VOLUME II - APPENDICES
FINAL DAMBREAK ANALYSIS FOR THE HARQUAHALA AND SADDLEBACK FLOOD RETARDING STRUCTURES
Project No. FCD-88-66

Prepared for:
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Prepared by:
CARTER ASSOCIATES, INC.
5080 N. 40th Street, Suite 300
Phoenix, Arizona 85018
(602) 955-0900

Registered Professional Engineer (Civil)
CERTIFICATE NO.
20155
ROBERT B.
MURPHY
Signed 2-28-91
ARIZONA, U.S.A.

February 1991
Carter Job No. 06-016-83394-02

CARTER ASSOCIATES, INC.
CONSULTING ENGINEERS, PLANNERS & SURVEYORS
5080 North 40th Street • Suite 300 • Phoenix, Az. 85018 • (602) 955-0900
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Appendix A

APPENDIX A

Harquahala Flood Retarding Structure
6- and 72-Hour PMF HEC-1 Model

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID        DAMBREAK ANALYSIS OF FAR-WEST MARICOPA COUNTY STRUCTURES
  2           ID        HARQUAHALA STRUCTURE
  3           ID        6 HOUR PMF STORM:  50% 6 HOUR HYDROGRAPH GENERATED FOR DAMBREAK
  4           ID        FILE:  HQFA.D6
              *DIAGRAM
  5           ID        SEPT.17,  1990
  6           IT       5       0       0     300
  7           IO       5       0
  8           IN      15

  9           KK    WS-1        WATERSHED NO. 1 DRAINING TO HQFRS
 10           BA   30.54
 11           PB    9.5
 12           PC      0    0.14    0.29    0.43     0.6    0.78    0.95    1.12     1.5     4.3
 13           PC    5.6     6.3     7.0     7.5    7.85    8.15     8.4    8.55     8.7    8.85
 14           PC    9.0     9.1    9.25    9.36     9.5
 15           LS      0      89
 16           UD   1.63

 17           KK    WS-2        WATERSHED NO. 2 DRAINING TO HQFRS
 18           BA   48.63
 19           LS      0      87
 20           UD   1.55

 21           KK    WS-3        WATERSHED NO. 3 DRAINING TO HQFRS
 22           BA   12.87
 23           LS      0      88
 24           UD   0.49

 25           KK    WS-4        WATERSHED NO. 4 DRAINING TO HQFRS
 26           BA   11.25
 27           LS      0      88
 28           UD   0.82

 29           KK    CP-1
 30           KM        COMBINE WS-1 TRHU WS-4 AT HQFRS
 31           HC       4

 32           KK   HQHYD        50% 6 HOUR PMF HYDROGRAPH FOR ROUTING THRU HQFRS
 33           KO       2       2
 34           DT  0.5PMP
 35           DI       0 1000000
 36           DQ       0  500000

 37           KK   HQFRS
 38           KO       2       2
 39           KM        EMERGENCY SPILLWAY INV. = 1408.4
 40           KM        TOP OF HQFRS = 1419.7   BOTTOM ELE. = 1375.9
 41           KM        PRINCIPAL & EMERGENCY SPILLWAY TOTAL Q @  1419.7 = 15377.7 CFS
 42           RS       1    STOR       0       0
 43           SV     0.0   45.19   70.09  111.96  166.29  272.73  401.06  718.81  1268.6 3160.99
 44           SV  4577.8  6287.6 8287.32 9998.0911880.79 15696.5 21075.9 28349.3 29006.6   30102
 45           SE  1375.9  1387.3  1389.1 1390.83 1392.59 1391.34  1396.1 1397.86 1399.61 1403.13
 46           SE  1404.9  1406.6  1408.4  1409.7 1411.06 1413.45 1416.38  1419.7  1420.0  1420.5
 47           SQ     0.0     0.2   162.5   262.6   272.6   281.8   290.8   299.8   308.1   325.0
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  48          SQ   332.4   340.1   347.8  1049.3  2325.3  5551.8 10718.6 15377.7 22588.6   58752
  49          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
LINE      (V) ROUTING          (---)) DIVERSION OR PUMP FLOW

