#3260

Water Flow and pH

COVER SHEET

FAX

To: Steve Wiley
Fax #: 423- 576-4595
Subject: EFPC Flow Rate Data
Date: August 15, 1996
Pages: 1, including this cover sheet.

Steve-
Thank you for the copy of the huge 1989 RIFS for the Mercury Areas (Y/TS-597). A little more than the first half of it was extremely useful to us in modeling 'current day' mercury releases that Ralph Turner is talking about with regard to tree rings. It definitely was not a waste to copy it. There are 2 pages that didn't copy well enough to read- p.3-6 and 3-7. Could you send or fax darker copies of those 2 pages?
Also, would you do a little investigating on the EFPC flow rate data for me since I will not be out until the September 19,20 ORHASP meeting? [There is an EPA Hg meeting in Denver on September 17-19. Mongan and I will attend, then I will fly to Oak Ridge on Wednesday night. The EPA meeting will discuss the Oak Ridge and the Carson City mercury sites. Maybe you could come. If you are interested I can fax you the agenda, etc.]
Back to the flow rates- Page 114 of the Hg Task Force Report says, "These [Y-12 Plant Quarterly] reports were the source of flow rates used to estimate the loss from fourth quarter 1955 to 1963." When I looked at these reports in the Hg Files last year, my notes say that after 4thQ 1956 the flow rate is not reported. Question 1: Could you spot check a few reports between 1957 and 1963 to see if my notes are wrong or if the flow rate data is on some other page? Secondly, the Hg Task Force report says, "These [Y-12 Plant Quarterly] reports were the sources for flow rates used to estimate losses from 1963 to 1970." I did not look at any quarterly reports after 4thQ 1962. Question 2: Could you spot check a few reports between 1963 and 1970 to see if this is correct? Last, the Hg Task Force report says, "More detailed data were available for flow rates observed from 1971 to 1982. These data included monthly average flow rates for the period January 1971 to March 1978 and monthly maximum, minimum, and average flow rates for the period from April 1978 to April 1983." [However, on pages 114 and 115, it also says that flow rate data were missing for 2Q61; 6-,7-, and 8-71; all of 1973 except 5-,6-,7-, and 8-73; and 11- and 12-74.] Bottom line = I have no flow rate data from 1956 to 1995. For 1956-83, I have the Hg TF Report but nothing to check the numbers with. For 1983-95 I have no data. Q3: Can you supply a source? THX! Call me for the scoop on results from EEC1 that will be a hot item at the next ORHASP meeting.

Susan

(Wed 9A.)
Kim Hanzelka
574-1599

Brad Skaggs
873-7858 pager
241-2582 phone

From the desk of...
Susan M. Flack
Senior Associate
ChemRisk
2870 Kalmia Ave., Suite 308
Boulder, CO 80301-5915
303-449-8471
Fax: 303-939-8318

Stn. 17 EFPC stn.
weir

composite sampler there
grab samples
flume/not weir

The stream flow data used in the estimates of mercury lost to East Fork Poplar Creek were obtained by use of a weir on East Fork Poplar Creek. Prior to the construction of New Hope Pond, a weir located upstream of the New Hope Pond site was used to measure the stream flow rate. The average quarterly flow rate was reported in the Y-12 Plant Quarterly Reports. These reports were the source of flow rates used to estimate the loss from fourth quarter 1955 to 1963. The construction of New Hope Pond in 1963 included the installation of a 6-ft Cipolletti weir at the outflow of the pond. Upon completion of the pond, this weir was used for East Fork Poplar Creek flow measurements. The average quarterly flow rates continued to be reported in the Y-12 Plant Quarterly Reports. These reports were the sources for flow rates used to estimate losses from 1963 to 1970. More detailed data were available for flow rates observed from 1971 to 1982. These data included monthly average flow rates for the period January 1971 to March 1978 and monthly maximum, minimum, and average flow rates for the period from April 1978 to April 1983.

have these

have these

The material lost to East Fork Poplar Creek was estimated by pairing the available average stream flow rate with the corresponding average mercury concentration for a given time period. Because of the form of the available stream flow rate data, quarterly estimates of the loss were obtained for the period from fourth quarter 1955 to fourth quarter 1970, and monthly estimates were obtained from January 1971 to September 1982. Both the flow rate data set and the mercury concentration data set contained time periods with missing data. This prevented the direct estimation of losses for the following time periods: second quarter 1961; second quarter 1963; second quarter and third quarter 1966; June, July, and August 1971; January, February, March, April, September, October, November, and December 1973; November and December 1974; and February 1982.

For the time periods where the necessary data were available, the mercury losses were estimated using the following equation:

$$\ell = \left(\bar{x}\ \text{mg/L} \times \frac{1}{1{,}000\ \text{mg/g}} \times \frac{1}{453\ \text{g/lb}} \times 3.7853\ \ell/\text{gal}\right) \times \left(1{,}000{,}000 \times \bar{y}\ \frac{\text{million gal}}{\text{day}} \times k\ \frac{\text{days}}{\text{time period}}\right),$$

where

$\bar{x}$ = the average mercury concentration for the time period in mg/L,

$\bar{y}$ = the average stream flow rate for the time period in million gal/day,

k = the number of days in the time period,

ℓ = the mercury loss in pounds.

~~4/~~ 5/6 72,73,74

− 1. monthly avgs, not weekly avgs.

+ 2. missing data for 71, 73, 74 agrees (dredging) malfunction

+ 3. monthly avgs in 1975, 76 etc.

+ 4. 1978: correction factors, ? maxs, mins!

A large number of the mercury concentration values reported by the laboratory was of the form (<C) where C is the minimum detectable limit for the particular analytical procedure used on the samples. If one uses the minimum detectable level in the loss estimates when actually there was a much lower concentration in the sample, an overestimation of loss results. To evaluate the magnitude of the problem created by the "less than" reporting, two sets of estimates were calculated. One calculation replaced the "less than" value with the minimum detectable level, and the other calculation replaced the "less than" value with zero. The estimate for total mercury loss using the minimum detectable level was 216,749 lb, and the estimate for total mercury lost using zero was 210,585 lb.

A procedure to estimate missing data was developed to enable estimates to be made of mercury losses to East Fork Poplar Creek for the time periods where either concentration or flow rate data were not available. Because of the seasonal variation in flow rates which, assuming a constant mercury loss rate, also affect mercury concentration values, the missing data were estimated by averaging available data for corresponding time periods in other years. Missing flow rate data for 1961 were estimated using available data from 1954 to 1966, and missing flow rate data for 1971, 1973, and 1974 were estimated using available data from 1966 to 1982. Missing mercury concentration data for 1963 and 1966 were estimated using available data from 1963 to 1966. Because of the high percentage of mercury concentration reported as "less than" values for the samples submitted in the early 1970s, the missing concentration data for 1971, 1973, and 1974 were estimated by the current "less than" value in use during that time period.

Variance estimates for the mercury losses to East Fork Poplar Creek were also calculated. These estimates were obtained using the formula for the variance of a product of two random variables. For two independent random variables X and Y, the variance of their product is expressed as:

$$\mathrm{VAR}(XY) = E^2(X)\ \mathrm{VAR}(Y) + E^2(Y)\ \mathrm{VAR}(X) + \mathrm{VAR}(X)\ \mathrm{VAR}(Y)\ .$$

This quantity can be estimated using observed sample means and sample variances as follows:

$$\widehat{\mathrm{VAR}}(XY) = \bar{X}\ S_y^2 + \bar{Y}\ S_x^2 + S_x^2\ S_y^2\ .$$

In the current situation, the random variables of interest are mercury concentration and stream flow rate. Individual sample results were available in the mercury concentration data. These were used to estimate the within-quarter and within-month variation for mercury concentration. Because of the different analytical methods used and apparent changes in variability from 1955 to 1982, several estimates of mercury concentration variance were determined using the data collected during specific time periods. These variance estimates are summarized in Table 4.1.

Date of Issue: August 18, 1983

~~Y/EX-21~~

Y/EX-21/DEL REV

MERCURY AT Y-12

A Study of Mercury Use at the Y-12 Plant, Accountability, and Impacts on Y-12 Workers and the Environment - 1950 to 1983 ~~(U)~~

Compiled by The 1983 Mercury Task Force, a Committee Appointed by Gordon G. Fee in May 1983

This is an unclassified version of a classified document. This version was sanitized of classified information by excision. The original remains intact.

P. E. Wilkinson 3/28/95

P. E. Wilkinson (ADC) Date

V R Byrd 3/28/95

V. R. Byrd (ADD, ADC, RO) Date

Oak Ridge Y-12 Plant
P.O. Box Y, Oak Ridge, Tennessee 37830

Prepared for the U.S. Department of Energy
under Contract No. W-7405-eng-26

~~RESTRICTED DATA~~

~~This document contains Restricted Data as defined in the Atomic Energy Act of 1954. Unauthorized disclosure subject to Administrative and Criminal Sanctions.~~

~~Derivative Classifier~~ [signature]

~~Wm. F. Wilson, Jr.~~
~~Assistant to the President~~
~~Union Carbide Corporation~~
~~Nuclear Division~~

photos by Thm. in FedEx

86-95 flow rates → CO/TIO

copy pgs. in Thm. 62-70 (1Q) flow rates in 1/4 lyp (Y-12)
(53-62 I have.)

71-86

→ 75-86 NPDES Lenny's people looking for that may come

page Steve or Pam Dickey 574-1776 (Lowell's secy.)

Widner:
letter about work with ventil. w EEC and EM data

Flow

from MS|CHK2-0166|del rev

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box P OAK RIDGE, TENN.

TO Edw. G. Struxness, Y12RC
LOCATION Bldg. 9202

DATE February 24, 1954

ANSWERING LETTER DATE

ATTENTION
COPY TO R. J. Morton
File

SUBJECT Recommendations for Creek Water Sampling

In connection with the studies being made on the liquid waste disposal problems as they concern Poplar Creek, Bill Baumann and I met with R. J. Morton, J. M. Garner and B. Kahn of the ORNL Health Physics Division on Tuesday, February 23, 1954. We reviewed and analyzed what little stream pollution data we have collected thus far and discussed the possibility of stream pollution under the present Y-12 waste disposal practices. In summing up our discussions, the ORNL representatives offered the following suggestions or recommendations which we think are quite noteworthy:

1. That the results shown by our present sampling method does not reveal a great pollution problem; however, a more representative picture would be obtained from samples proportional to the volume of stream flow. Any one of several suggested models of proportional pumps would satisfactorily collect such samples but it was the feeling of the group that such apparatus should be kept as simple and economical as possible.

2. That it is essential that a water gaging station be installed and calibrated by the United States Geological Survey as to volume of flow. Such a calibration is necessary for correct pump design. In conjunction with the gaging station a Stevens gage recorder, approved by the U.S.G.S., should be installed at the cost of approximately four hundred dollars ($400.00). The building engineer reports that construction of the gaging station is being suspended temporarily until such a recorder is purchased. Since accurate calibration of this equipment is determined by a wide fluctuation of stream level which may be afforded by the run off from spring rains, it is our feeling that if the recorder could be purchased on some special account it should be ordered immediately.

3. That, due to the relatively low activity levels as shown by previous samples, analysis could be of a general nature; such as, total alpha activity, total beta-gamma activity, mercury content, etc. In case the total alpha count should exceed 3,000 d/m/l, which is approximately the MPL for plutonium in drinking water as set forth in Bureau of Standards Handbook 52 and is the lowest MPL for the alpha emitters, a differential analysis should be made. The total beta-gamma count would be primarily for the records but if it should exceed 222 d/m/l, the MPL for mixed fission products, it should be analyzed in view of the total alpha count. Mercury and any other analyses could be made as desired.

Since some instrumentation is required in connection with the installation of equipment, perhaps the services of some qualified member of our technical staff could be used.

Signed By
Paul C. McRee

Paul C. McRee
Contamination Control Section
Health Physics Department

PCM:cs

from MS\ChR2-0166\delnev

Calendar year	Flowrate millions per day	Hg mg/L	Li ppm	Na ppm	K ppm	pH	Alpha d/m/liter	Beta d/m/liter
3rd 57	[illegible]	0.32						
[illegible] 57	18.3	[illegible]	[illegible]				209	15,26[illegible]
1st 55	[illegible]	[illegible]	[illegible]				253	15,05[illegible]
2nd	11.0	1.80	23	87	14	10.6	340	3,910
3rd	11.6	1.13	20	82	8	10.0	465	1,784
4th	10.8	0.70	17	69	6	9.4	286	1,500
1st 56	11.7	0.37	15	53	10	8.7	135	1,340
2nd	11.3	0.66	13	57	5	8.8	275	3,260
3rd	10.8	1.53	11	54	8	8.8	395	1,460
4th	8.1	1.26	9	66	8	8.7	240	3,031

+ Survey by TVA + Geodetic group.

∠ 15000 d/m/l (W)

July 12 - 20 1955

Silver	<0.02		Vanadium	0.03
Aluminum	5.0	X	Zinc	<0.40 ✓
Gold	<0.02		Tungsten	<0.40
Boron	<0.1		Zirconium	<0.10
Barium	0.05			
Beryllium	<0.01			
Bismuth	<0.05			
Calcium	43.0	X		
Cadmium	<0.4			
Cobalt	<0.02			
Chromium	0.03	✓		
Cesium	<0.8			
Copper	0.05	✓		
Iron	2.3	X ✓		
Niobium	<0.2			
Hafnium	<0.2			
Indium	<0.05			
Potassium	6.0	X		
Lithium	15.0	X		
Magnesium	17.0	X		
Manganese	0.07	✓		
Molybdenum	<0.02			
Sodium	113	X		
Nickel	0.30	X		
Phosphorus	<3.0			
Lead	<0.03	✓		
Palladium	<0.10			
Ruthenium	<0.20			
Antimony	<0.30			
Silica	6.0	X		
Tin	<0.05			
Platinum	<0.10			
Titanium	0.20			
Tantalum	<0.80			

POPLAR CREEK - ANALYSIS FOR FLOW - Hg, Na,
K, Liand pH 6-1959
Thro.

Y/HG-0077

M-825

Water Flow In East Fork of Poplar Creek, For Period May 1955 Through December 25, 1955

Weekly reports from
L. C. Emerson and C. M. West
to
L. J. LaFrance

June ~~13~~ 1, 1955 to December 30, 1955

1955

APPROVED FOR PUBLIC RELEASE

Technical Information Office Date 3/23/94

August 30, 1955

SUBJECT: Daily Flow at Poplar Creek

JUNE

DATE		TOTAL VOLUME
6-1-55		1.077×10^7
6-2-55		1.091
6-3-55		1.119
6-4-55		1.136
6-5-55	1.111	1.134
6-6-55		1.182
6-7-55		1.285
6-8-55		1.394
6-9-55		1.182
6-10-55		1.211
6-11-55		1.208×10^7
6-12-55	1.231	1.158
6-13-55		1.135
6-14-55		1.150
6-15-55		1.135
6-16-55		1.106
6-17-55		1.114
6-18-55		1.050
6-19-55	1.085	0.905
6-20-55		1.09×10^7
6-21-55		1.10
6-22-55		1.13
6-23-55	1.14	1.14
6-24-55		1.15
6-25-55		1.31
6-26-55		1.10
6-27-55		11.975×10^6
6-28-55		11.916
6-29-55		12.108
6-30-55		11.813

av. 11.416×10^6

vs. 11.2 $\times 10^6$ Sm2

2Q55 $\bar{x} = 10.7$

M-825

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
File, NoY12RC

DATE June 13, 1955

ANSWERING LETTER DATE

SUBJECT Flow Rate in East Fork of Poplar Creek

Pursuant to our recent telephone conversation, the following pertinent data on the flow rates in the East Fork of Poplar Creek are listed:

Total flow in May	324,110,000 gal.	
Average flow per day in May	10,455,000 gal.	
Mean flow per day in May	10,244,000 gal.	10.45 ± 2.50
Highest daily flow, May 13	14,060,000 gal.	5,010
Lowest daily flow, May 8	9,050,000 gal.	
June 2	10,907,000 gal.	
June 3	11,187,000 gal.	
June 5	11,340,000 gal.	"variability"
June 6	11,817,000 gal.	

J. E. Parham
for L. C. Emerson

JEP:cs

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCX-163 (3-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
File, Y12RC

DATE June 21, 1955

ANSWERING LETTER DATE

SUBJECT Daily Flow at Poplar Creek

Listed below are the daily flows for the period June 1, 1955 to June 19, 1955 as recorded by the gaging station on the East Fork of Poplar Creek. The present plans call for this information to be compiled every Monday for the preceding seven day period ending at midnight Sunday. Upon completion of the installation of the automatic sampling equipment, we will combine this report with the water analyses report which is now issued on a monthly basis. We would welcome any comments or suggestions you may have on the format, content, and distribution of the report.

Daily Water Flow in East Fork Poplar Creek

Date	Total Volume	Date	Total Volume
6-1-55	1.077×10^7 gal.	6-11-55	1.208×10^7 gal.
6-2-55	1.091	6-12-55	1.158
6-3-55	1.119	6-13-55	1.135
6-4-55	1.136	6-14-55	1.150
6-5-55	1.134	6-15-55	1.135
6-6-55	1.182	6-16-55	1.106
6-7-55	1.285	6-17-55	1.114
6-8-55	1.394	6-18-55	1.050
6-9-55	1.182	6-19-55	0.905
6-10-55	1.211		

L. C. Emerson

L. C. Emerson

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
File, Y12RC

DATE June 28, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 6-20-55 through 6-26-55

Listed below are the daily flows for the period June 20, 1955 through June 26, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
6-20-55	1.09×10^7 gallons
6-21-55	1.10
6-22-55	1.13
6-23-55	1.14
6-24-55	1.15
6-25-55	1.31
6-26-55	1.10

1.14

L. C. Emerson

L. C. Emerson

CS

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WCX-163 (3-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
File, Y12RC

DATE July 5, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 6-27-55 through 7-3-55

Listed below are the daily flows for the period June 27, 1955 through July 3, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date		Total Volume
6-27-55	11.697	11.975×10^6 gallons
6-28-55		11.916
6-29-55		12.108
6-30-55		11.813
7-1-55	$\times 10^6$	11.524
7-2-55		11.275
7-3-55		11.268

$N=30$, $\bar{X}_{June} = 11.19 \pm 2.1 \times 10^6$ gals

$\therefore$ 2Q55 avg. = 10.7 (May, June only)

L. C. Emerson

L. C. Emerson

j

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCX-163 (3-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance -
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
File, Y12RC

DATE July 12, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period July 4, 1955 through July 10, 1955

Listed below are the daily flows for the period July 4, 1955 through July 10, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
7-4-55	11.192×10^6
7-5-55	11.441
7-6-55	11.469
7-7-55	11.601
7-8-55	12.542
7-9-55	11.134
7-10-55	11.015

11.485

L. C. Emerson

L. C. Emerson

CS

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WCX-163 (3-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
File, Y12RC

DATE July 19, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 7-11-55 through 7-17-55

Listed below are the daily flows for the period July 11, 1955 through July 17, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
7-11-55	11.818×10^6
7-12-55	11.985
7-13-55	11.719
7-14-55	11.827
7-15-55	11.293
7-16-55	10.788
7-17-55	10.751

11.454

L. C. Emerson
L. C. Emerson

CS

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WCX-163 (3-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
File, Y12RC

DATE July 25, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 7-18-55 through 7-24-55

Listed below are the daily flows for the period July 18, 1955 through July 24, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
7-18-55	11.572×10^6
7-19-55	11.472
7-20-55	11.360
7-21-55	11.220
7-22-55	11.287
7-23-55	10.966
7-24-55	10.956

11.262

L C Emerson
L. C. Emerson

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCX-163 (3-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
File, Y12RC

DATE August 1, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 7-25-55 through 7-31-55

Listed below are the daily flows for the period July 25, 1955 through July 31, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
7-25-55	11.248×10^6 gallons
7-26-55	11.007
7-27-55	11.161
7-28-55	11.185
7-29-55	10.711
7-30-55	10.276
7-31-55	10.062

10.807

$N = 31$, $\bar{x}_{July} = 11.26 \pm .48 \times 10^6$ gals

L. C. Emerson

L. C. Emerson

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCX-163 (3-55)

August 30, 1955

JULY

SUBJECT Water Flow at East Fork of Poplar Creek.

DATE	TOTAL VOLUME
7-1-55	11.524
7-2-55	11.275
7-3-55	11.268
7-4-55	11.192 x 10^6
7-5-55	11.441
7-6-55	11.469
7-7-55	11.601
7-8-55	12.542
7-9-55	11.134
7-10-55	11.015
7-11-55	11.818 x 10^6
7-12-55	11.985
7-13-55	11.719
7-14-55	11.827
7-15-55	11.293
7-16-55	10.788
7-17-55	10.751
7-18-55	11.572 x 10^6
7-19-55	11.472
7-20-55	11.360
7-21-55	11.220
7-22-55	11.287
7-23-55	10.966
7-24-55	10.956
7-25-55	11.248 x 10^6 gal.
7-26-55	11.007
7-27-55	11.161
7-28-55	11.185
7-29-55	10.711
7-30-55	10.276
7-31-55	10.062
	349.125

AV. 11.300 X 10^6

vs. 11.26 X 10^6 SMD

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
File, Y12RC

DATE August 8, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 8-1-55 through 8-7-55

Listed below are the daily flows for the period August 1, 1955 through August 7, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
8-1-55	10.498×10^6
8-2-55	13.335
8-3-55	11.150
8-4-55	11.961
8-5-55	11.396
8-6-55	10.963
8-7-55	11.018

11.474

L. C. Emerson

L. C. Emerson

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCX-163 (3-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
File, Y12RC

DATE August 15, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 8-8-55 through 8-14-55

Listed below are the daily flows for the period August 8, 1955 through August 14, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
8-8-55	11.110 x 10^6 gallons
8-9-55	12.462
8-10-55	11.175
8-11-55	11.228
8-12-55	10.903
8-13-55	9.749
8-14-55	9.804

10.919

L. C. Emerson

L. C. Emerson

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCX-163 (3-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO J. P. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE August 22, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 8-15-55 through 8-21-55

Listed below are the daily flows for the period August 15, 1955 through August 21, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
8-15-55	11.585 x 10^6 gallons
8-16-55	11.870
8-17-55	11.804
8-18-55	11.806
8-19-55	11.916
8-20-55	11.359
8-21-55	11.204

11.649

C. M. West
C. M. West

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCX-163 (3-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance ✓
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE August 30, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 8-22-55 through 8-28-55

Listed below are the daily flows for the period August 22, 1955 through August 28, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
8-22-55	14.242×10^6 gallons
8-23-55	11.973
8-24-55	12.261
8-25-55	11.989
8-26-55	12.082
8-27-55	11.731
8-28-55	11.634

12.273
±.893

C. M. West
C. M. West

cs

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

CX-163 (3-55)

August 30, 1955

SUBJECT: Daily Flow at Poplar Creek.

AUGUST

DATE	TOTAL VOLUME
8-1-55	10.498 x 10^6
8-2-55	13.335
8-3-55	11.150
8-4-55	11.961
8-5-55	11.396
8-6-55	10.963
8-7-55	11.018
8-8-55	11.110 x 10^6
8-9-55	12.462
8-10-55	11.175
8-11-55	11.228
8-12-55	10.903
8-13-55	9.749
8-14-55	9.804
8-15-55	11.585 x 10^6
8-16-55	11.870
8-17-55	11.804
8-18-55	11.806
8-19-55	11.916
8-20-55	11.359
8-21-55	11.204
8-22-55	14.242 x 10^6
8-23-55	11.973
8-24-55	12.261
8-25-55	11.989
8-26-55	12.082
8-27-55	11.731
8-28-55	11.634
8-29-55	11.844 x 10^6
8-30-55	12.174
8-31-55	11.903
	360,129

Av. 11.6 x 10^6

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE September 7, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 8-29-55 through 9-4-55

Listed below are the daily flows for the period August 29, 1955 through September 4, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
8-29-55	11.844 x 10^6 gallons
8-30-55	12.174
8-31-55	11.903
9-1-55	11.293
9-2-55	10.866
9-3-55	11.148
9-4-55	10.954

already typed
1 dai

11.454

C. M. West

C. M. West

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCX-163 (3-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE September 12, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 9-5-55 through 9-11-55

Listed below are the daily flows for the period September 5, 1955 through September 11, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
9-5-55	11.115×10^6 gallons
9-6-55	11.176
9-7-55	11.011
9-8-55	10.987
9-9-55	11.562
9-10-55	11.087
9-11-55	12.049

11.284

C. M. West
C. M. West

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCX-163 (3-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Emerson, Y12RC
L. C. Johnson
File

DATE September 29, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 9-5-55 through 9-25-55

Listed below are the daily flows for the period September 5, 1955 through September 25, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date		Total Volume
9-5-55		11.115 x 10^6 gallons
9-6-55		11.176
9-7-55	11.284	11.011
9-8-55		10.987
9-9-55		11.562
9-10-55		11.087
9-11-55		12.049
9-12-55		11.114
9-13-55		11.117
9-14-55		11.405
9-15-55		11.876
9-16-55	11.519	11.718
9-17-55		11.402
9-18-55		12.005
9-19-55		12.300
9-20-55		12.213
9-21-55		12.466
9-22-55	12.056	12.057
9-23-55		11.671
9-24-55		12.261
9-25-55		11.426

already typed up. [illegible]

C. M. West

C. M. West

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCX-163 (3-55)

September 8, 1955

SUBJECT: Daily Flow at
Poplar Creek.

SEPTEMBER

DATE	TOTAL VOLUME
9-1-55	11.293
9-2-55	10.866
9-3-55	11.148
9-4-55	10.954
9-5-55	11.115 x 10^6
9-6-55	11.176
9-7-55	11.011
9-8-55	10.987
9-9-55	11.562
9-10-55	11.087
9-11-55	12.049
9-12-55	11.114
9-13-55	11.117
9-14-55	11.405
9-15-55	11.876
9-16-55	11.718
9-17-55	11.402
9-18-65	12.005
9-19-55	12.300
9-20-55	12.213
9-21-55	12.466
9-22-55	12.057
9-23-55	11.671
9-24-55	12.261
9-25-55	11.426
9-26-55	12.102 x 10^6
9-27-55	12.260
9-28-55	11.865
9-29-55	15.000
9-30-55	13.536

352.042

11.7 x 10^6

3Q55 $\bar{x}$ = 11.5

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE October 6, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 9-26-55 through 10-2-55

Listed below are the daily flows for the period September 26, 1955 through October 2, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
9-26-55	12.102×10^6 gallons
9-27-55	12.260
9-28-55	11.865
9-29-55	15.000
9-30-55	13.536
10-1-55	11.237
10-2-55	11.122

12.446

C. M. West

C. M. West

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCK-163 (2-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE October 11, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 10-3-55 through 10-9-55

Listed below are the daily flows for the period October 3, 1955 through October 9, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
10-3-55	12.164×10^6 gallons
10-4-55	11.759
10-5-55	11.751
10-6-55	12.197
10-7-55	14.536
10-8-55	11.169
10-9-55	10.940

12.074

C. M. West

C. M. West

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

UCX-162 (7-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE October 18, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 10-10-55 through 10-16-55

Listed below are the daily flows for the period October 10, 1955 through October 16, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
10-10-55	10.807×10^6 gallons
10-11-55	11.206
10-12-55	11.014
10-13-55	11.238
10-14-55	10.853
10-15-55	10.644
10-16-55	10.637

10.914

C. M. West

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE November 3, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 10-17-55 through 10-23-55

Due to the fact that there was a failure in the recording mechanism, there were no creek flow data for the period October 17, 1955 through October 23, 1955.

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE November 2, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 10-24-55 throught 10-30-55

Listed below are the daily flows for the period October 24, 1955 through October 30, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
10-24-55	12.071 x 10^6 gallons
10-25-55	11.499
10-26-55	11.634
10-27-55	11.439
10-28-55	11.350
10-29-55	10.900
10-30-55	10.860

11.393

C. M. West

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

October 7, 1955

SUBJECT: Daily Flow at Poplar Creek

DATE	TOTAL VOLUME
10-1-55	11.237
10-2-55	11.122
10-3-55	12.164
10-4-55	11.759
10-5-55	11.751
10-6-55	12.197
10-7-55	14.536
10-8-55	11.169
10-9-55	10.940
10-10-55	10.807
10-11-55	11.206
10-12-55	10.014
10-13-55	11.238
10-14-55	10.853
10-15-55	10.644
10-16-55	10.637
10-24-55	12.071
10-25-55	11.499
10-26-55	11.634
10-27-55	11.439
10-28-55	11.350
10-29-55	10.900
10-30-55	10.860
10-31-55	11.332

10-17

10-23

Hv. 11.4 x10^6

INTER-COMPANY CORRESPONDENCE

INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE November 9, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 10-31-55 through 11-6-55

Listed below are the daily flows for the period October 31, 1955 through Novmeber 6, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
10-31-55	11.332 x 10^6 gallons
11-1-55	11.203
11-2-55	11.653
11-3-55	11.871
11-4-55	11.599
11-5-55	11.413
11-6-55	11.464

11.505

C. M. West

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE November 18, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 11-7-55 through 11-13-55

Listed below are the daily flows for the period November 7, 1955 through November 13, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
11-7-55	11.662 x 10^6 gallons
11-8-55	12.048
11-9-55	11.846
11-10-55	12.497
11-11-55	11.729
11-12-55	11.304
11-13-55	11.939

11.861

C. M. West

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE December 1, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in the East of Poplar Creek for Period 11-14-55 through 11-27-55

Listed below are the daily flows for the period November 14, 1955 through November 27, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Due to some difficulty with the recording mechanism, there were no results reported for November 18, 19, and 20.

Date		Total Volume
11-14-55		10.325 x 10^6 gallons
11-15-55		9.084
11-16-55	9.690	10.048
11-17-55		9.304
11-18, 11-19, 11-20		
11-21-55		10.045
11-22-55		13.124
11-23-55		10.618
11-24-55		10.503
11-25-55		10.899
11-26-55		9.984
11-27-55	10.775	10.255

C. M. West

C. M. West

CS

November 11, 1955

SUBJECT: Daily flow at Poplar Creek

DATE	TOTAL VOLUME (c.f.s.)
11-1-55	11.203
11-2-55	11.653
11-3-55	11.871
11-4-55	11.599
11-5-55	11.413
11-6-55	11.464
11-7-55	11.662
11-8-55	12.048
11-9-55	11.846
11-10-55	12.497
11-11-55	11.729
11-12-55	11.304
11-13-55	11.939
11-14-55	10.325
11-15-55	9.084
11-16-55	10.048
11-17-55	9.304
11-21-55	10.045
11-22-55	13.124
11-23-55	10.618
11-24-55	10.503
11-25-55	10.899
11-26-55	9.984
11-27-55	10.255
11-28-55	11.102
11-29-55	10.940
11-30-55	10.624

27 | 297.083

11.028

HW.

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE December 12, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in the East Fork of Poplar Creek for Period 11-28-55 through 12-4-55

Listed below are the daily flows for the period November 28, 1955 through December 4, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Due to some difficulty with the recording mechanism, there were no results reported for December 2, 3, and 4.

Date	Total Volume
11-28-55	11.102 x 10^6 gallons
11-29-55	10.940
11-30-55	10.624
12-1-55	5.463 (12 hours)
12-2	10.926
12-3	10.898
12-4	

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(PLANT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE December 13, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 12-5-55 through 12-11-55

Listed below are the daily flows for the period December 5, 1955 through December 11, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
12-5-55	10.987×10^6 gallons (7 hours)
12-6-55	10.384
12-7-55	10.295
12-8-55	10.007
12-9-55	9.453
12-10-55	9.249
12-11-55	9.400

24 hrs calc.

9.968

C. M. West

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(LIMIT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance ✓
LOCATION Bldg. ~~9995~~ 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE December 29, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 12-12-55 through 12-18-55

Listed below are the daily flows for the period December 12, 1955 through December 18, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Due to some difficulty with the recording mechanism, there were no results reported for December 15, 16, 17, and 18.

Date	Total Volume
12-12-55	10.731×10^6 gallons
12-13-55	10.678
12-14-55	10.597
12-15	
12-16	10.669
12-17	
12-18	

C. M. West
C. M. West

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCY-162 (3-55)

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION

COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE December 30, 1955

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 12-19-55 through 12-25-55

Listed below are the daily flows for the period December 19, 1955 through December 25, 1955 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
12-19-55	10.368×10^6 gallons
12-20-55	10.240
12-21-55	10.274
12-22-55	10.320
12-23-55	9.734
12-24-55	9.555
12-25-55	9.456

9.992

C. M. West
C. M. West

CS

UNCLASSIFIED

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

WCX-163 (3-55)

December 15, 1955

SUBJECT: Daily Flow at Poplar Creek

DATE	TOTAL 7 LINE	
12-1-55	5.463	5.463 (12 hrs)
12-5-55	10.987	10.987 (calc'd for 24 hrs based on 7 hrs)
12-6-55	10.384	10.384
12-7-55	10.295	10.295
12-8-55	10.007	10.007
12-9-55	9.453	9.453
12-10-55	9.249	9.249
12-11-55	9.400	9.400
[illegible]	10.731	10.731
[illegible]	10.678	10.678
[illegible]	10.597	10.597
[illegible]	10.368	10.368
[illegible]	10.240	10.240
[illegible]	10.274	10.274
[illegible]	10.320	10.320
12-19-55	9.734	9.734
12-20-55	9.555	9.555
12-21-55	9.456	9.456
12-22-55		
12-23-55		
12-24-55		
12-25-55		
12-26 12-27 12-28-55	10.663	
12-29-55	10.818	
12-30-55	11.013	
12-31-55	10.247	
	214.532	

N=22,
10.24 ± .55
sm2

Ave. 9.99

4Q55 $\bar{x}$ = 10.9

UNCLASSIFIED

E1 1955

Results of Poplar Creek (Flow Readings)

Also in Box 28-9-16

DIVISION	DEPARTMENT	SECTION	BUILDING	ROOM
Industrial Relations	Medical Department	Industrial Hygiene	Bldg. 9736-2	34

DESCRIPTION OF RECORDS	FROM	THROUGH	CODE NUMBER
Meetings, Procedures, Solvent, Exposures, Stack Sampling, Uranium, etc. Listing of all folders included in this box enclosed. M through Z	1951	1957	~~2090-IH-1~~ Y-12 ~~2090-IH-1~~

APPROVED FOR PUBLIC RELEASE

[illegible] 3/2/95

Technical Information Office Date

BOX NUMBER 2 OF 5

LOCATION IN RECORDS CENTER

Indef.	SECTION	TIER	DR.
	20	9	16

CLASS OF FILE

RECORD [X] NON-RECORD [ ]

RECORDS VERIFIED BY: Bill Everett

DATE 2/14/58

T-2078

TRANSFER OF RECORDS

Y/HG-0079

M-826

Water Flow In
East Fork Poplar Creek
For Period 12/26/55 Through ~~9/9/56~~
10/31/56

C. M. West
Health Physics Department

APPROVED FOR PUBLIC RELEASE
3/23/94
Technical Information Office Date

INTER-COMPANY CORRESPONDENCE

(SERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE January 12, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 12-26-55 through 1-8-56

Listed below are the daily flows for the period December 26, 1955 through January 8, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Due to some difficulty with the recording mechanism, there were no readings reported for December 26 and 27.

12-26
12-27
already on Dec sheet

Date	Total Volume
12-28-55	10.663 x 10^6 gallons
12-29-55	10.818
12-30-55	11.013
12-31-55	10.247
1-1-56	10.367
1-2-56	10.286
1-3-56	10.361
1-4-56	10.178
1-5-56	10.380
1-6-56	10.367
1-7-56	9.638
1-8-56	9.645

10.622

10.122

C. M. West

C. M. West

cs

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE January 18, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 1-9-56 through 1-15-56

Listed below are the daily flows for the period January 9, 1956 through January 15, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
1-9-56	10.192 ~~x 10^6 gallons~~
1-10-56	10.744
1-11-56	10.824
1-12-56	10.824
1-13-56	10.811
1-14-56	10.455
1-15-56	9.835

10.526

C. M. West
C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE January 26, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 1-16-56 through 1-22-56

Listed below are the daily flows for the period January 16, 1956 through January 22, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
1-16-56	10.293×10^6 gallons
1-17-56	10.717
1-18-56	10.824
1-19-56	11.201
1-20-56	11.103
1-21-56	10.569
1-22-56	10.178

7D.698

C. M. West

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE February 3, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 1-23-56 through 1-29-56

Listed below are the daily flows for the period January 23, 1956 through January 29, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
1-23-56	10.892×10^6 gallons
1-24-56	11.330
1-25-56	11.175
1-26-56	10.946
1-27-56	10.824
1-28-56	10.966
1-29-56	17.525

11.951
*2.464

C. M. West
C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE February 13, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 1-30-56 through 2-5-56

Listed below are the daily flows for the period January 30, 1956 through February 5, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
1-30-56	15.122 x 10^6 gallons
1-31-56	12.574
2-1-56	12.705
2-2-56	14.944
2-3-56	18.150
2-4-56	14.486
2-5-56	12.181

N=31, $\bar{X}$= 11.00 ± 1.56

14.309 ± 2.080

C. M. West

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE February 17, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 2-6-56 through 2-12-56

Listed below are the daily flows for the period February 6, 1956 through February 12, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
2-6-56	15.284 x 10^6 gallons
2-7-56	12.195
2-8-56	11.728
2-9-56	11.778
2-10-56	11.347
2-11-56	11.457
2-12-56	10.611

12.057
±1.504

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE February 22, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 2-13-56 through 2-19-56

Listed below are the daily flows for the period February 13, 1956 through February 19, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
2-13-56	11.101 x 10^6 gallons
2-14-56	10.982
2-15-56	11.179
2-16-56	11.887
2-17-56	16.221
2-18-56	12.246
2-19-56	12.914

12.361
±1.840

C. M. West

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE March 2, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 2-20-56 through 2-26-56

Listed below are the daily flows for the period February 20, 1956 through February 26, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
2-20-56	13.118 x 10^6 gallons
2-21-56	11.707
2-22-56	11.553
2-23-56	11.484
2-24-56	12.400
2-25-56	12.399
2-26-56	11.118

11.968

C. M. West
C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC
File

DATE March 9, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 2-27-56 through 3-4-56

Listed below are the daily flows for the period February 27, 1956 through March 4, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
2-27-56	11.807 x 10^6 gallons
2-28-56	11.406
2-29-56	11.368
3-1-56	11.353
3-2-56	11.961
3-3-56	13.734
3-4-56	11.125

N=29, 12.47 ±1.74

11.822

C. M. West

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. J. Johnson
L. C. Emerson, T12RC
File

DATE March 21, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 3-5-56 through 3-11-56

Listed below are the daily flows for the period March 5, 1956 through March 11, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
3-5-56	11.590 x 10^6 gallons
3-6-56	10.942
3-7-56	11.500*
3-8-56	11.500*
3-9-56	11.500*
3-10-56	11.500*
3-11-56	11.500*

$\bar{X} = 11.78$ (N=6) ± 1.02

11.266

* Due to equipment breakdown, the results for these dates are not available. In order that the record will be continuous, this estimate, based on the average of recent flow data, is included.

NO

C. M. West
C. M. West

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

DATE March 28, 1956

ANSWERING LETTER DATE

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC

SUBJECT Water Flow in East Fork of Poplar Creek for Period 3-12-56 through 3-25-56

2 wks

No water flow record is available for the 3-12-56 through 3-25-56 period due to equipment failure. Based on the most recent data obtained, it is estimated that the creek flow during this period was 11.5 million gallons per day.

C. M. West

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC

DATE April 9, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 3-25-56 through 4-1-56

No water flow record is available for the 3-25-56 through 4-1-56 period due to equipment failure. Based on the most recent data obtained, it is estimated that the creek flow during this period was 11.5 million gallons per day.

C. M. West

C. M. West

cs

RECEIVED

Ave Flow

Jan	11.00×10^6 gals	11.0
Feb	12.45×10^6	12.47
March	11.65×10^6 through 3/11	11.78 thru 3-6

1Q56 $\bar{x}$ = 11.75

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

DATE April 11, 1956

ANSWERING LETTER DATE

ATTENTION

COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC

SUBJECT Water Flow in East Fork of Poplar Creek for Period 4-2-56 through 4-8-56

Listed below are the daily flows for the period April 2, 1956 through April 8, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Due to some difficulty with the recording mechanism, there were no results reported for April 2 and 3.

Date	Total Volume
4-2, 4-3, 4-4-56	13.789 x 10^6 gallons
4-5-56	12.430
4-6-56	17.654
4-7-56	12.280
4-8-56	11.861

13.603

C. M. West

C. M. West

CS

THIS FORM FOR INTER-COMPANY CORRESPONDENCE ONLY

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC

DATE April 17, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 4-9-56 through 4-15-56

Listed below are the daily flows for the period April 9, 1956 through April 15, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
4-9-56	11.571 x 10^6 gallons
4-10-56	10.862
4-11-56	12.366
4-12-56	10.520
4-13-56	10.033
4-14-56	9.075
4-15-56	25.308

12.819
±5.607

C. M. West

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO L. J. LaFrance ✓
LOCATION Bldg. 9706-2

ATTENTION
COPY TO W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC

DATE April 30, 1956

ANSWERING LETTER DATE

SUBJECT Water Flow in East Fork of Poplar Creek for Period 4-16-56 through 4-22-56

Listed below are the daily flows for the period April 16, 1956 through April 22, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
4-16-56	13.158
4-17-56	12.259
4-18-56	11.857
4-19-56	11.394
4-20-56	11.207
4-21-56	10.211
4-22-56	10.032

11.445
±1.106

C. M. West

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance
Building 9706-2

Plant: Y-12

Date: May 9, 1956

Copies To: W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 4-23-56 through 4-29-56

Listed below are the daily flows for the period April 23, 1956 through April 29, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
4-23-56	10.845 x 10^6 gallons
4-24-56	11.055
4-25-56	10.973
4-26-56	10.914
4-27-56	10.764
4-28-56	9.981
4-29-56	9.980

10.644

C. M. West
C. M. West

cs

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance ✓
Building 9706-2

Plant: Y-12

Date: May 22, 1956

Copies To: W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 4-30-56 through 5-20-56

Listed below are the daily flows for the period April 30, 1956 through May 20, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

N=27, $\bar{x}$=11.60 ±3.62

Date		Total Volume
4-30-56		10.978 x 10^6 gallons
5-1-56		10.955
5-2-56		11.693
5-3-56		10.213
5-4-56		11.815
5-5-56	10.985	10.132
5-6-56		11.110
5-7-56		11.406
5-8-56		10.973
5-9-56		11.392
5-10-56		11.147
5-11-56		10.832
5-12-56	10.715	9.519
5-13-56		9.737
5-14-56		9.575
5-15-56		10.213
5-16-56		10.774
5-17-56		10.764
5-18-56	10.170	10.589
5-19-56		9.919
5-20-56		9.359

C. M. West

CS

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance
Building 9706-2

Plant: Y-12

Date: June 20, 1956

Copies To: W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 5-21-56 through 6-10-56

Listed below are the daily flows for the period May 21, 1956 through June 10, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
5-21-56	10.386 x 10^6 gallons
5-22-56	10.407
5-23-56	10.535
5-24-56	10.744
5-25-56	10.463
5-26-56	9.561
5-27-56	9.763
5-28-56	10.351
5-29-56	10.642
5-30-56	9.721
5-31-56	10.797
6-1-56	11.686
6-2-56	12.003
6-3-56	12.465
6-4-56	11.602
6-5-56	11.594
6-6-56	11.565
6-7-56	11.441
6-8-56	11.346
6-9-56	11.942
6-10-56	12.337

11.083

10.261

N=31, $\bar{x}$ = 10.50 ± .65

Ave.

C. M. West

CS

This form for Inter-Company Correspondence only

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance
Building 9706-2

Plant: Y-12

Date: June 21, 1956

Copies To: W. A. Pfeiler
L. C. Johnson
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 6-11-56 through 6-17-56

Listed below are the daily flows for the period June 11, 1956 through June 17, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
6-11-56	11.942 x 10^6 gallons
6-12-56	11.160
6-13-56	10.928
6-14-56	11.403
6-15-56	11.188
6-16-56	12.111
6-17-56	11.750

11.497

C. M. West
C. M. West

cs

UNCLASSIFIED

Total 8[illegible]7

Average 11.297

This form for Inter-Company Correspondence only

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance ✓
Building 9706-2

Plant: Y-12

Date: June 26, 1956

Copies To: L. C. Johnson
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 6-18-56 through 6-24-56

Listed below are the daily flows for the period June 18, 1956 through June 24, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
6-18-56	11.237×10^6 gallons
6-19-56	11.136
6-20-56	10.804
6-21-56	11.032
6-22-56	10.968
6-23-56	11.590
6-24-56	~~11.500*~~ not used sma

11.128

*Due to equipment breakdown, the result for this date is not available. In order that the record will be continuous, this estimate, based on the average of recent flow data, is included.

C. M. West
C. M. West

cs

UNCLASSIFIED

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance
Building 9706-2

Plant: Y-12

Date: July 5, 1956

Copies To: L. C. Johnson
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 6-25-56 through 7-1-56

Listed below are the daily flows for the period June 25, 1956 through July 1, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
6-25-56	11.134×10^6 gallons
6-26-56	11.097
6-27-56	11.001
6-28-56	10.757
6-29-56	10.913
6-30-56	11.527
7-1-56	11.183

11.087

$N=29, \bar{x} = 11.44 \pm .46$ smr

2Q56 $\bar{x} =$ 11.18

C. M. West
C. M. West

cs

UNCLASSIFIED

This form for Inter-Company Correspondence only

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance
Building 9706-2

Plant: Y-12

Date: July 16, 1956

Copies To: L. C. Johnson
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 7-2-56 through 7-8-56

Listed below are the daily flows for the period July 2, 1956 through July 8, 1956 as recorded by the gaging station on the East Fork of Poplar Creek

Date	Total Volume
7-2-56	10 689 x 10^6 gallons
7-3-56	10.420
7-4-56	11 217
7-5-56	10.683
7-6-56	10 250
7-7-56	10.962
7-8-56	10.549

10.681

C. M. West

C. M. West

cs

UNCLASSIFIED

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance
Building 9706-2

Plant: Y-12

Date: July 17, 1956

Copies To: L. C. Johnson
G. J. Angele
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 7-9-56 through 7-15-56

Listed below are the daily flows for the period July 9, 1956 through July 15, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
7-9-56	10.155×10^6 gallons
7-10-56	10.596
7-11-56	10.475
7-12-56	10.482
7-13-56	10.102
7-14-56	10.465
7-15-56	11.147

10.489

C. M. West

C. M. West

CS

Ella Mae

Make copy for Gus Angele

UNCLASSIFIED

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance ✓
Building 9706-2

Plant: Y-12

Date: July 24, 1956

Copies To: L. C. Johnson
G. J. Angele
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 7-16-56 through 7-22-56

Listed below are the daily flows for the period July 16, 1956 through July 22, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
7-16-56	10.340×10^6 gallons
7-17-56	10.371
7-18-56	10.582
7-19-56	10.744
7-20-56	10.156
7-21-56	11.407
7-22-56	11.636

10.748

C. M. West

C. M. West

cs

UNCLASSIFIED

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance ✓
Building 9706-2

Plant: Y-12

Date: July 31, 1956

Copies To: L. C. Johnson
G. J. Angele
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 7-23-56 through 7-29-56

Listed below are the daily flows for the period July 23, 1956 through July 29, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
7-23-56	10.832×10^6 gallons
7-24-56	10.358
7-25-56	9.803
7-26-56	9.800
7-27-56	10.075
7-28-56	10.607
7-29-56	10.752

10.318

C. M. West

C. M. West

cs

UNCLASSIFIED

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance
Building 9706-2

Plant: Y-12

Date: August 20, 1956

Copies To: L. C. Johnson
G. J. Angele
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 7-30-56 through 8-12-56

Listed below are the daily flows for the period July 30, 1956 through August 12, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date		Total Volume
7-30-56		10.5×10^6 gallons
7-31-56		10.4
8-1-56		10.3
8-2-56		10.0
8-3-56		9.9
8-4-56	10.3	10.3
8-5-56		11.0
8-6-56		10.3
8-7-56		10.9
8-8-56		11.0
8-9-56		11.0
8-10-56		10.8
8-11-56		10.9
8-12-56	10.9	11.4

$N=31, \bar{x}=10.57 \pm .43$

C. M. West

C. M. West

cs

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INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance
Building 9706-2

Plant: Y-12

Date: August 21, 1956

Copies To: L. C. Johnson
G. J. Angele
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 8-13-56 through 8-19-56

Listed below are the daily flows for the period August 13, 1956 through August 19, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date	Total Volume
8-13-56	11.3×10^6 gallons
8-14-56	10.9
8-15-56	10.8
8-16-56	11.1
8-17-56	11.0
8-18-56	11.6
8-19-56	11.8

11.2

C. M. West

C. M. West

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INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance ✓
Bldg. 9706-2

Plant: Y-12

Date: September 12, 1956

Copies To:
L. C. Johnson
G. J. Angele
L. C. Emerson, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 8-20-56 through 9-9-56

Listed below are the daily flows for the period August 20, 1956 through September 9, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date		Total Volume
8-20-56		11.3 x 10^6 gallons
8-21-56		10.6
8-22-56		11.0
8-23-56		11.1
8-24-56		11.1
8-25-56	11.2	11.6
8-26-56		11.9
8-27-56		11.7
8-28-56		10.9
8-29-56		10.4
8-30-56		10.9
8-31-56		11.0
9-1-56		11.5
9-2-56	11.1	11.6
9-3-56		12.0
9-4-56		11.8
9-5-56		11.2
9-6-56		10.6
9-7-56		~~11.5*~~ not used
9-8-56	10.2	12.9
9-9-56		12.4

N=31, $\bar{x}$ = 10.96 ± .49

Av. 10.755

71 | 763588

* Due to equipment breakdown, the result for this date is not available. In order that the record will be continuous, this estimate, based on the average of recent flow data, is included.

Paul C McRee for
C. M. West

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CS

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INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance
Building 9706-2

Plant: Y-12

Date: October 15, 1956

Copies To: L. C. Johnson
G. J. Angele
J. D. McLendon, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 9/10/56 through 10/7/56

Listed below are the daily flows for the period September 10, 1956 through October 7, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date		Total Volume
9/10/56		11.1×10^6 gallons
9/11/56		10.8
9/12/56		10.5
9/13/56		10.8
9/14/56		11.0
9/15/56	11.2	12.0
9/16/56		12.2
9/17/56		10.7
9/18/56		11.1
9/19/56		11.0
9/20/56		11.1
9/21/56		11.5
9/22/56	11.4	12.3
9/23/56		12.3
9/24/56		10.8
9/25/56		11.3
9/26/56		11.1
9/27/56		11.0
9/28/56		11.1
9/29/56	11.4	12.3
9/30/56		12.5
10/1/56		10.8
10/2/56		10.5
10/3/56		10.7
10/4/56		11.1
10/5/56	11.2	10.7
10/6/56		12.3
10/7/56		12.2

$N=29, \bar{x} = 11.46 \pm .66$

3Q56 = 11.0

UNCLASSIFIED

L. M. West

WCX-163 (8-55) CS

This form for Inter-Company Correspondence only

INTER-COMPANY CORRESPONDENCE

UNION CARBIDE NUCLEAR COMPANY

A Division of Union Carbide and Carbon Corporation

To: L. J. LaFrance
Bldg. 9706-2

Plant: Y-12

Date: October 29, 1956

Copies To: L. C. Johnson
G. J. Angele
J. D. McLendon, Y12RC

Subject: Water Flow in East Fork of Poplar Creek for Period 10/8/56 through 10/21/56

Continued in Surface Water Sampling Reports starting 10/56

Listed below are the daily flows for the period October 8, 1956 through October 21, 1956 as recorded by the gaging station on the East Fork of Poplar Creek.

Date		Total Volume
10/8/56		11.8 x 10^6 gallons
10/9/56		11.7
10/10/56		11.4
10/11/56		11.5
10/12/56		11.5
10/13/56	11.8	12.5
10/14/56		12.5
10/15/56		11.7
10/16/56		11.4
10/17/56		11.3
10/18/56		10.7
10/19/56		11.1
10/20/56		11.9
10/21/56	11.4	12.0

APPROVED FOR PUBLIC RELEASE
P. L. McKenney 8/11/95
Technical Information Office Date

ANNUAL RUNOFF (CFSM).--Indicates the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area for the year.

ANNUAL RUNOFF (INCHES).--Indicates the depth to which the drainage area would be covered if all the runoff for the year were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that is exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that is exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that is exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Data Available

Records of discharge, not published by the USGS, are collected in Tennessee at several sites by the U.S. Army Corps of Engineers and Tennessee Valley Authority. the National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of these sites as well as an index of records of discharge collected by other agencies but not published by the USGS. Information on records at specific sites can be obtained from that office upon request.

AUG.13.1996 4:23PM MCLAREN HART 216-360-2156 NO.633 P.3

August 2, 1996

Brian,

The other 3 files (engle.dv, zion.dv, and caldwell.dat) are different versions of the same thing.I provided 2 formats just in case one is more convenient than the other.

Engle.dv is Chestuee Cr ab Englewood (03565040), da = 14.8 mi2.
The format is rows.

Zion.dv is Chestuee Cr at Zion Hill (03565120), da = 37.8 mi2.
The format is rows.

Caldwell.dat is columnar and includes both Englewood and Zion Hill daily mean data.

The enclosed pages from our 1995 data book give a basic explanation of how data quality is determined. It will take a little effort to get the quality description for each year, if you need it.

I have summarized the quality descriptors for East Fork Poplar Cr data I previously sent:

wy61-68 good	±10%
wy69-70 excellent	±5%
wy71-77 good	±10%
wy78-81 fair	±15%
wy82-88 good.	±10%

Let me know if you need anything else.

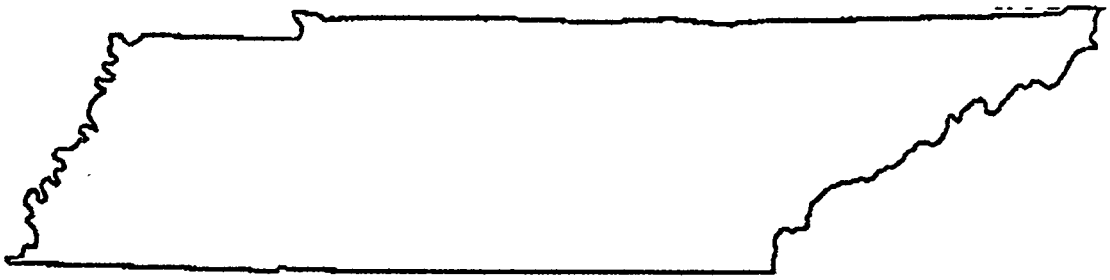
Brad

±5%
brad@USGS

if correctly built
(EFPC was..)
"open channel"
FLOW RATE

AUG.13.1996 4:35PM MCLAREN HART 216-360-2156 NO.642 P.3

Water Resources Data
Tennessee
Water Year 1995



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TN-95-1
Prepared in cooperation with the State of Tennessee
and with other agencies

AUG.13.1996 4:23PM MCLAREN HART 216-360-2156 NO.633 P.2

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DATE: August 13, 1996

TO: Susan Flack

COMPANY/LOCATION: Colorado
FAX: (303) 939-8318
PROJECT NO.:

FROM:

BRIAN CALDWELL
Assistant Health Scientist
CHEMRISK, A DIVISION OF McLAREN/HART
COURTLAND EAST BUILDING
29225 CHAGRIN BOULEVARD
CLEVELAND, OHIO 44122-4629

4B PAGE(S) INCLUDING COVER

RE: Poplar Creek flow

Additional Message:

Susan,

Here's the flow rate information I thought you'd like. Hope this helps.

Susan,

How are you? Thought it would be easier to send you the information I was faxed instead of trying to explain in over the phone. The references which have been highlighted in the left side column are the ones which I sent to Tom Mongan. I received this information from Bradley Bryan from the USGS in Knoxville. Hope this answers the reference question. Have a good vacation, give me a call when you return.

Take Care,

Brian

Brian

1961-89

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06-12-1996 09:59AM FROM US Geological Survey TO 82164646101 P.03

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50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-87/225	2.	3. Recipient's Accession No.

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Water Resources Data Tennessee, Water Year 1986

5. Report Date: March 1987

6.

7. Author(s)

J. F. Lowery, P. H. Counts, H. L. Edmiston, and F. D. Edwards

8. Performing Organization Rept. No. USGS-WDR-TN-86-1

9. Performing Organization Name and Address

U.S. Geological Survey, Water Resources Division
A-413 Federal Building - U.S. Courthouse
Nashville, TN 37203

10. Project/Task/Work Unit No.

11. Contract(C) or Grant(G) No.
(C)
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12. Sponsoring Organization Name and Address

U.S. Geological Survey, Water Resources Division
A-413 Federal Building - U.S. Courthouse
Nashville, TN 37203

13. Type of Report & Period Covered
Annual-Oct. 1, 1985 to Sept. 30, 1986

14.

15. Supplementary Notes Prepared in cooperation with the Tennessee Department of Health and Environment, Office of Water Management; the Tennessee Valley Authority; and with other State, municipal, and Federal agencies.

16. Abstract (Limit: 200 words)

Water resources data for the 1986 water year for Tennessee consist of records of stage, discharge, and water quality of streams and springs; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of wells. This report contains discharge records for 96 gaging stations; stage only records for 2 lake-gaging stations; elevation and contents for 28 lakes and reservoirs; water quality for 43 stations and 45 wells; and water levels for 33 observation wells. Also included are 90 crest-stage partial-record stations and 78 low-flow partial-record stations. Additional water data were collected at various stream and spring sites not involved in the systematic data collection program and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Tennessee.

17. Document Analysis a. Descriptors

*Tennessee, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment analyses, Water temperatures, Sampling sites, Water levels, Water analyses.

b. Identifiers/Open-Ended Terms

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REPORTS DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD-HD-88/236	2.	3. Recipient's Accession No.
4. Title and Subtitle Water Resources Data Tennessee, Water Year 1987			5. Report Date May 1988 6.
7. Author(s) J. F. Lowery, P. H. Counts, H. L. Edmiston, and F. D. Edwards			8. Performing Organization Rept. No. USGS-WDR-TN-87-1
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division A-413 Federal Building - U.S. Courthouse Nashville, TN 37203			10. Project/Task/Work Unit No. 11. Contract(C) or Grant (G) No. (C) (G)
12. Sponsoring Organization Name and Address U.S. Geological Survey, Water Resources Division A-413 Federal Building - U.S. Courthouse Nashville, TN 37203			13. Type of Report & Period Covered Annual-Oct. 1, 1986 to Sept. 30, 1987 14.

15. Supplementary Notes

Prepared in cooperation with the Tennessee Department of Health and Environment, Office of Water Management; the Tennessee Valley Authority; and with other State, municipal, and Federal agencies.

16. Abstract (Limit: 200 words)

Water resources data for the 1987 water year for Tennessee consist of records of stage, discharge, and water quality of streams and springs; stage, contents, and water quality of lakes and reservoirs; water levels and water quality of wells; and quantity and quality of precipitation. This report contains discharge records for 100 gaging stations; stage only records for 6 gaging stations; elevation and contents for 27 lakes and reservoirs; water quality for 37 stations and 149 wells; water levels for 32 observation wells; and 1 precipitation station. Also included are 89 crest-stage partial-record stations and 82 low-flow partial-record stations. Additional water data were collected at various stream and spring sites not involved in the systematic data collection program and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Tennessee.

17. Document Analysis a. Descriptors

*Tennessee, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment analyses, Water temperatures, Sampling sites, Water levels, Water analyses.

b. Identifiers/Open-Ended Terms

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REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-89/258	2.	3. Recipient's Accession No.
4. Title and Subtitle: Water Resources Data Tennessee, Water Year 1988			5. Report Date: April 1989
7. Author(s): J.F. Lowery, P.H. Counts, F.D. Edwards, and J.W. Garrett			6.
9. Performing Organization Name and Address: U.S. Geological Survey, Water Resources Division, A-413 Federal Building - U.S. Courthouse, Nashville, TN 37203			8. Performing Organization Rept. No. USGS-WRD-TN-88-1
			10. Project/Task/Work Unit No.
			11. Contract(C) or Grant (G) No. (C) (G)
12. Sponsoring Organization Name and Address: U.S. Geological Survey, Water Resources Division, A-413 Federal Building - U.S. Courthouse, Nashville, TN 37203			13. Type of Report & Period Covered: Annual-Oct. 1, 1987 to Sept. 30, 1988
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15. Supplementary Notes

Prepared in cooperation with the Tennessee Department of Health and Environment, Office of Water Management; the Tennessee Valley Authority; and with other State, municipal, and Federal agencies.

16. Abstract (Limit: 200 words)

Water resources data for the 1988 water year for Tennessee consist of records of stage, discharge, and water quality of streams and springs; stage, contents, and water quality of lakes and reservoirs; water levels and water quality of wells; and quantity and quality of precipitation. This report contains discharge records for 103 gaging stations; stage only records for 6 gaging stations; elevation and contents for 27 lakes and reservoirs; water quality for 41 stations and 32 wells; water levels for 32 observation wells; and 1 precipitation station. Also included are 92 crest-stage partial-record stations and 207 low-flow partial-record stations. Additional water data were collected at various stream and spring sites not involved in the systematic data collection program and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Tennessee.

17. Document Analysis a. Descriptors

*Tennessee, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment analyses, Water temperatures, Sampling sites, Water levels, Water analyses.

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

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15. Supplementary Notes

Prepared in cooperation with the Tennessee Department of Health and Environment, Office of Water Management; the Tennessee Valley Authority; and with other State, municipal, and Federal agencies.

16. Abstract (Limit: 200 words)

Water resources data for the 1989 water year for Tennessee consist of records of stage, discharge, and water quality of streams and springs; stage, contents, and water quality of lakes and reservoirs; water levels and water quality of wells; and quantity and quality of precipitation. This report contains discharge records for 94 gaging stations; stage only records for 6 gaging stations; elevation and contents for 28 lakes and reservoirs; water quality for 19 stations and 10 wells; water levels for 32 observation wells; and 1 precipitation station. Also included are 94 crest-stage partial-record stations. Additional water data were collected at various stream sites not involved in the systematic data collection program and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Tennessee.

17. Document Analysis a. Descriptors

*Tennessee, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment analyses, Water temperatures, Sampling sites, Water levels, Water analyses.

b. Identifiers/Open-Ended Terms

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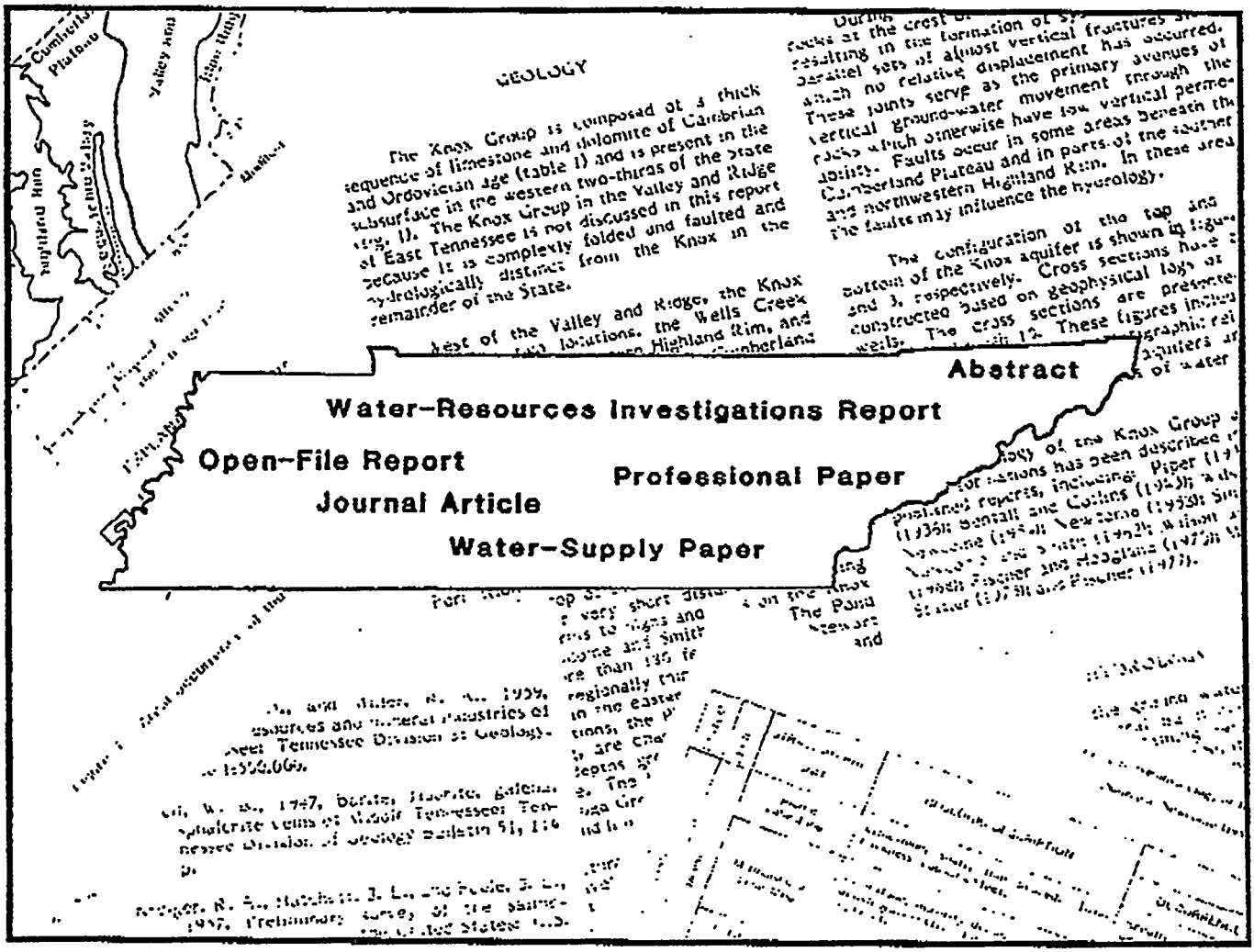
WATER RESOURCES PUBLICATIONS OF THE U.S. GEOLOGICAL SURVEY FOR TENNESSEE, 1906-1987



U.S. GEOLOGICAL SURVEY

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Y-12 Plant Quarterly Reports Containing
Environmental Monitoring Data
(1962 - 1977)

1962-1970

(See back of Control Form for Document Numbers)

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Date Issued: March 25, 1963

Report Number Y-1219

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UNION CARBIDE NUCLEAR COMPANY
Division of Union Carbide Corporation

Y-12 PLANT

Contract W-7405-eng-26
With the U. S. Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Second Quarter, FY 1963
October-December, 1962

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27,

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Oak Ridge, Tennessee
January 24, 1963

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INDUSTRIAL HYGIENE

Potable Water Sampling

The program of sampling potable water from various water fountains and sinks within the Y-12 area was continued this quarter. A total of 121 samples were tested for total residual chlorine and bacteriological count. Two of the samples contained one or more colonies of coliform bacteria. The Plant sanitary engineer was informed and corrective action was initiated. Resamples were free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek for pH and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The cations, including mercury, continue to remain at low concentrations. The anions ranged as follows: nitrates from 22 to 53 ppm; sulfates from 12 to 74 ppm; chlorides from 11 to 57 ppm, and fluorides from 2 to 6 ppm. The average mercury concentration dropped from 0.16 mg/l for the last quarter to 0.07 mg/l for this period.

The average results for pH and creek flow are presented in Table F-7 for the quarter.

Table F-7

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	11.1 million gals/day	12.4 million gals/day
pH	8.6	9.3

Noise Studies

Miscellaneous noise measurements were made in the Plant operating areas this quarter. Recommendations were made to supervision when levels were above the Plant criteria.

A noise questionnaire was prepared during this quarter which will be given to each employee during his or her routine physical examination. It is hoped that the results of this questionnaire will provide information that can be used to pick out employees who are prone to hearing loss beyond the normal range.

Beryllium Program

The number of both air and smear samples above the Threshold Limit Values (TLV) decreased significantly this quarter. The continued efforts of operating personnel to correct sources of contamination are largely responsible for this decrease.

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UNION CARBIDE NUCLEAR COMPANY
Division of Union Carbide Corporation

Y-12 PLANT

Contract W-7405-eng-26
With the U. S. Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Third Quarter, FY 1963
January-March, 1963

F22, 25, 26, 27
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Oak Ridge, Tennessee
April 24, 1963

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INDUSTRIAL HYGIENE

Potable Water Sampling

The program of sampling potable water from various water fountains within the Y-12 area was continued this quarter. A total of 131 samples were tested for total residual chlorine and bacteriological count. Five of the samples contained one or more colonies of coliform bacteria. The Plant sanitary engineer was informed and corrective action was initiated. Resamples were free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek for pH and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and cations continue to remain at low concentrations. The anions ranged as follows: nitrates from 9 to 41 ppm; sulfates from 24 to 111 ppm; chlorides from 15 to 23 ppm, and fluorides from 1 to 4 ppm.

The average results for pH and creek flow are presented in Table F-6 for the quarter.

Table F-6

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	14.1 million gals/day	11.1 million gals/day
pH	8.4	8.6

Noise Studies

Noise measurements this quarter were made in those areas in which new equipment had been installed and placed in service. Only one area was found to exceed the Y-12 Plant criteria for noise. Recommendations were made to supervision in this area that a noise sign be posted and ear protection worn by all personnel. This recommendation was made in lieu of acoustical treatment because of the temporary nature of the operation.

A noise questionnaire, described in the last quarterly report, was placed in use at the beginning of this quarter. It was learned from the results of several hundred of these questionnaires that changes in the wording of several questions are necessary before useful information can be gained.

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UNION CARBIDE NUCLEAR COMPANY
Division of Union Carbide Corporation

Y-12 PLANT

Contract W-7405-eng-26
With the U. S. Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Fourth Quarter, FY 1963
April-June, 1963

F-21 22, 23, 24,

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Oak Ridge, Tennessee
August 23, 1963

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Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek for pH and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 4 to 35 ppm; sulfates - 18 to 37 ppm; chlorides - 3 to 156 ppm; and fluorides - 1 to 3 ppm.

The average results for pH and creek flow for the quarter are presented in Table F-6.

Table F-6

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	14.7 million gals/day	14.1 million gals/day
pH	8.3	8.4

Noise Surveys

Noise measurements made this quarter throughout the Plant revealed that in two buildings criteria for noise was exceeded—areas were the two million-volt X ray in Building 9204-2 and the new nitrogen plant, Building 9727-7. Supervision for both areas were notified of this condition and corrective action was initiated.

Mercury Program

A total of 2507 air measurements for mercury were made this quarter with 155 samples exceeding the threshold limit of 0.1 mg/M^3 of air. The total number of samples taken was about half, but the total number of measurements exceeding the threshold limit increased by a factor of 1.5, on a percentage basis, as compared to the previous quarter. The primary cause for the increase was due to operational changes involved in the termination of one program and the startup of another.

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Nuclear Division

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Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

First Quarter, FY 1964
July-September, 1963

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Oak Ridge, Tennessee
November 22, 1963

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Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees. Included at times were comprehensive inspections of shops and production buildings with recommendations made covering indicated potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

The routine program of sampling potable water from various water fountains throughout the area was continued this quarter. A total of 179 samples were tested for total residual chlorine and bacteriological count. Eight of the samples contained one or more colonies of coliform bacteria. The Plant Sanitary Engineer was informed and corrective action was initiated. Resamples were free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek for pH and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 6 to 26 ppm; sulfates - 12 to 131 ppm; chlorides - 6 to 34 ppm; and fluorides - 1 to 2 ppm.

The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	10.2 million gals/day	14.7 million gals/day
pH	8.0	8.3

Noise Surveys

Noise surveys were continued this quarter in areas where new or additional equipment had been installed. Only one area was found to exceed the Y-12 Plant criteria. This situation was caused by a vacuum cleaner being used as a carbon pickup system in the machine shop in Building 9201-1. Corrective action was taken by

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Second Quarter, FY 1964
October-December, 1963

F-11, 12, 13,

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Oak Ridge, Tennessee
February 21, 1964

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INDUSTRIAL HYGIENE

Potable Water Sampling

During this quarter a total of 207 potable water samples were taken from water fountains throughout the Plant area. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. Only one sample contained one or more colonies of coliform bacteria. The Plant Sanitary Engineer was informed and action was initiated. Resamples were free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek for pH and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 4 to 20 ppm; sulfates - 36 to 76 ppm; chlorides - 5 to 26 ppm; and fluorides - 1 to 8 ppm.

The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	8.5 million gals/day	10.2 million gals/day
pH	7.3 - 8.6	8.0

Noise Surveys

Noise surveys made during this quarter revealed that no new installations or equipment created any noise which exceeded the Y-12 Plant criteria. The corrective action which was started last quarter to correct a noise problem produced by a vacuum pickup system for carbon was resurveyed this quarter. The survey indicated that the corrective design by Engineering was effective in reducing the noise below the permissible level.

Beryllium Program

A sharp decrease was experienced in the number of air and smear samples that were taken for beryllium this quarter. This decrease was the result of the strike which

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Third Quarter, FY 1964
January-March

F-11, 13, 14

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Oak Ridge, Tennessee
May 21, 1964

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

		This Quarter	Last(1) Quarter	Average FY 1964
Disabling Injuries	- On Job	1	0	0.3
	- Off Job	17	9	13
Days Lost or Charged	- On Job	51	0	17
	- Off Job	431	296	409
Accident Rates, Disabling	- Frequency	0.33	0	0.11
	- Severity	17	0	6
Number of Serious Injuries (doctor's cases)		40	31	36
Total Number of Injuries		41	31	37
Direct Costs (compensation and medical expenses for disabling injuries)(2)		$1222.16	$1463.74	$4902.64(3)

(1) Final as explained in introduction to Part F.
(2) It is considered that the indirect cost exceeds by four times the direct cost.
(3) Total for FY 1964.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

During this quarter a total of 149 potable water samples were taken from water fountains throughout the Plant area. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. Three samples contained one or more colonies of bacteria. The Plant Sanitary Engineer was informed and action was initiated. Resamples were taken and were found to be free of bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek for pH and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 2 to 31 ppm; sulfates - 8 to 70 ppm; chlorides - 14 to 38 ppm; and fluorides - 1 to 1.5 ppm.

The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

Noise Surveys

Noise surveys were conducted in three different buildings of the Plant. Only one area located in Building 9206 was found to be above the permissible limits.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	9.6 million gals/day	8.5 million gals/day
pH	7.6 - 9.2	7.3 - 8.6

The source of the noise was from a pulverizer. Supervision was informed of the results and it was recommended that the personnel in this area be provided with ear muffs. The area was posted as a noise control area, stating that ear protection is required.

Beryllium Program

The number of air and smear samples taken this quarter is higher than that of last quarter. Last quarter's results were lower than normal because of the labor strike which occurred during that period.

Additional samples were taken in Building 9201-3 where the ORNL Chemical Group is preparing beryllium-containing salt mixtures for the molten salt reactor. The frequency of the samples taken in both Buildings 9202 and 9766 was increased because of the fabrication and machining of beryllium oxide prepared by Y-12 Development.

Mercury Program

No mercury surveys were conducted during this quarter.

Personnel Exposure

At the request of the Medical Department a total of ten personnel exposure cases were investigated for cause. Five of these were severe cases of chemical dermatoses due to either perchloroethylene or caustic soda in the gloves worn by the employees. After recommendations to correct this problem were made and followed, all five cases cleared up. The remaining cases were problems caused by the following materials: fiber glass, dust from grinders, nitric acid, and hydrochloric acid. In all instances, supervision of the respective employees were advised of the cause and action was taken to prevent a future occurrence.

The urine sampling program for mercury and lead was continued. No sample that was tested for these contaminants exceeded the limit.

Table F-5 presents data concerning the urine program for this and the preceding three quarters.

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Fourth Quarter, FY 1964
April - June 1964

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Oak Ridge, Tennessee
August 21, 1964

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

		This Quarter	Last(1) Quarter	Average FY 1964
Disabling Injuries	- On Job	1	1	0.5
	- Off Job	37	18	17
Days Lost or Charged	- On Job	37	51	22
	- Off Job	899	625	481
Accident Rates, Disabling	- Frequency	0.33	0.33	0.17
	- Severity	12	17	8
Number of Serious Injuries (doctor's cases)		30	40	35
Total Number of Injuries		31	41	35
Direct Costs (compensation and medical expenses for disabling injuries)(2)		$750.19	$1222.16	$5652.83(3)

(1) Final as explained in introduction to Part F.
(2) It is considered that the indirect cost exceeds by four times the direct cost.
(3) Total for FY 1964.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

During this quarter a total of 166 potable water samples were taken from water fountains throughout the Plant area. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were free of bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek for pH and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 8 to 32 ppm; sulfates - 20 to 84 ppm; chlorides - 13 to 40 ppm; and fluorides - < 0.01 to 1.5 ppm.

The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

Noise Surveys

Sound-level surveys were made in the areas around the eddy-current testing apparatus and the Rover merry-go-round counter in the west end of C Wing of Building

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Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	9.8 million gals/day	9.6 million gals/day
pH	6.0 - 8.6	7.6 - 9.2

9212. The overall sound levels were observed to be 83 - 85 decibels around the eddy-current testing apparatus and 82 decibels around the merry-go-round counter. All readings were well under the Plant criteria for noise levels and no specific recommendations were made.

Beryllium Program

The total number of both air and smear samples taken in the beryllium operational areas increased over the previous quarter, but the number of samples which exceeded the threshold limit value decreased by approximately 22%.

Mercury Program

Both Buildings 9201-5 and 9201-4 were surveyed for mercury contamination to determine their conditions during shut-down and summer conditions. Supervision was informed of the areas where high readings and visible mercury were found.

Personnel Exposure

A total of thirteen investigations were made this quarter concerning personnel who reported to the Medical Department for aid. The majority of these cases were from dermatoses of machinists who worked with the perchloroethylene-Arochlor coolant mixture for machining uranium. It has been difficult to explain the fact that this coolant has been used in the Plant approximately one year without any problem and then suddenly starts causing problems. Barrier creams were recommended as protection for the hands and arms of the machinists before this mixture was allowed to be used. This investigation has been continued to ascertain if some decomposition product has been produced which is more of a sensitizer than the original solution.

Both urinary sampling programs for mercury and lead were continued this quarter. No results above the urine threshold limit for either metal were reported.

Table F-5 presents data concerning the urine program for this and the preceding three quarters.

Air Analysis

Environmental air and smear analyses were performed for various contaminants found in the Plant operating areas. A breakdown of the analytical results is given in.

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

First Quarter, FY 1965
July - September 1964

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

		This Quarter	Last Quarter(1)	Average FY 1965
Disabling Injuries	- On Job	2	1	2
	- Off Job	26	39	26
Days Lost or Charged	- On Job	106	37	106
	- Off Job	566	1492	566
Accident Rates, Disabling	- Frequency	0.69	0.33	0.69
	- Severity	37	12	37
Number of Serious Injuries (doctor's cases)		41	30	41
Total Number of Injuries		43	31	43
Direct Costs (compensation and medical expenses for disabling injuries)(2)		$1326.98	$750.19	$1326.98(3)

(1) Corrected figures.
(2) It is considered that the indirect cost exceeds by four times the direct cost.
(3) Total for FY 1965.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

During this quarter a total of 139 potable water samples were taken from water fountains throughout the Plant area. These samples were analyzed for total residual chlorine and for the presence of coliform and noncoliform bacteria. Three samples were found to contain one or more colonies of bacteria. The Plant Sanitary Engineer was informed and action was initiated. Resamples were free of bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek for pH and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 8 to 32 ppm; sulfates - 20 to 84 ppm; chlorides - 13 to 40 ppm; and fluorides - < 0.01 to 1.5 ppm.

The average pH and creek flow for this and the preceding quarters are presented in Table F-4.

Noise Surveys

Surveys made in the Building 9206 uranium chip processing area revealed that the chip crusher was creating sound levels above the Plant noise criteria. Corrective

[redacted]

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	7.8 million gals/day	9.8 million gals/day
pH	7.2 - 8.9	6.0 - 8.6

measures were taken by supervision when informed of these results. A resurvey of this process showed that the maintenance work performed had reduced the noise level sufficiently below the criteria level and ear protection was no longer required.

A resurvey of Building 9723-3 was made after an acoustical enclosure had been constructed around the refrigeration compressors. The results of the survey disclosed that the enclosure was very effective in reducing the noise level of the building. The area, however, was not removed from the noise risk category by the Medical Department. An area between the air and nitrogen compressor remains above the plant criteria for noise levels.

Beryllium Program

Both the number of samples required to maintain a surveillance of the beryllium areas and the samples above the limit of 2 μg per cubic meter of air showed a significant decrease this quarter. The samples taken were reduced by 333 and the number above the limit decreased from a total of 33 to 2.

Mercury Program

Daily surveys were made in the mercury bottling facility in Building 9201-5, which was started up again during this quarter. The surveys showed the area to be above the threshold limit for mercury and the personnel performing the work were required to wear respirators.

Recommendations were made to an ORNL reactor group planning to use mercury for solubility studies in Building 9204-1. These recommendations required that the experiment be conducted in a hood with good ventilation. Daily surveys of this facility indicated that air-borne mercury was creating no problems.

Personnel Exposures

Three investigations involving five individuals were requested by the Medical Department during this quarter.

Dust on a new gasket from Stores caused minor irritation on the faces of two individuals. Investigation and analysis showed the dust to contain zinc sulfate and phosphate.

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Report Number Y-1427

This document contains 113 pages.
Copy 39 of 41, Series A.

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Second Quarter, FY 1965
October - December 1964

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Oak Ridge, Tennessee
February 23, 1965

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Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged in concentration as follows: nitrates - 9 to 11 ppm; sulfates - 41 to 55 ppm; chlorides - 22 to 40 ppm; and fluorides - < 0.01 to 1.1 ppm.

The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

Table F-4
POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	7.8 million gals/day	7.8 million gals/day
pH	7.2 - 8.8	7.2 - 8.9

Noise Surveys

A sound-level survey was made in the Sherwood area, second floor of Building 9201-2, during normal operating conditions. The overall sound levels were observed to be 77 - 82 decibels which are within the noise criteria set for the Plant.

Construction in the A-2 Wing of Building 9212 warranted a noise-level survey when both jack hammers and a concrete saw were in use. The overall sound levels were found to be 100 - 102 decibels and the frequency band of 300 - 4800 cps was observed to be 90 - 95 decibels. Because these levels were well above the noise risk criteria of 85 decibels in the frequency bands, recommendations were made to Ferguson Company supervision that their employees wear ear protection when performing this type of construction.

Beryllium Program

The number of samples above the airborne threshold limit for beryllium showed a slight increase over the previous quarter. However, all beryllium areas remained well under control during this quarter from a health standpoint.

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Mercury Program

The number of routine surveys for mercury sharply decreased this quarter due to the curtailment of the bottling operation in Building 9201-5. Nonroutine surveys were made at the request of supervision in Buildings 9207, 9737, 9204-1, 9201-3, 9204-3, and 9201-5. The results of these surveys indicated that a health problem was not being created from the manner or amount in which the mercury was handled. Although no health problem was involved, recommendations on the control of mercury contamination were made to the supervisor of the Instrument Standard Testing Laboratory in Building 9737. It was suggested that the storage cabinet used for the mercury-coated contacts used to calibrate electrical equipment be ventilated to prevent damage to other equipment in the proximity.

Personnel Exposures

At the request of the Medical Department, four investigations were made to determine if health problems were created by the individuals' work environment.

