.1	68.3	81.9	34.3	35.0	35.5	34.0
1300	34.6	35.3	67.8	81.4	34.4	35.2	35.5	34.1
1400	34.8	35.2	67.2	80.6	34.4	35.2	35.4	34.1
1500	34.7	35.3	66.5	80.2	34.4	34.9	35.4	34.1
1600	34.8	35.3	65.9	79.6	34.4	34.9	35.4	34.0
1700	34.8	35.3	65.2	79.3	34.3	34.9	35.4	34.0
1800	35.0	35.5	64.5	78.8	34.8	35.0	35.3	34.2
1900	34.5	35.6	64.7	78.4	34.7	35.3	35.3	34.1
2000	33.4	35.8	64.6	78.8	34.7	35.0	35.3	34.3
2100	33.0	35.8	64.5	78.4	34.6	35.0	35.1	34.0
2200	32.2	35.8	64.6	78.4	34.5	35.0	35.0	34.1
2300	32.0	35.8	64.8	78.4	34.5	35.2	35.0	34.0
2400	31.6	35.8	65.0	78.6	34.4	34.8	34.8	34.0

^{1/} Instruments adjusted to ground truth.

TABLE 335
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 1, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	31.1	35.7	65.3	78.8	34.3	34.8	34.8	33.9
0200	30.5	35.7	65.7	78.8	34.3	35.0	34.8	33.9
0300	29.8	35.6	66.3	78.9	34.0	34.9	34.8	33.8
0400	29.3	35.5	66.7	78.3	33.9	34.5	34.4	33.6
0500	29.3	35.4	66.8	79.0	33.7	34.3	34.4	33.7
0600	29.3	35.2	67.2	79.7	33.5	34.3	34.4	33.4
0700	29.3	35.1	67.0	80.0	33.4	34.4	34.3	33.4
0800	30.0	35.2	67.2	80.2	33.4	34.3	34.4	33.7
0900	31.5	35.2	67.4	80.5	33.5	34.3	34.4	34.0
1000	33.2	35.2	67.6	80.6	33.6	34.4	34.4	33.8
1100	34.2	35.2	67.7	80.7	33.7	34.5	34.7	33.5
1200	34.2	35.2	67.7	80.6	33.7	34.6	34.7	33.6
1300	34.3	35.3	67.7	80.5	33.8	34.6	34.7	33.7
1400	34.3	35.4	67.8	80.8	33.8	34.4	34.7	33.0
1500	34.4	35.4	67.9	81.1	33.8	34.4	34.8	33.8
1600	34.6	35.4	68.0	81.1	33.9	34.4	34.8	34.1
1700	34.7	35.4	68.1	79.9	34.0	34.6	34.8	34.4
1800	34.7	35.4	67.9	80.3	34.1	34.7	34.9	34.5
1900	34.8	35.5	67.9	80.6	34.2	34.8	35.1	34.6
2000	34.8	35.4	67.6	80.5	34.2	34.8	35.1	34.4
2100	34.8	35.4	67.3	80.4	34.2	34.8	35.1	34.3
2200	34.8	35.4	67.2	80.3	34.1	34.8	35.1	34.4
2300	34.8	35.4	67.1	80.2	34.0	34.8	35.2	34.5
2400	34.9	35.3	66.8	80.0	34.0	34.6	35.2	34.4

TABLE 336
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 2, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	34.7	35.0	66.0	79.7	33.9	34.5	35.2	34.4
0200	34.6	34.9	65.9	79.5	33.8	34.3	35.1	34.4
0300	34.5	34.8	65.8	79.3	33.7	34.2	34.9	34.4
0400	34.4	34.7	65.4	78.9	33.6	34.2	34.9	34.2
0500	34.3	34.5	65.0	78.5	33.4	34.2	34.9	33.9
0600	34.3	34.5	65.1	78.7	33.4	34.3	34.7	33.8
0700	34.3	34.6	65.1	78.8	33.4	34.3	34.6	33.7
0800	34.3	34.6	65.3	78.9	33.4	34.2	34.6	33.7
0900	34.3	34.6	65.6	79.0	33.4	34.2	34.6	33.6
1000	34.3	34.6	65.6	79.2	33.5	34.1	34.6	33.5
1100	34.4	34.7	65.4	79.2	33.6	34.2	34.7	33.7
1200	34.5	34.8	65.3	79.2	33.6	34.3	34.8	33.8
1300	34.7	34.9	65.4	79.3	33.8	34.5	34.8	33.8
1400	34.8	35.1	65.7	79.4	33.9	34.7	34.8	33.8
1500	34.7	35.1	65.9	79.4	33.9	34.4	34.7	33.9
1600	34.5	35.1	66.0	79.4	33.8	34.3	34.7	34.0
1700	34.5	35.0	66.1	79.7	33.8	34.3	34.6	33.9
1800	34.5	34.9	66.3	80.0	33.8	34.3	34.5	33.8
1900	34.6	34.8	66.3	79.9	33.8	34.2	34.5	33.7
2000	34.7	34.8	66.3	79.8	33.7	34.0	34.5	33.6
2100	34.6	34.8	66.3	79.9	33.6	34.1	34.5	33.4
2200	34.4	34.8	66.3	80.1	33.4	34.2	34.4	33.4
2300	34.4	34.8	66.3	79.8	33.4	34.2	34.4	33.4
2400	34.3	34.9	66.4	79.7	33.4	34.3	34.4	33.5

TABLE 337

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

December 3, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	34.3	34.9	66.7	80.3	33.5	34.4	34.5	33.5
0200	34.4	34.9	66.7	80.2	33.4	34.6	34.7	33.4
0300	34.4	34.9	66.8	80.1	33.3	34.7	34.8	33.4
0400	34.4	34.8	66.7	80.0	33.3	34.6	34.8	33.4
0500	34.4	34.6	66.6	79.9	33.2	34.4	34.8	33.4
0600	34.1	34.7	66.6	79.9	33.1	34.4	34.7	33.4
0700	33.8	34.8	66.5	80.0	33.0	34.5	34.6	33.4
0800	33.9	34.6	66.7	80.0	33.1	34.3	34.6	33.4
0900	34.2	34.4	66.8	79.9	33.1	34.2	34.5	33.5
1000	34.2	34.4	66.8	80.2	33.1	33.8	34.4	33.3
1100	34.3	34.4	66.8	80.0	33.0	33.8	34.4	33.1
1200	34.2	34.3	66.9	80.0	33.1	33.8	34.1	32.9
1300	34.1	34.2	67.1	80.0	33.2	33.8	33.9	32.9
1400	33.8	34.3	67.2	80.2	33.1	33.8	33.9	32.9
1500	33.4	34.4	67.3	80.3	33.0	33.8	33.9	33.0
1600	33.7	34.7	67.3	80.4	33.6	33.8	33.9	33.0
1700 ^{1/}	34.0	34.9	71.2	87.5	34.3	34.8	35.4	35.4
1800	33.9	34.9	71.2	87.3	34.3	34.8	35.3	35.3
1900	33.9	34.9	71.3	87.2	34.2	34.8	35.4	35.3
2000	33.8	34.9	71.3	87.3	34.1	34.7	35.3	35.2
2100	33.8	34.8	71.4	87.5	34.0	34.6	35.1	35.2
2200	33.8	34.8	71.6	87.5	34.1	34.7	35.2	35.3
2300	33.8	34.9	71.7	87.5	34.2	34.8	35.2	34.4
2400	33.8	35.1	71.8	87.9	34.2	34.9	35.5	35.5

^{1/} Recorder adjusted to ground truth data.