NO.       (.) CONNECTOR        ((---) RETURN OF DIVERTED OR PUMPED FLOW

 9         WS-1
              .
              .
17            .        WS-2
              .           .
              .           .
21            .           .        WS-3
              .           .           .
              .           .           .
25            .           .           .        WS-4
              .           .           .           .
              .           .           .           .
29         CP-1.................................
              .
              .
34            .-------)  0.5PMP
32        HQHYD
             V
             V
37        HQFRS

) RUNOFF ALSO COMPUTED AT THIS LOCATION
```

```
                                        ****
                    FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
          U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
                                        ****


                    DAMBREAK ANALYSIS OF FAR-WEST MARICOPA COUNTY STRUCTURES
                    HARQUAHALA STRUCTURE
                    6 HOUR PMF STORM:  50% 6 HOUR HYDROGRAPH GENERATED FOR DAMBREAK
                    FILE:  HQFA.D6
                    SEPT.17,  1990

  7 IO        OUTPUT CONTROL VARIABLES
                   IPRNT          5  PRINT CONTROL
                   IPLOT          0  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT         HYDROGRAPH TIME DATA
                    NMIN          5  MINUTES IN COMPUTATION INTERVAL
                   IDATE     1    0  STARTING DATE
                   ITIME       0000  STARTING TIME
                      NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE     2    0  ENDING DATE
                  NDTIME       0055  ENDING TIME

              COMPUTATION INTERVAL     .08 HOURS
                   TOTAL TIME BASE   24.92 HOURS

       ENGLISH UNITS


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


          **************
          *            *
  32 KK   *     HQHYD  *            50% 6 HOUR PMF HYDROGRAPH FOR ROUTING THRU HQFRS
          *            *
          **************

  33 KO       OUTPUT CONTROL VARIABLES
                   IPRNT          2  PRINT CONTROL
                   IPLOT          2  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE

   DT         DIVERSION
                   ISTAO     0.5PMP  DIVERSION HYDROGRAPH IDENTIFICATION

   DI            INFLOW        .001000000.00

   DQ      DIVERTED FLOW        .00 500000.00

                                                   ***
*****************************************************************************************************************************