Two cases of dermatitis were found to have been caused by perchloroethylene and silicone rubber hardner. In both cases recommendations were made to the individual and to his supervisor to prevent further attack from these materials. Another case of dermatitis was investigated, but the cause could not be determined. The possibility of a nonoccupational agent was suspected as the cause.

Another inquiry was made concerning the possible exposure of an individual to heavy metals. It was ascertained from information gained from the individual's supervisor that his work environment would not expose him in any way to heavy metals.

Urinary sampling programs for both mercury and lead were continued. No results above the threshold limit for either metal were reported. Table F-5 presents data concerning the urine program for this and the preceding three quarters.

Air Analysis

Environmental air and smear analyses were performed for various contaminants found in the Plant operating areas. A breakdown of the analytical results is given in Table F-6. In addition, Table F-7 gives the number of samples taken at stack effluents as atmospheric samples, and by smears on miscellaneous equipment.

Miscellaneous

Twelve individuals participated in the Respirator Testing Facility program this quarter, making an overall total of 424 who have been properly fitted with the respirator which gives the individual a correct fit.

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Report Number Y-1428

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

A 8, B 13, F 12

Contract W-7405-eng-26
With the US Atomic Energy Commiss

Y-12 PLANT QUARTERLY REPORT

Third Quarter, FY 1965
January - March 1965

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Oak Ridge, Tennessee
May 21, 1965

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

		This Quarter	Last Quarter(1)	Average FY 1965
Disabling Injuries	- On the Job	0	4	2
	- Off the Job	25	33	32
Days Lost or Charged	- On the Job	0	345	168
	- Off the Job	762	6972(2)	2777
Accident Rates, Disabling	- Frequency	0	1.39	0.71
	- Severity	0	120	52
Number of Serious Injuries (doctor's cases)		39	40	40
Total Number of Injuries		39	44	42
Direct Costs (compensation and medical expenses for disabling injuries)(3)		$3533.80	$5108.07	$9968.85(4)

(1) Corrected figures.
(2) Includes one fatality.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1965.

chlorine and for the presence of coliform and noncoliform bacteria. All samples were free of bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 8 to 12 ppm; sulfates - 52 to 60 ppm; chlorides - 20 to 39 ppm; and fluorides - 0.3 to 1.2 ppm.

The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	9.0 million gals/day	7.8 million gals/day
pH	7.1 - 9.3	7.2 - 8.8

Noise Surveys

A sound-level survey was made during the operation of a Vibrobar atomizer located temporarily in Building 9202. The levels in both frequency bands of 1200 - 2400 and 2400 - 3800 cycles per second were found to be above the Plant criterion of 82 db for pure tones. Ear protection, such as ear muffs, was prescribed for

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Fourth Quarter, FY 1965
April - June, 1965

F-11, 12, 13, 14,

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UNCLASSIFIED

Oak Ridge, Tennessee
August 20, 1965

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

		This Quarter	Last Quarter(1)	Average FY 1965
Disabling Injuries	- On the Job	2	0	2
	- Off the Job	26	25	28
Days Lost or Charged	- On the Job	6047(2)	0	1,638
	- Off the Job	765	935	2,319
Accident Rates, Disabling	- Frequency	0.79	0	0.73
	- Severity	2396	0	594
Number of Serious Injuries (doctor's cases)		33	39	38
Total Number of Injuries		35	39	40
Direct Costs (compensation and medical expenses for disabling injuries)(3)		$3322.87	$3533.80	$13,291.72(4)

(1) Corrected figures.
(2) Includes one fatality.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1965.

Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees. Included at times were comprehensive inspections of shops and production buildings with recommendations made covering indicated potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

During this quarter a total of 30 potable water samples were taken from water fountains throughout the Plant area. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at

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low concentrations. The anions ranged as follows: nitrates - 5 to 20 ppm; sulfates - 36 to 52 ppm; chlorides - 16 to 31 ppm; and fluorides - 1.1 to 1.4 ppm.

The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	8.3 million gals/day	9.0 million gals/day
pH	6.0 - 8.8	7.1 - 9.3

Noise Surveys

A noise survey made in Building 9998 during a swaging operation showed that the sound pressure levels were exceeding the Plant criteria. The Medical Department was advised of this unfavorable condition. The area was proclaimed a noise risk area and ear protection was declared mandatory when the swaging facility is in operation.

Another survey was made in Building 9202 in which a fluid energy mill was being operated. This study revealed that the noise level was above the recommended level. Since this facility is not in continuous operation, the area containing the fluid energy mill was not declared a noise risk; however, it was recommended that ear protection be worn when the mill is in operation.

Beryllium Program

The number of both air and smear samples necessary to maintain adequate coverage in the beryllium areas of the plant was further reduced this quarter. Only two samples this report period were above the threshold limit value of 2 $\mu gs/M^3$ compared to 73 for the previous quarter.

Mercury Program

Surveys for mercury concentrations were made twice daily during the stripping operations in Building 9201-5. A total of 2930 readings were recorded. Prior to April 15, all readings were recorded regardless of concentration (mg/M^3); however, effective April 15, only the readings $\geqq 0.1$ mg/M^3 were recorded. This reporting change provides supervision of these areas with condensed and precise reports of the areas and locations indicating high concentrations. Copies of the survey reports are furnished supervision daily. This service provides for immediate corrective and/or personnel protective action.

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Category: Weapon Data

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This is copy 35 of 37 Series a

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UNION CARBIDE CORPORATION
Nuclear Division

INVENTORIED AUG 2 0 1971

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

First Quarter, FY 1966
July - September, 1965

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Oak Ridge, Tennessee

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

		This Quarter	Last Quarter(1)	Average for FY 1966
Disabling Injuries	- On the Job	1	2	1
	- Off the Job	28	27	28
Days Lost or Charged	- On the Job	62	6047(2)	62
	- Off the Job	658	794	658
Accident Rates, Disabling	- Frequency	0.40	0.79	0.40
	- Severity	25	2396	25
Number of Serious Injuries (doctor's cases)		43	33	43
Total Number of Injuries		44	35	44
Direct Costs (compensation and medical expenses for disabling injuries)(3)		$3102.41	$3322.87	$3102.41(4)

(1) Final as explained in Introduction to Part F.
(2) Includes one fatality.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1966.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

During this quarter a total of 34 potable water samples were taken from water fountains throughout the Plant area. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek and composited weekly for the spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 10 to 20 ppm; sulfates - 40 to 48 ppm; chlorides - 16 to 20 ppm; and fluorides - 1.0 ppm.

The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

Noise Survey

A noise survey was made this quarter in the Rover area of Building 9212. The survey

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	9.6 million gals/day	8.3 million gals/day
pH	6.8 - 7.9	6.0 - 8.8

was requested by supervision to determine if the noise level had increased since the previous one made earlier this year. No change was noted and the noise levels remained below the Plant criteria level.

Beryllium Program

A twenty percent reduction in the number of permanent air samples necessary to adequately monitor the beryllium areas was noted this quarter. There were no permanent air samples reported above the threshold limit of 2 $\mu gms/M^3$ for airborne beryllium.

Mercury Program

Surveys for mercury concentrations were continued this quarter in the Building 9201-5 stripping operations. A total of 1382 measurements above the threshold limit of 0.1 mg/M^3 were recorded this quarter. These measurements pointed out the areas in the building in which respiratory equipment was mandatory.

Personnel Exposure

Investigations revealed that dermatitis on the hands of two employees was primarily due to perchloroethylene. Recommendations were made to improve the techniques which were causing the problems of one employee. The other employee was temporarily restricted from the use of perchloroethylene by the Medical Department.

Twelve employees showed a value that exceeded the limit for mercury in urine (0.3 mg/l). Five of these employees were restricted by the Medical Department from mercury-contaminated areas. However, one restriction was lifted when the employee showed three values below the limit.

No employees on the urine program for lead exceeded the recommended level of 0.15 mg/l during this quarter. Table F-5 presents data concerning the urine programs for this and the preceding three quarters.

Air Analysis

Environmental air and smear analyses were performed to determine the extent of various contaminants found in the Plant operation areas. Table F-6 gives a breakdown of the analytical results of routine samples taken during the quarter. In addition,

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT (U)

Second Quarter, FY 1966
October - December, 1965

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Oak Ridge, Tennessee

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

		This Quarter	Last Quarter(1)	Average for FY 1966
Disabling Injuries	- On the Job	1	1	1
	- Off the Job	30	31	32
Days Lost or Charged	- On the Job	30	93	62
	- Off the Job	6837	795	3816
Accident Rates, Disabling	- Frequency	0.41	0.40	0.40
	- Severity	12	25	25
Number of Serious Injuries (doctor's cases)		40	43	42
Total Number of Injuries		41	44	43
Direct Costs (compensation and medical expenses for disabling injuries)(2)		$2230.39	$3102.41	$5332.80(3)

(1) Final figures.
(2) It is considered that the indirect cost exceeds by four times the direct cost.
(3) Total for FY 1966

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

During this quarter a total of 120 potable water samples were taken from water fountains throughout the Plant area. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 4 to 8 ppm; sulfates - 37 to 40 ppm; chlorides - 16 to 18 ppm, and fluorides - 1.2 ppm.

The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

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Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	7.8 million gals/day	9.6 million gals/day
pH	7.0 - 8.1	6.8 - 7.9

Beryllium Program

An increase of 11% in the number of beryllium air samples was noted this quarter over the number collected last quarter.

Mercury Program

Surveys for mercury concentrations were continued this quarter in Building 9201-5 stripping operations. A total of 1286 measurements above the threshold limit of ≥ 0.1 mg/M^3 were recorded this quarter compared to 1387 measurements last quarter. These measurements indicated the areas in the building in which respiratory equipment is mandatory.

Although an increase in stripping operations was noted this quarter, fewer readings greater than the threshold limit were recorded which may be explained by the decrease in the ambient temperatures which decrease vapor activity.

Personnel Exposure

Five moderate to severe cases of dermatitis were investigated upon request by the Plant physicians. Chlorinated solvents and epoxy hardeners were found to be the primary cause. In each case, precautions were recommended to alleviate the cause.

Eleven employees showed a value that exceeded the limit for mercury in urine of 0.3 mg/l. Three of these employees were restricted by the Medical Department from mercury contaminated areas. Three restrictions were lifted when the employees showed three excretion values below the limit.

No employee on the urine program for lead exceeded the recommended level of 0.15 mg/l during this quarter. Table F-5 presents data concerning the urine programs for this and the preceding three quarters.

Respirator Test Facility

Sixty-four employees were checked for respirator fit this quarter. This number brings the total to 512 employees who have been provided this service.

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT (U)

Third Quarter, FY 1966
January - March, 1966

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Oak Ridge, Tennessee

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

		This Quarter	Last Quarter(1)	Average for FY 1966
Disabling Injuries	- On the Job	2	1	1
	- Off the Job	17	30	26
Days Lost or Charged	- On the Job	60	30	61
	- Off the Job	338	7076	2736
Accident Rates, Disabling	- Frequency	0.78	0.41	0.53
	- Severity	23	12	24
Number of Serious Injuries (doctor's cases)		34	40	39
Total Number of Injuries		36	41	40
Direct Costs (compensation and medical expenses for disabling injuries)(2)		$1094.40	$2230.39	$6427.20(3)

(1) Final as explained in Introduction to Part F.
(2) It is considered that the indirect cost exceeds by four times the direct cost.
(3) Total for FY 1966.

Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees. Included at times were comprehensive inspections of shops and production buildings with recommendations made covering indicated potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

During this quarter, a total of 31 potable water samples were taken from water fountains throughout the Plant area. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at

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low concentrations. The anions ranged as follows: nitrates - 4 to 13 ppm; sulfates - 32 to 40 ppm; chlorides - 10 to 18 ppm, and fluorides - 1.2 to 1.4 ppm.

The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	9.5 million gals/day	7.8 million gals/day
pH	7.0 - 8.0	7.0 - 8.1

Beryllium Program

A five percent increase in the number of air samples for beryllium was noted this quarter.

Most recent results indicate good control and concentrations well below the TLV in the beryllium operating facilities.

Mercury Program

Surveys for mercury concentrations were continued this quarter in Building 9201-5 stripping operations. A total of 1658 measurements above the threshold limit of ≥ 0.1 mg/M^3 were recorded this quarter as compared to 1286 measurements last quarter. These measurements indicate the areas in the building in which respiratory equipment is mandatory.

The increase in the number of measurements above the threshold limit can be attributed to the dismantling of decomposers and separation columns and a general increase in work activity. Steps have been taken to reduce and control air concentrations in future dismantling of the columns and decomposers.

Personnel Exposure

During the quarter, the Plant physicians requested that investigations be made in five cases of various illnesses. Three of these were from dermatitis caused by carbon dust, thorium, and cutting oil. Two cases were resolved by barrier creams, and the others by transferring the individual to another area. One investigation showed that a grinding operation was not properly ventilated, and a temporary system was devised until a permanent system was installed. The final case was found to be not job connected.

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT (U)

Fourth Quarter, FY 1966
April - June, 1966

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Oak Ridge, Tennessee

UNCLASSIFIED

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter(1)	Last Quarter(2)	Average for the Year
Disabling Injuries - On the Job	2	2	2
- Off the Job	28	18	26
Days Lost or Charged - On the Job	480	60	58
- Off the Job	680	393	2238
Accident Rates, Disabling - Frequency	0.80	0.78	0.60
- Severity	192	23	66
Number of Serious Injuries (doctor's cases)	34	34	38
Total Number of Injuries	36	36	39
Direct Costs (compensation and medical expenses for disabling injuries)(3)	$2075.33	$1094.40	$8502.53(4)

(1) Preliminary figures.
(2) Final figures.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1966.

Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees. Included at times were comprehensive inspections of shops and production buildings with recommendations made regarding potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

During this quarter a total of 14 potable water samples were taken from water fountains throughout the Plant area. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 4 to 14 ppm; sulfates - 27 to 42 ppm; chlorides - 8 to 12 ppm; and fluorides - 1.0 to 1.6 ppm.

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The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

Table F-4
POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	11.8 million gals/day	9.5 million gals/day
pH	7.1 - 7.9	7.0 - 8.0

Noise Surveys

Although the overall noise level was making communications difficult, a survey made in Building 9201-2 showed that the noise criteria was not exceeded.

Beryllium Program

The total number of samples taken in the various beryllium facilities remains approximately the same as for the previous quarter. This quarter the number of samples above the threshold limit of 2 $\mu g/M^3$ showed a significant increase. These occurred primarily in the Building 9201-5 facilities. All personnel wore respiratory protective devices during this time. Improvements have been recommended and partially completed.

Mercury Program

Surveys for mercury were made in the course of the Building 9201-5 stripping operations during the first two months of the quarter. These operations have been temporarily curtailed due to the increase in the ambient temperature and will not be reactivated until fall. A total of 346 measurements above the limit of 0.1 mg/M^3 were recorded this quarter, compared to 1658 measurements last quarter. Many of these results were obtained after a spill of a large quantity of mercury into a wind tunnel located under the process areas. These measurements were taken to determine the areas of the building in which respiratory protection should be used.

Personnel Exposure

Three investigations were made for the Medical Department to determine the cause of employees' complaints. One case was caused by phosgene produced by the decomposition of trichloroethylene in a welding torch. Movement of this operation to another location solved the problem.

The second case was alleged to have been caused by dust produced by the machining of polystyrene foam. After conferring with industrial hygiene personnel of Union

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT (U)

First Quarter, FY 1967
July - September, 1966

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Oak Ridge, Tennessee

UNCLASSIFIED

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter(1)	Last Quarter(2)	Average
Disabling Injuries - On the Job	2	2	2
- Off the Job	17	28	17
Days Lost or Charged - On the Job	710	480	710
- Off the Job	497	691	497
Accident Rates, Disabling - Frequency	0.78	0.80	0.78
- Severity	277	192	277
Number of Serious Injuries (doctor's cases)	32	34	32
Total Number of Injuries	34	36	34
Direct Costs (compensation and medical expenses for disabling injuries)(3)	$4426.80	$2075.33	$4426.80(4)

(1) Preliminary figures.
(2) Final as explained in Introduction to Part F.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1967.

Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees. Included at times were comprehensive inspections of shops and production buildings with recommendations made covering indicated potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of 15 potable water samples were taken from water fountains throughout the Plant area this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Four samples were taken outside the Plant area from a spring which was used for potable water by a logging contractor. All samples showed coliform bacteria too numerous to count. The spring was posted: "Notice: Water Unfit for Drinking".

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Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determination. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 10 to 14 ppm; sulfates - 34 to 44 ppm; chlorides - 10 to 12 ppm; and fluorides - 1.0 to 1.2 ppm.

The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	10.7 million gals/day	11.8 million gals/day
pH	7.1 - 8.6	7.1 - 7.9

Noise Surveys

Three noise surveys were made this quarter. One survey in the jig grinding room of the Building 9201-1 machine shop area revealed that the noise criterion was equaled (85 DB) in the frequency range of 600 - 1200 cycles per second. Recommendations were made for ear protection until engineering changes could be made. A survey made in Building 9737 during the test on an "Apollo" storage box with a MB vibration system indicated that no noise problem existed during this particular test. A survey in an office of Building 9204-1 revealed that the noise was at a nuisance level but no hearing hazard existed.

Beryllium Program

Due to a sharp increase last quarter in the number of general air samples that exceeded the threshold limit of 2 $\mu gs/M^3$ when compared to previous quarters, a concentrated effort was made this quarter to establish the source of contamination. Two hundred and fifty-three operational samples were taken, compared to 150 last quarter. Of the 253 operational air samples collected, 24 exceeded the threshold limit for operationals (25 $\mu gs/M^3$).

Extensive recommendations have been made regarding equipment changes, operating techniques, and improved housekeeping practices. During this report period, none of the general air samples exceeded the limit permissible for general air concentrations.

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Date Issued: April 26, 1967

Report Number Y-1515

This document contains 94 pages.
Copy 31 of 33, Series A.

Subject Category: Weapon Data

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INVENTORIED AUG 20 1973

UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT (U)

Second Quarter, FY 1967
October - December, 1966

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Oak Ridge, Tennessee

UNCLASSIFIED

[redacted]

Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter(1)	Last Quarter(2)	Average
Disabling Injuries - On the Job	2	2	2
- Off the Job	10	19	15
Days Lost or Charged - On the Job	801	710	756
- Off the Job	6249	687	3468
Accident Rates, Disabling - Frequency	0.79	0.78	0.79
- Severity	316	277	297
Number of Serious Injuries (doctor's cases)	37	32	36
Total Number of Injuries	39	34	38
Direct Costs (compensation and medical expenses for disabling injuries)(3)	$5138.73	$4426.80	$9565.53(4)

(1) Preliminary figures.
(2) Final as explained in Introduction to Part F.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1967.

Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees. Included at times were comprehensive inspections of shops and production buildings, with recommendations made covering indicated potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of six potable water samples were taken from water fountains this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the east fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 3 to 8 ppm; sulfates - 48 to 60 ppm; chlorides - 14 to 20 ppm; and fluorides - 1.1 to 1.2 ppm.

The average results for pH and creek flow for this and the preceding quarters are presented in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	9.3 million gals/day	10.7 million gals/day
pH	7.2 - 8.4	7.1 - 8.6

Beryllium Program

The sharp increase in the number of general air samples exceeding the threshold limit (TLV) of 2 $\mu g/M^3$ this quarter when compared to previous quarters is due to an extensive monitoring program initiated while stripping the beryllium upgrading and grinding facilities in Building 9201-5. Ninety-eight percent of the 169 samples exceeding the TLV during this report period were collected within the 9201-5 beryllium stripping areas. Respiratory protection equipment, special clothing, and special showering facilities were furnished the personnel assigned to this job. The job, which began in October, was completed at the close of this quarter. One hundred and eighty-six operationals were taken this quarter. Five of the 186 samples exceeded the threshold limit of 25 $\mu g/M^3$ for operationals.

Respirators were worn during these operations.

Mercury Program

Emphasis again has been put on stripping the mercury facilities in Building 9201-5. A total of 1331 readings were taken during this period with 504 of the measurements above the limit of 0.1 mg/M^3. Standard practice for this activity requires that all personnel wear respiratory protection equipment while working in the mercury stripping operations.

Personnel Exposure

Two cases of illness were investigated for cause at the request of the Medical Department this quarter.

The first case was alleged to have been caused by using Varcum and acetone. Investigations indicated that the manner of use and the quantity involved would not likely cause this type of illness. The individual was temporarily transferred by his supervision to another area in an effort to help alleviate his illness.

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Copy 29 of 31, Series A.

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INVENTORIED AUG 24 1971

UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT (U)

Third Quarter, FY 1967
January - March 1967

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Oak Ridge, Tennessee

UNCLASSIFIED

[redacted]

Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter(1)	Last Quarter(2)	Average
Disabling Injuries - On the Job	2	2	2
- Off the Job	17	10	12
Days Lost or Charged - On the Job	98	862	557
- Off the Job	12,480	6,270	6,479
Accident Rates, Disabling - Frequency	0.76	0.79	0.78
- Severity	37	316	210
Number of Serious Injuries (doctor's cases)	30	37	33
Total Number of Injuries	32	39	32
Direct Costs (compensation and medical expenses for disabling injuries)(3)	$1,803.77	$5,138.73	$11,414.30(4)

(1) Preliminary figures.
(2) Final figures.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1967.

Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees. Included at times were comprehensive inspections of shops and production buildings with recommendations made covering indicated potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of 13 potable water samples were taken from Y-12 water fountains this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anion concentrations ranged as follows: nitrates - 8 to 16 ppm, sulfates - 38 to 42 ppm, chlorides - 10 to 19 ppm, and fluorides - 0.7 to 1.1 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	8.9 million gals/day	9.3 million gals/day
pH Range	7.3 - 8.6	7.2 - 8.4

Beryllium Program

Three percent of the 2,366 general air samples collected this quarter exceeded the threshold limit value (TLV) of 2 $\mu gs/M^3$.

The areas from which samples were collected that exceeded the TLV are now areas in which respirators are required. Additional information and the previous quarter's comparisons are given in Table F-5.

Table F-5

ROUTINE ENVIRONMENTAL ANALYSES

		This Quarter			Last Quarter		
Contaminant	Threshold Limit Value/8 Hours	Number of Samples	Number Above TLV	Percent Above TLV	Number of Samples	Number Above TLV	Percent Above TLV
Beryllium (air)	2 $\mu gs/M^3$	2,366	77	3.3	2,348	169	7.2
Beryllium (smear)	25 $\mu gs/12\ in^2$	821	87	10.6	883	71	8.0
Chromic Acid	100 $\mu gs/M^3$	6	0	0.0	6	0	0.0
Hydrogen Cyanide	10 ppm	17	2	11.8	0	0	0.0
Mercury	0.10 mgs/M^3	1,866	612	32.8	1,331	504	37.9
Perchloroethylene	100 ppm	104	12	11.5	0	0	0.0

Mercury Program

Stripping of the mercury facilities in Building 9201-5 has been completed. A total of 1,866 readings were taken during this report period with 612 of the measurements above the limit of 0.1 mg/M^3. One hundred and twenty persons submitted 230 samples to be analyzed for mercury. Of the 120 persons, three submitted samples which indicated a mercury content in excess of the excretion limit of 0.3 mg/l.

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT (U)

Fourth Quarter FY 1967
April - June 1967

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Oak Ridge, Tennessee

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RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of ten potable water samples were taken from water fountains this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek and composited weekly for the spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged in concentration as follows: nitrates - 1 to 13 ppm, sulfates - 31 to 48 ppm, chlorides - 12 to 15 ppm, and fluorides - 1.2 to 1.3 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	8.5 million gals/day	8.9 million gals/day
pH Range	7.4 - 8.7	7.3 - 8.6

Beryllium Program

Less than two percent of the 2,951 general air samples collected this quarter, compared to three percent last quarter, exceeded the threshold limit (TLV) of 2 $\mu gs/M^3$. The highest value observed was 6 $\mu gs/M^3$. Most of the high samples recorded this report period were collected from the plasma-spray operations in Building 9201-5.

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

First Quarter, FY 1968

July - September 1967

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Oak Ridge, Tennessee

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter(1)	Last Quarter(2)	Average for FY 1968
Disabling Injuries - On the Job	2	1	2
- Off the Job	19	33	19
Days Lost or Charged - On the Job	128	270	128
- Off the Job	575	13,227	575
Accident Rates, Disabling - Frequency	0.75	0.38	0.75
- Severity	48	102	48
Number of Serious Injuries (doctor's cases)	32	33	32
Total Number of Injuries	34	34	34
Direct Costs (compensation and medical expenses for disabling injuries)(3)	$2,627.02	$ 3,954.28	$2,627.02(4)

(1) Preliminary figures.
(2) Final figures.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1968

Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees. Included at times were a comprehensive inspection of shops and production buildings with recommendations made covering indicated potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of eight potable water samples were taken from water fountains this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of the coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determination. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 5 to 10 ppm, sulfates - 34 to 41 ppm, chlorides - 6 to 14 ppm, and fluorides - 1.0 to 2.0 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	9.9 million gals/day	8.5 million gals/day
pH Range	7.2 - 8.3	7.4 - 8.7

Beryllium Program

Six percent (195 samples) of the 3,097 general air samples collected throughout the Plant for beryllium airborne concentrations this quarter exceeded the threshold limit (TLV) of 2 μgs/M^3, compared to two percent last quarter.

Further consideration will be given to improving the operation techniques, equipment condition and design, and housekeeping practices.

The number of surface contamination surveys (smears) exceeding the TLV of 25 μgs/12 in^2 for all beryllium areas increased to 34 percent this quarter from the 14 percent reported last quarter.

Mercury Program

A total of 218 readings were taken this report period for mercury concentrations. Sixty-two readings exceeded the TLV of 0.10 mg/M^3. Most of these samples were taken in areas where construction personnel were to work. Areas indicating mercury concentrations were cleaned by operations personnel prior to the beginning of construction. Surveys were also taken during construction when conditions required. Respiratory protection was prescribed when necessary. Table F-5 summarizes the current information and that for the previous quarter.

Ten persons submitted 15 urine samples to be analyzed for mercury. None of the samples indicated a mercury content in excess of the excretion limit of 0.3 mg/l. Currently, there are no employees having mercury restrictions. Urinary data for mercury for this and the preceding three quarters are presented in Table F-6.

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Document Y-1519

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Copy 32 of 34, Series A.

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Second Quarter, FY 1968

October - December 1967

F11-14

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Oak Ridge, Tennessee

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter(1)	Last Quarter(2)	Average for FY 1968
Disabling Injuries - On the Job	1	2	1.5
- Off the Job	16	20	18
Days Lost or Charged - On the Job	50	142	96
- Off the Job	6,598	811	3,705
Accident Rates, Disabling - Frequency	0.37	0.75	0.56
- Severity	18	48	36
Number of Serious Injuries (doctor's cases)	26	32	29
Total Number of Injuries	27	34	31
Direct Costs (compensation and medical expenses for disabling injuries)(3)	$3,221.11	$2,627.02	$5,848.13(4)

(1) Preliminary figures.
(2) Final figures.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1968.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of ten potable water samples were taken from water fountains this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 5 to 10 ppm, sulfates - 29 to 37 ppm, chlorides - 7 to 13 ppm, and fluorides - 1.2 to 1.5 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	9.8 million gals/day	9.9 million gals/day
pH Range	7.0 - 8.8	7.2 - 8.3

Beryllium Program

Seven percent (236 samples) of the 3,548 general air samples collected throughout the Plant for beryllium airborne concentrations this quarter exceeded the threshold limit (TLV) of 2 μgs/M^3, compared to six percent last quarter.

As indicated by these data, continuing efforts must be made regarding the improvement of such factors as operating techniques, equipment condition and design, and good housekeeping practices if environmental conditions within the area are to be improved.

The number of surface-contamination surveys (smears) exceeding the TLV of 25 μgs/12 in^2 for all beryllium areas showed a decline from 34 percent last quarter to 28 percent this quarter.

Mercury Program

A total of 615 readings were taken this report period for mercury concentrations. Seventy percent of these readings exceeded the TLV of 0.10 mg/M^3. Most of these samples were taken in areas where construction personnel were to work or were presently working. Many of the high readings recorded were within areas where floor drains and/or tanks were being removed. Areas indicating mercury concentration were cleaned by operations personnel, and respiratory protection was prescribed where necessary. Refer to Table F-5 for additional information on the sampling programs for mercury. Data for the three previous quarters are repeated for purposes of comparison.

Personnel Exposure

Three investigations were made for the Medical Department to help determine the cause of illness.

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Third Quarter, FY 1968

January - March 1968

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Oak Ridge, Tennessee

UNCLASSIFIED

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter	Last Quarter(1)	Average for FY 1968
Disabling Injuries - On the Job	1	1	1.33
- Off the Job	23	16	20
Days Lost or Charged - On the Job	109	89	113
- Off the Job	789	6,619	2,739
Accident Rates, Disabling - Frequency	0.35	0.37	0.48
- Severity	38	33	39
Number of Serious Injuries (doctor's cases)	20	26	26
Total Number of Injuries	21	27	27
Direct Costs (compensation and medical expenses for disabling injuries)(2)	$2,173.63	$3,221.11	$8,021.76(3)

(1) Final as explained in Introduction to Part F.
(2) It is considered that the indirect cost exceeds by four times the direct cost.
(3) Total for fiscal year.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of 13 potable water samples were taken from water fountains this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged in concentration as follows: nitrates - 3 to 14 ppm, sulfates - 28 to 54 ppm, chlorides - 11 to 12 ppm, and fluorides - 1.3 to 1.7 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

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Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	9.7 million gals/day	9.8 million gals/day
pH Range	6.9 - 8.3	7.0 - 8.8

Beryllium Program

Four percent (146 samples) of the 3,950 general air samples collected throughout the Plant for beryllium airborne concentrations this quarter exceeded the threshold limit (TLV) of 2 μgs/M^3, compared to seven percent last quarter.

For virtually the same number of samples collected the past two quarters, there were 89 less samples exceeding the TLV this quarter compared to last quarter. Continuing efforts are being made to improve the operating conditions

While grinding beryllium oxide in the Alpha-5 machine shop, a small flash fire occurred involving contaminated kerosene. Kerosene was being used as a coolant to grind beryllium oxide using a diamond wheel. It is believed that the coolant supply ran low and the coolant stopped momentarily, causing heat to be generated against the wheel and the part. When the coolant came back on and made contact with the hot wheel and part, the centrifugal force of the wheel caused the coolant to vaporize and a flash fire occurred. Most of the fire was contained within the hood. It is believed that all the smoke was removed through the hood exhaust since no smoke was seen escaping the hood into the general room atmosphere. The fire was quickly extinguished with a powder extinguisher. The following environmental monitoring surveys were made: one operational sample with a Hi-Volume sampler, seven permanent operational samples, and ten removable surface contamination (smear) surveys. The results from these surveys are as follows:

1. Operational with the Hi-Vol Sampler: < 0.02 μg/M^3.

2. Permanent Operationals: < 0.02 μg/M^3.

3. Smears: average smear, 2.7 μgs/12 in^2 (high - 5.7 μgs; low - 0.1 μg).

These results indicate that no significant contamination escaped into the environs of the machining area. The TLV for air is 2.0 μgs/M^3; the TLV for smears is 25 μgs/12 in^2. The coolant for this operation has been changed to perchloroethylene to prevent any reoccurrence of a flash-fire problem.

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Date Issued: November 7, 1968

Document Y-1631

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INVENTORIED AUG 22 1973

UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Fourth Quarter, FY 1968

April - June 1968

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Oak Ridge, Tennessee

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter(1)	Last Quarter(2)	Average for FY 1968
Disabling Injuries - On the Job	0	1	1
- Off the Job	13	26	18
Days Lost or Charged - On the Job	0	184	104
- Off the Job	469	1,257	2,289
Accident Rates, Disabling - Frequency	0	0.35	0.36
- Severity	0	38	37
Number of Serious Injuries (doctor's cases)	22	20	25
Total Number of Injuries	22	21	26
Direct Costs (compensation and medical expenses for disabling injuries)(3)	$2,909.60	$2,173.63	$10,931.36(4)

(1) Preliminary figures.
(2) Final figures.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1968.

form and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations; the anions ranged as follows: nitrates - 3 to 11 ppm, sulfates - 29 to 50 ppm, chlorides - 10 to 11 ppm, and fluorides - 1.2 to 1.4 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	10.6 million gals/day	9.7 million gals/day
pH Range	6.6 - 7.2	6.9 - 8.3

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Document Y-1632

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

First Quarter, FY 1969

July - September 1969

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Oak Ridge, Tennessee

UNCLASSIFIED

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Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees. Included at times were comprehensive inspections of shops and production buildings with recommendations made covering indicated potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of 16 potable water samples were taken from water fountains this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged in concentration as follows: nitrates - 1 to 4 ppm, sulfates - 24 to 39 ppm, chlorides - 7 to 17 ppm, and fluorides - 0.2 to 1.7 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

Beryllium Program

A total of 4,343 general air samples were collected throughout the Plant for beryllium airborne concentrations of which 205 samples exceeded the threshold limit value (TLV) of 2 $\mu gs/M^3$. This number represents a slight decrease in the percentage of samples greater than the TLV (4.7 compared to 5% last quarter).

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	10.3 million gals/day	10.6 million gals/day
pH Range	6.7 - 7.8	6.6 - 7.2

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Document Y-1633

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Subject Category Weapon Data

Atomic Weapon Data Category Sigma 1

INVENTORIED SEP 3 1971

UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

INVENTORIED AUG 22 1973

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Second Quarter, FY 1969

October - December 1968

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declassification.

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter(1)	Last Quarter(2)	Average for FY 1969
Disabling Injuries - On the Job	1	0	0.5
Off the Job	6	21	14
Days Lost or Charged - On the Job	29	0	15
Off the Job	6,334	6,539	6,437
Accident Rates, Disabling - Frequency	0.35	0	0.18
Severity	10	0	5
Number of Serious Injuries (doctor's cases)	32	40	36
Total Number of Injuries	33	40	37
Direct Costs (compensation and medical expenses for disabling injuries)(3)	$ 608.18	$2,630.77	$3,289.95(4)

(1) Preliminary figures.
(2) Final figures.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1969.

Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees. Included at times were comprehensive inspections of shops and production buildings with recommendations made covering indicated potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of five potable water samples were taken from water fountains this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations con-

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tinue to remain at low concentrations; the anions ranged as follows: nitrates - 5 to 15 ppm, sulfates - 36 to 53 ppm, chlorides - 11 to 13 ppm, and fluorides - 1.1 to 1.6 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

Table F-4
POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	9.7 million gals/day	10.3 million gals/day
pH Range	6.9 - 8.2	6.7 - 7.8

Beryllium Program

A total of 4,492 general air samples were collected throughout the Plant for beryllium airborne concentrations of which 71 samples exceeded the threshold limit value (TLV) of 2 $\mu gs/M^3$. This number represents a significant decrease in the percentage of samples greater than the TLV (1.5% compared to 4.7% last quarter).

All of the ventilation systems both present and future were reviewed, with representatives of Engineering and Fire Protection Departments, with regard to failures or shut downs during emergencies. In some areas a shut down for a failure of a ventilation system could create a health hazard. To minimize this condition, it was agreed that in these areas an audible and visual alarm should be provided to alert personnel that these systems were not functioning and the area should be evacuated.

The number of surface contamination surveys (smears) exceeding the TLV of 25 $\mu gs/12\ in^2$ for all beryllium areas showed a sharp decrease from 33 percent last quarter to 14 percent this quarter.

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Atomic Weapon Data Category Sigma 1

INVENTORIED SEP 3 1971

UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Third Quarter, FY 1969

January - March 1969

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter(1)	Last Quarter(2)	Average for FY 1969
Disabling Injuries - On the Job	0	1	0.33
Off the Job	26	6	18
Days Lost or Charged - On the Job	0	35	12
Off the Job	6,582	6,380	6,500
Accident Rates, Disabling - Frequency	0	0.35	0.11
Severity	0	10	4
Number of Serious Injuries (doctor's cases)	36	32	36
Total Number of Injuries	36	33	36
Direct Costs (compensation and medical expenses for disabling injuries)(3)	0	$608.18	$3,238.95(4)

(1) Preliminary figures.
(2) Final figures.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1969.

of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged as follows: nitrates - 6 to 10 ppm, sulfates - 46 to 58 ppm, chlorides - 12 to 17 ppm, and fluorides - 1.3 to 1.5 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

Beryllium Program

A total of 4,948 general air samples were collected throughout the Plant for beryllium airborne concentrations. Ninety-two samples exceeded the

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	11.0 million gals/day	9.7 million gals/day
pH Range	6.9 - 8.1	6.9 - 8.2

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Fourth Quarter, FY 1969

April - June 1969

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EDUCATION AND CONTROL

Meetings and Lectures

Three hundred and sixty three employee and supervisory safety meetings were held during the quarter with a total attendance of 8,480, and sixteen 40-minute safety lectures were conducted for the indoctrination of new employees with a total attendance of 334.

Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees throughout the quarter. Included at times were comprehensive inspections of shops and production buildings with recommendations made covering indicated potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of 18 potable water samples were taken from water fountains this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations continue to remain at low concentrations. The anions ranged in concentration as follows: nitrates - 5 to 24 ppm, sulfates - 36 to 39 ppm, chlorides - 9 to 10 ppm, and fluorides - 1.3 to 2.0 ppm.

The average results for pH and creek flow for this and the preceding quarter are given in Table F-4.

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Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	9.4 million gals/day	11.0 million gals/day
pH Range	6.8 - 7.4	6.9 - 8.1

Beryllium Program

Activity in the beryllium program in Building 9201-5 continued to increase this quarter, which resulted in the taking of more air samples than in the previous quarter. The number of samples exceeding the TLV of 2 $\mu gs/M^3$ was 92, which remained the same as in the preceding time period.

The number of surface contamination surveys (smears) exceeding the TLV of 25 $\mu gs/12\ in^2$ for all beryllium areas showed a decrease from 24 percent last quarter to 21 percent this quarter. Of the smear surveys taken in the pilot-plant areas, 39 percent exceeded the TLV this quarter compared to 45 percent last quarter.

Mercury Program

The frequency of the surveys for mercury in Building 9201-5 was further reduced this quarter due to the completion of construction in the remaining process areas. These surveys were made primarily in the wind tunnels where small amounts of residual mercury remain in the expansion joints and crevices in the concrete floors. One special survey was made when some process lines were removed in a pit area. This survey pointed out the need for a cleanup of the area to reduce the threshold level below the accepted value of 0.1 mg/M^3.

No urine samples were submitted by Rust employees this quarter due to the inactivity in the areas where mercury contamination was present.

Refer to Table F-5 for additional information and the previous quarter's comparison.

Personnel Exposure

Six investigations were made this quarter as requested by the Medical Department to assist in determining the cause of illness.

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UNION CARBIDE CORPORATION
Nuclear Division

Y-12 PLANT

Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

First Quarter, FY 1970

July - September 1969

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Oak Ridge, Tennessee

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presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations remain at low concentrations. The anions ranged as follows: nitrates - 4 to 9 ppm, sulfates - 31 to 42 ppm, chlorides - 9 to 14 ppm, and fluorides - 1.3 to 1.8 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	8.4 million gals/day	9.4 million gals/day
pH Range	7.0 - 7.2	6.8 - 7.4

Beryllium Program

There were 84 samples exceeding the TLV of 2 $\mu gs/M^3$, of which 82 were taken in the pilot plant areas.

Fifty-three percent of the samples that exceeded the TLV were taken in four new driver areas. These high readings can be attributed to maintenance work involved in the startup of new units. One permanent air sampler at Driver Unit 13 accounted for 32 percent of the samples above the TLV. Leak tests were made on the enclosure of this driver unit, and several small leaks were located and repaired. Additional air samples taken in the driver room indicated that the feed hopper system may also be a source of contamination. Further studies are being made on the feed hopper system to help locate and correct this problem.

The number of surface contamination surveys (smears) exceeding the TLV of 25 $\mu gs/12\ in^2$ for all beryllium areas showed an increase from 21 percent last quarter to 32 percent this quarter. Of the smear surveys taken in the pilot plant areas, 48 percent exceeded the TLV this quarter compared to 39 percent last quarter.

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Atomic Weapon Data Category Sigma 1

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UNION CARBIDE CORPORATION
Nuclear Division

OAK RIDGE Y-12 PLANT

Operated under Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Second Quarter, FY 1970

October - December 1969

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter(1)	Last Quarter(2)	Average for 1970
Disabling Injuries - On the Job	1	3	2
Off the Job	13	35	24
Days Lost of Charged - On the Job	60	289	175
Off the Job	455	1,060	758
Accident Rates, Disabling - Frequency	0.31	0.93	0.62
Severity	18	20	19
Number of Serious Injuries (doctor's cases)	25	31	28
Total Number of Injuries	26	34	30
Direct Costs (compensation and medical expenses for disabling injuries)(3)	$293.97	$6,294.89	$6,588.86(4)

(1) Preliminary figures.
(2). Final figures.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1970.

Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees. Included at times were comprehensive inspections of shops and production buildings with recommendations made covering indicated potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of 62 potable water samples were taken from water fountains this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Daily water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. Mercury and the other cations remain at low concentrations; the anions ranged as follows:

nitrates - 4 to 21 ppm, sulfates - 24 to 36 ppm, chlorides - 9 to 11 ppm, and fluorides - 0.7 to 1.5 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	8.8 million gals/day	8.4 million gals/day
pH Range	6.8 - 7.8	7.0 - 7.2

Beryllium Program

During the second quarter of Fiscal Year 1970, there were 155 beryllium air samples exceeding the TLV of 2 μgs/M^3. One hundred and forty-eight of these were taken in the second-floor pilot production areas of Building 9201-5. Permanent air samplers in Driver Units 11, 12, and 13 accounted for 57 percent of all samples that exceeded the beryllium TLV. To further break these samples down, Driver Unit 13 accounted for 28 percent, Unit 11 - 17 percent, and Unit 12 - 12 percent. Operational samples taken during the various stages of this operation have shown the primary source to be the powder-loading process. Changes to the feed hopper and loading method must be made before this problem can be corrected.

The number of surface contamination surveys (smears) exceeding the TLV of 25 μgs/12 in^2 for all beryllium areas showed an increase from 32 percent last quarter to 34 percent this quarter. Of the smear surveys taken in the pilot production areas in Building 9201-5, 61 percent exceeded the TLV this quarter, compared to 48 percent last quarter. This significant increase can be attributed to the sampling program which was conducted in the driver units in an effort to locate the source of contamination. The contamination was located in the feed hopper system mentioned previously.

Mercury Program

The mercury bottling process was started again in October and terminated in December. Daily surveys were made for air concentrations and the results were reported to the area supervisor so that corrective measures could be made when the TLV was exceeded.

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UNION CARBIDE CORPORATION
Nuclear Division

OAK RIDGE Y-12 PLANT

Operated under Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Third Quarter, FY 1970

January - March 1970

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Oak Ridge, Tennessee

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter(1)	Last Quarter(2)	Average for 1970
Disabling Injuries - On the Job	0	1	1
Off the Job	22	13	23
Days Lost of Charged - On the Job	171	93	184
Off the Job	557	495	704
Accident Rates, Disabling - Frequency	0.0	0.31	0.41
Severity	53	28	57
Number of Serious Injuries (doctor's cases)	33	25	30
Total Number of Injuries	33	26	31
Direct Costs (compensation and medical expenses for disabling injuries)(3)	$3,906.47	$2,084.97	$12,286.33(4)

(1) Preliminary figures.
(2) Final figures.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1970.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of 53 potable water samples were taken from water fountains this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations remain at low concentrations. The anions ranged as follows: nitrates, 9.2 to 11.0 ppm; sulfates, 26 to 47 ppm; chlorides, 11.5 to 12.7 ppm; and fluorides, 0.99 to 1.6 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

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Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	9.2 million gals/day	8.8 million gals/day
pH Range	6.7 - 8.1	6.8 - 7.8

Beryllium Program

During the third quarter of Fiscal Year 1970, 61 beryllium air samples exceeded the TLV of 2 μgs/M^3. This number represents a significant reduction from the previous quarter when 155 samples exceeded the TLV.

Permanent air samples in Drivers 12 and 13 of the pilot-plant area contributed 44 percent of the samples over the TLV.

The number of surface contamination surveys (smears) exceeding the TLV of 25 μgs/12 in^2 for all beryllium areas showed a decrease of 7 percent (from 34% last quarter to 28% this quarter). Of the smear surveys taken in the pilot-production areas in Building 9201-5, 45 percent exceeded the TLV this quarter compared to 61 percent last quarter.

Mercury Program

Nine surveys for mercury were made this quarter in the construction areas and the wind tunnels of Building 9201-5. A total of 15 measurements were found to exceed the TLV of 0.1 mg/M^3 for mercury. These readings were found in an area where little or no personnel exposure would be encountered. Refer to Table F-5 for additional information and a comparison with the total for the last quarterly period.

Personnel Exposure

Thirty-one employees submitted 31 urine samples to be analyzed for mercury. None of the samples indicated mercury content in excess of the excretion

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UNION CARBIDE CORPORATION
Nuclear Division

OAK RIDGE Y-12 PLANT

Operated under Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Fourth Quarter, FY 1970

April - June 1970

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Oak Ridge, Tennessee

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter(1)	Last Quarter(2)	Average for 1970
Disabling Injuries - On the Job	0	0	1
Off the Job	17	24	22
Days Lost or Charged - On the Job	91	171	97
Off the Job	695	754	741
Accident Rates, Disabling - Frequency	0.0	0.0	0.33
Severity	40	53	32
Number of Serious Injuries (doctor's cases)	10	33	25
Total Number of Injuries	10	33	26
Direct Costs (compensation and medical expenses for disabling injuries)(3)	$2,372.60	$3,906.47	$14,658.93(4)

(1) Preliminary figures.
(2) Final figures.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1970.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

A total of 38 potable water samples were taken from water fountains in the Y-12 Area this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. Mercury and other cations remain at low concentrations; the anions ranged as follows: nitrates, 1.0 to 10.5 ppm; sulfates, 19 to 57 ppm; chlorides, 7.1 to 9.4 ppm; and fluorides, 0.88 to 1.1 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

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Table F-4

POPLAR CREEK ANALYSIS

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	This Quarter	Last Quarter
Average Flow	7.2 million gals/day	9.2 million gals/day
pH Range	7.4 - 8.3	6.7 - 8.1

Beryllium Program

A total of 46 beryllium air samples exceeded the TLV of 2 μgs/M^3 this quarter, compared to 61 samples for the previous quarter. The major portion of these samples were taken in the driver area of Building 9201-5. Problems still persist concerning loading the feed hoppers, leakage of the hoppers during weighing procedures, and the lack of a balanced ventilation system. The weighing problem has been corrected by changing the location of the operation to a properly ventilated area. A trial run was made on a new feed hopper system, but this test indicated that additional modification was necessary before it could function properly. The exhaust system balancing procedure was started near the end of this quarter and was to be completed early in the next quarter.

The number of surface contamination surveys (smears) exceeding the TLV of 25 μgs/12 in^2 for all beryllium areas showed an increase of one percent (from 28% last quarter to 29% this quarter). Of the smear surveys taken in the pilot production areas in Building 9201-5, 37 percent exceeded the TLV this quarter compared to 45 percent last quarter.

Mercury Surveys

Twelve surveys were made for airborne mercury this quarter. Two surveys were made in Buildings 9201-4 and 81-10, which are in standby condition. In Building 9201-4, the office areas were checked because personnel are occupying these facilities. No mercury contamination was found. In Building 81-10, the sludge burning facility, considerable mercury was observed, and air concentrations were measured above the TLV of 0.1 mg/M^3. Recommendation was made for a cleanup of this facility. Reactivation of this facility is scheduled for this fall when the ambient temperatures are lower.

Additional surveys were made in Buildings 9201-5 and 9201-2 where construction personnel were working. Seventeen samples above the TLV were measured in these areas, but respiratory protection is mandatory. A general cleanup of these areas in Building 9201-5 will be initiated when the construction work is completed and more efficient methods of cleaning can be applied.

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UNION CARBIDE CORPORATION
Nuclear Division

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OAK RIDGE Y-12 PLANT

Operated under Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

First Quarter, FY 1971

July - September 1970

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Poplar Creek Water Sampling

Water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analysis of 39 cations, chemical analysis of four anions, and mercury determinations. The mercury and other cations remain at low concentrations. The anions ranged as follows: nitrates, 0.1 to 1.3 ppm; sulfates, 40 to 44 ppm; chlorides, 6.0 to 8.2 ppm; and fluorides, 1.2 to 1.6 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	8.9 million gals/day	7.2 million gals/day
pH	6.9 - 8.0	7.4 - 8.3

Beryllium Program

Of over 8,600 beryllium air samples taken this quarter, 338 exceeded the TLV of 2 $\mu gs/M^3$ compared to only 46 for the previous quarter. Although this is the highest number of beryllium air samples exceeding the TLV ever experienced in the Y-12 Plant in a quarter, most occurred within areas requiring respiratory protection and reflect the startup and utilization of new facilities.

Immediate action was taken to correct and improve these problem sources either by changing the procedure or by instituting engineering changes.

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UNION CARBIDE CORPORATION
Nuclear Division

OAK RIDGE Y-12 PLANT

Operated under Contract W-7405-eng-26
With the US Atomic Energy Commission

Y-12 PLANT QUARTERLY REPORT

Second Quarter, FY 1971

October - December 1970

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presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

Poplar Creek Water Sampling

Water samples were taken from the East Fork of Poplar Creek and composited weekly for spectrographic analyses of 39 cations, chemical analyses of four anions, and mercury determinations. The mercury and other cations remain at low concentrations. The anions ranged in concentration as follows: nitrates, 0.5 to 4.3 ppm; sulfates, 40 to 43 ppm; chlorides, 8.8 to 11.6 ppm; and fluorides, 0.75 to 1.6 ppm. The range for hexavalent chromium was 0.03 - 0.09 ppm.

The average results for pH and creek flow for this and the preceding quarters are given in Table F-4.

Table F-4

POPLAR CREEK ANALYSIS

	This Quarter	Last Quarter
Average Flow	10.2 million gals/day	8.9 million gals/day
pH	6.3 - 8.0	6.9 - 8.0

Beryllium Program

Of the 7,181 beryllium air samples taken this quarter, 236 exceeded the TLV of 2 $\mu gs/M^3$, compared to 338 for the previous quarter. Most of these excessive concentrations were found within areas requiring the use of respiratory protection

The largest portion of air samples exceeding the TLV occurred in the application areas and arose primarily from leaks from the dry box.

It is expected that the consistent use of these valves each time the air locks are opened and frequent cleanup of the inside of the air locks should provide a reduction in the air concentrations which result from these operations.

The number of surface contamination surveys (smears) exceeding the TLV of 25 $\mu gs/12\ in^2$ for all beryllium areas showed an increase from 33 last quarter to 45 this quarter. Of the smear surveys taken in the pilot production areas in Building 9201-5,71 exceeded the TLV this quarter compared to 46 last quarter.

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Atomic Weapon Data Category Sigma 1

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Y-12 PLANT QUARTERLY REPORT

Oak Ridge Y-12 Plant

P.O. Box Y, Oak Ridge, Tennessee 37830

operated for the U.S. ATOMIC ENERGY COMMISSION
by UNION CARBIDE CORPORATION—NUCLEAR DIVISION
under Contract W-7405-eng-26

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Table F-3

ACCIDENT EXPERIENCE - CONDENSED SUMMARY

	This Quarter	Last Quarter	Average for FY 1971
Disabling Injuries - On the Job	1	2	1.3
Off the Job	18	26	24
Days Lost or Charged - On the Job	70	101	82
Off the Job	12,409	25,902	15,095
Accident Rates, Disabling - Frequency	0.26	0.54	0.36
Severity	18	27	22
Number of Serious Injuries (doctor's cases)	33	29	36
Total Number of Injuries	34	31	38
Direct Costs (compensation and medical expenses for disabling injuries)(3)	$1,922.80	$4,112.78	$6,385.18(4)

(1) Preliminary figures.
(2) Final figures.
(3) It is considered that the indirect cost exceeds by four times the direct cost.
(4) Total for FY 1971.

EDUCATION AND CONTROL

Meetings and Lectures

There were 207 employee and supervisory safety meetings held during the quarter with a total attendance of 5,216, and twelve 40-minute safety lectures were conducted for the indoctrination of new employees with a total attendance of 220.

Routine Inspections

Daily routine checks or inspections were made by safety engineers and departmental safety committees. Included at times were comprehensive inspections of shops and production buildings, with recommendations made covering indicated potential hazards.

RADIATION SAFETY

INDUSTRIAL HYGIENE

Potable Water Sampling

Thirty-nine potable water samples were taken from water fountains this quarter. These samples were analyzed for total residual chlorine and the presence of coliform and noncoliform bacteria. All samples were found to be free of coliform bacteria.

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Beryllium Program

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A reduction of 26 percent in the number of beryllium air samples exceeding the TLV of 2 $\mu gs/M^3$ was noted this quarter, compared to the previous one. Of the 6,788 air samples taken, 174 exceeded the TLV (last quarter's totals were 7,181 samples; 236 exceeded the TLV).

Operational air samples were emphasized during the quarter to help improve the operational procedures and reduce the loss of material from the various operations involved.

Additional modifications were made to the feed hopper system as a result of air samples taken during this operation, and it is anticipated that further improvements can be made.

Velocity measurements at the entrances to the application cubicles suggested a need for a reduction in the size of the doorways and closing of other openings. These modifications resulted in a significant increase in face and capture velocity for each of the enclosures.

To complement the respiratory fitting program, considerable effort was made during the quarter in the respirator-required areas by supervision to insure the proper use and care of respiratory protection. Definite improvements were observed; however, continuing emphasis will be placed on this program.

During the quarter, over twenty training sessions were held to instruct the cubicle operators in the detection of enclosure leaks and the proper use of respiratory equipment. It is hoped that, as a result of these sessions and administrative emphasis on procedures, a further reduction in airborne contamination can be accomplished.

The number of surface contamination surveys (smears) exceeding the TLV of 25 $\mu gs/12\ in^2$ for all beryllium areas showed a decrease from 45 last quarter to 38 this quarter. Of the smear surveys taken in the pilot production areas in Building 9201-5, 47 exceeded the TLV this quarter, compared to 71 last quarter.

Noise Surveys

The plant-wide review of potential noise-risk areas was continued and four surveys were made during this quarter, as discussed in the sections that follow.

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Atomic Weapon Data Category Sigma 1
Date of Issue: September 21, 1977

Y-2036

UNCLASSIFIED

Y-12 PLANT QUARTERLY REPORT

THIRD QUARTER, FY 1977

April - June 1977

Compiled by
H. F. Ballenger

vg. 9,

Oak Ridge Y-12 Plant
P. O. Box Y, Oak Ridge, Tennessee 37830

Prepared for the US Energy Research
and Development Administration
Under US Government Contract W-7405-eng-26

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CLASSIFIED BY L. R. Phillips
L. R. Phillips
Y-12 Classification Officer
9/4/77
DATE

UNCLASSIFIED

namely: replacement of the harbour signs in the lake, reworking of the infields on both softball fields, and new sand placed in the beach area. (Page 40)

EMPLOYEE AND PLANT PROTECTION

Fire Prevention and Control

Fire Experience - Ten fires occurred in the Area this quarter. There was no measurable fire loss and none of the fires were considered to be significant. (Page 44)

Building 9106 is a two-story office structure which was erected at the south center area of the north portal. The building has approximately 8000 square feet of floor area on the upper floor at grade level and 6000 square feet of floor area below grade level. (Page 45)

Classification and Information

A joint Y-12/ORGDP classification guide, K/CG-425 *Classification Guide for Laser Isotope Separation (U)*, was issued in June. (Page 51)

Safety

Accident Experience - No disabling injuries occurred during this period. Consequently, the 73rd accident-free period, which began on February 16, is still continuing. As of June 30, the Plant has operated 4,288,998 manhours, or 135 days, without a disabling injury. (Page 51)

Health Physics

Environmental Control - Reviews of Plant records and internal memoranda were made to estimate the amounts of mercury that were discarded in Poplar Creek waters. Since 1962, the amount of mercury in this effluent has been less than 5350 pounds; and, since 1972, the creek waters have has a mercury level of less than 0.001 mg/dm^3 (0.001 ppm), which is equivalent to less than 18 pounds per year. (Page 57)

Criticality Safety

Physical testing and criticality safety analyses of the DT-14 shipping package were completed during the quarter. The package is being proposed as a replacement for the DOT-SP-5765 Vermiculite-filled package. The test and calculational results indicate that the quantity of enriched uranium previously transported in the "5765" can be safely packaged in the DT-14. (Page 58)

WORK FOR OTHERS

UNCLASSIFIED

Purchase Order Activities

Lawrence Livermore Laboratory

UNCLASSIFIED

East Fork Poplar Creek (EFPC) Flow Data

2

197~~1~~- 1980

1972-83

1982 - 1985

APPROVED FOR PUBLIC RELEASE
18 Oct 96
Technical Information Office Date

DATE	hr/mo	sums	gal per month	million gal/mo	mgd	1/4 avg	yr avg
Jan-72	12 d off	28599	2.8599E+08	285.99	15.05	11.89	7.73
Feb-72	LEAP	31290	3.1290E+08	312.90	10.79		
Mar-72	5 d off	25544	2.5544E+08	255.44	9.82		
Apr-72	7 d off	15120	1.5120E+08	151.20	6.57	7.30	
May-72		24398	2.4398E+08	243.98	7.87		
Jun-72		22352	2.2352E+08	223.52	7.45		
Jul-72	12 d off	15323	1.5323E+08	153.23	8.06	5.11	
Aug-72	1 d off	11242	1.1242E+08	112.42	3.75		
Sep-72		10594	1.0594E+08	105.94	3.53		
Oct-72		11312	1.1312E+08	113.12	3.65	6.60	
Nov-72		12516	1.2516E+08	125.16	4.17		
Dec-72		37149	3.7149E+08	371.49	11.98		
Jan-73	dredging 2 d	24788	2.4788E+08	247.88	8.55	8.55	9.10
Feb-73	dredging 28d	NA	NA	NA	NA		
Mar-73	dredging 26 d	NA	NA	NA	NA		
Apr-73	2 d off	26811	2.6811E+08	268.11	9.58	10.18	
May-73	7 d off	23528	2.3528E+08	235.28	9.80		
Jun-73		33511	3.3511E+08	335.11	11.17		
Jul-73	2 d off	26345	2.6345E+08	263.45	9.08	8.19	
Aug-73		26012	2.6012E+08	260.12	8.39		
Sep-73	19 d off	7807	7.8070E+07	78.07	7.10		
Oct-73	working on weir	NA	NA	NA	NA	NA	
Nov-73	working on weir	NA	NA	NA	NA		
Dec-73	working on weir	NA	NA	NA	NA		
Jan-74	1 d off	30767	3.0767E+08	307.67	10.26	8.35	6.30
Feb-74		22544	2.2544E+08	225.44	8.05		
Mar-74	1 d off	20264	2.0264E+08	202.64	6.75		
Apr-74	15 d off	6591	6.5910E+07	65.91	4.39	5.36	
May-74		19976	1.9976E+08	199.76	6.44		
Jun-74	3 d off	14140	1.4140E+08	141.40	5.24		
Jul-74	21 d off	4468	4.4680E+07	44.68	4.47	4.45	
Aug-74	Instrument Dept.	changeover NA	NA	NA	NA		
Sep-74	26 d off	1775	1.7750E+07	17.75	4.44		
Oct-74	9 d off	8784	8.7840E+07	87.84	3.99	6.41	
Nov-74	9 d off	14872	1.4872E+08	148.72	7.08		
Dec-74	5 d off	21240	2.1240E+08	212.40	8.17		
DATE			gal per month	million gal/mo	mgd	1/4 avg	yr avg
Jan-75			1.3556E+08	135.56	4.37	7.04	6.83
Feb-75			2.6500E+08	265.00	9.46		
Mar-75			2.2539E+08	225.39	7.27		
Apr-75			2.0568E+08	205.68	6.86	7.23	
May-75			2.1907E+08	219.07	7.07		
Jun-75			2.3277E+08	232.77	7.76		
Jul-75			1.9758E+08	197.58	6.37	5.80	
Aug-75			1.5470E+08	154.70	4.99		
Sep-75			1.8134E+08	181.34	6.04		
Oct-75			1.8418E+08	184.18	5.94	7.23	
Nov-75			2.2546E+08	225.46	7.52		
Dec-75			2.5568E+08	255.68	8.25		

Jan-76			3.4706E+08	347.06	11.20	9.44	8.05
Feb-76	29d leap year		2.3308E+08	233.08	8.04		
Mar-76			2.8132E+08	281.32	9.07		
Apr-76			2.0905E+08	209.05	6.97	6.40	
May-76			2.1554E+08	215.54	6.95		
Jun-76			1.5877E+08	158.77	5.29		
Jul-76			2.5692E+08	256.92	8.29	7.63	
Aug-76			2.2584E+08	225.84	7.29		
Sep-76			2.1955E+08	219.55	7.32		
Oct-76			2.7668E+08	276.68	8.93	8.72	
Nov-76			2.2413E+08	224.13	7.47		
Dec-76			3.0274E+08	302.74	9.77		
Jan-77			7.8170E+07	78.17	2.52	5.72	8.58
Feb-77			2.0081E+08	200.81	7.17		
Mar-77			2.3170E+08	231.70	7.47		
Apr-77			3.1911E+08	319.11	10.64	9.24	
May-77			2.7574E+08	275.74	8.89		
Jun-77			2.4545E+08	245.45	8.18		
Jul-77			2.7988E+08	279.88	9.03	10.15	
Aug-77			3.2642E+08	326.42	10.53		
Sep-77			3.2639E+08	326.39	10.88		
Oct-77			2.5315E+08	253.15	8.17	9.22	
Nov-77			3.7734E+08	377.34	12.58		
Dec-77			2.1401E+08	214.01	6.90		
DATE		**sums**	**Inches/month**	**inches/hour**	**mgd**	**1/4 avg**	**yr avg**
Jan-78		3233.00	3868	5.20	3.72	3.29	6.14
Feb-78		2876.50	2876.5	4.28	2.78		
Mar-78			3611.8	4.85	3.36		
Apr-78			5274.5	7.33	6.22	7.49	
May-78			5657.9	9.31	8.91		
Jun-78			5883.3	8.17	7.33		
Jul-78			5792.4	7.79	6.82	6.92	
Aug-78			6303	8.47	7.74		
Sep-78			5264.3	7.31	6.21		
Oct-78			5158.4	6.93	5.73	6.84	
Nov-78			5734.4	7.96	7.06		
Dec-78			6301.2	8.47	7.74		
Jan-79			7056.1	9.48	9.17	8.19	7.76
Feb-79			5688.3	8.46	7.73		
Mar-79			6272	8.43	7.68		
Apr-79			6040.7	8.39	7.63	7.53	
May-79			6180.1	8.31	7.52		
Jun-79			5945.8	8.26	7.45		
Jul-79			6990.9	9.40	9.04	7.97	
Aug-79			6352	8.54	7.83		
Sep-79			5726.8	7.95	7.04		
Oct-79			5810.8	7.81	6.85	7.34	
Nov-79			6358.2	8.83	8.24		
Dec-79			5851.8	7.87	6.92		
Jan-80			7137.2	9.59	9.33	9.75	8.53
Feb-80	29 d leap year		5517.7	7.93	7.01		

Mar-80			8869.9	11.92	12.92		
Apr-80			6446.7	8.95	8.41	8.40	
May-80			6489.7	8.72	8.09		
Jun-80			6593.2	9.16	8.70		
Jul-80			6065	8.15	7.31	7.53	
Aug-80			6106.8	8.21	7.38		
Sep-80			6181	8.58	7.90		
Oct-80			6956.2	9.35	8.98	8.42	
Nov-80			6657.3	9.25	8.83		
Dec-80			6155.5	8.27	7.47		
Jan-81			NA	NA	NA	NA	NA
Feb-81			NA	NA	NA		
Mar-81			NA	NA	NA		
Apr-81			NA	NA	NA	NA	
May-81			NA	NA	NA		
Jun-81			NA	NA	NA		
Jul-81			NA	NA	NA	NA	
Aug-81			NA	NA	NA		
Sep-81			NA	NA	NA		
Oct-81			NA	NA	NA	NA	
Nov-81			NA	NA	NA		
Dec-81			NA	NA	NA		
Jan-82			6946.2	9.34	8.96	9.33	9.00
Feb-82			NA	NA	NA		
Mar-82			7331	9.85	9.71		
Apr-82			6302.1	8.75	8.13	8.00	
May-82			6270.6	8.43	7.68		
Jun-82			6333.2	8.80	8.19		
Jul-82			6934.5	9.32	8.93	9.12	
Aug-82			7101.5	9.55	9.26		
Sep-82			6827.2	9.48	9.17		
Oct-82			6584.8	8.85	8.27	9.68	
Nov-82			7354.5	10.21	10.25		
Dec-82			7730.7	10.39	10.51		
Jan-83			6573.2	8.83	8.24	9.07	8.97
Feb-83			6808.7	10.13	10.12		
Mar-83			6883.3	9.25	8.83		
Apr-83			7248.8	10.07	10.03	9.25	
May-83			7279.9	9.78	9.61		
Jun-83			6298	8.75	8.12		
Jul-83			6787.8	9.12	8.65	8.20	
Aug-83			6490.2	8.72	8.09		
Sep-83			6165.7	8.56	7.87		
Oct-83			6782.4	9.12	8.64	9.35	
Nov-83			6944.3	9.64	9.40		
Dec-83			7476.8	10.05	10.00		
Jan-84			7601.7	10.22	10.25	9.93	9.21
Feb-84	29 d leap year		7160.6	10.29	10.36		
Mar-84			7067.3	9.50	9.19		
Apr-84	600 hr on	5626.30	5626.3	9.38	9.01	9.66	
May-84		8162.50	8162.5	10.97	11.41		

Jun-84		6517.40	6517.4	9.05	8.55		
Jul-84	686 hr on	6976.23	6976.2	10.17	10.18	8.86	
Aug-84		6624.20	6624.2	8.90	8.34		
Sep-84		6260.10	6260.1	8.69	8.05		
Oct-84		7130.50	7130.5	9.58	9.31	8.38	
Nov-84		6494.90	6494.9	9.02	8.51		
Dec-84	4 d off	5288.00	5288.0	8.16	7.32		
Jan-85	10 hr off	6211.00	6211.0	8.46	7.73	8.42	9.64
Feb-85		6542.50	6542.5	9.40	9.05		
Mar-85		6696.50	6696.5	9.00	8.48		
Apr-85		6500.30	6500.3	10.83	11.19	9.90	
May-85		6798.40	6798.4	9.14	8.67		
Jun-85		7154.90	7154.9	9.94	9.83		
Jul-85		8201.50	8201.5	11.02	11.49	11.23	
Aug-85		8851.70	8851.7	11.90	12.88		
Sep-85	143 hr off	5531.40	5531.4	9.59	9.32		
Oct-85		6974.80	6974.8	9.37	9.01	9.02	
Nov-85		6789.40	6789.4	9.43	9.09		
Dec-85		6951.20	6951.2	9.34	8.97		
Oct-85	7.76	9.25	286.79				
chk	7.58		9.25				
	7.49		286.79 / 7.647=37.5				
	7.69						
	7.55						
	7.31						
	7.14						
	13.07						
	8.93						
	8.45						
	8.45						
	8.13						
	7.71						
	7.64						
	7.77						
	7.8						
	7.8						
	7.69						
	7.65						
	14.52						
	8.53						
	22.29						
	21.4						
	10.8						
	8.72						
	8.19						
	8.07						
	7.57						
	7.72						
	7.7						
	7.67						

UCN-7721B
(2 8/96)

OAK RIDGE Y-12 PLANT INFORMATION CONTROL FORM

ChemRisk

DOCUMENT DESCRIPTION (Completed by Requesting Division)

Document No.	Date of Request	Requested Date of Release (Allow 5 to 10 Days)	Page Count
Y/TS-1600	OCT 10, 1996	OCT 17, 1996	160

Unclassified Title: EAST FORK POPLAR CREEK (EFPC) FLOW DATA FOR 1971-1980; 1982-1985 (FROM 9207 DATA CENTER)

Author's / Requestor's Name	Telephone No., Pager No. and Plant Address	Account Number
S. W. Wiley	6-0263, 417-5417, Bldg. 9106, MS-8023	2366-0003

INTENDED AUDIENCE: ☐ Public ☐ Environmental Regulators ☐ NWC ☐ DOE Contractors ☒ Other ChemRisk

TYPE: ☐ Abstract ☐ Brochure ☐ Co-op Report ☐ Formal Report ☐ Informal Report
☐ Invention Disclosure ☐ Journal Article ☐ News Release ☐ Photograph/Visuals ☐ Technical Progress Report
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PATENT OR INVENTION SIGNIFICANCE ☐ Yes ☑ No (Identify) Document will be published in proceedings ☐ Yes ☑ No
Document has been previously released ☐ Yes ☑ No (Reference) Document will be distributed at meeting ☐ Yes ☑ No

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CLASSIFICATION REVIEW [Authorized Derivative Classifier (ADC)]

Classification of: Title: UNC Abstract: NA

DOCUMENT: Level UNC Category NA

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POPLAR CREEK

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
12-30-71	1162		1-30-72	Out of Order		3-01-72	1386	
12-31-71	731	1447	1-31-72	348 (Out of Order)		3-02-72	1878	
1-01-72	970		2-01-72	912		3-03-72	1459	8665
1-02-72	9190		2-02-72	888		3-04-72	952	
1-03-72	994		2-03-72	1431	7232	3-05-72	878	
1-04-72	2283		2-04-72	896		3-06-72	894	
1-05-72	1933		2-05-72	855		3-07-72	880	
1-06-72	1081		2-06-72	915		3-08-72	1330	2588
1-07-72	918	6215	2-07-72	1135		3-09-72	378	
1-08-72	Out of Order		2-08-72	960		3-10-72	No	
1-09-72	Out of Order		2-09-72	943		3-11-72	Chart	
1-10-72	Out of Order		2-10-72	939	7504	3-12-72		
1-11-72	Out of Order		2-11-72	935		3-13-72		
1-12-72	" "		2-12-72	1237		3-14-72	No chart	
1-13-72	" "	1959	2-13-72	1474		3-15-72	364	
1-14-72	" " "		2-14-72	1016		3-16-72	1203	5483
1-15-72	259		2-15-72	1070		3-17-72	989	
1-16-72	801		2-16-72	1056		3-18-72	991	
1-17-72	899		2-17-72	1388	7631	3-19-72	959	
1-18-72	843		2-18-72	1434		3-20-72	977	
1-19-72	938		2-19-72	941		3-21-72	1309	
1-20-72	934	5444	2-20-72	878		3-22-72	1148	
1-21-72	1321		2-21-72	864		3-23-72	834	6258
1-22-72	990		2-22-72	892		3-24-72	816	
1-23-72	Out of Order		2-23-72	1008	7905	3-25-72	802	
1-24-72	418		2-24-72	1240		3-26-72	701	
1-25-72	1309		2-25-72	1260		3-27-72	648	
1-26-72	906		2-26-72	1499		3-28-72	648	
1-27-72	955	3827	2-27-72	1036		3-29-72	648	
1-28-72	309 (Out of Order)		2-28-72	970		3-30-72	645	
1-29-72	Out of Order		2-29-72	1218		3-31-72	609	

POPLAR CREEK

1972

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
4-01-72	564	4173	5-05-72	675		6-08-72	735	
-02-72	531		5-06-72	627	5620	6-09-72	766	5123
-03-72	528		5-07-72	629		6-10-72	688	
-04-72	528		5-08-72	905		6-11-72	707	
-05-72	645		5-09-72	699		6-12-72	676	
-06-72	709	4413	5-10-72	66[illegible]		6-13-72	701	
-07-72	671		5-11-72	879	5852	6-14-72	684	
-08-72	542		5-12-72	679		6-15-72	732	5068
-09-72	501		5-13-72	1211		6-16-72	786	
-10-72	817		5-14-72	887		6-17-72	704	
-11-72	889		5-15-72	1036		6-18-72	732	
-12-72	342	1231	5-16-72	801		6-19-72	729	
-13-72	Out of Order		5-17-72	682		6-20-72	942	
-[illegible]-72	Out of Order		5-18-72	762	5352	6-21-72	758	
-15-72	Out of Order		5-19-72	772		6-22-72	701	5051
-16-72	Out of Order		5-20-72	691		6-23-72	681	
-17-72	Out of Order		5-21-72	684		6-24-72	634	
-18-72	Out of Order		5-22-72	960		6-25-72	641	
-19-72	Out of Order		5-23-72	801		6-26-72	694	
-20-72	502		5-24-72	779		6-27-72	708	
-21-72	723	3908	5-25-72	772	5314	6-28-72	1237	
-22-72	1282		5-26-72	765		6-29-72	1067	6004
-23-72	731		5-27-72	721		6-30-72	751	
-24-72	670		5-28-72	731		7-01-72	745	
-25-72	700		5-29-72	745		7-02-72	741	
-26-72	685		5-30-72	846		7-03-72	755	
-27-72	661	4591	5-31-72	768		7-04-72	1096	
-28-72	671		6-01-72	739	4961	7-05-72	1428	
-29-72	616		6-02-72	671		7-06-72	718	6081
-30-72	612		6-03-72	609		7-07-72	727	
5-[illegible]-72	646		6-04-72	604		7-08-72	681	
-01-								
-02-72	748		6-05-72	724		7-09-72	687	
-03-72	1122		6-06-72	819		7-10-72	744	
-04-72	914		6-07-72	732		7-11-72	801	

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POPLAR CREEK

1972

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
7-12-72	811		8-15-72	398		9-18-72	381	
7-13-72	820	5695	8-16-72	405		9-19-72	331	
7-14-72	786		8-17-72	407	2743	9-20-72	328	
7-15-72	734		8-18-72	404		9-21-72	309	2141
7-16-72	770		8-19-72	349		9-22-72	311	
7-17-72	973		8-20-72	391		9-23-72	293	
7-18-72	812		8-21-72	389		9-24-72	268	
7-19-72	494		8-22-72	376		9-25-72	301	
7-20-72	No Chart	1306	8-23-72	414		9-26-72	337	
7-21-72			8-24-72	408	2562	9-27-72	352	
7-22-72			8-25-72	371		9-28-72	317	2704
7-23-72			8-26-72	347		9-29-72	502	
7-24-72			8-27-72	322		9-30-72	734	
7-[illegible]-72			8-28-72	324		10-01-72	223	
7-26-72			8-29-72	338		10-02-72	239	
7-27-72		—	8-30-72	346		10-03-72	234	
7-28-72	Pen Dry		8-31-72	367	2141	10-04-72	653	
7-29-72			9-01-72	322		10-05-72	463	2287
7-30-72			9-02-72	258		10-06-72	267	
7-31-72			9-03-72	246		10-07-72	214	
8-01-72			9-04-72	264		10-08-72	224	
8-02-72	142		9-05-72	388		10-09-72	232	
8-03-72	456	2314	9-06-72	329		10-10-72	237	
8-04-72	465		9-07-72	325	2332	10-11-72	235	
8-05-72	395		9-08-72	358		10-12-72	235	1982
8-06-72	388		9-09-72	313		10-13-72	568	
8-07-72	468		9-10-72	324		10-14-72	237	
8-08-72	460		9-11-72	325		10-15-72	216	
8-09-72	340		9-12-72	316		10-16-72	254	
8-10-72	168	2572	9-13-72	316		10-17-72	976	
8-[illegible]-72	419		9-14-72	342	2789	10-18-72	943	
8-12-72	391		9-15-72	326		10-19-72	943	
8-13-72	384		9-16-72	312		10-20-72	369	
8-14-72	410		9-17-72	796		10-21-72	273	

UCN-3889A DATA SHEET

Poplar Creek

1972

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
10-22-72	231	4050	11-26-72	392	2490	12-31-72	875	5277
10-23-72	315		11-27-72	316		1-01-73	680	
10-24-72	303		11-28-72	664				
10-25-72	277		11-29-72	382				
10-26-72	280		11-30-72	470	2838			
10-27-72	416	2223	12-01-72	384				
10-28-72	369		12-02-72	290				
10-29-72	228		12-03-72	277				
10-30-72	350		12-04-72	371				
10-31-72	308		12-05-72	344				
11-01-72	321		12-06-72	1189				
11-02-72	439	2291	12-07-72	794	15212			
11-03-72	356		12-08-72	934				
11-04-72	294		12-09-72	2340				
11-05-72	268		12-10-72	7800				
11-06-72	305		12-11-72	1811				
11-07-72	778		12-12-72	1285				
11-08-72	456		12-13-72	1261				
11-09-72	349	2969	12-14-72	1224	8436			
11-10-72	339		12-15-72	1742				
11-11-72	301		12-16-72	1071				
11-12-72	278		12-17-72	931				
11-13-72	468		12-18-72	922				
11-14-72	490		12-19-72	919				
11-15-72	361		12-20-72	1007				
11-16-72	378	3558	12-21-72	1807	7582			
11-17-72	350		12-22-72	1334				
11-18-72	530		12-23-72	910				
11-19-72	972		12-24-72	830				
11-20-72	477		12-25-72	775				
11-21-72	353		12-26-72	819				
11-22-72	321		12-27-72	763				
11-23-72	324		12-28-72	746				
11-24-72	269		12-29-72	740				
11-25-72	515		12-30-72	654				

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POPLAR CREEK

1973

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
1-01-73	680							
1-02-73	235 x		2-06-73			3-13-73		
1-03-73	730 x		2-07-73			3-14-73		
1-04-73	1051	5328	2-08-73	Dredging		3-15-73	Dredging	
1-05-73	845		2-09-73			3-16-73		
1-06-73	762		2-10-73			3-17-73		
1-07-73	744		2-11-73			3-18-73		
1-08-73	961		2-12-73			3-19-73		
1-09-73	979		2-13-73			3-20-73		
1-10-73	818		2-14-73			3-21-73		
1-11-73	810	5749	2-15-73	Dredging		3-22-73	Dredging	
1-12-73	790		2-16-73			3-23-73		
1-13-73	703		2-17-73			3-24-73		
1-14-73	744		2-18-73			3-25-73		
1-15-73	905		2-19-73			3-26-73		
1-16-73	853		2-20-73			3-27-73	863	
1-17-73	825		2-21-73			3-28-73	825	
1-18-73	830	7334	2-22-73	Dredging		3-29-73	1235	6662
1-19-73	1504		2-23-73			3-30-73	948	
1-20-73	789		2-24-73			3-31-73	1104	
1-21-73	1029		2-25-73			4-01-73	823	
1-22-73	1504		2-26-73			4-02-73	864	
1-23-73	946		2-27-73			4-03-73	655	
1-24-73	888		2-28-73			4-04-73	No Reading	
1-25-73	841	6377	3-01-73	Dredging		4-05-73	No Reading	5167
1-26-73	910		3-02-73			4-06-73	674	
1-27-73	824		3-03-73			4-07-73	1613	
1-28-73	1124		3-04-73			4-08-73	1171	
1-29-73	844		3-05-73			4-09-73	1054	
1-30-73			3-06-73			4-10-73	914	
1-31-73			3-07-73			4-11-73	332	
2-01-73	Dredging		3-08-73	Dredging		4-12-73	827	5074
2-02-73			3-09-73			4-13-73	824	
2-03-73			3-10-73			4-14-73	685	
2-04-73			3-11-73			4-15-73	693	
2-05-73			3-12-73			4-16-73	799	

UCN-3889A DATA SHEET

POPLAR CREEK

1973

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
4-17-73	922		5-22-73	856		6-26-73	838	
4-18-73	877		5-23-73			6-27-73	1313	
4-19-73	885	5664,000	5-24-73			6-28-73	1516	
4-20-73	731		5-25-73			6-29-73	1109	7423,000
4-21-73	719		5-26-73			6-30-73	958	
4-22-73	719		5-27-73			7-01-73	821	
4-23-73	811		5-28-73			7-02-73	868	
4-24-73	1008		5-29-73			7-03-73	925	
4-25-73	1597		5-30-73	708		7-04-73	870	
4-26-73	1719	92,190,000	5-31-73	1191		7-05-73	888	4,108,000
4-27-73	1981		6-01-73	1174	61,520,000	7-06-73	848	
4-28-73	1110		6-02-73	1057		7-07-73	573	
4-29-73	885		6-03-73	999		7-08-73	No Reading	
4-30-73	919		6-04-73	1023		7-09-73	No Reading	
5-01-73	895		6-05-73	1213		7-10-73	895	
5-02-73	905		6-06-73	1964		7-11-73	869	
5-03-73	1394	63,070,000	6-07-73	1038	89,310,000	7-12-73	797	
5-04-73	868		6-08-73	1978		7-13-73	947	6884,000
5-05-73	740		6-09-73	836		7-14-73	1108	
5-06-73	720		6-10-73	821		7-15-73	1296	
5-07-73	785		6-11-73	1081		7-16-73	972	
5-08-73	1775		6-12-73	1255		7-17-73	862	
5-09-73	1593		6-13-73	1218		7-18-73	837	
5-10-73	1232	85,380,000	6-14-73	1136	78,780,000	7-19-73	846	5575,000
5-11-73	1344		6-15-73	878		7-20-73	820	
5-12-73	914		6-16-73	1551		7-21-73	708	
5-13-73	828		6-17-73	951		7-22-73	715	
5-14-73	852		6-18-73	889		7-23-73	787	
5-15-73	849		6-19-73	951		7-24-73	813	
5-16-73	826		~~6-20-73~~	1464		7-25-73	1430	
5-17-73	993	59,280,000	6-21-73	1138	67,150,000	7-26-73	1226	6561,000
5-18-73	777		6-22-73	890		7-27-73	916	
5-19-73	943		6-23-73	733		7-28-73	709	
5-20-73	785		6-24-73	740		7-29-73	686	
5-21-73	775		6-25-73	799		7-30-73	781	

UCN-3869A (12-11-67) DATA SHEET

POPLAR CREEK

1973

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
7-31-73	1532		9-04-73	774		10-09-73	Working on Weir	
8-01-73	1446		9-05-73	800		10-10-73		
8-02-73	960	6,919,000	9-06-73	794	54,280,000	10-11-73		
8-03-73	834		9-07-73	814		10-12-73		
8-04-73	690		9-08-73	681		10-13-73		
8-05-73	683		9-09-73	780		10-14-73		
8-06-73	774		9-10-73	785		10-15-73		
8-07-73	881		9-11-73	320		10-16-73	Working on Weir	
8-08-73	850		9-12-73	Out of Order		10-17-73		
8-09-73	873	57,280,000	9-13-73			10-18-73		
8-10-73	845		9-14-73			10-19-73		
8-11-73	688		9-15-73			10-20-73		
8-12-73	701		9-16-73			10-21-73		
8-13-73	890		9-17-73			10-22-73		
8-14-73	1001		9-18-73	Out of Order		10-23-73	Working on Weir	
8-15-73	845		9-19-73			10-24-73		
8-16-73	795	59,350,000	9-20-73			10-25-73		
8-17-73	770		9-21-73			10-26-73		
8-18-73	662		9-22-73			10-27-73		
8-19-73	655		9-23-73			10-28-73		
8-20-73	1207		9-24-73			10-29-73		
8-21-73	855		9-25-73	Working on Weir		10-30-73	Working on Weir	
8-22-73	743		9-26-73			10-31-73		
8-23-73	1065	55,600,000	9-27-73			11-01-73		
8-24-73	773		9-28-73			11-02-73		
8-25-73	674		9-29-73			11-03-73		
8-26-73	664		9-30-73			11-04-73		
8-27-73	786		10-01-73			11-05-73		
8-28-73	828		10-02-73	Working on Weir		11-06-73	Working on Weir	
8-29-73	850		10-03-72			11-07-73		
8-30-73	870	54,610,000	10-04-73			11-08-73		
8-31-73	854		10-05-73			11-09-73		
9-01-73	687		10-06-73			11-10-73		
9-02-73	675		10-07-73			11-11-73		
9-03-73	697		10-08-73			11-12-73		