TABLE 338
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 4, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.8	35.0	71.4	87.7	34.3	35.0	35.6	35.6
0200	33.8	34.9	71.4	87.4	34.2	35.0	35.6	35.6
0300	33.8	34.9	71.0	87.3	34.2	34.9	35.5	35.5
0400	33.9	35.0	70.6	87.2	34.2	34.9	35.7	35.4
0500	34.2	35.1	70.2	87.1	34.2	34.8	35.8	35.4
0600	34.1	34.9	70.1	86.8	34.1	34.8	35.8	35.3
0700	33.8	34.7	69.8	86.3	33.9	34.8	35.8	35.2
0800	33.6	34.4	69.3	85.9	33.8	34.7	35.6	35.1
0900	33.5	34.2	68.8	85.7	33.7	34.6	35.4	34.9
1000	33.4	34.3	68.9	85.4	33.7	34.6	35.4	34.9
1100	33.4	34.6	69.0	85.1	33.9	34.6	35.4	34.9
1200	33.4	34.8	68.7	85.3	33.9	34.7	35.4	34.9
1300	33.4	34.9	68.5	85.6	34.0	34.8	35.4	34.9
1400	33.4	34.9	69.4	85.6	34.1	34.8	35.4	35.1
1500	33.5	34.9	68.3	85.6	34.2	34.8	35.4	35.3
1600	33.6	34.9	68.6	85.7	34.3	34.9	35.5	35.2
1700	33.6	34.9	68.9	85.9	34.4	35.0	35.5	35.2
1800	33.7	34.9	69.1	85.8	34.4	34.9	35.5	35.3
1900	33.8	34.9	69.3	85.8	34.4	34.9	35.5	35.3
2000	33.9	34.9	69.4	86.1	34.4	35.1	35.5	35.4
2100	34.0	35.1	69.6	86.5	34.5	35.3	35.5	35.6
2200	33.9	34.9	69.4	86.4	34.4	35.2	35.4	35.4
2300	33.8	34.9	69.2	86.3	34.4	35.0	35.4	35.2
2400	33.8	34.8	69.3	86.1	34.3	35.2	35.3	34.8

TABLE 339
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 5, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.7	34.7	69.2	86.1	34.2	34.8	35.3	34.6
0200	33.4	34.5	69.2	85.9	33.8	34.6	35.1	34.7
0300	33.2	34.2	69.2	85.8	33.5	34.3	35.0	34.8
0400	33.2	33.9	69.1	85.7	33.4	34.2	35.0	34.4
0500	33.2	33.8	68.8	85.6	33.3	34.2	35.0	34.1
0600	33.2	33.8	68.7	85.5	33.3	34.2	35.1	34.2
0700	33.0	33.8	68.5	85.4	33.3	34.3	35.1	34.2
0800	33.0	33.8	68.4	85.4	33.3	34.3	35.0	34.2
0900	32.9	33.8	68.3	85.3	33.4	34.3	35.0	34.1
1000	33.0	33.9	68.4	85.3	33.4	34.3	35.0	34.1
1100	33.0	34.0	68.5	85.3	33.5	34.3	34.9	34.1
1200	33.1	34.2	68.7	85.4	33.7	34.4	34.9	34.2
1300	33.2	34.2	68.8	85.5	33.8	34.6	34.9	34.3
1400	33.4	34.6	69.1	85.9	34.1	34.7	35.1	34.4
1500	33.6	34.8	69.5	86.3	34.3	34.9	35.2	34.6
1600	33.6	34.8	69.5	86.4	34.3	34.9	35.1	34.6
1700	33.6	34.8	69.6	86.5	34.3	34.9	35.1	34.6
1800	33.6	34.5	69.9	86.6	34.2	34.9	35.0	34.2
1900	33.4	34.4	69.8	86.5	34.1	34.7	34.8	34.1
2000	33.3	34.3	69.8	86.4	33.9	34.4	34.5	34.0
2100	33.1	34.5	69.6	86.2	33.6	34.5	34.1	33.7
2200	32.7	34.8	69.5	85.9	33.2	34.6	33.9	33.4
2300	32.7	34.8	69.5	85.9	33.2	34.6	33.9	33.4
2400	32.6	33.8	69.7	85.4	33.1	33.6	33.9	33.3

TABLE 340
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 6, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.4	33.6	69.6	83.0	32.9	33.6	33.8	33.5
0200	32.4	33.5	69.7	83.1	32.8	33.6	33.8	33.3
0300	32.4	33.4	69.9	83.2	32.8	33.6	33.8	33.2
0400	32.3	33.3	69.9	83.6	32.8	33.6	33.8	33.2
0500	32.2	33.2	70.0	83.8	32.8	33.6	33.8	33.2
0600	32.2	33.2	69.9	84.2	32.8	33.7	33.9	33.2
0700	32.2	33.2	69.8	84.9	32.8	33.9	34.1	33.2
0800	32.4	33.5	69.1	83.9	32.9	33.9	34.1	33.3
0900	32.6	33.6	68.0	83.0	33.1	34.0	34.2	33.5
1000	32.8	33.9	68.4	83.4	33.4	34.2	34.4	33.7
1100	33.0	34.3	68.8	84.2	33.7	34.3	34.5	33.9
1200	33.1	34.5	69.1	84.3	34.4	33.8	34.6	34.2
1300	33.2	34.6	69.4	84.5	33.9	34.5	34.8	34.5
1400	33.2	34.8	69.7	85.2	33.9	34.7	34.8	34.8
1500	33.2	34.9	70.2	86.0	34.0	34.8	34.9	34.5
1600	33.2	34.7	69.1	86.0	34.0	34.6	34.8	34.5
1700	33.2	34.6	69.8	86.0	34.0	34.4	34.7	34.5
1800	33.1	34.4	70.2	86.4	33.9	34.4	34.6	34.5
1900	33.0	34.2	70.6	86.8	33.8	34.4	34.5	34.5
2000	32.9	34.2	70.8	86.9	33.8	34.4	34.5	34.3
2100	32.8	34.1	71.0	87.2	33.8	34.4	34.4	34.2
2200	32.8	34.1	71.1	87.4	33.7	34.4	34.4	34.1
2300	32.8	34.0	71.4	87.7	33.6	34.4	34.4	33.8
2400	32.8	34.1	71.5	87.4	33.5	33.8	34.4	33.9

TABLE 341

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

December 7, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.7	34.1	71.7	87.7	33.6	34.2	34.3	33.7
0200	32.7	34.2	72.1	87.9	33.6	34.2	34.4	33.9
0300	32.8	34.2	72.4	88.1	33.5	34.2	34.4	34.2
0400	32.8	34.1	72.4	88.0	33.5	34.2	34.5	34.1
0500	32.8	34.0	72.4	87.9	33.5	34.2	34.6	33.8
0600	32.9	34.1	72.6	88.1	33.7	34.3	34.8	33.9
0700	33.0	34.2	72.8	88.4	33.9	34.5	35.1	34.3
0800	33.2	34.3	72.9	88.7	33.9	34.7	35.3	34.3
0900	33.4	34.4	73.0	88.8	34.0	34.8	35.4	34.3
1000	33.5	34.7	73.4	88.8	34.3	34.9	35.6	34.8
1100	33.6	34.9	73.8	88.8	34.5	35.0	35.7	35.3
1200	33.7	35.2	73.9	89.4	34.7	35.3	35.7	35.6
1300	33.8	35.4	74.2	90.2	35.0	35.4	35.8	36.0
1400	33.9	35.5	74.5	90.1	35.1	35.4	35.7	35.9
1500	33.9	35.6	74.7	89.9	35.2	35.4	35.7	35.8
1600	33.8	35.5	73.9	89.7	35.1	35.3	35.7	35.9
1700	33.8	35.4	73.5	89.4	35.0	35.2	35.7	36.2
1800	33.8	35.3	73.1	88.3	35.0	35.2	35.6	36.4
1900	33.8	35.2	72.6	87.4	35.1	35.2	35.6	36.8
2000	33.8	35.1	71.3	87.4	35.1	35.2	35.6	36.4
2100	33.8	35.0	70.5	87.4	35.1	35.2	35.6	36.0
2200	33.8	34.9	70.1	87.2	35.1	35.2	35.6	36.1
2300	33.8	34.9	69.6	87.0	35.1	35.2	35.6	36.2
2400	33.6	34.9	69.8	86.4	35.1	35.2	35.5	35.6