                                        DIVERSION HYDROGRAPH   0.5PMP

*****************************************************************************************************************************
```

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
					*						*						*					
1		0000	1	0.	*	1		0615	76	29411.	*	1		1230	151	49.	*	1		1845	226	0.
1		0005	2	0.	*	1		0620	77	28140.	*	1		1235	152	43.	*	1		1850	227	0.
1		0010	3	0.	*	1		0625	78	26848.	*	1		1240	153	38.	*	1		1855	228	0.
1		0015	4	0.	*	1		0630	79	25558.	*	1		1245	154	34.	*	1		1900	229	0.
1		0020	5	0.	*	1		0635	80	24281.	*	1		1250	155	29.	*	1		1905	230	0.
1		0025	6	0.	*	1		0640	81	23038.	*	1		1255	156	26.	*	1		1910	231	0.
1		0030	7	0.	*	1		0645	82	21827.	*	1		1300	157	22.	*	1		1915	232	0.
1		0035	8	2.	*	1		0650	83	20670.	*	1		1305	158	19.	*	1		1920	233	0.
1		0040	9	10.	*	1		0655	84	19559.	*	1		1310	159	16.	*	1		1925	234	0.
1		0045	10	27.	*	1		0700	85	18480.	*	1		1315	160	13.	*	1		1930	235	0.
1		0050	11	62.	*	1		0705	86	17426.	*	1		1320	161	11.	*	1		1935	236	0.
1		0055	12	123.	*	1		0710	87	16399.	*	1		1325	162	9.	*	1		1940	237	0.
1		0100	13	215.	*	1		0715	88	15403.	*	1		1330	163	7.	*	1		1945	238	0.
1		0105	14	343.	*	1		0720	89	14440.	*	1		1335	164	5.	*	1		1950	239	0.
1		0110	15	509.	*	1		0725	90	13513.	*	1		1340	165	4.	*	1		1955	240	0.
1		0115	16	714.	*	1		0730	91	12627.	*	1		1345	166	3.	*	1		2000	241	0.
1		0120	17	955.	*	1		0735	92	11781.	*	1		1350	167	2.	*	1		2005	242	0.
1		0125	18	1229.	*	1		0740	93	10968.	*	1		1355	168	1.	*	1		2010	243	0.
1		0130	19	1533.	*	1		0745	94	10185.	*	1		1400	169	1.	*	1		2015	244	0.
1		0135	20	1863.	*	1		0750	95	9437.	*	1		1405	170	0.	*	1		2020	245	0.
1		0140	21	2218.	*	1		0755	96	8729.	*	1		1410	171	0.	*	1		2025	246	0.
1		0145	22	2595.	*	1		0800	97	8060.	*	1		1415	172	0.	*	1		2030	247	0.
1		0150	23	3025.	*	1		0805	98	7428.	*	1		1420	173	0.	*	1		2035	248	0.
1		0155	24	3533.	*	1		0810	99	6835.	*	1		1425	174	0.	*	1		2040	249	0.
1		0200	25	4155.	*	1		0815	100	6280.	*	1		1430	175	0.	*	1		2045	250	0.
1		0205	26	5358.	*	1		0820	101	5760.	*	1		1435	176	0.	*	1		2050	251	0.
1		0210	27	7529.	*	1		0825	102	5279.	*	1		1440	177	0.	*	1		2055	252	0.
1		0215	28	11199.	*	1		0830	103	4840.	*	1		1445	178	0.	*	1		2100	253	0.
1		0220	29	16424.	*	1		0835	104	4443.	*	1		1450	179	0.	*	1		2105	254	0.
1		0225	30	22872.	*	1		0840	105	4084.	*	1		1455	180	0.	*	1		2110	255	0.
1		0230	31	29791.	*	1		0845	106	3757.	*	1		1500	181	0.	*	1		2115	256	0.
1		0235	32	36494.	*	1		0850	107	3460.	*	1		1505	182	0.	*	1		2120	257	0.
1		0240	33	42509.	*	1		0855	108	3186.	*	1		1510	183	0.	*	1		2125	258	0.
1		0245	34	47842.	*	1		0900	109	2934.	*	1		1515	184	0.	*	1		2130	259	0.
1		0250	35	52309.	*	1		0905	110	2701.	*	1		1520	185	0.	*	1		2135	260	0.
1		0255	36	56276.	*	1		0910	111	2486.	*	1		1525	186	0.	*	1		2140	261	0.
1		0300	37	59985.	*	1		0915	112	2286.	*	1		1530	187	0.	*	1		2145	262	0.