1-3869A DATA SHEET

POPLAR CREEK

1973

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
11-13-73	Working on Weir		12-18-73					
11-14-73			12-19-73					
11-15-73			12-20-73					
11-16-73			12-21-73					
11-17-73			12-22-73					
11-18-73			12-23-73					
11-19-73			12-24-73					
11-20-73	Working on Weir		12-25-73					
11-21-73			12-26-73					
11-22-73			12-27-73					
11-23-73			12-28-73					
11-24-73			12-29-73					
11-25-73			12-30-73					
11-26-73			12-31-73					
11-27-73	Working on Weir							
11-28-73								
11-29-73								
11-30-73								
12-01-73								
12-02-73								
12-03-73								
12-04-73	Working on Weir							
12-05-73								
12-06-73								
12-07-73								
12-08-73								
12-09-73								
12-10-73								
12-11-73								
12-12-73								
12-13-73								
12-14-73								
12-15-73								
12-16-73								
12-17-73								

JCN-3889A DATA SHEET

All Readings X 10^4

POPLAR CREEK

1974

Date	Gal/Day Daily Readings	Gal/Week Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals	Date	Gal/Day Daily Readings	Gal/Wee Weekly Totals
1-01-74			2-05-74	708		3-12-74	796	
1-02-74	793		2-06-74	1069		3-13-74	235	
1-03-74	2017	6747	2-07-74	774	4717	3-14-74	432	3249
1-04-74	1470		2-08-74	722		3-15-74	424	
1-05-74	901		2-09-74	507		3-16-74	606	
1-06-74	798		2-10-74	465		3-17-74	355	
1-07-74	768		2-11-74	472		3-18-74	401	
1-08-74	610		2-12-74	476		3-19-74	1319	
1-09-74	1967		2-13-74	484		3-20-74	1565	
1-10-74	1677	9823	2-14-74	1161	5468	3-21-74	2047	6990
1-11-74	2302		2-15-74	548		3-22-74	668	
1-12-74	1296		2-16-74	1489		3-23-74	560	
1-13-74	885		2-17-74	719		3-24-74	494	
1-14-74	1086		2-18-74	591		3-25-74	337	
1-15-74	815		2-19-74	1051		3-26-74	No Reading	
1-16-74	690		2-20-74	712		3-27-74	399	
1-17-74	648	4286	2-21-74	566	5557	3-28-74	670	3995
1-18-74	603		2-22-74	1425		3-29-74	1262	
1-19-74	501		2-23-74	660		3-30-74	690	
1-20-74	468		2-24-74	576		3-31-74	469	
1-21-74	561		2-25-74	567		4-01-74	505	
1-22-74	464		2-26-74	525		4-02-74	1198	
1-23-74	904		2-27-74	515		4-03-74	188	
1-24-74	1628	7538	2-28-74	505	3041	4-04-74	[illegible]	1386
1-25-74	956		3-01-74	417		4-05-74	[illegible]	
1-26-74	1764		3-02-74	345		4-06-74	[illegible]	
1-27-74	944		3-03-74	336		4-07-74	[illegible]	
1-28-74	878		3-04-74	398		4-08-74	[illegible]	
1-29-74	916		3-05-74	967		4-09-74	[illegible]	
1-30-74	782		3-06-74	1245		4-10-74	[illegible]	
1-31-74	675	7630	3-07-74	971	5039	4-11-74	[illegible]	
2-01-74	1257		3-08-74	630		4-12-74	[illegible]	
2-02-74	1949		3-09-74	434		4-13-74	[illegible]	
2-03-74	1255		3-10-74	367		4-14-74	[illegible]	
2-04-74	796		3-11-74	425		4-15-74		

UCN-3889A DATA SHEET

All Readings X 10^4

POPLAR CREEK

1974

Date	Gal/Day Daily Readings	Gal/Week Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals
4-16-74	No		5-21-74	445		6-25-74	385	
4-17-74	Reading		5-22-74	758		6-26-74	349	
4-18-74		1231	5-23-74	1515	5014	6-27-74	416	
4-19-74	152		5-24-74	568		6-28-74	363	
4-20-74	380		5-25-74	391		6-29-74	309	
4-21-74	336		5-26-74	900		6-30-74	204	
4-22-74	363		5-27-74	437		7-01-74	No Reading	
4-23-74	769		5-28-74	331		7-02-74	No Reading	
4-24-74	418		5-29-74	417		7-03-74	186	
4-25-74	354	3030	5-30-74	537	3453	7-04-74	363	684
4-26-74	374		5-31-74	736		7-05-74	135	
4-27-74	340		6-01-74	615		7-06-74	Weir	
4-28-74	350		6-02-74	408		7-07-74	Date	
4-29-74	425		6-03-74	409		7-08-74	Down	
4-30-74	439		6-04-74	432		7-09-74	Weir	
5-01-74	472		6-05-74	409		7-10-74	Date Down 663	
5-02-74	977	2206	6-06-74	1017	4264	7-11-74	1170	3327
5-03-74	828		6-07-74	646		7-12-74	452	
5-04-74	435		6-08-74	658		7-13-74	323	
5-05-74	611		6-09-74	620		7-14-74	309	
5-06-74	444		6-10-74	482		7-15-74	410	
5-07-74	385		6-11-74	484		7-16-74	457	
5-08-74	537		6-12-74	581		7-17-74		
5-09-74	928	5035	6-13-74	1615	4680	7-18-74		
5-10-74	455		6-14-74	1375		7-19-74	Change	
5-11-74	524		6-15-74	366		7-20-74		
5-12-74	1616		6-16-74	259		7-21-74	over	
5-13-74	590		6-17-74	No Reading		7-22-74		
5-14-74	479		6-18-74	No Reading		7-23-74		
5-15-74	893		6-19-74	No Reading until 4:00 p.m.	167	7-24-74	to	
5-16-74	493	4139	6-20-74	435		7-25-74		
5-17-74	459		6-21-74	452	1738	7-26-74	Sanitation	
5-18-74	473		6-22-74	354		7-27-74		
5-19-74	858		6-23-74	299		7-28-74	Department	
5-20-74	484		6-24-74	301		7-29-74		

JCN-3889A DATA SHEET

All Readings x 10^4

POPLAR CREEK

1974

Date	Gal/Day Daily Readings	Gal/Week Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals
7-30-74			9-03-74			10-08-74	411	
7-31-74			9-04-74			10-09-74	444	2924
8-01-74			9-05-74			10-10-74	415	
8-02-74			9-06-74			10-11-74	360	
8-03-74			9-07-74			10-12-74	307	
8-04-74			9-08-74			10-13-74	359	3037
8-05-74			9-09-74			10-14-74	370	
8-06-74			9-10-74			10-15-74	888	
8-07-74			9-11-74			10-16-74	753	
8-08-74			9-12-74			10-17-74	No Reading	
8-09-74			9-13-74			10-18-74		
8-10-74			9-14-74			10-19-74		
8-11-74			9-15-74			10-20-74	No Reading	
8-12-74			9-16-74			10-21-74		
13-74			9-17-74			10-22-74		
8-14-74			9-18-74			10-23-74		
8-15-74			9-19-74			10-24-74		
8-16-74			9-20-74			10-25-74	218	
8-17-74			9-21-74			10-26-74	299	
8-18-74			9-22-74			10-27-74	240	1744
8-19-74			9-23-74			10-28-74	310	
8-20-74			9-24-74			10-29-74	389	
8-21-74			9-25-74			10-30-74	288	
8-22-74			9-26-74	—		10-31-74	No Reading	
8-23-74			9-27-74	454		11-01-74	321	
8-24-74			9-28-74	360		11-02-74	361	
8-25-74			9-29-74	630		11-03-74	334	3803
8-26-74			9-30-74	331	2854	11-04-74	517	
8-27-74			10-01-74	353		11-05-74	1352	
8-28-74			10-02-74	382		11-06-74	469	
8-29-74			10-03-74	344		11-07-74	449	
30-74			10-04-74	402		11-08-74	1990	
8-31-74			10-05-74	421		11-09-74	277	
9-01-74			10-06-74	408		11-10-74	240	
9-02-74			10-07-74	423		11-11-74	820	

Change over to Instrument Department

Change over to Instrument Department

UCN-3889A DATA SHEET

All Readings x 10^4

POPLAR CREEK

Date	Gal/Day Daily Readings	Gal/Week Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals
11-12-74	553	4968	12-16-74	535				
11-13-74	412		12-17-74	512	3863			
11-14-74	676		12-18-74	486				
11-15-74	370		12-19-74	489				
11-16-74	332		12-20-74	474				
11-17-74	366	6101	12-21-74	419				
11-18-74	428		12-22-74	372	>5910			
11-19-74	1405		12-23-74	482				
11-20-74	2400		12-24-74	>2363				
11-21-74	800		12-25-74	>2400				
11-22-74	[illegible]		12-26-74	>2400				
11-23-74	[illegible]		12-27-74	>1300				
11-24-74	[illegible]		12-28-74					
11-25-74	[illegible]		12-29-74					
11-26-74	[illegible]		12-30-74					
11-27-74	[illegible]		12-31-74					
11-28-74								
11-29-74	[illegible]							
11-30-74	311							
12-01-74	[illegible]	2422						
12-02-74	426							
12-03-74	706							
12-04-74	652							
12-05-74	638							
12-06-74	667							
12-07-74	1198							
12-08-74	1188	6045						
12-09-74	783							
12-10-74	742							
12-11-74	751							
12-12-74	716							
12-13-74	680							
12-14-74	573							
12-15-74	588							

UCN-3889A DATA SHEET

Poplar Creek
Monthly Totals
1975

	X 10^{+4} Gal/Month	Dates Data Missing
January	13,556	1, 2, 3, 4, 5, 6, 11, 12, 25, 26
February	26,500	—
March	22,539	8, 9, 15, 16, 30
April	20,568	23
May	21,907	—
June	23,277	—
July	19,758	—
August	15,470	—
September	18,134	7
October	18,418	18, 19
November	22,546	—
December	25,568	—

UCN-3889A
(125 11-62) DATA SHEET

All Readings x 10^4

POPLAR CREEK

Date	Gal/Day Daily Readings	Gal/Week Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals
1-01-75		>1300	2-05-75	1588	8847	3-12-75	1100	6194
1-02-75			2-06-75	1094		3-13-75	2400	
1-03-75	Out of		2-07-75	893		3-14-75	900	
1-04-75			2-08-75	713		3-15-75	Time not Working	
1-05-75		Order	2-09-75	629	5807	3-16-75	Time not working	4450
1-06-75			2-10-75	624		3-17-65	637	
1-07-75	300		2-11-75	670		3-18-75	930	
1-08-75	759	1732	2-12-75	1476		3-19-75	1147	
1-09-75	673		2-13-75	802		3-20-75	836	
1-10-75	488		2-14-75	752		3-21-75	777	
1-11-75	no		2-15-75	603		3-22-75	1172	
1-12-75	Reading		2-16-75	925	5977	3-23-75	728	6498
1-13-75	488	3359	2-17-75	1422		3-24-75	991	
1-14-75	849		2-18-75	848		3-25-75	1089	
15-75	803		2-19-75	747		3-26-75	914	
1-16-75	731		2-20-75	680		3-27-75	827	
1-17-75	696		2-21-75	666		3-28-75	692	
1-18-75	745		2-22-75	568		3-29-75	156	
1-19-75	309	4484	2-23-75	973	5874	3-30-75	Inst. Trouble	4673
1-20-75	433		2-24-75	1486		3-31-75	686	
1-21-75	849		2-25-75	820		4-01-75	1025	
1-22-75	749		2-26-75	683		4-02-75	1019	
1-23-75	703		2-27-75	678		4-03-75	1095	
1-24-75	723		2-28-75	659		4-04-75	913	
1-25-75	—		3-01-75	802		4-05-75	708	
1-26-75	—	3317	3-02-75	595	4522	4-06-75	648	4940
1-27-75	335		3-03-75	606		4-07-75	696	
1-28-75	759		3-04-75	637		4-08-75	695	
1-29-75	822		3-05-75	651		4-09-75	652	
1-30-75	678		3-06-75	572		4-10-75	628	
1-31-75	664		3-07-75	1185		4-11-75	600	
)1-75	616		3-08-75	—		4-12-75	518	
2-02-75	1590		3-09-75	—		4-13-75	480	
2-03-75	1330		3-10-75	1071		4-14-75	601	
2-04-75	1965		3-11-75	438		4-15-75	839	

UCN-3889A DATA SHEET

POPLAR CREEK

1975

Date	GAL/DAY Daily Readings	GAL/WEEK Weekly Totals	Date	GAL/DAY Daily Readings	GAL/WEEK Weekly Totals	Date	GAL/DAY Daily Readings	GAL/WEEK Weekly Totals
4-16-75	592	4196	5/21/75	643	—	6/25/75	621	4506
4-17-75	566		5/22/75	663		6/26/75	1078	
4-18-75	613		5/23/75	689		6/27/75	623	
4-19-75	1343		5/24/75	647		6/28/75	585	
4/20/75	607	[illegible]	5/25/75	591	[illegible]	6/29/75	519	4620
4/21/75	608		5/26/75	588		6/30/75	552	
4/22/75	467 (14hr)		5/27/75	590		7/01/75	687	
4/23/75	Date Closed		5/28/75	620		7/02/75	927	
4/24/75	95		5/29/75	704		7/03/75	727	
4/25/75	1443		5/30/75	1302		7/04/75	585	
4/26/75	650		5/31/75	888		7/05/75	550	
4/27/75	571	[illegible]	6/01/75	910	5762	7/06/75	1108	5098
4/28/75	640		6/02/75	536		7/07/75	708	
4/29/75	660		6/03/75	552		7/08/75	709	
4/30/75	596		6/04/75	604		7/09/75	725	
5/01/75	590		6/05/75	971		7/10/75	713	
5/02/75	587		6/06/75	794		7/11/75	665	
5/03/75	555		6/07/75	597		7/12/75	577	
5/04/75	524	[illegible]	6/08/75	507	7731	7/13/75	519	3828
5/05/75	523		6/09/75	551		7/14/75	532	
5/06/75	599		6/10/75	1668		7/15/75	555	
5/07/75	585		6/11/75	1899		7/16/75	480	
5-08-75	851		6/12/75	1715		7/17/75	500	
5-09-75	745		6/13/75	893		7/18/75	590	
5-10-75	495		6/14/75	625		7/19/75	452	
5-11-75	528	4239	6/15/75	948	5188	7/20/75	1,003	4192
5/12/75	546		6/16/75	844		7/21/75	624	
5/13/75	517		6/17/75	605		7/22/75	495	
5/14/75	569		6/18/75	650		7/23/75	480	
5/15/75	1439		6/19/75	623		7/24/75	548	
5/16/75	1263		6/20/75	637		7/25/75	615	
5/17/75	793		6/21/75	562		7/26/75	483	
5/18/75	1378		6/22/75	512		7/27/75	450	
5/19/75	399		6/23/75	524		7/28/75	445	
5/20/75	496		6/24/75	572		7/29/75	483	

UCN-3889A DATA SHEET

POPLAR CREEK

1975

Date	GAL/DAY Daily Readings	GAL/WEEK Weekly Totals	Date	GAL/DAY Daily Readings	GAL/WEEK Weekly Totals	Date	GAL/DAY Daily Readings	GAL/WEEK Weekly Totals
7-30-75	1032	4299	9-03-75	483	3304	10-08-75	837	3578
7-31-75	821		9-04-75	539		10-09-75	735	
8-01-75	499		9-05-75	538		10-10-75	529	
8-02-75	399		9-06-75	376		10-11-75	492	
8-03-75	324	3462	9-07-75	Cable off		10-12-75	480	2949
8-04-75	367		9-08-75	1040	3611	10-13-75	468	
8-05-75	600		9-09-75	547		10-14-75	497	
8-06-75	710		9-10-75	549		10-15-75	483	
8-07-75	563		9-11-75	561		10-16-75	Cable off	
8-08-75	522		9-12-75	555		10-17-75	2400	
8-09-75	465		9-13-75	384		10-18-75	Cable	
8-10-75	154	3293	9-14-75	360	4767	10-19-75	off	4741
8-11-75	372		9-15-75	349		10-20-75	403	
8-12-75	574		9-16-75	433		10-21-75	652	
8-13-75	623		9-17-75	1207		10-22-75	659	
8-14-75	583		9-18-75	1479		10-23-75	627	
8-15-75	532		9-19-75	598		10-24-75	602	
8-16-75	501		9-20-75	480		10-25-75	600	
8-17-75	603	3461	9-21-75	453	5668	10-26-75	834	5141
8-18-75	371		9-22-75	962		10-27-75	627	
8-19-75	363		9-23-75	1555		10-28-75	646	
8-20-75	519		9-24-75	1034		10-29-75	1097	
8-21-75	573		9-25-75	586		10-30-75	735	
8-22-75	540		9-26-75	483		10-31-75	633	
8-23-75	516		9-27-75	465		11-01-75	601	
8-24-75	509	3803	9-28-75	437	3611	11-02-75	600	4354
8-25-75	528		9-29-75	445		11-03-75	624	
8-26-75	584		9-30-75	410		11-04-75	600	
8-27-75	567		10-01-75	854		11-05-75	641	
8-28-75	559		10-02-75	522		11-06-75	655	
8-29-75	549		10-03-75	399		11-07-75	995	
8-30-75	470		10-04-75	360		11-08-75	647	
8-31-75	432		10-05-75	360		11-09-75	646	
9-01-75	400		10-06-75	412		11-10-75	717	
9-02-75	431		10-07-75	475		11-11-75	649	

UCN-3889A DATA SHEET

POPLAR CREEK

1975

Date	GAL/DAY Daily Readings	GAL/WEEK (x10⁴) Weekly Totals	Date	GAL/DAY Daily Readings	GAL/WEEK Weekly Totals	Date	GAL/DAY Daily Readings	GAL/WEEK Weekly Totals
11-12-75	1980	6653	12-16-75	1004	[illegible]			
11-13-75	1019		12-17-75	754				
11-14-75	821		12-18-75	731				
11-15-75	723		12-19-75	759				
11-16-75	688	5324	12-20-75	744				
11-17-75	711		12-21-75	662				
11-18-75	704		12-22-75	693				
11-19-75	716		12-23-75	700				
11-20-75	961		12-24-75	628				
11-21-75	736		12-25-75	1480				
11-22-75	615		12-26-75	1413				
11-23-75	600	4530	12-27-75	816				
11-24-75	682		12-28-75	717	7073			
11-25-75	647		12-29-75	720				
11-26-75	634		12-30-75	1233				
11-27-75	636		12-31-75	2174				
11-28-75	600			1233				
11-29-75	600							
11-30-75	1118	5203						
12-01-75	834							
12-02-75	707							
12-03-75	667							
12-04-75	677							
12-05-75	645							
12-06-75	648							
12-07-75	648	4597						
12-08-75	648							
12-09-75	712							
12-10-75	648							
12-11-75	648							
12-12-75	645							
12-13-75	592							
12-14-75	576							
12-15-75	1045							

UCN-3889A DATA SHEET

POPLAR CREEK

1976

Month	Total
January	34,706
February	23,308
March	28,132
April	20,905
May	21,554
June	15,877
July	25,692
August	22,584
September	21,955
October	27,668
November	22,413
December	30,274

UCN-3889A
(125 11-62) DATA SHEET

POPLAR CREEK

1976

Date	Gal/Day Daily Readings	Gal/Week (x 10^4) Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals
1-01-76	1233	7073	2-04-76	854	6558	3-09-76	1676	
1-02-76	977		2-05-76	820		3-10-76	973	7217
1-03-76	1834		2-06-76	793		3-11-76	822	
1-04-76	1019	7756	2-07-76	696		3-12-76	914	
1-05-75	933		2-08-76	672	5174	3-13-76	740	
1-06-76	902		2-09-76	925		3-14-76	686	5152
1-07-76	1162		2-10-76	701		3-15-76	689	
1-08-76	929		2-11-76	699		3-16-76	770	
1-09-76	881		2-12-76	688		3-17-76	707	
1-10-76	836		2-13-76	657		3-18-76	646	
1-11-76	1238	8147	2-14-76	602		3-19-76	651	
1-12-76	934		2-15-76	600	6049	3-20-76	682	
1-13-76	1903		2-16-76	600		3-21-76	1112	5896
14-76	1338		2-17-76	625		3-22-76	647	
1-15-76	1017		2-18-76	1947		3-23-76	873	
1-16-76	1051		2-19-76	1018		3-24-76	950	
1-17-76	840		2-20-76	831		3-25-76	981	
1-18-76	840	6183	2-21-76	967		3-26-76	916	
1-19-76	847		2-22-76	862	5541	3-27-76	851	
1-20-76	888		2-23-76	757		3-28-76	686	8061
1-21-76	876		2-24-76	742		3-29-76	1207	
1-22-76	841		2-25-76	700		3-30-76	2127	
1-23-76	808		2-26-76	682		3-31-76	1309	
1-24-76	786		2-27-76	662		4-01-76	965	
1-25-76	1446	9465	2-28-76	646		4-02-76	890	
1-26-76	2390		2-29-76	600	4679	4-03-76	755	
1-27-76	1686		3-01-76	658		4-04-76	707	5352
1-28-76	1273		3-02-76	680		4-05-76	722	
1-29-76	1076		3-03-76	668		4-06-76	760	
1-30-76	1013		3-04-76	765		4-07-76	750	
31-76	909		3-05-76	1327		4-08-76	768	
2-01-76	1086		3-06-76	744		4-09-76	738	
2-02-76	895		3-07-76	625		4-10-76	720	
2-03-76	981		3-08-76	1050		4-11-76	720	

UCN-3889A (125 11-62) DATA SHEET

POPLAR CREEK

1976

Date	Gal/Day Daily Readings	Gal/Week (x 10^4) Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week Weekly Totals
			5-16-76	983				
4-12-76	720		5-17-76	1076	6835	6-20-76	Gate	
4-13-76	720	5025	5-18-76	677		6-21-76	Closed	420
4-14-76	719		5-19-76	636		6-22-76		
4-15-76	688		5-20-76	613		6-23-76		
4-16-76	620		5-21-76	632		6-24-76	420	
4-17-76	612		5-22-76	606		6-25-76	701	
4-18-76	600	4578	5-23-76	795	4516	6-26-76	686	
4-19-76	627		5-24-76	647		6-27-76	698	5506
4-20-76	646		5-25-76	594		6-28-76	734	
4-21-76	737		5-26-76	622		6-29-76	1223	
4-22-76	736		5-27-76	620		6-30-76	1379	
4-23-76	613		5-28-76	1477		7-01-76	85	
4-24-76	610		5-29-76			7-02-76	309	
25-76	765	4376	5-30-76	Gate	1477	7-03-76	1333	
4-26-76	616		5-31-76	Closed		7-04-76	1526	5946
4-27-76	606		6-01-76			7-05-76	731	
4-28-76	588		6-02-76			7-06-76	698	
4-29-76	578		6-03-76			7-07-76	679	
4-30-76	609		6-04-76	547		7-08-76	670	
5-01-76	1253		6-05-76	750		7-09-76	858	
5-02-76	561		6-06-76	714	5052	7-10-76	612	
5-03-76	551	4746	6-07-76	745		7-11-76	647	5670
5-04-76	572		6-08-76	756		7-12-76.	913	
5-05-76	559		6-09-76	773		7-13-76	758	
5-06-76	641		6-10-76	767		7-14-76	743	
5-07-76	861		6-11-76	760		7-15-76	1139	
5-08-76	519		6-12-76	733		7-16-76	1669	
5-09-76	480	4589	6-13-76	715	4899	7-17-76	922	
5-10-76	480		6-14-76	770		7-18-76	729	6724
5-11-76	961		6-15-76	781		7-19-76	775	
12-76	675		6-16-76	812		7-20-76	762	
5-13-76	613		6-17-76	331 Gate Closed		7-21-76	933	
5-14-76	960		6-18-76	Gate		7-22-76	934	
5-15-76	1890		6-19-76	Closed				

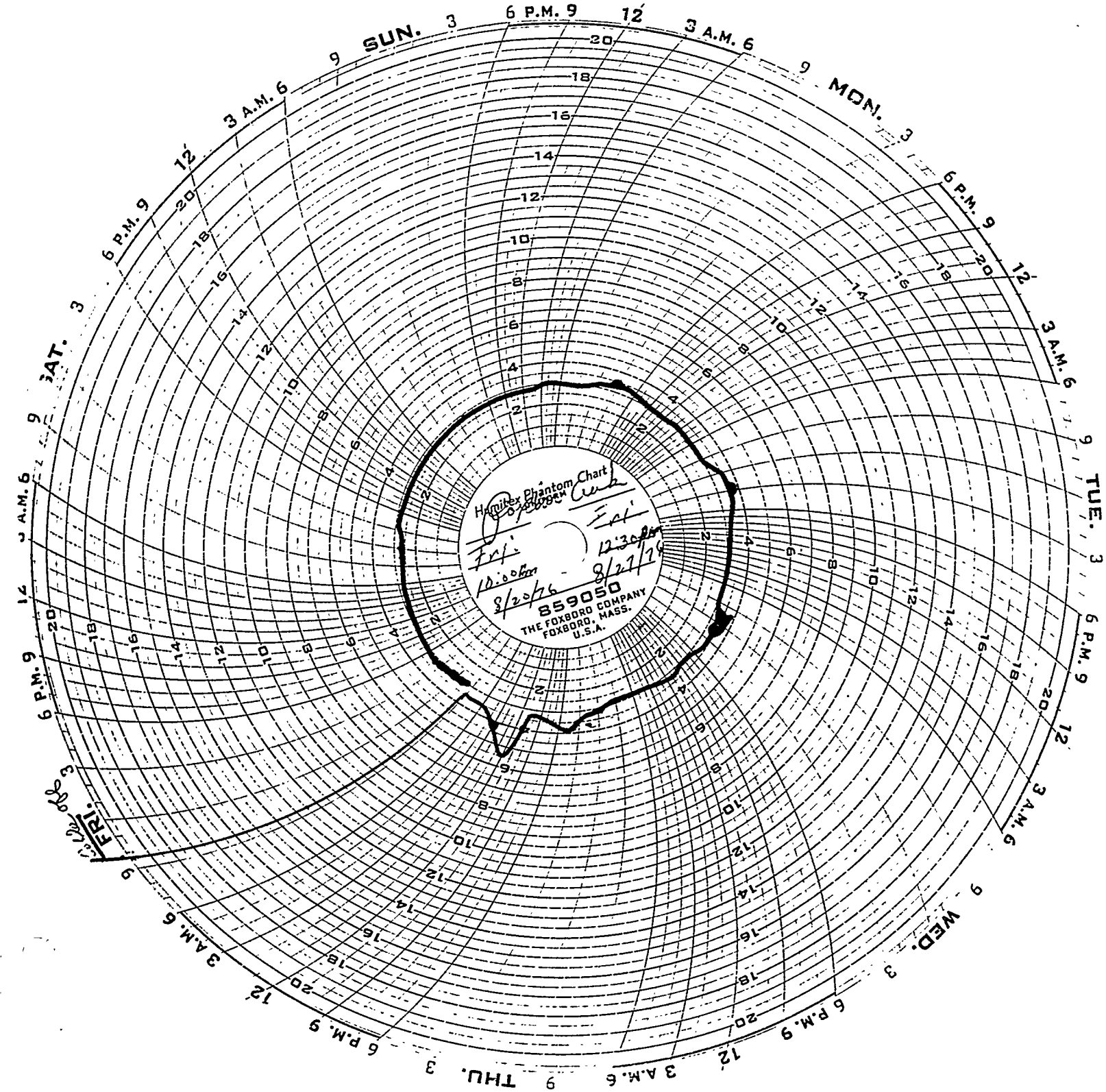
UCN-3889A (125 11-62) DATA SHEET

Date	Gal/Day Daily Readings	Gal/Week (x 10^4) Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week (x 10^4) Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week (x 10^4) Weekly Totals
7/23/76	783		8/26/76	786	5099	9/29/76	990	6408
7/24/76	717		8/27/65	1385		9/30/76	933	
7/25/76	720	5440	8/28/76	952		10/01/76	748	
7/26/76	781		8/29/76	418	2755	10/02/76	667	
7/27/76	801		8/30/76	Cable		10/03/76	630	5732
7/28/76	842		8/31/76			10/04/76	715	
7/29/76	796		9/01/76			10/05/76	772	
7/30/76	765		9/02/76	2		10/06/76	1251	
7/31/76	1062		9/03/76	346		10/07/76	949	
8/01/76	761	5384	9/04/76	876		10/08/76	1380	
8/02/76	734		9/05/76	846	5652	10/09/76	801	
8/03/76	674		9/06/76	813		10/10/76	733	5681
8/04/76	689		9/07/76	857		10/11/76	734	
05/76	699		9/08/76	896		10/12/76	684	
8/06/76	1175		9/09/76	1018		10/13/76	674	
8/07/76	918		9/10/76	930		10/14/76	675	
8/08/76	658	5505	9/11/76	694		10/15/76	747	
8/09/76	597		9/12/76	712	5268	10/16/76	658	
8/10/76	709		9/13/76	741		10/17/76	715	5463
8/11/76	712		9/14/76	706		10/18/76	721	
8/12/76	736		9/15/76	773		10/19/76	715	
8/13/76	741		9/16/76	712		10/20/76	1201	
8/14/76	718	5668	9/17/76	722		10/21/76	706	
8/15/76	1173		9/18/76	730		10/22/76	664	
8/16/76	831		9/19/76	703	4127	10/23/76	627	
8/17/76	750		9/20/76	918		10/24/76	1185	7623
8/18/76	719		9/21/76	784		10/25/76	2360	
8/19/76	715		9/22/76	270		10/26/76	1138	
8/20/76	703		9/23/76	Lost cut of Order		10/27/76	854	
8/21/76	664		9/24/76	509		10/28/76	795	
22/76	684		9/25/76	684		10/29/76	788	
8/23/76	736		9/26/76	1338		10/30/76	1411	
8/24/76	767		9/27/76	1449		10/31/76	970	
8/25/76	759		9/28/76	1005		11/01/76	769	

UCN-3889A (125 11-62) DATA SHEET

Date	Gal/Day Daily Reading	Gal/Week (x 10^4) Weekly Totals	Date	Gal/Day Daily Reading	Gal/Week (x 10^4) Weekly Totals	Date	Gal/Day Daily Reading	Gal/Week (x 10^4) Weekly Totals
11/02/76	745	6.27	12/06/76	1393				
11/03/76	672		12/07/76	1884	7339			
11/04/76	672		12/08/76	995				
11/05/76	621		12/09/76	887				
11/06/76	640		12/10/76	814				
11/07/76	583	4.55	12/11/76	1147				
11/08/76	625		12/12/76	1776	7129			
11/09/76	648		12/13/76	1009				
11/10/76	653		12/14/76	881				
11/11/76	735		12/15/76	1123				
11/12/76	729		12/16/76	879				
11/13/76	617		12/17/76	806				
11/14/76	537	4.569	12/18/76	719				
11/15/76	713		12/19/76	789	6180			
11/16/76	656		12/20/76	1445				
11/17/76	654		12/21/76	850				
11/18/76	663		12/22/76	793				
11/19/76	659		12/23/76	778				
11/20/76	635		12/24/76	732				
11/21/76	603	4.544	12/25/76	1059				
11/22/76	679		12/26/76	1044	6237			
11/23/76	706		12/27/76	879				
11/24/76	666		12/28/76	816				
11/25/76	596		12/29/76	788				
11/26/76	947		12/30/76	919				
11/27/76	837		12/31/76	1284				
11/28/76	1818	7.544						
11/29/76	1465							
11/30/76	872							
12-01-76	812							
12/02/76	793							
12/03/76	764							
12/04/76	714							
12/05/76	702							

UCN-3889A (125 11-62) DATA SHEET


Hamitex Phantom Chart
859050
THE FOXBORO COMPANY
FOXBORO, MASS.
U.S.A.
SUN.
MON.
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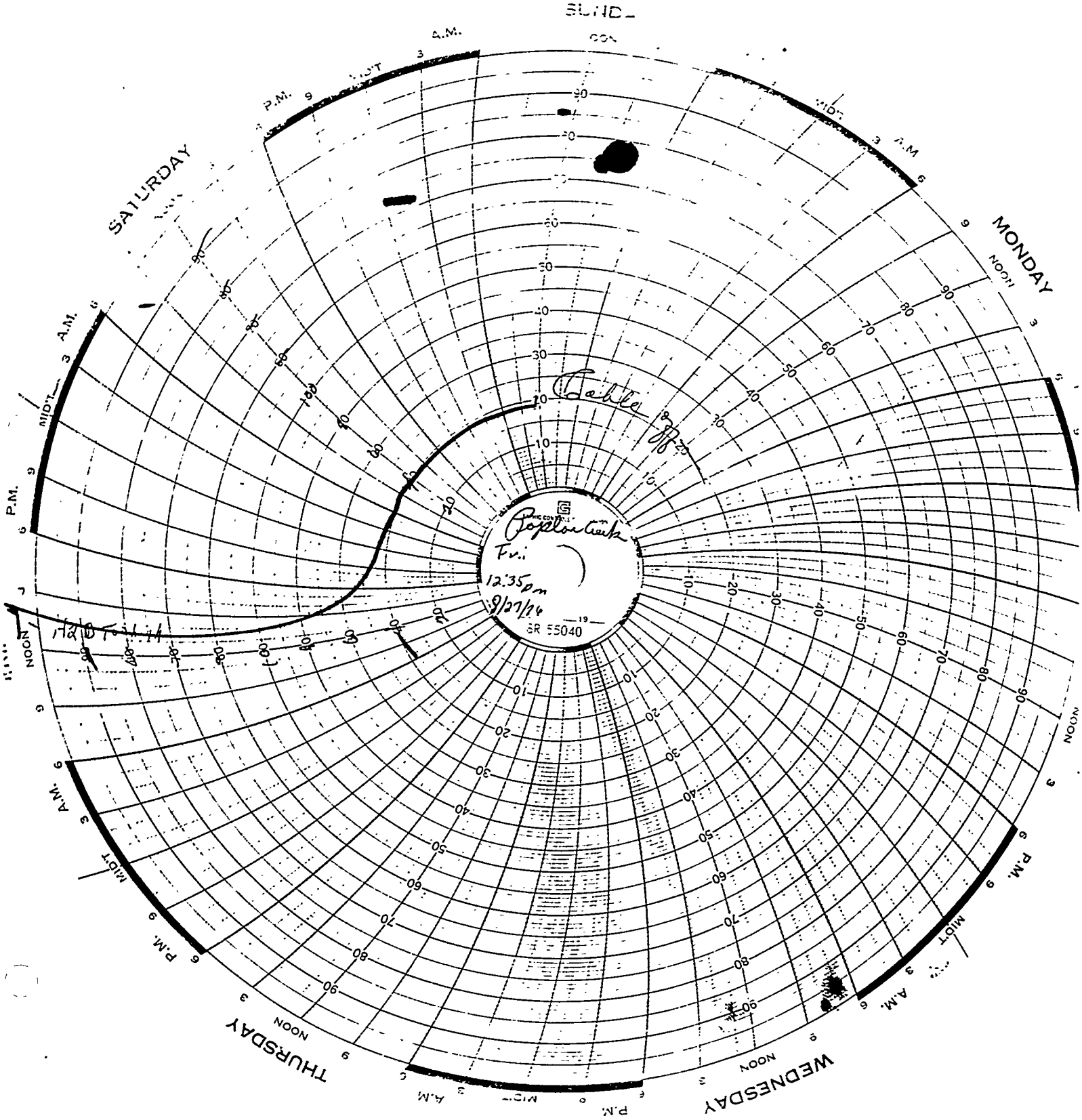
SUNDAY
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NOON
Poplar Creek
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12:35pm
9/27/74
SR 55040

POPLAR CREEK

1977

Month	Total	
January	7817	
February	20,081	
March	23,170	
April	31,911	
May	27,574	
June	24,545	
July	27,988	
August	32,642	
September	32,639	
October	25,315	
November	~~38,544~~	37734
December	21,401	

UCN-2889A (12/5 11-62) DATA SHEET

Date	Gal/Day Daily Readings	Gal/Week (x 104) Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week (x 104) Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week (x 104) Weekly Totals
1/01/77	815		2/04/77	703	6036	3/10/77	762	5474
1/02/77	786		2/05/77	704		3/11/77	749	
1/03/77	835	4270	2/06/77	654		3/12/77	288	
1/04/77	861		2/07/77	713		3/13/77	Calle off	
1/05/77	973		2/08/77	703	4836	3/14/77	" "	3403
1/06/77	Flow Meter		2/09/77	689		3/15/77	1011	
1/07/77	is out for Repair		2/10/77	682		3/16/77	902	
1/08/77			2/11/77	681		3/17/77	809	
1/09/77			2/12/77	944		3/18/77	893	
1/10/77	Flow Meter is		2/13/77	718		3/19/77	732	
1/11/77			2/14/77	674	4978	3/20/77	Calls off	
1/12/77	out for repair		2/15/77	678		3/21/77	559	4930
1/13/77			2/16/77	677		3/22/77	1063	
1/14/77			2/17/77	669		3/23/77	833	
1/15/77			2/18/77	618		3/24/77	856	
1/16/77	Flow Meter is		2/19/77	610		3/25/77	897	
1/17/77			2/20/77	624		3/26/77	883	
1/18/77		out for repair	2/21/77	649	5594	3/27/77	878	
1/19/77	Out		2/22/77	676		3/28/77	1051	6547
1/20/77			2/23/77	692		3/29/77	668	
1/21/77			2/24/77	1421		3/30/77	902	
1/22/77			2/25/77	922		3/31/77	1106	
1/23/77			2/26/77	901		4/01/77	1059	
1/24/77		Meter is	2/27/77	812		4/02/77	1126	
1/25/77			2/28/77	481	5559	4/03/77	2400	
1/26/77	Flow	out for repair	3/01/77	779		4/04/77	2400	12758
1/27/77			3/02/77	714		4/05/77	2370	
1/28/77			3/03/77	714		4/06/77	1807	
1/29/77	1204		3/04/77	1158		4/07/77	1419	
1/30/77	1123		3/05/77	756		4/08/77	1236	
1/31/77	1230		3/06/77	934		4/09/77	1124	
2/01/77	750		3/07/77	780		4/10/77	1072	
2/02/77	308		3/08/77	749		4/11/77	1087	
2/03/77	728		3/09/77	764		4/12/77	1033	

UCN-3889A DATA SHEET

UCN-3889A DATA SHEET

Date	Gal/Day Daily Readings	Gal/Week (x 10^4) Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week (x 10^4) Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week (x 10^4) Weekly Totals
4/13/77	1007	7174	5/17/77	996		6/20/77	265	
4/14/77	931		5/18/77	936	6172	6/21/77	602	5833
4/15/77	920		5/19/77	936		6/22/77	914	
4/16/77	1077		5/20/77	898		6/23/77	1115	
4/17/77	869		5/21/77	829		6/24/77	1076	
4/18/77	868	6186	5/22/77	1093		6/25/77	Cable off	
4/19/77	866		5/23/77	948	6365	6/26/77	" "	
4/20/77	822		5/24/77	874		6/27/77	690	4842
4/21/77	803		5/25/77	863		6/28/77	1091	
4/22/77	881		5/26/77	903		6/29/77	1011	
4/23/77	1100		5/27/77	855		6/30/77	989	
4/24/77	806		5/28/77	821		7/01/77	1061	
4/25/77	707	4734	5/29/77	823		7/02/77	Cable off	
4/26/77	815		5/30/77	829	5971	7/03/77	" "	
4/27/77	820		5/31/77	922		7/04/77	" "	3907
4/28/77	486		6/01/77	915		7/05/77	567	
4/29/77	Gate closed		6/02/77	837		7/06/77	1130	
4/30/77	Gate		6/03/77	824		7/07/77	1089	
5/01/77	Closed		6/04/77	789		7/08/77	1121	
5/02/77	464	5480	6/05/77	788		7/09/77	1052	
5/03/77	1728		6/06/77	920	5693	7/10/77	1023	
5/04/77	1483		6/07/77	802		7/11/77	1142	7411
5/05/77	934		6/08/77	812		7/12/77	1050	
5/06/77	871		6/09/77	819		7/13/77	1034	
5/07/77	1062		6/10/77	763		7/14/77	1044	
5/08/77	894		6/11/77	730		7/15/77	1066	
5/09/77	892	6162	6/12/77	893		7/16/77	996	
5/10/77	842		6/13/77	882	6682	7/17/77	1028	
5/11/77	829		6/14/77	1651		7/18/77	1073	6783
5/12/77	826		6/15/77	871		7/19/77	1063	
5/13/77	817		6/16/77	829		7-20/77	1059	
5/14/77	800		6/17/77	826		7/21/77	1048	
5/15/77	780		6/18/77	785		7/22/77	516	
5/16/77	826		6/19/77	Cable off		7/23/77	1200	

UCN-3889A DATA SHEET

Date	Gal/Day Daily Readings	Gal/Week (x 10^4) Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week (x 10^4) Weekly Totals	Date	Gal/Day Daily Readings	Gal/Week (x 10^4) Weekly Totals
/24/77	1200		8/27/77	1339		9/30/77	507	4752
/25/77	1200		8/28/77	1059		10/01/77	1019	
/26/77	1564	6975	8/29/77	1005	7490	10/02/77	880	
/27/77	951		8/30/77	1025		10/03/77	880	5145
/28/77	922		8/31/77	1045		10/04/77	684	
/29/77	1138		9/01/77	1005		10/05/77	892	
/30/77	939		9/02/77	1012		10/06/77	590	
/31/77	912		9/03/77	990		10/07/77	Late Closed	
/01/77	991	6417	9/04/77	977		10/08/77		
/02/77	915		9/05/77	995	7857	10/09/77		
/03/77	886		9/06/77	1007		10/10/77		3446
/04/77	882		9/07/77	1741		10/11/77	670	
/05/77	892		9/08/77	1138		10/12/77	954	
/77	833		9/09/77	1009		10/13/77	875	
/07/77	858		9/10/77	973		10/14/77	947	
/08/77	986	7269	9/11/77	951	8924	10/15/77	844	
/09/77	1585		9/12/77	930		10/16/77	912	
/10/77	1065		9/13/77	1244		10/17/77	862	6097
/11/77	983		9/14/77	1699		10/18/77	874	
/12/77	959		9/15/77	1556		10/19/77	865	
/13/77	1308		9/16/77	1601		10/20/77	864	
/14/77	1025		9/17/77	1875		10/21/77	876	
/15/77	1003	7939	9/18/77	1216	9089	10/22/77	845	
/16/77	1031		9/19/77	1541		10/23/77	851	
/17/77	1492		9/20/77	1427		10/24/77	924	10038
/18/77	1118		9/21/77	1034		10/25/77	1718	
/19/77	962		9/22/77	985		10/26/77	2400	
/20/77	926		9/23/77	1011		10/27/77	2400	
/21/77	912		9/24/77	960		10/28/77	900	
/22/77	996	7395	9/25/77	1176		10/29/77	Cable	
/77	1035		9/26/77	1656		10/30/77	off	
/24/77	1457		9/27/77	453		10/31/77	589	
/25/77	1046		9/28/77	Cable off		11/01/77	899	
/26/77	1023		9/29/77	Cable off		11/02/77	931	

UCN-3889A (125 11-62) DATA SHEET

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
1-03-77	960	4408	12-07-77	1228	1647			
1-04-77	1029		12-08-77	1245				
1-05-77	1302		12-09-77	738				
1-06-77	1682		12-10-77	811				
1-07-77	1345	5377	12-11-77	794				
1-08-77	1110		12-12-77	838	5963			
1-09-77	1027		12-13-77	860				
1-10-77	978		12-14-77	1013				
1-11-77	933		12-15-77	810				
1-12-77	899		12-16-77	837				
1-13-77	864		12-17-77	875				
1-14-77	921	7550	12-18-77	993				
1-15-77	890		12-19-77	809	5545			
1[illegible]-77	1152		12-20-77	846				
1-17-77	1229		12-21-77	717				
1-18-77	1095		12-22-77	665				
1-19-77	972		12-23-77	640				
1-20-77	972		12-24-77	578	578			
-21-77	1648	[illegible]	12-25-77	Cable				
1-22-77	[illegible]	10360	12-26-77					
-23-77	2033		12-27-77					
-24-77	1330		12-28-77					
-25-77	1091		12-29-77					
-26-77	678		12-30-77					
-27-77	1505		12-31-77	Cable				
-28-77	1502	10296						
-29-77	2277							
-30-77	1666							
-01-77	1437							
2-02-77	1231							
2[illegible]-77	1157							
2-04-77	Cable							
2-05-77	905							
2-06-77	1374							

UCN-3669A (125 11-62) DATA SHEET

POPLAR CREEK

1978

	Month		H-f Maximum Flow gal/day (million)	H-f Minimum Flow gal/day (million)		Correction	H Total Inches	C Average Inch/Hr	f Avera Gal/d (Mill
744	January		10.0-9.93	4.0-2.50		3868 ÷31, ~~÷24~~	~~3233.0~~	5.20	3.72
672	February	crossed	6.7-	3.5-		OK	2876.5	4.28	2.78
744	March		10.0-	4.1-		3611.8	2856.8	4.85	3.35
720	April		284-12.78	166-5.7		5274.5	4914.5	7.33	6.2
*608	May		373-19.3	175-6.19		OK	5657.9	9.31	8.9
720	June		323-15.5	169-5.86		OK	5883.3	8.17	7.3
744	July		264-11.44	158-5.33			5792.4	7.78	6.8
744	August		314-14.6	176-6.1			6303.0	8.47	7.8
720	September		250-10.6	160-5.4			5264.3	7.31	6.2
744	October		233-9.5	149-4.9			5158.4	6.93	5.7
720	November		373-19.2	156-5.6			5,734.4	7.96	7.1
744	December		359-18.9	170-5.9			6,301.2	8.47	7.8

*CORRECTION

$Q = 3.367\ L H^{3/2}$ cfs

$L = 6'$

$f = Q \times .646317$ millions gal./day

$f = 13.05 \left(\sqrt{\frac{C}{12}}\right)^3 = 13.05(.433)^3 = 3.72$

$\frac{MAX + MIN}{24} = C \rightarrow$ use f formula above

UCN-8889A (125 11-62) DATA SHEET

1978

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Total
1-01-78	Cable JJ		2-04-78	1082	7974	3-10-78	1099	819.9
1-02-78	" "		2-05-78	1068		3-11-78	1286	
1-03-78	504	516.1	2-06-78	1068		3-12-78	657	
1-04-78	754		2-07-78	1096	7424	3-13-78	Cable	
1-05-78	1158		2-08-78	1031		3-14-78	JJ	
1-06-78	1644		2-09-78	1061		3-15-78	779	500.9
1-07-78	1101		2-10-78	1062		3-16-78	1208	
1-08-78	621		2-11-78	1035		3-17-78	1210	
1-09-78	Cable		2-12-78	968		3-18-78	1155	
1-10-78	JJ	4685	2-13-78	1315		3-19-78	1392	
1-11-78	692		2-14-78	1117	7239	3-20-78	1113	
1-12-78	1171		2-15-78	1013		3-21-78	1247	7784
1-13-78	1187		2-16-78	1012		3-22-78	1124	
1-14-78	1094		2-17-78	955		3-23-78	1041	
1-15-78	1080		2-18-78	859		3-24-78	1089	
1-16-78	1087		2-19-78	888		3-25-78	778	
1-17-78	1740	8179	2-20-78	920		3-26-78	Cable JJ	
1-18-78	1404		2-21-78	1040	6686	3-27-78	675	
1-19-78	785		2-22-78	1010		3-28-78	1124	3318
1-20-78	862		2-23-78	977		3-29-78	1077	
1-21-78	1221		2-24-78	954		3-30-78	442	
1-22-78	1158		2-25-78	897		3-31-78	Calibrated	
1-23-78	1146		2-26-78	873		4-01-78	Meter	
1-24-78	1628	10773	2-27-78	978		4-02-78	Calibrated	
1-25-78	2018		2-28-78	1123	7232	4-03-78	Meter	
1-26-78	2035		3-01-78	1066		4-04-78	184.6	817.0
1-27-78	1483		3-02-78	1180		4-05-78	179.7	
1-28-78	1305		3-03-78	956		4-06-78	178.7	
1-29-78	1200		3-04-78	1056		4-07-78	103.6	
1-30-78	1192		3-05-78	1034		4-08-78	167.4	
1-31-78	1140		3-06-78	1022		4-09-78	172.8	
2-01-78	1092		3-07-78	1046		4-10-78	175.5	
2-02-78	1153		3-08-78	1639		4-11-78	199.3	
2-03-78	1115		3-09-78	1073		4-12-78	174.1	

DATA SHEET

POPLAR CREEK

1978

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekl Total
4/13/78	174.4		5/16/78	187.9		6/19/78	175 6	
4/14/78	172.7	236.5	5/17/78	189. 2	511.5	6/20/78	176 8	
4/15/78	167.7		5/18/78	373.4 ✓		6/21/78	182. 9	1260.
4/16/78	1657 ✓		5/19/78	178.6		6/22/78	189. 0	
4/17/78	1745		5/20/78	175.0		6/23/78	181. 3	
4/18/78	2839 ✓	12486	5/21/78	177. 2		6/24/78	185. 2	
4/19/78	1867		5/22/78	181. 0		6/25/78	187. 1	
4/20/78	1901		5/23/78	183.8	1043.9	6/26/78	190.7	
4/21/78	179.1		5/24/78	241.9		6/27/78	184.1	1266.
4/22/78	168.6		5/25/78	196.2		6/28/78	180.0	
4/23/78	167.1		5/26/78	63.8		6/29/78	180 0	
4/24/78	174.7		5/27/78	Data Closed		6/30/78	172.5	
4/25/78	238.1	1331.3	5/28/78	Data Closed		7/01/78	172.3	
4/26/78	222.5		5/29/78	"		7/02/78	192.9	
4/27/78	181.0		5/30/78	"	766.9	7/03/78	216.5	
4/28/78	175.2		5/31/78	190.0		7/04/78	167.6	1265.6
4/29/78	172.5		6-01-78	187.2		7/05/78	171.6	
4/30/78	184.1		6-02-78	201.3		7/06/78	176.5	
5/01/78	187.2		6-03-78	188.4		7/07/78	173.5	
5/02/78	176.9	1552.9	6-04-78	175.0		7/08/78	167.0	
5/03/78	175.8		6-05-78	170.7		7/09/78	175.1	
5/04/78	294.2		6-06-78	180.9	1690.6	7/10/78	187.9	
5/05/78	200.7		6-07-78	212.1		7/11/78	182.7	1356.5
5/06/78	334.0		6-08-78	411.7		7/12/78	178.7	
5/07/78	187.0		6-09-78	217.7		7/13/78	182.3	
5/08/78	300.3		6-10-78	322.5		7/14/78	195.0	
5/09/78	219.9	1543.7	6-11-78	177.1		7/15/78	254.8	
5/10/78	196.9		6-12-78	197.7		7/16/78	263.7	
5/11/78	185.9		6/13/78	194.7	1261.3	7/17/78	174.4	
5/12/78	197.0		6/14/78	175.8		7/18/78	176.8	1310.4
5/13/78	256.7		6/15/78	174.2		7/19/78	176.5	
5/14/78	211.6		6/16/78	172.4		7/20/78	178.0	
5/15/78	195.8		6/17/78	169.4		7/21/78	174.9	
			6/18/78	169.3		7/22/78	166.1	

UCN-3889A (125 11-62) DATA SHEET

POPLAR CREEK

1978

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
7/23/78	164.1		8/26/78	187.7	1295.0	9/29/78	172.5	1197.6
7/24/78	180.8		8/27/78	177.6		9/30/78	164.8	
7/25/78	243.6	1295.9	8/28/78	175.5		10/01/78	233.3	
7/26/78	192.9		8/29/78	182.4		10/02/78	172.7	
7/27/78	183.5		8/30/78	189.5	1271.8	10/03/78	172.6	
7/28/78	173.3		8/31/78	206.5		10/04/78	184.6	1238.3
7/29/78	157.7		9/01/78	176.8		10/05/78	162.7	
7/30/78	160.4		9/02/78	163.5		10/06/78	163.3	
7/31/78	231.3		9/03/78	168.2		10/07/78	149.1	
8/01/78	190.1	1422.8	9/04/78	174.6		10/08/78	149.6	
8/02/78	180.1		9/05/78	177.8	1218.6	10/09/78	164.9	
8/03/78	183.7		9/06/78	170.4		10/10/78	165.3	1133.6
8/04/78	221.5		9/07/78	184.8		10/11/78	165.3	
8/05/78	255.7		9/08/78	183.3		10/12/78	163.7	
8/06/78	236.5		9/09/78	159.5		10/13/78	164.5	
8/07/78	182.9		9/10/78	179.1		10/14/78	160.3	
8/08/78	179.6	1513.3	9/11/78	249.6		10/15/78	150.1	
8/09/78	195.5		9/12/78	183.1	1290.1	10/16/78	162.7	
8/10/78	181.1		9/13/78	171.9		10/17/78	165.8	1136.7
8/11/78	234.0		9/14/78	177.0		10/18/78	167.1	
8/12/78	313.7		9/15/78	169.6		10/19/78	168.0	
8/13/78	216.6		9/16/78	159.8		10/20/78	155.7	
8/14/78	257.7		9/17/78	159.6		10/21/78	167.3	
8/15/78	195.7	1532.1	9/18/78	178.5		10/22/78	178.4	
8/16/78	207.9		9/19/78	177.9	1217.4	10/23/78	174.9	
8/17/78	255.2		9/20/78	178.1		10/24/78	172.2	1167.3
8/18/78	212.4		9/21/78	178.7		10/25/78	165.0	
8/19/78	186.6		9/22/78	175.7		10/26/78	155.9	
8/20/78	188.0		9/23/78	168.9		10/27/78	165.0	
8/21/78	184.4		9/24/78	169.2		10/28/78	155.9	
8/22/78	184.9		9/25/78	172.7		10/29/78	156.5	
8/23/78	183.6		9/26/78	173.5		10/30/78	161.5	
8/24/78	182.6		9/27/78	174.4		10/31/78	164.5	
8/25/78	183.8		9/28/78	170.8		11/01/78	163.1	

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POPLAR CREEK

1978

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
11-02-78	159.2		12-07-78	178.7				
11-03-78	163.8	1128.1	12-08-78	228.6				
11-04-78	159.5		12-09-78	359.2				
11-05-78	156.5		12-10-78	214.4				
11-06-78	163.6		12-11-78	198.2				
11-07-78	194.1	1200.0	12-12-78	192.5				
11-08-78	180.9		12-13-78	176.5	1,321.7			
11-09-78	168.5		12-14-78	176.9				
11-10-78	166.7		12-15-78	177.4				
11-11-78	169.7		12-16-78	185.8				
11-12-78	161.2		12-17-78	174.0				
11-13-78	165.2		12-18-78	173.5				
11-14-78	166.4		12-19-78	187.4				
11-15-78	175.1	1338.5	12-20-78	197.0	1,363.9			
11-16-78	267.3		12-21-78	266.1				
11-17-78	232.6		12-22-78	188.0				
11-18-78	170.7		12-23-78	177.9				
11-19-78	158.7		12-24-78	192.4				
11-20-78	160.3		12-25-78	179.4				
11-21-78	160.3		12-26-78	172.8				
11-22-78	172.1	1340.3	12-27-78	174.7	1,270.1			
11-23-78	331.5		12-28-78	174.8				
11-24-78	185.9		12-29-78	173.1				
11-25-78	172.0		12-30-78	202.9				
11-26-78	168.6		12-31-78	247.6				
11-27-78	222.5							
11-28-78	372.9							
11-29-78	260.9	1,556.9						
11-30-78	184.6							
12-01-78	169.5							
12-02-78	177.9							
12-03-78	241.3							
12-04-78	347.5							
12-05-78	214.2							
12-06-78	181.0	1,750.5						

UCN-3889A (125 11-62) DATA SHEET

POPLAR CREEK

1979

	Month		H-f Maximum Flow gal/day (Million)	H-f Minimum Flow gal/day (Million)		Correction	H Total Inches	C Average Inch/Hr	f Aver Gal/ (Mil
744	January		414-22.5	177-6.3			7,056.1	9.48	9.1
672	February		318-17.4	175-6.2			5,688.3	8.46	7.7
744	March		380-19.7	154-5.1			6,272.0	~~8.71~~ 8.43	~~8.0~~ 8.0
720	April		325-15.6	161-5.4			6,040.7	8.38	7.6
~~744~~ 608	May		399-21.3	163-5.6			6,180.1	8.31	7.5
720	June		414-22.5	171-6.0			5,945.8	8.26	7.4
744	July		382-19.9	170-5.9			6,990.9	9.39	9.0
744	August		308-14.3	178-6.3			6,352.0	8.53	7.8
720	September		282-12.6	170-5.9			5,726.8	7.95	7.0
744	October		295-13.4	171-6.0			5,810.8	7.81	6.8
720	November		340-16.8	181-6.4			6,358.2	8.83	8.2
744	December		265-11.5	176-6.2			5,851.8	7.86	6.9

$Q = 3.367\ L H^{3/2}$ cfs

$L = 6'$

$f = Q \times .646317$ millions gal/day

$f = 13.05 \left(\sqrt{\frac{C}{12}}\right)^3$

MAX or MIN = C → use f formula above

24 hrs

UCN-3889A (125 11-62) DATA SHEET

POPLAR CREEK

1979

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
1-01-79	334.4		2-05-79	178.3		3-12-79	188.3	
1-02-79	296.7		2-06-79	179.3		3-13-79	184.4	
1-03-79	210.7	1,757.6	2-07-79	202.4	1,304.7	3-14-79	236.0	1,342.8
1-04-79	196.8		2-08-79	195.2		3-15-79	186.6	
1-05-79	193.0		2-09-79	190.6		3-16-79	176.7	
1-06-79	278.4		2-10-79	178.8		3-17-79	174.1	
1-07-79	413.6		2-11-79	176.5		3-18-79	171.8	
1-08-79	257.6		2-12-79	182.0		3-19-79	153.6	
1-09-79	216.0		2-13-79	186.3		3-20-79	175.7	
1-10-79	201.8	1,682.5	2-14-79	182.1	1,268.7	3-21-79	182.2	1,377.5
1-11-79	204.2		2-15-79	185.4		3-22-79	168.8	
1-12-79	199.1		2-16-79	181.1		3-23-79	276.4	
1-13-79	190.2		2-17-79	175.3		3-24-79	249.0	
1-14-79	177.2		2-18-79	180.6		3-25-79	192.7	
1-15-79	179.0		2-19-79	202.9		3-26-79	185.3	
1-16-79	181.1		2-20-79	188.0		3-27-79	183.2	
1-17-79	179.8	1,496.3	2-21-79	245.4	1,510.5	3-28-79	182.1	1,278.
1-18-79	178.2		2-22-79	190.2		3-29-79	182.7	
1-19-79	187.6		2-23-79	237.7		3-30-79	177.3	
1-20-79	413.4		2-24-79	265.7		3-31-79	175.5	
1-21-79	320.3		2-25-79	347.6		4-01-79	183.4	
1-22-79	227.0		2-26-79	278.4		4-02-79	222.9	
1-23-79	209.5		2-27-79	223.2		4-03-79	315.7	
1-24-79	251.7	1,614.8	2-28-79	210.8	1,661.7	4-04-79	221.1	1,499.2
1-25-79	205.1		3-01-79	200.2		4-05-79	194.9	
1-26-79	196.3		3-02-79	189.0		4-06-79	183.6	
1-27-79	204.9		3-03-79	212.5		4-07-79	177.6	
1-28-79	192.2		3-04-79	380.4		4-08-79	175.2	
1-29-79	189.0		3-05-79	237.1		4-09-79	245.6	
1-30-79	186.8		3-06-79	213.0		4-10-79	180.3	
1-31-79	184.5	1,296.9	3-07-79	211.1	1,671.2	4-11-79	179.6	1,623.1
2-01-79	182.6		3-08-79	210.9		4-12-79	293.8	
2-02-79	181.1		3-09-79	193.9		4-13-79	324.6	
2-03-79	180.7		3-10-79	224.8		4-14-79	224.0	
2-04-79	180.1		3-11-79	196.7		4-15-79	196.7	

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POPLAR CREEK

1979

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
4-16-79	190.6		5-21-79	184.2		6-25-79	170.6	
4-17-79	183.1		5-22-79	176.6		6-26-79	173.0	
4-18-79	183.0	1,288.2	5-23-79	366.3	1,585.0	6-27-79	177.7	1,257.6
4-19-79	183.6		5-24-79	296.3		6-28-79	174.3	
4-20-79	174.8		5-25-79	204.4		6-29-79	177.4	
4-21-79	176.4		5-26-79	183.1		6-30-79	187.1	
4-22-79	174.5		5-27-79	202.2		7-01-79	187.1	
4-23-79	171.2		5-28-79	194.1		7-02-79	180.8	
4-24-79	175.7		5-29-79	179.6		7-03-79	182.4	
4-25-79	190.6	1,305.5	5-30-79	194.9	1,670.6	7-04-79	204.4	1,362.5
4-26-79	255.8		5-31-79	398.7		7-05-79	191.9	
4-27-79	174.3		6-01-79	261.8		7-06-79	169.8	
4-28-79	163.4		6-02-79	239.3		7-07-79	246.1	
4-29-79	160.7		6-03-79	414.1		7-08-79	200.9	
4-30-79	164.0		6-04-79	266.9		7-09-79	227.5	
5-01-79	163.6		6-05-79	209.7		7-10-79	235.4	
5-02-79	163.4	1,321.5	6-06-79	204.4	1,671.4	7-11-79	184.8	1,527.3
5-03-79	192.9		6-07-79	202.4		7-12-79	210.7	
5-04-79	293.2		6-08-79	192.4		7-13-79	183.8	
5-05-79	183.7		6-09-79	181.5		7-14-79	284.2	
5-06-79	168.4		6-10-79	187.2		7-15-79	200.0	
5-07-79	171.1		6-11-79	181.0		7-16-79	188.9	
5-08-79	171.7		6-12-79	179.3		7-17-79	183.7	
5-09-79	172.9	1,187.9	6-13-79	177.0	1,252.5	7-18-79	180.0	1,652.5
5-10-79	171.0		6-14-79	178.8		7-19-79	186.8	
5-11-79	168.4		6-15-79	177.1		7-20-79	330.8	
5-12-79	164.4		6-16-79	172.1		7-21-79	382.3	
5-13-79	235.5		6-17-79	178.3		7-22-79	264.1	
5-14-79	171.0		6-18-79	174.9		7-23-79	261.4	
5-15-79	165.5		6-19-79	182.9		7-24-79	222.0	1,793.2
5-16-79	163.2	1,240.9	6-20-79	179.3	1,263.2	7-25-79	241.2	
5-17-79	165.6		6-21-79	179.3		7-26-79	233.1	
5-18-79	167.8		6-22-79	189.9		7-27-79	289.9	
5-19-79	172.3		6-23-79	178.6		7-28-79	281.5	
5-20-79	174.1		6-24-79	197.5		7-29-79	235.3	

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POPLAR CREEK

1979

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
7-30-79	212.9		9-03-79	187.8		10-08-79	176.8	
7-31-79	207.2		9-04-79	190.1		10-09-79	184.5	
8-01-79	202.6	1,438.4	9-05-79	186.6	1,313.5	10-10-79	294.8	1,415.6
8-02-79	198.3		9-06-79	188.5		10-11-79	204.0	
8-03-79	194.1		9-07-79	183.1		10-12-79	188.4	
8-04-79	188.0		9-08-79	178.1		10-13-79	191.0	
8-05-79	185.9		9-09-79	177.7		10-14-79	179.0	
8-06-79	188.1		9-10-79	181.1		10-15-79	184.9	
8-07-79	192.5		9-11-79	181.0		10-16-79	180.6	
8-08-79	193.3	1,426.2	9-12-79	181.9	1,266.0	10-17-79	182.1	
8-09-79	193.3		9-13-79	183.9		10-18-79	185.7	1,267.8
8-10-79	189.6		9-14-79	187.8		10-19-79	178.5	
8-11-79	283.5		9-15-79	172.6		10-20-79	177.0	
8-12-79	212.8		9-16-79	169.7		10-21-79	177.9	
8-13-79	192.4		9-17-79	176.2		10-22-79	181.3	
8-14-79	188.4		9-18-79	178.7		10-23-79	217.2	
8-15-79	186.7	1,323.1	9-19-79	176.3	1,350.5	10-24-79	180.6	1,281.4
8-16-79	183.5		9-20-79	178.1		10-25-79	178.8	
8-17-79	181.7		9-21-79	282.1		10-26-79	174.7	
8-18-79	177.6		9-22-79	189.4		10-27-79	170.9	
8-19-79	179.3		9-23-79	172.5		10-28-79	185.6	
8-20-79	187.0		9-24-79	174.6		10-29-79	192.6	
8-21-79	188.2		9-25-79	177.5		10-30-79	182.5	
8-22-79	205.1	1,322.3	9-26-79	178.0	1,422.3	10-31-79	179.4	1,448.5
8-23-79	202.2		9-27-79	280.2		11-01-79	236.1	
8-24-79	178.2		9-28-79	250.4		11-02-79	281.3	
8-25-79	182.3		9-29-79	189.1		11-03-79	191.0	
8-26-79	308.3		9-30-79	181.0		11-04-79	185.6	
8-27-79	192.9		10-01-79	183.5		11-05-79	186.3	
8-28-79	271.0		10-02-79	180.1		11-06-79	181.5	
8-29-79	206.1	1,690.9	10-03-79	182.0	1,286.9	11-07-79	183.0	1,552.4
8-30-79	305.4		10-04-79	195.3		11-08-79	184.7	
8-31-79	213.7		10-05-79	187.3		11-09-79	291.7	
9-01-79	193.5		10-06-79	177.7		11-10-79	339.6	
9-02-79	199.3		10-07-79	176.1		11-11-79	212.5	

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POPLAR CREEK

1979

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
11-12-79	204.9		12-17-79	181.1	
11-13-79	197.1		12-18-79	182.4	
11-14-79	191.5	1,362.5	12-19-79	181.0	1,265.1
11-15-79	188.9		12-20-79	183.7	
11-16-79	184.7		12-21-79	180.6	
11-17-79	182.9		12-22-79	175.8	
11-18-79	180.6		12-23-79	205.5	
11-19-79	186.2		12-24-79	264.5	
11-20-79	188.4		12-25-79	212.0	
11-21-79	183.5	1,441.0	12-26-79	192.7	1,442.0
11-22-79	177.8		12-27-79	190.1	
11-23-79	228.6		12-28-79	189.3	
11-24-79	295.9		12-29-79	187.9	
11-25-79	276.3		12-30-79	205.9	
11-26-79	237.6		12-31-79	192.1	
11-27-79	202.6				
11-28-79	195.1	1,477.1			
11-29-79	194.4				
11-30-79	187.9				
12-01-79	183.2				
12-02-79	180.6				
12-03-79	185.7				
12-04-79	179.8				
12-05-79	179.1	1,263.5			
12-06-79	181.3				
12-07-79	180.9				
12-08-79	176.1				
12-09-79	176.1				
12-10-79	178.7				
12-11-79	179.6				
12-12-79	182.2	1,300.0			
12-13-79	217.6				
12-14-79	185.0				
12-15-79	180.8				
12-16-79	180.5				

UCN-3869A (125 11-62) DATA SHEET

POPLAR CREEK

1980

HRS	Month		H-f Maximum Flow gal/day (Million)	H-f Minimum Flow gal/day (Million)		Correction	H Total Inches	C Average Inch/Hr	f Average Gal/day (Million)
744	January		388 -20.4	185- 6.7			7,137.2	9.59	9.3
696 ~~672~~	February		215- 12.2	169- 5.9			5,517.7	7.93	7.0
744	March		492-28.9	171- 6.0			8,869.9	11.9	12.9
720	April		316- 15.1	195- 7.3			6,446.7	8.95	8.3
744	May		343-16.9	140- 4.4			6,489.7	8.72	8.1
720	June		484-28.4	158- 5.3			6,593.2	9.16	8.7
744	July		237-9.7	173- 6.1			6,065.0	8.15	7.3
744	August		249-10.5	192- 7.1			6,106.8	8.20	7.4
720	September		262- 11.3	169- 5.9			6,181.0	8.58	7.9
744	October		257- 11.0	208- 8.0			6,956.2	9.35	9.0
720	November		300- 13.9	200- 7.5			6,657.3	9.25	8.8
744	December		303- 14.2	175- 6.2			6,155.5	8.27	7.5

$Q = 3.367\ L H^{3/2}$ cfs

$L = 6'$

$f = Q \times .646317$ millions gal/day

$f = 13.05 \left(\sqrt{\frac{C}{12}}\right)^3$

$\frac{\text{MAX OR MIN}}{24} = C \rightarrow$ using f formula above

UCN-3889A (12-11-62) DATA SHEET

POPLAR CREEK

1980

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
01-01-80	216.9		02-05-80	197.6		03-11-80	190.8	
01-02-80	189.1	1,462.5	02-06-80	189.5	1,296.7	03-12-80	187.6	
01-03-80	185.1		02-07-80	172.6		03-13-80	192.2	1,337.4
01-04-80	272.8		02-08-80	169.2		03-14-80	182.9	
01-05-80	200.6		02-09-80	184.7		03-15-80	174.5	
01-06-80	191.7		02-10-80	194.0		03-16-80	171.4	
01-07-80	230.5		02-11-80	188.8		03-17-80	486.0	
01-08-80	200.4		02-12-80	185.6		03-18-80	492.0	
01-09-80	191.8	1,437.4	02-13-80	185.9	1,401.7	03-19-80	492.0	3,032.4
01-10-80	192.7		02-14-80	185.9		03-20-80	492.0	
01-11-80	235.2		02-15-80	186.7		03-21-80	491	
01-12-80	195.1		02-16-80	274.8		03-22-80	408	
01-13-80	198.0		02-17-80	238.7		03-23-80	348	
01-14-80	221.4		02-18-80	210.9		03-24-80	356	
01-15-80	197.0		02-19-80	191.3		03-25-80	323	
01-16-80	188.6	1,660.3	02-20-80	182.0	1,351.9	03-26-80	305	2,289.2
01-17-80	238.1		02-21-80	176.5		03-27-80	288	
01-18-80	387.6		02-22-80	180.3		03-28-80	395	
01-19-80	229.6		02-23-80	172.2		03-29-80	274.2	
01-20-80	207.2		02-24-80	180.5		03-30-80	252.5	
01-21-80	204.3		02-25-80	184.9		03-31-80	232.3	
01-22-80	346.8		02-26-80	187.3		04-01-80	215.0	
01-23-80	248.5	1,608.5	02-27-80	184.5	1,275.4	04-02-80	204.4	1,575.3
01-24-80	211.8		02-28-80	177.8		04-03-80	215.7	
01-25-80	199.4		02-29-80	181.5		04-04-80	252.8	
01-26-80	190.5		03-01-80	178.9		04-05-80	202.6	
01-27-80	187.2		03-02-80	183.5		04-06-80	199.0	
01-28-80	185.7		03-03-80	184.8		04-07-80	200.4	
01-29-80	187.3		03-04-80	244.6		04-08-80	216.8	
01-30-80	193.2	1,339.4	03-05-80	200.2	1,547.2	04-09-80	202.3	1,474.0
01-31-80	215.1		03-06-80	184.1		04-10-80	198.4	
02-01-80	189.5		03-07-80	230.9		04-11-80	199.8	
02-02-80	181.4		03-08-80	319		04-12-80	257.3	
02-03-80	187.7		03-09-80	210.9		04-13-80	315.8	
02-04-80	195.4		03-10-80	198.5		04-14-80	252.0	

UCN-3889A (12-11-82) DATA SHEET

Poplar Creek
1980

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
04-15-80	221.0		05-20-80	262.4		06-24-80	232.3	
04-16-80	213.8	1,624.4	05-21-80	203.4	1,560.3	06-25-80	204.7	
04-17-80	213.6		05-22-80	209.3		06-26-80	179.8	1,316.6
04-18-80	207.3		05-23-80	205.3		06-27-80	179.7	
04-19-80	200.9		05-24-80	225.7		06-28-80	175.6	
04-20-80	200.2		05-25-80	210.1		06-29-80	177.9	
04-21-80	203.0		05-26-80	189.2		06-30-80	182.9	
04-22-80	204.5		05-27-80	172.3		07-01-80	180.0	
04-23-80	201.6	1,428.7	05-28-80	159.2	1,314.7	07-02-80	181.1	1,291.5
04-24-80	202.3		05-29-80	140.1		07-03-80	218.3	
04-25-80	194.6		05-30-80	195.8		07-04-80	173.3	
04-26-80	222.5		05-31-80	248.0		07-05-80	178.0	
04-27-80	237.1		06-01-80	245.0		07-06-80	227.2	
04-28-80	200.1		06-02-80	223.0		07-07-80	185.3	
04-29-80	197.6		06-03-80	206.0		07-08-80	186.3	
04-30-80	194.3	1,397.9	06-04-80	199.9	1,442.7	07-09-80	192.9	1,362.4
05-01-80	190.9		06-05-80	192.0		07-10-80	197.1	
05-02-80	191.8		06-06-80	193.2		07-11-80	188.8	
05-03-80	186.1		06-07-80	183.6		07-12-80	184.8	
05-04-80	187.0		06-08-80	179.0		07-13-80	184.9	
05-05-80	190.7		06-09-80	184.1		07-14-80	223.3	
05-06-80	188.6		06-10-80	321.8		07-15-80	211.9	
05-07-80	191.3	1,617.5	06-11-80	484.8	2,237.9	07-16-80	196.2	1,376.9
05-08-80	343.1		06-12-80	484.8		07-17-80	192.6	
05-09-80	311.2		06-13-80	418.2		07-18-80	186.0	
05-10-80	206.1		06-14-80	165.2		07-19-80	182.0	
05-11-80	193.3		06-15-80	163.0		07-20-80	184.4	
05-12-80	199.5		06-16-80	185.4		07-21-80	190.2	
05-13-80	202.2		06-17-80	184.9		07-22-80	199.3	
05-14-80	198.7	1,428.4	06-18-80	188.0	1,235.8	07-23-80	192.4	1,324.0
05-15-80	196.5		06-19-80	180.8		07-24-80	186.2	
05-16-80	194.2		06-20-80	175.2		07-25-80	183.3	
05-17-80	244.0		06-21-80	158.5		07-26-80	188.2	
05-18-80	208.4		06-22-80	163.4		07-27-80	237.1	
05-19-80	245.8		06-23-80	180.5		07-28-80	221.9	

JCN-3889A
(29 11-82) DATA SHEET

Poplar Creek
1980

Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
07-29-80	204.0		09-02-80	186.7		10-07-80	213.2	
07-30-80	204.0	1,460.0	09-03-80	186.9	1,282.7	10-08-80	214.1	
07-31-80	204.0		09-04-80	194.8		10-09-80	218.0	1,527.3
08-01-80	197.0		09-05-80	181.1		10-10-80	233.2	
08-02-80	192.0		09-06-80	169.1		10-11-80	222.1	
08-03-80	192.0		09-07-80	173.4		10-12-80	215.7	
08-04-80	192.0		09-08-80	185.2		10-13-80	220.8	
08-05-80	192.0		09-09-80	185.0		10-14-80	226.6	
08-06-80	192.0	1,330.7	09-10-80	262.3	1,348.9	10-15-80	224.5	1,588.3
08-07-80	192.0		09-11-80	186.8		10-16=80	226.5	
08-08-80	193.9		09-12-80	183.7		10-17-80	226.7	
08-09-80	176.8		09-13-80	172.5		10-18-80	247.5	
08-10-80	190.6		09-14-80	177.4		10-19-80	231.3	
08-11-80	225.6		09-15-80	188.9		10-20-80	229.1	
08-12-80	206.5		09-16-80	187.8		10-21-80	227.8	
08-13-80	197.6	1,485.2	09-17-80	196.3	1,296.0	10-22-80	223.3	1,628.9
08-14-80	197.8		09-18-80	188.6		10-23-80	224.3	
08-15-80	218.4		09-19-80	179.2		10-24-80	235.7	
08-16-80	228.7		09-20-80	177.8		10-25-80	257.4	
08-17-80	197.3		09-21-80	191.0		10-26-80	216.4	
08-18-80	197.8		09-22-80	195.3		10-27-80	231.7	
08-19-80	209.6		09-23-80	195.4		10-28-80	237.5	
08-20-80	200.4	1,392.3	09-24-80	218.1	1,413.7	10-29-80	219.4	1,553.9
08-21-80	197.9		09-25-80	213.1		10-30-80	219.5	
08-22-80	195.1		09-26-80	199.5		10-31-80	214.9	
08-23-80	197.2		09-27-80	201.3		11-01-80	214.5	8.4
08-24-80	191.7		09-28-80	224.8		11-02-80	214.8	8.4
08-25-80	195.2		09-29-80	222.4		11-03-80	218.5	8.7
08-26-80	191.2		09-30-80	211.7		11-04-80	238.3	9.8
08-27-80	187.7	1,326.3	10-01-80	223.6	1,531.2	11-05-80	223.1	1,527.1 8.9
08-28-80	189.5		10-02-80	223.5		11-06-80	217.8	8.7
08-29-80	189.0		10-03-80	214.0		11-07-80	210.8	8.2
08-30-80	182.0		10-04-80	211.2		11-08-80	203.8	7.8
08-31-80	183.3		10-05-80	207.9		11-09-80	206.7	7.9
09-01-80	180.8		10-06-80	218.8		11-10-80	206.5	7.9

CN-3889A DATA SHEET

Poplar Creek
1980

Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Totals	Date	Daily Readings	Weekly Totals
11-11-80	205.6	7.9	12-16-80	192.7				
11-12-80	206.0	1,511.5 7.9	12-17-80	197.2	1,395.0			
11-13-80	207.6	8.0	12-18-80	204.0				
11-14-80	209.4	8.1	12-19-80	204.4				
11-15-80	269.7	11.8	12-20-80	203.7				
11-16-80	204.1	7.8	12-21-80	202.9				
11-17-80	295.9	13.5	12-22-80	204.2				
11-18-80	220.5	8.8	12-23-80	189.5				
11-19-80	204.3	1,533.4 7.9	12-24-80	226.5	1,353.6			
11-20-80	202.8	7.8	12-25-80	178.5				
11-21-80	203.8	7.9	12-26-80	175.8				
11-22-80	202.0	7.7	12-27-80	176.2				
11-23-80	269.7	11.8	12-28-80	175.3				
11-24-80	300.4	13.8	12-29-80	177.3				
11-25-80	210.0	8.2	12-30-80	176.7				
11-26-80	204.6	1,669.9 7.8	12-31-80	176.4				
11-27-80	282.0	12.6						
11-28-80	203.0	7.8						
11-29-80	200.2	7.6						
11-30-80	200.9	7.6						
12-01-80	203.2							
12-02-80	200.9							
12-03-80	199.8	1,397.7						
12-04-80	202.3							
12-05-80	202.9							
12-06-80	187.7							
12-07-80	195.7							
12-08-80	203.3							
12-09-80	303.0							
12-10-80	211.3	1,504.4						
12-11-80	200.6							
12-12-80	194.8							
12-13-80	195.7							
12-14-80	195.5							
12-15-80	197.5							

POPLAR CREEK

1982

	Month		H-f Maximum Flow gal/day (Million)	H-f Minimum Flow gal/day (Million)		Correction	H Total Inches	c Average Inch/Hr	f Average Gal/Day (Million
744	January		358 = 18.09	180 = 6.44			6,946.2	9.34	8.96
672	February		EQUIPMENT OUT OF ORDER						
744	March		358 = 18.09	195 - 7.3			7,331.0	9.85	9.71
720	April		265 = 11.51	191 = 7.04			6,302.1	8.75	8.13
744	May		305 = 14.22	192 - 7.09			6,270.6	8.43	7.68
720	June		241 = 9.99	188 = 6.88			6,333.2	8.80	8.18
744	July		391 = 20.81	194 = 7.22			6,934.5	9.32	8.93
744	August		432 = 23.8	205 = 7.8			7,101.5	9.54	9.26
720	September		360 = 20.7	201 = 7.6			6,827.2	9.48	9.18
744	October		311 = 14.6	197 = 7.4			6,584.8	8.85	8.27
720	November		375 = 19.4	209 = 8.1			7,354.5	10.21	10.24
744	December		415 = 22.6	214 = 8.4			7,730.7	10.39	10.51

$Q = 3.367\, L H^{3/2}$ cfs

$L = 6'$

$f = Q \times .646317$ mil gal./day

$f = 13.05 \left(\sqrt{\frac{c}{12''}}\right)^3$

$\frac{\text{MAX or MIN}}{24\text{ hrs}} = c$ use f formula above

UCN-3889A DATA SHEET

POPLAR CREEK

1982

Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Reading
01-01	188.2	1,254.4	02-05	209.4	1,588.5	03-12	215.0	1,708
01-02	184.7		02-06	216.7		03-13	235.0	
01-03	330.2		02-07	200.8		03-14	223.5	
01-04	323.2		02-08	202.2		03-15	347.3	
01-05	214.6		02-09	302.5		03-16	252.4	
01-06	199.4	1,636.5	02-10	223.9		03-17	238.7	1,721.0
01-07	194.3		02-11	216.0		03-18	225.2	
01-08	192.0		02-12			03-19	221.5	
01-09	182.8		02-13			03-20	212.4	
01-10	179.9		02-14			03-21	355.9	
01-11	189.4		02-15			03-22	255.0	
01-12	187.6		02-16			03-23	232.9	
01-13	191.0	1,324.4	02-17			03-24	223.5	1,703.2
01-14	191.0		02-18			03-25	219.6	
01-15	193.0		02-19			03-26	216.1	
01-16	192.5		02-20			03-27	200.2	
01-17	189.8		02-21			03-28	196.0	
01-18	192.0		02-22			03-29	205.7	
01-19	219.4		02-23			03-30	209.5	
01-20	240.4	1,772.6	02-24			03-31	296.1	1,568.0
01-21	357.7		02-25			04-01	223.5	
01-22	272.6		02-26	274.2		04-02	217.4	
01-23	310.7		02-27	274.2		04-03	219.8	
01-24	226.9		02-28	198.4		04-04	190.8	
01-25	212.3		03-01	198.8		04-05	198.4	
01-26	205.5		03-02	194.5		04-06	196.3	
01-27	202.9	1,408.7	03-03	200.2	1,489.0	04-07	201.2	1,428
01-28	190.8		03-04	210.3		04-08	232.7	
01-29	187.8		03-05	231.7		04-09	206.4	
01-30	183.3		03-06	255.1		04-10	202.3	
01-31	236.8		03-07	357.7		04-11	201.2	
02-01	194.3		03-08	238.2		04-12	199.0	
02-02	241.7		03-09	224.7		04-13	198.1	
02-03	274.6		03-10	220.4		04-14	198.5	
02-04	215.0		03-11	217.9		04-15	200.7	