TABLE 342
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 8, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.6	34.9	69.5	85.7	35.0	35.1	35.4	35.7
0200	33.7	34.9	69.1	85.9	35.0	35.2	35.4	36.1
0300	33.8	34.9	68.6	86.3	35.0	35.3	35.4	36.4
0400	33.9	35.1	68.8	85.9	35.2	35.4	35.7	36.4
0500	34.2	35.4	69.0	85.7	35.4	35.6	35.8	36.4
0600	34.2	35.8	68.9	85.6	35.4	35.6	35.9	36.2
0700	34.2	36.2	68.8	85.5	35.3	35.5	36.0	36.0
0800	34.1	35.7	68.7	85.5	35.3	35.3	36.2	36.1
0900	34.0	35.1	68.5	85.5	35.2	35.4	36.2	36.1
1000	34.1	35.3	68.8	85.7	35.3	35.5	36.3	36.2
1100	34.1	35.4	69.2	85.9	35.4	35.6	36.3	36.3
1200 ^{1/}	34.1	35.4	68.9	85.7	35.4	35.6	36.4	36.3
1300	34.0	35.6	68.5	85.5	35.4	35.6	36.4	36.4
1400	34.0	35.4	68.6	85.6	35.3	35.6	36.3	36.3
1500	34.0	35.3	68.8	85.7	35.3	35.6	36.2	36.2
1600	34.0	35.2	68.5	85.6	35.3	35.7	36.2	36.1
1700	34.0	35.1	68.3	85.6	35.4	35.8	36.1	36.0
1800	34.0	35.1	68.6	85.8	35.5	35.8	36.1	35.9
1900	34.1	35.0	68.9	85.9	35.6	35.8	36.0	35.9
2000	34.0	35.1	68.9	85.9	35.6	35.7	35.9	35.8
2100	34.0	35.1	69.1	85.9	35.5	35.6	35.8	35.7
2200	34.0	35.1	69.3	86.1	35.4	35.5	35.7	35.6
2300	34.0	35.1	69.5	86.3	35.3	35.4	35.6	35.5
2400	33.9	35.1	69.7	86.2	35.3	35.4	35.6	35.5

^{1/} Ground truth data indicated no adjustment necessary.

TABLE 343

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

December 9, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.8	35.1	69.8	85.8	35.1	35.3	35.5	35.5
0200	33.9	35.1	69.8	86.1	35.1	35.4	35.6	35.5
0300	34.0	35.2	69.9	86.4	35.1	35.6	35.6	35.5
0400	34.1	35.2	69.9	86.7	35.0	35.6	35.7	35.6
0500	34.2	35.2	70.0	87.0	34.9	35.5	35.8	35.6
0600	34.1	35.2	70.0	87.0	34.8	35.4	35.8	35.6
0700	34.0	35.1	69.9	89.6	34.8	35.3	35.9	35.6
0800	33.8	34.8	69.3	86.2	34.5	35.2	35.6	35.4
0900	33.8	34.8	69.3	86.2	34.6	35.2	35.7	35.6
1000	33.8	34.8	69.4	86.2	34.7	35.3	35.8	35.7
1100	33.8	34.9	69.6	86.3	34.8	35.3	36.1	35.8
1200	33.9	35.1	69.8	86.4	34.9	35.4	36.3	35.9
1300	34.1	35.2	69.7	86.6	35.0	35.4	36.2	35.9
1400	34.1	35.3	69.6	86.7	35.1	35.5	36.1	36.0
1500	34.0	35.3	69.5	86.6	35.1	35.5	36.1	36.0
1600	34.0	35.3	69.4	86.4	35.1	35.5	36.0	36.1
1700	34.0	35.2	69.4	86.4	35.1	35.5	35.9	35.8
1800	33.9	35.1	69.4	86.3	35.0	35.5	35.9	35.7
1900	33.9	34.9	69.3	86.1	34.9	35.4	35.9	35.6
2000	33.9	34.8	69.2	86.0	34.9	35.4	35.8	35.6
2100	33.9	34.7	69.2	86.0	34.8	35.4	35.8	35.4
2200	33.8	34.6	69.2	86.0	34.7	35.4	35.8	35.3
2300	33.7	34.5	68.9	34.6	35.9	34.6	35.3	35.3
2400	33.6	34.4	68.7	85.8	34.3	35.1	35.5	35.1

TABLE 344
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 10, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.5	34.3	68.5	85.6	34.3	35.2	35.3	35.0
0200	33.4	34.2	68.4	85.4	34.2	35.1	35.3	34.8
0300	33.3	34.1	68.3	85.2	34.0	34.9	35.3	34.7
0400	33.2	33.9	68.3	84.9	33.9	34.9	35.1	34.6
0500	33.1	33.8	68.2	84.8	33.8	34.8	35.0	34.4
0600	33.0	33.8	67.9	66.3	33.6	34.7	34.9	34.4
0700	32.8	33.8	67.7	60.8	33.5	34.7	34.8	^{1/}
0800	32.8	33.8	67.9	60.8	33.4	34.6	34.6	
0900	32.8	33.8	68.3	67.4	33.3	34.4	34.4	
1000	32.9	33.8	69.5	69.5	33.3	34.7	34.5	
1100	33.0	33.8	70.9	71.0	33.4	34.9	34.6	
1200	33.1	33.9	60.5	66.5	33.4	34.7	34.5	
1300	33.2	34.0	56.6	61.8	33.3	34.4	34.4	
1400	33.1	34.0	60.0	63.1	33.3	34.4	34.4	
1500	33.0	34.1	62.8	65.8	33.3	34.5	34.4	
1600	33.0	34.0	64.0	65.9	33.3	34.5	34.4	
1700	32.9	33.9	61.4	66.0	33.3	34.5	34.4	
1800	33.0	33.9	57.9	63.0	33.2	34.5	34.3	
1900	33.1	33.8	58.0	62.4	33.1	34.5	34.2	
2000	32.9	33.8	59.5	63.4	33.1	34.3	34.2	
2100	32.8	33.8	60.1	64.5	32.9	34.2	34.2	
2200	32.8	33.8	59.8	64.2	32.8	34.2	34.1	
2300	32.8	33.7	57.8	62.9	32.8	34.2	34.0	
2400	32.6	33.8	57.3	62.4	32.7	34.2	34.1	

^{1/} Instrument began reading high. Adjustment to ground truth data was made 12/15.

TABLE 345

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

December 11, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.5	33.6	57.9	62.6	32.6	34.3	34.1	
0200	32.4	33.6	58.1	62.9	32.6	34.3	34.1	
0300	32.4	33.6	58.4	63.3	32.6	34.3	34.1	
0400	32.4	33.6	57.5	62.8	32.6	34.2	34.1	
0500	32.5	33.5	57.0	62.2	32.6	34.2	34.0	
0600	32.5	33.5	57.3	62.3	32.6	34.1	34.0	
0700	32.6	33.5	57.6	62.4	32.5	34.2	34.1	
0800	32.4	33.5	57.5	62.4	32.5	34.3	34.2	
0900	32.6	33.5	57.3	62.5	32.6	34.4	34.3	
1000	32.6	33.6	57.3	62.4	32.7	34.4	34.3	
1100	32.7	33.8	57.4	62.3	32.8	34.4	34.4	
1200	32.8	33.9	57.8	62.6	33.0	34.4	34.4	
1300	32.9	34.1	58.0	63.0	33.2	34.5	34.5	
1400	33.1	34.1	58.1	63.0	33.3	35.2	34.8	
1500	33.1	34.1	58.2	62.1	33.4	35.3	34.8	
1600	33.1	34.1	58.0	61.8	33.4	35.3	34.7	
1700	33.1	34.1	57.8	61.6	33.4	35.3	34.5	
1800	33.2	34.0	57.8	61.6	33.5	35.4	34.5	
1900	33.3	34.0	57.8	61.6	33.5	35.6	34.5	
2000	33.2	34.0	57.3	61.4	33.6	35.6	34.5	
2100	33.1	34.1	56.5	60.9	33.6	35.6	34.5	
2200	33.1	34.1	56.3	60.9	33.5	35.3	34.4	
2300	33.2	34.1	56.2	60.9	33.4	34.6	34.4	
2400	33.2	34.0	56.2	61.5	33.3	34.8	34.4	