1		0305	38	63621.	*	1		0920	113	2101.	*	1		1535	188	0.	*	1		2150	263	0.
1		0310	39	67175.	*	1		0925	114	1929.	*	1		1540	189	0.	*	1		2155	264	0.
1		0315	40	70436.	*	1		0930	115	1768.	*	1		1545	190	0.	*	1		2200	265	0.
1		0320	41	73320.	*	1		0935	116	1618.	*	1		1550	191	0.	*	1		2205	266	0.
1		0325	42	75719.	*	1		0940	117	1479.	*	1		1555	192	0.	*	1		2210	267	0.
1		0330	43	77631.	*	1		0945	118	1349.	*	1		1600	193	0.	*	1		2215	268	0.
1		0335	44	79071.	*	1		0950	119	1229.	*	1		1605	194	0.	*	1		2220	269	0.
1		0340	45	80119.	*	1		0955	120	1116.	*	1		1610	195	0.	*	1		2225	270	0.
1		0345	46	80850.	*	1		1000	121	1012.	*	1		1615	196	0.	*	1		2230	271	0.
1		0350	47	81237.	*	1		1005	122	917.	*	1		1620	197	0.	*	1		2235	272	0.
1		0355	48	81252.	*	1		1010	123	831.	*	1		1625	198	0.	*	1		2240	273	0.
1		0400	49	80873.	*	1		1015	124	752.	*	1		1630	199	0.	*	1		2245	274	0.
1		0405	50	80157.	*	1		1020	125	680.	*	1		1635	200	0.	*	1		2250	275	0.
1		0410	51	79139.	*	1		1025	126	614.	*	1		1640	201	0.	*	1		2255	276	0.
1		0415	52	77791.	*	1		1030	127	556.	*	1		1645	202	0.	*	1		2300	277	0.
1		0420	53	76126.	*	1		1035	128	503.	*	1		1650	203	0.	*	1		2305	278	0.
1		0425	54	74139.	*	1		1040	129	455.	*	1		1655	204	0.	*	1		2310	279	0.
1		0430	55	71855.	*	1		1045	130	412.	*	1		1700	205	0.	*	1		2315	280	0.
1		0435	56	69318.	*	1		1050	131	374.	*	1		1705	206	0.	*	1		2320	281	0.
1		0440	57	66622.	*	1		1055	132	338.	*	1		1710	207	0.	*	1		2325	282	0.
1		0445	58	63873.	*	1		1100	133	306.	*	1		1715	208	0.	*	1		2330	283	0.
1		0450	59	61167.	*	1		1105	134	278.	*	1		1720	209	0.	*	1		2335	284	0.
1		0455	60	58566.	*	1		1110	135	251.	*	1		1725	210	0.	*	1		2340	285	0.
1		0500	61	56056.	*	1		1115	136	227.	*	1		1730	211	0.	*	1		2345	286	0.
1		0505	62	53649.	*	1		1120	137	206.	*	1		1735	212	0.	*	1		2350	287	0.
1		0510	63	51316.	*	1		1125	138	186.	*	1		1740	213	0.	*	1		2355	288	0.

1	0515	64	47885.	*	1	1130	139	169.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	46894.	*	1	1135	140	152.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	44826.	*	1	1140	141	138.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	42863.	*	1	1145	142	125.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	41021.	*	1	1150	143	113.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	39292.	*	1	1155	144	102.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	37648.	*	1	1200	145	92.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	36086.	*	1	1205	146	83.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	34615.	*	1	1210	147	75.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	33237.	*	1	1215	148	67.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	31929.	*	1	1220	149	61.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	30664.	*	1	1225	150	54.	*	1	1840	225	0.	*	2	0055	300	0.
				*					*					*				

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 81252.	3.92		43004.	11134.	10724.	10724.