UCN-3889A (25 11-62) DATA SHEET

POPLAR CREEK

1982

Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readings
04-16	203.9	1,466.5	05-21	201.7	1,402.1	06-25	214.8	1,464.0
04-17	265.1		05-22	212.5		06-26	216.3	
04-18	204.5		05-23	208.0		06-27	235.5	
04-19	206.7		05-24	201.3		06-28	224.2	
04-20	203.5		05-25	201.9		06-29	212.8	
04-21	203.4	1,420.5	05-26	201.8	1,546.5	06-30	214.4	1,504.9
04-22	203.5		05-27	219.2		07-01	210.0	
04-23	202.3		05-28	305.3		07-02	204.0	
04-24	196.6		05-29	209.0		07-03	204.0	
04-25	237.7		05-30	202.4		07-04	293.7	
04-26	232.8		05-31	202.1		07-05	238.2	
04-27	240.4		06-01	211.8		07-06	217.6	
04-28	211.3	1,519.2	06-02	202.6	1,484.1	07-07	212.4	1,685.6
04-29	202.2		06-03	201.7		07-08	240.4	
04-30	201.4		06-04	240.8		07-09	251.1	
05-01	193.4		06-05	222.7		07-10	231.6	
05-02	193.2		06-06	199.6		07-11	268.9	
05-03	194.5		06-07	202.7		07-12	219.9	
05-04	197.4		06-08	203.4		07-13	210.8	
05-05	195.5	1,357.1	06-09	208.2	1,444.0	07-14	207.4	1,530.4
05-06	192.5		06-10	215.9		07-15	209.9	
05-07	192.0		06-11	209.8		07-16	212.0	
05-08	192.0		06-12	204.4		07-17	201.5	
05-09	195.9		06-13	201.8		07-18	194.1	
05-10	196.5		06-14	200.0		07-19	198.0	
05-11	197.1		06-15	207.0		07-20	197.6	
05-12	192.0	1,367.0	06-16	234.8	1,458.7	07-21	193.7	1,399.9
05-13	196.2		06-17	217.7		07-22	213.9	
05-14	194.6		06-18	205.5		07-23	201.6	
05-15	194.7		06-19	191.9		07-24	201.0	
05-16	193.6		06-20	187.7		07-25	204.1	
05-17	197.3		06-21	193.4		07-26	208.1	
05-18	200.8		06-22	222.5		07-27	208.2	
05-19	198.1		06-23	214.2		07-28	210.5	
05-20	198.1		06-24	215.1		07-29	208.5	

POPLAR CREEK

1982

Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Reading
07-30	271.1	1,701.2	09-03	243.3	1,746.5	10-08	236.3	1,490.
07-31	390.7		09-04	213.7		10-09	209.6	
08-01	224.7		09-05	209.1		10-10	205.2	
08-02	212.4		09-06	207.5		10-11	207.2	
08-03	212.4		09-07	206.9		10-12	239.2	
08-04	216.7	1,506.3	09-08	208.6	1,459.2	10-13	311.3	1,587.8
08-05	219.5		09-09	210.8		10-14	212.9	
08-06	213.7		09-10	210.8		10-15	208.8	
08-07	206.9		09-11	205.5		10-16	203.2	
08-08	207.1		09-12	201.3		10-17	196.8	
08-09	432.0		09-13	217.7		10-18	206.1	
08-10	253.5		09-14	219.1		10-19	205.9	
08-11	249.1	1,818.1	09-15	213.3	1,479.7	10-20	212.7	1,443.9
08-12	232.7		09-16	209.1		10-21	211.4	
08-13	227.2		09-17	211.5		10-22	209.1	
08-14	216.5		09-18	207.7		10-23	201.9	
08-15	213.3		09-19	207.1		10-24	200.1	
08-16	220.8		09-20	214.7		10-25	205.8	
08-17	225.4		09-21	210.8		10-26	207.9	
08-18	241.3	1,569.6	09-22	222.7	1,525.0	10-27	208.4	1,444.9
08-19	216.4		09-23	210.3		10-28	208.5	
08-20	219.6		09-24	208.4		10-29	205.9	
08-21	232.8		09-25	251.0		10-30	208.3	
08-22	205.3		09-26	213.3		10-31	207.4	
08-23	255.8		09-27	211.0		11-01	211.2	
08-24	247.2		09-28	210.0		11-02	213.0	
08-25	223.2	1,569.4	09-29	211.0	1,465.5	11-03	374.8	1,752.4
08-26	212.7		09-30	209.6		11-04	300.7	
08-27	214.6		10-01	209.3		11-05	223.8	
08-28	210.6		10-02	201.3		11-06	221.5	
08-29	204.7		10-03	201.6		11-07	213.2	
08-30	206.3		10-04	205.3		11-08	210.9	
08-31	227.1		10-05	207.4		11-09	209.2	
09-01	291.2		10-06	207.7		11-10	211.4	
09-02	360.2		10-07	222.3		11-11	214.9	

UCN-3889A (125 11-82) DATA SHEET

POPLAR CREEK

1982

Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readin
11-12	286.5	1,572.9	12-17	238.2	1,802.9			
11-13	226.8		12-18	224.7				
11-14	211.3		12-19	234.9				
11-15	217.9		12-20	223.4				
11-16	219.0		12-21	217.7				
11-17	249.7	1,666.2	12-22	214.9	1,556.2			
11-18	309.6		12-23	231.2				
11-19	238.3		12-24	213.7				
11-20	220.4		12-25	220.4				
11-21	218.9		12-26	246.4				
11-22	318.3		12-27	221.5				
11-23	242.8		12-28	289.2				
11-24	269.1	1,739.1	12-29	227.2				
11-25	221.1		12-30	220.1				
11-26	217.6		12-31	214.0				
11-27	251.3							
11-28	322.8							
11-29	270.9							
11-30	237.6							
12-01	414.8	2,012.8						
12-02	280.7							
12-03	249.7							
12-04	236.3							
12-05	336.4							
12-06	249.5							
12-07	231.1							
12-08	229.1	1,771.7						
12-09	223.8							
12-10	224.8							
12-11	271.4							
12-12	307.5							
12-13	237.9							
12-14	233.0							
12-15	252.7							
12-16	308.9							

UCN-3889A (125 11-62) DATA SHEET

POPLAR CREEK

1983

	Month	Maximum Flow gal/day (Million)	Minimum Flow gal/day (Million)	Correction	Total Inches	Average Inch/Hr	Average Gal/Day (Million
		H f	H f		H	c	f
744	January	247 - 10.4	195 - 7.3		6,573.2	8.83	8.24
672	February	358 - 17.9	212 - 8.2		6,808.7	10.13	10.13
744	March	281 - 12.6	201 - 7.6		6,883.3	9.26	8.84
720	April	389 - 20.5	200 - 7.5		7,248.8	10.07	10.03
744	May	370 - 19.0	202 - 7.7		7,279.9	9.78	9.61
720	June	296 - 13.6	199 - 7.5		6,298.0	8.74	8.12
744	July	245 - 10.2	198 - 7.4		6,787.8	9.12	8.65
744	August	233 - 9.5	193 - 7.2		6,490.2	8.72	8.09
720	September	289 - 13.1	190 - 7.0		6,165.7	8.56	7.87
[illegible]	October	357 - 18.0	197 - 7.4		6,782.4	9.12	8.64
720	November	349 - 17.4	198 - 7.4		6,944.3	9.64	9.39
744	December	396 - 21.1	200 - 7.5		7,476.8	10.05	10.0

$Q = 3.367 \cdot LH^{3/2}$ cfs

$L = 6'$

$f = Q \times .646317$ mg/d

$f = 13.05 \left(\sqrt{\frac{a}{12''}}\right)^3$

$\frac{\text{MAX OR MIN}}{24} = c$ above — Use in f formula

ICN-3889A (25 11-62) DATA SHEET

POPLAR CREEK

1983

Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Reading
01-01	213.0	1,631.4	02-05	227.4		03-12	220.1	
01-02	221.7		02-06	272.2		03-13	222.2	
01-03	219.4		02-07	248.9		03-14	225.9	
01-04	210.9		02-08	236.6		03-15	221.8	
01-05	213.5	1,506.7	02-09	224.8	1,842.7	03-16	216.0	1,502.2
01-06	214.5		02-10	316.5		03-17	207.8	
01-07	214.8		02-11	302.9		03-18	207.3	
01-08	211.9		02-12	242.8		03-19	201.2	
01-09	246.9		02-13	230.2		03-20	253.9	
01-10	225.6		02-14	228.5		03-21	251.5	
01-11	217.6		02-15	227.5		03-22	212.0	
01-12	214.1	1,517.8	02-16	232.0	1,605.6	03-23	208.4	1,549.4
01-13	209.5		02-17	233.7		03-24	209.0	
01-14	209.1		02-18	231.4		03-25	210.6	
01-15	195.0		02-19	222.3		03-26	204.4	
01-16	194.6		02-20	224.3		03-27	259.2	
01-17	200.3		02-21	222.7		03-28	210.8	
01-18	210.2		02-22	273.8		03-29	207.0	
01-19	212.3	1,463.4	02-23	239.9	1,631.6	03-30	209.6	1,536.2
01-20	207.1		02-24	238.9		03-31	207.7	
01-21	229.8		02-25	217.8		04-01	199.9	
01-22	209.1		02-26	214.2		04-02	242.0	
01-23	206.0		02-27	212.7		04-03	215.4	
01-24	210.3		02-28	217.2		04-04	205.6	
01-25	209.9		03-01	213.8		04-05	388.6	
01-26	208.4	1,446.6	03-02	217.8	1,545.9	04-06	336.2	1,996.7
01-27	205.3		03-03	233.4		04-07	260.0	
01-28	205.0		03-04	229.2		04-08	251.2	
01-29	201.7		03-05	231.8		04-09	339.7	
01-30	214.0		03-06	281.4		04-10	255.5	
01-31	211.7		03-07	222.8		04-11	241.4	
02-01	232.3		03-08	229.6		04-12	236.6	
02-02	358.4	1,724.6	03-09	224.0	1,621.0	04-13	233.7	1,634.9
02-03	244.1		03-10	222.8		04-14	229.4	
02-04	236.7		03-11	220.3		04-15	222.8	

UCN-3889A (125 11-62) DATA SHEET

Poplar Creek

1983

Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readings
04-16	215.5		05-21	369.9		06-25	200.6	
04-17	215.8		05-22	307.6		06-26	199.6	
04-18	249.1		05-23	277.1		06-27	206.9	
04-19	224.7		05-24	249.8		06-28	215.6	
04-20	223.0	1,643.6	05-25	223.6	1,695.2	06-29	207.6	1,455.4
04-21	223.2		05-26	216.9		06-30	205.7	
04-22	226.9		05-27	213.0		07-01	221.0	
04-23	280.9		05-28	207.2		07-02	199.0	
04-24	226.9		05-29	208.9		07-03	198.0	
04-25	220.3		05-30	202.2		07-04	245.0	
04-26	218.3		05-31	204.0		07-05	214.2	
04-27	221.3	1,531.7	06-01	203.0	1,539.4	07-06	202.1	1,473.9
04-28	217.6		06-02	204.0		07-07	204.7	
04-29	216.1		06-03	221.2		07-08	207.3	
04-30	211.2		06-04	296.1		07-09	202.6	
05-01	211.2		06-05	266.9		07-10	200.3	
05-02	213.1		06-06	212.1		07-11	206.6	
05-03	265.1		06-07	207.6		07-12	205.1	
05-04	215.2	1,545.8	06-08	203.0	1,440.3	07-13	211.5	1,460.3
05-05	214.0		06-09	203.4		07-14	212.9	
05-06	214.8		06-10	207.9		07-15	213.9	
05-07	212.4		06-11	199.4		07-16	210.0	
05-08	279.6		06-12	198.5		07-17	210.2	
05-09	212.8		06-13	201.6		07-18	208.5	
05-10	258.9		06-14	205.3		07-19	215.6	
05-11	249.9	1,916.9	06-15	204.6	1,459.2	07-20	241.2	1,528.2
05-12	220.8		06-16	207.7		07-21	229.8	
05-13	228.0		06-17	222.3		07-22	215.3	
05-14	261.9		06-18	219.2		07-23	207.6	
05-15	238.3		06-19	199.9		07-24	206.1	
05-16	246.9		06-20	201.4		07-25	246.6	
05-17	213.7		06-21	203.5		07-26	208.8	
05-18	211.8		06-22	222.6	1,438.8	07-27	207.1	1,483.6
05-19	305.0	1,872.9	06-23	206.7		07-28	209.3	
05-20	287.3		06-24	204.1		07-29	206.0	

UCN-3889A
(125 11-62) DATA SHEET

Poplar Creek

1983

Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readings
07-30	199.7		09-03	203.2		10-08	203.3	
07-31	222.1		09-04	225.7		10-09	203.7	
08-01	237.7		09-05	210.4		10-10	207.5	
08-02	203.3		09-06	201.1		10-11	219.3	
08-03	204.4	1,494.1	09-07	201.5	1,444.2	10-12	219.8	1,602.4
08-04	208.3		09-08	204.4		10-13	343.6	
08-05	211.0		09-09	203.4		10-14	210.5	
08-06	207.3		09-10	197.7		10-15	198.0	
08-07	232.8		09-11	194.1		10-16	198.3	
08-08	211.2		09-12	201.6		10-17	203.2	
08-09	204.8		09-13	234.5		10-18	206.6	
08-10	204.5	1,475.1	09-14	205.4	1,426.6	10-19	201.3	1,435.0
08-11	216.3		09-15	199.3		10-20	202.6	
08-12	209.2		09-16	196.7		10-21	214.9	
08-13	196.3		09-17	194.4		10-22	208.1	
08-14	193.3		09-18	195.6		10-23	356.6	
08-15	203.2		09-19	197.2		10-24	229.6	
08-16	203.0		09-20	201.0		10-25	202.6	
08-17	200.4	1,416.9	09-21	289.4	1,472.8	10-26	212.4	1,630.0
08-18	201.9		09-22	199.7		10-27	212.0	
08-19	205.2		09-23	199.9		10-28	210.2	
08-20	209.9		09-24	190.0		10-29	206.6	
08-21	204.9		09-25	190.2		10-30	205.1	
08-22	210.4		09-26	200.6		10-31	209.7	
08-23	210.4		09-27	204.0		11-01	212.5	
08-24	212.2	1,485.4	09-28	202.9	1,405.2	11-02	212.1	1,566.1
08-25	211.8		09-29	204.9		11-03	222.2	
08-26	210.1		09-30	263.6		11-04	292.1	
08-27	225.6		10-01	199.0		11-05	212.4	
08-28	224.9		10-02	197.4		11-06	211.5	
08-29	203.3		10-03	202.5		11-07	212.4	
08-30	204.1		10-04	206.2		11-08	211.2	
08-31	208.5	1,457.3	10-05	263.8	1,501.2	11-09	212.3	1,480.4
09-01	208.2		10-06	217.8		11-10	222.2	
09-02	205.3		10-07	210.2		11-11	207.6	

UCN-3889A (125 11-62) DATA SHEET

Poplar Creek
1983

INCHES

Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readings
11-12	203.2		12-17	202.5	
11-13	200.3		12-18	199.9	
11-14	202.4		12-19	205.1	
11-15	313.4		12-20	206.4	
11-16	217.8	1,547.9	12-21	208.7	1,521.2
11-17	211.1		12-22	287.0	
11-18	204.6		12-23	210.3	
11-19	198.3		12-24	203.8	
11-20	303.8		12-25	204.6	
11-21	218.8		12-26	203.9	
11-22	207.0		12-27	205.7	
11-23	247.9	1,675.8	12-28	362.4	1,636.9
11-24	282.6		12-29	240.5	
11-25	210.7		12-30	216.3	
11-26	205.0		12-31	203.5	
11-27	305.2				
11-28	349.4				
11-29	222.8				
11-30	211.5	1,994.4			
12-01	207.7				
12-02	301.6				
12-03	316.2				
12-04	339.7				
12-05	246.2				
12-06	297.2				
12-07	229.9	1,759.8			
12-08	221.9				
12-09	216.3				
12-10	208.6				
12-11	288.1				
12-12	262.0				
12-13	229.5				
12-14	241.6	1,653.4			
12-15	219.0				
12-16	210.7				

UCN-3889A
(125 11-62) DATA SHEET

East Fork Poplar Creek (EFPC) Flow Data

1984

1984

POPLAR CREEK

1984

	Month	Maximum Flow gal/day (Million)	Minimum Flow gal/day (Million)	Correction	Total Inches	Average Inch/Hr	Average Gal/Day (Millio
744	January	327.4 - 15.7	201.9 - 7.6		7,601.7	10.22	10.3
696	February	354.4 - 17.78	217.6 - 8.57		7,160.6	10.288	10.36
744	March	354.3 - 17.8	201.4 - 7.6		7,067.3	9.49	9.19
~~720~~ 600	April *	330.6 - 16.1	205.7 - 7.88		5626.3	9.38	9.02
744	May	29.71	7.647				11.68
720	June	15.27	6.842				8.583
744	July						10.36
744	August						8.36
720	September						8.07
1	October						
720	November						
744	December						

* Chart missing for 4/13 - 4/19

$Q = 3.367 \; LH^{3/2}$ cfs

$L = 6'$

$f = Q \times 0.646317 \; 10^6$ g/d

$f = 13.05 \left(\sqrt{c/12''}\right)^3$

$\frac{\text{max or min}}{24} = c$; use in f formula above

UCN-3889A (125 11-62) DATA SHEET

POPLAR CREEK

1984

Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readings	Date	Daily Readings	Weekly Readin
01-01	201.9		02-05	217.6 .76		03-11	199.2	.69
01-02	211.8		02-06	229.6 .80		03-12	301.6	.70
01-03	224.0		02-07	230.4 .80		03-13	[illegible]	.76
01-04	225.4	1,540.1	02-08	230.4 .80	1,622.0	03-14	212.0 .74	1,485
01-05	225.7		02-09	230.4 .80		03-15	208.8 .73	
01-06	227.0		02-10	248.0 .86		03-16	[illegible] .80	
01-07	224.3		02-11	235.6 .82		03-17	212.0 .73	
01-08	216.6		02-12	228.6 .79		03-18	215.7 .75	
01-09	219.7		02-13	334.6 1.16		03-19	212.4 .74	
01-10	279.5		02-14	300.8 1.04		03-20	290.0 1.01	
01-11	250.7	1,678.1	02-15	259.4 .90	1,855.8	03-21	[illegible] .99	1,678.4
01-12	279.5		02-16	253.6 .88		03-22	247.2 .86	
01-13	240.8		02-17	244.0 .85		03-23	229.9 .80	
01-14	231.8		02-18	234.8 .82		03-24	215.9 .75	
01-15	228.3		02-19	233.8 .81		03-25	213.2 .74	
01-16	239.7		02-20	227.4 .79		03-26	213.4 .74	
01-17	235.4 .82		02-21	222.8 .77		03-27	21[illegible].8 .75	
01-18	327.4 1.14	1,753.7	02-22	230.4 .80	1,654.6	03-28	254.3 1.20	1,734.9
01-19	259.0 .90		02-23	277.2 .96		03-29	272.2 .95	
01-20	236.9 .82		02-24	234.0 .81		03-30	[illegible].1 .84	
01-21	229.0 .79		02-25	229.0 .80		03-31	225.9 .78	
01-22	228.0 .79		02-26	228.0 .79		04-01	222.3	
01-23	228.0 .79		02-27	354.4 1.23		04-02	223.0	
01-24	320.1 1.11		02-28	295.6 1.03		04-03	237.3	
01-25	316.0 1.10	1,950.4	02-29	250.4 .87	1,789.1	04-04	330.6	
01-26	287.7 1.00		03-01	225.6 .78		04-05	259.2	
01-27	340.2 1.18		03-02	221.5 .77		04-06	✓	
01-28	230.4 0.80		03-03	213.6 .74		04-07		
01-29	228.0 .79		03-04	210.9 .73		04-08		
01-30	223.8 .78		03-05	222.9 0.77		04-09		
01-31	227.6 .79		03-06	225.5 .78		04-10		
02-01	223.6 .78	1,579.2	03-07	215.8 .74	1,487.9	04-11		
02-02	222.6 .77		03-08	207.4 .72		04-12		
02-03	231.2 .80		03-09	20[illegible].0 .70		04-13		
02-04	222.4 .77		03-10	201.4 .70		04-14		

UCN-3889A (125 11-62) DATA SHEET

Poplar Creek
1984

	Sunday April 1	Monday April 2	Tuesday April 3	Wednesday April 4	Thursday April 5	Friday April 6	Saturday April 7
1					11.4		9.8
2							9.6
3					11.3X2	10.6X3	9.6
4					11.2		9.6
5				9.5X5			9.6
6		9.3X6		12.5	11.0X2	10.5X3	"
7			9.3X7	16.1			"
8			9.5				"
9			10.5	17.2X2	10.9X3		"
10			11.2			10.4X4	"
11			11.1			10.4	"
12	9.3X12	9.2X6	10.9	17.4X3	10.7X3	10.4	9.9
1			10.5				9.9
2		9.3X2	10.3	17.5X2			9.7
3			10.2	16.9			9.7
4			10.1	15.6			9.7
5			10.0	14.5			9.7
6		9.4X4	-	13.6			9.7
7			9.9X2	13.0			9.7
8			9.8	12.4			9.7
9	9.2X9		9.7	12.1			9.5
10			9.6	11.8			9.5
11						10 X 11	9.5
12	9.3X3	9.3X6	9.5X2	11.5X2	10.6X12	9.9	9.5
	222.3	223.0	237.3	330.6	259.2	244.6	231.5
	0.77	.77	.82	1.15	.90	.85	.80
	8.822	8.822	9.695	16.10	11.15	10.23	9.343

UCN-3889A (125 11-82) DATA SHEET

	Sunday	Monday	Tues	Wed	Thur	Fri	Sat
1	April 8	4/9	4/10	4/11	4/12	4/13	4/14
1						9.4	
2						9.4	
3							
4							
5							
6		9.5x6					
7		9.7					
8						9.5x6	
9		9.5x9		[illegible]	9.5x9	9.4	
10		9.7		[illegible]	9.8		
11		10.3		[illegible]	9.7		
12		10.5		[illegible]	9.5		
13		10.5		[illegible]	9.5		
14		10.7			9.5		
15		10.7		[illegible]	9.4		
16		10.5					
17		10.3					
18		10.0			[illegible]		
19		9.8					
20		9.7					
21		9.7					
22		9.5					
23		9.5					
24	9.5x24	9.5	9.5x24	9.5x24	9.4		
	228	245.9	228	228	227.9	85.24	#
	.79	.85	.79	.79	.79	.79	
	9.168	10.23	9.168	9.168	9.168*	9.168 Chart missing	

UCN-3889A (125 11-82) DATA SHEET

	Sunday 4/15	Monday 4/16	Tues. 4/17	Wed. 4/18	Thurs 4/19	Fri. 4/20	Sat. 4/21
AM 1							9.3
2							9.2
3							9.0
4						8.5 x 4	8.9
5						8.4	8.7
6						8.4	8.6
7						8.3	8.5
8							
9					8.5		
10					8.5		
11					8.2		
12					9.2		8.5 x 5
M 1					9.2		
2					9.2		
3					9.0		
4					8.9		
5					8.8		
6					8.8		
7					8.8	8.4 x 11	
8					8.7	10	
9					8.6	10.9	
10					8.5	10.5	8.4 x 10
11					8.5	10.3	8.4
12					8.5	9.8	8.5 x 2
Total	*	*	*	*	139.9 *	211	205.7
					.73	.73	.71
	* Chart	missing			8.144	8.144	7.811

JCN-3889A DATA SHEET

	Sunday 4/22	Monday 4/23	Tues. 4/24	Wed. 4/25	Thurs 4/26	Fri. 4/27	Sat. 4/28
AM 1							
2							
3							
4							
5						9.0×5	
6			9.4×6		9.2×6	9.2	
7						9.5	
8	8.5×8	10.0×8				9.5	
9	9.2.0					9.5	
10	16.0					9.5	
11						10.5	
12	17.0×2					11.2	
PM 1	16.5					10.9	
2	16.0					10.7	9.0×14
3	15.5					10.4	9.5
4	14.5					10.2	10.0
5	13.3					9.7	9.9
6	12.5					9.7	9.7
7	11.8					9.5	9.5
8	11.2					9.3	9.4
9	10.8					9.2	9.3
10	10.5					9.3	9.0
11	10.3					9.1	9.0
12	10.2	9.5×16	9.2×18	9.2×24	9.0×18	9.0	8.9
Total	273.8	232	222	220.8	217.2	230.9	220.2
Avg. inches	11.41	9.67	9.25	9.2	9.05	9.62	9.18
Avg. ft	0.95	0.81	0.77	0.77	0.75	0.80	0.76
Flow	12.09	9.518	8.822	8.822	8.430	9.343	8.651

JCN-3889A DATA SHEET

	Sunday 4/29	Monday 4/30	Tues. 5/1	Wed. 5/2	Thurs 5/3	Fri. 5/4	Sat. 5/5
AM 1	8.9	9.8	9.5	9.5	12.3	13.6	10.5
2		9.7		9.5	12.1	13.7	10.5
3		9.5		9.4	11.8	13.5	10.5
4		9.5		9.4	11.6	13.3	10.5
5		9.5		9.4	11.5	13.0	10.5
6		9.5		9.4	16.9	12.9	10.5
7		9.5		9.4	16.9	12.7	10.5
8		10.5		9.4	17.0	12.7	10.4
9		11.2		9.9	17.1	12.5	10.4
10		10.7		15.4	17.2	12.1	10.3
11		10.6		16.9	17.2	12.0	10.2
12		10.5		16.9	17.2	11.9	10.1
PM 1		10.5	9.5	17.0	17.2	11.8	10.1
2		10.6	9.6	17.0	16.8	11.7	10.0
3		10.4	9.7	17.0	16.3	11.6	10.0
4		10.3	9.7	17.0	15.7	11.4	10.0
5	8.9	9.7	9.6	17.0	15.0	11.2	10.0
6	11.8		9.6	17.0	14.4	11.1	10.0
7	13.5		9.6	16.6	14.2	11.0	
8	12.8		9.6	15.7	13.8	10.9	
9	11.8		9.5	14.6	13.5	10.8	
10	10.8		9.5	13.8	13.3	10.6	
11	10.4		9.5	12.7	13.1	10.5	
12	10.0	9.7	9.5	12.5	12.9	10.5	10.0
Total	221.4	239.9	228.9	321.8	355	287	245
Avg Inches			9.54	13.38	14.79	11.96	10.21
Avg ft	.77	.83	0.79	1.11	1.23	1.00	0.85
Flow	8.822	9.873	9.168	15.27	17.81	13.06	10.23

1984

	Sunday 5/6	Monday 5/7	Tues. 5/8	Wed. 5/9	Thurs 5/10	Fri. 5/11	Sat. 5/12
AM 1	9.9	17.2	25.4	14.4	11.9	11.0	10.0
2	9.9	16.8	26.3	14.0	11.8	11.0	
3	9.9	16.9	27.0	13.7	11.7	11.0	
4	9.8	17.0	26.1	13.6	11.6	11.0	
5	9.8	17.0	24.3	13.6	11.5	11.0	
6	9.7	17.0	22.5	13.5	11.5	11.0	10.0
7	9.7	17.1	21.7	13.5	11.5	10.9	9.9
8	9.7	17.1	20.0	13.4	11.4	10.3	9.9
9	9.7	17.1	18.9	13.2	11.4	10.3	9.9
10	9.7	17.2	18.4	13.1	11.3	10.2	9.9
11	17.0	17.3	18.1	13.0	11.3	10.2	9.8
12	17.0	17.5	18.0	13.0	11.4	10.2	9.8
PM 1	17.1	17.5	17.6	13.0	11.3	10.2	9.8
2	17.1	17.7	17.6	13.0	11.2	10.2	9.7
3	17.0	17.9	18.0	12.9	11.1	10.2	9.7
4	17.0	20.4	18.0	12.7	11.0	10.2	9.7
5	17.0	19.6	17.6	12.6	11.0	10.2	9.6
6	17.0	18.4	17.0	12.5	11.0	10.2	9.6
7	17.1	25.2	16.3	12.3	11.0	10.1	9.6
8	16.9	29.9	15.7	12.1	11.0	10.1	9.6
9	17.0	28.7	15.3	12.1	11.0	10.1	9.6
10	17.1	28.5	14.9	12.1	11.0	10.1	9.6
11	17.2	27.2	14.6	12.0	11.0	10.1	9.7
12	17.2	25.4	14.5	12.0	11.0	10.0	9.7
total	336.5	498.6	450.8	311.3	270.9	249.8	235.1
avg	14.02	20.78	18.75	12.96	11.29	10.38	9.80
avg #	1.17	1.73	1.56	1.08	0.94	0.86	0.82
flow	16.52	29.71	25.44	14.65	11.90	10.41	9.695

CN-3889A DATA SHEET

PC 1984

	Sunday 5/13	Monday 5/14	Tues. 5/15	Wed. 5/16	Thurs 5/17	Fri. 5/18	Sat. 5/19
AM 1	9.7	11.1	10.0	9.7	9.6	9.6	9.3
2	9.6	10.9		9.8	9.6	9.6	9.2
3	9.6	10.8		9.8	9.6		9.2
4	9.6	10.7	10.0	9.8	9.6		9.1
5	9.5	10.5	9.9	9.8	9.6		
6	9.5	10.4	9.8	9.7	9.6		
7	9.5	10.3		9.7	9.6		
8		10.3		9.7	9.6	9.6	
9		10.3	9.8	9.8	9.6	9.6	
10		10.2	9.7	9.6	9.6		9.0
11		10.3	9.8	9.7	9.6		9.0
12		10.3	9.9	9.7	9.7		8.9
M 1	9.5	10.3		9.7	9.7		
2	9.4	10.3		9.7	9.7		
3	9.4	10.3		9.7	9.7		
4	9.4	10.2	9.9	9.7			
5	16.5	10.2	9.8	9.7			
6	21.0	10.1	9.8	9.7		9.5	
7	17.6	10.1	9.8			9.5	9.1
8	15.5	10.1	9.7			9.4	9.1
9	14.5	10.0	9.7			9.4	9.0
10	12.7		9.7			9.3	
11	12.0		9.7	9.7		9.3	
12	11.4	10.0	9.7	9.6	9.7	9.3	
Total	273.4	247.7	236	233.1	231.7	228.9	216.8
	11.39	10.32	9.83	9.71	9.65	9.54	9.03
	0.95	0.86	0.82	0.81	0.80	0.79	0.75
	12.09	10.41	9.695	9.518	9.343	9.168	8.480

CN-3889A

C 1984

	Sunday 5/20	Monday 5/21	Tues. 5/22	Wed. 5/23	Thurs 5/24	Fri. 5/25	Sat. 5/26
AM 1	9.0	9.0	9.2	9.1	8.9	8.4	8.4
2				9.1			8.4
3				9.1			8.3
4				9.0	8.8		8.3
5					8.8		8.3
6					8.3		
7							
8							8.3
9					8.6	8.4	8.4
10		9.1		11.5		8.5	8.5
11		9.3		11.7			
12				12.1			
M 1			9.3	11.8			8.5
2			9.3	11.4			8.4
3	9.1		9.4	11.0			8.4
4	9.2		9.2	10.6		8.5	8.4
5	9.1			10.3		8.6	8.4
6	9.1			10.0		8.6	8.3
7	9.1			9.2	8.5	8.5	8.3
8	9.0			9.0		8.5	
9				9.0		8.5	
10				8.9		8.5	
11						8.4	
12						8.4	8.3
Total	216.6	220.3	221.2	235.6	206.8	203.1	200.3
	9.03	9.18	9.22	9.82	8.62	8.46	8.35
	0.75	0.76	0.77	0.82	0.72	0.71	0.70
	8.48	8.651	8.822	9.695	7.977	7.811	7.647

JCN-3889A

F.C.

1984

	SUNDAY	MONDAY	TUES.	WED.	THUR.	FRI	SAT
	5/27	5/28	5/29	5/30	5/31	6/1	6/2
AM 1	8.3	16.8	11.6	9.2	9.1	9.0	8.6
2		15.7	11.3	9.2			8.5
3		14.2	10.7	9.1			
4		13.0	10.3				
5		11.8	10.0			9.0	
6		11.4	9.8	9.1	9.1	8.9	
7		11.3	9.6	9.1	9.1	8.9	
8		10.8	9.4	9.0	9.2	8.9	
9		10.3	9.4	9.1	9.2		
10	8.3	10.2	9.4	9.2	9.3		
11	8.4	10.0	9.5		9.3		
12	8.4	14.0			9.2		
1	8.4	16.3			9.2		
2	8.3	15.0			9.2		
3	8.3	13.5		9.2	9.1		
4		12.5	9.5	9.1	9.1		
5		11.7	9.4	9.1	9.1		
6		11.2	9.3	9.1	9.0		
7		17.5	9.2	9.0	9.0	8.8	8.4
8		21.0			9.1	8.7	
9		17.1			9.1	8.6	
10	8.3	15.6		9.0	9.0	8.6	
11	8.4	14.7		9.1	9.0	8.6	
12	~11.0	12.5	9.2	9.1	9.0	8.6	
Total in	202.3	328.1	232.4	218.7	218.8	212.5	203.5
Avg in	8.43	13.67	9.68	9.11	9.12	8.85	8.48
Avg flow	0.70	1.14	0.81	0.76	0.76	0.74	0.71
Flow	7.647	15.89	9.518	8.651	8.651	8.311	7.811

Total flow for month 362 mg

JCN-3889A DATA SHEET

PC

June 1, 1984 - NOV. 30, 1984

	SUNDAY 6/3	MONDAY 6/4	TUES. 6/5	WED. 6/6	THUR. 6/7	FRI 6/8	SAT 6/9
AM 1	8.41	8.5	8.5	8.5	8.5	8.3	7.9
2							
3							
4						8.0	
5							
6							
7							7.8
8				8.7			
9				8.8		7.9	
10							
11			8.6		8.6		
N 12			8.6				
1		8.6	8.7			8.0	
2							
3							
4			8.6	8.7			
5				8.6			
6				8.6			
7		8.6		8.6			
8		8.6					
9		8.5		8.5			
10	8.5	8.5					
11			8.5				
1 12			8.5				
Total IN	201.9	204.8	205.5	206.8	205.4	191.5	187.8
AVG. IN	8.41	8.53	8.56	8.62	8.56	7.98	7.82
AVG. FT.	0.70	0.71	0.71	0.72	0.71	0.66	0.65
OW	7.647	7.811	7.811	7.977	7.811	7.001	6.842

JCN-3889A DATA SHEET

PC

June 1, 1984 - NOV. 30, 1984

	SUNDAY	MONDAY	TUES.	WED.	THUR.	FRI	SAT
	6/10	6/11	6/12	6/13	6/14	6/15	6/16
AM 1	7.5	7.8	8.1	8.2	8.3	10.8	8.7
2				8.2		10.3	
3						10.0	
4					8.2	9.8	8.8
5					8.2	9.6	8.9
6					8.1	9.5	
7						9.4	
8						9.3	
9						9.2	
10			8.2		8.2	9.0	8.8
11		8.0	8.3	8.3	8.3		8.7
12		8.2	8.3	8.4			8.7
1		8.2	8.4	8.5		8.5	8.6
2		8.2				8.6	
3		8.3				8.7	
4					28.2		
5					28.2		
6					23.5		
7		8.2	8.3	8.4	19.0		
8			8.3		16.2		
9			8.2		14.4		
10					13.0		
11		8.1			12.0		
PM 12		8.1		8.3	11.3		
TOTAL IN.	187.2	192.8	197.5	200.0	289.2	219	208.8
AVG. IN.	7.8	8.03	8.23	8.33	12.05	9.13	8.70
AVG. FT.	0.65	0.67	0.69	0.69	1.00	0.76	0.73
FLOW	8.994	7.160	7.483	7.483	13.06	8.651	8.144

9

JCN-3889A DATA SHEET

DC

June 1, 1984 - NOV. 30, 1984

	SUNDAY	MONDAY	TUES.	WED.	THUR.	FRI	SAT
	6/17	6/18	6/19	6/20	6/21	6/22	6/23
AM 1	8.6	8.5	8.7	9.7	11.4	9.9	11.8
2	8.6			9.6	10.8	9.8	.2
3	8.6			9.5	10.3	9.7	10.5
4	8.5			9.4	10.1	9.6	10.2
5				9.4	9.9	9.5	9.9
6				9.3	9.8	8.7	9.5
7				9.2	9.8	8.6	9.4
8					9.8	8.5	9.3
9					9.7	8.5	9.1
10				8.5	9.7	8.4	9.0
11		8.6			9.6		9.0
12		8.6			9.5		9.0
1		8.7					8.9
2		8.8				8.5	
3		8.8					
4		8.8	8.9				8.7
5		8.9	8.8				
6		8.9	14.0				
7		8.8	13.1			8.4	
8		8.7	12.0	17.9	9.7		
9		8.7	11.2	17.5	10.3		
10		8.6	11.0	14.5	10.3	14.4	
11		8.7	9.5	13.3	10.3	13.5	
PM 12			9.8	12.1	10.0	12.5	
STA IN	204.3	207.3	228.5	244.8	242.2	224.5	222.9
V9. IN	8.51	8.64	9.52	10.20	10.09	9.35	9.29
V9. FT	0.71	0.72	0.79	0.85	0.84	0.78	0.77
HAW	7.811	7.977	9.168	10.23	10.05	8.994	8.822

JCN-3889A DATA SHEET

	SUNDAY 6/24	MONDAY 6/25	TUES. 6/26	WED. 6/27	THUR. 6/28	FRI 6/29	SAT 6/30
AM 1	8.7	8.9	8.1	8.	8.3	3.1	9.4
2							9.3
3							9.2
4	8.9	8.0					
5							
6						28.2	10.0
7				8.0		25.5	23.0
8						20.0	24.2
9						17.5	21.5
10						16.4	19.0
11		8.2				15.4	17.0
N 12		8.3				14.0	15.5
1			8.2	8.1		13.0	14.5
2				8.2		12.1	14.0
3				8.3		11.5	14.0
4				8.3		11.0	13.5
5	9.3			8.4		10.5	12.6
6	9.3					10.2	12.0
7	9.3				8.1	10.0	11.5
8	9.1					9.9	11.0
9	9.0					9.9	10.8
10	8.9	8.1	8.1			9.7	10.4
11						9.6	10.0
1 12						9.5	9.9
TOTAL IN.	214.5	198.2	196.2	196.7	198	304.4	320.7	Inches (Total)
AVG IN.	8.94	8.26	8.18	8.20	8.25	12.68	13.36	Inches (Avg)
AVG FT	0.74	0.69	0.68	0.68	0.69	1.06	1.11	ft (Avg)
—	8.311	7.483	7.321	7.321	7.483	14.25	15.27	MGD

Total Flow for June (257.488)

UCN-3889A DATA SHEET

P. C

	Friday	Sat.	7/1 Sun.	7/2 Mon.	7/3 Tues.	7/4 Wed.	7/5 Thurs.
4M 1			9.7	8.9	8.9	8.7	
2			9.5				
3			9.4				
4			9.3	8.8			
5			9.2				
6			9.2				
7			9.1		8.8		
8			9.1				
9			9.1				
10			9.0				
11					8.7		Out of order
12							
m 1							
2				9.0			
3							
4							
5							
6							
7						29.0	
8							
9							
10			8.9			Out of order	
11							
12				8.9			
Total in.			218.3	213.6	210.4	~	
Avg in			9.1	8.9	8.76	10.8	
Avg ft			0.76	0.74	0.73	0.90	
MGD.			8.651	8.311	8.144	11.15	10?

CN-3889A DATA SHEET

P.C

	7/6 Friday	7/7 Sat.	7/8 Sun.	7/9 Mon.	7/10 Tues.	7/11 Wed.	7/12 Thurs.
AM 1		10.2	9.8	9.3	9.2	9.2	28.5
2		28.3	9.7				25.0
3		28.0	9.6				21.0
4		25.0	↓				18.0
5		22.2	9.5				16.0
6		20.0	9.4				14.5
7		17.5	9.3				13.2
8		15.8					12.5
9		14.5					12.1
10		13.5				9.3	11.4
11	9.2	12.8					11.4
12	9.4	12.2					11.3
pm 1		11.8				9.5	11.1
2		11.5					10.8
3		11.2			9.3		10.6
4		11.0					10.3
5		10.6				9.4	
6	12.0	10.5					
7	12.5				9.4		10.1
8	12.1						
9	11.7					9.3	
10	11.2	10.3			9.3		
11	10.8	10.0					
12	10.4	9.9				28.5	10.0
Total in.	145.6	348.3	225	223.2	222.1	242.7	318.43
Avg in	10.4	14.5	9.375	9.3	9.254	10.1	13.267
Avg ft	0.8667	1.209	0.78	0.775	0.771	0.842	1.105
MGD.	10.60	17.38	8.994	8.651	8.822	10.05	15.27

JCN-3889A DATA SHEET

	7/13 Friday	7/14 Sat.	7/15 Sun.	7/16 Mon.	7/17 Tues.	7/18 Wed.	7/19 Thurs.	7/20
AM 1	9.9	9.0	8.8	8.5	9.0	24.8	9.8	9.5
2	9.8	8.9	8.8	8.5		24.0		
3	9.7		8.7	9.0		25.5		
4	9.7		8.6	9.5		22.8		
5	9.6		8.5	11.0		19.8		
6				10.6		18.0		
7				10.4		16.0		
8				10.4		14.5	9.5	
9				9.8		13.7	9.5	
10				9.5		13.0	9.6	
11	9.0					12.1		
12	9.0					11.7		
PM 1	9.0	9.0				11.4		
2	9.1			9.5		11.4		
3	9.1			9.4		11.1		
4	9.1			9.4		11.0		
5	9.2			9.3		10.6		
6	9.1			9.3		10.5		
7	9.0			9.2	10.0	10.4	9.7	
8				9.2	10.5	10.4	9.7	
9		8.9		9.1	16.5	10.1	9.7	
10		8.9			16.0	10.1	9.5	
11		8.8			15.1	9.9		
12		8.8			15.1	9.9		
Total in.	223.3	214.3	204.9	227.2	247.2	342.7	231	228
Avg in	9.304	8.929	8.5375	9.466	10.3	14.279	9.625	9.5
Avg ft	0.775	0.744	.7114	0.788	0.8583	1.189	0.802	0.7916
MGD.	8.994	8.311	7.811	9.168	10.41	15.48	9.343	9.168

JCN-3889A DATA SHEET

	7/20 Friday	7/21 Sat.	7/22 Sun.	7/23 Mon.	7/24 Tues.	7/25 Wed.	7/26 Thurs.	27
AM 1	9.5	8.9	8.7	9.0	9.0	9.0	9.5	13.5
2							9.3	14.0
3							9.3	↓
4		↓					9.1	13.0
5		9.0						12.5
6		9.0						15.5
7								17.0
8								16.7
9	↓	↓	↓					15.5
10	8.9	8.9	8.9					14.6
11	8.9							
12	8.9							
PM 1	8.9							
2	8.9	↓						
3	9.0	8.8				↓	↓	
4						10.0	9.7	
5		↓				11.0	9.8	
6	↓	8.7	↓			11.0	9.5	
7	9.0	8.7	9.0			10.5	9.5	
8	8.9	8.7	9.5			10.2	9.5	
9	8.9		9.5			10.0	9.2	
10			9.3			9.8	9.2	
11			9.1			9.8	16.1	
12	↓	↓	9.1	↓	↓	9.5	15.0	
Total in.	219.5	212.3	213.9	216	216	226.6	234.8	
Avg in	9.146	8.846	8.9125	9	9	9.44	9.783	
Avg ft	0.762	0.737	0.743	.75	.75	0.787	0.815	
MGD.	8.651	8.311	8.311	8.480	8.480	9.168	9.695	

UCN-3889A DATA SHEET

	7/27 Friday	7/28 Sat.	7/29 Sun.	7/30 Mon.	7/31 Tues.	8/1 Wed.	8/2 Thurs.	8/3 Fri
AM 1	13.5	9.5	8.8	8.6	8.9	8.9	9.0	9.0
2	14.0	9.5						
3	↓	9.5						
4	13.0	9.4						
5	12.5	9.3						
6	15.5	9.2						
7	17.0	9.1				9.8		
8	16.7					9.8		
9	15.5					9.5		
10	14.6				9.0	9.5		
11	13.2			8.8	9.0	9.5		
12	12.0			8.9		9.4		
pm 1	11.5					9.4		
2	11.0					9.4		
3	11.0					9.3		
4	10.7					9.3		
5	10.7					9.3		
6	10.6					9.3		
7	10.5	9.0	8.6		8.9	9.3		
8	10.5	9.0			8.8	9.3		
9	10.0	8.9				9.1		
10	9.9	8.9				9.1		
11	9.9	8.8				9.0		
12	9.6	8.8				9.0		
Total in.	297.4	219	210	230.5	214	221.7	216	
Avg in	12.391	9.125	8.75	8.77	8.91	9.24	9.0	
Avg ft	1.032	0.7604	0.729	0.731	.7431	0.7697	0.75	
MGD.	13.65	8.651	8.144	8.144	8.311	8.892	8.480	

July (321.355)

Avg 10.366 MGD

JCN-3889A DATA SHEET

	8/3 Friday	8/4 Sat.	8/5 Sun.	8/6 Mon.	8/7 Tues.	8/8 Wed.	8/9 Thurs.
1	9.0	28.5	9.0	9.0	9.5	9.5	9.0
2		25.					
3		20.0					
4		17.0					
5		15.0					
6		13.5		9.5			
7		11.5				9.0	
8		11.5					
9		11.0			9.0		
10	9.5	11.0					
11							
12							
1		10.5					
2		10.0					
3							
4							
5							
6		9.7			9.5		
7		9.7	8.7			9.2	
8							
9							
10			8.5				
11							
12						9.0	
total in.	223.5	304.4	213.1	225.5	223.5	220	216
avg in	9.316	12.683	8.879	9.395	9.312	9.166	9.0
avg ft	0.776	1.057	.739	.7829	0.776	.7638	.750
NGD.	8.994	14.05	8.311	8.994	8.994	8.651	8.480

CN-3889A

	8/10 Friday	8/11 Sat.	8/12 Sun.	8/13 Mon.	8/14 Tues.	8/15 Wed.	8/16 Thurs.
AM 1	9.0	8.7	8.5	8.5	8.5	8.5	8.7
2		8.7					8.5
3							
4							
5							
6		8.5					
7		8.5					
8							
9							
10							
11							
12							9.5
PM 1						8.7	11.0
2							11.0
3							10.5
4							10.2
5							10.0
6				8.7			9.7
7				8.7			9.5
8				8.7			9.5
9				8.5			9.5
10							9.2
11							9.2
12	8.7						9.0
Total in.	215.7	205	204	204.6	204	206.4	221.5
Avg in.	8.9875	8.541	8.5	8.525	8.5	8.6	9.229
Avg ft	.7489	.7118	0.708	.7104	.708	.7166	.7691
MGD.	8.480	7.811	7.811	7.811	7.811	7.977	8.822

JCN-3889A DATA SHEET

	8/17 Friday	8/18 Sat.	8/19 Sun.	8/20 Mon.	8/21 Tues.	8/22 Wed.	8/23 Thurs.
AM 1	8.5	8.5	8.2	8.2	8.7	8.5	9.0
2							
3							
4							
5					8.5		
6							
7							8.7
8							
9							
10	8.7						
11		8.2		8.5	8.7		
12		8.2				8.8	
pm 1							
2							
3	9.0						
4				8.7	8.8		
5					8.8		
6					8.8	8.5	
7	8.7				8.8		
8					8.5		
9							
10	8.5						
11	8.5						
12	8.5					9.0	
Total in.	207.6	199.8	196.8	202.8	207	207.3	210.6
Avg in	8.65	8.325	8.2	8.45	8.625	8.6375	8.775
Avg ft	.7206	0.694	.68	.7042	.7187	.7198	.7321
MGD.	7.977	7.483	7.321	7.647	7.977	7.977	8.144

	8/24 Friday	8/25 Sat.	8/26 Sun.	8/27 Mon.	8/28 Tues.	8/29 Wed.	8/30 Thurs.
AM 1	8.5	8.5	8.4	8.4	8.6	9.3	8.9
2							8.9
3							8.9
4						9.1	8.8
5							8.7
6							
7							
8		8.4					
9							
10					11.8		8.8
11					11.9		8.9
12			8.5	8.6	11.1		
pm 1				8.7	10.5		
2				8.7	10.4		
3				8.8	10.2		
4				8.8	10.0		
5				8.7	9.7		
6				8.6	9.5		
7			8.4		9.4	9.0	8.9
8					9.4		8.9
9					9.3		8.8
10						8.9	
11							
12							
Total in.	204	202.3	202.3	204.9	218.5	218.1	212
Avg in	8.5	8.429	8.429	8.5375	9.104	9.0875	8.833
Avg ft	.7083	.7024	.7024	.7115	.7587	.7573	0.736
MGD.	7.811	7.647	7.647	7.811	8.651	8.651	8.311

GN-3889A

	8/31 Friday	9/1 Sat.	9/2 Sun.	9/3 Mon.	9/4 Tues.	9/5 Wed.	9/6 Thurs.
AM 1	8.8	8.2	8.1	8.1	13.0	9.3	9.0
2					12.0		
3					11.5		
4					11.0		
5					10.6		
6					10.3		
7		8.1			10.1		
8					10.0		
9					9.9		
10					9.8		
11					9.7		
12	8.4				9.7		
pm 1					9.7		9.1
2				28.5	9.6		
3				28.5	9.5		
4	8.4			26.5			10.2
5	8.4			22.0			10.1
6	8.3			19.0			10.0
7				17.5		9.2	9.8
8				16.0	9.4	9.1	9.6
9				14.8	9.3	9.0	9.6
10				15.2			
11				14.8			
12				14.0			9.5
Total in.	205.3	195	194	321.6	250.7	221.7	[illegible]
Avg in	8.554	8.12	8.1	13.4	10.4	9.23	9.3
Avg ft	.7128	0.677	0.675	1.11	0.870	0.769	0.775
MGD.	7.811	7.321	7.321	15.27	10.60	8.822	8.994

(259.165
8.360 Avg) Avg

JCN-3889A DATA SHEET

	9/7 Friday	9/8 Sat.	9/9 Sun.	9/10 Mon.	9/11 Tues.	9/12 Wed.	9/13 Thurs.
AM 1	9.3	8.4	8.4	8.4	8.6	9.5	8.9
2	9.2					9.4	
3	9.0					9.3	
4	9.0					9.2	8.8
5	8.9					9.1	
6							
7							
8							
9							
10							
11	8.5						
12	8.5			8.6		9.3	
pm 1	8.6						
2							
3							
4							
5					13.8		
6					13.1	8.9	
7				8.8	12.0		
8					11.2		
9					10.7		
10	8.5			8.7	10.2		
11					9.9		
12					9.8		
Total in.	209.8	201.6	201.6	205.1	228.3	201.9	211.5
Avg in	8.74	8.4	8.4	8.54	9.51	8.41	8.812
Avg ft	0.721	0.7	0.7	0.712	0.79	0.701	0.734
MGD.	8.144	7.647	7.647	7.811	9.168	7.647	8.144

JCN-3889A

	9/14 Friday	9/15 Sat.	9/16 Sun.	9/17 Mon.	9/18 Tues.	9/19 Wed.	9/20 Thurs.
AM 1	8.7	8.6	8.3	8.1	8.3	8.3	8.3
2		8.5					
3		8.5					
4		8.4					
5							
6							
7				8.2			
8				8.3			
9				8.4			
10	8.5			8.5			
11	8.6	8.3					
12	8.6						
pm 1	8.7						
2	8.7						
3	8.8						
4				8.4			
5			8.1				
6							
7	8.6						
8							
9							
10							
11	8.7						
12	8.6						
Total in.	208.3	200.6	197.6	200.1	199.2	199.2	[illegible]
Avg in	8.679	8.35	8.23	8.3	8.3	8.3	[illegible]
Avg ft	0.7232	0.695	0.686	0.69	0.69	0.69	[illegible]
M&D.	7.977	7.647	7.483	7.483	7.483	7.483	7.483

UCN-3889A

	9/21 Friday	9/22 Sat.	9/23 Sun.	9/24 Mon.	9/25 Tues.	9/26 Wed.	9/27 Thurs.
AM 1	8.5	8.2	8.2	[illegible]	8.5	[illegible]	[illegible]
2	8.6						
3	8.5						
4	8.4				8.4		
5	8.4					8.5	8.2
6	8.3						
7							
8							
9							
10				8.4		8.4	
11	8.3			8.5			
12				8.5			
pm 1				8.6	8.5	8.5	
2				8.5			
3							
4						8.6	8.3
5					8.4		8.4
6							
7	8.2					8.5	
8							
9							
10				8.6	8.3	8.4	
11						[illegible]	
12						8.4	
Total in.	199.2	196.8	196.8	201.6	202	204.9	198.9
Avg in	8.3	8.2	8.2	8.4	8.4	8.5	8.28
Avg ft	0.691	0.68	0.68	0.7	0.701	0.711	0.692
MGD.	7.483	7.321	7.321	7.647	7.647	7.811	7.483
		7.382					

JCN-3889A DATA SHEET

	Friday	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.
	9/26	9/27	9/28	9/29	9/30	10/1	10/2
AM 1	8.4	8.1	8.0	8.9	8.3	[illegible]	[illegible]
2	8.3			8.6			
3	8.2			8.5			
4				8.5			
5				8.4			
6				8.3			
7							
8							
9				8.4			
10		8.0				8.2	[illegible]
11	8.2						8.5
12							
pm 1					8.4	8.3	
2					8.4		
3				8.9	8.5		
4				8.9	8.5		8.6
5				8.7	8.5		
6				8.5	8.5		
7				8.5	8.4		
8			9.9	8.5			
9			9.9	8.4			8.5
10	8.1		9.6	8.3	8.3		8.4
11			9.4				
12			9.1				
Total in.	196.8	192.9	199.9	203.2	200.5	198.9	202.3
Avg in.	8.2	8.03	8.3	8.4	8.35	8.28	8.4
Avg ft	0.68	0.669	0.691	0.705	0.695	0.692	0.701
MGD.	7.321	7.160	7.483	7.811	7.647	7.483	7.647
				7.76	7.58	7.49	7.69

(242.252 MG)

Sept.

Avg 8.075

JCN-3889A DATA SHEET

	10/5 Friday	10/6 Sat.	10/7 Sun.	10/8 Mon.	10/9 Tues.	10/10 Wed.	10/11 Thurs.
AM 1	8.4	8.3 3	8.0 21	8.2 6	10.0 1	9.0 19	9.0 19
2				8.2	9.7 1	9.0	
3				8.2	9.5 3	9.0	
4		8.2 6			9.5		
5	8.3	8.2			9.5		
6		8.2			9.4		
7				8.5	9.4	8.9 5	8.9 6
8				9.0	9.2 7	8.9	8.9
9				9.5	9.2		9.0
10	8.2 3	8.1 15		13.0	9.2		
11	8.2			13.5	9.2		
12	8.2			16.0	9.2	9.0	
pm 1	8.3			17.0	9.3 3		9.0
2	8.3			18.0	9.3		
3	8.4			18.0	9.3		
4	8.4			17.5	9.4 5		
5	8.4			16.5	9.4		
6	8.4			14.0	9.4		
7	8.4	8.1		13.0	9.2	9.0	8.9
8	8.4 10			12.5	9.2		8.9
9	8.3 11			11.5	9.0 4		8.9
10			8.2 3	11.0	9.0		9.0
11				10.5	9.0		
12				10.0	9.0		
Total in.	170.29 ~~155.9~~	195.6	192.6	288.2	~~226~~ 225.5	~~233.3~~ ~~188.8~~ 215.5	215.5
Avg in							
Avg ft							
MGD.	~~8.33~~ 7.55	~~8.15~~ 7.31	7.14	13.07	8.93	8.45	8.45

UCN-3889A DATA SHEET

	10/12 Friday	10/13 Sat.	10/14 Sun.	10/15 Mon.	10/16 Tues.	10/17 Wed.	10/18 Thurs.
AM 1	9.0 9	8.6 3	8.4 22	8.4 3	8.5	8.5	8.4
2		8.6	8.3			8.4	
3		8.6	8.4				
4		8.5 5	8.3 2	8.5 21			
5			8.4				
6							
7						8.5	8.4
8						8.6 6	
9		8.4 16				8.7 2	
10	8.7 6		8.4			8.7	
11	8.7					8.6	
12	8.7					8.6	
pm 1							8.5 8
2							
3					8.6 3		
4	8.5 6					8.5 8	
5							
6	8.5				8.5 21		
7		8.4					
8							
9							8.4 16
10	8.6 3					8.4 8	
11	8.6						
12	8.6						
Total in.	210	202.7	201.4	203.7	204.3	204.2	202.4
Avg in							
Avg ft							
M&D.	4.13	7.71	7.64	7.77	7.80	7.80	7.69

UCN-3889A DATA SHEET

	10/19 Friday	10/20 Sat.	10/21 Sun.	10/22 Mon.	10/23 Tues.	10/24 Wed.	10/25 Thurs.
AM 1	8.4	18.0	9.0	8.9 8	11.3	13.0	9.5 5
2		16.5			13.5 3	12.5	
3		14.5			13.5'	12.0	
4		13.0	9.2 3		13.0	11.5	
5		14.5	9.2		12.7	11.2	
6		14.7	9.2		11.5	11.0	9.4 4
7		22.0	9.1 2		11.0	11.0	9.4
8		20.0	9.1		10.8	10.7	9.4
9		17.0	9.0 19	20.0	10.7	10.5 2	9.4
10		15.0		28.4 5	28.5 2	10.5	9.0 15
11		13.2		28.4	28.4'	10.0 13	
12	8.4	12.5		28.4	25.5	10.0	
pm 1		11.5			22.0		
2		11.0			19.5		
3		10.5		28.6	16.5		
4		10.0		25.0	15.0 2		
5		9.9		22.0	13.5'		
6		9.7		19.5	20.5 2		
7		9.5	9.0	17.0	20.5'	10.0	9.0
8		9.5		15.5	19.0	10.0	
9		9.3		14.0	18.5	9.9	
10		9.2		13.0	16.0	10.0	
11		9.2		12.0	15.0'		
12		9.0		11.5	14.0		
Total in.	201.6	504.8	216.8	411.3	359.80	253.8	220.10
Avg in.							
Avg ft							
MGD.	7.65	14.52	8.53	22.29	21.40	10.80	8.72

UCN-3889A DATA SHEET

	10/26 Friday	10/27 Sat.	10/28 Sun.	10/29 Mon.	10/30 Tues.	10/31 Wed.	11/1 Thurs.
AM 1	9.0	8.2 2	8.3 9	8.4	8.5	8.4	8.4 14
2		8.2					
3		8.4 8					
4		9.0 2					
5		9.5 2					
6		9.9 2					
7	9.0 9	9.9			8.4 15		
8		9.5					
9		9.4 1					
10	8.9 6	9.0	8.2 6				
11		8.7 1					
12		8.5 3					
PM 1		8.5		8.5 12			
2		8.5					
3		8.4					8.5 10
4	8.8 1	8.4	8.5 8				
5	8.7 2	8.4					
6	8.7	8.4				8.5 3	
7	8.5 3	8.4			8.5 9		
8	8.5						
9	8.5						
10	8.4 2	8.3 3			8.4	8.4 21	
11	8.4	8.3					
12	8.2 1	8.3	8.4 1				
Total in.	211.10	208.9	200.3	202.8	202.5	201.9	202.6
Avg in							
Avg ft							
MGD.	8.19	8.07	7.57	7.72	7.70	7.67	8.4

Total Ins 286.79

AVG. 7.647 MGD

33

Dept.

JCN-3889A DATA SHEET

PC

	11/2 FRIDAY	11/3 SAT.	11/4 SUN.	11/5 MON.	11/6 TUES.	11/7 WED.	11/8 THURS.
AM1	8.4	9.7	8.3	9.4	8.4	8.3	8.3
2	8.4	9.5	8.3	9.2	8.4	8.3	8.3
3	8.4	9.3	8.3	9.1	8.4	8.3	8.3
4	8.5	9.2	8.3	9.0	8.4	8.3	8.3
5	8.6	9.0	8.3	8.9	8.4	8.3	8.3
6	8.6	8.8	8.3	8.8	8.5	8.3	8.4
7	8.6	8.7	8.4	8.7	8.5	8.3	8.4
8	8.8	8.6	8.4	8.7	8.5	8.3	8.4
9	9.3	8.5	8.4	9.0	8.5	8.3	8.4
10	10.7	8.4	8.4	9.0	8.5	8.3	8.4
11	10.5	8.4	8.4	9.0	8.5	8.4	8.4
12	10.0	8.4	8.4	8.9	8.5	8.5	8.4
PM1	9.8	8.3	8.3	8.7	8.5	8.5	8.4
2	9.5	8.3	8.2	8.6	8.5	8.5	8.5
3	9.4	8.3	8.2	8.5	8.5	8.4	8.5
4	9.2	8.3	8.2	8.5	8.5	8.4	8.4
5	9.0	8.2	8.2	8.5	8.5	8.3	8.4
6	8.8	8.2	8.2	8.5	8.5	8.3	8.4
7	8.8	8.2	8.2	8.5	8.5	8.3	8.3
8	8.6	8.2	8.2	8.5	8.4	8.3	8.3
9	8.5	8.2	8.2	8.5	8.4	8.3	8.3
10	8.7	8.2	8.4	8.5	8.4	8.3	8.4
11	9.0	8.2	9.0	8.4	8.4	8.3	8.4
12	9.5	8.2	9.4	8.4	8.3	8.3	8.4
Total IN.	217.7	205.3	200.9	209.8	202.9	200.1	201
AVG. IN.							
AVG FT							
MGD	9.1	8.6	8.3	8.7	8.5	8.3	8.3
	8.622	7.922	7.511	8.060	7.784	7.511	7.511

UCN-3889A (125 11-62) DATA SHEET

PC

	11/9 FRIDAY	11/10 SAT.	11/11 SUN.	11/12 MON.	11/13 TUES.	11/14 WED.	11/15 THURS.
AM 1	8.5	7.6	11.5	8.8	8.9	8.5	8.5
2			11.0				
3			10.7				
4			10.4			8.6	
5			10.2				
6			10.0	8.8			
7		7.5	9.8		8.7		
8			9.7				
9			9.6				
10	7.5		9.5	8.9			
11			9.5	8.9			
12		28.2	9.4				
PM 1	7.6	28.5	9.3			8.6	8.5
2		27.0	9.3				8.5
3		22.5	9.2				8.5
4		18.5	9.2			8.7	13.0
5		19.0	9.1			8.7	13.3
6		19.0	9.0			8.7	13.0
7	7.5	19.3		8.8	8.7	8.6	13.2
8		17.0					16.3
9		15.0					15.5
10		13.5	8.9	8.9	8.6		14.5
11		12.5			8.6		13.0
12		11.9			8.5	8.5	12.0
Total IN.	18.96	310.7	230.1	212.4	209.6	206.3	251.3
Avg. IN.							
Avg. FT							
MGD	7.9	12.9	9.6	8.9	8.7	8.6	10.4
GD	6,974	14,553	9,343	8,340	8,060	7,922	10,535

UCN-3869A (125 11-62) DATA SHEET

PC

	11/16 FRIDAY	11/17 SAT.	11/18 SUN.	11/19 MON.	11/20 TUES.	11/21 WED.	11/22 THURS.
AM 1	11.2	8.5	8.4	16.5	9.0	8.5	8.2
2	10.7			21.0			8.2
3	10.2			21.6			8.2
4	10.0	8.4	8.3	19.5	8.9		8.1
5	9.7			17.0	8.8		8.1
6	9.5			15.0	8.8		8.1
7	9.5			13.5	8.7		8.1
8	9.3			12.5	8.6		8.1
9	9.1			12.0	8.6		
10	8.7		8.2	11.5			
11				11.0			
12				10.8			
PM 1	8.8		8.2	10.6	8.6	8.3	
2			8.2	10.5	8.7	8.3	8.0
3			8.2	10.0	8.8	8.4	
4			8.2		8.8	8.4	
5			8.2		8.7	8.4	
6			8.4		8.6	8.5	
7	8.6		10.3	9.9		8.5	
8			10.5	9.7		8.4	
9			10.2	9.5		8.4	
10	8.6		10.2	9.3		8.3	
11			10.0	9.2		8.3	8.1
12	8.5		12.0	9.0		8.3	8.1
Total IN.	219.6	210.3	212.2	299.6	209.0	202.5	193.8
Avg. IN.							
Avg FT							
MGD	9.2	8.8	8.8	12.5	8.7	8.4	8.1
	8.765	8.200	8.200	13.881	8.060	7.647	7.241

UCN-3889A (125 11-62) DATA SHEET

PC

	11/23 FRIDAY	11/24 SAT.	11/25 SUN.	11/26 MON.	11/27 TUES.	11/28 WED.	11/29 THURS.
AM 1	8.0	8.0	8.0	8.0	8.1	8.2	8.7
2						18.5	
3						20.3	
4					8.0	22.0	
5					8.1	22.3	
6						19.0	
7						16.5	
8						14.5	8.6
9		7.9				13.0	8.6
10		7.9		8.1		11.5	8.5
11		7.9		8.1	8.2	10.8	8.5
12		8.0		8.1	8.2	10.5	8.6
PM 1	8.1			8.1	8.3	10.0	8.6
2	8.1			8.1		9.7	8.7
3	8.0			8.1		9.5	8.7
4				8.1		9.4	8.6
5				8.2		9.3	
6				8.3	8.4	9.3	
7				8.2	8.4	9.1	8.5
8				8.2	8.3	9.0	8.5
9				8.1	8.2	8.9	8.5
10					8.2	8.9	8.5
11					8.2	8.8	8.4
12					8.2	8.7	8.4
Total IN.	192.2	199.7	192	194	196.6	297.7	206.3
Avg. IN.							
Avg. FT							
MGD	8.0	8.3	8.0	8.1	8.2	12.4	8.6
	7.107	7.511	7.107	7.241	7.376	13.715	7.922

UCN-3889A (125 11-62) DATA SHEET

PC

	11/30 FRIDAY	12/1 SAT.	12/2 SUN.	12/3 MON.	12/4 TUES.	12/5 WED.	12/6 THURS.
AM1	8.4	8.8	8.0	8.0	8.0	8.2	12.0
2	8.4	8.7	8.0			8.2	12.5
3	8.4	8.6	7.9			8.1	12.2
4		8.5	7.9			8.1	11.7
5		8.4	7.9			8.0	11.0
6		8.3	7.8			8.0	10.4
7						8.1	10.0
8	8.5					8.1	9.6
9	8.5					8.1	9.5
10	8.5					8.1	9.2
11	8.5					8.1	9.1
12	8.4					8.1	9.0
PM1	8.4	8.2			8.1	8.2	9.0
2	10.0	8.0				8.3	8.8
3	10.8	8.0		8.1		8.5	8.6
4	10.8	7.9		8.1		8.5	8.5
5	10.5	7.9		8.1		8.3	
6	10.3	7.8		8.2	8.0	8.3	
7	10.3		8.0	8.2	8.0	8.2	
8	10.0		8.1	8.1	8.1	8.2	
9	9.5		8.1	8.1	8.2	8.2	
10	9.3		8.0	8.0	8.3	9.0	
11	9.1				8.3	10.0	
12	8.9				8.3	11.0	
TOTAL IN.	219.1	1957	1893	1929	193.7	201.9	229.1
AVG. IN.							
AVG. FT							
MGD	9.1	8.2	7.9	8.0	8.1	8.4	9.5
	8,622	7,376	6,974	7,107	7,241	7,647	9,197

Total 256.89

8.563 MGD Avg

Nov.

UCN-3889A (125 11-62) DATA SHEET

PC

	12/7 FRIDAY	12/8 SAT.	12/9 SUN.	12/10 MON.	12/11 TUES.	12/12 WED.	12/13 THURS.
AM1	8.5	8.4	8.2	7.8	8.0	8.0	7.9
2		8.2					
3			8.0				
4				7.9			
5		8.0		8.0			
6				8.1			
7				8.1		7.9	
8			7.9	8.0			
9							7.8
10	8.2						7.8
11							7.8
12			8.0			8.0	7.9
PM1			8.0			8.1	7.9
2		8.1	8.0			8.1	8.0
3	8.3		7.9			8.0	
4	8.3		7.9	8.1			
5	8.4		7.8	8.1			
6	8.5			8.1			
7				8.1			
8				8.1			
9				8.0			
10	8.4	8.2					
11						7.9	7.9
12							
Total IN.	201.7	194.4	190.2	192	192	191.5	190.2
Avg. IN.							
Avg FT							
MGD	8.4	8.1	7.9	8.0	8.0	8.0	7.9
	7.647	7.241	6.974	7.107	7.107	7.107	6.974

UCN-3889A (125 11-62) DATA SHEET

PC

	12/14 FRIDAY	12/15 SAT.	12/16 SUN.	12/17 MON.	12/18 TUES.	12/19 WED.	12/20 THURS.
AM1	7.9	7.9	7.8	7.5	7.7	7.8	7.9
2			7.6				7.9
3			7.6				
4			7.6			7.7	
5			7.6			7.7	
6			7.6	7.6		7.7	
7						7.7	
8		7.8				7.7	
9						7.7	14.5
10	7.9				7.8		14.2
11	7.9						13.5
12	7.9		7.7				13.3
PM1	8.0		7.7				13.0
2			7.6				12.5
3			7.6			7.8	12.5
4			7.5			7.9	12.0
5						8.0	11.5
6	7.9					8.0	11.2
7						8.1	11.0
8						8.1	10.5
9						8.1	10.5
10				7.7		8.0	10.3
11				7.7		8.0	10.6
12				7.7		8.0	10.6
Total IN.	190.1	187.9	189.5	182.2	186.3	188.1	254.9
Avg. IN.							
Avg. FT							
MGD	7.9	7.8	7.9	7.6	7.8	7.8	10.6
	6.974	6.842	6.974	6.581	6.842	6.842	10.840

UCN-3669A (125 11-62) DATA SHEET

PC

	12/21 FRIDAY	12/22 SAT.	12/23 SUN.	12/24 MON.	12/25 TUES.	12/26 WED.	12/27 THURS.
AM 1	10.5	15.2	8.6	8.5	12.5	8.6	8.6
2	10.4	15.0	8.6		11.8	8.6	
3	10.0	14.5	8.5		11.7		8.5
4	9.8	13.5		8.4	12.0		8.6
5	9.5	11.8		8.4	11.6		8.6
6	9.5	11.2			11.5		
7	9.4	10.5			11.0		
8	9.3	10.4			10.5		
9	9.0	10.0			10.0		
10	8.5	9.8			9.8		8.5
11		9.5	8.4	8.5	9.8	8.7	8.5
12		9.5		8.5	9.5	8.8	8.5
PM 1		9.2		8.5	9.4	8.9	8.6
2		9.2		8.6	9.3	8.9	8.6
3		9.0		8.6	9.1	8.8	8.6
4				8.6	9.0		8.6
5				8.6	9.0		8.6
6			8.5	8.6	8.9		8.6
7				8.5			8.7
8				8.5		8.7	8.7
9				8.5		8.6	8.7
10				8.5	8.7		8.7
11	15.0	8.8		8.5	8.7		8.6
12	15.5	8.8		13.2	8.6		8.6
Total IN.	232.9	248.9	203.5	216.9	239.1	208.4	206.4
Avg. IN.							
Avg. FT							
MGD	9.7	10.4	8.5	9.0	10.0	8.7	8.6
	9,489	10,535	7,784	8,481	9,933	8,060	7,922

UCN-3889A (125 11-62) DATA SHEET

East Fork Poplar Creek (EFPC) Flow Data

1985

1985

1985

PC

IME	WED.	THURS.	FRIDAY	SAT.	SUN.	MON.	1/1 TUES.
M 1							8.4
2							↓
3							
4							8.2
5							
6							
7							
8							
9							
10							
11							
12							
'm 1							
2							↓
3							8.1
4							8.1
5							23.0
6							21.0
7							18.0
8							15.5
9							13.5
10							12.5
11							11.5
12							11.0
tal In.							257.60
Avg. IN.							10.7333
Avg. Ft.							0.8944
MGD							10.96
							4.3

JCN-3889A (125 11-62) DATA SHEET

100

1985

PC

IME	1/2 WED.	1/3 THURS.	1/4 FRIDAY	1/5 SAT.	1/6 SUN.	1/7 MON.	1/8 TUES.
M 1	10.5	8.5	9.0	8.5	8.2	8.1	8.2
2	10.0		9.4	8.5			
3			9.5	8.4	8.0		
4	9.8		10.0	8.3	8.2		
5	9.5		10.5				
6	9.4						
7	9.3	8.6	10.3				
8	9.2		10.2				
9	9.1	8.7	10.0				
10	9.0	9.0	9.5				
11		9.5					
12		9.6				8.2	
m 1		9.5		8.2			
2		9.5	9.6				
3		9.4	9.5		8.1		
4		9.3	9.4			8.3	
5	8.9	9.2	9.3				
6		9.0	9.1		8.0		
7	8.8		8.9				
8	8.6		8.7		8.1		
9			8.7				
10	8.5		8.6				
11			8.6			8.2	
12			8.5			8.2	
tal In.	219.10	214.90	226.3	198.5	195.4	196.4	196.8
vg. IN. ÷24	9.1292	8.9542	9.4292	8.27	8.14	8.18	8.2
lvg. Ft. ÷12	0.7608	0.7462	0.7858	0.69	0.68	0.68	0.68
MGD x11.391	8.6051	8.480	9.168	7.483	7.321	7.321	7.321
		11.34	11.64	10.84	10.77	10.77	10.77
→							

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25 11-62)
DATA SHEET

1985

PC

IME	1/9 WED.	1/10 THURS.	1/11 FRIDAY	1/12 SAT.	1/13 SUN.	1/14 MON.	1/15 TUES.
.M 1	8.2	8.2	8.3	8.2	8.0	8.0	8.1
2				8.1			
3			8.2	8.0			
4							
5							
6						8.1	
7				8.1			
8	8.1						
9							
10			8.3				
11	8.2						
12	8.3					8.2	
'm 1	8.3						
2		8.3					
3						8.3	
4	8.2					8.4	
5				8.0			
6						8.3	
7			8.2			8.2	
8						8.2	
9		8.4					8.0
10			8.3			8.1	
11							
12							
otal In.	196.9	198.3	198.2	193.3	192.0	195.5	194.0
Avg. IN.	8.20	8.26	8.26	8.05	8.0	8.15	8.08
Avg. Ft.	0.68	0.69	0.69	0.67	0.67	0.68	0.67
MGD	7.321	7.483	7.483	7.160	7.160	7.321	7.160

JCN-3889A
125 11-62) DATA SHEET

1985

PC

IME	1/16 WED.	1/17 THURS.	1/18 FRIDAY	1/19 SAT.	1/20 SUN.	1/21 MON.	1/22 TUES.
M 1	8.0	8.0	8.1	8.0	7.8	7.8	8.0
2							
3							
4							
5		8.1			7.7		
6						7.9	8.1
7							8.1
8		8.2					8.1
9		8.3		8.1			8.0
10		8.4		8.1			8.0
11		8.5		8.1			8.1
12	8.1		8.0	8.0			8.1
M 1	8.1		8.1				8.2
2	8.1		8.1				8.2
3	8.2		8.2				8.2
4	8.2		8.1		7.8		8.3
5	8.2		8.1	7.9		8.0	8.4
6	8.1	8.4	8.1	7.9			8.3
7	8.0	8.3	8.0	7.8			8.2
8		8.3					8.2
9		8.2					8.1
10		8.2					
11		8.1					
12							
tal In.	193.0	198.3	193.8	190.9	186.1	189.9	194.9
vg. IN.	8.04	8.26	8.075	7.95	7.75	7.91	8.12
vg. Ft.	0.67	0.69	0.67	0.66	0.65	0.66	0.68
MGD	7.160	7.483	7.160	7.001	6.842	7.001	7.221

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25 11-62) DATA SHEET

1985

PC

IME	1/23 WED.	1/24 THURS.	1/25 FRIDAY	1/26 SAT.	1/27 SUN.	1/28 MON.	1/29 TUES.
M 1	8.0	8.5	8.5	8.5	8.3	8.4	8.6
2	8.0					8.5	
3	8.0						
4	8.1			8.3			
5							
6							
7							
8	8.1						
9	8.0						
10	8.0						
11	8.1	8.6					
12	8.1	8.6					
m 1	8.2	8.7			8.5		
2		8.6					
3							
4					8.4		
5		8.5					8.7
6	8.1		8.4			8.6	
7	8.1						
8	8.0						
9							8.5
10							
11	8.1						
12	8.1						8.6
							206.5
tal In.	178.1	204.70	203.3	199.8	200.7	204.0	206.5
lug. IN.	7.42	8.5292	8.47	8.33	8.36	8.5250	8.8042
tvg. Ft.	0.162	0.7108	0.71	0.69	0.70	0.7108	0.7110
MGD	6.374	7.811	7.811	7.483	7.647	7.811	7.811
otal flow		7.9750				7.9750	8.1020

JCN-3889A (12S 11-62) DATA SHEET

PC

1985	1/30	1/31	2/1	2/2	2/3	2/4	2/5
IME	WED.	THURS.	FRIDAY	SAT.	SUN.	MON.	TUES.
M 1	8.5	8.0	14.0	13.5	10.5	9.5	9.5
2			16.0	17.8			
3			17.0	17.5			
4		9.0	24.0	16.5	10.2		
5		10.0	28.0	15.5	10.1		
6		11.2	27.0	14.5	10.0		
7		11.2	26.5	13.5			
8		11.0	26.0	13.0			
9		10.5	23.5	12.5			10.0
10		10.4	21.5	12.0		9.6	10.5
11	No Data	10.1	19.5	11.9			10.5
12		10.0	18.0	11.6			14.0
m 1		9.8	16.5	11.5			14.5
2		9.5	15.5	11.5			14.0
3		9.5	15.7	11.4		9.5	13.5
4		9.7	16.0	11.3	9.8		12.5
5		11.0	15.8	11.2	9.8		12.0
6		18.5	15.3	11.0	9.7		11.5
7		18.2	14.5	10.8	9.6		11.2
8		16.2	14.0	10.7	9.5		11.0
9	8.0	15.0	13.5	10.5			
10		13.7	13.0				
11		14.0	12.8				
12		13.7	13.0				
	-10h						
tal In.	117.0	276.20	436.6	301.20	238.20	228.50	265.20
Avg. IN.	8.4	11.5083	18.1917	12.5500	9.9250	9.5208	11.05
Avg. Ft.	0.7	0.9590	1.5160	1.0458	0.8271	0.7934	0.9208
MGD	7.647	12.28	24.47	13.06	9.873	9.168	11.52

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PC

1985

Time	2/6 WED.	2/7 THURS.	2/8 FRIDAY	2/9 SAT.	2/10 SUN.	2/11 MON.	2/12 TUES.
AM 1	11.0	9.2	9.1	9.0	8.8	8.6	14.0
2	10.8	9.2					13.2
3	10.5	9.1					12.5
4	10.5				8.6		12.0
5	10.3						11.2
6	10.2						11.0
7	10.1						10.7
8	10.0						10.5
9			9.0		8.7		10.4
10					8.6		10.2
11	9.5					8.7	10.0
12		9.2		8.9		8.8	
PM 1		9.3				8.9	
2						8.9	
3			9.3			9.0	
4			9.4			9.5	
5			9.4			10.0	10.1
6	9.4		9.3	8.8		10.2	10.1
7			9.1			13.5	10.0
8						13.5	
9						13.0	
10	9.3	9.2				12.7	
11		9.1				13.0	
12		9.1				14.3	
Total In.	235.40	220.60	218.80	214.00	198.50	240.0	255.90
Avg. IN.	9.8083	9.1917	9.1167	8.9167	8.2708	10.0	10.6625
Avg. Ft.	0.8174	0.7660	0.7597	0.7431	0.6892	0.8333	0.8885
MGD	9.695	8.822	8.651	8.311	7.483	9.873	10.96

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PC

1985	2/13	2/14	2/15	2/16	2/17	2/18	2/19
IME	WED.	THURS.	FRIDAY	SAT.	SUN.	MON.	TUES.
M 1	10.0	9.5	9.3	9.0	8.5	8.5	9.0
2		9.5			8.5		9.4
3		9.4			8.5		9.6
4		9.4			8.4		9.7
5		9.3		8.9			
6	9.8	9.2					
7	9.7						
8	9.6						
9	9.6		9.2				9.8
10	9.5		9.2				10.0
11	9.4	9.3	9.2				10.0
12		9.4	9.2	8.7			9.8
m 1			9.3				9.7
2	9.6		9.3				9.6
3	10.0		9.4				
4	10.5	9.5					
5	10.6			8.6			
6	10.5		9.3	8.6			9.5
7	10.4		9.2	8.5	8.5	8.6	9.4
8	10.2						9.3
9	10.0	9.4					
10	9.9					8.7	
11	9.8		9.1			8.8	
12	9.6	9.3	9.1			8.8	
tal In.	237.50	225.0	222.30	210.00	202.50	205.10	229.60
Avg. IN.	9.8958	9.3750	9.2625	8.750	8.4375	8.5458	9.5667
Avg. Ft.	0.8247	0.7813	0.7719	0.7292	0.7031	0.7122	0.7972
MGD	9.695	8.994	8.822	8.144	7.1047	7.811	9.343

JCN-3889A (12S 11-62) DATA SHEET

PC

1985	2/20	2/21	2/22	2/23	2/24	2/25	2/26
IME	WED.	THURS.	FRIDAY	SAT.	SUN.	MON.	TUES.
.M 1	9.3	9.0	8.9	9.0	8.7	8.7	10.2
2							9.9
3							9.7
4		8.9					9.7
5							9.5
6							
7							
8							
9							
10							
11	9.0		9.0				
12		9.0	9.0				
'm 1			9.2			8.8	9.4
2			9.3			8.9	
3				8.9			
4				8.9			
5				8.8		9.4	
6				8.7		10.0	
7						11.5	9.3
8			9.1			11.5	
9			9.0			11.4	
10		8.9				11.2	9.2
11						10.9	
12						10.5	
tal In.	219.00	214.90	217.10	213.50	208.8	226.30	227.40
Avg. IN.	9.1250	8.9542	9.0458	8.8958	8.70	9.4292	9.4750
Avg. Ft.	0.7604	0.7462	0.7538	0.7413	0.7250	0.7858	0.7896
MGD	8.651	8.480	8.480	8.311	8.144	9.168	9.168

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PC

1985	2/27	2/28	3/11	3/2	3/3	3/4	3/5
IME	WED.	THURS.	FRIDAY	SAT.	SUN.	MON.	TUES.
.M 1	9.1	9.2	8.5	8.5	8.4	8.3	10.5
2							10.5
3							10.4
4				8.4			10.3
5	9.0						10.0
6							9.6
7						8.4	9.4
8							9.4
9							9.3
10		8.5					9.2
11	9.3						9.0
12							
'm 1					8.5		
2							
3							
4							
5					8.4		
6							
7							
8							
9							
10	9.2				8.3		
11						8.5	8.9
12						10.4	
stal In.	220.30	210.30	204.0	201.90	201.70	203.10	224.40
Avg. IN.	9.1792	8.7625	8.5	8.4125	8.4042	8.4625	9.3500
Avg. Ft.	0.7649	0.7302	0.7083	0.7010	0.7003	0.7052	0.7792
MGD	8.651	8.144	7.811	7.647	7.647	7.811	8.994

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PC

1985

IME	3-6 WED.	3-7 THURS.	3-8 FRIDAY	3-9 SAT.	3-10 SUN.	3-11 MON.	3-12 TUES.
.M 1	8.9	8.8	8.9	13.1	9.5	9.4	9.4
2				13.0			9.4
3				12.7			9.5
4				12.3			10.4
5				11.7			10.6
6				11.4			10.5
7				11.0			10.4
8				10.6			10.1
9				10.4			10.0
10	8.8	8.9		10.2			9.9
11	8.7	9.0		10.1		9.5	9.8
12					9.4		9.7
'M 1							9.6
2				10.0			9.6
3				9.9			9.5
4				9.9			
5				9.7			
6	8.8	8.9		9.6		9.4	9.4
7	8.9						
8							
9			14.0				
10			14.9				
11			14.2				9.3
12			13.5	9.5			9.3
otal In.	212.00	213.40	234.60	254.04	226.70	226.30	233.0
Avg. IN.	8.833	8.8917	9.7750	10.585	9.4458	9.4292	9.7083
Avg. Ft.	0.7361	0.7410	0.8146	0.8821	0.7872	0.7858	0.8090
MGD	8.311	8.311	9.518	10.96	9.168	8.994	9.518