TABLE 346

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

December 12, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.1	34.0	56.3	59.1	33.3	34.4	34.2	
0200	33.0	34.0	55.8	56.1	33.2	34.4	34.2	
0300	33.0	33.9	55.6	52.4	33.1	34.3	34.2	
0400	33.0	33.9	55.8	52.1	33.1	34.3	34.1	
0500	32.9	33.9	56.3	51.8	33.1	34.3	33.9	
0600	32.8	33.8	54.0	50.7	32.9	34.2	33.8	
0700	32.8	33.7	51.4	48.9	32.8	34.1	33.8	
0800	32.8	33.7	49.0	47.3	32.8	34.1	33.8	
0900	32.7	33.7	47.3	45.8	32.8	34.1	33.8	
1000	32.7	33.8	47.3	47.7	32.9	34.2	33.8	
1100	32.8	44.9	47.4	56.7	33.1	33.9	33.8	
1200	32.8	44.7	46.8	57.3	33.1	33.9	33.7	
1300	32.8	44.4	45.4	58.1	33.2	34.1	33.6	
1400	32.9	43.9	45.6	58.1	33.2	34.1	33.7	
1500	33.0	43.7	45.9	58.2	33.2	34.0	33.8	
1600	33.0	46.1	51.9	63.8	33.3	34.1	33.8	
1700	33.0	47.4	52.6	67.7	33.4	34.1	33.8	
1800	33.0	47.7	52.7	67.8	33.5	34.1	33.8	
1900	33.1	47.9	52.8	68.9	33.6	34.2	33.8	
2000	33.1	47.7	52.8	68.2	33.6	34.2	33.7	
2100	33.1	47.6	55.0	69.4	33.6	34.2	33.6	
2200	33.1	52.8	58.8	74.9	33.7	34.2	33.7	
2300	33.1	38.4	59.3	75.7	33.8	34.2	33.8	
2400	33.0	51.1	59.5	76.8	33.6	34.2	33.5	

TABLE 347

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

December 13, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.2	40.9	59.3	76.5	33.6	34.1	33.5	
0200	33.2	44.1	60.8	77.3	33.7	34.1	33.5	
0300	33.2	35.4	63.4	79.6	33.8	34.0	33.5	
0400	33.1	40.8	64.3	81.9	33.8	34.0	33.5	
0500	33.0	40.1	64.9	82.4	33.9	34.0	33.6	
0600	33.0	40.1	64.9	83.0	33.9	34.0	33.6	
0700	33.0	40.0	65.0	83.1	33.8	34.0	33.6	
0800	33.0	41.3	66.3	84.9	33.9	34.1	33.6	
0900	33.1	41.5	68.0	86.5	34.0	34.2	33.6	
1000	33.1	41.0	68.6	87.4	34.0	34.2	33.6	
1100	33.1	40.9	69.0	87.8	34.1	34.2	33.6	
1200	33.3	40.1	69.5	87.9	34.3	34.4	33.9	
1300	33.5	35.0	69.8	88.8	34.4	35.0	34.0	
1400	33.5	35.0	70.3	85.4	34.4	35.0	34.1	
1500	33.5	35.0	70.5	82.9	34.4	35.1	34.2	
1600	33.5	34.8	70.3	82.0	34.4	35.1	34.2	
1700	33.5	34.9	69.9	82.0	34.4	35.2	34.2	
1800	33.5	34.9	69.7	82.1	34.4	35.2	34.2	
1900	33.5	34.9	69.4	82.2	34.5	35.3	34.2	
2000	33.5	34.9	71.9	83.8	34.5	35.4	34.2	
2100	33.4	34.8	71.1	84.5	34.5	35.5	34.2	
2200	33.4	34.7	69.9	83.4	34.4	35.4	34.2	
2300	33.3	34.6	68.9	82.6	34.3	35.3	34.2	
2400	33.3	34.6	68.6	82.4	34.3	35.0	34.2	

TABLE 348
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 14, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.2	34.6	68.5	82.5	34.3	35.1	34.1	
0200	33.2	34.6	68.7	82.7	34.3	35.1	34.1	
0300	33.2	34.6	68.8	83.0	34.3	35.1	34.1	
0400	33.2	34.6	69.8	83.5	34.3	35.1	34.1	
0500	33.3	34.6	69.8	84.3	34.3	35.0	34.2	
0600	33.3	34.6	69.3	84.1	34.3	35.0	34.2	
0700	33.3	34.5	68.8	83.9	34.2	35.0	34.2	
0800	33.3	34.5	68.8	84.0	34.2	35.1	34.2	
0900	33.3	34.6	68.8	84.0	34.2	35.2	34.2	
1000	33.3	34.6	68.9	84.2	34.2	35.1	34.2	
1100	33.2	34.7	69.2	84.4	34.2	34.9	34.2	
1200	33.2	34.8	69.7	84.7	34.3	35.2	34.3	
1300	33.1	34.9	69.9	85.0	34.4	35.4	34.4	
1400	33.2	35.0	79.5	84.7	34.4	35.3	34.4	
1500	33.4	35.0	69.0	84.3	34.5	35.2	34.4	
1600	33.4	34.8	68.6	83.9	34.4	35.2	34.4	
1700	33.4	34.6	68.2	83.6	34.4	35.3	34.4	
1800	33.4	34.4	67.8	83.1	34.3	35.1	34.4	
1900	33.4	34.2	67.3	82.5	34.2	35.0	34.3	
2000	33.0	34.0	67.1	82.3	34.2	34.9	34.3	
2100	33.0	33.9	66.7	82.0	23.1	34.8	34.3	
2200	33.3	33.8	66.2	81.8	34.1	34.8	34.3	
2300	33.2	33.7	65.8	81.3	34.0	34.8	34.2	
2400	33.0	33.6	65.6	80.8	33.8	34.5	34.1	

TABLE 349
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 15, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.9	33.5	65.3	80.7	33.7	34.8	34.0	
0200	32.9	33.4	65.1	80.2	33.6	34.6	33.9	
0300	32.9	33.4	64.8	79.9	33.4	34.3	33.8	
0400	32.9	33.4	64.6	79.9	33.3	34.3	33.8	
0500	32.8	33.3	64.3	79.9	33.2	34.3	33.8	
0600	32.7	33.2	64.1	79.7	33.1	34.5	33.8	
0700	32.6	33.1	63.8	79.4	33.0	34.6	33.8	
0800	32.6	33.1	63.6	79.4	33.0	34.4	33.8	
0900	32.5	33.2	63.4	79.4	33.0	34.3	33.9	
1000	32.6	33.2	63.3	79.2	33.0	34.3	33.9	
1100	32.6	33.2	63.2	79.0	33.0	34.4	34.0	
1200 ^{1/}	32.7	33.4	63.3	79.1	32.8	33.9	33.7	33.9
1300	32.8	33.5	63.5	79.3	32.5	33.4	33.4	33.9
1400	32.8	33.6	63.6	79.5	32.5	33.4	33.4	34.1
1500	32.8	33.7	63.9	79.8	32.5	33.5	33.4	34.4
1600	32.8	33.5	64.1	79.8	32.5	33.4	33.3	34.3
1700	32.8	33.4	64.2	79.8	32.4	33.2	33.1	34.2
1800	32.8	33.4	64.2	79.8	32.4	33.3	33.1	34.2
1900	32.8	33.4	64.2	79.8	32.4	33.3	33.1	34.1
2000	32.8	33.3	64.1	79.8	32.4	33.2	33.1	34.0
2100	32.8	33.2	63.9	79.8	32.4	33.0	33.1	33.9
2200	32.7	33.2	63.7	79.7	32.3	33.0	33.1	33.8
2300	32.5	33.1	63.6	79.6	32.2	33.0	33.0	33.7
2400	32.4	33.0	63.7	79.4	32.1	33.4	33.0	33.5

^{1/}Recorder adjusted to ground truth.