		(INCHES)	3.871	4.009	4.009	4.009
		(AC-FT)	21324.	22083.	22083.	22083.

CUMULATIVE AREA = 103.29 SQ MI

****

HYDROGRAPH AT STATION HQHYD

****

MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
				*						*						*					
1	0000	1	0.	*	1	0615	76	29411.	*	1	1230	151	49.	*	1	1845	226	0.
1	0005	2	0.	*	1	0620	77	28140.	*	1	1235	152	43.	*	1	1850	227	0.
1	0010	3	0.	*	1	0625	78	26848.	*	1	1240	153	38.	*	1	1855	228	0.
1	0015	4	0.	*	1	0630	79	25558.	*	1	1245	154	34.	*	1	1900	229	0.
1	0020	5	0.	*	1	0635	80	24281.	*	1	1250	155	29.	*	1	1905	230	0.
1	0025	6	0.	*	1	0640	81	23038.	*	1	1255	156	26.	*	1	1910	231	0.
1	0030	7	0.	*	1	0645	82	21827.	*	1	1300	157	22.	*	1	1915	232	0.
1	0035	8	2.	*	1	0650	83	20670.	*	1	1305	158	19.	*	1	1920	233	0.
1	0040	9	10.	*	1	0655	84	19559.	*	1	1310	159	16.	*	1	1925	234	0.
1	0045	10	27.	*	1	0700	85	18480.	*	1	1315	160	13.	*	1	1930	235	0.
1	0050	11	62.	*	1	0705	86	17426.	*	1	1320	161	11.	*	1	1935	236	0.
1	0055	12	123.	*	1	0710	87	16399.	*	1	1325	162	9.	*	1	1940	237	0.
1	0100	13	215.	*	1	0715	88	15403.	*	1	1330	163	7.	*	1	1945	238	0.
1	0105	14	343.	*	1	0720	89	14440.	*	1	1335	164	5.	*	1	1950	239	0.
1	0110	15	509.	*	1	0725	90	13513.	*	1	1340	165	4.	*	1	1955	240	0.
1	0115	16	714.	*	1	0730	91	12627.	*	1	1345	166	3.	*	1	2000	241	0.
1	0120	17	955.	*	1	0735	92	11781.	*	1	1350	167	2.	*	1	2005	242	0.
1	0125	18	1229.	*	1	0740	93	10968.	*	1	1355	168	1.	*	1	2010	243	0.
1	0130	19	1533.	*	1	0745	94	10185.	*	1	1400	169	1.	*	1	2015	244	0.
1	0135	20	1863.	*	1	0750	95	9437.	*	1	1405	170	0.	*	1	2020	245	0.
1	0140	21	2218.	*	1	0755	96	8729.	*	1	1410	171	0.	*	1	2025	246	0.
1	0145	22	2595.	*	1	0800	97	8060.	*	1	1415	172	0.	*	1	2030	247	0.
1	0150	23	3025.	*	1	0805	98	7428.	*	1	1420	173	0.	*	1	2035	248	0.
1	0155	24	3533.	*	1	0810	99	6835.	*	1	1425	174	0.	*	1	2040	249	0.
1	0200	25	4155.	*	1	0815	100	6280.	*	1	1430	175	0.	*	1	2045	250	0.
1	0205	26	5358.	*	1	0820	101	5760.	*	1	1435	176	0.	*	1	2050	251	0.
1	0210	27	7529.	*	1	0825	102	5279.	*	1	1440	177	0.	*	1	2055	252	0.
1	0215	28	11199.	*	1	0830	103	4840.	*	1	1445	178	0.	*	1	2100	253	0.
1	0220	29	16424.	*	1	0835	104	4443.	*	1	1450	179	0.	*	1	2105	254	0.
1	0225	30	22872.	*	1	0840	105	4084.	*	1	1455	180	0.	*	1	2110	255	0.
1	0230	31	29791.	*	1	0845	106	3757.	*	1	1500	181	0.	*	1	2115	256	0.
1	0235	32	36494.	*	1	0850	107	3460.	*	1	1505	182	0.	*	1	2120	257	0.

1	0245	34	47842.	*	1	0900	109	2934.	*	1	1515	184	0.	*	1	2130	259	0.
1	0250	35	52309.	*	1	0905	110	2701.	*	1	1520	185	0.	*	1	2135	260	0.
1	0255	36	56276.	*	1	0910	111	2486.	*	1	1525	186	0.	*	1	2140	261	0.
1	0300	37	59985.	*	1	0915	112	2286.	*	1	1530	187	0.	*	1	2145	262	0.
1	0305	38	63621.	*	1	0920	113	2101.	*	1	1535	188	0.	*	1	2150	263	0.
1	0310	39	67175.	*	1	0925	114	1929.	*	1	1540	189	0.	*	1	2155	264	0.
1	0315	40	70436.	*	1	0930	115	1768.	*	1	1545	190	0.	*	1	2200	265	0.
1	0320	41	73320.	*	1	0935	116	1618.	*	1	1550	191	0.	*	1	2205	266	0.