UCN-3889A (12S 11-62) DATA SHEET

PC

1985

TIME	3-13 WED.	3-14 THURS.	3-15 FRIDAY	3-16 SAT.	3-17 SUN.	3-18 MON.	3-19 TUES.
.M 1	9.3	9.0	9.0	9.0	8.6	8.6	8.7
2							
3							
4							
5							8.6
6				8.9			
7							
8							
9							
10							
11	9.0						
12				9.0		8.7	
m 1							8.7
2							
3				8.9			
4				8.9			
5				89			
6				8.8			
7				8.8			
8				8.7			
9				8.7			
10				8.6			
11							
12							
tal In.	219.00	216.00	216.0	212.90	206.40	207.7	208.0
Avg. IN.	9.13	9.0	9.0	8.87	8.6	8.65	8.67
Avg. Ft.	0.76	0.75	0.75	0.74	0.72	0.72	0.72
MGD	8.651	8.480	8.480	8.311	7.977	7.977	7.977

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125 11-621 DATA SHEET

PC

1985

IME	3-20 WED.	3-21 THURS.	3-22 FRIDAY	3-23 SAT.	3-24 SUN.	3-25 MON.	3-26 TUES.
.M 1	8.7	8.6	8.7	9.2	15.5	9.0	9.0
2				9.2	14.6		
3				9.0	13.5		
4			8.9		12.5		
5					11.6		
6	8.6				11.0		
7					10.6		
8			10.5	9.1	10.3		
9		8.5	13.4		10.0		
10			13.3		9.9		
11	8.6		12.5		9.7		
12		8.6	12.0		9.5		
'm 1			11.4				
2			10.9	9.0			
3	8.7		10.5		9.3		
4	8.8		10.2		9.3		
5			10.0	8.9	9.0		
6		8.8	9.7	8.8			
7			9.5	8.7			
8	8.7						
9	8.6	8.9					
10		8.8					
11		8.8	9.4				
12		8.7	9.3				
tal In.	207.9	198.90	242.8	214.90	238.60	216.0	216.0
Avg. IN.	8.66	8.28	10.12	8.95	9.94	9.0	9.0
Avg. Ft.	0.72	0.69	0.84	0.75	0.83	0.75	.75
MGD	7.977	7.483	10.05	8.480	9.873	8.480	8.480

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'128 11-62) DATA SHEET

1985

TIME	3-27 WED.	3-28 THURS.	3-29 FRIDAY	3-30 SAT.	3-31 SUN.	4-1 MON.	4-2 TUES.
AM 1	9.0	8.8	8.6	8.6	8.5	13.4	9.0
2		8.9	8.7			13.4	
3		8.9	8.9			13.0	
4		8.8				12.2	
5		8.8				11.5	
6		8.7		8.8	8.4	10.8	
7		8.6	8.8	8.9		10.4	8.9
8			8.7	9.0		10.0	
9			8.7	9.0		9.6	
10		8.5	8.6	9.0		9.4	
11	8.8			8.9		9.2	
12				8.7		9.0	
PM 1				8.6			
2				8.6			
3			8.5	8.5		8.9	
4							
5							
6							
7							9.0
8							
9							
10							
11			8.6			9.0	
12		8.6	8.6		12.3	9.0	
Total In.	213.2	206.3	207.3	207.5	206.0	239.10	214.80
Avg. IN.	8.88	8.60	8.64	8.65	8.58	9.96	8.95
Avg. Ft.	0.74	0.72	0.72	0.72	0.72	0.83	0.75
MGD	8.311	7.977	7.977	7.977	7.977	9.873	8.480

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1985

PC

IME	4-3 WED.	4-4 THURS.	4-5 FRIDAY	4-6 SAT.	4-7 SUN.	4-8 MON.	4-9 TUES.
M 1	9.0	8.5	8.5	14.0	9.2	9.1	9.3
2				12.7			
3				12.0			
4				11.3			
5				10.8			
6	8.9			10.5			
7				10.2			
8				10.0			
9			8.4	10.0			
10				9.9		9.2	
11	8.7			9.9		9.2	
12				9.8		9.3	
m 1				9.7		9.3	
2				9.6		9.5	
3				9.5		9.3	
4				9.4		9.3	
5				9.3		9.4	
6	8.5		8.8	9.2			
7			8.9		9.1		
8			28.3				
9			25.0			4.3	
10			21.0				
11			18.0				
12			15.5				
otal In.	209.90	204.0	269.10	243.0	220.2	221.8	223.2
Avg. IN.	8.75	8.5	11.2	10.13	9.18	9.24	9.3
Avg. Ft.	0.73	0.71	0.93	0.84	0.76	0.77	0.78
MGD	8.144	7.811	11.71	10.05	8.651	8.822	8.994

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1985

PC

TIME	4-10 WED.	4-11 THURS.	4-12 FRIDAY	4-13 SAT.	4-14 SUN.	4-15 MON.	4-16 TUES.
AM 1	9.3	8.5	8.5	8.5	8.3	8.3	11.3
2							10.9
3							10.5
4							10.3
5				8.4		8.4	10.1
6						8.5	10.0
7						19.5	9.9
8						20.5	9.8
9						20.7	9.7
10						18.5	9.6
11	8.5					16.5	9.6
12	8.6					14.5	9.6
PM 1						13.5	9.7
2						12.5	
3				8.3		11.7	
4						11.4	
5						10.8	9.6
6	8.5					10.5	9.5
7						10.3	
8						10.0	
9						10.0	
10						11.3	
11						12.0	
12						11.6	
Total In.	212.60	204.0	204.0	201.0	199.20	304.21	236.20
Avg. IN.	8.86	8.5	8.5	8.38	8.3	12.68	9.84
Avg. Ft.	0.74	0.71	0.71	0.70	0.69	1.06	0.82
MGD	8.311	7.811	7.811	7.647	7.483	14.25	9.695

JCN-3889A (2S 11-62) DATA SHEET

1985

PC

	4-17	4-18	4-19	4-20	4-21	4-22	4-23
E	WED.	THURS.	FRIDAY	SAT.	SUN.	MON.	TUES.
AM 1	9.5	9.0	9.0	9.0	8.8	8.6	8.7
2	9.4						8.7
3							8.6
4				8.9	8.7		
5							
6							
7							
8							
9	9.3						
10	9.3						8.7
11	9.0						
12				8.8		8.7	
PM 1							
2				8.7			
3				8.6		8.8	
4							
5							8.6
6					8.6		
7							
8							
9					8.7	8.7	
10							
11				8.7			
12				8.8			
Total In.	219.90	216.0	216.0	210.80	208.8	208.30	207.3
Avg. IN.	9.16	9.0	9.0	8.78	8.70	8.68	8.64
Avg. Ft.	0.76	0.75	0.75	0.73	0.73	0.72	0.72
MGD	8.651	8.480	8.480	8.144	8.144	7.977	7.977

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PC

1985

	4-24	4-25	4-26	4-27	4-28	4-29	4-30
	WED.	THURS.	FRIDAY	SAT.	SUN.	MON.	TUES.
AM 1	8.6	8.4	8.4	8.4	8.2	8.1	8.2
2							
3							
4							
5							
6					8.1		
7							
8							
9							
10							8.3
11	8.4						8.4
12				8.5			
PM 1						8.2	
2						8.4	
3	8.5						8.3
4			8.1				
5			8.1			8.3	
6			8.2				
7	8.4			8.4			
8				8.4			
9			8.3	8.3			
10							
11							
12				8.2		8.2	
Total In.	204.0	201.60	200.0	201.80	194.90	196.9	198.7
Avg. IN.	8.5	8.4	8.33	8.4	8.1	8.2	8.3
Avg. Ft.	0.71	0.70	0.69	0.70	0.68	0.68	0.69
MGD	7.811	7.647	7.483	7.647	7.321	7.321	7.483

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1985

PC

	5-1	5-2	5-3	5-4	5-5	5-6	5-7
	WED.	THURS.	FRIDAY	SAT.	SUN.	MON.	TUES.
AM 1	8.3	8.5	15.0	9.4	8.9	8.9	9.1
2			13.2				
3			12.3				
4		8.6	11.5	9.3			
5		8.7	11.0	9.1		9.0	
6		8.6	10.6	9.0	8.8	9.1	9.0
7		8.6	10.4	9.0			
8		8.5	10.1	8.9			
9		8.7	10.0				
10		10.8	9.9				
11	8.4	13.3			8.9	9.0	
12	8.5	15.0		8.8			9.1
PM 1	8.6	18.5					9.2
2		19.8	9.7				9.2
3		16.0	9.6				9.4
4	8.9	13.8	9.5				
5	9.0	15.0				9.1	
6		21.5			8.8		
7		21.0					9.3
8	8.8	20.0					
9	8.7	27.8	9.4			9.2	
10	8.6	27.8	9.3	8.9			
11	8.5	23.0					
12	8.5	17.5					
Total In.	204.7	358.0	247.80	214.9	212.4	217.30	220.4
Avg. IN.	8.5	14.9	10.3	8.95	8.85	9.05	9.18
Avg. Ft.	0.71	1.24	0.86	0.745	0.74	0.75	0.77
MGD	7.811	18.03	10.41	8.480	8.311	8.480	8.822

ICN-3889A
(2S 11-62) DATA SHEET

1985 PC

TIME	5-8 WED.	5-9 THURS.	5-10 FRIDAY	5-11 SAT.	5-12 SUN.	5-13 MON.	5-14 TUES.
AM 1	9.3	9.0	9.1	9.2	9.2	9.0	9.1
2				9.2	9.1		
3				9.1	9.0		
4							
5							
6			9.0	9.0			
7						8.9	
8							
9							9.0
10							
11	9.1					9.0	
12	9.2					9.1	
PM 1		9.2	9.1			9.4	
2		9.3			9.1		9.1
3	9.3				9.2		9.2
4	9.4						9.4
5	9.4						
6	9.3	9.2	9.2		9.1		
7	9.2	9.1		9.5			
8	9.1			10.0		9.3	9.3
9	9.0			9.7		9.2	9.2
10				9.5		9.1	9.1
11				9.4			
12				9.3			
Total In.	230	218.2	218.4	220.1	217.7	209.9	219.5
Avg. IN.	9.6	9.09	9.1	9.2	9.1	8.7	9.1
Avg. Ft.	0.80	0.76	0.76	0.76	0.76	0.73	0.76
MGD	9.343	8.651	8.651	8.651	8.651	8.144	8.651

UCN-3889A (12S 11-62) DATA SHEET

1985

PC

TIME	5-15 WED.	5-16 THURS.	5-17 FRIDAY	5-18 SAT.	5-19 SUN.	5-20 MON.	5-21 TUES.
AM 1	9.1	9.0	9.1	9.0	8.5	8.6	9.0
2			9.0	9.0			
3				8.8			
4							
5							
6				8.7			
7						8.7	
8							
9							
10					8.6		9.1
11	9.2				8.8	8.8	
12	9.2					8.9	
PM 1	9.3	9.1				9.0	9.2
2	9.4	9.2					9.2
3	9.5	9.3	9.2		8.7		9.3
4			9.5			9.1	
5			9.6				
6	9.4	9.2	9.5	8.6			
7	9.3	9.2	9.4				
8	9.2	9.3	9.2				
9	9.1	9.4	9.0				9.2
10		9.4					9.1
11		9.3					
12		9.2					
Total In.	220.9	219.2	218.5	209.0	207.3	213.0	219.6
Avg. IN.	9.2	9.1	9.1	8.7	8.6	8.9	9.1
Avg. Ft.	0.77	0.76	0.76	0.73	0.72	0.74	0.76
MGD	8.822	8.651	8.651	8.144	7.977	8.311	8.651

UCN-2669A (12S 11-82) DATA SHEET

1985

Time	5-22 WED.	5-23 THURS.	5-24 FRIDAY	5-25 SAT.	5-26 SUN.	5-27 MON.	PC 5-28 TUES.
AM 1	9.1	9.0	9.2	9.0	8.6	8.8	8.9
2			9.2				
3			9.1				
4			9.0			8.9	
5							
6							
7				8.9	8.7		
8				8.7			
9		10.5		8.6			
10		10.8					
11	9.3	10.5					
12	9.4	10.2		8.7			9.5
PM 1	9.3	10.0	9.5				10.0
2	9.3	9.6	10.0				10.0
3	9.2	9.6	10.0				9.8
4	9.1	9.5	9.9	8.6			9.5
5		9.4	9.7	8.5			9.3
6		9.3	9.5 –				9.1
7			9.5				9.0
8			9.4				9.0
9	9.6		9.3	8.6			8.9
10			9.2				
11			9.1				
12			9.1				
Total In.	209.8	227.2	222.7	191.8	208.2	213.3	218.7
Avg. IN.	8.7	9.5	9.3	8.0	8.7	8.9	9.1
Avg. Ft.	0.73	0.79	0.77	0.66	0.72	0.74	0.76
MGD	8.144	9.168	8.822	7.001	7.977	8.311	8.651

9.3
65 1

UCN-3889A (12S 11-62) DATA SHEET

1985

PC

Hr	5-29 WED.	5-30 THURS.	5-31 FRIDAY	6-1 SAT.	6-2 SUN.	6-3 MON.	6-4 TUES.
AM 1	8.9	8.6	8.8	8.9	8.5	8.9	9.0
2	8.9	8.5	8.7				
3	8.8						
4	8.7		8.6	8.8			
5				8.7			
6							
7	8.6	93.5	8.5				
8					9.0		
9					9.5		
10	8.5				10.8		
11					10.5		
12			8.6	8.9	10.0		
PM 1		8.6			9.5	8.9	
2	8.6	8.7	8.7		9.3	9.0	
3	8.7		8.8		9.0		
4	8.8	8.8	8.9	8.7			
5			9.0	8.6	8.9		
6				8.5			
7							
8		79.2	9.1				
9	8.6		9.1				
10			9.0				
11					71.2		
12							8.9
Total In.	172.9	207.3	210.3	208.8	217.3	214.7	215.9
Avg. IN.	7.2	8.6	8.8	8.7	9.1	8.9	9.0
Avg. Ft.	0.60	0.72	0.73	0.72	0.75	0.75	0.75
MGD	6.068	7.977	8.144	7.977	8.480	8.480	8.480

UCN-2889A (12S 11-62) DATA SHEET

1985

PC

	6-5 WED.	6-6 THURS.	6-7 FRIDAY	6-8 SAT.	6-9 SUN.	6-10 MON.	6-11 TUES.
AM 1	8.9	8.9	9.1	9.8	8.7	8.7	9.1
2	8.8		9.0	9.5			9.0
3			9.5	9.4		9.0	
4		8.8	10.0	9.2			
5	8.7		10.1	9.0			
6			10.0				
7		8.7	9.5			9.5	
8			9.4	8.9		9.7	
9	8.5		9.1	-1.2			
10	8.7		9.0			9.6	
11	8.8		9.5			9.5	
12	8.9	8.9	12.0				
PM 1	8.9		14.5			9.4	9.2
2	8.9		18.0				
3	9.0		16.6				9.4
4			21.5	8.7		9.5	9.5
5			22.0			9.4	9.8
6			18.0				9.9
7		9.5	14.5				10.0
8			12.5			9.3	
9			11.5				
10			11.0			9.2	
11		9.4	10.5				
12		9.3	10.0				10.5
Total In.	212.8	215.6	296.8	214.4	208.8	223.0	225.6
Avg. IN.	8.9	9.0	12.4	8.9	8.7	9.3	9.4
Avg. Ft.	0.74	0.75	1.03	0.74	0.72	0.77	0.78
MGD	8.311	8.480	13.65	8.311	7.977	8.822	8.994

UCN-3889A (12S 11-62) DATA SHEET

1985

PC

TIME	6-12 WED.	6-13 THURS.	6-14 FRIDAY	6-15 SAT.	6-16 SUN.	6-17 MON.	6-18 TUES.
AM 1	10.8	9.6	8.7	8.9	8.8	9.5	12.3
2	10.7	↓	↓	8.8	↓	↓	13.2
3	10.5	↓	↓	8.7	↓	↓	15.1
4	10.4	↓	↓	↓	↓	9.6	19.0
5	11.0	9.5	↓	↓	↓	9.7	20.4
6	16.0	9.4	↓	↓	↓	↓	18.0
7	21.0	9.2	↓	↓	↓	↓	15.5
8	17.0	9.0	↓	↓	↓	9.8	14.0
9	14.2	9.0	↓	8.6	↓	9.9	13.0
10	11.9	9.0	8.9	↓	↓	9.8	12.6
11	11.5	9.1	9.0	↓	8.9	9.7	12.4
12	11.0	↓	↓	↓	↓	9.6	12.3
PM 1	10.9	↓	↓	↓	↓	9.7	12.0
2	10.5	9.0	↓	↓	↓	9.9	11.7
3	10.2	↓	↓	↓	8.8	10.0	10.0
4	10.1	8.9	↓	↓	8.9	12.5	10.0
5	10.0	↓	8.9	8.7	9.0	22.0	9.9
6	10.0	↓	↓	8.9	9.1	27.9	9.8
7	9.9	↓	8.8	↓	9.4	25.5	9.7
8	9.8	↓	8.7	↓	9.5	18.0	9.6
9	9.7	↓	↓	↓	↓	15.3	9.5
10	9.7	↓	8.8	8.8	↓	13.7	↓
11	9.7	↓	8.9	↓	↓	12.6	9.4
12	9.6	↓	↓	↓	↓	12.0	9.4
Total In.	276.1	218.9	211.6	209.4	216.3	305.1	298.3
Avg. IN.	11.50	9.12	8.82	8.73	9.01	12.71	12.43
Avg. Ft.	0.96	0.76	0.73	0.73	0.75	1.06	1.04
MGD	12.28	8.651	8.144	8.144	8.480	14.25	13.85

UCN-3889A (12S 11-82) DATA SHEET

PC

1985	6-19	6-20	6-21	6-22	6-23	6-24	6-25
TIME	WED.	THURS.	FRIDAY	SAT.	SUN.	MON.	TUES.
AM 1	9.4	10.0	10.1	10.0	10.0	10.2	10.5
2	9.3	9.9	10.0				10.4
3	9.2	↓					10.3
4	9.1	9.8					10.2
5	9.0	↓					10.1
6		9.7					
7							
8							
9	↓	↓					
10	10.0	9.8					↓
11	10.5	9.9					10.0
12	10.5	10.0					
PM 1	10.5					↓	↓
2	10.4					10.3	10.1
3	10.3					10.5	10.3
4	10.3	↓	↓			10.9	
5	10.2	10.2	10.3			11.1	
6	↓					11.9	
7	10.2	↓	↓			12.6	
8	10.1	10.3	10.2		↓	12.5	
9	10.0	10.4	10.1		10.1	11.7	
10		10.3	10.0		10.2	11.2	
11		10.2				10.9	
12	↓	10.1	↓	↓	↓	10.6	↓
Total In.	235.2	239.8	241.3	240	240.7	256.8	245.1
Avg. IN.	9.8	10.0	10.0	10.0	10.0	10.7	10.2
Avg. Ft.	0.82	0.83	0.84	0.83	0.84	0.89	0.85
MGD	9.695	9.873	10.05	9.873	10.05	10.96	10.23

UCN-3889A (12S 11-62) DATA SHEET

1985	6-26	6-27	6-28	6-29	6-30	7-1	PC 7-2
Time	WED.	THURS.	FRIDAY	SAT.	SUN.	MON.	TUES.
AM 1	10.3	10.3	10.0	10.2	10.0	17.1	12.8
2	↓	↓	↓	10.1	↓	15.0	12.0
3	10.2	↓	↓	10.0	↓	13.2	11.5
4	10.0	↓	↓	↓	↓	12.4	11.2
5	↓	10.2	↓	↓	↓	11.8	11.0
6	↓	↓	↓	↓	↓	11.5	10.8
7	↓	↓	↓	↓	↓	12.0	10.6
8	↓	↓	↓	↓	↓	12.9	10.5
9	↓	↓	↓	↓	↓	13.0	↓
10	10.2	10.0	↓	↓	↓	12.8	↓
11	↓	↓	↓	↓	↓	12.3	↓
12	↓	↓	10.2	10.2	↓	11.8	↓
PM 1	↓	↓	↓	↓	↓	11.5	↓
2	10.3	↓	10.3	10.3	↓	11.2	↓
3	↓	↓	10.4	10.4	↓	11.0	↓
4	10.5	↓	10.5	↓	↓	↓	10.4
5	10.7	↓	↓	↓	↓	↓	↓
6	↓	↓	↓	10.2	↓	↓	10.3
7	10.6	↓	↓	10.1	↓	↓	10.2
8	10.5	↓	↓	10.0	13.5	12.0	↓
9	↓	↓	↓	↓	18.5	17.5	↓
10	↓	↓	↓	↓	20.5	18.1	↓
11	10.4	↓	10.4	↓	24.5	15.5	↓
12	10.3	↓	10.2	↓	23.0	13.9	↓
Total In.	246.9	242.2	245.0	242.5	290.0	310.5	256.2
Avg. IN.	10.3	10.1	10.2	10.1	12.1	12.9	10.7
Avg. Ft.	0.86	0.84	0.85	0.84	1.01	1.08	0.89
MGD	10.41	10.05	10.23	10.05	13.25	14.65	10.96

UCN-2889A (12S 11-62) DATA SHEET

1985

PC

TIME	7-3 WED.	7-4 THURS.	7-5 FRIDAY	7-6 SAT.	7-7 SUN.	7-8 MON.	7-9 TUES.
AM 1	10.2	10.0	10.0	10.0	10.0	10.0	10.0
2							
3							
4							
5							
6							
7							
8				10.1			
9							
10	10.0			10.2			10.1
11	10.2					10.1	10.2
12							
PM 1				10.1		10.2	10.3
2				10.0		10.3	
3							10.4
4							10.5
5							
6							
7		10.1					
8							
9						10.2	13.0
10	10.1						21.0
11	10.0						20.0
12						10.1	16.0
Total In.	244.1	240.6	240.0	240.8	240.0	243.2	274.0
Avg. IN.	10.2	10.0	10.0	10.0	10.0	10.1	11.4
Avg. Ft.	0.85	0.84	0.83	0.84	0.83	0.84	0.95
MGD	10.23	10.05	9.873	10.05	9.873	10.05	12.09

UCN-3889A (12S 11-62) DATA SHEET

1985

PC

Time	7-10 WED.	7-11 THURS.	7-12 FRIDAY	7-13 SAT.	7-14 SUN.	7-15 MON.	7-16 TUES.
AM 1	14.0	27.5	10.8	10.5	10.5	10.5	13.2
2	13.9	20.0	↓	↓	↓	↓	12.4
3	12.1	16.4	↓	↓	↓	10.4	11.9
4	11.6	14.5	↓	10.6	↓	↓	11.5
5	11.3	13.5	10.7	↓	↓	↓	11.3
6	11.1	12.7	↓	↓	↓	↓	11.1
7	11.0	12.2	↓	10.5	↓	↓	11.0
8	10.9	11.9	↓	↓	10.4	↓	10.9
9	10.8	11.7	↓	↓	↓	↓	↓
10	10.7	11.5	↓	↓	↓	↓	↓
11	10.8	11.5	↓	↓	↓	10.5	↓
12	↓	11.4	10.8	↓	↓	10.7	↓
PM 1	10.9	↓	↓	↓	10.5	↓	↓
2	↓	↓	↓	↓	↓	↓	↓
3	11.0	11.5	10.9	↓	↓	12.0	↓
4	10.9	↓	↓	↓	10.6	12.7	↓
5	↓	↓	↓	10.7	10.5	12.5	↓
6	10.8	11.3	10.8	10.8	↓	12.0	10.8
7	↓	11.1	10.7	10.9	↓	11.5	10.7
8	10.7	11.0	10.6	10.7	↓	↓	10.6
9	10.3	↓	↓	10.6	↓	15.5	↓
10	12.0	10.9	↓	10.5	↓	19.2	10.5
11	22.0	10.8	↓	↓	↓	16.2	↓
12	27.8	↓	10.5	↓	↓	14.2	↓
Total In.	298.0	309.0	257.6	253.5	251.6	284.1	265.6
Avg. IN.	12.4	12.9	10.7	10.6	10.5	11.8	11.1
Avg. Ft.	1.03	1.07	0.89	0.88	0.87	0.99	0.92
MGD	13.65	14.45	10.96	10.78	10.60	12.86	11.52

UCN-3669A (12S 11-62) DATA SHEET

1985

PC

Time	7-17 WED.	7-18 THURS.	7-19 FRIDAY	7-20 SAT.	7-21 SUN.	7-22 MON.	7-23 TUES.
AM 1	10.5	10.2	10.3	10.5	10.2	10.2	10.5
2	10.4	10.1		10.4			
3							12.1
4							12.6
5							12.4
6					10.1		11.8
7							11.3
8							10.9
9	10.3			10.3			10.8
10	10.3						
11	10.4			10.0		10.4	
12	10.5	10.2		9.8		10.5	
PM 1		10.3		9.7		10.7	10.7
2				9.5			
3	10.4				10.2		10.6
4		10.4	10.5			10.6	
5		10.5		9.6			
6	10.5			9.7			10.5
7	10.4			9.8			
8	10.3	10.3		9.9		10.5	
9				10.0			
10				10.2			
11							
12							
Total In.	249.4	245.7	249.0	241.5	243.9	249.9	262.0
Avg. IN.	10.4	10.2	10.4	10.1	10.2	10.4	10.9
Avg. Ft.	0.87	0.85	0.86	0.84	0.85	0.87	0.91
MGD	10.60	10.23	10.41	10.05	10.23	10.60	11.33

UCN-3669A (12S 11-62) DATA SHEET

1985

PC

TIME	7-24 WED.	7-25 THURS.	7-26 FRIDAY	7-27 SAT.	7-28 SUN.	7-29 MON.	7-30 TUES.
AM 1	10.6	15.5	11.0	15.3	11.0	10.6	10.7
2		14.3		24.0	10.9		
3		13.5		27.3			
4	10.5	13.0		20.3		10.5	
5		12.5		16.7			
6		12.3		14.8			
7		12.1	10.9	13.7	10.8		10.6
8		12.0		13.0			
9	10.4	11.8		12.5			
10	10.5	11.7	10.8	12.3			
11		11.7		11.9			
12	10.7	11.6	10.9	11.7			
PM 1	10.8	11.6	11.0	11.5			10.8
2		11.6		11.4		10.6	11.2
3		11.5		11.3		10.8	11.4
4				11.2	10.7		11.5
5	11.7	11.4				11.0	11.5
6	18.0	11.3		11.1		11.3	11.3
7	27.7	11.2		11.0		11.4	11.1
8		11.1				11.5	11.0
9		11.0				11.3	
10	23.0		10.9		10.6	11.0	10.9
11	19.0		13.5			10.9	
12	16.7		14.2			10.8	
Total In.	332.10	287.20	268.80	327.20	259.50	258.20	261.30
Avg. IN.	13.8375	11.9667	11.2000	13.6333	10.8125	10.7583	10.8875
Avg. Ft.	1.1531	0.9972	0.9333	1.1361	0.9010	0.8965	0.9073
MGD	16.10	13.06	11.71	15.89	11.15	11.15	11.33

UCN-3889A (12S 11-82) DATA SHEET

1985

PC

Time	7-31 WED.	8-1 THURS.	8-2 FRIDAY	8-3 SAT.	8-4 SUN.	8-5 MON.	8-6 TUES.
AM 1	10.9	10.8	11.3	10.7	10.0	10.0	10.3
2	10.8	↓	11.2	↓	↓	↓	↓
3	10.7	↓	11.1	↓	↓	↓	↓
4	10.7	11.0	11.0	↓	↓	↓	↓
5	10.6	12.3	↓	↓	↓	↓	↓
6	↓	12.6	↓	↓	↓	↓	↓
7	↓	12.5	↓	10.6	↓	↓	12.0
8	↓	12.2	↓	10.5	↓	↓	14.7
9	↓	11.7	↓	↓	↓	↓	14.5
10	10.5	11.5	↓	↓	↓	↓	13.3
11	10.6	13.0	↓	↓	↓	10.1	12.5
12	↓	17.1	↓	10.4	↓	10.2	12.0
PM 1	↓	23.5	↓	10.3	↓	10.3	11.6
2	10.7	20.3	↓	↓	↓	↓	11.3
3	↓	17.0	↓	10.2	↓	↓	11.2
4	10.8	15.2	10.7	↓	↓	↓	11.1
5	↓	14.0	10.6	10.1	↓	↓	11.0
6	↓	13.3	↓	↓	↓	↓	10.9
7	↓	12.7	↓	↓	↓	↓	10.8
8	↓	12.2	↓	↓	↓	↓	10.7
9	↓	11.7	↓	10.0	↓	↓	10.6
10	↓	11.5	↓	↓	↓	↓	10.5
11	↓	11.5	10.7	↓	↓	↓	↓
12	↓	11.4	↓	↓	↓	↓	↓
Total In.	257.0	320.6	261.3	248.6	240.0	243.9	271.5
Avg. IN.	10.7083	13.3583	10.8875	10.3583	10.0000	10.1625	11.3125
Avg. Ft.	0.8924	1.1132	0.9073	0.8632	0.8333	0.8469	0.9427
MGD	10.96	15.27	11.33	10.41	9.873	10.23	11.90

UCN-3889A (12S 11-62) DATA SHEET

1985

PC

Time	8-7 WED.	8-8 THURS.	8-9 FRIDAY	8-10 SAT.	8-11 SUN.	8-12 MON.	8-13 TUES.
AM 1	10.5	10.5	10.5	10.6	10.5	10.3	10.5
2	↓	↓	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓	↓	10.4
4	10.4	10.4	↓	10.5	↓	↓	↓
5	↓	10.3	↓	↓	↓	↓	↓
6	↓	10.2	↓	↓	↓	↓	↓
7	10.3	↓	↓	↓	↓	10.4	↓
8	11.0	↓	↓	↓	↓	10.5	↓
9	14.6	↓	↓	↓	↓	↓	↓
10	14.2	↓	↓	↓	↓	↓	10.5
11	13.5	↓	10.7	10.7	↓	10.7	10.6
12	12.6	10.3	10.8	10.8	↓	↓	10.7
PM 1	12.0	↓	↓	10.9	↓	↓	↓
2	11.7	10.4	↓	↓	↓	↓	↓
3	11.4	↓	↓	10.8	10.4	10.8	↓
4	11.1	↓	↓	10.7	↓	10.9	↓
5	10.9	↓	↓	10.6	↓	↓	↓
6	10.8	↓	10.7	10.5	10.3	10.8	↓
7	10.8	↓	10.6	↓	↓	10.7	10.6
8	10.7	10.5	↓	↓	↓	10.6	↓
9	10.6	↓	↓	↓	↓	10.5	↓
10	10.5	↓	↓	↓	↓	↓	↓
11	↓	↓	↓	↓	↓	↓	11.0
12	↓	↓	↓	↓	↓	↓	13.0
Total In.	270.4	248.9	254.8	254.2	250.3	253.2	256.2
Avg. IN.	11.27	10.37	10.62	10.59	10.43	10.55	10.68
Avg. Ft.	0.94	0.86	0.88	0.88	0.87	0.88	0.89
MGD	11.90	10.41	10.78	10.78	10.60	10.78	10.96

UCN-3889A (12S 11-62) DATA SHEET

1985

PC

TIME	8-14 WED.	8-15 THURS.	8-16 FRIDAY	8-17 SAT.	8-18 SUN.	8-19 MON.	8-20 TUES.
AM 1	13.4	11.5	10.6	27.9	13.8	10.8	11.0
2	12.6	11.2	↓	↓	13.4	↓	↓
3	12.1	11.0	↓	27.8	13.0	↓	10.9
4	11.7	10.9	↓	25.1	12.8	↓	10.8
5	11.3	10.8	↓	27.0	12.5	↓	↓
6	11.1	10.7	↓	26.4	12.3	↓	↓
7	11.0	10.6	10.5	26.0	12.2	10.7	↓
8	10.9	↓	↓	27.8	12.0	↓	↓
9	10.8	↓	↓	↓	11.9	↓	10.9
10	↓	↓	↓	↓	11.8	10.3	↓
11	↓	↓	↓	↓	11.7	10.5	↓
12	10.9	10.7	↓	↓	↓	10.7	↓
PM 1	↓	10.8	↓	↓	11.6	10.9	11.0
2	↓	↓	↓	26.8	11.5	11.0	↓
3	10.8	↓	↓	26.7	11.4	11.2	↓
4	10.9	↓	10.6	25.0	↓	↓	↓
5	11.0	↓	↓	21.2	↓	↓	11.1
6	11.2	↓	↓	19.2	11.3	↓	11.2
7	11.4	10.9	10.8	18.3	↓	↓	↓
8	11.5	10.8	11.5	17.8	↓	11.1	11.1
9	↓	10.7	14.0	16.7	11.1	↓	11.0
10	11.8	↓	21.5	15.8	11.0	↓	↓
11	↓	10.6	27.9	15.0	10.8	↓	↓
12	↓	↓	↓	14.3	↓	11.0	↓
Total In.	272.9	258.9	303.5	571.7	284.0	261.7	263.1
Avg. IN.	11.37	10.79	12.65	23.82	11.83	10.90	10.96
Avg. Ft.	0.95	0.90	1.05	1.99	0.99	0.91	0.91
MGD	12.09	11.15	14.05	36.65	12.86	11.33	11.33

UCN-3689A (12S 11-42) DATA SHEET

1985

PC

TIME	8-21 WED.	8-22 THURS.	8-23 FRIDAY	8-24 SAT.	8-25 SUN.	8-26 MON.	8-27 TUES.
AM 1	10.9	10.5	10.5	10.4	12.6	27.8	12.0
2	↓	↓	10.4	↓	12.2	22.3	11.8
3	10.8	10.4	10.3	10.3	11.9	18.1	11.5
4		10.3			11.6	16.0	11.4
5					11.5	14.5	11.3
6					11.4	13.7	11.2
7			↓		11.2	13.0	11.1
8			10.4		11.0	12.7	
9					10.8	12.3	
10		↓	↓	↓	10.7	11.8	
11	↓	10.4	10.5	↓	10.6		↓
12	10.9	↓	↓	14.7	10.5		11.0
PM 1		10.5	10.6	12.2	10.4		
2				↓			
3				15.0		↓	
4				24.5		11.5	↓
5	↓			27.8		11.4	10.9
6	10.8			27.0		↓	
7	10.7			20.5		11.3	
8	10.6			17.5	↓	↓	↓
9	↓			16.2	10.5	11.4	10.8
10	10.5		↓	15.1	13.5	12.5	
11			10.5	14.0	24.0		↓
12	↓	↓	↓	13.2	27.8	↓	10.7
Total In.	258.6	251.3	251.6	340.4	299.0	327.0	266.4
Avg. IN.	10.78	10.47	10.48	14.18	12.46	13.6	11.1
Avg. Ft.	0.90	0.87	0.87	1.18	1.04	1.14	0.92
MGD	11.15	10.60	10.60	16.74	13.85	15.89	11.52

UCN-3689A (12S 11-62) DATA SHEET

1985

PC

Time	8-28 WED.	8-29 THURS.	8-30 FRIDAY	8-31 SAT.	9-1 SUN.	9-2 MON.	9-3 TUES.
AM 1	10.7	10.6	10.5	10.8	9.5	9.4	9.33
2				10.5			
3				10.2			
4				10.0			9.47
5		10.5				9.5	
6				9.9			
7	10.6			9.8			
8							
9				9.7			
10							
11	10.7					9.4	NO READING
12				9.6			
PM 1	10.8	10.6					
2				9.7			
3	10.9	10.7		9.8		9.3	
4			13.0				
5			14.0				
6			13.4	9.7			
7	10.8	10.6	12.1		9.4		
8	10.7	10.5	11.4				
9	10.6		11.0				
10			10.5	9.6			
11			10.5				
12			10.8	9.5			
							~10h
Total In.	257.1	253.5	264.2	235.9	227.4	225.2	237
Avg. IN.	10.7	10.6	11.0	9.8	9.5	9.4	
Avg. Ft.	0.89	0.88	0.92	0.82	0.79	0.78	
MGD	10.96	10.78	11.52	9.695	9.168	8.994	9.70

12.16 MG
Avg
min 9.695
max

UCN-3889A (12S 11-62) DATA SHEET

1985

PC

TIME	9-4. WED.	9-5 THURS.	9-6 FRIDAY	9-7 SAT.	9-8 SUN.	9-9 MON.	9-10 TUES.
AM 1	NO READING	NO READING	NO READING	NO READING	NO READING	NO READING	9.5
2							
3							
4							
5							
6							
7							
8							
9							
10						9.7	
11							9.9
12							10.1
PM 1							
2						9.8	10.0
3							9.9
4							9.8
5						9.7	9.7
6							9.5
7							
8							
9						9.6	
10						9.5	
11							
12							
Total In.						145.10	231.0
Avg. IN.						9.67	9.63
Avg. Ft.						0.81	0.80
MGD	8.31	7.98	7.98				9.343

UCN-3889A (12S 11-62) DATA SHEET

1985

PC

TIME	9-11 WED.	9-12 THURS.	9-13 FRIDAY	9-14 SAT.	9-15 SUN.	9-16 MON.	9-17 TUES.
Am 1	9.5	9.5	9.4	9.3	9.2	9.0	9.5
2		9.4				9.1	9.4
3				9.4		9.2	
4			9.3		9.3	9.3	9.3
5						9.4	
6				9.3			
7							
8					9.4		
9				9.2	9.3		
10				9.3		9.6	
11		9.5	9.4		9.2	9.7	9.3
12			9.5			9.8	9.3
Pm 1			9.6	9.4		9.9	9.4
2					9.1	10.0	9.5
3		9.6			9.0		
4			9.7				
5		9.5	9.6				
6			9.5				
7				9.3			
8		9.7		9.2			9.4
9						9.9	
10							9.3
11		9.5				9.8	
12			9.4			9.6	9.4
Total In.	228.0	227.9	226.7	223.5	219.5	231.8	225.2
Avg. IN.	9.5	9.50	9.45	9.31	9.15	9.66	9.38
Avg. Ft.	0.79	0.79	0.79	0.78	0.76	0.80	0.78
MGD	9.168	9.168	9.168	8.994	8.651	9.343	8.994

UCN-3889A (12S 11-62) DATA SHEET

1985

PC

TIME	9-18 WED.	9-19 THURS.	9-20 FRIDAY	9-21 SAT.	9-22 SUN.	9-23 MON.	9-24 TUES.
AM 1	9.5	9.5	9.5	9.4	9.3	9.3	10.6
2	↓						10.5
3	9.4						10.8
4	9.3	↓				↓	11.9
5	9.2	9.4				9.5	12.0
6						9.5	11.7
7			↓			9.5	11.1
8			9.4			9.4	10.8
9						↓	10.5
10	↓			↓		9.3	10.3
11	9.3		↓	9.2		9.1	10.2
12	9.4		9.5			9.2	10.1
PM 1	9.5			↓		9.3	10.0
2		↓		9.3		9.4	10.0
3		9.5		9.4		9.5	9.9
4						9.6	9.8
5						9.8	9.7
6				↓		11.0	9.7
7				9.3		14.0	9.7
8	↓		↓			14.0	9.6
9	9.4		9.4			12.6	9.5
10						11.8	9.4
11						11.2	↓
12	↓	↓	↓	↓	↓	10.8	↓
Total In.	225.2	227.0	227.2	224.3	223.2	245.1	246.6
Avg. IN.	9.38	9.46	9.47	9.35	9.3	10.21	10.28
Avg. Ft.	0.78	0.79	0.79	0.78	0.78	0.85	0.86
MGD	8.994	9.168	9.168	8.994	8.994	10.23	10.41

UCN-3889A (12S 11-82) DATA SHEET

1985

TIME	9-25 WED.	9-26 THURS.	9-27 FRIDAY	9-28 SAT.	9-29 SUN.	9-30 MON.	PC 10-1 TUES.
AM 1	9.4	9.8	10.0	9.8	9.7	9.3	9.7
2		9.7	10.0				
3			9.9				
4	9.3		9.8		9.6		
5			9.7				9.6
6			9.7				
7			9.6				
8							11.0
9							13.8
10							14.5
11					9.5	9.5	15.8
12			9.7			9.6	16.7
PM 1		9.8	9.7				17.0
2		10.1	9.8		9.4		17.4
3	9.4	11.5	9.9				17.0
4	9.5	15.0	10.0				16.6
5		14.5					15.8
6		13.1		9.7			15.3
7		12.2					15.0
8	9.6	11.5	9.9				14.5
9	9.8	11.0	9.8		9.3		14.0
10		10.5					13.7
11		10.3					13.3
12		10.1				9.7	12.7
Total In.	226.7	256.1	235.3	234.5	227.8	227.4	321.7
Avg. IN.	9.45	10.67	9.80	9.77	9.49	9.48	13.40
Avg. Ft.	0.79	0.89	0.82	0.81	0.79	0.79	1.18
MGD	9.168	10.96	9.695	9.518	9.168	9.168	16.74

274 rd

9.13 avg

UCN-3889A (125 11-42) DATA SHEET

1985	10/2	10/3	10/4	10/5	10/6	10/7	10/8
TIME	WED.	THURS.	FRIDAY	SAT.	SUN.	MON.	TUES.
Am 1	12.2	12.0	9.5	9.3	9.0	8.9	8.9
2	11.7	12.0	9.4	9.2			
3	11.3	11.5					
4	11.0	11.0					
5	10.8	10.8					
6	10.6	10.5		9.1			
7	10.5	10.4	9.3	9.0			
8	10.4	10.3					
9	10.3	10.2					
10	10.3	10.1					9.0
11	10.3	10.1		9.2		9.0	
12	10.2	10.0		9.3			9.1
Pm 1	10.2	10.0	9.4	9.3			
2	10.1	9.9	9.5	9.1	9.2		
3		9.8		9.0	9.3		
4					9.3		
5					9.2		
6		9.7			9.0		9.0
7		9.6			9.0		
8	10.0	9.5			8.9		
9				9.1			
10				9.3			8.9
11	10.2		9.4	9.2			
12	11.2		9.3	9.1			
Total In.	251.8	245.0	225.9	227.9	216.5	215.0	215.4
Avg. IN.	10.49	10.21	9.41	9.50	9.02	8.96	8.98
Avg. Ft.	0.87	0.85	0.78	0.79	0.75	0.75	0.75
MGD	10.60	10.23	8.994	9.168	8.480	8.480	8.480

UCN-3889A (12S 11-82) DATA SHEET

1985

PC

TIME	10-9 WED.	10-10 THURS.	10-11 FRIDAY	10-12 SAT.	10-13 SUN.	10-14 MON.	10-15 TUES.
Am 1	8.9	9.0	9.0	9.0	9.0	9.0	9.1
2							
3		8.9					9.0
4							
5							
6							
7							
8							
9							
10	8.9						
11	9.0				9.1	9.1	9.2
12		9.0				9.2	9.4
Pm 1	9.1		9.1		9.2	9.3	9.5
2			9.3				
3	9.0		9.4		9.1		
4			9.3				
5		9.1	9.2		9.0		
6			9.1				9.4
7			9.0				9.3
8						9.2	9.2
9		9.0		9.1			9.1
10						9.1	9.0
11							
12				9.0			
Total In.	215.2	215.5	217.4	216.3	216.8	219.1	220.3
Avg. IN.	8.97	8.98	9.06	9.01	9.03	9.13	9.18
Avg. Ft.	0.75	0.75	0.75	0.75	0.75	0.76	0.76
MGD	8.480	8.480	8.480	8.480	8.480	8.651	8.651

UCN-3669A (12S 11-62) DATA SHEET

1985

PC

TIME	10-16 WED.	10-17 THURS.	10-18 FRIDAY	10-19 SAT.	10-20 SUN.	10-21 MON.	10-22 TUES.
AM 1	9.0	9.0	9.0	9.0	8.6	8.5	9.0
2					8.5		
3							
4							
5							
6						8.6	
7						8.7	
8						8.8	
9				8.9		8.8	
10						8.9	
11						13.8	9.1
12		9.1				12.4	
PM 1						11.5	
2				8.8		10.7	9.2
3						10.2	9.3
4						9.8	
5	9.1					9.6	
6	9.0					9.5	
7						9.4	
8						9.3	
9							
10						9.2	
11		9.0		8.7		9.1	
12				8.6		9.0	
Total In.	216.1	217.1	216.0	213.0	204.1	229.1	219.5
Avg. IN.	9.00	9.05	9.0	8.88	8.50	9.55	9.15
Avg. Ft.	0.75	0.75	0.75	0.74	0.71	0.80	0.76
MGD	8.480	8.480	8.480	8.311	7.811	9.343	8.651

UCN-3889A (12S 11-62) DATA SHEET

1985

TIME	10-23 WED.	10-24 THURS.	10-25 FRIDAY	10-26 SAT.	10-27 SUN.	10-28 MON.	10-29 TUES. PC
AM 1	9.2	10.5	9.2	8.8	8.8	8.9	9.0
2	↓	10.1	↓			↓	8.9
3	9.1	10.0	9.1			9.0	
4	9.0	9.8					
5		9.7					
6		9.6					
7		↓					
8	↓	9.5					
9	9.1		↓	↓		↓	
10	9.3		9.2	8.9		9.0	↓
11	10.0		↓	9.0		9.2	9.0
12	10.5		9.3		↓	9.3	9.1
PM 1	10.8				8.9	9.3	
2	10.6					9.2	
3	10.4					9.1	↓
4	11.0						9.3
5	14.0						↓
6	18.0		↓	↓	↓	↓	9.1
7	18.2	↓	9.2	8.9	8.8	9.0	9.0
8	15.4	9.4					
9	13.5	↓	↓				
10	12.3	9.3	9.0				
11	11.5	↓	↓				
12	11.0	9.2	8.9	↓	↓	↓	↓
Total In.	268.1	229.9	220.1	213.5	211.8	217.2	216.2
Avg. IN.	11.17	9.58	9.17	8.90	8.82	9.05	9.01
Avg. Ft.	0.93	0.80	0.76	0.74	0.74	0.75	0.75
MGD	11.71	9.343	8.651	8.311	8.311	8.480	8.480

UCN-3889A (12S 11-42) DATA SHEET

1985

PC

TIME	10-30 WED.	10-31 THURS.	11-1 FRIDAY	11-2 SAT.	11-3 SUN.	11-4 MON.	11-5 TUES.
Am 1	9.0	9.2	9.0	14.0	9.0	9.0	9.6
2	↓	9.1	↓	13.0	↓	↓	9.5
3	↓	9.0	↓	12.0	↓	↓	9.3
4	8.9	↓	↓	11.1	↓	↓	↓
5	↓	↓	↓	10.8	↓	↓	9.2
6	↓	↓	↓	10.4	9.1	↓	9.2
7	↓	↓	↓	10.0	9.4	↓	9.1
8	↓	↓	↓	9.9	↓	10.0	↓
9	↓	↓	↓	9.7	9.3	10.1	↓
10	↓	↓	9.3	9.6	9.2	10.3	9.3
11	9.0	↓	9.5	↓	↓	↓	9.4
12	↓	9.1	9.6	↓	↓	10.5	↓
Pm 1	9.1	9.2	↓	↓	9.1	11.0	9.3
2	9.5	9.3	↓	↓	↓	11.5	↓
3	10.0	9.4	10.1	9.5	9.0	12.3	↓
4	10.5	9.5	11.4	9.4	↓	13.6	↓
5	10.3	↓	11.5	9.3	↓	13.6	9.2
6	10.0	↓	11.2	9.2	↓	12.6	9.1
7	9.8	9.4	10.7	9.1	↓	11.1	↓
8	9.5	9.3	10.4	↓	↓	10.6	↓
9	9.4	9.2	10.1	↓	↓	10.2	↓
10	9.3	9.1	11.4	9.0	↓	9.9	↓
11	↓	↓	12.0	↓	↓	9.8	↓
12	↓	↓	14.0	↓	↓	9.7	↓
Total In.	223.3	220.0	241.4	240.6	218.0	250.1	221.6
Avg. IN.	9.30	9.17	10.1	10.0	9.09	10.42	9.23
Avg. Ft.	0.78	0.76	0.84	0.84	0.76	0.87	0.77
MGD	8.994	8.651	10.05	10.05	8.651	10.60	8.822

OCTOBER -
Total monthly flow 281.36
Average flow 9.08

UCN-3889A (125 11-42) DATA SHEET

1985

PC

TIME	11-6 WED.	11-7 THURS.	11-8 FRIDAY	11-9 SAT.	11-10 SUN.	11-11 MON.	11-12 TUES.
1	9.0	9.0	9.0	8.9	8.6	8.8	8.5
2				8.8	8.7		
3							
4				8.7			
5				8.3			
6	8.9						
7							8.3
8							
9						8.0	
10	9.0					8.2	8.4
11			9.1			8.4	
12		9.3	9.2		8.8	8.5	8.5
1	9.1	9.5	9.3	8.6	8.9	8.6	
2						8.7	
3				8.5	8.8		
4	9.2	9.4					
5		9.3	9.2				
6		9.2	9.1				
7	9.1		9.0		8.7		
8	9.0	9.1				8.6	
9							
10		9.0			8.8	8.5	
11							
12							
Total In.	216.6	219.1	217.8	207.0	209.9	207.0	203.2
Avg. IN.	9.02	9.13	9.08	8.62	8.75	8.62	8.47
Avg. Ft.	0.75	0.76	0.76	0.72	0.73	0.72	0.71
MGD	8.480	8.651	8.651	7.977	8.144	7.977	7.811

UCN-2869A (12S 11-42) DATA SHEET

1985

PC

HE	11-13 WED.	11-14 THURS.	11-15 FRIDAY	11-16 SAT.	11-17 SUN.	11-18 MON.	11-19 TUES.
	8.5	8.6	8.7	8.5	9.6	8.5	8.5
2					9.3	8.4	
3			8.6		9.1		
4	8.5	8.5			9.0		
5					8.9		
6					8.8		
7					8.7		
8							
9							
10							
11		8.7				8.5	8.6
12	8.6	8.8				8.5	8.8
1	8.7		8.7			8.6	8.8
2	8.8		8.8				8.7
3			8.9				
4				9.0			
5				10.5	8.6		
6	8.7		8.8	13.0	8.5		
7				15.6			
8			8.7	14.0			
9		8.7		12.5		8.5	
10			8.6	11.4			8.6
11				10.5			
12			8.5	10.0			
al In.	206.9	208.0	208.3	234.0	209.8	203.9	206.6
vg. IN.	8.62	8.67	8.68	9.75	8.74	8.50	8.61
vg. Ft.	0.72	0.72	0.72	0.81	0.73	0.71	.72
YGD	7.977	7.977	7.977	9.518	8.144	7.811	7.977

3689A (-421) DATA SHEET

1985

Time	11-20 WED.	11-21 THURS.	11-22 FRIDAY	11-23 SAT.	11-24 SUN.	11-25 MON.	11-26 TUES.
Hrs 1	8.6	8.5	11.3	8.9	8.5	8.4	9.0
2			10.7				8.9
3			10.5				8.9
4							9.0
5	8.5						9.1
6			10.1				
7			9.9	8.8			
8			9.6				
9			9.5				
10				8.6			
11		8.6				9.0	
12	8.6					9.0	
Am 1	8.7					9.1	
2						9.2	9.2
3						9.3	9.3
4		11.0				9.2	9.4
5		14.5	9.4			9.1	9.4
6	8.6	15.6	9.2			9.0	9.3
7		15.6		8.5			9.2
8		14.5			8.4		9.1
9	8.5	10.7	9.1				9.1
10		11.7	9.0				9.0
11							
12							
Total In.	205.8	245.0	232.2	208.2	203.5	210.9	218.7
Avg. IN.	8.58	10.21	9.68	8.68	8.48	8.79	9.11
Avg. Ft.	0.71	0.85	0.81	0.72	0.71	0.73	0.76
MGD	7.811	10.23	9.518	7.977	7.811	8.144	8.651

UCN-3669A (12S 11-42) DATA SHEET

1985

PC

TIME	11-27 WED.	11-28 THURS.	11-29 FRIDAY	11-30 SAT.	12-1 SUN.	12-2 MON.	12-3 TUES.
AM 1	9.0	11.1	13.0	10.5	9.5	10.5	10.0
2		11.5	12.4	10.5		10.3	
3		11.6	12.0	10.4		10.1	
4		11.6	11.5	10.2		10.0	
5		11.4	11.5	10.1			
6		11.1	11.2	10.0			
7		11.0	11.0				
8		10.8	10.9				9.8
9	9.5	10.9	10.8				
10	10.0	11.0	10.6				
11	10.5		10.5				
12	10.5						10.0
PM 1	10.5				11.5		
2	15.0	11.5			14.2		
3	22.0	12.0			14.2		
4	28.0	12.0	10.4	9.9	15.0		
5	28.0	14.0	10.3	9.8	15.0		
6	21.0	19.0	10.2	9.7	14.0		
7	17.0	25.5	10.2		11.6		
8	14.5	25.0	10.4		12.0		
9	13.0	20.0	10.5	9.6	11.5		9.9
10	12.2	17.0	10.5		11.0		9.8
11	11.5	15.0	10.6		10.8		9.7
12	11.0	13.5	10.5	9.5	10.6		9.7
Total In.	316.2	329.5	250.8	238.8	265.4	230.9	238.3
Avg. IN.	13.18	13.73	10.45	9.95	11.06	9.62	9.93
Avg. Ft.	1.10	1.14	0.87	0.83	0.92	0.80	0.83
MGD	15.06	15.89	10.6	9.873	11.52	9.343	9.873

NOVEMBER - Total monthly flow - 274.81

Average flow - 9.16

UCN-3889A (125 11-62) DATA SHEET

1985

PC

Time	12-4 WED.	12-5 THURS.	12-6 FRIDAY	12-7 SAT.	12-8 SUN.	12-9 MON.	12-10 TUES.
AM 1	9.6	9.5	9.1	8.7	9.0	8.6	8.7
2							
3							
4					8.9		
5							
6							
7			9.0				
8							
9							
10				8.9	8.8		
11	9.7		9.1	9.0			8.9
12	9.8	10.0	9.2	9.1		9.0	
PM 1	9.9	10.2		9.2		9.1	
2	9.9	10.3		9.2	8.9		9.0
3	10.0	10.4	9.3	9.0	9.0		9.1
4		10.1			8.9		
5		9.8			8.9	9.0	9.2
6	9.9	9.6			8.8		9.1
7	9.7					8.9	
8			9.2			8.7	
9	9.6	9.5	9.1		8.7		9.0
10		9.4	9.0		8.6		
11		9.3	9.0				
12	9.5	9.2	8.9				
Total In.	232.9	231.6	219.0	213.7	212.2	210.4	213.4
Avg. IN.	9.70	9.65	9.12	8.90	8.84	8.77	8.89
Avg. Ft.	0.81	0.80	0.76	0.74	0.74	0.73	0.74
MGD	9.518	9.343	8.651	8.311	8.311	8.144	8.311

UCN-3889A (12S 11-82) DATA SHEET

1985

DC

TIME	12-11 WED.	12-12 THURS.	12-13 FRIDAY	12-14 SAT.	12-15 SUN.	12-16 MON.	12-17 TUES.
AM 1	8.9	11.0	12.5	9.4	8.9	8.9	9.0
2		10.5	13.0		8.9		
3		10.0	12.3		9.0		
4		10.0	11.8			9.0	
5		9.7	11.5				
6		9.5	11.2	9.3			
7		9.5	11.0	9.1			
8		9.3	10.7				
9			10.5		8.9		
10							
11	9.0	9.1				9.0	
12	9.0			9.0			
PM 1	9.1		10.4				9.1
2	9.3						9.2
3							
4							
5			10.2	8.9		9.1	
6	9.6		10.1			9.1	9.1
7	10.0		10.0			9.0	
8	10.5		10.0	9.0			
9	10.6		9.7				
10	11.0		9.6				
11			9.5				
12		10.0	9.5				
Total In.	227.0	226.4	256.2	218.5	214.2	215.9	217.6
Avg. IN.	9.46	9.43	10.68	9.10	8.93	8.99	9.07
Avg. Ft.	.79	.79	0.89	0.76	0.74	0.75	0.76
MGD	9.168	9.168	10.96	8.651	8.311	8.480	8.651

UCN-3888A (12S 11-82) DATA SHEET

1985

TIME	12-18 WED.	12-19 THURS.	12-20 FRIDAY	12-21 SAT.	12-22 SUN.	12-23 MON.	12-24 TUES.
1	9.1	9.1	9.3	9.3	9.0	9.3	9.0
2		9.1		9.2		9.3	
3		9.0		9.1		9.2	
4			9.4			9.1	
5							
6							
7							
8			9.3	9.0			
9	9.0		9.2				
10	9.0	9.1				9.1	
11	9.0					9.3	
12	9.1		9.3		9.1	9.4	
pm 1	9.2		9.5		9.3		
2	9.3	9.2			9.4		
3		9.3				9.2	
4			9.6			9.1	
5						9.0	
6					9.3		
7	9.5		9.5		9.2		
8	9.5				9.1		
9	9.4						
10	9.3						
11	9.3		9.4				
12	9.2		9.3		9.3		
Total In.	220.8	219.7	225.7	208.0	219.2	219.3	216.0
Avg. IN.	9.2	9.15	9.40	8.67	9.13	9.14	9.0
Avg. Ft.	0.77	0.76	0.78	0.72	0.76	0.76	.75
MGD	8.822	8.651	8.994	7.977	8.651	8.651	8.480

UCN-3669A (12S 11-62) DATA SHEET

1985

TIME	12-25 WED.	12-26 THURS.	12-27 FRIDAY	12-28 SAT.	12-29 SUN.	12-30 MON.	12-31 TUES.
AM 1	9.0	9.0	9.1	9.0	9.0	9.0	9.0
2	9.0	9.0	9.1				
3	8.9	8.9	9.0				
4							
5							
6							
7							
8							9.5
9							10.5
10		9.0					13.0
11		9.1	9.2				17.0
12		9.2	9.3				19.0
PM 1			9.4			9.1	16.0
2						9.2	15.5
3							14.5
4							13.5
5			9.3				12.5
6			9.1		8.9	9.1	11.9
7		9.1				9.0	11.5
8							11.0
9							10.6
10							10.0
11							10.6
12							10.1
Total In.	213.8	217.4	219.3	216.0	215.3	217.0	280.1
Avg. IN.	8.91	9.06	9.14	9.0	8.97	9.04	11.67
Avg. Ft.	0.74	0.75	0.76	.75	0.75	0.75	0.97
MGD	8.311	8.480	8.651	8.480	8.480	8.480	12.47

Dec Avg
8.575

JCN-3889A 125 11-421 DATA SHEET

OLDFLOW3.XLS

1986-1988 MGD

1986-88

	MGD
DATE	FLOW
1/1/86	9.168
1/2/86	8.822
1/3/86	8.822
1/4/86	8.822
1/5/86	8.480
1/6/86	8.480
1/7/86	8.651
1/8/86	8.994
1/9/86	8.822
1/10/86	8.480
1/11/86	7.977
1/12/86	8.480
1/13/86	8.480
1/14/86	8.822
1/15/86	8.822
1/16/86	8.994
1/17/86	8.822
1/18/86	8.994
1/19/86	10.96
1/20/86	8.994
1/21/86	8.822
1/22/86	8.822
1/23/86	8.651
1/24/86	8.994
1/25/86	9.873
1/26/86	10.41
1/27/86	9.168
1/28/86	9.168
1/29/86	9.343
1/30/86	8.994
1/31/86	8.994
2/1/86	8.822
2/2/86	8.822
2/3/86	9.168
2/4/86	9.168
2/5/86	14.45
2/6/86	10.6
2/7/86	9.873
2/8/86	8.651
2/9/86	8.480
2/10/86	8.822
2/11/86	9.873
2/12/86	9.168
2/13/86	9.343
2/14/86	10.05
2/15/86	9.518
2/16/86	10.23
2/17/86	19.35
2/18/86	18.47

9.579 avg 1Q86

2/19/86	11.9
2/20/86	10.41
2/21/86	10.05
2/22/86	10.23
2/23/86	9.518
2/24/86	10.6
2/25/86	9.695
2/26/86	9.695
2/27/86	9.873
2/28/86	9.168
3/1/86	8.822
3/2/86	8.480
3/3/86	8.994
3/4/86	9.168
3/5/86	8.994
3/6/86	8.994
3/7/86	8.822
3/8/86	8.480
3/9/86	8.480
3/10/86	8.651
3/11/86	8.994
3/12/86	11.33
3/13/86	13.25
3/14/86	10.23
3/15/86	9.695
3/16/86	9.168
3/17/86	8.994
3/18/86	8.994
3/19/86	15.680
3/20/86	9.695
3/21/86	9.518
3/22/86	8.651
3/23/86	8.480
3/24/86	8.651
3/25/86	8.480
3/26/86	8.311
3/27/86	8.822
3/28/86	8.822
3/29/86	8.822
3/30/86	8.822
3/31/86	8.651
4/1/86	8.822
4/2/86	8.651
4/3/86	8.48
4/4/86	8.480
4/5/86	8.651
4/6/86	9.168
4/7/86	8.822
4/8/86	12.28
4/9/86	9.168
4/10/86	8.48

8.898 avg. 2086

4/11/86	8.48
4/12/86	8.48
4/13/86	8.48
4/14/86	8.651
4/15/86	8.48
4/16/86	8.48
4/17/86	8.651
4/18/86	8.48
4/19/86	7.977
4/20/86	8.311
4/21/86	8.994
4/22/86	8.144
4/23/86	8.994
4/24/86	8.994
4/25/86	8.48
4/26/86	8.651
4/27/86	8.48
4/28/86	10.23
5/1/86	8.480
5/2/86	8.480
5/3/86	8.311
5/4/86	8.144
5/5/86	8.311
5/6/86	8.480
5/7/86	8.822
5/8/86	8.651
5/9/86	8.480
5/10/86	8.651
5/11/86	8.822
5/12/86	8.651
5/13/86	8.651
5/14/86	8.651
5/15/86	8.651
5/16/86	8.994
5/17/86	8.651
5/18/86	8.994
5/19/86	8.651
5/20/86	8.311
5/21/86	8.311
5/22/86	8.311
5/23/86	15.06
5/24/86	9.168
5/25/86	9.343
5/26/86	7.977
5/27/86	10.78
5/28/86	10.96
5/29/86	8.994
5/30/86	8.651
5/31/86	8.480
6/1/86	8.8220

6/2/86	9.1680
6/3/86	8.6510
6/4/86	8.6510
6/5/86	12.0900
6/6/86	10.0500
6/7/86	8.6510
6/8/86	8.9940
6/9/86	9.3430
6/10/86	8.6510
6/11/86	8.9940
6/12/86	8.8220
6/13/86	8.4800
6/14/86	8.1440
6/15/86	8.3110
6/16/86	8.4800
6/17/86	8.6510
6/18/86	8.6510
6/19/86	8.6510
6/20/86	8.9940
6/21/86	8.6510
6/22/86	8.9940
6/23/86	8.9940
6/24/86	8.8220
6/25/86	8.9940
6/26/86	8.8220
6/27/86	8.9940
6/28/86	8.6510
6/29/86	8.4800
6/30/86	8.9940
7/1/86	8.994
7/2/86	13.85
7/3/86	8.994
7/4/86	8.480
7/5/86	8.651
7/6/86	8.480
7/7/86	8.651
7/8/86	8.994
7/9/86	9.518
7/10/86	13.25
7/11/86	10.05
7/12/86	9.168
7/13/86	
7/14/86	7.977
7/15/86	
7/16/86	
7/17/86	7.977
7/18/86	7.977
7/19/86	
7/20/86	
7/21/86	7.647

9.125 avg 3Q86

7/22/86	7.647
7/23/86	7.647
7/24/86	7.647
7/25/86	7.647
7/26/86	
7/27/86	
7/28/86	8.651
7/29/86	8.651
7/30/86	7.977
7/31/86	7.647
8/1/86	7.647
8/2/86	8.651
8/3/86	8.480
8/4/86	8.480
8/5/86	8.480
8/6/86	8.822
8/7/86	8.994
8/8/86	8.994
8/9/86	8.994
8/10/86	9.168
8/11/86	13.85
8/12/86	9.168
8/13/86	8.822
8/14/86	9.168
8/15/86	9.343
8/16/86	9.343
8/17/86	9.343
8/18/86	9.168
8/19/86	8.994
8/20/86	9.168
8/21/86	9.343
8/22/86	9.168
8/23/86	9.168
8/24/86	8.822
8/25/86	8.651
8/26/86	7.001
8/27/86	8.311
8/28/86	13.06
8/29/86	8.822
8/30/86	8.480
8/31/86	8.480
9/1/86	10.78
9/2/86	16.74
9/3/86	9.873
9/4/86	9.168
9/5/86	10.6
9/6/86	8.651
9/7/86	8.311
9/8/86	8.651
9/9/86	8.651
9/10/86	8.651

9/11/86	8.822
9/12/86	10.23
9/13/86	8.480
9/14/86	8.311
9/15/86	8.311
9/16/86	11.71
9/17/86	9.343
9/18/86	8.480
9/19/86	8.994
9/20/86	8.651
9/21/86	8.480
9/22/86	8.480
9/23/86	8.311
9/24/86	9.343
9/25/86	9.168
9/26/86	8.994
9/27/86	9.168
9/28/86	8.651
9/29/86	10.05
9/30/86	8.994
10/1/86	10.23
10/2/86	9.343
10/3/86	9.168
10/4/86	8.822
10/5/86	8.480
10/6/86	8.480
10/7/86	8.480
10/8/86	8.480
10/9/86	8.822
10/10/86	9.168
10/11/86	10.6
10/12/86	12.28
10/13/86	16.1
10/14/86	18.03
10/15/86	8.822
10/16/86	8.480
10/17/86	8.651
10/18/86	8.310
10/19/86	8.144
10/20/86	8.311
10/21/86	8.311
10/22/86	8.311
10/23/86	8.311
10/24/86	8.651
10/25/86	22.09
10/26/86	9.873
10/27/86	9.168
10/28/86	8.994
10/29/86	8.994
10/30/86	8.994
10/31/86	8.822

10.04 avg 4Q86

11/1/86	8.651
11/2/86	8.480
11/3/86	8.480
11/4/86	8.480
11/5/86	9.343
11/6/86	8.651
11/7/86	11.33
11/8/86	9.343
11/9/86	11.15
11/10/86	8.822
11/11/86	12.67
11/12/86	9.695
11/13/86	9.168
11/14/86	8.994
11/15/86	9.343
11/16/86	8.822
11/17/86	8.994
11/18/86	8.994
11/19/86	8.822
11/20/86	11.33
11/21/86	9.343
11/22/86	8.651
11/23/86	10.6
11/24/86	13.25
11/25/86	10.78
11/26/86	13.06
11/27/86	9.343
11/28/86	8.994
11/29/86	8.651
11/30/86	8.480
12/1/86	8.822
12/2/86	11.15
12/3/86	9.695
12/4/86	8.994
12/5/86	8.994
12/6/86	8.822
12/7/86	8.651
12/8/86	15.06
12/9/86	31.27
12/10/86	13.65
12/11/86	14.25
12/12/86	11.33
12/13/86	9.695
12/14/86	9.695
12/15/86	9.518
12/16/86	9.168
12/17/86	9.695
12/18/86	12.28
12/19/86	9.695
12/20/86	8.994
12/21/86	8.651

12/22/86	8.994
12/23/86	9.343
12/24/86	9.695
12/25/86	8.994
12/26/86	8.994
12/27/86	8.651
12/28/86	8.480
12/29/86	8.651
12/30/86	7.647
12/31/86	7.321
1/1/87	
1/2/87	
1/3/87	
1/4/87	
1/5/87	
1/6/87	8.480
1/7/87	8.480
1/8/87	8.651
1/9/87	8.822
1/10/87	8.651
1/11/87	7.997
1/12/87	8.311
1/13/87	8.480
1/14/87	8.994
1/15/87	10.05
1/16/87	8.994
1/17/87	8.822
1/18/87	13.45
1/19/87	26.67
1/20/87	11.15
1/21/87	9.695
1/22/87	11.33
1/23/87	10.05
1/24/87	9.518
1/25/87	14.45
1/26/87	11.71
1/27/87	9.695
1/28/87	10.05
1/29/87	10.05
1/30/87	9.873
1/31/87	9.581
2/1/87	9.168
2/2/87	10.41
2/3/87	9.873
2/4/87	9.695
2/5/87	8.822
2/6/87	9.518
2/7/87	8.822
2/8/87	8.651
2/9/87	8.994
2/10/87	8.994

10.536 avg. 1Q87

2/11/87	9.168
2/12/87	9.168
2/13/87	9.343
2/14/87	9.168
2/15/87	8.822
2/16/87	14.65
2/17/87	10.05
2/18/87	10.41
2/19/87	9.695
2/20/87	9.518
2/21/87	9.168
2/22/87	14.05
2/23/87	11.52
2/24/87	10.05
2/25/87	9.518
2/26/87	10.05
2/27/87	21.86
2/28/87	17.81
4/1/87	8.651
4/2/87	9.343
4/3/87	12.09
4/4/87	9.873
4/5/87	8.994
4/6/87	8.994
4/7/87	8.994
4/8/87	8.994
4/9/87	8.822
4/10/87	8.822
4/11/87	9.168
4/12/87	8.651
4/13/87	8.311
4/14/87	10.6
4/15/87	15.48
4/16/87	10.41
4/17/87	9.343
4/18/87	8.651
4/19/87	8.480
4/20/87	8.311
4/21/87	8.822
4/22/87	8.994
4/23/87	8.822
4/24/87	9.518
4/25/87	8.651
4/26/87	8.651
4/27/87	8.651
4/28/87	8.311
4/29/87	8.144
4/30/87	8.144
5/1/87	8.311
5/2/87	8.311
5/3/87	8.651

No March '87 data?
8.775 avg 2Q87

5/4/87	12.86
5/5/87	6.685
5/6/87	
5/7/87	6.685
5/8/87	6.374
5/9/87	
5/10/87	
5/11/87	6.374
5/12/87	6.068
5/13/87	8.311
5/14/87	8.651
5/15/87	8.651
5/16/87	7.977
5/17/87	9.343
5/18/87	8.311
5/19/87	8.311
5/20/87	7.977
5/21/87	8.651
5/22/87	8.480
5/23/87	7.811
5/24/87	7.647
5/25/87	8.480
5/26/87	9.518
5/27/87	8.144
5/28/87	8.651
5/29/87	10.6
5/30/87	9.343
5/31/87	8.311
6/1/87	8.144
6/2/87	8.311
6/3/87	8.822
6/4/87	8.822
6/5/87	8.144
6/6/87	7.977
6/7/87	8.144
6/8/87	8.311
6/9/87	8.480
6/10/87	7.001
6/11/87	7.321
6/12/87	6.842
6/13/87	10.23
6/14/87	9.168
6/15/87	10.05
6/16/87	10.05
6/17/87	7.001
6/18/87	6.374
6/19/87	7.001
6/20/87	10.6
6/21/87	10.78
6/22/87	10.05

6/23/87	10.78
6/24/87	9.343
6/25/87	8.994
6/26/87	9.168
6/27/87	8.651
6/28/87	8.651
6/29/87	8.822
6/30/87	8.994
7/1/87	9.518
7/2/87	8.651
7/3/87	9.695
7/4/87	10.05
7/5/87	16.1
7/6/87	13.06
7/7/87	18.91
7/8/87	9.695
7/9/87	9.343
7/10/87	9.168
7/11/87	14.05
7/12/87	9.695
7/13/87	9.16
7/14/87	9.168
7/15/87	8.994
7/16/87	9.343
7/17/87	9.343
7/18/87	9.343
7/19/87	9.343
7/20/87	9.168
7/21/87	7.811
7/22/87	7.001
7/23/87	7.001
7/24/87	6.842
7/25/87	6.374
7/26/87	6.374
7/27/87	6.374
7/28/87	6.529
7/29/87	6.374
7/30/87	6.529
7/31/87	6.529
8/1/87	6.374
8/2/87	6.374
8/3/87	6.842
8/4/87	6.529
8/5/87	6.529
8/6/87	8.311
8/7/87	7.647
8/8/87	6.374
8/9/87	7.811

7.807 avg 3987

8/10/87	7.321
8/11/87	6.529
8/12/87	7.483
8/13/87	7.001
8/14/87	6.374
8/15/87	6.374
8/16/87	6.220
8/17/87	7.321
8/18/87	6.529
8/19/87	6.529
8/20/87	7.001
8/21/87	6.685
8/22/87	6.685
8/23/87	7.001
8/24/87	7.001
8/25/87	7.001
8/26/87	7.001
8/27/87	6.842
8/28/87	6.529
8/29/87	6.529
8/30/87	6.529
8/31/87	6.374
9/1/87	6.22
9/2/87	6.22
9/3/87	6.22
9/4/87	6.22
9/5/87	5.92
9/6/87	6.53
9/7/87	6.37
9/8/87	10.41
9/9/87	7.00
9/10/87	6.22
9/11/87	6.37
9/12/87	22.33
9/13/87	11.33
9/14/87	6.53
9/15/87	6.69
9/16/87	6.69
9/17/87	7.00
9/18/87	7.00
9/19/87	7.81
9/20/87	6.07
9/21/87	5.62
9/22/87	5.62
9/23/87	5.62
9/24/87	5.77
9/25/87	5.77
9/26/87	5.77
9/27/87	5.47
9/28/87	5.62
9/29/87	10.60

9/30/87	10.05
10/1/87	5.92
10/2/87	6.37
10/3/87	6.22
10/4/87	5.62
10/5/87	5.62
10/6/87	5.77
10/7/87	5.77
10/8/87	6.53
10/9/87	6.07
10/10/87	5.77
10/11/87	5.92
10/12/87	6.07
10/13/87	6.07
10/14/87	6.22
10/15/87	6.22
10/16/87	6.07
10/17/87	6.22
10/18/87	6.22
10/19/87	6.07
10/20/87	7.16
10/21/87	6.37
10/22/87	6.22
10/23/87	6.22
10/24/87	6.07
10/25/87	6.22
10/26/87	6.07
10/27/87	6.53
10/28/87	5.92
10/29/87	5.92
10/30/87	6.07
10/31/87	5.92
11/1/87	5.767
11/2/87	5.917
11/3/87	6.068
11/4/87	5.917
11/5/87	3.680
11/6/87	3.020
11/7/87	3.510
11/8/87	3.680
11/9/87	4.020
11/10/87	8.200
11/11/87	3.850
11/12/87	3.510
11/13/87	3.510
11/14/87	3.340
11/15/87	3.340
11/16/87	3.680
11/17/87	7.730
11/18/87	4.020
11/19/87	4.390

5.64 avg 4Q87

11/20/87	4.020
11/21/87	5.767
11/22/87	5.472
11/23/87	5.619
11/24/87	5.619
11/25/87	5.619
11/26/87	5.619
11/27/87	5.619
11/28/87	7.160
11/29/87	6.068
11/30/87	5.326
12/1/87	5.472
12/2/87	5.619
12/3/87	5.767
12/4/87	5.767
12/5/87	5.767
12/6/87	5.619
12/7/87	5.619
12/8/87	5.619
12/9/87	3.941
12/10/87	3.941
12/11/87	3.941
12/12/87	3.811
12/13/87	3.682
12/14/87	3.811
12/15/87	7.647
12/16/87	5.767
12/17/87	5.619
12/18/87	5.619
12/19/87	5.619
12/20/87	6.068
12/21/87	5.472
12/22/87	5.472
12/23/87	5.472
12/24/87	7.483
12/25/87	13.650
12/26/87	
12/27/87	
12/28/87	9.695
12/29/87	5.767
12/30/87	5.767
12/31/87	5.472
1/1/88	
1/2/88	
1/3/88	
1/4/88	7.00
1/5/88	6.07
1/6/88	5.77
1/7/88	6.37
1/8/88	6.37
1/9/88	6.37

8.16 avg. 1Q88

1/10/88	6.07
1/11/88	6.84
1/12/88	7.16
1/13/88	8.31
1/14/88	7.32
1/15/88	7.00
1/16/88	6.69
1/17/88	9.17
1/18/88	8.65
1/19/88	26.92
1/20/88	16.74
1/21/88	8.65
1/22/88	8.14
1/23/88	7.65
1/24/88	7.65
1/25/88	7.65
1/26/88	7.32
1/27/88	7.32
1/28/88	7.32
1/29/88	7.00
1/30/88	7.16
1/31/88	7.00
2/1/88	6.69
2/2/88	6.69
2/3/88	12.28
2/4/88	17.16
2/5/88	8.82
2/6/88	7.81
2/7/88	7.65
2/8/88	7.32
2/9/88	7.32
2/10/88	7.32
2/11/88	7.48
2/12/88	7.81
2/13/88	7.16
2/14/88	7.16
2/15/88	10.41
2/16/88	7.98
2/17/88	7.65
2/18/88	7.32
2/19/88	8.65
2/20/88	7.81
2/21/88	7.48
2/22/88	7.65
2/23/88	8.48
2/24/88	7.81

2/25/88	7.65
2/26/88	7.65
2/27/88	7.48
2/28/88	7.16
2/29/88	7.48
3/1/88	7.321
3/2/88	7.321
3/3/88	7.321
3/4/88	8.311
3/5/88	7.160
3/6/88	7.483
3/7/88	7.647
3/8/88	7.160
3/9/88	7.483
3/10/88	22.090
3/11/88	9.168
3/12/88	9.873
3/13/88	9.343
3/14/88	8.144
3/15/88	7.811
3/16/88	7.647
3/17/88	7.647
3/18/88	7.647
3/19/88	5.917
3/20/88	
3/21/88	7.321
3/22/88	6.685
3/23/88	7.001
3/24/88	7.001
3/25/88	7.321
3/26/88	7.647
3/27/88	6.842
3/28/88	7.001
3/29/88	7.160
3/30/88	7.160
3/31/88	7.321
4/1/88	8.822
4/2/88	7.483
4/3/88	7.483
4/4/88	7.160
4/5/88	6.842
4/6/88	12.090
4/7/88	7.811
4/8/88	7.321
4/9/88	7.160
4/10/88	7.001
4/11/88	7.321
4/12/88	7.647
4/13/88	7.483
4/14/88	7.647
4/15/88	7.977

7.648 avg. 2Q88

4/16/88	6.842
4/17/88	10.230
4/18/88	10.410
4/19/88	8.651
4/20/88	7.647
4/21/88	7.483
4/22/88	7.483
4/23/88	7.977
4/24/88	7.321
4/25/88	7.321
4/26/88	7.160
4/27/88	7.321
4/28/88	7.160
4/29/88	7.160
4/30/88	7.001
5/1/88	7.0010
5/2/88	7.1600
5/3/88	7.4830
5/4/88	10.2300
5/5/88	7.8110
5/6/88	7.4830
5/7/88	7.1600
5/8/88	7.0010
5/9/88	9.3430
5/10/88	7.8110
5/11/88	7.6470
5/12/88	7.4830
5/13/88	7.1600
5/14/88	7.4830
5/15/88	7.1600
5/16/88	7.3210
5/17/88	10.7800
5/18/88	7.3210
5/19/88	7.3210
5/20/88	7.3210
5/21/88	7.0010
5/22/88	7.1600
5/23/88	7.4830
5/24/88	9.8730
5/25/88	7.9770
5/26/88	7.3210
5/27/88	7.3210
5/28/88	7.1600
5/29/88	7.1600
5/30/88	7.0010
5/31/88	7.0010
6/1/88	7.160
6/2/88	7.483
6/3/88	7.160
6/4/88	6.529
6/5/88	6.529

6/6/88	6.842
6/7/88	7.647
6/8/88	7.321
6/9/88	7.977
6/10/88	7.321
6/11/88	7.001
6/12/88	6.842
6/13/88	7.160
6/14/88	7.483
6/15/88	7.647
6/16/88	7.977
6/17/88	7.977
6/18/88	7.647
6/19/88	7.321
6/20/88	7.647
6/21/88	7.483
6/22/88	7.647
6/23/88	7.811
6/24/88	7.977
6/25/88	7.811
6/26/88	7.483
6/27/88	7.647
6/28/88	7.483
6/29/88	7.811
6/30/88	7.811
7/1/88	7.321
7/2/88	7.160
7/3/88	8.311
7/4/88	7.160
7/5/88	7.647
7/6/88	7.483
7/7/88	7.483
7/8/88	7.647
7/9/88	7.647
7/10/88	7.321
7/11/88	7.647
7/12/88	16.740
7/13/88	20.480
7/14/88	11.150
7/15/88	8.994
7/16/88	12.280
7/17/88	9.518
7/18/88	9.873
7/19/88	9.518
7/20/88	8.480
7/21/88	16.100
7/22/88	8.651
7/23/88	8.311
7/24/88	7.321
7/25/88	7.160
7/26/88	8.144

7.339 avg 3Q88

7/27/88	7.483
7/28/88	7.321
7/29/88	7.321
7/30/88	7.001
7/31/88	6.685
8/1/88	7.321
8/2/88	7.483
8/3/88	7.321
8/4/88	6.842
8/5/88	6.842
8/6/88	6.685
8/7/88	6.220
8/8/88	6.529
8/9/88	6.529
8/10/88	6.685
8/11/88	6.685
8/12/88	6.685
8/13/88	6.529
8/14/88	6.374
8/15/88	6.842
8/16/88	7.001
8/17/88	7.811
8/18/88	8.480
8/19/88	1.168
8/20/88	0.000
8/21/88	0.000
8/22/88	0.000
8/23/88	3.303
8/24/88	6.685
8/25/88	6.374
8/26/88	6.374
8/27/88	5.917
8/28/88	6.068
8/29/88	6.374
8/30/88	6.220
8/31/88	6.068
9/1/88	6.068
9/2/88	6.220
9/3/88	8.480
9/4/88	20.940
9/5/88	7.977
9/6/88	6.068
9/7/88	6.068
9/8/88	5.917
9/9/88	6.220
9/10/88	5.917
9/11/88	5.767
9/12/88	6.220
9/13/88	5.917
9/14/88	6.220
9/15/88	6.220

9/16/88	6.529
9/17/88	11.710
9/18/88	
9/19/88	7.321
9/20/88	6.068
9/21/88	6.685
9/22/88	6.685
9/23/88	6.068
9/24/88	
9/25/88	
9/26/88	6.685
9/27/88	6.068
9/28/88	6.068
9/29/88	6.220
9/30/88	6.068
10/1/88	5.472
10/2/88	9.168
10/3/88	6.220
10/4/88	6.068
10/5/88	5.619
10/6/88	5.917
10/7/88	5.767
10/8/88	5.326
10/9/88	5.181
10/10/88	5.619
10/11/88	5.917
10/12/88	6.068
10/13/88	0.220
10/14/88	6.374
10/15/88	5.917
10/16/88	5.767
10/17/88	6.685
10/18/88	6.220
10/19/88	0.374
10/20/88	0.811
10/21/88	6.529
10/22/88	6.529
10/23/88	7.160
10/24/88	7.001
10/25/88	6.842
10/26/88	6.842
10/27/88	6.842
10/28/88	8.651
10/29/88	6.529
10/30/88	6.374
10/31/88	6.374
11/1/88	6.5290
11/2/88	6.2200
11/3/88	6.2200
11/4/88	11.7100

3.930 avg. 4Q88

11/5/88	17.1600
11/6/88	6.6850
11/7/88	2.1450
11/8/88	0.4763
11/9/88	0.2954
11/10/88	0.2954
11/11/88	0.2954
11/12/88	0.2954
11/13/88	0.2954
11/14/88	0.2418
11/15/88	0.0369
11/16/88	0.0000
11/17/88	0.0000
11/18/88	0.0000
11/19/88	0.0000
11/20/88	0.0000
11/21/88	0.0000
11/22/88	0.0000
11/23/88	0.0678
11/24/88	0.0678
11/25/88	0.0678
11/26/88	0.0678
11/27/88	0.1045
11/28/88	0.0369
11/29/88	0.0369
11/30/88	0.0000