TABLE 350
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 16, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.5	33.0	63.5	79.8	32.1	33.0	33.0	33.6
0200	32.5	33.0	63.4	79.6	32.1	33.0	33.0	33.4
0300	32.5	33.1	63.2	79.4	32.0	33.0	32.9	33.3
0400	32.4	33.0	63.1	79.4	32.0	33.0	32.9	33.3
0500	32.4	33.0	62.9	79.3	32.0	33.1	32.9	33.2
0600	32.4	33.0	62.8	79.1	32.0	33.0	32.9	33.2
0700	32.4	33.0	62.8	78.9	32.0	32.9	32.9	33.3
0800	32.4	33.0	62.7	78.9	32.0	33.1	32.9	33.2
0900	32.5	33.0	62.6	79.0	32.1	33.3	33.0	33.1
1000	32.4	33.2	62.8	79.3	32.1	33.3	33.2	33.2
1100	32.4	33.4	62.9	79.5	32.3	33.3	33.3	33.3
1200	32.4	33.4	63.1	79.7	32.2	33.3	33.2	33.4
1300	32.4	33.4	63.3	79.8	32.2	33.3	33.2	33.5
1400	32.5	33.5	63.3	79.1	32.3	33.6	33.3	33.7
1500	32.6	33.6	63.4	80.2	32.4	33.8	33.4	33.8
1600	32.5	33.6	63.4	80.1	32.3	33.8	33.3	33.7
1700	32.4	33.6	63.6	79.9	32.1	33.8	33.2	33.6
1800	32.3	33.5	63.6	79.9	32.1	33.6	33.2	33.7
1900	32.2	33.4	63.5	80.0	32.0	33.3	33.2	33.8
2000	32.2	33.4	63.5	80.0	32.1	33.4	33.2	33.9
2100	33.2	33.4	63.5	80.0	32.3	33.8	33.3	34.0
2200	32.2	33.4	63.6	79.8	32.3	33.7	33.3	33.6
2300	32.3	33.4	63.6	79.4	32.2	33.6	33.4	33.4
2400	32.4	33.2	63.5	79.4	32.3	33.8	33.3	34.0

TABLE 351
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 17, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.5	33.1	63.3	79.0	32.1	33.6	33.4	33.9
0200	32.4	33.1	62.9	78.9	32.1	33.4	33.3	33.8
0300	32.4	33.0	62.7	78.8	32.1	33.1	33.2	33.8
0400	32.4	33.0	62.6	78.7	32.1	33.4	33.2	33.8
0500	32.4	33.0	62.4	78.5	32.1	33.6	33.2	33.8
0600	32.3	33.2	61.6	78.3	32.1	33.6	33.2	33.8
0700	32.1	33.4	61.3	78.2	32.1	33.6	33.2	33.8
0800	32.1	33.1	61.2	77.9	32.0	33.4	33.1	33.8
0900	32.1	32.8	61.1	77.5	32.0	33.3	33.0	33.8
1000	32.3	32.8	61.2	77.8	32.1	33.4	33.1	33.9
1100	32.4	33.1	61.3	78.1	32.2	33.7	33.2	34.0
1200	32.5	33.1	61.4	77.7	32.3	33.7	33.2	33.8
1300	32.8	33.2	61.4	78.2	32.4	33.5	33.2	34.0
1400	32.6	33.4	61.4	78.4	32.4	33.9	33.4	34.0
1500	32.7	33.3	61.4	78.3	34.2	33.8	33.4	34.0
1600	32.8	33.3	61.4	78.2	32.4	33.7	33.4	34.0
1700	32.8	33.2	61.6	78.2	32.4	33.7	33.4	33.9
1800	32.8	33.1	61.7	78.2	32.2	33.6	33.4	33.8
1900	32.7	33.1	61.6	78.2	32.3	33.5	33.4	33.8
2000	32.6	33.0	61.3	78.1	32.2	33.4	33.4	33.8
2100	32.6	33.0	61.1	77.8	32.1	33.5	33.4	33.7
2200	32.6	33.0	60.8	77.4	32.0	33.7	33.4	33.6
2300	32.6	33.0	60.4	77.3	32.0	33.6	33.4	33.7
2400	32.6	33.1	60.2	77.2	32.0	33.4	33.3	33.9

TABLE 352
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 18, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.6	33.0	60.0	76.9	32.0	33.4	33.2	34.0
0200	32.6	33.0	59.9	76.8	32.0	33.5	33.2	34.0
0300	32.6	33.0	59.6	76.7	32.0	33.6	33.2	34.0
0400	32.5	33.0	59.5	76.9	32.0	33.7	33.2	33.9
0500	32.4	33.0	59.4	77.0	32.0	33.8	33.2	33.8
0600	32.4	33.0	59.3	77.0	32.0	33.7	33.2	33.9
0700	32.5	33.0	59.3	76.9	32.1	33.5	33.2	34.2
0800	32.5	33.0	59.2	76.8	32.1	33.6	33.2	33.9
0900	32.4	33.0	59.1	76.8	32.1	33.7	33.2	33.8
1000	32.5	33.0	59.3	76.7	32.1	33.7	33.2	33.8
1100	32.6	33.1	59.5	76.7	32.2	33.8	33.3	33.8
1200	32.6	33.2	60.1	77.1	32.2	33.8	33.3	33.9
1300	32.6	33.3	69.6	77.6	32.2	33.8	33.3	33.9
1400	32.6	33.3	60.9	77.9	32.3	33.8	33.3	34.0
1500	32.5	33.4	61.3	78.4	32.4	33.8	33.4	34.1
1600	32.4	33.3	61.2	78.3	32.3	33.8	33.4	34.1
1700	32.4	33.2	61.0	78.3	32.2	33.9	33.4	34.1
1800	32.4	33.2	60.9	78.1	32.2	33.9	33.3	34.1
1900	32.4	33.1	60.8	72.9	32.2	33.8	33.3	34.1
2000	32.4	33.1	60.7	72.9	32.2	33.8	33.3	34.1
2100	32.4	33.1	60.5	72.8	32.2	33.8	33.3	34.0
2200	32.5	33.1	60.3	72.5	32.2	33.8	33.3	34.0
2300	32.6	33.1	60.0	72.3	32.2	33.7	33.4	33.9
2400	32.4	33.1	60.0	72.7	32.1	33.8	33.1	34.0

TABLE 353
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 19, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.3	33.0	59.8	77.4	32.1	33.8	33.2	34.0
0200	32.3	33.0	59.6	77.3	32.2	33.8	33.2	34.0
0300	32.4	33.1	59.2	77.1	32.2	33.8	33.2	34.0
0400	32.4	33.1	59.2	76.9	32.2	33.8	33.2	33.9
0500	32.4	33.0	59.2	76.8	32.1	33.8	33.2	33.9
0600	32.3	33.0	59.1	76.9	32.1	33.8	33.2	33.7
0700	32.2	33.0	59.0	77.3	32.0	33.8	33.2	33.5
0800	32.2	33.0	59.0	77.5	32.0	33.8	33.2	33.5
0900	32.3	33.1	59.0	54.5	32.0	33.8	34.2	34.5
1000	32.3	33.2	59.4	54.5	32.1	33.4	34.0	34.4
1100	32.4	40.1	59.9	78.6	32.2	33.4	33.4	33.2
1200	32.4	33.4	61.3	77.0	32.2	33.3	33.3	34.0
1300	32.4	33.4	61.8	75.9	32.3	33.3	33.2	34.1
1400	32.4	33.4	61.7	75.8	32.3	33.4	33.3	34.1
1500	32.4	33.4	59.7	75.7	32.4	33.5	33.4	34.2
1600	32.4	33.3	50.0	70.0	32.4	33.5	33.4	33.9
1700	32.5	33.2	47.6	65.5	32.5	33.5	33.4	33.7
1800	32.4	33.2	56.8	66.7	32.3	33.2	33.2	33.3
1900	32.4	33.2	61.5	74.4	32.1	33.2	33.2	33.1
2000	32.4	33.2	60.9	77.2	32.2	33.4	33.2	33.3
2100	32.5	33.1	60.5	73.5	33.3	33.4	33.5	35.9
2200	32.4	33.1	55.3	56.5	32.8	33.3	31.9	31.8
2300	32.3	33.0	56.9	61.0	32.3	33.1	34.3	33.8
2400	32.5	33.1	58.4	58.4	32.2	33.5	34.2	34.4