1	0325	42	75719.	*	1	0940	117	1479.	*	1	1555	192	0.	*	1	2210	267	0.
1	0330	43	77631.	*	1	0945	118	1349.	*	1	1600	193	0.	*	1	2215	268	0.
1	0335	44	79071.	*	1	0950	119	1229.	*	1	1605	194	0.	*	1	2220	269	0.
1	0340	45	80119.	*	1	0955	120	1116.	*	1	1610	195	0.	*	1	2225	270	0.
1	0345	46	80850.	*	1	1000	121	1012.	*	1	1615	196	0.	*	1	2230	271	0.
1	0350	47	81237.	*	1	1005	122	917.	*	1	1620	197	0.	*	1	2235	272	0.
1	0355	48	81252.	*	1	1010	123	831.	*	1	1625	198	0.	*	1	2240	273	0.
1	0400	49	80873.	*	1	1015	124	752.	*	1	1630	199	0.	*	1	2245	274	0.
1	0405	50	80157.	*	1	1020	125	680.	*	1	1635	200	0.	*	1	2250	275	0.
1	0410	51	79139.	*	1	1025	126	614.	*	1	1640	201	0.	*	1	2255	276	0.
1	0415	52	77791.	*	1	1030	127	556.	*	1	1645	202	0.	*	1	2300	277	0.
1	0420	53	76126.	*	1	1035	128	503.	*	1	1650	203	0.	*	1	2305	278	0.
1	0425	54	74139.	*	1	1040	129	455.	*	1	1655	204	0.	*	1	2310	279	0.
1	0430	55	71855.	*	1	1045	130	412.	*	1	1700	205	0.	*	1	2315	280	0.
1	0435	56	69318.	*	1	1050	131	374.	*	1	1705	206	0.	*	1	2320	281	0.
1	0440	57	66622.	*	1	1055	132	338.	*	1	1710	207	0.	*	1	2325	282	0.
1	0445	58	63873.	*	1	1100	133	306.	*	1	1715	208	0.	*	1	2330	283	0.
1	0450	59	61167.	*	1	1105	134	278.	*	1	1720	209	0.	*	1	2335	284	0.
1	0455	60	58566.	*	1	1110	135	251.	*	1	1725	210	0.	*	1	2340	285	0.
1	0500	61	56056.	*	1	1115	136	227.	*	1	1730	211	0.	*	1	2345	286	0.
1	0505	62	53649.	*	1	1120	137	206.	*	1	1735	212	0.	*	1	2350	287	0.
1	0510	63	51316.	*	1	1125	138	186.	*	1	1740	213	0.	*	1	2355	288	0.
1	0515	64	49065.	*	1	1130	139	169.	*	1	1745	214	0.	*	2	0000	289	0.
1	0520	65	46894.	*	1	1135	140	152.	*	1	1750	215	0.	*	2	0005	290	0.
1	0525	66	44826.	*	1	1140	141	138.	*	1	1755	216	0.	*	2	0010	291	0.
1	0530	67	42863.	*	1	1145	142	125.	*	1	1800	217	0.	*	2	0015	292	0.
1	0535	68	41021.	*	1	1150	143	113.	*	1	1805	218	0.	*	2	0020	293	0.
1	0540	69	39292.	*	1	1155	144	102.	*	1	1810	219	0.	*	2	0025	294	0.
1	0545	70	37648.	*	1	1200	145	92.	*	1	1815	220	0.	*	2	0030	295	0.
1	0550	71	36086.	*	1	1205	146	83.	*	1	1820	221	0.	*	2	0035	296	0.
1	0555	72	34615.	*	1	1210	147	75.	*	1	1825	222	0.	*	2	0040	297	0.
1	0600	73	33237.	*	1	1215	148	67.	*	1	1830	223	0.	*	2	0045	298	0.
1	0605	74	31929.	*	1	1220	149	61.	*	1	1835	224	0.	*	2	0050	299	0.
1	0610	75	30664.	*	1	1225	150	54.	*	1	1840	225	0.	*	2	0055	300	0.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 81252.	3.92		43004.	11134.	10724.	10724.
		(INCHES)	3.871	4.009	4.009	4.009
		(AC-FT)	21324.	22083.	22083.	22083.

CUMULATIVE AREA = 103.29 SQ MI

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          *            *
 37 KK    *    HQFRS   *
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38 KO        OUTPUT CONTROL VARIABLES
                  IPRNT          2  PRINT CONTROL
                  IPLOT          2  PLOT CONTROL
                  QSCAL         0.  HYDROGRAPH PLOT SCALE
                         EMERGENCY SPILLWAY INV. = 1408.4