~~No~~ Dec 88 data

1989-92

OLDFLOW.XLS

1989-1992 cfs
except 4Q92
MGD

13.93 1Q89

LOW FLOW	94221	1/2/89	14.92	CFS
HIGH FLW	94221	1/3/89	126.42	CFS
LOW FLOW	94221	1/3/89	7.19	CFS
HIGH FLW	94221	1/4/89	103.71	CFS
LOW FLOW	94221	1/4/89	6.86	CFS
HIGH FLW	94221	1/5/89	28.5	CFS
LOW FLOW	94221	1/5/89	5.64	CFS
HIGH FLW	94221	1/6/89	54.61	CFS
LOW FLOW	94221	1/6/89	5.61	CFS
HIGH FLW	94221	1/7/89	48.38	CFS
LOW FLOW	94221	1/7/89	15.87	CFS
HIGH FLW	94221	1/8/89	21.75	CFS
LOW FLOW	94221	1/8/89	6.36	CFS
HIGH FLW	94221	1/9/89	10.5	CFS
LOW FLOW	94221	1/9/89	30.06	CFS
HIGH FLW	94221	1/10/89	31.67	CFS
LOW FLOW	94221	1/10/89	8.1	CFS
HIGH FLW	94221	1/11/89	11.08	CFS
LOW FLOW	94221	1/11/89	7.36	CFS
HIGH FLW	94221	1/12/89	9	CFS
LOW FLOW	94221	1/12/89	20.83	CFS
HIGH FLW	94221	1/13/89	22.75	CFS
LOW FLOW	94221	1/13/89	61.33	CFS
HIGH FLW	94221	1/14/89	60.92	CFS
LOW FLOW	94221	1/14/89	23.07	CFS
HIGH FLW	94221	1/15/89	25.46	CFS
LOW FLOW	94221	1/15/89	19.95	CFS
HIGH FLW	94221	1/16/89	22.46	CFS
LOW FLOW	94221	1/16/89	18.68	CFS
HIGH FLW	94221	1/17/89	20.88	CFS
LOW FLOW	94221	1/17/89	9.49	CFS
HIGH FLW	94221	1/18/89	12.67	CFS
LOW FLOW	94221	1/18/89	8.08	CFS
HIGH FLW	94221	1/19/89	10.54	CFS
LOW FLOW	94221	1/19/89	7.28	CFS
HIGH FLW	94221	1/20/89	9.5	CFS
LOW FLOW	94221	1/20/89	6.46	CFS
HIGH FLW	94221	1/21/89	9.25	CFS
LOW FLOW	94221	1/21/89	5.72	CFS
HIGH FLW	94221	1/22/89	8.88	CFS
LOW FLOW	94221	1/22/89	5.36	CFS
HIGH FLW	94221	1/23/89	8.79	CFS
LOW FLOW	94221	1/23/89	5.23	CFS
HIGH FLW	94221	1/24/89	8.67	CFS
LOW FLOW	94221	1/24/89	5.19	CFS
HIGH FLW	94221	1/25/89	8.83	CFS
LOW FLOW	94221	1/25/89	5.25	CFS
HIGH FLW	94221	1/26/89	9.25	CFS
LOW FLOW	94221	1/26/89	5.12	CFS
HIGH FLW	94221	1/27/89	8.96	CFS
LOW FLOW	94221	1/27/89	5.19	CFS
HIGH FLW	94221	1/28/89	9.71	CFS
LOW FLOW	94221	1/28/89	4.95	CFS
HIGH FLW	94221	1/29/89	8.33	CFS
LOW FLOW	94221	1/29/89	4.51	CFS
HIGH FLW	94221	1/30/89	7.54	CFS
LOW FLOW	94221	1/30/89	4.36	CFS

HIGH FLW	94221	1/31/89	7.13	CFS
LOW FLOW	94221	1/31/89	11.77	CFS
HIGH FLW	94221	2/1/89	14.67	CFS
LOW FLOW	94221	2/1/89	6.34	CFS
HIGH FLW	94221	2/2/89	9.75	CFS
LOW FLOW	94221	2/2/89	5.49	CFS
HIGH FLW	94221	2/3/89	9.5	CFS
LOW FLOW	94221	2/3/89	4.78	CFS
HIGH FLW	94221	2/4/89	8.29	CFS
LOW FLOW	94221	2/4/89	9.19	CFS
HIGH FLW	94221	2/5/89	7.54	CFS
LOW FLOW	94221	2/5/89	11.03	CFS
HIGH FLW	94221	2/6/89	9	CFS
LOW FLOW	94221	2/6/89	19.06	CFS
HIGH FLW	94221	2/7/89	14.29	CFS
LOW FLOW	94221	2/7/89	21.93	CFS
HIGH FLW	94221	2/8/89	16.71	CFS
LOW FLOW	94221	2/8/89	18.12	CFS
HIGH FLW	94221	2/9/89	13.17	CFS
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HIGH FLW	94221	2/12/89	9	CFS
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LOW FLOW	94221	2/15/89	31.69	CFS
HIGH FLW	94221	2/16/89	10.83	CFS
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LOW FLOW	94221	2/17/89	17.45	CFS
HIGH FLW	94221	2/18/89	8.63	CFS
LOW FLOW	94221	2/18/89	33.2	CFS
HIGH FLW	94221	2/19/89	24.17	CFS
LOW FLOW	94221	2/19/89	26.91	CFS
HIGH FLW	94221	2/20/89	19.5	CFS
LOW FLOW	94221	2/20/89	16.83	CFS
HIGH FLW	94221	2/21/89	12.25	CFS
LOW FLOW	94221	2/21/89	22.27	CFS
HIGH FLW	94221	2/22/89	14.65	CFS
LOW FLOW	94221	2/22/89	29.79	CFS
HIGH FLW	94221	2/23/89	29.13	CFS
LOW FLOW	94221	2/23/89	9.2	CFS
HIGH FLW	94221	2/24/89	13	CFS
LOW FLOW	94221	2/24/89	7.78	CFS
HIGH FLW	94221	2/25/89	9.75	CFS
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HIGH FLW	94221	2/26/89	9	CFS
LOW FLOW	94221	2/26/89	39.41	CFS
HIGH FLW	94221	2/27/89	9.17	CFS
LOW FLOW	94221	2/27/89	36.9	CFS
HIGH FLW	94221	2/28/89	9.38	CFS

LOW FLOW	94221	2/28/89	45.45	CFS
HIGH FLW	94221	3/1/89	14.75	CFS
LOW FLOW	94221	3/1/89	46.58	CFS
HIGH FLW	94221	3/2/89	13.92	CFS
LOW FLOW	94221	3/2/89	33.63	CFS
HIGH FLW	94221	3/3/89	9.21	CFS
LOW FLOW	94221	3/3/89	40.39	CFS
HIGH FLW	94221	3/4/89	9.33	CFS
LOW FLOW	94221	3/4/89	39.91	CFS
HIGH FLW	94221	3/5/89	9.22	CFS
LOW FLOW	94221	3/5/89	39.72	CFS
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LOW FLOW	94221	3/7/89	35.84	CFS
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LOW FLOW	94221	3/8/89	27.31	CFS
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HIGH FLW	94221	3/10/89	9.25	CFS
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HIGH FLW	94221	3/14/89	9.13	CFS
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HIGH FLW	94221	3/20/89	11.39	CFS
LOW FLOW	94221	3/20/89	30.1	CFS
HIGH FLW	94221	3/21/89	8.08	CFS
LOW FLOW	94221	3/21/89	42.26	CFS
HIGH FLW	94221	3/22/89	10.88	CFS
LOW FLOW	94221	3/22/89	118.42	CFS
HIGH FLW	94221	3/23/89	21.79	CFS
LOW FLOW	94221	3/23/89	43.72	CFS
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HIGH FLW	94221	3/26/89	10	CFS
LOW FLOW	94221	3/26/89	97.75	CFS
HIGH FLW	94221	3/27/89	9.83	CFS
LOW FLOW	94221	3/27/89	85.69	CFS
HIGH FLW	94221	3/28/89	8.67	CFS
LOW FLOW	94221	3/28/89	39.88	CFS

HIGH FLW	94221	3/29/89	8.59	CFS
LOW FLOW	94221	3/29/89	35.62	CFS
HIGH FLW	94221	3/30/89	7.42	CFS
LOW FLOW	94221	3/30/89	38.84	CFS
HIGH FLW	94221	3/31/89	6	CFS
LOW FLOW	94221	3/31/89	31.11	CFS
HIGH FLW	94221	4/1/89	33.42	CFS
LOW FLOW	94221	4/1/89	15.88	CFS
HIGH FLW	94221	4/2/89	18.67	CFS
LOW FLOW	94221	4/2/89	5.98	CFS
HIGH FLW	94221	4/3/89	9.74	CFS
LOW FLOW	94221	4/3/89	4.66	CFS
HIGH FLW	94221	4/4/89	8.54	CFS
LOW FLOW	94221	4/4/89	7.16	CFS
HIGH FLW	94221	4/5/89	11.35	CFS
LOW FLOW	94221	4/5/89	21.4	CFS
HIGH FLW	94221	4/6/89	24.71	CFS
LOW FLOW	94221	4/6/89	7.12	CFS
HIGH FLW	94221	4/7/89	11.17	CFS
LOW FLOW	94221	4/7/89	5.16	CFS
HIGH FLW	94221	4/8/89	9.88	CFS
LOW FLOW	94221	4/8/89	5.89	CFS
HIGH FLW	94221	4/9/89	10.46	CFS
LOW FLOW	94221	4/9/89	11.11	CFS
HIGH FLW	94221	4/10/89	15.42	CFS
LOW FLOW	94221	4/10/89	5.16	CFS
HIGH FLW	94221	4/11/89	9.63	CFS
LOW FLOW	94221	4/11/89	4.67	CFS
HIGH FLW	94221	4/12/89	9.46	CFS
LOW FLOW	94221	4/12/89	4.04	CFS
HIGH FLW	94221	4/13/89	8.46	CFS
LOW FLOW	94221	4/13/89	4.16	CFS
HIGH FLW	94221	4/14/89	9.54	CFS
LOW FLOW	94221	4/14/89	3.87	CFS
HIGH FLW	94221	4/15/89	7.75	CFS
LOW FLOW	94221	4/15/89	3.76	CFS
HIGH FLW	94221	4/16/89	7.79	CFS
LOW FLOW	94221	4/16/89	5.51	CFS
HIGH FLW	94221	4/17/89	9.75	CFS
LOW FLOW	94221	4/17/89	3.18	CFS
HIGH FLW	94221	4/18/89	6.67	CFS
LOW FLOW	94221	4/18/89	2.83	CFS
HIGH FLW	94221	4/19/89	6	CFS
LOW FLOW	94221	4/19/89	2.59	CFS
HIGH FLW	94221	4/20/89	6	CFS
LOW FLOW	94221	4/20/89	2.05	CFS
HIGH FLW	94221	4/21/89	6	CFS
LOW FLOW	94221	4/21/89	2.13	CFS
HIGH FLW	94221	4/22/89	6	CFS
LOW FLOW	94221	4/22/89	2.25	CFS
HIGH FLW	94221	4/23/89	6	CFS
LOW FLOW	94221	4/23/89	2.24	CFS
HIGH FLW	94221	4/24/89	6	CFS
LOW FLOW	94221	4/24/89	2.44	CFS
HIGH FLW	94221	4/25/89	6	CFS
LOW FLOW	94221	4/25/89	2.28	CFS
HIGH FLW	94221	4/26/89	6	CFS

6.34 2-Q89

LOW FLOW	94221	4/26/89	2.42	CFS
HIGH FLW	94221	4/27/89	6	CFS
LOW FLOW	94221	4/27/89	1.63	CFS
HIGH FLW	94221	4/28/89	6	CFS
LOW FLOW	94221	4/28/89	1.8	CFS
HIGH FLW	94221	4/29/89	6.21	CFS
LOW FLOW	94221	4/29/89	2.02	CFS
HIGH FLW	94221	4/30/89	6	CFS
LOW FLOW	94221	4/30/89	2.71	CFS
HIGH FLW	94221	5/1/89	6.75	CFS
LOW FLOW	94221	5/1/89	1.98	CFS
HIGH FLW	94221	5/2/89	6	CFS
LOW FLOW	94221	5/2/89	8.13	CFS
HIGH FLW	94221	5/3/89	12.25	CFS
LOW FLOW	94221	5/3/89	2.97	CFS
HIGH FLW	94221	5/4/89	6	CFS
LOW FLOW	94221	5/4/89	2.98	CFS
HIGH FLW	94221	5/5/89	6	CFS
LOW FLOW	94221	5/5/89	4.72	CFS
HIGH FLW	94221	5/6/89	8.21	CFS
LOW FLOW	94221	5/6/89	31.22	CFS
HIGH FLW	94221	5/7/89	34.5	CFS
LOW FLOW	94221	5/7/89	7.64	CFS
HIGH FLW	94221	5/8/89	12.04	CFS
LOW FLOW	94221	5/8/89	4.26	CFS
HIGH FLW	94221	5/9/89	9.92	CFS
LOW FLOW	94221	5/9/89	4.1	CFS
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HIGH FLW	94221	5/17/89	6.75	CFS
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HIGH FLW	94221	5/18/89	6	CFS
LOW FLOW	94221	5/18/89	3.04	CFS
HIGH FLW	94221	5/19/89	6	CFS
LOW FLOW	94221	5/19/89	2.7	CFS
HIGH FLW	94221	5/20/89	6	CFS
LOW FLOW	94221	5/20/89	3.03	CFS
HIGH FLW	94221	5/21/89	6.58	CFS
LOW FLOW	94221	5/21/89	15.22	CFS
HIGH FLW	94221	5/22/89	17.88	CFS
LOW FLOW	94221	5/22/89	3.36	CFS
HIGH FLW	94221	5/23/89	6	CFS
LOW FLOW	94221	5/23/89	2.94	CFS
HIGH FLW	94221	5/24/89	6	CFS
LOW FLOW	94221	5/24/89	2.91	CFS

HIGH FLW	94221	5/25/89	6	CFS
LOW FLOW	94221	5/25/89	2.25	CFS
HIGH FLW	94221	5/26/89	6	CFS
LOW FLOW	94221	5/26/89	2.38	CFS
HIGH FLW	94221	5/27/89	6.33	CFS
LOW FLOW	94221	5/27/89	8.56	CFS
HIGH FLW	94221	5/28/89	12.14	CFS
LOW FLOW	94221	5/28/89	18.12	CFS
HIGH FLW	94221	5/29/89	30.58	CFS
LOW FLOW	94221	5/29/89	3.79	CFS
HIGH FLW	94221	5/31/89	7.27	CFS
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HIGH FLW	94221	6/2/89	6.11	CFS
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HIGH FLW	94221	6/3/89	6.18	CFS
LOW FLOW	94221	6/3/89	4.54	CFS
HIGH FLW	94221	6/4/89	7.68	CFS
LOW FLOW	94221	6/4/89	2.83	CFS
HIGH FLW	94221	6/5/89	6	CFS
LOW FLOW	94221	6/5/89	10.89	CFS
HIGH FLW	94221	6/6/89	13.83	CFS
LOW FLOW	94221	6/6/89	16.21	CFS
HIGH FLW	94221	6/7/89	19.54	CFS
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HIGH FLW	94221	6/8/89	23.25	CFS
LOW FLOW	94221	6/8/89	6.71	CFS
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LOW FLOW	94221	6/11/89	7.47	CFS
HIGH FLW	94221	6/12/89	11.26	CFS
LOW FLOW	94221	6/12/89	4.99	CFS
HIGH FLW	94221	6/13/89	9.17	CFS
LOW FLOW	94221	6/13/89	17.15	CFS
HIGH FLW	94221	6/14/89	20.82	CFS
LOW FLOW	94221	6/14/89	15.23	CFS
HIGH FLW	94221	6/15/89	19.13	CFS
LOW FLOW	94221	6/15/89	7.36	CFS
HIGH FLW	94221	6/16/89	10.55	CFS
LOW FLOW	94221	6/16/89	33.43	CFS
HIGH FLW	94221	6/17/89	36.04	CFS
LOW FLOW	94221	6/17/89	27.17	CFS
HIGH FLW	94221	6/18/89	29.88	CFS
LOW FLOW	94221	6/18/89	9.34	CFS
HIGH FLW	94221	6/19/89	12.54	CFS
LOW FLOW	94221	6/19/89	7.06	CFS
HIGH FLW	94221	6/20/89	10	CFS
LOW FLOW	94221	6/20/89	7.24	CFS
HIGH FLW	94221	6/21/89	10.58	CFS
LOW FLOW	94221	6/21/89	20.78	CFS
HIGH FLW	94221	6/22/89	24.04	CFS
LOW FLOW	94221	6/22/89	7.38	CFS
HIGH FLW	94221	6/23/89	10.58	CFS

LOW FLOW	94221	6/23/89	8.47	CFS
HIGH FLW	94221	6/24/89	11.92	CFS
LOW FLOW	94221	6/24/89	6.12	CFS
HIGH FLW	94221	6/25/89	10	CFS
LOW FLOW	94221	6/25/89	4.65	CFS
HIGH FLW	94221	6/26/89	8.58	CFS
LOW FLOW	94221	6/26/89	4.02	CFS
HIGH FLW	94221	6/27/89	8.08	CFS
LOW FLOW	94221	6/27/89	3.42	CFS
HIGH FLW	94221	6/28/89	6.23	CFS
LOW FLOW	94221	6/28/89	3.7	CFS
HIGH FLW	94221	6/29/89	6.71	CFS
LOW FLOW	94221	6/29/89	15.8	CFS
HIGH FLW	94221	6/30/89	29.21	CFS
LOW FLOW	94221	6/30/89	6.04	CFS
HIGH FLW	94221	7/1/89	10.21	CFS
LOW FLOW	94221	7/1/89	4.55	CFS
HIGH FLW	94221	7/2/89	9.08	CFS
LOW FLOW	94221	7/2/89	4.44	CFS
HIGH FLW	94221	7/3/89	9.67	CFS
LOW FLOW	94221	7/3/89	5.62	CFS
HIGH FLW	94221	7/4/89	9.83	CFS
LOW FLOW	94221	7/4/89	16.39	CFS
HIGH FLW	94221	7/5/89	19.79	CFS
LOW FLOW	94221	7/5/89	8.05	CFS
HIGH FLW	94221	7/6/89	11.67	CFS
LOW FLOW	94221	7/6/89	5.43	CFS
HIGH FLW	94221	7/7/89	9.71	CFS
LOW FLOW	94221	7/7/89	19.45	CFS
HIGH FLW	94221	7/8/89	22.54	CFS
LOW FLOW	94221	7/8/89	7.74	CFS
HIGH FLW	94221	7/9/89	10.74	CFS
LOW FLOW	94221	7/9/89	5.56	CFS
HIGH FLW	94221	7/10/89	10	CFS
LOW FLOW	94221	7/10/89	4.56	CFS
HIGH FLW	94221	7/11/89	8.5	CFS
LOW FLOW	94221	7/11/89	4.33	CFS
HIGH FLW	94221	7/12/89	8.58	CFS
LOW FLOW	94221	7/12/89	4.72	CFS
HIGH FLW	94221	7/13/89	8.25	CFS
LOW FLOW	94221	7/13/89	4.5	CFS
HIGH FLW	94221	7/14/89	7.08	CFS
LOW FLOW	94221	7/14/89	4.45	CFS
HIGH FLW	94221	7/15/89	8.42	CFS
LOW FLOW	94221	7/15/89	3.7	CFS
HIGH FLW	94221	7/16/89	7.42	CFS
LOW FLOW	94221	7/16/89	3.17	CFS
HIGH FLW	94221	7/17/89	6	CFS
LOW FLOW	94221	7/17/89	3.98	CFS
HIGH FLW	94221	7/18/89	7.17	CFS
LOW FLOW	94221	7/18/89	3.5	CFS
HIGH FLW	94221	7/19/89	6	CFS
LOW FLOW	94221	7/19/89	3.09	CFS
HIGH FLW	94221	7/20/89	6	CFS
LOW FLOW	94221	7/20/89	6.38	CFS
HIGH FLW	94221	7/21/89	9.75	CFS
LOW FLOW	94221	7/21/89	4.17	CFS

4.47 3Q89

HIGH FLW	94221	7/22/89	7.79	CFS
LOW FLOW	94221	7/22/89	4.83	CFS
HIGH FLW	94221	7/23/89	8.29	CFS
LOW FLOW	94221	7/23/89	3.55	CFS
HIGH FLW	94221	7/24/89	6.04	CFS
LOW FLOW	94221	7/24/89	5.75	CFS
HIGH FLW	94221	7/25/89	8.29	CFS
LOW FLOW	94221	7/25/89	4.67	CFS
HIGH FLW	94221	7/26/89	8.42	CFS
LOW FLOW	94221	7/26/89	3.19	CFS
HIGH FLW	94221	7/27/89	6.17	CFS
LOW FLOW	94221	7/27/89	2.83	CFS
HIGH FLW	94221	7/28/89	6.29	CFS
LOW FLOW	94221	7/28/89	2.85	CFS
HIGH FLW	94221	7/29/89	6.29	CFS
LOW FLOW	94221	7/29/89	2.94	CFS
HIGH FLW	94221	7/30/89	6.54	CFS
LOW FLOW	94221	7/30/89	2.79	CFS
HIGH FLW	94221	7/31/89	6.21	CFS
LOW FLOW	94221	7/31/89	5.23	CFS
HIGH FLW	94221	8/1/89	8.96	CFS
LOW FLOW	94221	8/1/89	3.56	CFS
HIGH FLW	94221	8/2/89	6.67	CFS
LOW FLOW	94221	8/2/89	26.67	CFS
HIGH FLW	94221	8/3/89	47.78	CFS
LOW FLOW	94221	8/3/89	7.48	CFS
HIGH FLW	94221	8/4/89	11.17	CFS
LOW FLOW	94221	8/4/89	4.72	CFS
HIGH FLW	94221	8/5/89	9.75	CFS
LOW FLOW	94221	8/5/89	3.99	CFS
HIGH FLW	94221	8/6/89	8.21	CFS
LOW FLOW	94221	8/6/89	3.35	CFS
HIGH FLW	94221	8/7/89	6.29	CFS
LOW FLOW	94221	8/7/89	4.39	CFS
HIGH FLW	94221	8/8/89	7.29	CFS
LOW FLOW	94221	8/8/89	3.07	CFS
HIGH FLW	94221	8/9/89	6	CFS
LOW FLOW	94221	8/9/89	2.57	CFS
HIGH FLW	94221	8/10/89	6	CFS
LOW FLOW	94221	8/10/89	2.2	CFS
HIGH FLW	94221	8/11/89	6	CFS
LOW FLOW	94221	8/11/89	2.02	CFS
HIGH FLW	94221	8/12/89	6	CFS
LOW FLOW	94221	8/12/89	1.99	CFS
HIGH FLW	94221	8/13/89	6	CFS
LOW FLOW	94221	8/13/89	1.98	CFS
HIGH FLW	94221	8/14/89	6	CFS
LOW FLOW	94221	8/14/89	2.02	CFS
HIGH FLW	94221	8/15/89	6	CFS
LOW FLOW	94221	8/15/89	2.19	CFS
HIGH FLW	94221	8/16/89	6	CFS
LOW FLOW	94221	8/16/89	4.05	CFS
HIGH FLW	94221	8/17/89	7.38	CFS
LOW FLOW	94221	8/17/89	2.73	CFS
HIGH FLW	94221	8/18/89	6	CFS
LOW FLOW	94221	8/18/89	9.81	CFS
HIGH FLW	94221	8/19/89	13.04	CFS

LOW FLOW	94221	8/19/89	3.05	CFS
HIGH FLW	94221	8/20/89	6.08	CFS
LOW FLOW	94221	8/20/89	2.21	CFS
HIGH FLW	94221	8/21/89	6	CFS
LOW FLOW	94221	8/21/89	2.77	CFS
HIGH FLW	94221	8/22/89	6.04	CFS
LOW FLOW	94221	8/22/89	2.83	CFS
HIGH FLW	94221	8/23/89	6.13	CFS
LOW FLOW	94221	8/23/89	2.88	CFS
HIGH FLW	94221	8/24/89	6	CFS
LOW FLOW	94221	8/24/89	9.88	CFS
HIGH FLW	94221	8/25/89	13	CFS
LOW FLOW	94221	8/25/89	5.62	CFS
HIGH FLW	94221	8/26/89	9.79	CFS
LOW FLOW	94221	8/26/89	2.95	CFS
HIGH FLW	94221	8/27/89	6.08	CFS
LOW FLOW	94221	8/27/89	5.23	CFS
HIGH FLW	94221	8/28/89	8.63	CFS
LOW FLOW	94221	8/28/89	2.73	CFS
HIGH FLW	94221	8/29/89	6	CFS
LOW FLOW	94221	8/29/89	2.88	CFS
HIGH FLW	94221	8/30/89	6.21	CFS
LOW FLOW	94221	8/30/89	2.79	CFS
HIGH FLW	94221	8/31/89	6.21	CFS
LOW FLOW	94221	8/31/89	2.88	CFS
HIGH FLW	94221	9/1/89	6.08	CFS
LOW FLOW	94221	9/1/89	2.51	CFS
HIGH FLW	94221	9/2/89	6.21	CFS
LOW FLOW	94221	9/2/89	8.45	CFS
HIGH FLW	94221	9/3/89	11.79	CFS
LOW FLOW	94221	9/3/89	3.26	CFS
HIGH FLW	94221	9/4/89	6.71	CFS
LOW FLOW	94221	9/4/89	2.5	CFS
HIGH FLW	94221	9/5/89	6.04	CFS
LOW FLOW	94221	9/5/89	2.17	CFS
HIGH FLW	94221	9/6/89	6	CFS
LOW FLOW	94221	9/6/89	2.16	CFS
HIGH FLW	94221	9/7/89	6	CFS
LOW FLOW	94221	9/7/89	2.4	CFS
HIGH FLW	94221	9/8/89	6	CFS
LOW FLOW	94221	9/8/89	2.39	CFS
HIGH FLW	94221	9/9/89	6	CFS
LOW FLOW	94221	9/9/89	2.04	CFS
HIGH FLW	94221	9/10/89	6.04	CFS
LOW FLOW	94221	9/10/89	2.06	CFS
HIGH FLW	94221	9/11/89	6.04	CFS
LOW FLOW	94221	9/11/89	2.03	CFS
HIGH FLW	94221	9/12/89	6	CFS
LOW FLOW	94221	9/12/89	3.11	CFS
HIGH FLW	94221	9/13/89	6.63	CFS
LOW FLOW	94221	9/13/89	2.63	CFS
HIGH FLW	94221	9/14/89	6	CFS
LOW FLOW	94221	9/14/89	2.25	CFS
HIGH FLW	94221	9/15/89	6	CFS
LOW FLOW	94221	9/15/89	3.92	CFS
HIGH FLW	94221	9/16/89	7.5	CFS
LOW FLOW	94221	9/16/89	3.46	CFS

HIGH FLW	94221	9/19/89	6.5	CFS
LOW FLOW	94221	9/19/89	2.5	CFS
HIGH FLW	94221	9/20/89	6	CFS
LOW FLOW	94221	9/20/89	2.46	CFS
HIGH FLW	94221	9/21/89	6	CFS
LOW FLOW	94221	9/21/89	2.74	CFS
HIGH FLW	94221	9/22/89	6	CFS
LOW FLOW	94221	9/22/89	2.94	CFS
HIGH FLW	94221	9/23/89	6	CFS
LOW FLOW	94221	9/23/89	27.95	CFS
HIGH FLW	94221	9/24/89	30.5	CFS
LOW FLOW	94221	9/24/89	23.73	CFS
HIGH FLW	94221	9/25/89	26.88	CFS
LOW FLOW	94221	9/25/89	4.44	CFS
HIGH FLW	94221	9/26/89	9.58	CFS
LOW FLOW	94221	9/26/89	15.76	CFS
HIGH FLW	94221	9/27/89	18.54	CFS
LOW FLOW	94221	9/27/89	10.03	CFS
HIGH FLW	94221	9/28/89	13.87	CFS
LOW FLOW	94221	9/28/89	3.8	CFS
HIGH FLW	94221	9/29/89	7.88	CFS
LOW FLOW	94221	9/29/89	2.42	CFS
HIGH FLW	94221	9/30/89	6	CFS
LOW FLOW	94221	9/30/89	2.56	CFS
HIGH FLW	94221	10/1/89	6.63	CFS
LOW FLOW	94221	10/1/89	55.5	CFS
HIGH FLW	94221	10/2/89	40.71	CFS
LOW FLOW	94221	10/2/89	24.45	CFS
HIGH FLW	94221	10/3/89	27.21	CFS
LOW FLOW	94221	10/3/89	8.58	CFS
HIGH FLW	94221	10/4/89	11.75	CFS
LOW FLOW	94221	10/4/89	6.05	CFS
HIGH FLW	94221	10/5/89	10	CFS
LOW FLOW	94221	10/5/89	4.46	CFS
HIGH FLW	94221	10/6/89	9.67	CFS
LOW FLOW	94221	10/6/89	4.1	CFS
HIGH FLW	94221	10/7/89	9.5	CFS
LOW FLOW	94221	10/7/89	3.99	CFS
HIGH FLW	94221	10/8/89	8.21	CFS
LOW FLOW	94221	10/8/89	3.15	CFS
HIGH FLW	94221	10/9/89	6	CFS
LOW FLOW	94221	10/9/89	3.08	CFS
HIGH FLW	94221	10/10/89	6	CFS
LOW FLOW	94221	10/10/89	2.87	CFS
HIGH FLW	94221	10/11/89	6	CFS
LOW FLOW	94221	10/11/89	2.53	CFS
HIGH FLW	94221	10/12/89	6	CFS
LOW FLOW	94221	10/12/89	2.82	CFS
HIGH FLW	94221	10/13/89	6	CFS
LOW FLOW	94221	10/13/89	2.88	CFS
HIGH FLW	94221	10/14/89	6	CFS
LOW FLOW	94221	10/14/89	2.94	CFS
HIGH FLW	94221	10/15/89	6	CFS
LOW FLOW	94221	10/15/89	2.7	CFS
HIGH FLW	94221	10/16/89	6	CFS
LOW FLOW	94221	10/16/89	2.62	CFS
HIGH FLW	94221	10/17/89	6	CFS

4.81 4Q89

LOW FLOW	94221	10/17/89	9.47	CFS
HIGH FLW	94221	10/18/89	12.52	CFS
LOW FLOW	94221	10/18/89	11.72	CFS
HIGH FLW	94221	10/19/89	15.29	CFS
LOW FLOW	94221	10/19/89	4.58	CFS
HIGH FLW	94221	10/20/89	7.77	CFS
LOW FLOW	94221	10/20/89	5.12	CFS
HIGH FLW	94221	10/21/89	9.55	CFS
LOW FLOW	94221	10/21/89	3.56	CFS
HIGH FLW	94221	10/22/89	7.88	CFS
LOW FLOW	94221	10/22/89	3.15	CFS
HIGH FLW	94221	10/23/89	6	CFS
LOW FLOW	94221	10/23/89	3.05	CFS
HIGH FLW	94221	10/24/89	6	CFS
LOW FLOW	94221	10/24/89	3.62	CFS
HIGH FLW	94221	10/25/89	6.5	CFS
LOW FLOW	94221	10/25/89	3.47	CFS
HIGH FLW	94221	10/26/89	6	CFS
LOW FLOW	94221	10/26/89	3.2	CFS
HIGH FLW	94221	10/27/89	6	CFS
LOW FLOW	94221	10/27/89	3.15	CFS
HIGH FLW	94221	10/28/89	6	CFS
LOW FLOW	94221	10/28/89	3.1	CFS
HIGH FLW	94221	10/29/89	6	CFS
LOW FLOW	94221	10/29/89	3	CFS
HIGH FLW	94221	10/30/89	6	CFS
LOW FLOW	94221	10/30/89	2.99	CFS
HIGH FLW	94221	10/31/89	6	CFS
LOW FLOW	94221	10/31/89	3.28	CFS
HIGH FLW	94221	11/1/89	6	CFS
LOW FLOW	94221	11/1/89	5.25	CFS
HIGH FLW	94221	11/2/89	9.04	CFS
LOW FLOW	94221	11/2/89	3.23	CFS
HIGH FLW	94221	11/3/89	6	CFS
LOW FLOW	94221	11/3/89	2.83	CFS
HIGH FLW	94221	11/4/89	6	CFS
LOW FLOW	94221	11/4/89	2.6	CFS
HIGH FLW	94221	11/5/89	6	CFS
LOW FLOW	94221	11/5/89	2.31	CFS
HIGH FLW	94221	11/6/89	6	CFS
LOW FLOW	94221	11/6/89	2.23	CFS
HIGH FLW	94221	11/7/89	6	CFS
LOW FLOW	94221	11/7/89	11.53	CFS
HIGH FLW	94221	11/8/89	15.17	CFS
LOW FLOW	94221	11/8/89	11.22	CFS
HIGH FLW	94221	11/9/89	14.3	CFS
LOW FLOW	94221	11/9/89	14.16	CFS
HIGH FLW	94221	11/10/89	17.83	CFS
LOW FLOW	94221	11/10/89	5.76	CFS
HIGH FLW	94221	11/11/89	10.46	CFS
LOW FLOW	94221	11/11/89	3.85	CFS
HIGH FLW	94221	11/12/89	8.04	CFS
LOW FLOW	94221	11/12/89	3.24	CFS
HIGH FLW	94221	11/13/89	6	CFS
LOW FLOW	94221	11/13/89	2.99	CFS
HIGH FLW	94221	11/14/89	6	CFS
LOW FLOW	94221	11/14/89	3.02	CFS

HIGH FLW	94221	11/15/89	6	CFS
LOW FLOW	94221	11/15/89	6.2	CFS
HIGH FLW	94221	11/16/89	9.79	CFS
LOW FLOW	94221	11/16/89	38.38	CFS
HIGH FLW	94221	11/17/89	40.67	CFS
LOW FLOW	94221	11/17/89	15.34	CFS
HIGH FLW	94221	11/18/89	18.83	CFS
LOW FLOW	94221	11/18/89	5.41	CFS
HIGH FLW	94221	11/19/89	9	CFS
LOW FLOW	94221	11/19/89	4.48	CFS
HIGH FLW	94221	11/20/89	9.13	CFS
LOW FLOW	94221	11/20/89	3.82	CFS
HIGH FLW	94221	11/21/89	7.67	CFS
LOW FLOW	94221	11/21/89	3.75	CFS
HIGH FLW	94221	11/22/89	6	CFS
LOW FLOW	94221	11/22/89	3.61	CFS
HIGH FLW	94221	11/23/89	6.5	CFS
LOW FLOW	94221	11/23/89	14.18	CFS
HIGH FLW	94221	11/24/89	17.33	CFS
LOW FLOW	94221	11/24/89	6.15	CFS
HIGH FLW	94221	11/25/89	9.79	CFS
LOW FLOW	94221	11/25/89	4.29	CFS
HIGH FLW	94221	11/26/89	9.13	CFS
LOW FLOW	94221	11/26/89	4	CFS
HIGH FLW	94221	11/27/89	8.92	CFS
LOW FLOW	94221	11/27/89	3.79	CFS
HIGH FLW	94221	11/28/89	5.95	CFS
LOW FLOW	94221	11/28/89	4.46	CFS
HIGH FLW	94221	11/29/89	7.92	CFS
LOW FLOW	94221	11/29/89	12.74	CFS
HIGH FLW	94221	11/30/89	15.71	CFS
LOW FLOW	94221	11/30/89	4.31	CFS
HIGH FLW	94221	12/1/89	9	CFS
LOW FLOW	94221	12/1/89	3.95	CFS
HIGH FLW	94221	12/2/89	8.96	CFS
LOW FLOW	94221	12/2/89	3.63	CFS
HIGH FLW	94221	12/3/89	6.58	CFS
LOW FLOW	94221	12/3/89	3.53	CFS
HIGH FLW	94221	12/4/89	6	CFS
LOW FLOW	94221	12/4/89	3.26	CFS
HIGH FLW	94221	12/5/89	5.92	CFS
LOW FLOW	94221	12/5/89	3.58	CFS
HIGH FLW	94221	12/6/89	6.83	CFS
LOW FLOW	94221	12/6/89	3.17	CFS
HIGH FLW	94221	12/7/89	6.19	CFS
LOW FLOW	94221	12/7/89	2.97	CFS
HIGH FLW	94221	12/8/89	6	CFS
LOW FLOW	94221	12/8/89	3.1	CFS
HIGH FLW	94221	12/9/89	6.21	CFS
LOW FLOW	94221	12/9/89	9.16	CFS
HIGH FLW	94221	12/10/89	12.75	CFS
LOW FLOW	94221	12/10/89	3.97	CFS
HIGH FLW	94221	12/11/89	7.04	CFS
LOW FLOW	94221	12/11/89	3.15	CFS
HIGH FLW	94221	12/12/89	5.79	CFS
LOW FLOW	94221	12/12/89	3.5	CFS
HIGH FLW	94221	12/13/89	5.91	CFS

LOW FLOW	94221	12/13/89	4.55	CFS
HIGH FLW	94221	12/14/89	8.79	CFS
LOW FLOW	94221	12/14/89	3.46	CFS
HIGH FLW	94221	12/15/89	5.42	CFS
LOW FLOW	94221	12/15/89	3.07	CFS
HIGH FLW	94221	12/16/89	5.38	CFS
LOW FLOW	94221	12/16/89	3.38	CFS
HIGH FLW	94221	12/17/89	5.92	CFS
LOW FLOW	94221	12/17/89	3.09	CFS
HIGH FLW	94221	12/18/89	5.04	CFS
LOW FLOW	94221	12/18/89	3.11	CFS
HIGH FLW	94221	12/19/89	5.04	CFS
LOW FLOW	94221	12/19/89	3.29	CFS
HIGH FLW	94221	12/20/89	5.39	CFS
LOW FLOW	94221	12/20/89	4.59	CFS
HIGH FLW	94221	12/21/89	7.92	CFS
LOW FLOW	94221	12/21/89	3.38	CFS
HIGH FLW	94221	12/22/89	5.42	CFS
LOW FLOW	94221	12/22/89	3.39	CFS
LOW FLOW	94221	3/6/90	2.98	CFS
HIGH FLW	94221	3/7/90	6	CFS
LOW FLOW	94221	3/7/90	2.89	CFS
HIGH FLW	94221	3/8/90	6	CFS
LOW FLOW	94221	3/8/90	2.82	CFS
HIGH FLW	94221	3/9/90	6	CFS
LOW FLOW	94221	3/9/90	3.38	CFS
HIGH FLW	94221	3/10/90	6.63	CFS
LOW FLOW	94221	3/10/90	3.21	CFS
HIGH FLW	94221	3/11/90	6.3	CFS
LOW FLOW	94221	3/11/90	8.18	CFS
HIGH FLW	94221	3/12/90	11.54	CFS
LOW FLOW	94221	3/12/90	3.38	CFS
HIGH FLW	94221	3/13/90	6.08	CFS
LOW FLOW	94221	3/13/90	2.61	CFS
HIGH FLW	94221	3/14/90	6	CFS
LOW FLOW	94221	3/14/90	2.55	CFS
HIGH FLW	94221	3/15/90	6	CFS
LOW FLOW	94221	3/15/90	2.34	CFS
HIGH FLW	94221	3/16/90	6	CFS
LOW FLOW	94221	3/16/90	2.1	CFS
HIGH FLW	94221	3/17/90	6	CFS
LOW FLOW	94221	3/17/90	38.74	CFS
HIGH FLW	94221	3/18/90	40.42	CFS
LOW FLOW	94221	3/18/90	34.61	CFS
HIGH FLW	94221	5/2/90	36.58	CFS
LOW FLOW	94221	5/2/90	48.58	CFS
HIGH FLW	94221	5/3/90	14.33	CFS
LOW FLOW	94221	5/3/90	44.69	CFS
HIGH FLW	94221	5/4/90	6.79	CFS
LOW FLOW	94221	5/4/90	39.27	CFS
HIGH FLW	94221	5/5/90	9.79	CFS
LOW FLOW	94221	5/5/90	84.17	CFS
HIGH FLW	94221	5/6/90	29.13	CFS
LOW FLOW	94221	5/6/90	59.07	CFS
HIGH FLW	94221	5/7/90	12.13	CFS
LOW FLOW	94221	5/7/90	51.2	CFS
HIGH FLW	94221	5/8/90	7.21	CFS

5.76 1Q90

7.60 2Q90

LOW FLOW	94221	5/8/90	50.11	CFS
HIGH FLW	94221	5/19/90	5.71	CFS
LOW FLOW	94221	5/19/90	12.5	CFS
HIGH FLW	94221	5/26/90	6	CFS
LOW FLOW	94221	5/26/90	2	CFS
HIGH FLW	94221	5/30/90	6	CFS
LOW FLOW	94221	5/30/90	11.64	CFS
HIGH FLW	94221	5/31/90	6	CFS
LOW FLOW	94221	5/31/90	3.42	CFS
HIGH FLW	94221	6/1/90	6	CFS
LOW FLOW	94221	6/1/90	1.52	CFS
HIGH FLW	94221	6/2/90	5.42	CFS
LOW FLOW	94221	6/2/90	1.44	CFS
HIGH FLW	94221	6/3/90	5.58	CFS
LOW FLOW	94221	6/3/90	1.29	CFS
HIGH FLW	94221	6/4/90	5.04	CFS
LOW FLOW	94221	6/4/90	3.24	CFS
HIGH FLW	94221	6/5/90	6.5	CFS
LOW FLOW	94221	6/5/90	2.2	CFS
HIGH FLW	94221	6/6/90	6	CFS
LOW FLOW	94221	6/6/90	2.36	CFS
HIGH FLW	94221	6/7/90	6	CFS
LOW FLOW	94221	6/7/90	1.57	CFS
HIGH FLW	94221	6/8/90	6	CFS
LOW FLOW	94221	6/8/90	7.4	CFS
HIGH FLW	94221	6/9/90	7.63	CFS
LOW FLOW	94221	6/9/90	6.91	CFS
HIGH FLW	94221	6/10/90	6.17	CFS
LOW FLOW	94221	6/10/90	10.52	CFS
HIGH FLW	94221	6/11/90	8.76	CFS
LOW FLOW	94221	6/11/90	14.5	CFS
HIGH FLW	94221	6/12/90	6.67	CFS
LOW FLOW	94221	6/12/90	19.7	CFS
HIGH FLW	94221	6/13/90	6	CFS
LOW FLOW	94221	6/13/90	53.68	CFS
HIGH FLW	94221	6/14/90	5.71	CFS
LOW FLOW	94221	6/14/90	4.97	CFS
HIGH FLW	94221	6/15/90	5.33	CFS
LOW FLOW	94221	6/15/90	7.28	CFS
HIGH FLW	94221	6/16/90	6	CFS
LOW FLOW	94221	6/16/90	8.43	CFS
HIGH FLW	94221	6/17/90	5.92	CFS
LOW FLOW	94221	6/17/90	8.4	CFS
HIGH FLW	94221	6/18/90	5.38	CFS
LOW FLOW	94221	6/18/90	8.5	CFS
HIGH FLW	94221	6/19/90	6	CFS
LOW FLOW	94221	6/19/90	8.37	CFS
HIGH FLW	94221	6/20/90	5.83	CFS
LOW FLOW	94221	6/20/90	7.21	CFS
HIGH FLW	94221	6/21/90	5.63	CFS
LOW FLOW	94221	6/21/90	5.49	CFS
HIGH FLW	94221	6/22/90	6	CFS
LOW FLOW	94221	6/22/90	7.55	CFS
HIGH FLW	94221	6/23/90	6	CFS
LOW FLOW	94221	6/23/90	10.25	CFS
HIGH FLW	94221	6/24/90	7.75	CFS
LOW FLOW	94221	6/24/90	9.31	CFS

HIGH FLW	94221	6/25/90	6	CFS
LOW FLOW	94221	6/25/90	6.35	CFS
HIGH FLW	94221	6/26/90	5.75	CFS
LOW FLOW	94221	6/26/90	4.42	CFS
HIGH FLW	94221	6/27/90	6	CFS
LOW FLOW	94221	6/27/90	3.39	CFS
HIGH FLW	94221	6/28/90	5.13	CFS
LOW FLOW	94221	6/28/90	3.5	CFS
HIGH FLW	94221	6/29/90	5.29	CFS
LOW FLOW	94221	6/29/90	3.67	CFS
HIGH FLW	94221	6/30/90	5.71	CFS
LOW FLOW	94221	6/30/90	3.42	CFS
HIGH FLW	94221	7/1/90	5.25	CFS
LOW FLOW	94221	7/1/90	3.21	CFS
HIGH FLW	94221	7/2/90	5.13	CFS
LOW FLOW	94221	7/2/90	15.96	CFS
HIGH FLW	94221	7/3/90	33.96	CFS
LOW FLOW	94221	7/3/90	14.64	CFS
HIGH FLW	94221	7/4/90	10.04	CFS
LOW FLOW	94221	7/4/90	9.83	CFS
HIGH FLW	94221	7/5/90	6	CFS
LOW FLOW	94221	7/5/90	7.7	CFS
HIGH FLW	94221	7/6/90	6	CFS
LOW FLOW	94221	7/6/90	6.28	CFS
HIGH FLW	94221	7/7/90	5.54	CFS
LOW FLOW	94221	7/7/90	5.4	CFS
HIGH FLW	94221	7/8/90	6	CFS
LOW FLOW	94221	7/8/90	6.04	CFS
HIGH FLW	94221	7/9/90	5.63	CFS
LOW FLOW	94221	7/9/90	3.8	CFS
HIGH FLW	94221	7/10/90	6	CFS
LOW FLOW	94221	7/10/90	4.2	CFS
HIGH FLW	94221	7/11/90	6.17	CFS
LOW FLOW	94221	7/11/90	4.17	CFS
HIGH FLW	94221	7/12/90	6.04	CFS
LOW FLOW	94221	7/12/90	10.29	CFS
HIGH FLW	94221	7/13/90	11.2	CFS
LOW FLOW	94221	7/13/90	23.4	CFS
HIGH FLW	94221	7/14/90	19.88	CFS
LOW FLOW	94221	7/14/90	19.75	CFS
HIGH FLW	94221	7/15/90	16.13	CFS
LOW FLOW	94221	7/15/90	18.1	CFS
HIGH FLW	94221	7/16/90	20.04	CFS
LOW FLOW	94221	7/16/90	7.73	CFS
HIGH FLW	94221	7/17/90	7.08	CFS
LOW FLOW	94221	7/17/90	6.08	CFS
HIGH FLW	94221	7/18/90	6	CFS
LOW FLOW	94221	7/18/90	4.83	CFS
HIGH FLW	94221	7/19/90	6	CFS
LOW FLOW	94221	7/19/90	4.86	CFS
HIGH FLW	94221	7/20/90	6	CFS
LOW FLOW	94221	7/20/90	4.68	CFS
HIGH FLW	94221	7/21/90	6	CFS
LOW FLOW	94221	7/21/90	4.37	CFS
HIGH FLW	94221	7/22/90	6	CFS
LOW FLOW	94221	7/22/90	9.43	CFS
HIGH FLW	94221	7/23/90	10.71	CFS

5.47 3Q90

LOW FLOW	94221	7/23/90	8.88	CFS
HIGH FLW	94221	7/24/90	10.17	CFS
LOW FLOW	94221	7/24/90	5.27	CFS
HIGH FLW	94221	7/25/90	6.21	CFS
LOW FLOW	94221	7/25/90	4.77	CFS
HIGH FLW	94221	7/26/90	6	CFS
LOW FLOW	94221	7/26/90	4.44	CFS
HIGH FLW	94221	7/27/90	6	CFS
LOW FLOW	94221	7/27/90	4.08	CFS
HIGH FLW	94221	7/28/90	6	CFS
LOW FLOW	94221	7/28/90	4.27	CFS
HIGH FLW	94221	7/29/90	6	CFS
LOW FLOW	94221	7/29/90	4.1	CFS
HIGH FLW	94221	7/30/90	6	CFS
LOW FLOW	94221	7/30/90	3.98	CFS
HIGH FLW	94221	7/31/90	6	CFS
LOW FLOW	94221	7/31/90	4.61	CFS
HIGH FLW	94221	8/1/90	6.29	CFS
LOW FLOW	94221	8/1/90	4.57	CFS
HIGH FLW	94221	8/2/90	6	CFS
LOW FLOW	94221	8/2/90	4.33	CFS
HIGH FLW	94221	8/3/90	6	CFS
LOW FLOW	94221	8/3/90	4.31	CFS
HIGH FLW	94221	8/4/90	6	CFS
LOW FLOW	94221	8/4/90	4.03	CFS
HIGH FLW	94221	8/5/90	6	CFS
LOW FLOW	94221	8/5/90	5.03	CFS
HIGH FLW	94221	8/6/90	7.17	CFS
LOW FLOW	94221	8/6/90	21.84	CFS
HIGH FLW	94221	8/7/90	22.79	CFS
LOW FLOW	94221	8/7/90	19.87	CFS
HIGH FLW	94221	8/8/90	14.83	CFS
LOW FLOW	94221	8/8/90	15.2	CFS
HIGH FLW	94221	8/9/90	6	CFS
LOW FLOW	94221	8/9/90	14.85	CFS
HIGH FLW	94221	8/10/90	6	CFS
LOW FLOW	94221	8/10/90	17.7	CFS
HIGH FLW	94221	8/11/90	37.57	CFS
LOW FLOW	94221	8/11/90	11.53	CFS
HIGH FLW	94221	8/12/90	10.33	CFS
LOW FLOW	94221	8/12/90	7.81	CFS
HIGH FLW	94221	8/13/90	6	CFS
LOW FLOW	94221	8/13/90	5.98	CFS
HIGH FLW	94221	8/14/90	6	CFS
LOW FLOW	94221	8/14/90	5.01	CFS
HIGH FLW	94221	8/15/90	6	CFS
LOW FLOW	94221	8/15/90	9.76	CFS
HIGH FLW	94221	8/16/90	10.29	CFS
LOW FLOW	94221	8/16/90	14.59	CFS
HIGH FLW	94221	8/17/90	6.67	CFS
LOW FLOW	94221	8/17/90	14.28	CFS
HIGH FLW	94221	8/18/90	6	CFS
LOW FLOW	94221	8/18/90	14.8	CFS
HIGH FLW	94221	8/19/90	8.21	CFS
LOW FLOW	94221	8/19/90	12.61	CFS
HIGH FLW	94221	8/20/90	6	CFS
LOW FLOW	94221	8/20/90	12.83	CFS

HIGH FLW	94221	8/21/90	6	CFS
LOW FLOW	94221	8/21/90	13.22	CFS
HIGH FLW	94221	8/22/90	6	CFS
LOW FLOW	94221	8/22/90	13.31	CFS
HIGH FLW	94221	8/23/90	6.26	CFS
LOW FLOW	94221	8/23/90	22.7	CFS
HIGH FLW	94221	8/24/90	18.64	CFS
LOW FLOW	94221	8/24/90	13.27	CFS
HIGH FLW	94221	8/25/90	6	CFS
LOW FLOW	94221	8/25/90	6.67	CFS
HIGH FLW	94221	8/26/90	6	CFS
LOW FLOW	94221	8/26/90	5.01	CFS
HIGH FLW	94221	8/27/90	6	CFS
LOW FLOW	94221	8/27/90	3.72	CFS
HIGH FLW	94221	8/28/90	6	CFS
LOW FLOW	94221	8/28/90	3.58	CFS
HIGH FLW	94221	8/29/90	6	CFS
LOW FLOW	94221	8/29/90	3.68	CFS
HIGH FLW	94221	8/30/90	6.04	CFS
LOW FLOW	94221	8/30/90	13.12	CFS
HIGH FLW	94221	8/31/90	14.04	CFS
LOW FLOW	94221	8/31/90	12.03	CFS
HIGH FLW	94221	9/1/90	6.36	CFS
LOW FLOW	94221	9/1/90	13.43	CFS
HIGH FLW	94221	9/2/90	6	CFS
LOW FLOW	94221	9/2/90	15	CFS
HIGH FLW	94221	9/3/90	6	CFS
LOW FLOW	94221	9/3/90	14.75	CFS
HIGH FLW	94221	9/4/90	6	CFS
LOW FLOW	94221	9/4/90	14.01	CFS
HIGH FLW	94221	9/5/90	6	CFS
LOW FLOW	94221	9/5/90	9.95	CFS
HIGH FLW	94221	9/6/90	6	CFS
LOW FLOW	94221	9/6/90	5.93	CFS
HIGH FLW	94221	9/7/90	6	CFS
LOW FLOW	94221	9/7/90	6.87	CFS
HIGH FLW	94221	9/8/90	5.25	CFS
LOW FLOW	94221	9/8/90	9.65	CFS
HIGH FLW	94221	9/9/90	5.42	CFS
LOW FLOW	94221	9/9/90	10.27	CFS
HIGH FLW	94221	9/10/90	5.54	CFS
LOW FLOW	94221	9/10/90	12.4	CFS
HIGH FLW	94221	9/11/90	5.88	CFS
LOW FLOW	94221	9/11/90	12.75	CFS
HIGH FLW	94221	9/12/90	6	CFS
LOW FLOW	94221	9/12/90	12.27	CFS
HIGH FLW	94221	9/13/90	6	CFS
LOW FLOW	94221	9/13/90	13.9	CFS
HIGH FLW	94221	9/14/90	6.38	CFS
LOW FLOW	94221	9/14/90	15.78	CFS
HIGH FLW	94221	9/15/90	6	CFS
LOW FLOW	94221	9/15/90	16.07	CFS
HIGH FLW	94221	9/16/90	6.08	CFS
LOW FLOW	94221	9/16/90	15	CFS
HIGH FLW	94221	9/17/90	7.33	CFS
LOW FLOW	94221	9/17/90	12.79	CFS
HIGH FLW	94221	9/18/90	6	CFS

LOW FLOW	94221	9/18/90	5.85	CFS
HIGH FLW	94221	9/19/90	6	CFS
LOW FLOW	94221	9/19/90	3.48	CFS
HIGH FLW	94221	9/20/90	6	CFS
LOW FLOW	94221	9/20/90	4.04	CFS
HIGH FLW	94221	9/21/90	6	CFS
LOW FLOW	94221	9/21/90	3.5	CFS
HIGH FLW	94221	9/22/90	6	CFS
LOW FLOW	94221	9/22/90	4.5	CFS
HIGH FLW	94221	9/23/90	6.79	CFS
LOW FLOW	94221	9/23/90	5.56	CFS
HIGH FLW	94221	9/24/90	7.33	CFS
LOW FLOW	94221	9/24/90	3.22	CFS
HIGH FLW	94221	9/25/90	6	CFS
LOW FLOW	94221	9/25/90	2.79	CFS
HIGH FLW	94221	9/26/90	5.3	CFS
LOW FLOW	94221	9/26/90	2.87	CFS
HIGH FLW	94221	9/27/90	6	CFS
LOW FLOW	94221	9/27/90	3.17	CFS
HIGH FLW	94221	9/28/90	6	CFS
LOW FLOW	94221	9/28/90	3.44	CFS
HIGH FLW	94221	9/29/90	6	CFS
LOW FLOW	94221	9/29/90	3.5	CFS
HIGH FLW	94221	9/30/90	6	CFS
LOW FLOW	94221	9/30/90	3.49	CFS
HIGH FLW	94221	10/1/90	6	CFS
LOW FLOW	94221	10/1/90	3.5	CFS
HIGH FLW	94221	10/2/90	6	CFS
LOW FLOW	94221	10/2/90	4.02	CFS
HIGH FLW	94221	10/3/90	6	CFS
LOW FLOW	94221	10/3/90	3.71	CFS
HIGH FLW	94221	10/4/90	6	CFS
LOW FLOW	94221	10/4/90	3.79	CFS
HIGH FLW	94221	10/5/90	6	CFS
LOW FLOW	94221	10/5/90	16.6	CFS
HIGH FLW	94221	10/6/90	15.63	CFS
LOW FLOW	94221	10/6/90	8.68	CFS
HIGH FLW	94221	10/7/90	6	CFS
LOW FLOW	94221	10/7/90	4.66	CFS
HIGH FLW	94221	10/8/90	6	CFS
LOW FLOW	94221	10/8/90	4.13	CFS
HIGH FLW	94221	10/9/90	6	CFS
LOW FLOW	94221	10/9/90	21.34	CFS
HIGH FLW	94221	10/10/90	19.63	CFS
LOW FLOW	94221	10/10/90	11.03	CFS
HIGH FLW	94221	10/11/90	6	CFS
LOW FLOW	94221	10/11/90	15.24	CFS
HIGH FLW	94221	10/12/90	7.5	CFS
LOW FLOW	94221	10/12/90	16.61	CFS
HIGH FLW	94221	10/13/90	7.17	CFS
LOW FLOW	94221	10/13/90	16.05	CFS
HIGH FLW	94221	10/14/90	6	CFS
LOW FLOW	94221	10/14/90	16.12	CFS
HIGH FLW	94221	10/15/90	6	CFS
LOW FLOW	94221	10/15/90	10.27	CFS
HIGH FLW	94221	10/16/90	7.13	CFS
LOW FLOW	94221	10/16/90	5.3	CFS

8.08 4Q90

HIGH FLW	94221	10/17/90	6	CFS
LOW FLOW	94221	10/17/90	5.27	CFS
HIGH FLW	94221	10/18/90	6	CFS
LOW FLOW	94221	10/18/90	5.34	CFS
HIGH FLW	94221	10/19/90	6	CFS
LOW FLOW	94221	10/19/90	14.26	CFS
HIGH FLW	94221	10/20/90	14.92	CFS
LOW FLOW	94221	10/20/90	6.38	CFS
HIGH FLW	94221	10/21/90	6	CFS
LOW FLOW	94221	10/21/90	5.93	CFS
HIGH FLW	94221	10/22/90	6	CFS
LOW FLOW	94221	10/22/90	5.99	CFS
HIGH FLW	94221	10/23/90	6	CFS
LOW FLOW	94221	10/23/90	13.94	CFS
HIGH FLW	94221	10/24/90	14.63	CFS
LOW FLOW	94221	10/24/90	7.7	CFS
HIGH FLW	94221	10/25/90	8.63	CFS
LOW FLOW	94221	10/25/90	6.41	CFS
HIGH FLW	94221	10/26/90	6	CFS
LOW FLOW	94221	10/26/90	6.11	CFS
HIGH FLW	94221	10/27/90	6	CFS
LOW FLOW	94221	10/27/90	6.05	CFS
HIGH FLW	94221	10/28/90	6	CFS
LOW FLOW	94221	10/28/90	5.68	CFS
HIGH FLW	94221	10/29/90	6	CFS
LOW FLOW	94221	10/29/90	5.63	CFS
HIGH FLW	94221	10/30/90	6	CFS
LOW FLOW	94221	10/30/90	5.71	CFS
HIGH FLW	94221	10/31/90	6	CFS
LOW FLOW	94221	10/31/90	5.55	CFS
HIGH FLW	94221	11/1/90	6	CFS
LOW FLOW	94221	11/1/90	5.49	CFS
HIGH FLW	94221	12/2/90	5.96	CFS
LOW FLOW	94221	12/2/90	4.9	CFS
HIGH FLW	94221	12/3/90	5.63	CFS
LOW FLOW	94221	12/3/90	5.22	CFS
HIGH FLW	94221	12/4/90	6.04	CFS
LOW FLOW	94221	12/4/90	27.32	CFS
HIGH FLW	94221	12/5/90	28.58	CFS
LOW FLOW	94221	12/5/90	7.88	CFS
HIGH FLW	94221	12/6/90	8.29	CFS
LOW FLOW	94221	12/6/90	6.2	CFS
HIGH FLW	94221	12/7/90	6	CFS
LOW FLOW	94221	12/7/90	6.08	CFS
HIGH FLW	94221	12/8/90	6	CFS
LOW FLOW	94221	12/8/90	6.09	CFS
HIGH FLW	94221	12/9/90	6	CFS
LOW FLOW	94221	12/9/90	5.92	CFS
HIGH FLW	94221	12/10/90	6	CFS
LOW FLOW	94221	12/10/90	5.69	CFS
HIGH FLW	94221	12/11/90	6	CFS
LOW FLOW	94221	12/11/90	5.52	CFS
HIGH FLW	94221	12/12/90	6	CFS
LOW FLOW	94221	12/12/90	5.2	CFS
HIGH FLW	94221	12/13/90	6	CFS
LOW FLOW	94221	12/13/90	5.2	CFS
HIGH FLW	94221	12/14/90	6	CFS

LOW FLOW	94221	12/14/90	6.77	CFS
HIGH FLW	94221	12/15/90	7.54	CFS
LOW FLOW	94221	12/15/90	8.05	CFS
HIGH FLW	94221	12/16/90	8.67	CFS
LOW FLOW	94221	12/16/90	5.81	CFS
HIGH FLW	94221	12/17/90	6.42	CFS
LOW FLOW	94221	12/17/90	5.94	CFS
HIGH FLW	94221	12/18/90	6.58	CFS
LOW FLOW	94221	12/18/90	16.63	CFS
HIGH FLW	94221	12/19/90	17.3	CFS
LOW FLOW	94221	12/19/90	16.65	CFS
HIGH FLW	94221	12/20/90	17.68	CFS
LOW FLOW	94221	12/20/90	8.73	CFS
HIGH FLW	94221	12/21/90	9.67	CFS
LOW FLOW	94221	12/21/90	9.2	CFS
HIGH FLW	94221	12/22/90	9.17	CFS
LOW FLOW	94221	12/22/90	6.86	CFS
HIGH FLW	94221	12/23/90	6.75	CFS
LOW FLOW	94221	12/23/90	81.01	CFS
HIGH FLW	94221	12/24/90	82.83	CFS
LOW FLOW	94221	12/24/90	60.13	CFS
HIGH FLW	94221	12/25/90	80.79	CFS
HIGH FLW	94221	12/26/90	14.22	CFS
HIGH FLW	94221	12/27/90	9.33	CFS
LOW FLOW	94221	12/27/90	186.66	CFS
HIGH FLW	94221	12/28/90	9.27	CFS
HIGH FLW	94221	12/29/90	19.11	CFS
HIGH FLW	94221	12/30/90	35.24	CFS
HIGH FLW	94221	12/31/90	16.46	CFS
HIGH FLW	94221	1/1/91	14.05	CFS
HIGH FLW	94221	1/3/91	9.63	CFS
HIGH FLW	94221	1/4/91	9	CFS
HIGH FLW	94221	1/5/91	9	CFS
HIGH FLW	94221	1/6/91	8.67	CFS
HIGH FLW	94221	1/7/91	6	CFS
HIGH FLW	94221	1/8/91	6	CFS
LOW FLOW	94221	1/8/91	10.1	CFS
HIGH FLW	94221	1/9/91	22.46	CFS
LOW FLOW	94221	1/9/91	9.39	CFS
HIGH FLW	94221	1/10/91	9	CFS
LOW FLOW	94221	1/10/91	7.78	CFS
HIGH FLW	94221	1/11/91	8.94	CFS
LOW FLOW	94221	1/11/91	7.3	CFS
HIGH FLW	94221	1/12/91	11	CFS
HIGH FLW	94221	1/13/91	14.63	CFS
HIGH FLW	94221	1/14/91	9	CFS
HIGH FLW	94221	1/15/91	8.21	CFS
HIGH FLW	94221	1/16/91	5.74	CFS
HIGH FLW	94221	1/17/91	6.54	CFS
HIGH FLW	94221	1/18/91	11.21	CFS
HIGH FLW	94221	1/19/91	5.36	CFS
HIGH FLW	94221	1/20/91	5.13	CFS
HIGH FLW	94221	1/21/91	6.95	CFS
HIGH FLW	94221	1/22/91	8.5	CFS
HIGH FLW	94221	1/23/91	5.71	CFS
HIGH FLW	94221	1/24/91	5.13	CFS
HIGH FLW	94221	1/25/91	5.17	CFS

1.01 1991

HIGH FLW	94221	1/26/91	5	CFS
HIGH FLW	94221	1/27/91	5	CFS
HIGH FLW	94221	1/28/91	5.88	CFS
HIGH FLW	94221	1/29/91	5	CFS
HIGH FLW	94221	1/30/91	5.17	CFS
HIGH FLW	94221	1/31/91	5	CFS
HIGH FLW	94221	2/1/91	8.29	CFS
HIGH FLW	94221	2/2/91	5.17	CFS
HIGH FLW	94221	2/3/91	4.94	CFS
HIGH FLW	94221	2/4/91	5.13	CFS
HIGH FLW	94221	2/5/91	5.21	CFS
HIGH FLW	94221	2/6/91	5.42	CFS
HIGH FLW	94221	2/7/91	5.17	CFS
HIGH FLW	94221	2/8/91	7.29	CFS
HIGH FLW	94221	2/9/91	5.25	CFS
HIGH FLW	94221	2/10/91	5	CFS
HIGH FLW	94221	2/11/91	5	CFS
HIGH FLW	94221	2/12/91	5	CFS
HIGH FLW	94221	2/13/91	5	CFS
HIGH FLW	94221	2/14/91	5.29	CFS
HIGH FLW	94221	2/15/91	22.63	CFS
HIGH FLW	94221	2/16/91	17.96	CFS
HIGH FLW	94221	2/17/91	8.71	CFS
HIGH FLW	94221	2/18/91	5.38	CFS
HIGH FLW	94221	2/19/91	30.42	CFS
HIGH FLW	94221	2/20/91	72.17	CFS
HIGH FLW	94221	2/21/91	75.21	CFS
HIGH FLW	94221	2/22/91	31.71	CFS
HIGH FLW	94221	2/23/91	14.54	CFS
HIGH FLW	94221	2/24/91	11.46	CFS
HIGH FLW	94221	2/25/91	9	CFS
HIGH FLW	94221	2/26/91	9	CFS
HIGH FLW	94221	2/27/91	9.29	CFS
LOW FLOW	94221	2/27/91	7.3	CFS
HIGH FLW	94221	2/28/91	8.42	CFS
HIGH FLW	94221	3/1/91	5.58	CFS
HIGH FLW	94221	3/2/91	5.29	CFS
HIGH FLW	94221	3/3/91	11.33	CFS
LOW FLOW	94221	3/3/91	6.98	CFS
HIGH FLW	94221	3/4/91	8.58	CFS
LOW FLOW	94221	3/4/91	30.8	CFS
HIGH FLW	94221	3/5/91	31.29	CFS
LOW FLOW	94221	3/5/91	13.91	CFS
HIGH FLW	94221	3/6/91	12.88	CFS
LOW FLOW	94221	3/6/91	8.1	CFS
HIGH FLW	94221	3/7/91	8.79	CFS
HIGH FLW	94221	3/8/91	9	CFS
LOW FLOW	94221	3/8/91	6.79	CFS
HIGH FLW	94221	3/9/91	8.17	CFS
LOW FLOW	94221	3/9/91	6.48	CFS
HIGH FLW	94221	3/10/91	5.42	CFS
LOW FLOW	94221	3/10/91	5.84	CFS
HIGH FLW	94221	3/11/91	5.25	CFS
LOW FLOW	94221	3/11/91	6.35	CFS
HIGH FLW	94221	3/12/91	5.13	CFS
LOW FLOW	94221	3/12/91	6.06	CFS
HIGH FLW	94221	3/13/91	5.17	CFS

LOW FLOW	94221	3/13/91	9.53	CFS
HIGH FLW	94221	3/14/91	7.17	CFS
LOW FLOW	94221	3/14/91	16.69	CFS
HIGH FLW	94221	3/15/91	17.21	CFS
LOW FLOW	94221	3/15/91	8.3	CFS
HIGH FLW	94221	3/16/91	8.79	CFS
LOW FLOW	94221	3/16/91	6.61	CFS
HIGH FLW	94221	3/17/91	5.29	CFS
LOW FLOW	94221	3/17/91	5.75	CFS
HIGH FLW	94221	3/18/91	5.29	CFS
LOW FLOW	94221	3/18/91	6.54	CFS
HIGH FLW	94221	3/19/91	6.71	CFS
LOW FLOW	94221	3/19/91	7.92	CFS
HIGH FLW	94221	3/20/91	12.57	CFS
LOW FLOW	94221	3/20/91	6.48	CFS
HIGH FLW	94221	3/21/91	5.42	CFS
LOW FLOW	94221	3/21/91	5.7	CFS
HIGH FLW	94221	3/22/91	5.69	CFS
LOW FLOW	94221	3/22/91	5.8	CFS
HIGH FLW	94221	3/23/91	5.42	CFS
LOW FLOW	94221	3/23/91	7.13	CFS
HIGH FLW	94221	3/24/91	7.38	CFS
LOW FLOW	94221	3/24/91	21.19	CFS
HIGH FLW	94221	3/25/91	21.96	CFS
LOW FLOW	94221	3/25/91	6.39	CFS
HIGH FLW	94221	3/26/91	7.46	CFS
LOW FLOW	94221	3/26/91	5.88	CFS
HIGH FLW	94221	3/27/91	5.58	CFS
LOW FLOW	94221	3/27/91	5.74	CFS
HIGH FLW	94221	3/28/91	5.58	CFS
LOW FLOW	94221	3/28/91	5.71	CFS
HIGH FLW	94221	3/29/91	5.75	CFS
LOW FLOW	94221	3/29/91	10.5	CFS
HIGH FLW	94221	3/30/91	10.75	CFS
LOW FLOW	94221	3/30/91	54.22	CFS
HIGH FLW	94221	3/31/91	54.46	CFS
LOW FLOW	94221	3/31/91	27.8	CFS
HIGH FLW	94221	4/1/91	14.04	CFS
HIGH FLW	94221	4/2/91	9	CFS
HIGH FLW	94221	4/3/91	9	CFS
HIGH FLW	94221	4/4/91	5.95	CFS
HIGH FLW	94221	4/5/91	5.38	CFS
HIGH FLW	94221	4/6/91	5.13	CFS
LOW FLOW	94221	4/6/91	6.63	CFS
HIGH FLW	94221	4/7/91	7.92	CFS
LOW FLOW	94221	4/7/91	5.1	CFS
HIGH FLW	94221	4/8/91	5.75	CFS
LOW FLOW	94221	4/8/91	5.27	CFS
HIGH FLW	94221	4/9/91	5.82	CFS
LOW FLOW	94221	4/9/91	6.56	CFS
HIGH FLW	94221	4/10/91	6.67	CFS
LOW FLOW	94221	4/10/91	7.79	CFS
HIGH FLW	94221	4/11/91	8	CFS
LOW FLOW	94221	4/11/91	5.65	CFS
HIGH FLW	94221	4/12/91	5.5	CFS
LOW FLOW	94221	4/12/91	4.84	CFS
HIGH FLW	94221	4/13/91	5.5	CFS

5.03 2Q91

LOW FLOW	94221	4/13/91	5.35	CFS
HIGH FLW	94221	4/14/91	5.88	CFS
LOW FLOW	94221	4/14/91	11.89	CFS
HIGH FLW	94221	4/15/91	12.25	CFS
LOW FLOW	94221	4/15/91	5.88	CFS
HIGH FLW	94221	4/16/91	6	CFS
LOW FLOW	94221	4/16/91	18.91	CFS
HIGH FLW	94221	4/17/91	23.75	CFS
LOW FLOW	94221	4/17/91	6.34	CFS
HIGH FLW	94221	4/18/91	12.58	CFS
LOW FLOW	94221	4/18/91	5.55	CFS
HIGH FLW	94221	4/19/91	12.17	CFS
LOW FLOW	94221	4/19/91	5.12	CFS
HIGH FLW	94221	4/20/91	14.25	CFS
LOW FLOW	94221	4/20/91	4.6	CFS
HIGH FLW	94221	4/21/91	31.21	CFS
HIGH FLW	94221	4/22/91	10.88	CFS
HIGH FLW	94221	4/23/91	7.71	CFS
HIGH FLW	94221	4/24/91	5.54	CFS
HIGH FLW	94221	4/25/91	5.08	CFS
HIGH FLW	94221	4/26/91	5.08	CFS
HIGH FLW	94221	4/27/91	5	CFS
LOW FLOW	94221	4/27/91	4.4	CFS
HIGH FLW	94221	4/28/91	5.25	CFS
HIGH FLW	94221	4/29/91	7.65	CFS
HIGH FLW	94221	4/30/91	5.13	CFS
HIGH FLW	94221	5/1/91	7.57	CFS
HIGH FLW	94221	5/2/91	5	CFS
HIGH FLW	94221	5/3/91	5.33	CFS
HIGH FLW	94221	5/4/91	5.21	CFS
HIGH FLW	94221	5/5/91	5.25	CFS
HIGH FLW	94221	5/6/91	5.29	CFS
HIGH FLW	94221	5/7/91	6.88	CFS
HIGH FLW	94221	5/9/91	5	CFS
HIGH FLW	94221	5/10/91	5	CFS
HIGH FLW	94221	5/11/91	6.25	CFS
LOW FLOW	94221	5/11/91	4.5	CFS
HIGH FLW	94221	5/12/91	5	CFS
LOW FLOW	94221	5/12/91	4.22	CFS
HIGH FLW	94221	5/13/91	5.08	CFS
LOW FLOW	94221	5/13/91	4.5	CFS
HIGH FLW	94221	5/14/91	5	CFS
LOW FLOW	94221	5/14/91	4.33	CFS
HIGH FLW	94221	5/15/91	5.09	CFS
LOW FLOW	94221	5/15/91	4.32	CFS
HIGH FLW	94221	5/16/91	5.25	CFS
LOW FLOW	94221	5/16/91	4.18	CFS
HIGH FLW	94221	5/17/91	5.38	CFS
LOW FLOW	94221	5/17/91	6.69	CFS
HIGH FLW	94221	5/18/91	7.38	CFS
LOW FLOW	94221	5/18/91	4.69	CFS
HIGH FLW	94221	5/19/91	5.38	CFS
LOW FLOW	94221	5/19/91	7.15	CFS
HIGH FLW	94221	5/20/91	8.17	CFS
LOW FLOW	94221	5/20/91	5.52	CFS
HIGH FLW	94221	5/21/91	5.58	CFS
LOW FLOW	94221	5/21/91	8.7	CFS

HIGH FLW	94221	5/22/91	8.54	CFS
LOW FLOW	94221	5/22/91	4.95	CFS
HIGH FLW	94221	5/23/91	5.17	CFS
LOW FLOW	94221	5/23/91	4.17	CFS
HIGH FLW	94221	5/24/91	5.38	CFS
LOW FLOW	94221	5/24/91	13.63	CFS
HIGH FLW	94221	5/25/91	14.54	CFS
LOW FLOW	94221	5/25/91	7.31	CFS
HIGH FLW	94221	5/26/91	7.79	CFS
LOW FLOW	94221	5/26/91	3.38	CFS
HIGH FLW	94221	5/27/91	2.79	CFS
LOW FLOW	94221	5/27/91	3.27	CFS
HIGH FLW	94221	5/28/91	3.58	CFS
LOW FLOW	94221	5/28/91	7.4	CFS
HIGH FLW	94221	5/29/91	6.92	CFS
LOW FLOW	94221	5/29/91	7.87	CFS
HIGH FLW	94221	5/30/91	7.74	CFS
LOW FLOW	94221	5/30/91	5.03	CFS
HIGH FLW	94221	5/31/91	5.54	CFS
LOW FLOW	94221	5/31/91	4.66	CFS
HIGH FLW	94221	6/1/91	6.08	CFS
LOW FLOW	94221	6/1/91	4.21	CFS
HIGH FLW	94221	6/2/91	5.58	CFS
LOW FLOW	94221	6/2/91	15.28	CFS
HIGH FLW	94221	6/3/91	16.29	CFS
LOW FLOW	94221	6/3/91	6.08	CFS
HIGH FLW	94221	6/4/91	6.21	CFS
LOW FLOW	94221	6/4/91	7.28	CFS
HIGH FLW	94221	6/5/91	7.38	CFS
LOW FLOW	94221	6/5/91	6.23	CFS
HIGH FLW	94221	6/6/91	6.17	CFS
LOW FLOW	94221	6/6/91	4.76	CFS
HIGH FLW	94221	6/7/91	5.33	CFS
LOW FLOW	94221	6/7/91	4.7	CFS
HIGH FLW	94221	6/8/91	5	CFS
LOW FLOW	94221	6/8/91	4.56	CFS
HIGH FLW	94221	6/9/91	5.21	CFS
LOW FLOW	94221	6/9/91	4.28	CFS
HIGH FLW	94221	6/10/91	5.25	CFS
LOW FLOW	94221	6/10/91	4.12	CFS
HIGH FLW	94221	6/11/91	5.33	CFS
LOW FLOW	94221	6/11/91	4.17	CFS
HIGH FLW	94221	6/12/91	5.38	CFS
LOW FLOW	94221	6/12/91	4.26	CFS
HIGH FLW	94221	6/13/91	5.21	CFS
LOW FLOW	94221	6/13/91	17.75	CFS
HIGH FLW	94221	6/14/91	41.92	CFS
LOW FLOW	94221	6/14/91	8.07	CFS
HIGH FLW	94221	6/15/91	8.25	CFS
LOW FLOW	94221	6/15/91	5.82	CFS
HIGH FLW	94221	6/16/91	5.42	CFS
LOW FLOW	94221	6/16/91	5.53	CFS
HIGH FLW	94221	6/17/91	5.29	CFS
LOW FLOW	94221	6/17/91	5.14	CFS
HIGH FLW	94221	6/18/91	5.4	CFS
LOW FLOW	94221	6/18/91	22.29	CFS
HIGH FLW	94221	6/19/91	23.29	CFS

LOW FLOW	94221	6/19/91	7.34	CFS
HIGH FLW	94221	6/20/91	7.88	CFS
LOW FLOW	94221	6/20/91	5.23	CFS
HIGH FLW	94221	6/21/91	5.5	CFS
LOW FLOW	94221	6/21/91	7.42	CFS
HIGH FLW	94221	6/22/91	7.63	CFS
LOW FLOW	94221	6/22/91	5.55	CFS
HIGH FLW	94221	6/23/91	5.42	CFS
LOW FLOW	94221	6/23/91	7.04	CFS
HIGH FLW	94221	6/24/91	7.08	CFS
LOW FLOW	94221	6/24/91	18.01	CFS
HIGH FLW	94221	6/25/91	18.29	CFS
LOW FLOW	94221	6/25/91	13.98	CFS
HIGH FLW	94221	6/26/91	14.58	CFS
LOW FLOW	94221	6/26/91	19.83	CFS
HIGH FLW	94221	6/27/91	19.83	CFS
LOW FLOW	94221	6/27/91	12.16	CFS
HIGH FLW	94221	6/28/91	12.42	CFS
LOW FLOW	94221	6/28/91	7.8	CFS
HIGH FLW	94221	6/29/91	8.96	CFS
LOW FLOW	94221	6/29/91	6.77	CFS
HIGH FLW	94221	6/30/91	7.43	CFS
LOW FLOW	94221	6/30/91	5.75	CFS
HIGH FLW	94221	7/1/91	6	CFS
LOW FLOW	94221	7/1/91	5.15	CFS
HIGH FLW	94221	7/2/91	6	CFS
LOW FLOW	94221	7/2/91	5.31	CFS
HIGH FLW	94221	7/3/91	6	CFS
LOW FLOW	94221	7/3/91	10.06	CFS
HIGH FLW	94221	7/4/91	11.04	CFS
LOW FLOW	94221	7/4/91	7.66	CFS
HIGH FLW	94221	7/5/91	8.13	CFS
LOW FLOW	94221	7/5/91	5.17	CFS
HIGH FLW	94221	7/6/91	5.71	CFS
LOW FLOW	94221	7/6/91	6.51	CFS
HIGH FLW	94221	7/7/91	7.17	CFS
LOW FLOW	94221	7/7/91	4.85	CFS
HIGH FLW	94221	7/8/91	5.67	CFS
LOW FLOW	94221	7/8/91	4.67	CFS
HIGH FLW	94221	7/9/91	6	CFS
LOW FLOW	94221	7/9/91	4.78	CFS
HIGH FLW	94221	7/10/91	6	CFS
LOW FLOW	94221	7/10/91	4.75	CFS
HIGH FLW	94221	7/11/91	5.75	CFS
LOW FLOW	94221	7/11/91	4.85	CFS
HIGH FLW	94221	7/12/91	5.92	CFS
LOW FLOW	94221	7/12/91	4.94	CFS
HIGH FLW	94221	7/13/91	5.71	CFS
LOW FLOW	94221	7/13/91	5.13	CFS
HIGH FLW	94221	7/14/91	6.25	CFS
LOW FLOW	94221	7/14/91	18.3	CFS
HIGH FLW	94221	7/15/91	18.88	CFS
LOW FLOW	94221	7/15/91	4.98	CFS
HIGH FLW	94221	7/16/91	5.71	CFS
LOW FLOW	94221	7/16/91	5.21	CFS
HIGH FLW	94221	7/17/91	5.58	CFS
LOW FLOW	94221	7/17/91	4.93	CFS

4.24 3Q91

HIGH FLW	94221	7/18/91	5.5	CFS
LOW FLOW	94221	7/18/91	6.48	CFS
HIGH FLW	94221	7/19/91	6.75	CFS
LOW FLOW	94221	7/19/91	7.39	CFS
HIGH FLW	94221	7/20/91	7.5	CFS
LOW FLOW	94221	7/20/91	5.72	CFS
HIGH FLW	94221	7/21/91	5.79	CFS
LOW FLOW	94221	7/21/91	5.19	CFS
HIGH FLW	94221	7/22/91	5.71	CFS
LOW FLOW	94221	7/22/91	4.79	CFS
HIGH FLW	94221	7/23/91	5.79	CFS
LOW FLOW	94221	7/23/91	4.62	CFS
HIGH FLW	94221	7/24/91	5.33	CFS
LOW FLOW	94221	7/24/91	4.86	CFS
HIGH FLW	94221	7/25/91	5.87	CFS
LOW FLOW	94221	7/25/91	12.57	CFS
HIGH FLW	94221	7/26/91	13.67	CFS
LOW FLOW	94221	7/26/91	6.44	CFS
HIGH FLW	94221	7/27/91	6.54	CFS
LOW FLOW	94221	7/27/91	14.13	CFS
HIGH FLW	94221	7/28/91	14	CFS
LOW FLOW	94221	7/28/91	6.81	CFS
HIGH FLW	94221	7/29/91	7.42	CFS
LOW FLOW	94221	7/29/91	6	CFS
HIGH FLW	94221	7/30/91	5.63	CFS
LOW FLOW	94221	7/30/91	5.5	CFS
HIGH FLW	94221	7/31/91	5.58	CFS
LOW FLOW	94221	7/31/91	5.09	CFS
HIGH FLW	94221	8/1/91	6	CFS
LOW FLOW	94221	8/1/91	5.07	CFS
HIGH FLW	94221	8/2/91	5.58	CFS
LOW FLOW	94221	8/2/91	4.63	CFS
HIGH FLW	94221	8/3/91	5.57	CFS
LOW FLOW	94221	8/3/91	4.28	CFS
HIGH FLW	94221	8/4/91	5.63	CFS
LOW FLOW	94221	8/4/91	4.2	CFS
HIGH FLW	94221	8/5/91	5.58	CFS
LOW FLOW	94221	8/5/91	4.35	CFS
HIGH FLW	94221	8/6/91	5.67	CFS
LOW FLOW	94221	8/6/91	4.51	CFS
HIGH FLW	94221	8/7/91	5.54	CFS
LOW FLOW	94221	8/7/91	4.21	CFS
HIGH FLW	94221	8/8/91	5.58	CFS
LOW FLOW	94221	8/8/91	4.23	CFS
HIGH FLW	94221	8/9/91	5.83	CFS
LOW FLOW	94221	8/9/91	13.25	CFS
HIGH FLW	94221	8/10/91	14.21	CFS
LOW FLOW	94221	8/10/91	9.94	CFS
HIGH FLW	94221	8/11/91	10.21	CFS
LOW FLOW	94221	8/11/91	8.16	CFS
HIGH FLW	94221	8/12/91	8.04	CFS
LOW FLOW	94221	8/12/91	5.7	CFS
HIGH FLW	94221	8/13/91	5.54	CFS
LOW FLOW	94221	8/13/91	5.13	CFS
HIGH FLW	94221	8/14/91	5.35	CFS
LOW FLOW	94221	8/14/91	4.99	CFS
HIGH FLW	94221	8/15/91	5.33	CFS