TABLE 354
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 20, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.4	33.0	65.2	64.9	32.1	33.2	34.3	34.0
0200	32.4	33.0	53.8	62.5	32.1	33.2	34.1	33.7
0300	32.4	33.0	51.2	54.0	32.2	33.2	33.9	33.6
0400	32.4	33.0	52.8	56.4	32.2	33.1	33.9	33.6
0500	32.5	32.9	52.9	56.3	32.1	33.0	33.9	33.6
0600	32.4	33.0	52.9	57.6	32.2	33.1	34.1	33.7
0700	32.4	33.1	52.8	58.0	32.2	33.3	34.3	33.8
0800	32.4	33.1	48.0	53.5	32.2	33.2	34.1	33.6
0900	32.4	33.1	49.4	54.0	32.3	33.2	33.8	33.3
1000	32.4	33.1	49.7	54.3	32.3	33.3	33.7	33.4
1100	32.5	33.1	50.4	54.7	32.3	33.4	33.7	33.5
1200	32.6	33.1	50.0	54.7	32.2	33.4	33.8	33.6
1300	32.6	33.1	48.8	54.8	32.2	33.3	33.9	33.7
1400	32.7	33.2	49.1	54.8	32.3	33.3	33.9	33.7
1500	32.8	33.3	49.3	54.8	32.3	33.3	33.9	33.7
1600	32.7	33.3	49.7	55.1	32.3	33.4	33.4	33.9
1700	32.5	33.2	50.1	55.7	32.3	33.5	33.9	33.7
1800	32.5	33.2	49.3	55.2	32.3	33.3	33.9	33.7
1900	32.5	33.2	48.7	54.8	32.2	33.0	33.9	33.6
2000	32.5	33.2	49.1	55.3	32.3	33.0	33.9	33.6
2100	32.5	33.2	49.4	55.7	32.3	33.0	33.9	33.6
2200	32.5	33.1	49.7	55.9	32.3	33.2	33.9	33.6
2300	32.5	33.2	49.9	56.0	32.3	33.3	33.9	33.6
2400	32.4	33.1	49.8	56.2	32.0	33.3	34.0	33.6

TABLE 355
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 21, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.3	33.0	50.0	56.3	32.3	33.3	33.8	33.7
0200	32.4	33.1	50.7	56.9	32.3	33.3	33.9	33.7
0300	32.5	33.2	51.3	57.5	32.3	33.4	34.1	33.7
0400	32.6	33.2	51.7	57.7	32.2	33.4	34.1	33.7
0500	32.6	33.2	52.0	58.0	32.2	33.4	34.2	33.7
0600	32.5	33.3	52.6	58.4	32.1	33.4	34.1	33.7
0700	32.4	33.4	52.9	58.7	32.0	33.3	33.8	33.7
0800	32.6	33.4	52.3	59.2	32.0	33.4	33.8	33.7
0900	32.7	33.4	53.8	59.9	32.0	33.6	33.9	33.7
1000	32.6	33.4	53.9	60.2	32.0	33.5	33.6	33.7
1100	32.5	33.4	54.2	60.6	32.0	33.4	33.5	33.7
1200	32.5	33.3	54.7	60.8	31.9	33.2	33.4	33.6
1300	32.5	33.2	55.1	60.9	31.9	33.0	33.3	33.5
1400	32.4	33.1	55.6	61.2	31.9	32.9	33.4	33.6
1500	32.3	33.0	56.1	61.6	31.8	32.9	33.6	33.6
1600	32.4	33.0	56.3	61.7	31.8	33.1	33.6	33.7
1700	32.5	33.0	56.5	61.8	31.9	33.2	33.6	33.7
1800	32.5	33.0	56.7	61.8	31.9	33.1	33.6	33.7
1900	32.5	33.0	57.0	61.9	31.8	33.1	33.6	33.7
2000	32.4	33.0	57.2	61.9	31.7	33.1	33.6	33.7
2100	32.3	32.9	57.3	62.0	31.6	33.0	33.6	33.8
2200	32.3	32.9	57.4	62.1	31.7	33.0	33.5	33.8
2300	32.3	32.8	57.4	62.2	31.8	32.9	33.4	33.8
2400	32.6	32.9	57.4	62.4	31.7	33.1	33.5	33.7

TABLE 356
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 22, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.5	32.8	57.5	62.3	31.6	33.3	33.6	33.8
0200	32.4	32.8	57.4	62.4	31.6	33.2	33.6	33.8
0300	32.4	32.8	57.3	62.5	31.6	33.2	33.6	33.8
0400	32.3	32.8	57.3	62.7	31.6	33.2	33.6	33.8
0500	32.3	32.9	57.3	62.8	31.6	33.3	33.7	33.9
0600	32.2	32.8	57.4	62.8	31.6	33.2	33.7	33.9
0700	32.2	32.8	57.7	62.8	31.7	33.0	33.8	33.9
0800	32.2	32.8	57.9	62.8	31.7	32.1	33.8	33.9
0900	32.3	32.9	58.2	62.8	31.7	33.2	34.1	34.1
1000	31.9	32.9	58.3	62.8	31.6	33.4	34.1	34.1
1100	31.8	32.9	58.3	63.0	31.5	33.5	34.1	34.1
1200	31.9	32.9	58.4	63.0	31.6	33.6	34.2	34.2
1300	32.0	32.9	58.5	63.0	31.7	33.7	34.2	34.2
1400	32.0	33.1	58.7	63.2	31.7	33.7	34.3	34.1
1500	32.0	33.3	58.9	63.4	31.7	33.7	34.4	34.0
1600	32.3	33.3	59.1	63.4	31.9	33.9	34.6	34.2
1700	32.5	33.3	59.2	63.5	32.0	34.0	34.7	34.4
1800	32.5	33.3	59.2	63.5	32.0	34.0	34.8	34.4
1900	32.6	33.3	59.3	63.6	32.1	34.0	34.9	34.4
2000	32.6	33.3	59.1	63.6	32.1	33.9	34.7	34.5
2100	32.5	33.4	58.8	63.5	32.2	33.8	34.6	34.6
2200	32.4	33.3	57.8	62.9	32.1	33.8	34.5	34.7
2300	32.4	33.3	57.3	62.4	31.9	33.8	34.5	34.9
2400	32.6	33.2	56.5	62.2	31.8	33.8	34.5	34.8

TABLE 357
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 23, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.5	33.1	56.0	61.4	31.8	33.6	34.4	34.4
0200	32.5	33.1	55.8	61.2	31.8	33.4	34.3	34.3
0300	32.5	33.0	55.5	61.0	31.8	33.4	34.3	34.3
0400	32.5	32.9	55.1	60.6	31.8	33.4	34.2	34.2
0500	32.5	32.8	54.8	60.4	31.7	33.4	34.1	33.9
0600	32.5	32.8	54.4	60.3	31.7	33.5	34.2	33.9
0700	32.6	32.8	54.2	60.2	31.6	33.6	34.3	33.9
0800	32.6	32.9	53.9	60.2	31.7	33.6	34.2	33.9
0900	32.6	33.1	53.8	60.2	31.8	33.6	34.2	34.0
1000	32.5	33.2	54.1	60.4	31.9	33.5	34.2	34.0
1100	32.5	33.2	54.4	60.6	32.0	33.4	34.2	34.1
1200	32.6	33.3	54.7	60.8	32.1	33.6	34.2	34.2
1300	32.6	33.4	54.9	61.0	32.2	33.8	34.3	34.3
1400	32.6	33.5	55.2	61.2	32.2	33.7	34.3	34.3
1500	32.5	33.6	55.6	61.3	32.2	33.6	34.4	34.4
1600	32.6	33.4	55.6	61.4	32.1	33.7	34.4	34.3
1700	32.6	33.4	55.6	61.6	32.0	33.8	34.4	34.2
1800	32.5	33.3	55.7	61.5	32.0	33.8	34.4	34.2
1900	32.4	33.2	55.8	61.4	32.0	33.8	34.4	34.3
2000	32.4	33.2	55.8	61.4	32.0	33.8	34.4	34.3
2100	32.4	33.3	55.7	61.4	32.1	33.8	34.4	34.4
2200	32.4	33.3	55.6	61.2	32.0	33.8	34.4	34.3
2300	32.5	33.2	55.3	61.0	31.9	33.8	34.4	34.3
2400	32.5	33.4	55.3	61.0	31.9	34.0	34.4	34.4

TABLE 358
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 24, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.7	33.2	55.3	60.8	31.8	33.8	34.3	34.3
0200	32.7	33.2	55.2	60.7	31.8	33.8	34.3	34.2
0300	32.6	33.2	55.1	60.6	31.8	33.8	34.3	34.1
0400	32.5	33.3	55.1	60.6	31.8	33.6	34.3	34.1
0500	32.5	33.4	54.9	60.8	31.8	33.4	34.3	34.1
0600	32.5	33.3	55.1	60.8	31.8	33.7	34.2	34.1
0700	32.5	33.2	55.2	60.9	31.9	33.9	34.2	34.1
0800	32.3	33.1	54.9	60.7	31.7	33.6	34.1	33.7
0900	32.0	32.8	54.8	60.3	31.5	33.2	33.8	33.4
1000	32.1	32.9	54.9	60.6	31.6	33.4	33.8	33.7
1100 ^{1/}	32.2	33.0	35.0	61.1	31.6	33.5	33.8	34.0
1200	32.2	33.1	55.0	79.0	31.6	33.4	33.6	32.8
1300	32.2	33.1	55.1	76.3	31.6	33.4	33.6	32.8
1400	32.2	33.1	54.8	75.0	31.6	33.5	33.5	32.8
1500	32.2	33.0	54.4	74.4	31.7	33.6	33.5	33.8
1600	32.2	33.0	54.1	74.1	31.7	33.6	33.5	32.8
1700	32.2	33.1	53.8	73.8	31.6	34.4	33.5	32.8
1800	32.2	33.0	54.2	73.9	31.6	34.3	33.4	32.6
1900	32.2	33.0	61.4	76.4	31.6	34.1	33.4	32.4
2000	32.2	32.9	61.5	80.0	31.6	34.3	33.4	32.4
2100	32.2	32.8	61.6	80.9	31.4	34.5	33.4	32.4
2200	32.2	32.8	60.6	79.9	31.4	34.6	33.8	32.6
2300	32.2	32.8	60.3	58.4	31.4	34.6	34.5	34.5
2400	32.2	32.8	60.6	62.0	31.4	33.3	33.8	33.8

^{1/} Adjustment to ground truth data not required.

TABLE 359
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 25, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.3	32.8	62.2	64.2	31.4	32.7	34.1	34.0
0200	32.3	32.8	67.8	67.6	31.4	32.9	34.3	34.2
0300	32.3	32.8	68.6	69.8	31.4	33.6	34.4	34.4
0400	32.3	32.8	56.2	64.3	31.4	33.1	34.2	33.9
0500	32.3	32.8	56.5	61.3	31.4	32.8	34.0	33.6
0600	32.3	32.7	58.9	62.4	31.4	32.8	34.0	33.6
0700	32.4	32.6	60.8	64.8	31.5	32.8	34.0	33.6
0800	32.3	32.7	61.0	64.9	31.4	32.8	34.1	33.8
0900	32.0	32.8	60.0	65.1	31.3	32.8	34.1	34.0
1000	32.1	32.8	58.0	62.5	31.3	32.8	34.0	34.3
1100	32.2	32.8	57.2	61.8	31.4	32.8	34.1	34.6
1200	32.3	32.9	58.1	63.1	31.6	33.1	34.2	34.3
1300	32.4	33.0	60.0	65.2	31.8	33.2	34.3	34.0
1400	32.4	33.1	59.2	63.8	31.8	33.3	34.4	34.1
1500	32.6	33.2	58.3	63.2	31.9	33.6	34.4	34.1
1600	32.6	33.2	58.6	63.2	31.8	33.6	34.4	34.1
1700	32.4	33.2	58.8	63.2	31.8	33.6	34.4	34.2
1800	32.4	33.1	59.2	63.7	31.8	33.4	34.4	34.2
1900	32.4	33.0	59.6	64.0	31.8	33.3	34.3	34.2
2000	32.4	33.1	59.1	63.8	31.8	33.4	34.3	34.1
2100	32.5	33.1	58.5	63.4	31.9	33.6	34.4	34.1
2200	32.6	33.1	58.7	63.7	31.9	33.6	34.4	34.1
2300	32.6	33.1	58.8	63.8	31.9	33.8	34.4	34.1
2400	32.8	33.2	58.0	63.8	31.9	33.9	34.6	34.3

TABLE 360
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 26, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.8	33.2	58.8	63.6	32.0	34.0	34.6	34.2
0200	32.8	33.2	58.7	63.6	32.0	34.1	34.7	34.2
0300	32.8	33.2	58.6	63.5	32.0	34.2	34.8	34.3
0400	32.8	33.2	58.8	63.7	32.0	34.2	34.8	34.3
0500	32.9	33.2	58.8	63.8	32.0	34.1	34.8	34.3
0600	32.9	33.2	58.4	63.5	32.0	34.1	34.7	34.2
0700	32.9	33.2	58.2	63.2	32.0	34.1	34.6	34.2
0800	32.9	33.2	58.2	63.2	32.0	34.1	34.6	34.2
0900	32.8	33.3	58.1	63.2	31.9	34.1	34.6	34.2
1000	32.8	33.4	58.3	63.2	32.0	34.1	34.6	34.2
1100	32.8	33.4	58.4	63.2	32.0	34.1	34.6	34.2
1200	32.9	33.4	58.4	63.3	32.0	34.2	34.7	34.3
1300	33.0	33.4	58.5	63.4	32.0	34.3	34.8	34.4
1400	33.0	33.4	58.6	63.4	32.0	34.3	34.8	34.4
1500	33.0	33.4	58.8	63.6	32.0	34.3	34.9	34.4
1600	33.0	33.6	58.8	64.2	32.0	34.3	34.9	34.4
1700	33.0	33.6	58.8	64.2	32.2	34.3	34.8	34.5
1800	32.9	33.6	58.8	64.2	32.2	34.3	34.8	34.5
1900	32.8	33.6	58.8	64.9	32.0	^{1/} 34.3	35.2	34.5
2000	32.9	33.6	58.9	64.1	32.0		34.9	34.2
2100	33.0	33.6	59.0	65.4	32.0		34.8	33.8
2200	33.0	33.6	59.6	67.8	32.0		34.9	33.9
2300	32.9	33.5	60.4	69.9	32.0		34.9	34.0
2400	32.9	33.6	58.8	70.5	32.0		35.0	34.2

^{1/} Sensor malfunction

TABLE 361

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

December 27, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.0	33.5	61.8	71.5	32.0		35.0	34.1
0200	32.9	33.4	62.9	71.8	32.0		34.9	34.1
0300	32.8	33.3	65.1	72.5	32.0		34.9	34.2
0400	32.7	33.3	54.3	72.8	32.0		34.9	34.2
0500	32.6	33.3	64.4	72.9	31.9		34.8	34.1
0600	32.7	33.3	65.8	73.6	31.9		34.8	33.8
0700	32.8	33.3	65.2	74.4	31.8		34.8	33.9
0800	32.8	33.2	65.7	75.0	31.8		34.8	34.0
0900	32.7	33.2	66.2	75.6	31.8		34.8	34.0
1000	32.6	33.2	66.8	76.0	31.8		34.8	34.0
1100	32.6	33.2	67.2	76.4	31.9		34.8	34.0
1200	32.6	33.2	67.8	76.8	32.0		34.8	34.0
1300	32.6	33.3	67.9	76.1	31.9		34.8	34.1
1400	32.6	33.4	68.3	75.6	31.8		34.9	34.2
1500	32.7	33.5	68.7	76.1	32.0		34.9	34.2
1600	32.8	33.6	69.2	76.4	32.0		34.9	34.2
1700	32.7	33.4	68.8	76.7	31.8		34.9	33.8
1900	32.6	33.4	69.1	76.8	31.8		34.9	33.8
2000	32.6	33.4	69.4	76.9	31.8		34.9	33.8
2100	32.7	33.4	69.4	77.6	31.8		34.9	33.8
2200	32.8	33.4	69.4	78.9	31.8		34.9	33.9
2300	32.8	33.4	69.6	79.6	31.8		34.9	33.9
2400	32.8	33.4	70.0	80.3	31.8		34.9	33.8