LOW FLOW	94221	8/15/91	4.64	CFS
HIGH FLW	94221	8/16/91	4.71	CFS
LOW FLOW	94221	8/16/91	5.43	CFS
HIGH FLW	94221	8/17/91	5.08	CFS
LOW FLOW	94221	8/17/91	4.89	CFS
HIGH FLW	94221	8/18/91	5.43	CFS
LOW FLOW	94221	8/18/91	4.34	CFS
HIGH FLW	94221	8/19/91	5.5	CFS
LOW FLOW	94221	8/19/91	4.67	CFS
HIGH FLW	94221	8/20/91	5.46	CFS
LOW FLOW	94221	8/20/91	5.72	CFS
HIGH FLW	94221	8/21/91	6.37	CFS
LOW FLOW	94221	8/21/91	5.66	CFS
HIGH FLW	94221	8/22/91	5.46	CFS
LOW FLOW	94221	8/22/91	5.36	CFS
HIGH FLW	94221	8/23/91	5	CFS
LOW FLOW	94221	8/23/91	5.4	CFS
HIGH FLW	94221	8/24/91	5	CFS
LOW FLOW	94221	8/24/91	5.4	CFS
HIGH FLW	94221	8/25/91	5	CFS
LOW FLOW	94221	8/25/91	5.17	CFS
HIGH FLW	94221	8/26/91	5	CFS
LOW FLOW	94221	8/26/91	4.47	CFS
HIGH FLW	94221	8/27/91	5.73	CFS
LOW FLOW	94221	8/27/91	16.86	CFS
HIGH FLW	94221	8/28/91	17.05	CFS
LOW FLOW	94221	8/28/91	6.19	CFS
HIGH FLW	94221	8/29/91	6	CFS
LOW FLOW	94221	8/29/91	5.51	CFS
HIGH FLW	94221	8/30/91	5.5	CFS
LOW FLOW	94221	8/30/91	13.75	CFS
HIGH FLW	94221	8/31/91	14.21	CFS
LOW FLOW	94221	8/31/91	9.06	CFS
HIGH FLW	94221	9/1/91	9.5	CFS
LOW FLOW	94221	9/1/91	5.83	CFS
HIGH FLW	94221	9/2/91	5.4	CFS
LOW FLOW	94221	9/2/91	5.23	CFS
HIGH FLW	94221	9/3/91	5.38	CFS
LOW FLOW	94221	9/3/91	6.37	CFS
HIGH FLW	94221	9/4/91	6.83	CFS
LOW FLOW	94221	9/4/91	6.38	CFS
HIGH FLW	94221	9/5/91	6.38	CFS
LOW FLOW	94221	9/5/91	5.12	CFS
HIGH FLW	94221	9/6/91	5.38	CFS
LOW FLOW	94221	9/6/91	5.13	CFS
HIGH FLW	94221	9/7/91	5.42	CFS
LOW FLOW	94221	9/7/91	8.77	CFS
HIGH FLW	94221	9/8/91	8.87	CFS
LOW FLOW	94221	9/8/91	5.45	CFS
HIGH FLW	94221	9/9/91	5.48	CFS
LOW FLOW	94221	9/9/91	4.88	CFS
HIGH FLW	94221	9/10/91	5.42	CFS
LOW FLOW	94221	9/10/91	4.9	CFS
HIGH FLW	94221	9/11/91	5.46	CFS
LOW FLOW	94221	9/11/91	5.22	CFS
HIGH FLW	94221	9/12/91	5.29	CFS
LOW FLOW	94221	9/12/91	4.99	CFS

HIGH FLW	94221	9/13/91	5.54	CFS
LOW FLOW	94221	9/13/91	4.9	CFS
HIGH FLW	94221	9/14/91	5.42	CFS
LOW FLOW	94221	9/14/91	4.93	CFS
HIGH FLW	94221	9/15/91	5.46	CFS
LOW FLOW	94221	9/15/91	4.51	CFS
HIGH FLW	94221	9/16/91	5.46	CFS
LOW FLOW	94221	9/16/91	4.34	CFS
HIGH FLW	94221	9/17/91	5.5	CFS
LOW FLOW	94221	9/17/91	4.45	CFS
HIGH FLW	94221	9/18/91	5.46	CFS
LOW FLOW	94221	9/18/91	4.39	CFS
HIGH FLW	94221	9/19/91	5.46	CFS
LOW FLOW	94221	9/19/91	6.86	CFS
HIGH FLW	94221	9/20/91	7.25	CFS
LOW FLOW	94221	9/20/91	10.05	CFS
HIGH FLW	94221	9/21/91	9.79	CFS
LOW FLOW	94221	9/21/91	5.9	CFS
HIGH FLW	94221	9/22/91	5	CFS
LOW FLOW	94221	9/22/91	5.19	CFS
HIGH FLW	94221	9/23/91	5	CFS
LOW FLOW	94221	9/23/91	5.1	CFS
HIGH FLW	94221	9/24/91	5	CFS
LOW FLOW	94221	9/24/91	5.31	CFS
HIGH FLW	94221	9/25/91	5	CFS
LOW FLOW	94221	9/25/91	20.2	CFS
HIGH FLW	94221	9/26/91	19.96	CFS
LOW FLOW	94221	9/26/91	9.4	CFS
HIGH FLW	94221	9/27/91	9.73	CFS
LOW FLOW	94221	9/27/91	5.95	CFS
HIGH FLW	94221	9/28/91	5	CFS
LOW FLOW	94221	9/28/91	5.83	CFS
HIGH FLW	94221	9/29/91	5	CFS
LOW FLOW	94221	9/29/91	5.43	CFS
HIGH FLW	94221	9/30/91	5	CFS
LOW FLOW	94221	9/30/91	5.75	CFS
HIGH FLW	94221	10/1/91	5	CFS
LOW FLOW	94221	10/1/91	5.47	CFS
HIGH FLW	94221	10/2/91	5	CFS
LOW FLOW	94221	10/2/91	5.54	CFS
HIGH FLW	94221	10/3/91	5	CFS
LOW FLOW	94221	10/3/91	5.42	CFS
HIGH FLW	94221	10/4/91	5	CFS
LOW FLOW	94221	10/4/91	5.56	CFS
HIGH FLW	94221	10/5/91	5	CFS
LOW FLOW	94221	10/5/91	5.43	CFS
HIGH FLW	94221	10/6/91	5	CFS
LOW FLOW	94221	10/6/91	7.47	CFS
HIGH FLW	94221	10/7/91	7.13	CFS
LOW FLOW	94221	10/7/91	5.51	CFS
HIGH FLW	94221	10/8/91	5	CFS
LOW FLOW	94221	10/8/91	5.37	CFS
HIGH FLW	94221	10/9/91	5	CFS
LOW FLOW	94221	10/9/91	5.67	CFS
HIGH FLW	94221	10/10/91	5	CFS
LOW FLOW	94221	10/10/91	5.85	CFS
HIGH FLW	94221	10/11/91	5	CFS

5.89 4Q91

LOW FLOW	94221	10/11/91	5.85	CFS
HIGH FLW	94221	10/12/91	5	CFS
LOW FLOW	94221	10/12/91	5.75	CFS
HIGH FLW	94221	10/13/91	5	CFS
LOW FLOW	94221	10/13/91	5.36	CFS
HIGH FLW	94221	10/14/91	5	CFS
LOW FLOW	94221	10/14/91	5.25	CFS
HIGH FLW	94221	10/15/91	5	CFS
LOW FLOW	94221	10/15/91	5.58	CFS
HIGH FLW	94221	10/16/91	5	CFS
LOW FLOW	94221	10/16/91	23.08	CFS
HIGH FLW	94221	10/17/91	22.88	CFS
LOW FLOW	94221	10/17/91	6.72	CFS
HIGH FLW	94221	10/18/91	5.21	CFS
LOW FLOW	94221	10/18/91	6.02	CFS
HIGH FLW	94221	10/19/91	5	CFS
LOW FLOW	94221	10/19/91	5.97	CFS
HIGH FLW	94221	10/20/91	5	CFS
LOW FLOW	94221	10/20/91	5.65	CFS
HIGH FLW	94221	10/21/91	5	CFS
LOW FLOW	94221	10/21/91	5.65	CFS
HIGH FLW	94221	10/22/91	5	CFS
LOW FLOW	94221	10/22/91	5.4	CFS
HIGH FLW	94221	10/23/91	5	CFS
LOW FLOW	94221	10/23/91	6.04	CFS
HIGH FLW	94221	10/24/91	5	CFS
LOW FLOW	94221	10/24/91	6.02	CFS
HIGH FLW	94221	10/25/91	5	CFS
LOW FLOW	94221	10/25/91	5.7	CFS
HIGH FLW	94221	10/26/91	5	CFS
LOW FLOW	94221	10/26/91	5.45	CFS
HIGH FLW	94221	10/27/91	5	CFS
LOW FLOW	94221	10/27/91	5.51	CFS
HIGH FLW	94221	10/28/91	5	CFS
LOW FLOW	94221	10/28/91	5.48	CFS
HIGH FLW	94221	10/29/91	5	CFS
LOW FLOW	94221	10/29/91	5.41	CFS
HIGH FLW	94221	10/30/91	5	CFS
LOW FLOW	94221	10/30/91	5.71	CFS
HIGH FLW	94221	10/31/91	5	CFS
LOW FLOW	94221	10/31/91	5.38	CFS
HIGH FLW	94221	11/1/91	5	CFS
LOW FLOW	94221	11/1/91	5.38	CFS
HIGH FLW	94221	11/2/91	5	CFS
LOW FLOW	94221	11/2/91	6.69	CFS
HIGH FLW	94221	11/3/91	6	CFS
LOW FLOW	94221	11/3/91	5.4	CFS
HIGH FLW	94221	11/4/91	5	CFS
LOW FLOW	94221	11/4/91	5.4	CFS
HIGH FLW	94221	11/5/91	5	CFS
LOW FLOW	94221	11/5/91	5.51	CFS
HIGH FLW	94221	11/6/91	5	CFS
LOW FLOW	94221	11/6/91	5.81	CFS
HIGH FLW	94221	11/7/91	5	CFS
LOW FLOW	94221	11/7/91	6.23	CFS
HIGH FLW	94221	11/8/91	4.75	CFS
LOW FLOW	94221	11/8/91	6.02	CFS

HIGH FLW	94221	11/9/91	5	CFS
LOW FLOW	94221	11/9/91	6.88	CFS
HIGH FLW	94221	11/10/91	5.67	CFS
LOW FLOW	94221	11/10/91	6.22	CFS
HIGH FLW	94221	11/11/91	4.79	CFS
LOW FLOW	94221	11/11/91	6.13	CFS
HIGH FLW	94221	11/12/91	5	CFS
LOW FLOW	94221	11/12/91	6.13	CFS
HIGH FLW	94221	11/13/91	4.88	CFS
LOW FLOW	94221	11/13/91	6.23	CFS
HIGH FLW	94221	11/14/91	4.75	CFS
LOW FLOW	94221	11/14/91	6.21	CFS
HIGH FLW	94221	11/15/91	5	CFS
LOW FLOW	94221	11/15/91	6.22	CFS
HIGH FLW	94221	11/16/91	5	CFS
LOW FLOW	94221	11/16/91	5.97	CFS
HIGH FLW	94221	11/17/91	5	CFS
LOW FLOW	94221	11/17/91	5.76	CFS
HIGH FLW	94221	11/18/91	5	CFS
LOW FLOW	94221	11/18/91	5.52	CFS
HIGH FLW	94221	11/19/91	5	CFS
LOW FLOW	94221	11/19/91	5.86	CFS
HIGH FLW	94221	11/20/91	5	CFS
LOW FLOW	94221	11/20/91	5.96	CFS
HIGH FLW	94221	11/21/91	5	CFS
LOW FLOW	94221	11/21/91	6.6	CFS
HIGH FLW	94221	11/22/91	6.33	CFS
LOW FLOW	94221	11/22/91	15.16	CFS
HIGH FLW	94221	11/23/91	15.08	CFS
LOW FLOW	94221	11/23/91	38.11	CFS
HIGH FLW	94221	11/24/91	37.96	CFS
LOW FLOW	94221	11/24/91	7.45	CFS
HIGH FLW	94221	11/25/91	7.04	CFS
LOW FLOW	94221	11/25/91	6.34	CFS
HIGH FLW	94221	11/26/91	5	CFS
LOW FLOW	94221	11/26/91	6.52	CFS
HIGH FLW	94221	11/27/91	4.79	CFS
LOW FLOW	94221	11/27/91	6.76	CFS
HIGH FLW	94221	11/28/91	4.75	CFS
LOW FLOW	94221	11/28/91	6.22	CFS
HIGH FLW	94221	11/29/91	5	CFS
LOW FLOW	94221	11/29/91	6.16	CFS
HIGH FLW	94221	11/30/91	5	CFS
LOW FLOW	94221	11/30/91	5.94	CFS
HIGH FLW	94221	12/1/91	5	CFS
LOW FLOW	94221	12/1/91	15.96	CFS
HIGH FLW	94221	12/2/91	15	CFS
LOW FLOW	94221	12/2/91	78.44	CFS
HIGH FLW	94221	12/3/91	78.58	CFS
LOW FLOW	94221	12/3/91	53.6	CFS
HIGH FLW	94221	12/4/91	60.86	CFS
LOW FLOW	94221	12/4/91	40.27	CFS
HIGH FLW	94221	12/5/91	40.46	CFS
LOW FLOW	94221	12/5/91	12.22	CFS
HIGH FLW	94221	12/6/91	11.46	CFS
LOW FLOW	94221	12/6/91	9.77	CFS
HIGH FLW	94221	12/7/91	8.54	CFS

LOW FLOW	94221	12/7/91	8.6	CFS
HIGH FLW	94221	12/8/91	8.63	CFS
LOW FLOW	94221	12/8/91	8	CFS
HIGH FLW	94221	12/9/91	8.38	CFS
LOW FLOW	94221	12/9/91	7.41	CFS
HIGH FLW	94221	12/10/91	6.96	CFS
LOW FLOW	94221	12/10/91	7.1	CFS
HIGH FLW	94221	12/11/91	20.22	CFS
LOW FLOW	94221	12/11/91	7.1	CFS
HIGH FLW	94221	12/12/91	9.58	CFS
LOW FLOW	94221	12/12/91	7.1	CFS
HIGH FLW	94221	12/13/91	8.46	CFS
LOW FLOW	94221	12/13/91	7.1	CFS
HIGH FLW	94221	12/14/91	8.46	CFS
LOW FLOW	94221	12/14/91	7.1	CFS
HIGH FLW	94221	12/15/91	25.63	CFS
LOW FLOW	94221	12/15/91	7.11	CFS
HIGH FLW	94221	12/16/91	25.54	CFS
LOW FLOW	94221	12/16/91	7.12	CFS
HIGH FLW	94221	12/17/91	9.04	CFS
LOW FLOW	94221	12/17/91	7.12	CFS
HIGH FLW	94221	12/18/91	8.21	CFS
LOW FLOW	94221	12/18/91	7.1	CFS
HIGH FLW	94221	12/19/91	8.29	CFS
LOW FLOW	94221	12/19/91	7.13	CFS
HIGH FLW	94221	12/20/91	8.13	CFS
LOW FLOW	94221	12/20/91	7.16	CFS
HIGH FLW	94221	12/21/91	6.88	CFS
LOW FLOW	94221	12/21/91	7.11	CFS
HIGH FLW	94221	12/22/91	5.83	CFS
LOW FLOW	94221	12/22/91	7.1	CFS
HIGH FLW	94221	12/23/91	5.13	CFS
LOW FLOW	94221	12/23/91	7.1	CFS
HIGH FLW	94221	12/24/91	5.58	CFS
LOW FLOW	94221	12/24/91	7.1	CFS
HIGH FLW	94221	12/25/91	28.74	CFS
LOW FLOW	94221	12/25/91	7.1	CFS
HIGH FLW	94221	12/26/91	9.46	CFS
LOW FLOW	94221	12/26/91	7.13	CFS
HIGH FLW	94221	12/27/91	8	CFS
LOW FLOW	94221	12/27/91	7.19	CFS
HIGH FLW	94221	12/28/91	8	CFS
HIGH FLW	94221	12/29/91	7.13	CFS
HIGH FLW	94221	12/30/91	17.83	CFS
HIGH FLW	94221	12/31/91	8.29	CFS
HIGH FLW	94221	1/1/92	8	CFS
HIGH FLW	94221	1/3/92	4.67	CFS
HIGH FLW	94221	1/4/92	5.91	CFS
HIGH FLW	94221	1/5/92	31.67	CFS
HIGH FLW	94221	1/6/92	9.58	CFS
HIGH FLW	94221	1/7/92	8	CFS
HIGH FLW	94221	1/8/92	8	CFS
HIGH FLW	94221	1/9/92	7.33	CFS
HIGH FLW	94221	1/10/92	6.04	CFS
HIGH FLW	94221	1/11/92	10.38	CFS
HIGH FLW	94221	1/12/92	7.17	CFS
HIGH FLW	94221	1/13/92	4.46	CFS

4.49 1Q92

HIGH FLW	94221	1/14/92	4.88	CFS
HIGH FLW	94221	1/15/92	12.33	CFS
HIGH FLW	94221	1/16/92	10.88	CFS
HIGH FLW	94221	1/17/92	6.38	CFS
HIGH FLW	94221	1/18/92	7.17	CFS
HIGH FLW	94221	1/19/92	5.88	CFS
HIGH FLW	94221	1/20/92	4	CFS
HIGH FLW	94221	1/21/92	5.42	CFS
HIGH FLW	94221	1/22/92	4.29	CFS
HIGH FLW	94221	1/23/92	4.54	CFS
HIGH FLW	94221	1/24/92	5.04	CFS
HIGH FLW	94221	1/25/92	17.21	CFS
HIGH FLW	94221	1/26/92	8.29	CFS
HIGH FLW	94221	1/27/92	4.96	CFS
HIGH FLW	94221	1/28/92	4.54	CFS
HIGH FLW	94221	1/29/92	4.67	CFS
HIGH FLW	94221	1/30/92	5	CFS
HIGH FLW	94221	1/31/92	4.96	CFS
HIGH FLW	94221	2/1/92	4.33	CFS
HIGH FLW	94221	2/2/92	4.38	CFS
HIGH FLW	94221	2/3/92	4	CFS
HIGH FLW	94221	2/4/92	4.21	CFS
HIGH FLW	94221	2/5/92	4.25	CFS
HIGH FLW	94221	2/6/92	4.42	CFS
HIGH FLW	94221	2/7/92	4	CFS
HIGH FLW	94221	2/8/92	4.29	CFS
HIGH FLW	94221	2/9/92	4	CFS
HIGH FLW	94221	2/10/92	4	CFS
HIGH FLW	94221	2/11/92	4	CFS
HIGH FLW	94221	2/12/92	4.17	CFS
HIGH FLW	94221	2/13/92	4.25	CFS
HIGH FLW	94221	2/14/92	4	CFS
HIGH FLW	94221	2/15/92	6.83	CFS
HIGH FLW	94221	2/16/92	4.75	CFS
HIGH FLW	94221	2/17/92	15.33	CFS
HIGH FLW	94221	2/18/92	6.04	CFS
HIGH FLW	94221	2/19/92	4.42	CFS
HIGH FLW	94221	2/20/92	4.88	CFS
HIGH FLW	94221	2/21/92	4.5	CFS
HIGH FLW	94221	2/22/92	4.29	CFS
HIGH FLW	94221	2/23/92	4.21	CFS
HIGH FLW	94221	2/24/92	4.38	CFS
HIGH FLW	94221	2/25/92	8.38	CFS
HIGH FLW	94221	2/26/92	5.42	CFS
HIGH FLW	94221	2/27/92	16.21	CFS
HIGH FLW	94221	2/28/92	21.92	CFS
HIGH FLW	94221	2/29/92	8	CFS
HIGH FLW	94221	3/1/92	7	CFS
HIGH FLW	94221	6/2/92	4.79	CFS
HIGH FLW	94221	6/4/92	729	CFS
FLOW	94221	9/30/92	0.64	MGD
FLOW	94221	10/1/92	0.2	MGD
FLOW	94221	10/2/92	0.16	MGD
FLOW	94221	10/3/92	0.1	MGD
FLOW	94221	10/4/92	1.18	MGD
FLOW	94221	10/5/92	1.92	MGD
FLOW	94221	10/6/92	10.44	MGD

4Q92 avg.
4.13

FLOW	94221	10/7/92	3.3	MGD
FLOW	94221	10/8/92	2.71	MGD
FLOW	94221	10/9/92	2.52	MGD
FLOW	94221	10/10/92	2.54	MGD
FLOW	94221	10/11/92	2.36	MGD
FLOW	94221	10/12/92	2	MGD
FLOW	94221	10/13/92	1.97	MGD
FLOW	94221	10/14/92	2	MGD
FLOW	94221	10/15/92	2.07	MGD
FLOW	94221	10/16/92	1.98	MGD
FLOW	94221	10/17/92	1.95	MGD
FLOW	94221	10/18/92	2.01	MGD
FLOW	94221	10/19/92	1.85	MGD
FLOW	94221	10/20/92	1.88	MGD
FLOW	94221	10/21/92	2.86	MGD
FLOW	94221	10/22/92	2.21	MGD
FLOW	94221	10/23/92	2.03	MGD
FLOW	94221	10/24/92	2.07	MGD
FLOW	94221	10/25/92	2.1	MGD
FLOW	94221	10/26/92	1.97	MGD
FLOW	94221	10/27/92	1.94	MGD
FLOW	94221	10/28/92	1.94	MGD
FLOW	94221	10/29/92	2.38	MGD
FLOW	94221	10/30/92	3.11	MGD
FLOW	94221	10/31/92	2.28	MGD
FLOW	94221	11/1/92	5.38	MGD
FLOW	94221	11/3/92	2.27	MGD
FLOW	94221	11/4/92	11.73	MGD
FLOW	94221	11/5/92	3.28	MGD
FLOW	94221	11/6/92	10.55	MGD
FLOW	94221	11/7/92	4.68	MGD
FLOW	94221	11/8/92	3.19	MGD
FLOW	94221	11/9/92	2.58	MGD
FLOW	94221	11/10/92	2.55	MGD
FLOW	94221	11/11/92	2.63	MGD
FLOW	94221	11/12/92	2.49	MGD
FLOW	94221	11/13/92	2.45	MGD
FLOW	94221	11/14/92	10.45	MGD
FLOW	94221	11/15/92	3.55	MGD
FLOW	94221	11/16/92	2.8	MGD
FLOW	94221	11/17/92	2.65	MGD
FLOW	94221	11/18/92	2.53	MGD
FLOW	94221	11/19/92	2.7	MGD
FLOW	94221	11/20/92	2.89	MGD
FLOW	94221	11/21/92	2.74	MGD
FLOW	94221	11/22/92	2.65	MGD
FLOW	94221	11/23/92	6.72	MGD
FLOW	94221	11/24/92	12.21	MGD
FLOW	94221	11/25/92	3.88	MGD
FLOW	94221	11/26/92	6.32	MGD
FLOW	94221	11/27/92	8.08	MGD
FLOW	94221	11/28/92	3.57	MGD
FLOW	94221	11/29/92	3.15	MGD
FLOW	94221	11/30/92	2.8	MGD
FLOW	94221	12/1/92	2.74	MGD
FLOW	94221	12/2/92	2.78	MGD
FLOW	94221	12/3/92	3.28	MGD

OLDFLOW2.XLS

94221

1993-96

cfs 1993-1996

1993 cfs DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	5.5	5.5	5.7	7.7	6	6.4	6.4	5	5.6	4.9	5	4.9
2	5.4	5.3	6.4	7	5.9	6	5.6	5.8	5.6	5.6	5.2	4.9
3	5.3	5.4	8.9	6.4	5.9	5.8	5.4	5.7	12	5.5	5.1	4.7
4	8.1	5.3	19	6.5	10	5.9	5.3	6.3	24	4.9	5.8	163
5	11	5.1	7	9.7	6.2	5.5	5.3	5.8	5.4	5.3	15	20
6	6	5.1	6.1	6.4	5.9	5.5	5.3	22	5.4	5.5	5.5	8.7
7	6.4	5.1	6	6.1	5.9	5.7	5.4	5.6	5.7	5.3	4.8	6.8
8	13	5.2	5.9	5.9	8.5	6.1	5.7	5.2	5.7	5.4	4.8	6.2
9	6.4	5.2	5.8	16	6.1	5.9	5.7	5.3	5.5	6.8	5.2	5.8
10	6	5.3	5.6	7.4	5.7	5.8	5.3	5.6	5.4	5.4	5.1	21
11	18	8.4	5.4	6.3	6.1	5.6	5.3	6.2	4.8	5.5	5	8
12	8.8	7.1	5.6	6.1	5.9	5.5	5.7	11	4.8	5.7	5	6.3
13	7.1	5.3	6.8	6.2	6.3	5.9	6.4	12	5.2	5.3	4.5	6
14	6.2	5.2	7.5	6	5.8	5.6	6.6	5.8	5.6	5	8.7	7.1
15	5.9	5.1	7.6	11	5.5	10	7.1	5.4	12	5.2	15	7.3
16	5.6	16	9.1	7	5.6	5.6	5.9	5.6	16	6.1	6.5	5.7
17	5.6	5.9	12	5.9	5.6	5.6	8.7	5.9	6.1	5.3	13	5.5
18	5.4	5.6	7	5.9	10	5.7	5.8	5.8	5.2	5.6	6.4	5.3
19	5.5	5.5	6.4	5.9	14	11	8.9	5.4	5	5.8	5.6	5.2
20	5.4	5.3	6.4	14	6.6	5.5	7	5.5	5.2	5.8	5	9.3
21	8.7	70	6.2	8.5	7	5.7	6.1	5.2	5.4	7.7	4.9	9.4
22	5.7	10	6.1	6.4	5.8	5.7	5.8	5.1	5.4	5.3	4.9	6.1
23	5.3	6.9	84	6.2	5.5	5.9	5.8	5.2	7.7	4.8	5	5.7
24	27	6.3	13	5.7	5.7	5.7	5.5	5.6	5.8	4.7	4.7	5.3
25	6.8	6.7	7.9	6.6	6.2	5.7	5.5	5.7	7.5	4.8	4.6	5
26	6.2	8.4	8.9	17	6	5.2	5.5	5.5	14	5.4	9.1	5
27	5.9	6.2	21	6.5	5.7	5.1	12	5.5	11	5.3	12	5
28	5.6	5.8	8.4	6.4	5.9	5.3	6.1	5.4	5.8	5.2	6.3	15
29	5.5	---	7.2	6.1	9	5.7	5.7	5.3	5.5	5.1	5.3	10
30	5.5	---	6.9	6.2	7.7	6	5.5	5.6	5.2	9.5	5.2	6.5
31	5.5	---	10	---	16	---	5.1	5.8	---	5.6	---	5.9
TOTAL	234.3	242.2	329.8	229	218	180.6	191.4	200.8	223.5	173.3	198.2	390.6
MEAN	7.56	8.65	10.6	7.63	7.03	6.02	6.17	6.48	7.45	5.59	6.61	12.6
MAX	27	70	84	17	16	11	12	22	24	9.5	15	163
MIN	5.3	5.1	5.4	5.7	5.5	5.1	5.1	5	4.8	4.7	4.5	4.7
Mgd	4.89	5.59	6.85	4.93	4.54	3.89	3.99	4.19	4.82	3.61	4.27	8.14
Mgd avg	5.78			4.46			4.33			5.34		

1994 cfs

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	5.8	6.8	26	9.2	6.7	4.7	5.6	5.4	5.8	4.7	5.2	5.2
2	6.2	6.4	38	8.4	5.5	5	5.6	5.6	5.1	4.6	5	5
3	15	6.4	15	9.6	13	4.5	5.6	5.9	4.8	4.7	5	4.8
4	11	6.1	10	8.1	7	4.2	6.6	5.8	4.6	4.9	4.9	7.7
5	7	7.1	8.7	16	5.7	4.2	5.8	12	4.8	4.6	4.8	8.3
6	6.3	5.9	8	37	5.5	5.7	5.7	5.3	5.3	4.8	5.1	5.6
7	22	5.9	7.3	12	7.5	17	5.9	4.8	5.3	4.8	5	5.1
8	9.8	7.2	7.4	9.4	6.7	13	6.4	4.9	4.9	4.5	5	5
9	7.1	46	12	7.8	5.3	8.6	5.4	5.2	4.7	17	4.8	4.9
10	6.6	84	13	24	5.4	26	5.4	5.3	4.3	5.4	12	24
11	12	83	7.5	45	5.1	7.2	9.1	5.1	4.4	5	5.1	6.9
12	22	17	6.7	97	5.2	5.8	7.3	5.3	4.5	5.1	4.7	5.6
13	8.7	11	6.2	36	4.9	6.8	11	5	4.8	5.6	4.7	5.3
14	7.5	9.3	6.5	13	5.2	6.2	8.4	11	5	5.1	4.6	5.1
15	6.7	8.7	6.6	78	16	5.5	12	7.4	4.7	4.9	4.8	5
16	6.5	7.9	6.4	21	7.3	5.4	9.7	8.8	4.8	4.9	4.6	5.3
17	17	7.2	6.2	12	5.5	5.7	7.1	6.1	10	4.9	4.6	5.5
18	8.6	6.8	6.3	10	5.1	6.6	9.3	5.4	19	5	4.7	4.9
19	6.8	6.4	6	9.1	4.9	4.9	7.9	5.5	5	8.1	4.7	4.8
20	6.3	6.1	6	8.4	5	5.2	6.3	11	5.3	5.4	4.7	4.8
21	6	25	7.5	7.6	4.8	6.5	6	12	4.8	5.2	4.9	4.7
22	5.9	13	6.3	7	4.7	6.1	6.1	6	4.7	5.3	4.9	5.6
23	5.8	78	6	6.8	4.9	5.6	5.4	5.8	7	5.6	4.7	4.8
24	6	14	13	6.2	5	10	5.4	5.7	6.9	5	4.7	4.6
25	18	9.9	9.8	6.3	4.7	6.4	5.5	5.4	4.7	5.1	4.7	4.5
26	11	8.1	7.3	6.5	8.4	71	6.6	5.6	4.4	4.9	4.8	4.5
27	17	7.1	129	8	5.2	18	14	6.5	4.4	4.8	18	4.6
28	26	6.5	36	6.3	4.2	7.5	41	5.2	4.2	4.8	32	4.4
29	9.5	---	15	5.9	4.2	6.6	6.7	5.3	4.2	4.9	6.1	4.5
30	7.9	---	11	5.6	4.3	5.7	5.5	5.5	4.3	4.9	5.4	4.6
31	7.1	---	15	---	4.4	---	5.2	8.5	---	5.1	---	4.7
TOTAL	319.1	506.8	465.7	537.2	187.3	295.6	253.5	202.3	166.7	169.6	194.2	180.3
MEAN	10.3	18.1	15	17.9	6.04	9.85	8.18	6.53	5.56	5.47	6.47	5.82
MAX	26	84	129	97	16	71	41	12	19	17	32	24
MIN	5.8	5.9	6	5.6	4.2	4.2	5.2	4.8	4.2	4.5	4.6	4.4
mgd	6.66	11.70	9.69	11.57	3.90	6.37	5.29	4.22	3.59	3.54	4.18	3.76
4 yr avg.	9.35			7.28			4.37			3.83		

1995	cfs											
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	4.6	5.7	5.8	4	25	5.3	3.9	6.2	5	3.3	5.5	4.6
2	4.5	5.6	5.2	3.9	7.6	6	3.7	4	4.2	3.6	23	4
3	4.5	6.5	6.2	4	4.6	4.1	3.7	4.2	3.6	6.4	7.6	3.8
4	4.5	6.5	5	4.1	4.4	3.9	3.7	5.6	3.6	9.4	4.9	3.9
5	4.5	5.3	10	4.1	4.4	4	3.8	4.5	4	37	4.2	3.9
6	30	4.9	6.6	3.9	4	4.2	4.2	7.1	3.9	5.9	6.5	4
7	8.8	4.9	5.8	3.9	3.9	7	4.1	4.6	3.8	4.3	36	6.4
8	5.6	4.6	54	3.8	4	4.5	3.6	11	3.9	3.9	7.3	4.3
9	4.9	4.6	10	3.9	74	4.5	3.6	4.8	3.7	3.7	5.3	5.8
10	4.7	4.8	7.6	3.9	16	4.1	4	4.3	3.8	3.7	4.8	3.9
11	14	4.6	6.4	4.1	11	5.9	4.2	4.3	3.7	3.7	24	3.8
12	8.3	4.5	5.7	7.4	6.2	5.9	4.1	4.1	4.1	3.6	6.3	3.9
13	5.7	4.4	5.4	4.2	5.4	4.3	4	4.1	17	4.1	5.9	3.9
14	40	4.4	5.1	3.8	13	4.3	4.2	4.1	5.5	5	7.3	3.7
15	33	20	4.9	3.7	6.2	4.1	4	4.4	4.1	3.6	4.7	3.6
16	13	37	4.7	3.7	6.5	4.1	4	4.3	10	3.5	4.4	8.6
17	8.1	9.9	4.9	8.6	5.6	3.9	4.2	4.1	16	3.4	4.2	4.2
18	7	7.1	4.4	4.8	12	4	4.8	4	4.3	3.4	4.1	8
19	9.2	6.2	4.3	4.3	18	4.6	4.1	3.9	4.1	3.4	3.9	41
20	6.9	5.9	11	4.7	5.9	4.1	3.9	16	3.9	4.4	4	8
21	5.9	5.5	9.3	17	5.1	5.5	3.9	4.7	6.4	3.5	4.1	5.9
22	5.5	5.3	4.9	4.6	4.9	4.2	4.5	4.5	10	3.4	3.9	5.1
23	5.3	5.2	4.8	6.6	5	4	4.9	4.2	4.3	3.5	4.5	4.6
24	5.3	5.3	4.7	4.9	4.8	3.7	4	3.9	3.7	3.5	3.9	4.4
25	5.1	4.7	4.3	4.6	4.8	4.2	4.1	4.3	3.7	3.6	3.7	4.2
26	4.8	4.4	4.3	4.1	4.7	3.8	4.1	4.1	4	3.6	3.7	4.1
27	4.8	11	6.2	3.9	4.3	4.1	3.9	4.1	3.7	20	3.7	4.1
28	22	9	4.4	4	4.8	4	4.4	3.9	3.6	5.8	17	4.1
29	10	---	4.3	3.7	4.3	3.8	3.7	4.2	3.6	4.1	9.1	4.1
30	7.4	---	4.3	4	4.2	5.8	3.7	4.2	3.3	3.9	5.1	4
31	6.2	---	4.1	---	4.5	---	7.2	4.2	---	4	---	5.5
TOTAL	304.1	207.8	228.6	146.2	289.1	135.9	128.2	155.9	158.5	178.2	232.6	183.4
MEAN	9.81	7.42	7.37	4.87	9.33	4.53	4.14	5.03	5.28	5.75	7.75	5.92
MAX	40	37	54	17	74	7	7.2	16	17	37	36	41
MIN	4.5	4.4	4.1	3.7	3.9	3.7	3.6	3.9	3.3	3.3	3.7	3.6
mgd	6.34	4.80	4.76	3.15	6.03	2.93	2.68	3.25	3.41	3.72	5.01	3.83
1/4 avg.	5.30			4.04			3.11			4.18		

1996	cfs											
DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	4.9	5.7	5.1	9	5.4	5.7	4.5	83	---	---	---	---
2	19	6.2	5	6.8	5.1	5.7	4.6	13	---	---	---	---
3	6.8	6.1	4.8	6	4.9	6	4.8	12	---	---	---	---
4	5.2	5.7	4.7	6.3	4.7	5.4	4.1	11	---	---	---	---
5	4.9	5.4	9.5	5.7	4.7	5.1	4.3	11	---	---	---	---
6	30	5.3	22	5.3	11	5.3	4.2	11	---	---	---	---
7	21	7.7	32	5.1	6.8	5.2	4.7	11	---	---	---	---
8	8.8	26	9.7	6.9	5.1	25	5.1	13	---	---	---	---
9	6.8	29	7.2	5.8	4.9	73	5	11	---	---	---	---
10	6.1	11	6.3	5.1	5	11	4.1	11	---	---	---	---
11	5.7	9.5	5.9	5	4.5	8.3	4.3	32	---	---	---	---
12	8.1	7.6	5.8	4.9	4.3	48	4.1	30	---	---	---	---
13	6.9	7	5.6	8.2	4.5	11	4.2	15	---	---	---	---
14	6.5	6.5	5.4	5.4	4.7	7.7	13	13	---	---	---	---
15	6.3	6.1	8.6	7.1	21	6	23	13	---	---	---	---
16	6	5.9	6.7	5.5	6.1	5.6	5.8	13	---	---	---	---
17	5.8	5.5	5.6	4.9	5.4	5.4	5	12	---	---	---	---
18	11	5.3	5.3	4.9	5.1	5.5	4.9	12	---	---	---	---
19	20	5.2	13	5	5	5.4	4.9	12	---	---	---	---
20	6.8	15	6.7	16	5.3	5.5	34	12	---	---	---	---
21	5.8	6.4	6.3	11	5.3	5.3	13	12	---	---	---	---
22	5.4	5.9	5.7	6.4	5.1	4.8	8.8	12	---	---	---	---
23	5.1	5.7	5.3	5.8	5.3	5	7.4	12	---	---	---	---
24	19	5.2	5.1	5.3	5.3	10	7	12	---	---	---	---
25	6.5	5	7.6	5.2	13	5.9	11	---	---	---	---	---
26	25	5	5.4	15	30	4.8	11	---	---	---	---	---
27	18	5.2	5	5.6	36	4.7	7.4	---	---	---	---	---
28	8.3	9.4	21	5.2	15	4.5	17	---	---	---	---	---
29	7	5.4	8.5	7.4	8.6	4.4	23	---	---	---	---	---
30	6.5	---	6.6	10	6.8	4.4	13	---	---	---	---	---
31	6.4	---	11	---	6.1	---	134	---	---	---	---	---
TOTAL	309.6	234.9	262.4	205.8	260	309.6	401.2	---	---	---	---	---
MEAN	9.99	8.1	8.46	6.86	8.39	10.3	12.9	---	---	---	---	---
MAX	30	29	32	16	36	73	134	---	---	---	---	---
MIN	4.9	5	4.7	4.9	4.3	4.4	4.1	---	---	---	---	---
More?	[Y/N DE	LT=Y]:										
[2J [	1;1H [1;	[2J [1;1	H [1;24r	[2J [1;1	H [?3lM	TABLES	[Y/N DE	ULT=Y]:				
->> Cl	osing ca	ure file.										

mgd 6.46 5.24 5.47 4.43 5.42 6.66 8.34 (10.0)

Yr avg. 5.72 5.50 8.34

Received: by ccmail
Received: from eagle by mclaren-hart.com (UUPC/extended 1.11) with UUCP;
Wed, 06 Nov 1996 09:20:38 PST
Received: from cosmail3.ctd.ornl.gov (cosmail3.ctd.ornl.gov [134.167.250.3]) by
e agle.ns.net (8.6.13/8.6.10) with ESMTP id JAA22390 for
<susan_flack@mclaren-hart. com>; Wed, 6 Nov 1996 09:15:32 -0800
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cosmail3.c td.ornl.gov (8.7.6/8.7.3) with SMTP id MAA10757 for
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Message-Id: <2.2.32.19961106172013.0069ed54@cosmail3.ctd.ornl.gov>
X-Sender: b3e@cosmail3.ctd.ornl.gov
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Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Date: Wed, 06 Nov 1996 12:20:13 -0500
To: susan_flack@mclaren-hart.com (Susan Flack)
From: eagle!ornl.gov!b3e (Bradley Skaggs)
Subject: Flow data

Susan,

Use the file oldflow2.xls rather than st1794.xls or st17f95.xls. I believe
oldflow2.xls is the most accurate.

Brad

Bradley E. Skaggs
Staff Environmental Engineer

Lockheed Martin Energy Systems, Inc.
Post Office Box 2009, MS-8098
Oak Ridge, Tennessee 37831-8098
Internet: b3e@ornl.gov

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OAK RIDGE Y-12 PLANT INFORMATION CONTROL FORM

C.O.B.

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Y/TS-1571	9/17/96		59

Unclassified Title: EAST FORK POPLAR CREEK FLOW DATA (1986 - 1993) AT STATION 17

Author's / Requestor's Name	Telephone No., Pager No. and Plant Address	Account Number
S. W. Wiley	6-0263, 417-5417, 9106, MS-8023	2366-0002

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PATENT OR INVENTION SIGNIFICANCE ☐ Yes ☒ No (Identify) Document will be published in proceedings ☐ Yes ☐ No
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OAK RIDGE
Y-12
PLANT

MARTIN MARIETTA

East Fork Poplar Creek Flow Data (1986 - 1993) at Station 17

B. E. Skaggs

September 1996

Environmental Management Department

Health, Safety, Environment, and Accountability Organization

Oak Ridge Y-12 Plant
Oak Ridge, Tennessee 37831
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~~Sheet1~~ ST1994.xls

	USGS (cfs)	mgd
1/1/94	5.7	3.7
1/2/94	6	3.9
1/3/94	13	8.4
1/4/94	9.7	6.3
1/5/94	6.5	4.2
1/6/94	6.1	3.9
1/7/94	21	13.6
1/8/94	8.5	5.5
1/9/94	6.6	4.3
1/10/94	6.3	4.1
1/11/94	12	7.8
1/12/94	20	12.9
1/13/94	7.7	5.0
1/14/94	6.8	4.4
1/15/94	6.3	4.1
1/16/94	6.2	4.0
1/17/94	16	10.3
1/18/94	7.6	4.9
1/19/94	6.4	4.1
1/20/94	6	3.9
1/21/94	5.9	3.8
1/22/94	5.8	3.7
1/23/94	5.7	3.7
1/24/94	5.9	3.8
1/25/94	17	11.0
1/26/94	9.4	6.1
1/27/94	16	10.3
1/28/94	24	15.5
1/29/94	8.2	5.3
1/30/94	7.1	4.6
1/31/94	6.6	4.3
2/1/94	6.4	4.1
2/2/94	6.1	3.9
2/3/94	6.1	3.9
2/4/94	5.9	3.8
2/5/94	6.6	4.3
2/6/94	5.8	3.7
2/7/94	5.8	3.7
2/8/94	6.7	4.3
2/9/94	45	29.1
2/10/94	82	53.0
2/11/94	82	53.0
2/12/94	15	9.7
2/13/94	9.7	6.3
2/14/94	8.1	5.2
2/15/94	7.7	5.0
2/16/94	7.1	4.6
2/17/94	6.7	4.3
2/18/94	6.4	4.1
2/19/94	6.1	3.9

6.2 avg Jan 94

9.35 vs. 8.8 1st Q

5.7 1994 annual avg.

1994

11.2 Feb. avg.

APPROVED FOR PUBLIC RELEASE

10/15/96

Technical Information Office Date

2/20/94	5.9	3.8
2/21/94	24	15.5
2/22/94	11	7.1
2/23/94	77	49.8
2/24/94	12	7.8
2/25/94	8.6	5.6
2/26/94	7.2	4.7
2/27/94	6.6	4.3
2/28/94	6.2	4.0
3/1/94	26	16.8
3/2/94	36	23.3
3/3/94	13	8.4
3/4/94	8.9	5.8
3/5/94	7.7	5.0
3/6/94	7.2	4.7
3/7/94	6.7	4.3
3/8/94	6.8	4.4
3/9/94	12	7.8
3/10/94	11	7.1
3/11/94	6.9	4.5
3/12/94	6.4	4.1
3/13/94	6	3.9
3/14/94	6.2	4.0
3/15/94	6.3	4.1
3/16/94	6.1	3.9
3/17/94	6	3.9
3/18/94	6.1	3.9
3/19/94	5.9	3.8
3/20/94	5.9	3.8
3/21/94	6.9	4.5
3/22/94	6.1	3.9
3/23/94	5.9	3.8
3/24/94	12	7.8
3/25/94	8.5	5.5
3/26/94	6.8	4.4
3/27/94	129	83.4
3/28/94	34	22.0
3/29/94	13	8.4
3/30/94	9.4	6.1
3/31/94	13	8.4
4/1/94	8	5.2
4/2/94	7.4	4.8
4/3/94	8.5	5.5
4/4/94	7.3	4.7
4/5/94	15	9.7
4/6/94	36	23.3
4/7/94	10	6.5
4/8/94	8.2	5.3
4/9/94	7.1	4.6
4/10/94	23	14.9
4/11/94	43	27.8

9.2 March avg.

9.2 Apr. avg.

7.28 vs 60 2nd Q

4/12/94	---	
4/13/94	34	22.0
4/14/94	11	7.1
4/15/94	77	49.8
4/16/94	19	12.3
4/17/94	10	6.5
4/18/94	8.7	5.6
4/19/94	8	5.2
4/20/94	7.4	4.8
4/21/94	6.9	4.5
4/22/94	6.6	4.3
4/23/94	6.4	4.1
4/24/94	6	3.9
4/25/94	6.1	3.9
4/26/94	6.2	4.0
4/27/94	7.3	4.7
4/28/94	6.1	3.9
4/29/94	5.8	3.7
4/30/94	5.6	3.6
5/1/94	6.4	4.1
5/2/94	5.6	3.6
5/3/94	12	7.8
5/4/94	6.6	4.3
5/5/94	5.7	3.7
5/6/94	5.5	3.6
5/7/94	7.2	4.7
5/8/94	6.4	4.1
5/9/94	5.4	3.5
5/10/94	5.5	3.6
5/11/94	5.3	3.4
5/12/94	5.3	3.4
5/13/94	5.2	3.4
5/14/94	5.3	3.4
5/15/94	15	9.7
5/16/94	6.8	4.4
5/17/94	5.6	3.6
5/18/94	5.2	3.4
5/19/94	5.1	3.3
5/20/94	5.2	3.4
5/21/94	5.1	3.3
5/22/94	5	3.2
5/23/94	5.1	3.3
5/24/94	5.2	3.4
5/25/94	5.0	3.2
5/26/94	7.8	5.0
5/27/94	5.3	3.4
5/28/94	4.7	3.0
5/29/94	4.6	3.0
5/30/94	4.7	3.0
5/31/94	4.8	3.1
6/1/94	5.0	3.2

3.9 May avg.

4.37 vs.

4.9 Jun 94 avg.

6/2/94	5.2	3.4
6/3/94	4.9	3.2
6/4/94	4.7	3.0
6/5/94	4.7	3.0
6/6/94	5.6	3.6
6/7/94	17.0	11.0
6/8/94	12.0	7.8
6/9/94	7.9	5.1
6/10/94	25.0	16.2
6/11/94	6.7	4.3
6/12/94	5.7	3.7
6/13/94	6.5	4.2
6/14/94	6.0	3.9
6/15/94	5.5	3.6
6/16/94	5.5	3.6
6/17/94	5.7	3.7
6/18/94	6.3	4.1
6/19/94	5.1	3.3
6/20/94	5.3	3.4
6/21/94	6.2	4.0
6/22/94	5.9	3.8
6/23/94	5.6	3.6
6/24/94	9.4	6.1
6/25/94	6.1	3.9
6/26/94	---	
6/27/94	17.0	11.0
6/28/94	6.9	4.5
6/29/94	6.3	4.1
6/30/94	5.7	3.7
7/1/94	5.6	3.6
7/2/94	5.6	3.6
7/3/94	5.6	3.6
7/4/94	6.3	4.1
7/5/94	5.8	3.7
7/6/94	5.7	3.7
7/7/94	5.8	3.7
7/8/94	6.1	3.9
7/9/94	5.4	3.5
7/10/94	5.4	3.5
7/11/94	8.3	5.4
7/12/94	6.7	4.3
7/13/94	9.4	6.1
7/14/94	7.6	4.9
7/15/94	12.0	7.8
7/16/94	8.6	5.6
7/17/94	6.6	4.3
7/18/94	8.7	5.6
7/19/94	7.2	4.7
7/20/94	6.1	3.9
7/21/94	5.9	3.8
7/22/94	5.9	3.8

5.0 July avg.

4.3 3rd Q

4.37 vs.

7/23/94	5.5	3.6
7/24/94	5.4	3.5
7/25/94	5.5	3.6
7/26/94	6.3	4.1
7/27/94	12.0	7.8
7/28/94	40.0	25.9
7/29/94	6.3	4.1
7/30/94	5.5	3.6
7/31/94	5.3	3.4
8/1/94	5.5	3.6
8/2/94	5.6	3.6
8/3/94	5.8	3.7
8/4/94	5.7	3.7
8/5/94	11.0	7.1
8/6/94	5.4	3.5
8/7/94	5.1	3.3
8/8/94	5.1	3.3
8/9/94	5.4	3.5
8/10/94	5.4	3.5
8/11/94	5.3	3.4
8/12/94	5.4	3.5
8/13/94	5.2	3.4
8/14/94	11.0	7.1
8/15/94	6.9	4.5
8/16/94	8.0	5.2
8/17/94	6.0	3.9
8/18/94	5.5	3.6
8/19/94	5.5	3.6
8/20/94	10.0	6.5
8/21/94	11.0	7.1
8/22/94	5.9	3.8
8/23/94	5.8	3.7
8/24/94	5.7	3.7
8/25/94	5.5	3.6
8/26/94	5.6	3.6
8/27/94	6.3	4.1
8/28/94	5.3	3.4
8/29/94	5.4	3.5
8/30/94	5.5	3.6
8/31/94	8.0	5.2
9/1/94	5.7	3.7
9/2/94	5.3	3.4
9/3/94	5.0	3.2
9/4/94	5.0	3.2
9/5/94	5.0	3.2
9/6/94	5.4	3.5
9/7/94	5.4	3.5
9/8/94	5.2	3.4
9/9/94	5.0	3.2
9/10/94	4.7	3.0
9/11/94	4.8	3.1

4.1 Aug avg.

3.7 Sept. avg.

9/12/94	4.9	3.2
9/13/94	5.1	3.3
9/14/94	5.2	3.4
9/15/94	5.0	3.2
9/16/94	5.1	3.3
9/17/94	9.6	6.2
9/18/94	18.0	11.6
9/19/94	5.2	3.4
9/20/94	5.4	3.5
9/21/94	5.0	3.2
9/22/94	5.0	3.2
9/23/94	6.5	4.2
9/24/94	6.5	4.2
9/25/94	5.0	3.2
9/26/94	4.8	3.1
9/27/94	4.8	3.1
9/28/94	4.6	3.0
9/29/94	4.7	3.0
9/30/94	4.7	3.0
10/1/94	4.7	3.0
10/2/94	4.6	3.0
10/3/94	4.7	3.0
10/4/94	4.9	3.2
10/5/94	4.6	3.0
10/6/94	4.8	3.1
10/7/94	4.8	3.1
10/8/94	4.5	2.9
10/9/94	17.0	11.0
10/10/94	5.4	3.5
10/11/94	5.0	3.2
10/12/94	5.1	3.3
10/13/94	5.6	3.6
10/14/94	5.1	3.3
10/15/94	4.9	3.2
10/16/94	4.9	3.2
10/17/94	4.9	3.2
10/18/94	5.0	3.2
10/19/94	8.1	5.2
10/20/94	5.4	3.5
10/21/94	5.2	3.4
10/22/94	5.3	3.4
10/23/94	5.6	3.6
10/24/94	5.0	3.2
10/25/94	5.1	3.3
10/26/94	4.9	3.2
10/27/94	4.8	3.1
10/28/94	4.8	3.1
10/29/94	4.9	3.2
10/30/94	4.9	3.2
10/31/94	5.1	3.3
11/1/94	5.2	3.4

Oct avg. 3.5

3.8 4th Q

3.83 vs.

Nov. avg. 4.2

11/2/94	5.0	3.2
11/3/94	5.0	3.2
11/4/94	4.9	3.2
11/5/94	4.8	3.1
11/6/94	5.1	3.3
11/7/94	5.0	3.2
11/8/94	5.0	3.2
11/9/94	4.8	3.1
11/10/94	12.0	7.8
11/11/94	5.1	3.3
11/12/94	4.7	3.0
11/13/94	4.7	3.0
11/14/94	4.6	3.0
11/15/94	4.8	3.1
11/16/94	4.6	3.0
11/17/94	4.6	3.0
11/18/94	4.7	3.0
11/19/94	4.7	3.0
11/20/94	4.7	3.0
11/21/94	4.9	3.2
11/22/94	4.9	3.2
11/23/94	4.7	3.0
11/24/94	4.7	3.0
11/25/94	4.7	3.0
11/26/94	4.8	3.1
11/27/94	18.0	11.6
11/28/94	32.0	20.7
11/29/94	6.1	3.9
11/30/94	5.4	3.5
12/1/94	5.2	3.4
12/2/94	5.0	3.2
12/3/94	4.8	3.1
12/4/94	7.7	5.0
12/5/94	8.3	5.4
12/6/94	5.6	3.6
12/7/94	5.1	3.3
12/8/94	5.0	3.2
12/9/94	4.9	3.2
12/10/94	24.0	15.5
12/11/94	6.9	4.5
12/12/94	5.6	3.6
12/13/94	5.3	3.4
12/14/94	5.1	3.3
12/15/94	5.0	3.2
12/16/94	5.3	3.4
12/17/94	5.5	3.6
12/18/94	4.9	3.2
12/19/94	4.8	3.1
12/20/94	4.8	3.1
12/21/94	4.7	3.0
12/22/94	5.6	3.6

3.8 avg. Dec 94

12/23/94	4.8	3.1
12/24/94	4.6	3.0
12/25/94	4.5	2.9
12/26/94	4.5	2.9
12/27/94	4.6	3.0
12/28/94	4.4	2.8
12/29/94	4.5	2.9
12/30/94	4.6	3.0
12/31/94	4.7	3.0

ST17F95.XLS ? ? ?

	A	B	C	D	E	K
1		USGS (cfs)		SWHISS (MGD)		12.4
2	1/1/95	4.6	3.0			13.4
3	1/2/95	4.5	2.9			13.7
4	1/3/95	4.5	2.9			14
5	1/4/95	4.5	2.9	3.3		14.4
6	1/5/95	4.5	2.9	3.2		15.2
7	1/6/95	30	19.4	20.5		17.6
8	1/7/95	8.8	5.7	6.5		21.5
9	1/8/95	5.6	3.6	4.4		30.5
10	1/9/95	4.9	3.2	3.9		41.4
11	1/10/95	4.7	3.0	3.9		63.4
12	1/11/95	14	9.0	9.7		87.9
13	1/12/95	8.3	5.4	5.7		104.1
14	1/13/95	5.7	3.7	4.5		100.3
15	1/14/95	40	25.9	27.2		90.3
16	1/15/95	33	21.3	21.6		82.6
17	1/16/95	13	8.4	8.1		77.9
18	1/17/95	8.1	5.2	5.5		77.8
19	1/18/95	7	4.5	5.0		74.4
20	1/19/95	9.2	5.9	6.2		68
21	1/20/95	6.9	4.5	5.0		59.8
22	1/21/95	5.9	3.8	4.6		52.1
23	1/22/95	5.5	3.6	4.4		48
24	1/23/95	5.3	3.4	4.4		47.8
25	1/24/95	5.3	3.4	4.4		67.7
26	1/25/95	5.1	3.3	4.2		109.5
27	1/26/95	4.8	3.1	3.9		130.6
28	1/27/95	4.8	3.1	3.9		130.6
29	1/28/95	22	14.2	14.9		130.6
30	1/29/95	10	6.5	6.8		130.6
31	1/30/95	7.4	4.8	5.2		130.6
32	1/31/95	6.2	4.0	4.7	214	105.2
33	2/1/95	5.7	3.7	4.4		87.9
34	2/2/95	5.6	3.6	4.5		72.8
35	2/3/95	6.5	4.2	5.0		61.5
36	2/4/95	6.5	4.2	4.8		51.7
37	2/5/95	5.3	3.4	4.4		43
38	2/6/95	4.9	3.2	4.0		39.3
39	2/7/95	4.9	3.2	4.0		35.3
40	2/8/95	4.6	3.0	3.9		33.5
41	2/9/95	4.6	3.0	3.9		32.4
42	2/10/95	4.8	3.1	3.9		30.9
43	2/11/95	4.6	3.0	3.9		29.4
44	2/12/95	4.5	2.9	3.9		28.3
45	2/13/95	4.4	2.8	3.9		27.6
46	2/14/95	4.4	2.8	3.9		28
47	2/15/95	20	12.9	13.6		30.6
48	2/16/95	37	23.9	24.1		35
49	2/17/95	9.9	6.4	6.6		41
50	2/18/95	7.1	4.6	5.1		49.7
51	2/19/95	6.2	4.0	4.6		54.5
52	2/20/95	5.9	3.8	4.6		55.2
53	2/21/95	5.5	3.6	4.4		54.5
54	2/22/95	5.3	3.4	4.3		53
55	2/23/95	5.2	3.4	4.3		48
56	2/24/95	5.3	3.4	4.2		41.9
57	2/25/95	4.7	3.0	3.9		43.3
58	2/26/95	4.4	2.8	3.9		54.6
59	2/27/95	11	7.1	7.8		75.4
60	2/28/95	9	5.8	6.1	155.9	101.5
61	3/1/95	5.8	3.7	4.5		113.3
62	3/2/95	5.2	3.4	4.3		116.2
63	3/3/95	6.2	4.0	4.6		110.7

US 6.3 1-95
SW 7.3 avg.

US 5.3 1995
SW 5.8
5.3

US 4.2 1995
SW 5.4 1995 6mo. only

1995-96

US 4.8 2-95
SW 5.6 avg.

US 4.8 3-95
SW 4.5 avg.

	A	B	C	D	E	K
64	3/4/95	5	3.2	4		98.9
65	3/5/95	10	6.5	6.9		83.7
66	3/6/95	6.6	4.3			70
67	3/7/95	5.8	3.7			60.3
68	3/8/95	54	34.9			52.7
69	3/9/95	10	6.5			47.1
70	3/10/95	7.6	4.9	5.4		43.2
71	3/11/95	6.4	4.1	4.9		41.4
72	3/12/95	5.7	3.7	4.5		43.2
73	3/13/95	5.4	3.5	4.4		46.3
74	3/14/95	5.1	3.3	4.3		54.2
75	3/15/95	4.9	3.2	4		62.8
76	3/16/95	4.7	3.0	4		70.1
77	3/17/95	4.9	3.2	4		74.9
78	3/18/95	4.4	2.8	3.8		74.2
79	3/19/95	4.3	2.8	3.6		71.2
80	3/20/95	11	7.1	7.8		70
81	3/21/95	9.3	6.0	6.5		69.5
82	3/22/95	4.9	3.2	4		67.2
83	3/23/95	4.8	3.1	4		64
84	3/24/95	4.7	3.0	3.9		62.9
85	3/25/95	4.3	2.8	3.6		63.5
86	3/26/95	4.3	2.8	3.5		63.8
87	3/27/95	6.2	4.0	4.5		61.7
88	3/28/95	4.4	2.8	3.7		57.5
89	3/29/95	4.3	2.8	3.6		52.5
90	3/30/95	4.3	2.8	3.6		49.1
91	3/31/95	4.1	2.6		138.1885	46.3
92	4/1/95	4	2.6	3.1		43.4
93	4/2/95	3.9	2.5	3.1		41.6
94	4/3/95	4	2.6	3.2		40.5
95	4/4/95	4.1	2.6			39.8
96	4/5/95	4.1	2.6			38.5
97	4/6/95	3.9	2.5	3.2		60.10313
98	4/7/95	3.9	2.5	3.1		
99	4/8/95	3.8	2.5	2.9		
100	4/9/95	3.9	2.5	2.9		
101	4/10/95	3.9	2.5	2.9		
102	4/11/95	4.1	2.6			
103	4/12/95	7.4	4.8	5.2		
104	4/13/95	4.2	2.7	3.5		
105	4/14/95	3.8	2.5	2.9		
106	4/15/95	3.7	2.4	2.8		
107	4/16/95	3.7	2.4	2.8		
108	4/17/95	8.6	5.6	5.8		
109	4/18/95	4.8	3.1	3.9		
110	4/19/95	4.3	2.8	3.5		
111	4/20/95	4.7	3.0	3.8		
112	4/21/95	17	11.0	12.4		
113	4/22/95	4.6	3.0	3.8		
114	4/23/95	6.6	4.3	4.8		
115	4/24/95	4.9	3.2	4		
116	4/25/95	4.6	3.0	3.8		
117	4/26/95	4.1	2.6	3.4		
118	4/27/95	3.9	2.5	3.1		
119	4/28/95	4	2.6	3.1		
120	4/29/95	3.7	2.4	2.8		
121	4/30/95	4	2.6	3.1	114.3333	
122	5/1/95	25	16.2	16.6		
123	5/2/95	7.6	4.9	5.4		
124	5/3/95	4.6	3.0	3.8		
125	5/4/95	4.4	2.8	3.6		
126	5/5/95	4.4	2.8	3.7		

US 3.1 4-95
SW 3.8 avg.

US 4.1 2Q95
SW 4.9
4.04

US 6.0 5-95
SW 6.5 avg.

	A	B	C	D	E	K
127	5/6/95	4	2.6	3.2		
128	5/7/95	3.9	2.5	3.1		
129	5/8/95	4	2.6	3.2		
130	5/9/95	74	47.8	42.2		
131	5/10/95	16	10.3	11.1		
132	5/11/95	11	7.1	7.4		
133	5/12/95	6.2	4.0	4.6		
134	5/13/95	5.4	3.5	4.3		
135	5/14/95	13	8.4	9		
136	5/15/95	6.2	4.0	4.7		
137	5/16/95	6.5	4.2	4.7		
138	5/17/95	5.6	3.6	4.4		
139	5/18/95	12	7.8	8.5		
140	5/19/95	18	11.6	12.3		
141	5/20/95	5.9	3.8	4.5		
142	5/21/95	5.1	3.3	4.1		
143	5/22/95	4.9	3.2	4		
144	5/23/95	5	3.2	4		
145	5/24/95	4.8	3.1	4		
146	5/25/95	4.8	3.1	4		
147	5/26/95	4.7	3.0	3.9		
148	5/27/95	4.3	2.8	3.6		
149	5/28/95	4.8	3.1	3.9		
150	5/29/95	4.3	2.8	3.6		
151	5/30/95	4.2	2.7	3.5		
152	5/31/95	4.5	2.9	3.7	202.6	
153	6/1/95	5.3	3.4	4.2		
154	6/2/95	6	3.9	4.5		
155	6/3/95	4.1	2.6	3.4		
156	6/4/95	3.9	2.5	3.1		
157	6/5/95	4	2.6	3		
158	6/6/95	4.2	2.7	3.3		
159	6/7/95	7	4.5	5		
160	6/8/95	4.5	2.9	3.6		
161	6/9/95	4.5	2.9	3.6		
162	6/10/95	4.1	2.6	3.1		
163	6/11/95	5.9	3.8	4.2		
164	6/12/95	5.9	3.8	4.5		
165	6/13/95	4.3	2.8	3.6		
166	6/14/95	4.3	2.8			
167	6/15/95	4.1	2.6	3.4		
168	6/16/95	4.1	2.6	3		
169	6/17/95	3.9	2.5	3.1		
170	6/18/95	4	2.6	3.5		
171	6/19/95	4.6	3.0	3.3		
172	6/20/95	4.1	2.6			
173	6/21/95	5.5	3.6			
174	6/22/95	4.2	2.7			
175	6/23/95	4	2.6			
176	6/24/95	3.7	2.4			
177	6/25/95	4.2	2.7			
178	6/26/95	3.8	2.5			
179	6/27/95	4.1	2.6			
180	6/28/95	4	2.6			
181	6/29/95	3.8	2.5			
182	6/30/95	5.8	3.7		2.9	
183	7/1/95	3.9	2.5			
184	7/2/95	3.7	2.4			
185	7/3/95	3.7	2.4			
186	7/4/95	3.7	2.4			
187	7/5/95	3.8	2.5			
188	7/6/95	4.2	2.7			
189	7/7/95	4.1	2.6			

US 2.9 6-95 avgs.
SW 3.6

2.7 7-95 avg.

3.1 3Q95
3.11

	A	B	C	D	E	K
190	7/8/95	3.6	2.3			
191	7/9/95	3.6	2.3			
192	7/10/95	4	2.6			
193	7/11/95	4.2	2.7			
194	7/12/95	4.1	2.6			
195	7/13/95	4.0	2.6			
196	7/14/95	4.2	2.7			
197	7/15/95	4.0	2.6			
198	7/16/95	4.0	2.6			
199	7/17/95	4.2	2.7			
200	7/18/95	4.8	3.1			
201	7/19/95	4.1	2.6			
202	7/20/95	3.9	2.5			
203	7/21/95	3.9	2.5			
204	7/22/95	4.5	2.9			
205	7/23/95	4.9	3.2			
206	7/24/95	4.0	2.6			
207	7/25/95	4.1	2.6			
208	7/26/95	4.1	2.6			
209	7/27/95	3.9	2.5			
210	7/28/95	4.4	2.8			
211	7/29/95	3.7	2.4			
212	7/30/95	3.7	2.4			
213	7/31/95	7.2	4.7		82.9	
214	8/1/95	6.2	4.0			
215	8/2/95	4	2.6			
216	8/3/95	4.2	2.7			
217	8/4/95	5.6	3.6			
218	8/5/95	4.5	2.9			
219	8/6/95	7.1	4.6			
220	8/7/95	4.6	3.0			
221	8/8/95	11	7.1			
222	8/9/95	4.8	3.1			
223	8/10/95	4.3	2.8			
224	8/11/95	4.3	2.8			
225	8/12/95	4.1	2.6			
226	8/13/95	4.1	2.6			
227	8/14/95	4.1	2.6			
228	8/15/95	4.4	2.8			
229	8/16/95	4.3	2.8			
230	8/17/95	4.1	2.6			
231	8/18/95	4.0	2.6			
232	8/19/95	3.9	2.5			
233	8/20/95	16.0	10.3			
234	8/21/95	4.7	3.0			
235	8/22/95	4.5	2.9			
236	8/23/95	4.2	2.7			
237	8/24/95	3.9	2.5			
238	8/25/95	4.3	2.8			
239	8/26/95	4.1	2.6			
240	8/27/95	4.1	2.6			
241	8/28/95	3.9	2.5			
242	8/29/95	4.2	2.7			
243	8/30/95	4.2	2.7			
244	8/31/95	4.2	2.7		100.8	
245	9/1/95	5.0	3.2			
246	9/2/95	4.2	2.7			
247	9/3/95	3.6	2.3			
248	9/4/95	3.6	2.3			
249	9/5/95	4.0	2.6			
250	9/6/95	3.9	2.5			
251	9/7/95	3.8	2.5			
252	9/8/95	3.9	2.5			

3.3 8-95 avg.

3.4 9-95 avg.

	A	B	C	D	E	K
253	9/9/95	3.7	2.4			
254	9/10/95	3.8	2.5			
255	9/11/95	3.7	2.4			
256	9/12/95	4.1	2.6			
257	9/13/95	17.0	11.0			
258	9/14/95	5.5	3.6			
259	9/15/95	4.1	2.6			
260	9/16/95	10.0	6.5			
261	9/17/95	16.0	10.3			
262	9/18/95	4.3	2.8			
263	9/19/95	4.1	2.6			
264	9/20/95	3.9	2.5			
265	9/21/95	6.4	4.1			
266	9/22/95	10	6.5			
267	9/23/95	4.3	2.8			
268	9/24/95	3.7	2.4			
269	9/25/95	3.7	2.4			
270	9/26/95	4	2.6			
271	9/27/95	3.7	2.4			
272	9/28/95	3.6	2.3			
273	9/29/95	3.6	2.3			
274	9/30/95	3.3	2.1	102.4		
275	10/1/95	3.3	2.1			
276	10/2/95	3.6	2.3			
277	10/3/95	6.4	4.1			
278	10/4/95	9.4	6.1			
279	10/5/95	37	23.9			
280	10/6/95	5.9	3.8			
281	10/7/95	4.3	2.8			
282	10/8/95	3.9	2.5			
283	10/9/95	3.7	2.4			
284	10/10/95	3.7	2.4			
285	10/11/95	3.7	2.4			
286	10/12/95	3.6	2.3			
287	10/13/95	4.1	2.6			
288	10/14/95	5	3.2			
289	10/15/95	3.6	2.3			
290	10/16/95	3.5	2.3			
291	10/17/95	3.4	2.2			
292	10/18/95	3.4	2.2			
293	10/19/95	3.4	2.2			
294	10/20/95	4.4	2.8			
295	10/21/95	3.5	2.3			
296	10/22/95	3.4	2.2			
297	10/23/95	3.5	2.3			
298	10/24/95	3.5	2.3			
299	10/25/95	3.6	2.3			
300	10/26/95	3.6	2.3			
301	10/27/95	20	12.9			
302	10/28/95	5.8	3.7			
303	10/29/95	4.1	2.6			
304	10/30/95	3.9	2.5			
305	10/31/95	4	2.6			
306	11/1/95	5.5	3.6			
307	11/2/95	23	14.9			
308	11/3/95	7.6	4.9			
309	11/4/95	4.9	3.2			
310	11/5/95	4.2	2.7			
311	11/6/95	6.5	4.2			
312	11/7/95	36	23.3			
313	11/8/95	7.3	4.7			
314	11/9/95	5.3	3.4			
315	11/10/95	4.8	3.1			

3.7 10-95 avg.

4.2 4Q95

4.18

5.0 11-95 avg

	A	B	C	D	E	K
316	11/11/95	24	15.5			
317	11/12/95	6.3	4.1			
318	11/13/95	5.9	3.8			
319	11/14/95	7.3	4.7			
320	11/15/95	4.7	3.0			
321	11/16/95	4.4	2.8			
322	11/17/95	4.2	2.7			
323	11/18/95	4.1	2.6			
324	11/19/95	3.9	2.5			
325	11/20/95	4	2.6			
326	11/21/95	4.1	2.6			
327	11/22/95	3.9	2.5			
328	11/23/95	4.5	2.9			
329	11/24/95	3.9	2.5			
330	11/25/95	3.7	2.4			
331	11/26/95	3.7	2.4			
332	11/27/95	3.7	2.4			
333	11/28/95	17	11.0			
334	11/29/95	9.1	5.9			
335	11/30/95	5.1	3.3	150.3		
336	12/1/95	4.6	3.0			
337	12/2/95	4	2.6			
338	12/3/95	3.8	2.5			
339	12/4/95	3.9	2.5			
340	12/5/95	3.9	2.5			
341	12/6/95	4	2.6			
342	12/7/95	6.4	4.1			
343	12/8/95	4.3	2.8			
344	12/9/95	5.8	3.7			
345	12/10/95	3.9	2.5			
346	12/11/95	3.8	2.5			
347	12/12/95	3.9	2.5			
348	12/13/95	3.9	2.5			
349	12/14/95	3.7	2.4			
350	12/15/95	3.6	2.3			
351	12/16/95	8.6	5.6			
352	12/17/95	4.2	2.7			
353	12/18/95	8	5.2			
354	12/19/95	41	26.5			
355	12/20/95	7.8	5.0			
356	12/21/95	5.6	3.6			
357	12/22/95	4.8	3.1			
358	12/23/95	4.3	2.8			
359	12/24/95	4.1	2.6			
360	12/25/95	4	2.6			
361	12/26/95	3.9	2.5			
362	12/27/95	3.9	2.5			
363	12/28/95	3.9	2.5			
364	12/29/95	3.9	2.5			
365	12/30/95	3.8	2.5			
366	12/31/95	5.2	3.4			
367	1/1/96	4.7	3.0			
368	1/2/96	19	12.3			
369	1/3/96	6.5	4.2			
370	1/4/96	4.9	3.2			
371	1/5/96	4.6	3.0			
372	1/6/96	30	19.4			
373	1/7/96	20	12.9			
374	1/8/96	8.5	5.5			
375	1/9/96	6.5	4.2			
376	1/10/96	5.9	3.8			
377	1/11/96	5.4	3.5			
378	1/12/96	7.8	5.0			

3.8 12-95 avg.

6.2 1-96 avg

5.7 1Q96
5.72
(6.5 1996 8 mo. only)

	A	B	C	D	E	K
379	1/13/96	6.6	4.3			
380	1/14/96	6.2	4.0			
381	1/15/96	6	3.9			
382	1/16/96	5.8	3.7			
383	1/17/96	5.6	3.6			
384	1/18/96	11	7.1			
385	1/19/96	20	12.9			
386	1/20/96	6.5	4.2			
387	1/21/96	5.6	3.6			
388	1/22/96	5.1	3.3			
389	1/23/96	4.8	3.1			
390	1/24/96	19	12.3			
391	1/25/96	6	3.9			
392	1/26/96	24	15.5			
393	1/27/96	17	11.0			
394	1/28/96	7.6	4.9			
395	1/29/96	6.4	4.1			
396	1/30/96	5.9	3.8			
397	1/31/96	5.8	3.7			
398	2/1/96	5.7	3.7			
399	2/2/96	6.2	4.0			
400	2/3/96	6.1	3.9			
401	2/4/96	5.7	3.7			
402	2/5/96	5.4	3.5			
403	2/6/96	5.3	3.4			
404	2/7/96	7.7	5.0			
405	2/8/96	26	16.8			
406	2/9/96	29	18.7			
407	2/10/96	11	7.1			
408	2/11/96	9.5	6.1			
409	2/12/96	7.6	4.9			
410	2/13/96	7	4.5			
411	2/14/96	6.5	4.2			
412	2/15/96	6.1	3.9			
413	2/16/96	5.9	3.8			
414	2/17/96	5.5	3.6			
415	2/18/96	5.3	3.4			
416	2/19/96	5.2	3.4			
417	2/20/96	15	9.7			
418	2/21/96	6.4	4.1			
419	2/22/96	5.9	3.8			
420	2/23/96	5.7	3.7			
421	2/24/96	5.2	3.4			
422	2/25/96	5	3.2			
423	2/26/96	5	3.2			
424	2/27/96	5.2	3.4			
425	2/28/96	9.4	6.1			
426	2/29/96	5.4	3.5	151.8		
427	3/1/96	5.1	3.3			
428	3/2/96	5.0	3.2			
429	3/3/96	4.8	3.1			
430	3/4/96	4.7	3.0			
431	3/5/96	9.5	6.1			
432	3/6/96	22.0	14.2			
433	3/7/96	32.0	20.7			
434	3/8/96	9.7	6.3			
435	3/9/96	7.2	4.7			
436	3/10/96	6.3	4.1			
437	3/11/96	5.9	3.8			
438	3/12/96	5.8	3.7			
439	3/13/96	5.6	3.6			
440	3/14/96	5.4	3.5			
441	3/15/96	8.6	5.6			

5.2 2-96 avg

5.5 3-96 avg

	A	B	C	D	E	K
442	3/16/96	6.7	4.3			
443	3/17/96	5.6	3.6			
444	3/18/96	5.3	3.4			
445	3/19/96	13.0	8.4			
446	3/20/96	6.7	4.3			
447	3/21/96	6.3	4.1			
448	3/22/96	5.7	3.7			
449	3/23/96	5.3	3.4			
450	3/24/96	5.1	3.3			
451	3/25/96	7.6	4.9			
452	3/26/96	5.4	3.5			
453	3/27/96	5.0	3.2			
454	3/28/96	21.0	13.6			
455	3/29/96	8.5	5.5			
456	3/30/96	6.6	4.3			
457	3/31/96	11.0	7.1			
458	4/1/96	9	5.8			
459	4/2/96	6.8	4.4			
460	4/3/96	6	3.9			
461	4/4/96	6.3	4.1			
462	4/5/96	5.7	3.7			
463	4/6/96	5.3	3.4			
464	4/7/96	5.1	3.3			
465	4/8/96	6.9	4.5			
466	4/9/96	5.8	3.7			
467	4/10/96	5.1	3.3			
468	4/11/96	5	3.2			
469	4/12/96	4.9	3.2			
470	4/13/96	8.2	5.3			
471	4/14/96	5.4	3.5			
472	4/15/96	7.1	4.6			
473	4/16/96	5.5	3.6			
474	4/17/96	4.9	3.2			
475	4/18/96	4.9	3.2			
476	4/19/96	5	3.2			
477	4/20/96	16	10.3			
478	4/21/96	11	7.1			
479	4/22/96	6.4	4.1			
480	4/23/96	5.8	3.7			
481	4/24/96	5.3	3.4			
482	4/25/96	5.2	3.4			
483	4/26/96	15	9.7			
484	4/27/96	5.6	3.6			
485	4/28/96	5.2	3.4			
486	4/29/96	7.4	4.8			
487	4/30/96	10	6.5			
488	5/1/96	5.4	3.5			
489	5/2/96	5.1	3.3			
490	5/3/96	4.9	3.2			
491	5/4/96	4.7	3.0			
492	5/5/96	4.7	3.0			
493	5/6/96	11	7.1			
494	5/7/96	6.8	4.4			
495	5/8/96	5.1	3.3			
496	5/9/96	4.9	3.2			
497	5/10/96	5	3.2			
498	5/11/96	4.5	2.9			
499	5/12/96	4.3	2.8			
500	5/13/96	4.5	2.9			
501	5/14/96	4.7	3.0			
502	5/15/96	21	13.6			
503	5/16/96	6.1	3.9			
504	5/17/96	5.4	3.5			

4.4 4-96 avg.

5.5 2Q96
5.50

5.4 5-96 avg.

	A	B	C	D	E	K
505	5/18/96	5.1	3.3			
506	5/19/96	5	3.2			
507	5/20/96	5.3	3.4			
508	5/21/96	5.3	3.4			
509	5/22/96	5.1	3.3			
510	5/23/96	5.3	3.4			
511	5/24/96	5.3	3.4			
512	5/25/96	13	8.4			
513	5/26/96	30	19.4			
514	5/27/96	36	23.3			
515	5/28/96	15	9.7			
516	5/29/96	8.6	5.6			
517	5/30/96	6.8	4.4			
518	5/31/96	6.1	3.9	168.0		
519	6/1/96	5.7	3.7			
520	6/2/96	5.7	3.7			
521	6/3/96	6	3.9			
522	6/4/96	5.4	3.5			
523	6/5/96	5.1	3.3			
524	6/6/96	5.3	3.4			
525	6/7/96	5.2	3.4			
526	6/8/96	25	16.2			
527	6/9/96	73	47.2			
528	6/10/96	11	7.1			
529	6/11/96	8.3	5.4			
530	6/12/96	48	31.0			
531	6/13/96	11	7.1			
532	6/14/96	7.7	5.0			
533	6/15/96	6	3.9			
534	6/16/96	5.6	3.6			
535	6/17/96	5.4	3.5			
536	6/18/96	5.5	3.6			
537	6/19/96	5.4	3.5			
538	6/20/96	5.5	3.6			
539	6/21/96	5.3	3.4			
540	6/22/96	4.8	3.1			
541	6/23/96	5	3.2			
542	6/24/96	10	6.5			
543	6/25/96	5.9	3.8			
544	6/26/96	4.8	3.1			
545	6/27/96	4.7	3.0			
546	6/28/96	4.5	2.9			
547	6/29/96	4.4	2.8			
548	6/30/96	4.4	2.8	200.1		
549	7/1/96	4.5	2.9			
550	7/2/96	4.6	3.0			
551	7/3/96	4.8	3.1			
552	7/4/96	4.1	2.6			
553	7/5/96	4.3	2.8			
554	7/6/96	4.2	2.7			
555	7/7/96	4.7	3.0			
556	7/8/96	5.1	3.3			
557	7/9/96	5.0	3.2			
558	7/10/96	4.1	2.6			
559	7/11/96	4.3	2.8			
560	7/12/96	4.1	2.6			
561	7/13/96	4.2	2.7			
562	7/14/96	13.0	8.4			
563	7/15/96	23.0	14.9			
564	7/16/96	5.8	3.7			
565	7/17/96	5.0	3.2			
566	7/18/96	4.9	3.2			
567	7/19/96	4.9	3.2			

6.7 6-96 avg.

8.4 7-96
8.34 avg.

9.2 3Q96

	A	B	C	D	E	K
568	7/20/96	34.0	22.0			
569	7/21/96	13.0	8.4			
570	7/22/96	8.8	5.7			
571	7/23/96	7.4	4.8			
572	7/24/96	7.0	4.5			
573	7/25/96	11.0	7.1			
574	7/26/96	11.0	7.1			
575	7/27/96	7.4	4.8			
576	7/28/96	17.0	11.0			
577	7/29/96	23.0	14.9			
578	7/30/96	13.0	8.4			
579	7/31/96	134.0	86.6	259.3		
580	8/1/96	83	53.6			
581	8/2/96	13	8.4			
582	8/3/96	12	7.8			
583	8/4/96	11	7.1			
584	8/5/96	11	7.1			
585	8/6/96	11	7.1			
586	8/7/96	11	7.1			
587	8/8/96	13	8.4			
588	8/9/96	11	7.1			
589	8/10/96	11	7.1			
590	8/11/96	32	20.7			
591	8/12/96	30	19.4			
592	8/13/96	15	9.7			
593	8/14/96	13	8.4			
594	8/15/96	13	8.4			
595	8/16/96	13	8.4			
596	8/17/96	12	7.8			
597	8/18/96	12	7.8			
598	8/19/96	12	7.8			
599	8/20/96	12	7.8			
600	8/21/96	12	7.8			
601	8/22/96	12	7.8			
602	8/23/96	12	7.8			
603	8/24/96	12	7.8			
604	8/25/96	12	7.8			
605	8/26/96	11	7.1			
606	8/27/96	12	7.8			
607	8/28/96	12	7.8			
608	8/29/96	12	7.8			
609	8/30/96	12	7.8			
610	8/31/96	11	7.1	310.9		
611	9/1/96				NA	NA
612	9/2/96					
613	9/3/96					
614	9/4/96					
615	9/5/96					
616	9/6/96					
617	9/7/96					
618	9/8/96					
619	9/9/96					
620	9/10/96					
621	9/11/96					
622	9/12/96					
623	9/13/96					
624	9/14/96					
625	9/15/96					
626	9/16/96					
627	9/17/96					
628	9/18/96					
629	9/19/96					
630	9/20/96					

10.0 8-96 avg.

avg. 9-96

	A	B	C	D	E	K
631	9/21/96					
632	9/22/96					
633	9/23/96					
634	9/24/96					
635	9/25/96					
636	9/26/96					
637	9/27/96					
638	9/28/96					
639	9/29/96					
640	9/30/96					
641	10/1/96					
642	10/2/96					
643	10/3/96					
644	10/4/96					
645	10/5/96					
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653	10/13/96					
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655	10/15/96					
656	10/16/96					
657	10/17/96					
658	10/18/96					
659	10/19/96					
660	10/20/96					
661	10/21/96					
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664	10/24/96					
665	10/25/96					
666	10/26/96					
667	10/27/96					
668	10/28/96					
669	10/29/96					
670	10/30/96					
671	10/31/96					
672	11/1/96					
673	11/2/96					
674	11/3/96					
675	11/4/96					
676	11/5/96					
677	11/6/96					
678	11/7/96					
679	11/8/96					
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682	11/11/96					
683	11/12/96					
684	11/13/96					
685	11/14/96					
686	11/15/96					
687	11/16/96					
688	11/17/96					
689	11/18/96					
690	11/19/96					
691	11/20/96					
692	11/21/96					
693	11/22/96					

	A	B	C	D	E	K
694	11/23/96					
695	11/24/96					
696	11/25/96					
697	11/26/96					
698	11/27/96					
699	11/28/96					
700	11/29/96					
701	11/30/96					
702	12/1/96					
703	12/2/96					
704	12/3/96					
705	12/4/96					
706	12/5/96					
707	12/6/96					
708	12/7/96					
709	12/8/96					
710	12/9/96					
711	12/10/96					
712	12/11/96					
713	12/12/96					
714	12/13/96					
715	12/14/96					
716	12/15/96					
717	12/16/96					
718	12/17/96					
719	12/18/96					
720	12/19/96					
721	12/20/96					
722	12/21/96					
723	12/22/96					
724	12/23/96					
725	12/24/96					
726	12/25/96					
727	12/26/96					
728	12/27/96					
729	12/28/96					
730	12/29/96					
731	12/30/96					
732	12/31/96					
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734	1/2/97					
735	1/3/97					
736	1/4/97					
737	1/5/97					
738	1/6/97					
739	1/7/97					
740	1/8/97					
741	1/9/97					
742	1/10/97					
743	1/11/97					
744	1/12/97					
745	1/13/97					
746	1/14/97					
747	1/15/97					
748	1/16/97					
749	1/17/97					
750	1/18/97					
751	1/19/97					
752	1/20/97					
753	1/21/97					
754	1/22/97					
755	1/23/97					
756	1/24/97					

	A	B	C	D	E	K
757	1/25/97					
758	1/26/97					
759	1/27/97					
760	1/28/97					
761	1/29/97					
762	1/30/97					
763	1/31/97					
764	2/1/97					
765	2/2/97					
766	2/3/97					
767	2/4/97					
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774	2/11/97					
775	2/12/97					
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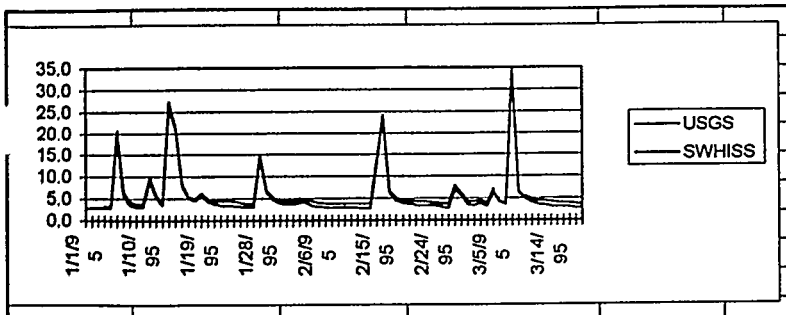
784	2/21/97					
785	2/22/97					
786	2/23/97					
787	2/24/97					
788	2/25/97					
789	2/26/97					
790	2/27/97					
791	2/28/97					
792	3/1/97					
793	3/2/97					
794	3/3/97					
795	3/4/97					
796	3/5/97					
797	3/6/97					
798	3/7/97					
799	3/8/97					
800	3/9/97					
801	3/10/97					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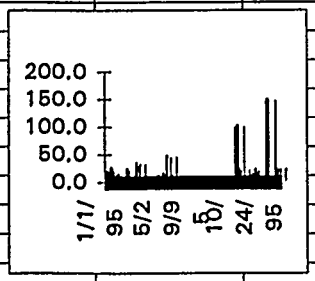
USGS
SWHISS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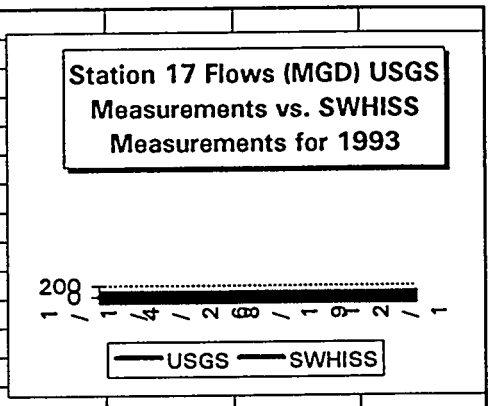
Station 17 Flows (MGD) USGS Measurements vs. SWHISS Measurements for 1993
USGS
SWHISS

UNC-7721B
(2 8/96)

OAK RIDGE Y-12 PLANT INFORMATION CONTROL FORM

ChemRisk

DOCUMENT DESCRIPTION (Completed by Requesting Division)

Document No.	Date of Request	Requested Date of Release (Allow 5 to 10 Days)	Page Count
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Unclassified Title: USGS - STATION 17 FLOWS (MGD) FOR JANUARY 1994 TO AUGUST 1996 (NOS. ST1794.XLS & ST17F95.XLS)

Author's / Requestor's Name	Telephone No., Pager No. and Plant Address	Account Number
S. W. Wiley	6-0263, 417-5417, Bldg. 9106, MS-8023	2366-0003

INTENDED AUDIENCE: ☐ Public ☐ Environmental Regulators ☐ NWC ☐ DOE Contractors ☒ Other ChemRisk

TYPE: ☐ Abstract ☐ Brochure ☐ Co-op Report ☐ Formal Report ☐ Informal Report
☐ Invention Disclosure ☐ Journal Article ☐ News Release ☐ Photograph/Visuals ☐ Technical Progress Report
☐ Thesis/Term Paper ☐ Videotape ☐ Other
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PATENT OR INVENTION SIGNIFICANCE ☐ Yes ☒ No (Identify) Document will be published in proceedings ☐ Yes ☒ No
Document has been previously released ☐ Yes ☒ No (Reference) Document will be distributed at meeting ☐ Yes ☒ No

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Weapons Data — Sigma —

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Conditions/Remarks:

pH 1955-63

JUNE

other June 55 no's

10.1
10.0

EAST SIDE OF Y-12

-6
-7
-8

	Ay	Na	K		pH	
6-9-55	1/ppm/~~[illegible]~~	125	8	~~9.6~~	10.6	/9.2 9.77
6-10-55	7.5	76	6		8.6	/9.8
6-13-55	14	80	7		10.2	/11.1
6-14-55	22.6	105	20		10.7	/10.3
6-15-55	14	110	17	10.56	10.4	/11.4
6-16-55	31	122	21		10.7	/10.6
6-17-55	14	110	16.5		10.8	/ 12.2
6-20-55	12.5	8.5	12.5		10.5	/10.2
6-21-55	52.5	100	27.2		12.0	/~~X~~
6-22-55	87	70	23	11.12	12.3	/11.5
6-23-55	16	71	10		10.6	/10.0
6-24-55	11	80	9		10.2	/10.5
6-27-55	11	74	9		9.8	/10.2
6-28-55	11	86	10.5	10.32	10.1	/10.2
6-29-55	14.5	89	10		10.6	/10.75
6-30-55	16.5	85	9.5		10.8	/9.2
	338/15	1392/16	218/16		1689/16	
	23	87	14		10.6	

JULY

EAST SIDE OF Y-12

	Ay	Na	K		pH
7-1-55	10	702	10		9.9 /10.1
7-5-55	18	92	13.5		9.9
7-6-55	19.5	95	13		10.5
7-7-55	10	75	12	9.75	9.20
7-8-55	6	45	10		9.4
7-11-55	9.3	80	1.0		9.1
7-12-55	8.2	62.5	2.1		9.7
7-13-55	18.0	65	.85	8.60	10.2
7-14-55	15	77.5	1.8		10.8
7-15-55	16.2	100	1.4		3.2
7-18-55	34	65	1.4		10.8
7-19-55	32	135	1.4		11.1
7-20-55	24	135	2.1	10.66	10.7
7-21-55	13	87.5	1.4		10
7-22-55	19	145	1.4		10.7
7-27-55	13.4	52.8	9.0		10.3
7-28-55	13.4	39	6.8	10.47	10.8
7-29-55	23.5	47	10		10.3

AUGUST

EAST SIDE OF Y-12

	Ay	K	Na		pH
8-1-55	11.5	8.4	44		10.3
8-2-55	12.5	11	130		10.7
8-3-55	10	8	46	9.94	10
8-4-55	6.5	5	50		10.1
8-5-55	7.5	7.4	55.5		8.6
8-8-55	7.5	6.5	49		10.6
8-9-55	9	7.5	57		10
8-10-55	8	8	58	9.76	10.6
8-11-55	10	7	45.5		10.6
8-12-55	16	25	84		7
8-15-55	27	8.5	64		11.3
8-16-55	18	7	51		11.4
8-17-55	10	6.5	58	10.6	10.1
8-18-55	56	10	82		9.8
8-19-55	11.5	8	57		10.4
8-22-55	7	5	48.5		9.4
8-23-55	12.5	4.5	49		9.7
8-24-55	45.5	8	80	9.98	11.2
8-25-55	12	4.2	58		10
8-26-55	13	4.5	50		9.6
8-29-55	10.3	11.7	70		10.08
8-30-55	21.5	11.7	32		10.68
8-31-55	60	18.7	170		11.25

SEPTEMBER

EAST SIDE OF Y-12

	Ay	K	Na	pH	
9-1-55	14	8.8	66	9.8	1054
9-2-55	28	10.1	71	10.9	
9-6-55	10.9	7.8	78	10.6	
9-7-55	26	11	96	9.2	10.12
9-8-55	11	8	93	10	
9-9-55	15	8.2	84	10.7	
9-12-55	17.5	8.5	90	10.9	
9-13-55	10	8	81	10.2	
9-14-55	7	7	70	10.6	10.7
9-15-55	30	10	50	11	
9-16-55	22.5	10	57	10.8	
9-19-55	22.5	7	89	9.7	
9-20-55	18	7	71	10.8	
9-21-55	17.5	9	87	10.8	10.66
9-22-55	22.5	9	68	11.1	
9-23-55	25	10	75	10.9	
9-27-55	21.9	10.5	63	11	
9-28-55	55	14.5	56	11.9	10.88
9-29-55	15.8	10.5	67	11.1	
9-30-55	55	8	25	9.5	
	1223/61	507/61	5028/61	6109/61	
	20	8	82	10.0	

fn 9

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box Y OAK RIDGE, TENN.

TO LOCATION Jack Rothfleisch

DATE October 26, 1955

ANSWERING LETTER DATE

ATTENTION

COPY TO File

SUBJECT Creek Analyses

[redacted]

The following table gives the flow rate of the East Fork of Poplar Creek as it leaves the Y-12 plant.

MONTH	AVERAGE DAILY FLOW IN GALLONS
May	10.45×10^6
June	11.46×10^6
July	11.30×10^6
August	11.62×10^6
September	11.70×10^6
October thru 10/16	11.40×10^6

The average monthly solvent concentration at the East ent of Y-12 Plant expressed in mg solvent/liter of water is as follows:

June	1.93
July	1.06
August	1.05
September	1.28

The following table gives the concentration in PPM of Alloy, Sodium, Potassium at the East end of Y-12 plant on a daily sampling basis. The pH is also included.

(continued on page -2-)

JULY

EAST SIDE OF Y-12

weekly averages

DATE	Ay	Na	K		pH
7-1-55	10	70.2	10		9.9
7-5-55	18	92	13.5		9.9
7-6-55	19.5	95	13		10.5
7-7-55	10	75	12	9.75	9.20
7-8-55	6	45	10		9.4
7-11-55	9.3	80	1.0		9.1
7-12-55	8.2	62.5	2.1		9.7
7-13-55	18.0	65	.85	8.60	10.2
7-14-55	15	77.5	1.8		10.8
7-15-55	16.2	100	1.4		3.2
7-18-55	34	65	1.4		10.8
7-19-55	32	135	1.4		11.1
7-20-55	24	135	2.1	10.66	10.7
7-21-55	13	87.5	1.4		10
7-22-55	19	145	1.4		10.7
7-27-55	13.4	52.8	9.0		10.3
7-28-55	13.4	59	6.8	10.47	10.8
7-29-55	23.5	47	10		10.3

AUGUST

EAST SIDE OF Y-12

DATE	Ay	K	Na		pH
8-1-55	11.5	8.4	44		10.3
8-2-55	12.5	11	130		10.7
8-3-55	10	8	46	8.94	10
8-4-55	6.5	5	50		10.1
8-5-55	7.5	7.4	55.5		8.6
8-8-55	7.5	6.5	49		10.6
8-9-55	9	7.5	57		10
8-10-55	8	8	58	9.76	10.6
8-11-55	10	7	45.5		10.6
8-12-55	16	25	84		7
8-15-55	27	8.5	64		11.3
8-16-55	18	7	51		11.4
8-17-55	10	6.5	58	10.6	10.1
8-18-55	56	10	82		9.8
8-19-55	11.5	8	57		10.4
8-22-55	7	5	48.5		9.4
8-23-55	12.5	4.5	49		9.7
8-24-55	45.5	8	80	9.98	11.2
8-25-55	12	4.2	58		10
8-26-55	13	4.5	50		9.6
8-29-55	10.3	11.7	70		10.08
8-30-55	21.5	11.7	32		10.68
8-31-55	60	18.7	170		11.25

S E P T E M B E R

EAST SIDE OF Y-12

DATE	Ay	K	Na	pH
9-1-55	14	8.8	66	10.54 9.8
9-2-55	28	10.1	71	10.9
9-6-55	10.9	7.8	78	10.6
9-7-55	26	11	96	10.12 9.2
9-8-55	11	8	93	10
9-9-55	15	8.2	84	10.7
9-12-55	17.5	8.5	90	10.9
9-13-55	10	8	81	10.2
9-14-55	7	7	70	10.7 10.6
9-15-55	30	10	50	11
9-16-55	22.5	10	57	10.8
9-19-55	22.5	7	89	9.7
9-20-55	18	7	71	10.8
9-21-55	17.5	9	87	10.66 10.8
9-22-55	22.5	9	68	11.1
9-23-55	25	10	75	10.9
9-27-55	21.9	10.5	63	11
9-28-55	55	14.5	56	10.88 11.9
9-29-55	15.8	10.5	67	11.1
9-30-55	55	8	25	9.5

O C TO B E R

EAST SIDE OF Y-12

DATE	Ay	Na	K		pH
10-3-55	17.5	72	14		7.4
10-4-55	17.5	95	15		7.1
10-5-55	9.5	54	12.5	9.0	10.2
10-7-55	5	36.5	11		9.9
10-6-55	12.5	66	13		10.4
10-10-55	8.8	70	7		10.8
10-11-55	7.2	71	7	8.17	9
10-12-55	16.8	79	9		4.7

Leo J. LaFrance
Industrial Hygienist
Medical Department

LJL:dai

October

	Ay	Na	K	pH	
10/3	17.5	72	14	7.4	
10/4	17.5	95	15	7.1	
10/5	9.5	54	12.5	10.2	9.0
10/7	5	36.5	11	9.9	
10-6	12.5	66	13	10.4	
10-10	8.8	70	7	10.8	
10-11	7.2	71	7	9	
10-12	16.8	79	9	4.7	8.7
10-13	9	148	<1	9.5	
10-14	9.5	77	6	9.6	
10-17	12	172.5	12.5	9.9	
10-18	18	198	12.5	10.5	
10-19	17	77	12	10.2	9.5
10-20	15.5	70	4	9.6	
10-21	11.75	104	6	7.1	
10-24-	27.5	88	10	10.5	
10-25	52	50	12.5	11.2	
~~XXXXXXXX~~	~~XXX~~	~~XX~~	~~XXXX~~	~~XXXX~~	9.9
10-26	5.3	55	<1	10.5	
10-27	7.75	70	<1	9.7	
10-28	10.5	85	6	7.4	
10-31	11	11	<1	9.7	
			175	194.9	

November

	Ay	K	Na	pH	
11-1-55	9.0	3.5	51	9.4	
11-2-55	9.5	4	54	9.2	9.5
11-3-55	11.5	4	50	9.5	
11-4-55	11.5	4	53	9.5	
11-7-55	50	9.5	72	11.0	
11-8-55	12	4	54	8.4	
11-9-55	17	5	61	8.1	9.0
11-10-55	15.5	5	51	9.3	
11-11-55	6.5	3	48	8.3	
11-14-55	15	5.5	53	9.7	
11-15-55	8.5	4	56	9.1	
11-16-55	9.5	4	51	9.1	9.5
11-17-55	27.0	7	90	10.3	
11-18-55	35	3	56	9.3	
11-21-55	22	10	55	10.1	
11-22-55	16	12.2	12.8	7.7	
11-23-55	18.5	102.5	147.5	10.3	9.2
				--	
11-25-55	10	2.8	47	8.6	
11-28-55	29	2.3	59	10.5	
11-29-55	12	1.8	64	9.9	
11-30-55	29	2.5	53	10.8	→
		96		148.1	

December

	Ay	K	Na	pH	
12-1-55	9	1.9	53	10.2	10.4
12-2-55	14	2	53	10.4	
12-5-55	11	8	65	9.6	
12-6-55	14	8	65	9.5	9.4
12-7-55	11	8	94	8.9	
12-8-55	11	7.5	88	9.1	
12-9-55	11.5	8	91	9.9	
12-12-55	15.8	11.8	113	4.8	
12-13-55	14.5	8	91	10.1	8.7
12-14-55	35	8.1	72	10.6	
12-15-55	11	7	89	9.4	
12-19-55	12	8	80	10.6	
12-20-55	17	8	8	9.9	9.6
12-21-55	75	8	59	10.9	
12-22-55	25	8.5	70	7.1	
12-23-55	9	8	45	9.4	
12-27-55	10.5	0.1	40.1	8.9	
12-28-55	2.7	0.1	29.5	9.3	9.4
12-29-55	8.2	0.1	30.75	9.2	
12-30-55	20.75	2	30	10.2	
		10		188.0	

January 1956

DATE	Ay	K	Na	pH	
1-4-56	11.5	5.5	93.5	9.1	9.4
1-5-56	6	4.9	55	9.1	
1-6-56	16.5	13.5	48.5	9.9	
1-9-56	28.0	10	128	5.5	
1-10-56	11	11	55	9.0	9.2
1-11-56	7	<15	40	9.7	
1-12-56	10	<15	44	10.2	
1-13-56	57	20	36	11.7	
1-16-56	25	23	60	9.6	
1-17-56	6.5	11	55	8.8	9.2
1-18-56	7	6	85	9.5	
1-19-56	22.5	6	48.5	9.7	
1-20-56	7.5	5	41.5	8.3	
1-24-56	12	6.5	85.0	8.8	
1-25-56	9	6	30	9.2	9.2
1-23-56	21	5.5	50	8.9	
1-26-56	17	5.5	41.5	9.2	
1-27-56	30	2.0	44	10.0	
1-30-56	6	4	29.5	8.2	
1-31-56	8.5	4.5	37	8.6	
	322	187	1081	174.0	

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February 1956

Date	Ay	K	Na	pH	
2-1-56	68	9.5	92	11.2	9.3
2-2-56	7.5	5	50	9.8	
2-3-56	3.2	3.8	12.5	8.9	
2-6-56	13	4.5	30	9.4	
2-7-56	10	5	42	9.4	9.4
2-8-56	12	16	67	9.4	
2-9-56	21	6.5	63.5	10.1	
2-10-56	8.5	4.5	35	8.7	
2-13-56	1.6	17.	146	11.3	
2-14-56	1.6	16	148	11.2	9.0
2-15-56	1.2	10	49	10.7	
2-16-56	1.0	8	84	4.6	
2-17-56	1.0	9	15	7.2	
2-20-56	5	2.6	27.5	8.2	
2-21-56	11.6	2.6	33.5	6.1	7.1
2-22-56	2.6	2.4	34.5	6.3	
2-23-56	11.6	6.8	44.5	9.5	
2-27-56	19	8	23.5	9.5	
2-28-56	10	4.5	42	9.1	
2-29-56	16	5.0	45	9.4	
2-24-56	2.8	6.8	11	8.6	
	229	147	1096	180.0	

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March 1956

Date	AY	K	Na	Ph	
3-1-56	15.2	6.8	45	9.1	9.3
3-2-56	19.7	42	50	9.3	
3-5-56	18.2	6.1	60	8.6	
3-6-56	8.75	<1	57.5	6.8	
3-7-56	17.5	27	45.0	5.1	7.3
3-8-56	12.75	7.5	40.5	9.6	
3-9-56	5.75	20	41.5	6.6	
3-12-56	12.3	11.8	67.5	7.5	
3-13-56	72	23	81	10.5	
3-14-56	15	17.6	35	9.6	9.2
3-15-56	9.8	9.7	28	8.8	
3-16-56	13	8	24	9.4	
3-19-56	25	12	50	10.7	
3-20-56	17.2	10	43	9.8	9.5
3-21-56	23.8	11.8	42	10.1	
3-22-56	8	9.3	26	7.5	
3-23-56	23.4	21	143	9.4	
3-26-56	13.2	6.2	27	9.7	
3-27-56	25	9.8	72	10.4	10.2
3-28-56	18	9.8	72	9.9	
3-29-56	31	10.6	68	10.6	

April 1956

Date	AY	K	Na	Ph	
4-2-56	12.5	12	33	9.2	
4-3-56	16	18	130	7.0	8.5
4-4-56	13.5	11	40	9.4	
4-6-56	5	11	25	9.0	
4-6-56	6	9	1	8.1	
4-9-56	25	21.5	55	9.9	
4-10-56	3.5	9.5	74	4.2	7.6
4-11-56	3	7.8	22	7.6	
4-12-56	15	8.8	41	6.1	
4-13-56	20.5	8.4	38	10.1	
4-16-56	5	8	27	2.9	
4-17-56	4	8	32	7.8	7.4
4-18-56	6	8.8	41	8.1	
4-19-56	4	8.8	91	8.9	
4-20-56	4	15	78	9.1	
4-23-56	3	16.2	59	8.6	
4-24-56	4.8	16.2	46	3.5	
4-25-56	10.8	<1	42	9.5	7.1
4-26-56	9.2	12.4	61	3.7	
4-27-56	11.9	7	43.5	10.0	
4-30-56	7.3	5.8	40	10.4	
	190.00	203.90	1019.5	163.10	
Monthly Av.	9.04	10.02	48.54	7.76	

May 1956

Date	AY	K	NA	Ph	
5-1-56	7.5	3.3	35	9.8	
5-2-56	9	5.4	41	10.1	10.4
5-3-56	19	4.3	27	11.3	
5-4-56	10.5	3.3	47	10.3	
5-7-56	11.3	4.8	22	10.0	
5-8-56	38	10.8	24.5	12.0	9.9
5-9-56	6.25	6.8	83	9.5	
5-10-56	11.2	5	60	9.2	
5-11-56	6.25	3.9	40	8.9	
5-14-56	100 X	9.7	58	11.2	
5-15-56	6	5.2	55	9.1	
5-16-56	8.4	5.5	60	8.7	9.4
5-17-56	11.1	5.7	60	8.7	
5-18-56	14	6.5	7	9.4	
5-21-56	9	6.6	70	9.2	
5-22-56	15.6	4.75	64	9.2	
5-23-56	11	4.1	61	9.2	9.0
5-24-56	6.6	4.75	58	8.6	
5-25-56	5.0	4.9	50	8.7	
5-28-56	7.8	5.4	71	9.3	
5-29-56	9.3	5.2	71	9.0	
5-31-56	3.8	7.1	77	9.8	
	326.60	123.00	1141.50	211.20	
Monthly Ave	14.84	5.59	51.88	9.60	

June 1956

Date	AY	K	NA	Ph	
6-1-56	16.3	6.2	42	8.7	9.2
6-4-56	16.3	6.7	50	9.3	
6-5-56	16.7	4.7	51.5	8.9	9.0
6-6-56	12.2	4.2	47	8.9	
6-7-56	14.1	7.	66	9.1	
6-8-56	9	3.0	46	8.8	
6-11-56	12.5	4.0	50	9.2	
6-12-56	11	3.6	64	9.5	9.2
6-13-56	12.5	2.1	90	9.2	
6-14-56	10	2.1	82	8.7	
6-15-56	10	6.4	65	9.2	
6-18-56	16	7.7	61	9.5	
6-19-56	9.2	7.0	54	9.3	9.4
6-20-56	9.2	6.8	44	9.3	
6-21-56	23.8	9.1	44	9.8	
6-22-56	13	6.9	66	9.2	
6-25-56	10	5.2	55	9.1	
6-26-56	15	5.9	66	9.0	9.1
6-27-56	6.5	12.6	39	9.0	
6-28-56	19.5	15.2	50	9.6	
6-29-56	11.5	13.9	50	8.6	
Total	198.80	80.60	856.50	137.40	
Monthly Ave	13.25	5.37	57.10	9.16	
Grand Ave.	12.37	7.19	52.50	8.84	

Note: The averages covered thru 6-21-56.

July 1956

Date	AY	K	NA	Ph	
7-2-56	8.5	16.7	56	8.8	
7-3-56	6.5	14.4	38	9.1	9.1
7-5-56	9	15.8	50	9.3	
7-6-56	10.5	14	45	9.2	
7-9-56	6.5	13.7	42	9.2	
7-10-56	4.5	4.2	46	8.2	8.6
7-11-56	7.8	4.7	50	8.8	
7-12-56	6	4.2	47	8.6	
7-13-56	5	4.2	59	8.3	
7-16-56	8	5.8	69	8.6	
7-17-56	4.5	6	50	8.1	8.4
7-18-56	4.3	5.4	45	8.2	
7-19-56	7.8	4.7	45	8.7	
7-20-56	8	5.1	48	8.5	
7-23-56	8.5	5.2	65	7.3	
7-24-56	15	5	53	9.0	
7-25-56	15	5	50	8.3	8.4
7-26-56	9.2	3.7	41	8.5	
7-27-56	3	3.3	28	8.9	
7-30-56	10.5	4.3	39	9.8	
7-31-56	16.6	3.7	54	8.8	

August

Date	Alloy	K	Na	pH	
8-1-56	8	6.7	69	8.5	8.9
8-2-56	13.5	5.2	54	9.1	
8-3-56	8.8	6.1	50	8.3	
8-6-56	10.5	5.3	69	8.3	
8-7-56	9	5.6	45	8.3	8.5
8-8-56	15	7.0	53	8.9	
8-9-56	10.5	6.8	57	8.8	
8-10-56	8.8	6.2	41	8.3	
8-13-56	5.7	6.6	61	8.6	
8-14-56	31	7.8	59	9.7	9.2
8-15-56	10	8.8	71	8.8	
8-16-56	31	7.5	56	9.5	
8-17-56	18.5	8.5	53.5	9.4	
8-20-56	11.5	11.2	69.5	9.2	
8-21-56	18	7.6	43	9.0	8.9
8-22-56	7	6.5	40.5	8.5	
8-23-56	5	6	49	8.9	
8-24-56	8.5	5.5	68	9.0	
8-27-56	17	8	64.5	9.3	
8-28-56	5	6.5	61	9.2	8.9
8-29-56	8.5	5.5	50	9.0	
8-30-56	5.5	7	52.5	8.8	
8-31-56	7	7.5	57	8.2	

September

Date	Alloy	K	Na	pH	
9-4-56	10	61	6.4	8.6	
9-11-56	11.25	8.6	63	8.5	
9-12-56	8.75	7.0	50	8.6	8.7
9-13-56	16	7.8	55	9.1	
9-14-56	11.25	8.0	59	8.7	
9-17-56	7.5	6.2	70	8.7	
	51|596 av 11.0	54|413 Av 8	56|3000 Av 54	54|4935 Av ~~8.8~~	
9-18-56	7.5	4.6	57.5	8.1	8.3
9-19-56	10.5	3.9	56.3	8.2	
9-20-56	15.75	5	57.5	8.6	
9-21-56	8.75	4.6	63	8.1	
9-24-56	10.5	5	61	8.3	
9-25-56	7.5	4.9	75	9.2	
9-26-56	4.5	4.6	67	8.1	8.4
9-27-56	4.5	4.3	50	8.05	
9-28-56	10	4.6	54	8.3	

October	Alloy	K	Na	pH	
10-1-56	15.5	5.6	63	8.1	
10-2-56	8	3.4	61	8.3	
10-3-56	6.3	7.0	53	8.05	8.2
10-4-56	8.4	5.6	53	8.3	
10-5-56	5.0	6.1	67	8.4	
10-8-56	5.0	6.5	61	8.12	
10-9-56	4.2	4.4	63	8.9	8.7
10-10-56	6.0	5.2	67	9.3	
10-11-56	11.2	8.1	61	8.6	
10-12-56	15.4	11	61	8.8	
10-15-56	6.8	9.3	85	8.1	
10-16-56	6.0	7.7	67	8.3	8.35
10-17-56	6.4	8.5	64	8.6	
10-19-56	6.0	9.9	71.5	8.3	
10-18-56	14	9.2	73	8.45	
10-22-56	10	12.3	73	9.1	
10-23-56	8	8.2	73	10.2	9.0
10-24-56	7	7.3	71	8.2	
10-25-56	8	7.8	79	8.8	
10-26-56	6.	7	79	8.8	
10-29-56	11	14	86	9.1	
10-30-56	15.5	7.8	75	9.15	
10-31-56	11	6.2	59	8.95	

November	Alloy	K	Na	pH	
11-1-56	9	5.1	49	8.4	8.8
11-2-56	8	5.3	71	8.6	
11-5-56	8	5.1	73	8.72	
11-6-56	8.5	8.5	73	9.3	
11-7-56	6.5	6	70	8.78	8.8
11-8-56	8	7	76	8.8	
11-9-56	8	13	76	8.6	
11-12-56	12.5	8.5	76	8.9	
11-13-56	6	7	92	8.2	
11-14-56	4	30	92	8.6	8.8
11-15-56	16	8.9	73	9.4	
11-16-56	14	7.2	44	9.1	
11-19-56	10.75	7	61	8.7	
11-20-56	8.5	6.2	61	8.6	
11-21-56	4.5	7.2	56	8.2	8.5
11-23-56	8.75	6.2	56	8.55	
11-26-56	7.5	5.9	52	8.5	
11-27-56	6.25	5.5	56	8.6	
11-28-56	6.5	5.9	64	8.9	8.6
11-29-56	7.25	6.2	56	8.8	
11-~~2~~30-56	6.25	6.2	64	8.4	

December	Alloy	K	Na	pH	
12-3-56	10.75	6.7	75	9.5	
12-4-56	8.25	6.2	68	8.85	
12-5-56	8	4.7	46	8.7	8.9
12-6-56	8	4.3	42	8.2	
12-7-56	6	6.6	61	9.05	
12-10-56	10	6.0	67	9.0	
12-11-56	7	6.2	67	9.1	
	436/50 (9)	358/51 (8)	3383/51 (66)	443/51 (8.7)	8.8
12-12-56	4.5	9.6	47	8.7	
12-13-56	6	8.3	26	8.52	
12-14-56	2.5	6.5	26	8.5	
12-17-56	6	13.5	61	8.52	
12-18-56	5	18	82	8.48	
12-19-56	8,5	10	86	8.75	8.3
12-20-56	7.2	8.9	68	7.8	
12-21-56	4.5	8	54	8.0	
12-26-56	7.5	10	72	8.55	
12-27-56	6.5	15	86	8.0	
12-28-56	6.25	16.5	89	8.2	8.2
12-29-56	6.25	12.2	90	8.23	

January	ALLOY	K	Na	pH	
1-2-57	6.5	18.8	96	8.75	
1-3-57	3.6	80	96	9.7	8.5
1-4-57	4	15.9	96	6.8	
1-5-57	6.8	15.9	54	8.6	
1-7-57	8.8	16.8	62	8.7	
1-8-57	35	15.2	52	9.52	8.9
1-9-57	17.5	25	82	8.78	
1-10-57	9.25	21	60	8.75	
1-11-57	6.5	18.7	56	8.72	
-14-57	7.5	22.2	73	8.38	
1-15-57	12.0	25	64	9.12	9.1
1-16-57	23.5	18.2	65	10.2	
1-18-57	8	3.9	50	8.68	
1-21-57	6	19.6	47	8.6	
1-22-57	6	20.3	52	8.4	
1-23-57	4.5	18.5	41	8.4	8.5
1-24-57	9	16.2	50	8.1	
1-25-57	10.5	20	70	9.1	
1-28-57	5	16.2	54	8.6	
1-29-57	3	8.8	40	8.85	
1-30-57	3.5	6.2	39	8.1	
1-31-57	4	3.8	46	7.9	

Date	Alloy	K	Na	pH	
2-1-57	2	1	26	7.9	8.3
2-4-57	4.5	8	41	8.0	
2-5-57	6	12.6	50	8.15	
2-6-57	5.2	9.4	48	8.25	8.25
2-7-57	5	15	40	8.55	
2-8-57	4	5	30	8.3	
2-11-57	3.5	5	14.5	8.0	
2-12-57	3.5	4	37.5	8.2	
2-13-57	9.5	5	57	8.4	8.4
2-14-57	17.5	5	52	9.32	
2-15-57	9	5	59	8.0	
2-18-57	7.5	5.0	66	9.15	
2-19-57	5.5	5	57	8.3	
2-20-57	5.5	5	61	8.55	8.6
2-21-57	7	19.2	57	8.1	
2-22-57	3.2	125	59	8.8	
2-26-57	6.5	10.4	48	8.25	
2-27-57	6.5	9.8	48	8.2	
2-28-57	7.5	14.8	53.5	8.55	

Date	Alloy	K	Na	pH	
					8.4
3-1-57	7.5	15	53.5	8.65	
3-4-57	22	8.6	61	9.55	
3-5-57	15.5	5.2	57	8.95	
3-6-57	11.2	15.7	67	9.15	9.2
3-7-57	16	6.4	60	9.25	
3-8-57	6.5	8	41	9.3	
3-11-57	16.5	16.4	74	9.7	
3-12-57	7	22.2	74	8.9	
3-13-57	12	25	65	9.1	
	472.9 / 62	954.4 / 62	3591 / 62	~~5335 / 62~~	
	7.6	15.4	58	~~8.6~~	9.4
3-14-57	10	17.3	66	9.3	
-15-57	13	20	110	9.85	
3-18-57	15	17.9	110	9.82	
3-19-57	7	7.8	87	9.15	
3-20-57	10	5	67.5	8.9	9.2
3-21-57	8.5	5	76	9.42	
3-22-57	6	10.4	70	8.7	
3-25-57	7.5	5	76	9.3	
3-26-57	7	5.7	79.5	9.35	
3-27-57	7.5	6	87	9.0	8.8
3-28-57	7	4.2	79.5	8.28	
3-29-57	6	5.2	74.5	7.9	
4-1-57	4.5	4.2	72	8.95	
4-2-57	4.5	4.8	71	8.95	
4-3-57	4.5	7.4	73	9.28	
4-4-57	5.5	10.3	98	9.4	

Date	Alloy	K	Na	pH	
					9.2
4-5-57	3	5.3	42	9.58	
4-8-57	5.2	5	61	10.0	
4-9-57	3.2	4.3	50	9.3	
4-10-57	3.8	4.7	65	9.68	9.7
4-11-57	3.1	5	76	9.8	
4-12-57	3.8	5	69	9.52	
4-15-57	4.8	10.6	78	9.9	
4-16-57	4.2	10.6	66	8.62	8.9
4-17-57	8.75	6.5	70	9.0	
4-18-57	4.5	10.3	56	8.25	
4-22-57	6	15	61	8.95	
4-23-57	6	6.5	56	8.35	
4-24-57	5	5.4	54	8.4	8.5
4-25-57	4	5.2	54	8.3	
4-26-57	4	5.4	55	8.6	
4-29-57	5	5.6	67	8.68	6.9
4-30-57	2	6.3	80	5.1	
					~~8.0~~
5-1-57	6	6	80	8.35	
5-2-57	5	6.2	67	8.92	8.6
5-3-57	7	5.4	62	8.7	
5-6-57	6.25	6	72	9.0	
5-7-57	5.5	7.1	66	9.0	8.9
5-9-57	5.0	5.2	66	8.65	
5-10-57	5.5	6.9	72	8.85	

Date	Alloy	K	Na	pH	
5-13-57	4.25	20	68	7.7	
5-14-57	3.5	11.8	61	8.35	
5-15-57	3.5	18	61	7.8	8.1
5-16-57	3	10.7	61	9.1	
5-17-57	4	6.9	63	7.6	
5-20-57	5	7.7	65	8.6	
5-21-57	4	6.9	68	8.18	
5-22-57	3	6.2	52	7.9	8.1
5-23-57	3	8.8	54	7.35	
5-24-57	3.5	7.7	56	8.7	
5-27-57	5.5	7.1	61	8.45	
5-28-57	4	7.1	68	8.0	8.6
5-29-57	4.5	8.0	71	8.5	
5-31-57	5.5	6	77	9.55	
6-3-57	8	8.0	68	8.45	
6-4-57	4.1	11.9	60	8.2	8.2
6-5-57	1	4.5	7	7.85	
6-10-57	7	5	52	8.35	
6-11-57	5	6.1	112	8.75	9.0
6-12-57	10	5.1	58	9.5	
6-13-57	7	5	53	9.1	
6-17-57	3.5	4.8	58	9.3	
6-14-57	5.5	5.3	89	9.42	
6-18-57	7.	7.1	52	9.08	
6-19-57	2.5	4.8	56	9.05	
	356.15	496.2	439.3	569.9	
	5.5 avg	7.6 avg	68 avg	8.8 avg	

Date	Alloy	K	Na	pH	
-20-57	11	5	63	7.2	8.8
6-21-57	6.7	5	47	9 .35	
6-24-57	3.7	5.7	125	7.45	
6-25-57	5	5	63	9 .1	
6-26-57	6	5.2	70	8 .78	8.5
6-27-57	5.5	5.1	65	8 .9	
6-28-57	4	5.5	66	8.3	
7-1-57	8	6	62	9.5	
7-2-57	5.5	5.9	72	8 .02	9.2
7-3-57	5.2	5.6	65	9.49	
-57	5	6	76	8.8	
7-8-57	4.6	5.8	63	8.4	
7-9-57	4	5.8	63	8.3	8.7
7-10-57	11	5.7	66	9.25	
7-11-57	6	5.8	65	8.92	
7-12-57	3.2	6.	60	8.56	
7-15-57	4.3	5.	58	8.4	
7-16-57	2.5	4.8	56	8.2	8.7
7-17-57	3.5	5.6	50	8.8	
7-18-57	9.25	5.6	45	9.25	
7-19-57	5.25	5.6	62	8.85	
7-22-57	4.5	4.7	53	9.5	
7-23-57	6	5.2	64	9.15	8.9
7-24-57	3.75	5.1	54	8.88	
7-25-57	3.5	4.9	53	7.45	
7-26-57	3.5	5.0	71	9.35	
7-29-57	5	4.7	54.5	6.62	
7-30-57	3	4.8	60	8.5	

Date	Alloy	H	Ha	pH	
7-31-57	3.75	5.2	61	8 9.5	
8-1-57	5.5	5.2	[illegible]	9 9.4	9.3
8-2-57	4	5.1	57	8 9.5	
8-5-57	4.5	6.4	55	8.6	
8-6-57	4.5	10	57	9.0	
8-7-57	6	9.7	68	10.15	9.5
8-8-57	4.5	7.7	65	9.8	
8-9-57	3,75	13.8	71	9.95	
8-12-57	6	24	67	10.2	
8-13-57	4.5	15	67	10.3	10.5
8-14-57	11	12.3	71	10.9	
-15-57	4.5	20	76	10.5	
8-16-57	4.75	18.5	67	10.6	
8-19-57	3.25	8.2	67	9.5	
8-20-57	4.75	5.2	64	9.6	
8-21-57	4.5	4.7	64	9.45	9.4
8-22-57	2.75	4.4	52	8.9	
8-23-57	4.	4.6	50	9.45	
8-26-57	3.	4.5	52	8.92	
8-27-57	4.	4.5	45	9.2	
8-28-57	3.	4.5	41	9.08	9.0
8-29-57	3.5	4.6	39	8.75	
8-30-57	3.	4.7	45	8.85	
9-3-57	5.5	4.7	43	9.7	
9-4-57	5.25	4.6	36	9.3	

Date	Alloy	K	Na	pH	
					9.0
9-5-57	4	5	30	8.4	
9-6-57	4	4.8	28	8.55	
9-9-57	5	5.2	35.5	8.7	
9-10-57	4	5	39	8.7	8.8
9-11-57	4.5	4.8	30	8.85	
9-12-57	3.75	4.8	30	8.95	
9-13-57	3	4.8	30	8.85	
9-17-57	2	5	28	8.7	
9-18-57	2.5	5.2	32	8.8	8.8
9-19-57	2.75	5.4	41	8.9	
9-20-57	3.5	5.3	36.5	9.0	
	$\frac{306.2}{64} = 4.8$	$\frac{417.5}{64} = 6.5$	$\frac{3601.5}{64} = 56.3$	$\frac{575.67}{64} = 8.$	
9-23-57	2.4	5.8	32	7.4	
9-24-57	1.7	5.3	30	7.48	
9-25-57	3.9	5.55	39	8.15	7.8
9-26-57	4.4	5.5	43	8.2	
9-26-57	3.8	5.4	43	7.8	
9-30-57	4	5.6	45	8.32	
10-1-57	3.4	5.2	39	8.15	8.1
10-2-57	4.2	5.4	39	8.2	
10-4-57	3.1	4.7	37	7.88	
10-7-57	3.3	5.3	44	8.63	
10-8-57	3.2	5.4	45	7.85	
10-9-57	1.9	5.0	49	8.7	8.4
10-10-57	2	4.9	38	8.4	
10-11-57	3.4	4.9	36	8.3	

Date	Alloy	K	Na	pH	
10-14-57	5.5	5.4	39	9.25	
10-15-57	3.5	9.6	51	8.3	
10-16-57	2.5	15	38	8.6	8.7
10-17-57	2.25	11	29	8.3	
10-18-57	3	14.4	33	8.9	
10-21-57	4.75	7	47	9.5	
10-22-57	3.1	6.3	44	8.4	
10-23-57	3.2	6.1	41	8.8	8.8
10-24-57	2.75	5.9	22	8.7	
10-25-57	5.2	11.1	34	8.05	
10-28-57	3	7.7	28	8.92	
10-29-57	4.5	13.2	25	8.8	8.6
10-30-57	3.75	64	23	8.72	
10-31-57	3	5.4	23	8.2	
11-1-57	2.5	6.6	32	8.15	
11-4-57	4.5	5.4	27	8.2	
11-5-57	3	5	29	8.05	
11-6-57	6.25	4.8	27	8.45	8.2
11-7-57	2.75	4.7	27	8.15	
11-8-57	2.75	4.8	24	8.2	
11-11-57	4.5	4.7	32	8.6	
11-12-57	4	4.7	31	8.1	8.3
11-13-57	3.75	5	31	8.3	
11-14-57	3	5.3	22	8.3	
11-15-57	3	7.6	26	8.1	
11-18-57	1.5	6.1	19	7.75	
11-19-57	1.5	8.4	24	7.4	

Date	Ay	K	Na	pH	
11-20-57	8	10.5	36	8.1	7.9
11-21-57	2	5.5	37.5	8.1	
11-22-57	9.5	5.3	37.5	8.1	
11-25-57	2.75	5	32	8.2	
11-26-57	4.3	5.2	35	7.6	8.2
11-27-57	4.25	5.6	39	8.5	
11-29-57	3	.54	39	8.6	
12-2-57	2.75	5.9	42	8.7	
12-3-57	3.75	6.1	39	8.5	8.6
12-4-57	3.5	5.3	34	8.4	
12-5-57	2.5	6.6	37.5	8.45	
12-6-57	2.5	7.4	50	8.7	
12-9-57	2	5.3	25	8.6	
12-10-57	2.5	6	41	8.25	8.3
12-11-57	3.75	5	47	7.95	
12-16-57	3.75	4.8	36.5	7.4	
12-17-57	5	4.9	40	8.70	
12-18-57	4.25	10.8	41.	8.1	8.1
12-19-57	4	7.5	36.5	7.7	
12-20-57	3.4	4.5	20	8.45	
12-23-57	2.75	4.5	37	8.3	
12-24-57	3	4.6	41	7.4	
	[illegible] / 63 = [illegible]	55.99 / 63 = 7.2	~~[illegible]~~ / [illegible] = 17.0	522.20 / 63 = 8.3	
			[illegible] / 63 = 35.1		

Date	Alloy	K	Na	pH	
12-26-57	3	4.4	37	8.4	8.2
12-27-57	3.25	4.6	40	8.7	
12-30-57	4	5	44	9.0	
12-31-57	3.3	5	44	8.6	8.9
1-2-58	2.5	5.4	33	9.5	
1-3-58	2	4.7	30	8.5	
1-6-58	4.25	15	42	8.75	
1-7-58	12.5	19	36	9.6	9.6
1-8-58	30	29	59	9.8	
1-9-58	3	5	100	9.8	
1-10-58	3.75	27.5	28	9.85	
1-13-58	4.25	12.1	46	9.15	
1-14-58	2.5	8	28	8.8	
1-15-58	4.25	5.4	31	9.2	9.0
1-16-58	4.75	5.1	31	9.0	
1-17-58	6	5.1	31	9.0	
1-20-58	5	4.9	41	9.35	
1-21-58	6	5.1	40	9.0	
1-22-58	3.5	10.9	47	8.11	8.6
1-23-58	4	13.7	4.	8.03	
1-24-58	5.8	6.6	40	8.6	
1-27-58	3	5	37.5	8.5	
1-28-58	5	4.9	38	8.25	8.25
1-29-58	4.25	4.9	47.5	8.2	
1-30-58	2.5	4.9	35	8.1	
1-31-58	3	4.9	47.5	8.2	

Date	Alloy	K	Na	pH	
2-3-58	3.25	4.6	31	8.8	
2-4-58	2	4.4	31	8.85	
2-5-58	4.5	4.4	26	8.4	8.8
2-6-58	4.25	5.1	41	9.0	
2-7-58	4	4.6	31	8.9	
2-10-58	2.1	5.8	46	8.7	
2-11-58	6.6	7.2	51	8.1	
2-12-58	2.1	8.4	82	7.8	8.4
2-13-58	2.6	12.1	27	9.2	
2-14-58	1.2	4.9	37	8.3	
2-17-58	5.2	8.3	35	8.9	
2-18-58	20	3.8	20	9.85	
2-19-58	4.25	6	42	3.65	8.1
2-20-58	4.8	4.4	51	9.5	
2-21-58	4.8	4.1	32	8.78	
2-24-58	5	5.6	110	9.55	
2-25-58	2.5	4.8	55	8.1	
2-26-58	3	4.4	40	8.45	8.4
2-27-58	2	4.1	32	8.0	
2-28-58	1.8	4.3	35	8.1	

615 873 6629

Date	Alloy	K	Na	pH
3-3-58	3	4.1	40	8.75
3-4-58	3.5	4.3	46	8.4
3-5-58	3.25	6.1	46	[illegible] 8.7
3-6-58	2.5	[illegible]	46	[illegible]
3-[illegible]-58	4.75	20	59	9.35
3-10-58	3.1	4.9	38	9.1
3-11-58	2.25	4.6	44	8.25
3-12-58	3.5	4.6	55	7.95
3-13-58	3	4.7	40	7.5
			55 [illegible]	8.1 [illegible]
		[illegible]		8.6
3-14-58	5	3.8	48	7.7
3-17-58	4	3.8	54	8.15
3-18-58	5	4.4	54	8.8
3-19-58	4.5	7	49	8.6 8.5
3-20-58	4	3	49	8.35
3-24-58	3.2	38	39	8.2
3-25-58	2.5	4.1	33	7.9
3-26-58	2	5.3	32	8.2 8.0
3-27-58	2	6	40	7.75
3-28-58	3.2	8.1	43	8.06
	65 285.55 4.4	65 487.2 7.5	2747.5 42.3	65 557.31 8.6
3-31-58	3	5.2	35	8.1

Date	Alloy	K	Na	pH	
4-1-58	7	3.9	39	8.6	8.6
4-2-58	4.5	3.2	46.5	9.0	
4-3-58	3.75	3.4	50	8.7	
4-7-58	2.5	3.7	35	8.5	
4-8-58	5.5	3.4	34	8.7	
4-9-58	5	9.1	40	9.2	8.7
4-10-58	4.5	7	37	8.7	
4-11-58	4.5	4.6	36	8.5	
4-14-58	6.25	3.2	30	8.5	
4-15-58	3	4.7	41	8.4	
4-16-58	3	4.9	47.5	7.4	8.4
4-17-58	3.5	10.8	42	8.5	
4-18-58	2.8	8.8	44.5	9.0	
4-21-58	1.3	.3	32	8.8	
4-22-58	1.5	5	36	8.6	8.6
4-23-58	1.5	5	38	8.6	
4-24-58	2.0	4	38	8.6	
4-25-58	1.0	3	40	8.3	
4-28-58	1.5	4	36	8.9	
4-29-58	1.3	3	28	9.0	
4-30-58	1.6	4	36	9.1	9.0
5-1-58	12.5	5.4	38	8.9	
5-2-58	3.5	5.4	37	8.9	
5-5-58	2.2	5.4	45	8.9	
5-6-58	3.3	5.2	40	9.1	

Date	Alloy	K	Na	pH
5-7-58	2	6	30	7.7
5-8-58	6	9.3	46	9 8.7
5-9-58	2.3	5.6	42	8.6
5-12-58	2.0	7.5	40	8.5
5-13-58	2.0	6.6	40	8.4
5-14-58	2.0	5.9	40	8.5 8.4
5-15-58	2.1	6.2	38	8.2
5-16-58	2.6	6.6	42	8.5
5-19-58	2.9	7.3	35	8.4
5-20-58	3.5	6.2	32	8.35 8.6
5-21-58	7.8	7.6	42	8.9
5-22-58	3.5	6.8	47	8.5
5-23-58	3.2	6.2	47	8.5
5-26-58	3.4	6.8	45	8.3
5-27-58	3	5.8	50	8.6
5-28-58	2	5.4	53	8.6 8.7
5-29-58	2.5	5	45	9.4
6-2-58	3	5.9	49	8.7
6-3-58	2	5.9	47	9.05
6-4-58	11.5	6	44	9.8 9.2
6-5-58	2	4.5	40	9.2
6-6-58	3.5	~~4.5~~ 4.4	38	~~8.75~~ 9.3
6-9-58	2.5	4.4	45	8.75
6-10-58	2	4.4	40	9. 8.85
6-11-58	1.8	4.7	52	9.3
6-12-58	2	5.2	45	8.4
6-13-58	1.8	5.1	46	8.8

Date	Allow	[illegible]	Na	pH
6-16-58	1.8	5.1	40	8 8.5 8.8
6-17-58	1.8	5.2	39	8 8.7
6-18-58	1.8	5.1	38	9 [illegible].6
6-19-58	3	4.0	46	8.7
6-20-58	2.5	5	49	8.5
6-23-58	3	4.0	50	9
6-24-58	2.5	8	51	9 8.7
6-25-58	3.8	4.6	41	8 8.7
6-26-58	3.5	4.3	37	8 [illegible].2
6-27-58	4	4.1	35	8 [illegible]
6-30-58	2.5	4.0	38	8 8.7
Total --------	~~204.1~~ / 63	~~343.2~~ / 63	~~2590~~ / 63	~~547.85~~ / ~~63~~
Average --------	3.2	5.4	41	~~8.7~~ 8.7
7-1-58	2	4.2	38	9.0
7-2-58	2.5	1.4	56	8.5
7-3-58	2.5	1.0	56	8.9
7-7-58	3.	1.	56	8.9
7-8-58	5	6	56	8.8
7-9-58	2.5	.5	56	9.1 9.1
7-10-58	2.5	1.5	56	9.4
7-11-58	2.5	.4	56	9.1
7-14-58	2.5	3.1	56	9.3
7-15-58	5	8	47	9.5
7-16-58	6	13	69	9.2 9.5
7-17-58	6	3.4	38	10.6
7-18-58	3	3.4	38	8.8

Date	Alloy	K	Na	pH	
7-21-58	3.5	2.6	22	10.7	
7-22-58	10	2.3	2[illegible]	[illegible].4	
7-23-58	12	[illegible].3	35	[illegible].7	8.8
7-24-58	8	2.3	24	9 [illegible].1	
7-25-58	2.5	9.8	44	7.0	
7-28-58	2.8	6	27	8.6	
7-29-58	2.5	6.2	25	8.4	
7-30-58	5	6.3	30	8.9	
7-31-58	4.5	5.6	28	8.8	8.8
8-1-58	6	5.5	20	9.1	
8-4-58	5.5	7.5	26	9.2	
8-5-58	6	7.1	33	8.0	
8-6-58	4.7	8.1	31	7.8	8.3
8-7-58	2.2	5.8	37	8.3	
8-8-58	2.0	5.5	37	8.1	
8-11-58	3.0	4.8	31	8.6	
8-12-58	3	6	29	7.1	
8-13-58	2	7	46	8.4	8.5
8-14-58	3	6.8	60	10.5	
8-15-58	3	6.5	42	7.9	
8-18-58	3	6	39	8.7	
8-19-58	4	6.5	40	8.6	8.4
8-20-58	4	7.3	41	8.3	
8-21-58	7	7	41	8.1	
8-22-58	4	7.5	39	8.3	

Date	Alloy	K	Na	pH	
8-25-58	4	5.6	61	8 .5	
8-26-58	4	6	72	8.5	8.3
8-27-58	5	5.8	67	7 7.8	
8-28-58	5	5.8	65	8.0	
8-29-58	6	6.2	71	8.5	
9-2-58	9	5.8	61	8 .8	
9-3-58	13	5.0	50	9.0	
9-4-58	10	5	23	8 .2	8.5
9-5-58	7	6	85	8.4	
9-8-58	4.0	5.0	40	8 8.3	
9-9-58	5.0	5.0	32	8.1	
9-10-58	14.	5	35	9.4	8.5
9-11-58	9.0	5.0	40	8.4	
9-12-58	6.0	5.0	35	8.0	
9-15-58	5.0	5.0	44	8.7	
9-16-58	5.0	5.0	44	8.5	
9-17-58	4.5	5.0	37	7.3	8.1
9-18-58	3.0	5.0	36	8.1	
9-19-58	4	1	36	7.9	
9-22-58	2	2	31	8.0	
9-23-58	3	2	54	7.9	
9-24-58	3	5	43	7.8	
9-25-58	3	2	39	7.9	
Total	291.7 / 61	303.2 / 61	2640.0 / 61	522.7 / 61	
Avg.	4.8	5.0	43.3	8.6	

Date	Alloy	K	Na	pH	
9-26-58	2.5	3.4	42	8 [illegible].2	8.0
9-29-58	3.5	3.4	39	8 [illegible].1	
9-30-58	3.3	4.1	48	7.9	
10-1-58	3.3	4.4	40	6 [illegible].6	8.2
10-2-58	5.0	4.0	40.5	9.2	
10-[illegible]-58	4.5	4.4	49	9.3	
10-6-58	4.8	3.5	36	8.1	
10-7-58	5.2	3.6	36	8 [illegible].8	
10-[illegible]-58	4.8	3.4	42	11.3	9.2
10-[illegible]-58	[illegible].8	3.6	37	8 [illegible].0	
10-[illegible]-58	3.5	3.6	3	9 [illegible].1	
10-13-58	3	5	33	8.5	
10-14-58	3	6	43	8.5	
10-15-58	24	6	31	9.9	8.6
10-16-58	13	6	34	8	
10-17-58	4	5	28	8.3	
10-20-58	13	5	25	9.6	
10-22-58	6	7	32	7.8	9.2
10-23-58	8	8	23.0	10.9	
10-24-58	3.4	5,2	31	8.6	
10-27-58	8,8	5.2	30	9.4	
10-28-58	9.9	5.5	39	9.3	
10-29-58	3.7	5.4	37	8,6	8.1
10-30-58	5.2	5.5	36	8.7	
10-31-58	4.2	3.0	30.2	7.5	

Date	Ay	K	Na	pH	
Nov. 3	2.7	3.1	30.1	8.2	
Nov. 4	5.4	3.2	30.3	7.6	
Nov. 5	6.2	5.3	42.	8.9	8.3
Nov. 6	2.9	5.6	40.	8.6	
Nov. 7	3.	5.	43.	8.4	
Nov. 10	5	5.	41.	8.7	
Nov. 11	4	5.	39.	8.3	
Nov. 12	2	5	42	8.3	8.3
Nov. 13	9	5	40	8.0	
Nov. 14	3	5	37	8.1	
Nov. 15	8	5	35	9.1	
Nov. 18	4.0	6.	53	7.8	
Nov. 19	4.0	5.	44	7.9	8.0
Nov. 20	4.0	6.	44	7.7	
Nov. 21	4.0	6.	49	7.7	
Nov. 24	4.0	6.	44	8.2	
Nov. 25	7.5	5	53	8.8	
Nov. 26	4.4	5	54	8.2	8.6
Nov. 28	14	5	40	9.2	
Dec. 1	4.8	5.2	46	8.5	
Dec. 2	3.8	5	80	9.1	
Dec. 3	4.2	6.2	68	8.4	8.4
Dec. 4	4.0	5.7	66	7.4	
Dec. 5	3.6	5.8	70	8.4	
Dec. 8	3.8	5.7	70	8.4	
Dec. 9	3.7	5.7	74	7.4	
Dec. 10	2.8	5.5	72	8.2	

Date	Alloy	K	Na	pH	
Dec. 11	2	5.	47	8.1	8.0
Dec. 12	8	400	55	8.1	
Dec. 16	4	9.1	39	9.15	
Dec. 17	9	5	46	8.3	8.3
Dec. 18	4	5	40	7.9	
Dec. 19	4	6.1	60	7.8	
Dec. 22	6	5	41	8.7	
Dec. 23	6	6.0	43	7.6	7.9
Dec. 24	3.5	2.9	42	7.2	
Dec. 26	4	6	47	8.2	
Dec. 29	5	6	35	8.5	
Dec. 30	5	6	40	8.4	
Dec. 31	5	6	42	8.3	
Total	621337.4	62.717.4	12,269.9	12,526.4	
Average	5.4	11.6	43.5	~~8.5~~	8.6
1959					
1-2-59	5	5	39	9.4	
1-5-59	12	5	60	9.0	
1-6-59	18	6	68	3.5	
1-7-59	4	5	40	9.1	7.6
1-8-59	3	5	25	8.3	
1-9-59	5	9	51	7.9	
1-12-59	3	5	53	8.2	
1-13-59	6	6	70	8.7	8.6
1-14-59	8	6	76	9.1	
1-15-59	[illegible]	[illegible]			
1-16-59	9	5	49	8.2	
1-19-59	7	6	92	10.6	

Date	Alloy	K	Na	pH	
1-20-59	19	7.5	145	10.3	
1-21-59	11	6	35	9.7	9.8
1-22-59	6.5	7.5	45	9.0	
1-23-59	5.5	7.5	58	9.2	
1-26-59	2.2	4	55	8.6	
1-27-59	5.4	4.2	62	9.4	
1-28-59	5.2	5.5	75	8.7	8.7
1-29-59	3.6	5.0	75	8.5	
1-30-59	2.9	5.3	62	8.4	
2-2-59	3.3	5.2	62	8.7	
2-3-59	54	7.2	72	10.7	
2-4-59	6.9	4.8	44	8.6	9.1
2-5-59	5.4	5.1	58	8.9	
2-6-59	4.6	5.4	64	8.4	
2-9-59	2.6	5.0	56	8.9	
2-10-59	3	5	48	9.2	
2-11-59	3	5	39	9.2	9.0
2-12-59	2	5	52	8.9	
2-13-59	3	5	46	8.9	
2-16-59	2	5	31	9.5	
2-17-59	2	5	42	8.9	
2-18-59	3	5	53	8.2	8.6
2-19-59	[illegible]	[illegible]		--	
2-20-59	3	8	45	7.7	
2-24-59	3	7	31	8.3	
2-25-59	3	7	41	8.3	8.3
2-26-59	3	8	46	8.3	
2-27-59	3	8	42	8.3	
				--	

Date	Alloy	K	Na	pH	
3-2-59	6	7	49	8.4	
3-3-59	3	7	42	8.2	
3-4-59	3	7	47	8.4	8.3
3-5-59	2	7	42	8.2	
3-6-59	3	7	31	8.3	
3-9-59	5	7	46	8.3	
3-10-59	4	7	42	7.6	
3-11-59	4	6	38	8.3	8.1
3-12-59	3	7	38	8.1	
3-13-59	2.9	5.8	60	8.4	
3-16-59	4.0	5.7	62	8.2	
3-17-59	19.0	7.0	93	9.4	
3-18-59	6.5	7.0	82	8.6	8.5
3-19-59	2.3	7.0	64	8.1	
3-20-59	2.4	7.8	78	8.2	
3-23-59	3.3	5.5	60	8.4	
3-24-59	4	11.	55	8.1	
3-25-59	14	11.	59	9.2	8.5
3-26-59	6	11.	60	8.3	
~~3-27-59~~	~~2~~	~~10.~~	~~46~~	~~8.1~~	
3-30-59	2	10.	46	8.4	
3-31-59	5	7	48	8.2	
	59/3555	59/379.0	59/3269	59/507.0	
Avg.	6.02	6.42	55.41	8.59	

Date	Alloy	K.	Na	pH	
4-1-59	6	7	44	8.6	8.3
4-2-59	5	7	56	8.3	
4-3-59	2	10	64	8.0	
4-6-59	4	10	72	8.7	
4-7-59	3	10	76	8.4	
4-8-59	3	13	79	8.2	8.3
4-9-59	3	10	64	7.9	
4-10-59	3	10	59	8.4	
4-13-59	2	6	46	8.5	
4-14-59	5	7	56	8.2	
4-15-59	4	7	78	9.0	8.3
4-16-59	4	7	70	7.9	
4-17-59	4	6	75	7.9	
4-20-59	2	5	37	7.9	
4-21-59	3	10	44	7.8	
4-22-59	2	8	72	8.0	7.9
4-23-59	4	5	47	7.8	
4-24-59	2	3	52	8.2	
4-27-59	2	3	62	8.4	
4-28-59	4	8	57	8.4	
4-29-59	2	6	46	7.9	8.0
4-30-59	4	6	37	7.2	
5-1-59	4	7	48	8.3	
5-4-59	4	6	40	8.5	
5-5-59	4	10	101	9.7	
5-6-59				--	9.0
5-7-59	4	9	65	9.1	
5-8-59	3	8	67	8.7	

Date	Alloy	K	Na	pH	
5-11-59	4	7	69	9.1	
5-12-59	5	8	72	9.0	
5-13-59	3	10	56	8.7	9.1
5-14-59	3	7	65	9.4	
5-15-59	6	7	65	9.4	
5-18-59	4	7	60	9.6	
5-19-59	4	7	70	9.2	
5-20-59	4	8	100	9.4	9.4
5-21-59	4	8	85	9.6	
5-22-59	4	7	75	9.4	
5-25-59	5	7	62	9.4	
5-26-59	3	7	54	8.2	
5-27-59	2	7	54	8.7	8.2
5-28-59	2	6	66	6.5	
5-29-59	Holiday			--	
6-1-59	2	6	50	8.5	
6-2-59	3	6	50	8.5	
6-3-59	2	6	60	8.4	8.4
6-4-59	3	7	60	8.3	
6-5-59	2	6	70	8.1	
6-8-59	2	6	60	8.4	
6-9-59	5	7	70	8.7	
6-10-59	2	6	60	8.5	8.6
6-11-69	2	6	85	8.9	
6-12-59	2	6	65	8.4	

Date	Alloy	K	Na	pH	
6-15-59	0	5	62	8.4	
6-16-59	0	5	74	8.8	8.5
6-17-59	0	0	63	8.4	
6-18-59	0	0	64	8.5	
6-19-59	0	5	63	8.5	
6-22-59	0	4	76	9.2	
6-23-59	0	0	64	8.5	
6-24-59	0	0	45	8.2	8.4
6-25-59	0	0	46	7.9	
6-26-59	0	0	50	8.2	
6-29-59	0	0	61	8.8	
6-30-59	0	0	50	8.8	
Total	170	388	3915	536.4	
Average	2.7	6.2	62.1	8.5	8.5
7-1-59	2	7	53	8.5	
7-2-59	2	8	70	7.9	
7-6-59	2	8	56	8.4	
7-7-59	2	8	50	8.2	
7-8-59	2	8	51	9.2	8.6
7-9-59	2	8	50	8.7	
7-10-59	3	7	50	8.4	
7-13-59	3	7	44	8.7	
7-14-59	3	7	44	8.4	
7-15-59	3	7	67	8.6	8.4
7-16-59	3	10	67	8.0	
7-17-59	2	8	50	8.2	
7-20-59	2	7	47	9.0	

Date	Alloy	K	Na	pH	
7-21-59	2	7	48	8.5	
7-22-59	3	7	45	8.5	
7-23-59	3	7	55	8.5	8.7
7-24-59	3	8	42	8.8	
7-27-59	2	7	44	8.9	
7-28-59	3	7	44	8.5	
7-29-59	2	7	43	8.7	8.7
7-30-59	2	7	43	8.4	
7-31-59	3	7	42	8.6	

* INDUSTRIAL HYGIENE OFFICE DID NOT RECEIVE CARDS ON THESE SAMPLES. PHONED BY H.P. (MSANDERS

*	8-3-59	Void				
*	8-4-59	2	3	67	8.7	
	8-5-59	2	5	37	8.2	8.3
*	8-6-59	2	5	46	8.1	
*	8-7-59	2	3	35	8.1	
*	8-10-59	3	2	36	8.3	
*	8-11-59	3	4	37	8.1	
*	8-12-59	2	2	35	8.2	8.2
*	8-13-59	2	2	42	8.3	
*	8-14-59	2	5	39	8.2	
*	8-17-59	2	2	36	8.3	
	8-18-59	2	4	31	8.2	
	8-19-59	2	7	33	8.2	8.1
	8-20-59	1	3	33	8.0	
	8-21-59	1	2	33	7.9	
	8-24-59	1	1	42	8.5	
	8-25-59	1	1	44	8.1	
	8-26-59	1	1	41	8.2	
	8-27-59	1	1	43	8.3	
	TOTAL	86	217	1815	3355	

Date	Alloy	K	Na	pH
8-28-59	1	4	44	9.2
8-31-59	0	4	46	9.5
9-1-59	0	7	62	9.7
9-2-59	1	4	45	9.5
9-3-59	0	4	41	9.2
9-4-59	0	4	40	9.4
9-8-59	1	3	42	9.1
9-9-59	1	3	42	9.1
9-10-59	1	3	41	8.9
9-11-59	1	3	43	8.8
9-14-59	2	3	45	9.0
9-15-59	2	4	43	9.0
9-16-59	2	4	48	9.1
9-17-59	2	3	52	9.1
9-18-59	3	5	28	8.4
9-21-59	2	3	26	8.5
9-22-59	1	3	23	8.2
9-23-59	2	5	49	8.8
9-24-59	2	4	56	9.2
9-25-59	2	3	52	9.0
9-28-59	2	3	53	9.2
9-29-59	2	3	56	8.9
9-30-59	4.	3.	56	9.1
	63)120(1.9	63)302(4.8	63)2848(45.2	63)543.4(8

8.5

9.5

9.0

8.9

8.7

Date	Alloy	K	Na	pH	
10-1-59	3	4	43	9.3	9.1
10-2-59	4	3	46	9.2	
10-5-59	3	3	45	9.5	
10-6-59	3	4	40	8.5	
10-7-59	1	8	35	8.9	9.1
10-8-59	2	6	37	9.2	
10-9-59	2	6	39	9.3	
10-13-59	1	3	30	8.4	
10-14-59	1	3	20	8.4	8.2
10-15-59	1	4	30	7.5	
10-16-59	2	5	30	8.3	
10-19-59	1	4	30	8.4	
10-20-59	1	5	40	8.5	
10-21-59	0	5	30	7.6	8.0
10-22-59	1	3	30	8.0	
10-23-59	0	4	50	7.4	
10-26-59	1	3	40	8.3	
10-27-59	1	3	36	8.1	
10-28-59	2	3	42	8.1	8.2
10-29-59	2	3	42	8.1	
10-30-59	1	4	42	8.3	
11-02-59	1	3	33	8.4	
11-03-59	1	3	34	8.4	
11-04-59	1	5	42	8.3	8.3
11-05-59	1	4	45	8.3	
11-06-59	1	3	48	8.3	
11-09-59	1	3	45	8.9	
11-10-59	0	2	42	7.8	

Date	Alloy	K	Na	pH	
11-11-59	2	4	42	7.9	8.2
11-12-59	1	3	43	8.2	
11-13-59	1	3	43	8.1	
11-16-59	0	3	43	8.2	
11-17-59	0	3	40	7.9	
11-18-59	1	3	49	7.9	8.0
11-19-59	1	3	48	8.0	
11-20-59	1	3	49	7.9	
11-23-59	1	2	45	1.4	
11-24-59	1	3	27	7.4	6.1
11-25-59	0	3	39	7.6	
11-27-59	1	4	45	7.9	
11-30-59	1	3	39	7.6	
12-1-59	1	6	35	8.0	
12-2-59	1	4	42	8.4	8.1
12-3-59	1	4	32	8.6	
12-4-39	1	3	32	8.1	
12-7-59	1	2	35	8.3	
12-8-59	1	2	35	8.1	
12-9-59	1	3	35	8.8	8.3
12-10-59	1	4	38	7.8	
12-11-59	2	3	52	8.3	
12-14-59	1	3	36	8.2	
12-15-59	2	3	43	8.2	
12-16-59	1	3	49	8.1	8.0
12-17-59	1	6	62	7.8	
12-18-59	1	6	47	7.8	

Date	Alloy	K	Na	pH
12-21-59	1	3	33	8.1
12-22-59	1	3	52	7.8 8.0
12-23-59	1	4	54	7.7
12-24-59	1	3	44	8 8.3
12-28-59	1	3	44	8 8.3
12-29-59	1	4	44	8.2 8.1
12-30-59	1	3	48	7.8
12-31-59	1	6	50	8.2
	33) 74 1.2	33) 230 3.6	33) 2562 40.0	33) 510.5 8.1

6.1 – 11.8

13 days of 4.3 yrs $< 6 \equiv (5, 4, 3)$

10-12-55
12-12-55
1-9-56
2-16-56
3-7-56
4-10-56
4-16-56
4-24-56
4-26-56
4-30-57
2-19-58
1-6-59
11-23-59

10 days of 4.3 yrs. $> 10 \equiv (11, 12)$

10-25-55
11-7-55
1-13-56
2-1-56
2-13-56
2-14-56
5-3-56
5-8-56
5-14-56
10-8-58

POPLAR CREEK ANALYSES

Date	P H
7-03-61	9.3
7-05-61	9.4
7-06-61	9.3
7-07-61	7.9
7-10-61	8.6
7-11-61	9.4
7-12-61	9.2
7-13-61	9.1
7-14-61	9.0
7-17-61	8.0
7-18-61	8.2
7-19-61	8.2
7-20-61	8.2
7-21-61	8.0
7-24-61	9.9
7-25-61	9.9
7-26-61	9.3
7-27-61	10.0
7-28-61	9.1
7-31-61	10.1
Average PH for Month of July, 1961	9.0
8-01-61	9.3
8-02-61	9.3
8-03-61	8.7
8-04-61	9.2
8-07-61	9.1
8-08-61	9.0
8-09-61	9.0
8-10-61	9.2
8-11-61	9.2
8-14-61	8.7
8-15-61	9.3
8-16-61	9.9
8-17-61	9.5
8-18-61	8.7
8-21-61	8.5
8-22-61	9.7
8-23-61	9.2
8-24-61	8.1
8-25-61	9.3
8-28-61	9.1
8-29-61	9.3
8-30-61	9.4
8-31-61	9.1
Average PH for Month of August, 1961	9.1

POPLAR CREEK ANALYSES

Date		P H
9-01-61		9.4
9-05-61		8.9
9-07-61		8.6
9-08-61		8.3
9-11-61		8.5
9-12-61		8.6
9-13-61		8.2
9-14-61		9.3
9-15-61		9.0
9-18-61		9.5
9-19-61		7.7
9-20-61		9.3
9-21-61		9.3
9-22-61		9.4
9-25-61		9.5
9-26-61		9.7
9-27-61		10.2
9-28-61		9.9
9-29-61		9.2
	Average PH for Month of September, 1961	9.1
10-02-61		8.8
10-03-61		8.5
10-04-61		9.2
10-05-61		9.1
10-06-61		9.5
10-09-61		10.1
10-10-61		10.1
10-11-61		9.7
10-12-61		9.6
10-13-61		9.4
10-16-61		9.9
10-17-61		9.5
10-18-61		9.7
10-19-61		9.7
10-20-61		9.5
10-23-61		9.4
10-24-61		9.3
10-25-61		9.3
10-26-61		9.4
10-27-61		8.9
10-30-61		9.0
10-31-61		9.4
	Average PH for Month of October, 1961	9.4

POPLAR CREEK ANALYSIS

Date		P H
11-01-61		9.4
11-02-61		10.2
11-03-61		10.1
11-06-61		10.2
11-07-61		10.2
11-08-61		10.1
11-09-61		9.9
11-10-61		10.2
11-13-61		9.9
11-14-61		9.4
11-15-61		9.7
11-16-61		10.2
11-17-61		9.5
11-20-61		10.1
11-21-61		9.9
11-22-61		10.1
11-24-61		9.9
11-27-61		9.4
11-28-61		9.2
11-29-61		9.2
11-30-61		9.4
	Average PH for Month of November, 1961	9.8
12-01-61		9.6
12-04-61		[illegible].7
12-05-61		8.5
12-06-61		9.0
12-07-61		10.7
12-08-61		11.2
12-11-61		10.7
12-12-61		8.9
12-13-61		8.3
12-14-61		9.6
12-15-61		8.9
12-18-61		7.6
12-19-61		8.1
12-20-61		8.5
12-21-61		9.0
12-22-61		8.7
12-26-61		8.7
12-27-61		8.4
12-28-61		8.1
12-29-61		7.2
	Average PH for Month of December, 1961	8.9

POPLAR CREEK ANALYSIS

Date	pH
1-02-62	7.0
1-03-62	7.6
1-04-62	7.8
1-05-62	7.9
1-08-62	9.5
1-09-62	9.4
1-10-62	9.7
1-11-62	11.3
1-12-62	9.7
1-15-62	9.4
1-16-62	9.4
1-17-62	9.6
1-18-62	9.2
1-19-62	8.9
1-22-62	9.7
1-23-62	9.4
1-24-62	9.4
1-25-62	10.2
1-26-62	9.8
1-29-62	9.0
1-30-62	9.3
1-31-62	9.6
Average pH for Month of January, 1962	9.2

2-01-62	9.6
2-02-62	9.8
2-05-62	8.5
2-06-62	9.3
2-07-62	9.4
2-08-62	9.5
2-09-62	9.1
2-12-62	8.6
2-13-62	9.4
2-14-62	9.5
2-15-62	9.7
2-16-62	8.8
2-19-62	9.0
2-20-62	9.1
2-21-62	9.0
2-23-62	8.8
2-26-62	8.0
2-27-62	8.4
2-28-62	9.4
Average pH for Month of February, 1962	9.1

POPLAR CREEK ANALYSIS

Date	pH
3-1-62	8.7
3-2-62	8.8
3-5-62	8.0
3-6-62	8.1
3-7-62	8.0
3-8-62	8.7
3-9-62	8.8
3-12-62	8.8
3-13-62	9.9
3-14-62	9.9
3-15-62	9.9
3-16-62	9.6
3-19-62	9.8
3-20-62	9.7
3-21-62	9.5
3-22-62	9.0
3-23-62	8.9
3-26-62	7.2
3-28-62	8.1
3-29-62	9.4
3-30-62	9.8
Average pH for Month of March, 1962	9.0

POPLAR CREEK ANALYSIS

Date	pH
3-1-62	8.7
3-2-62	8.8
3-5-62	8.0
3-6-62	8.1
3-7-62	8.0
3-8-62	8.7
3-9-62	8.8
3-12-62	8.8
3-13-62	9.9
3-14-62	9.9
3-15-62	9.9
3-16-62	9.6
3-19-62	9.8
3-20-62	9.7
3-21-62	9.5
3-22-62	9.0
3-23-62	8.9
3-26-62	7.2
3-27-62	
3-28-62	8.1
3-29-62	
3-30-62	9.8
	8.70

Average pH for Month of March, 1962

POPLAR CREEK ANALYSIS

Date	pH
4-2-62	9.5
4-3-62	8.8
4-4-62	9.8
4-5-62	9.4
4-6-62	9.3
4-9-62	9.9
4-10-62	10.3
4-11-62	9.6
4-12-62	9.9
4-13-62	10.2
4-23-62	9.5
4-24-62	8.8
4-25-62	11.0
4-26-62	10.3
4-27-62	10.9
Average pH for Month of April, 1962	9.8

5-2-62	10.4
5-3-62	9.7
5-4-62	8.7
5-7-62	9.8
5-8-62	9.7
5-9-62	9.4
5-10-62	6.4
5-11-62	9.7
5-14-62	9.2
5-15-62	9.5
5-16-62	8.7
5-17-62	9.3
5-18-62	10.6
5-21-62	2.6
5-22-62	7.3
5-23-62	9.6
5-24-62	9.4
5-25-62	9.8
5-28-62	11.0
5-29-62	9.4
5-31-62	10.1
Average pH for Month of May, 1962	9.1

Date	pH
6-1-62	9.5
6-4-62	9.4
6-5-62	9.0
6-6-62	9.3
6-7-62	9.7
6-8-62	9.7
6-11-62	9.7
6-12-62	8.5
6-13-62	10.9
6-18-62	10.5
6-19-62	9.3
6-20-62	10.3
6-21-62	10.4
6-22-62	10.7
6-25-62	10.6
6-26-62	11.4
6-27-62	7.7
6-28-62	11.7
6-29-62	10.0
Average pH for June, 1962	9.9
7-2-62	9.2
7-3-62	8.2
7-5-62	10.3
7-6-62	9.1
7-9-62	9.1
7-10-62	9.5
7-11-62	9.3
7-12-62	10.1
7-13-62	9.5
7-16-62	8.9
7-17-62	9.8
7-18-62	9.5
7-19-62	11.5
7-20-62	9.2
7-23-62	9.6
7-24-62	6.6
7-25-62	9.0
7-26-62	8.9
7-27-62	8.0
7-30-62	9.6
7-31-62	9.6
Average pH for July, 1962	9.3

Date	pH
8-1-62	9.3
8-2-62	9.4
8-3-62	9.6
8-6-62	9.1
8-7-62	9.4
8-8-62	9.3
8-10-62	8.5
8-13-62	8.3
8-14-62	9.1
8-15-62	9.3
8-16-62	9.6
8-17-62	9.8
8-20-62	7.1
8-21-62	9.7
8-22-62	10.1
8-23-62	9.0
8-24-62	8.9
8-27-62	7.6
8-28-62	9.0
8-29-62	8.3
8-30-62	8.6
8-31-62	8.3
Average for August, 1962	9.8
9-4-62	8.9
9-5-62	7.8
9-6-62	8.5
9-7-62	9.0
9-10-62	7.9
9-11-62	8.7
9-12-62	9.0
9-13-62	8.3
9-14-62	6.1
9-17-62	9.0
9-18-62	9.6
9-19-62	10.9
9-20-62	9.3
9-21-62	8.5
9-24-62	8.8
9-26-62	8.4
9-26-62	8.4
9-27-62	9.1
9-28-62	9.4
Average for September, 1962	8.7

Date	pH
10-01-62	8.3
10-02-62	7.4
10-03-62	10.1
10-04-62	10.0
10-05-62	8.9
10-08-62	8.5
10-09-62	10.3
10-10-62	9.4
10-11-62	9.3
10-12-62	8.4
10-15-62	8.2
10-16-62	8.3
10-17-62	7.9
10-18-62	7.1
10-19-62	8.0
10-22-62	12.5
10-23-62	9.0
10-24-62	9.1
10-25-62	9.1
10-26-62	9.0
10-29-62	8.6
10-30-62	9.5
10-31-62	9.4
Average for October, 1962	9.0

Date	pH
11-01-62	7.2
11-02-62	7.6
11-05-62	7.3
11-06-62	7.6
11-07-62	7.8
11-08-62	8.4
11-12-62	8.4
11-13-62	7.0
11-14-62	8.0
11-15-62	9.5
11-16-62	9.1
11-19-62	8.7
11-20-62	7.8
11-23-62	8.0
11-28-62	8.0
11-29-62	9.3
11-26-62	10.2
11-27-62	8.0
11-30-62	8.4
Average for month of November, 1962	8.2

12-03-62	9.5
12-04-62	9.5
12-06-62	9.6
12-07-62	9.1
12-10-62	10.5
12-12-62	2.3
12-14-62	9.3
12-17-62	8.5
12-18-62	9.2
12-19-62	8.7
12-20-62	9.3
12-21-62	8.4
12-26-62	7.4
12-27-62	8.1
12-28-62	7.5
12-29-62	9.1
Average for month of December, 1962	8.4

Date	pH
1-02-63	8.3
1-03-63	8.7
1-04-63	9.1
1-05-63	8.2
1-07-63	7.7
1-08-63	6.8
1-09-63	7.6
1-10-63	8.4
1-11-63	8.4
1-14-63	9.2
1-15-63	9.6
1-16-63	6.8
1-17-63	7.8
1-18-63	8.0
1-21-63	2.8
1-22-63	2.9
1-28-63	11.7
1-29-63	11.6
1-30-63	7.3
1-30-63	7.6
1-30-63	8.0
1-30-63	8.2
1-30-63	11.8
1-30-63	11.8
1-30-63	11.8
1-30-63	11.7
1-30-63	9.1
1-30-63	8.1
1-31-63	8.3
1-31-63	8.1
Average for January, 1963	8.5

2-01-63	8.0
2.01-63	8.0
2-04-63	12.0
2-05-63	8.0
2-06-63	7.8
2-07-63	7.7
2-08-63	9.6
2-11-63	8.9
2-12-63	8.9
2-13-63	8.1
2-18-63	8.0
2-19-63	2.7
2-20-63	7.3
2-21-63	7.3
2-25-63	7.2
2-26-63	8.0
2-27-63	8.2
Average for February, 1963	8.0

Date	pH
3-01-63	9.3
3-04-63	7.4
3-05-63	8.9
3-06-63	6.2
3-07-63	8.9
3-08-63	9.1
3-11-63	7.3
3-13-63	7.6
3-14-63	7.5
3-15-63	8.5
3-18-63	11.0
3-19-63	9.5
3-20-63	8.9
3-21-63	9.2
3-22-63	9.2
3-25-63	9.5
3-26-63	9.3
3-27-63	9.2
3-28-63	9.2
3-29-63	9.3
Average for March, 1963	8.8

4-1-63	9.0
4-2-63	8.4
4-3-63	8.1
4-4-63	7.8
4-5-63	9.0
4-9-63	8.7
4-8-63	8.8
4-10-63	7.6
4-11-63	7.5
4-16-63	7.7
4-17-63	7.9
4-18-63	8.2
4-19-63	8.5
4-22-63	7.5
4-23-63	8.4
4-24-63	7.9
4-25-63	7.9
4-26-63	8.0
4-29-63	10.3
4-30-63	8.9
Average for April, 1963	8.3

Date		pH
6-24-63		9.5
6-25-63		7.4
6-26-63		9.3
6-27-63		7.8
6-28-63		7.7
	Average for June, 1963	8.3

7-1-63		7.8
7-2-63		9.4
7-3-63		7.7
7-5-63		9.0
7-8-63		7.8
7-9-63		7.9
7-10-63		8.2
7-11-63		8.6
7-12-63		8.8
7-15-63		8.5
7-16-63		7.4
7-17-63		8.4
	Average for July, 1963	8.3

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OAK RIDGE Y-12 PLANT INFORMATION CONTROL FORM

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