TABLE 362
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 28, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	32.8	33.4	70.6	80.8	31.8		34.9	34.2
0200	32.8	33.4	71.1	81.2	31.8		34.9	34.2
0200	32.8	33.4	71.5	81.5	31.8		34.9	34.2
0400	32.7	33.4	72.2	82.0	31.8		34.9	34.6
0500	32.6	33.3	72.7	82.3	31.8		34.9	34.9
0600	32.9	33.3	73.1	82.7	31.8		34.9	34.6
0700	32.8	33.3	73.4	83.0	31.8		34.8	34.4
0800	32.8	33.3	73.4	83.1	31.8		34.8	34.4
0900	32.8	33.3	73.6	83.2	31.8		34.8	34.4
1000	32.8	33.3	73.7	85.3	31.8		33.7	33.2
1100	32.8	33.4	73.8	87.6	31.8		33.2	32.6
1200	33.1	37.6	75.6	88.3	31.9		33.1	32.6
1300	33.2	38.0	75.1	89.6	32.0		32.8	32.6
1400	33.4	39.1	77.2	92.7	32.0		32.8	32.6
1500	33.6	40.2	80.8	94.8	32.0		32.9	32.6
1600	33.3	40.5	80.8	95.3	31.9		32.8	32.6
1700	33.2	40.8	80.8	96.8	31.8		32.8	32.6
1800	33.2	39.3	83.4	98.2	31.7		32.8	32.6
1900	33.1	38.8	85.2	100.4	31.6		32.7	32.4
2000	33.1	38.0	85.7	100.9	31.4		32.7	32.3
2100	33.0	39.2	86.4	101.6	31.4		32.6	32.3
2200	33.0	39.8	88.2	102.8	31.4		32.6	32.3
2300	33.0	41.2	89.4	104.2	31.4		32.5	32.3
2400	33.0	42.4	89.3	104.9	31.4		32.4	32.0

TABLE 363

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

December 29, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.0	42.4	90.0	104.8	31.3		32.4	32.2
0200	33.0	43.2	90.7	105.3	31.3		32.4	32.1
0300	33.0	45.4	91.4	106.5	31.3		32.3	32.0
0400	33.0	45.1	91.8	106.8	31.3		32.3	31.9
0500	33.0	47.2	92.3	107.0	31.3		32.3	31.8
0600	32.9	46.3	92.6	107.3	31.3		32.3	31.8
0700	32.8	45.4	92.8	107.7	31.2		32.3	31.8
0800	32.8	44.6	93.1	107.9	31.2		32.3	31.8
0900	32.9	43.3	93.5	108.2	31.2		32.3	31.8
1000	32.8	42.9	93.8	108.6	31.3		32.3	31.8
1100	32.7	42.4	94.3	109.0	31.4		32.4	31.8
1200	32.9	38.1	94.7	109.2	31.4		34.1	31.8
1300	33.1	36.8	95.2	109.4	31.5		35.0	32.0
1400	33.1	35.1	94.8	104.7	31.5		35.4	32.0
1500	33.2	33.2	94.4	100.6	31.5		36.7	32.0
1600	33.2	33.1	93.8	99.9	31.5		35.6	32.0
1700	33.1	33.0	93.0	99.0	31.4		35.5	31.9
1800	33.1	33.0	87.8	97.8	31.3		35.4	31.9
1900	33.0	33.0	85.9	93.9	31.2		35.4	31.9
2000	32.7	33.0	85.7	93.6	31.3		35.4	31.9
2100	32.4	33.0	85.4	93.0	31.3		35.4	31.8
2200	32.7	33.0	83.3	92.4	31.2		35.4	31.8
2300	32.9	33.0	82.3	91.3	31.3		35.3	31.8
2400	33.0	33.0	81.8	90.8	31.3		35.3	31.8

TABLE 364

HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION

December 30, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.1	33.0	81.8	90.6	31.3		35.2	31.7
0200	33.0	32.9	81.1	90.3	31.3		35.2	31.7
0300	32.9	32.8	80.4	90.0	31.2		35.2	31.7
0400	32.9	32.8	80.3	89.7	31.3		35.2	31.7
0500	32.9	32.8	80.0	89.3	31.3		35.2	31.7
0600	32.9	32.8	79.6	89.1	31.3		35.2	31.7
0700	32.9	32.8	79.0	89.0	31.3		35.2	31.7
0800	32.9	32.8	78.8	88.7	31.3		35.2	31.7
0900	32.9	32.8	78.4	88.4	31.3		35.2	31.7
1000	32.9	32.8	78.4	88.4	31.3		35.2	31.7
1100	32.9	32.8	78.4	88.4	31.3		35.2	31.7
1200	32.9	32.8	78.4	88.3	31.3		35.2	31.7
1300	32.9	32.8	78.3	88.2	31.3		35.2	31.6
1400	32.9	32.8	78.3	88.3	31.3		35.2	31.6
1500	32.4	32.9	78.4	88.4	31.3		35.2	31.7
1600	32.6	32.9	78.3	88.3	31.4		35.3	31.7
1700	32.8	32.9	78.4	88.3	31.4		35.4	31.7
1800	32.9	32.9	78.6	88.7	31.5		35.6	31.9
1900	33.1	33.1	78.8	88.8	31.6		35.7	32.1
2000	33.1	33.2	78.8	88.9	31.6		35.6	32.3
2100	33.1	33.3	78.9	88.1	31.6		35.5	32.2
2200	33.1	33.3	77.3	87.7	31.6		35.5	32.2
2300	33.1	33.2	76.6	87.3	31.6		35.5	32.2
2400	33.0	33.2	76.6	87.0	31.6		35.3	32.2

TABLE 365
HOURLY WATER TEMPERATURE (°F) DATA, QUAD-CITIES STATION
December 31, 1981

Time	Upstream	Intake	Cooling Canal Cold End	Discharge	Downstream Sensors			
					A	B	C	D
0100	33.1	33.2	77.3	87.3	31.6		35.3	32.2
0200	33.1	33.2	77.3	87.4	31.7		35.3	32.2
0300	33.1	33.2	77.3	87.5	31.8		35.4	32.3
0400	33.1	33.2	77.4	87.7	31.8		35.3	32.3
0500	33.0	33.2	77.6	87.9	31.7		35.3	32.3
0600	33.1	33.2	77.7	87.9	31.9		35.3	32.3
0700	32.2	33.3	77.9	88.1	31.8		35.3	32.4
0800	33.2	33.3	78.2	88.4	31.7		35.3	32.4
0900	33.2	33.3	78.6	88.6	31.7		35.4	32.4
1000	33.1	33.3	78.6	88.6	31.7		35.4	32.4
1100	33.0	33.2	78.7	88.7	31.6		35.4	32.5
1200	33.0	33.2	78.8	88.7	31.7		35.4	32.5
1300	33.0	33.2	78.9	88.9	31.8		35.3	32.4
1400	33.5	33.2	79.1	88.9	31.8		35.4	32.4
1500	33.8	33.3	79.3	88.9	31.8		35.4	32.4
1600	33.3	33.2	78.4	88.2	31.7		35.4	32.4
1700	33.1	33.1	77.8	87.8	31.6		35.4	32.4
1800	32.9	32.9	76.3	87.3	31.6		35.3	32.3
1900	32.8	32.9	75.2	87.0	31.6		35.2	32.2
2000	33.0	32.9	74.7	86.2	31.6		35.2	32.2
2100	33.0	33.0	74.0	85.0	31.6		35.3	32.2
2200	33.0	33.0	73.2	84.8	31.6		35.3	32.2
2300	33.0	33.0	73.0	84.4	31.5		35.2	32.3
2400	33.0	33.0	72.7	83.9	31.7		35.2	32.1

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