                         TOP OF HQFRS = 1419.7   BOTTOM ELE. = 1375.9
                         PRINCIPAL & EMERGENCY SPILLWAY TOTAL Q @  1419.7 = 15377.7 CFS

           HYDROGRAPH ROUTING DATA

42 RS        STORAGE ROUTING
                  NSTPS          1  NUMBER OF SUBREACHES
                   ITYP       STOR  TYPE OF INITIAL CONDITION
                 RSVRIC        .00  INITIAL CONDITION
                      X        .00 WORKING R AND D COEFFICIENT

43 SV          STORAGE         .0      45.2      70.1     112.0     166.3     272.7     401.1     718.8    1268.6    3161.0
                            4577.8    6267.6    8287.3    9998.1   11880.8   15696.5   21075.9   28349.3   29006.6   30102.0

45 SE        ELEVATION     1375.90   1387.30   1389.10   1390.83   1392.59   1391.34   1396.10   1397.86   1399.61   1403.13
                           1404.90   1406.60   1408.40   1409.70   1411.06   1413.45   1416.38   1419.70   1420.00   1420.50

47 SQ        DISCHARGE         0.        0.       163.      263.      273.      282.      291.      300.      308.      325.
                               332.      340.      348.     1049.     2325.     5552.    10719.    15378.    22589.    58752.

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HYDROGRAPH AT STATION HQFRS

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	1375.9	1		0820	101	8942.	19226.0	1415.4	1		1640	201	4933.	14965.0	1413.0
1		0005	2	0.	.0	1375.9	1		0825	102	8919.	19202.5	1415.4	1		1645	202	4905.	14931.2	1413.0
1		0010	3	0.	.0	1375.9	1		0830	103	8894.	19176.1	1415.3	1		1650	203	4876.	14897.5	1412.9
1		0015	4	0.	.0	1375.9	1		0835	104	8866.	19146.9	1415.3	1		1655	204	4848.	14864.0	1412.9
1		0020	5	0.	.0	1375.9	1		0840	105	8835.	19115.3	1415.3	1		1700	205	4820.	14830.7	1412.9
1		0025	6	0.	.0	1375.9	1		0845	106	8803.	19081.5	1415.3	1		1705	206	4792.	14797.6	1412.9
1		0030	7	0.	.0	1375.9	1		0850	107	8769.	19045.9	1415.3	1		1710	207	4764.	14764.7	1412.9
1		0035	8	0.	.0	1375.9	1		0855	108	8733.	19008.5	1415.3	1		1715	208	4736.	14732.0	1412.8
1		0040	9	0.	.0	1375.9	1		0900	109	8695.	18969.5	1415.2	1		1720	209	4709.	14699.5	1412.8
1		0045	10	0.	.2	1375.9	1		0905	110	8657.	18929.2	1415.2	1		1725	210	4681.	14667.1	1412.8
1		0050	11	0.	.5	1376.0	1		0910	111	8617.	18887.6	1415.2	1		1730	211	4654.	14635.0	1412.8
1		0055	12	0.	1.1	1376.2	1		0915	112	8576.	18844.8	1415.2	1		1735	212	4627.	14603.0	1412.8
1		0100	13	0.	2.3	1376.5	1		0920	113	8534.	18801.0	1415.1	1		1740	213	4600.	14571.3	1412.7
1		0105	14	0.	4.2	1377.0	1		0925	114	8491.	18756.3	1415.1	1		1745	214	4574.	14539.7	1412.7
1		0110	15	0.	7.1	1377.7	1		0930	115	8447.	18710.7	1415.1	1		1750	215	4547.	14508.3	1412.7
1		0115	16	0.	11.3	1378.8	1		0935	116	8402.	18664.3	1415.1	1		1755	216	4521.	14477.0	1412.7
1		0120	17	0.	17.1	1380.2	1		0940	117	8357.	18617.3	1415.0	1		1800	217	4494.	14446.0	1412.7
1		0125	18	0.	24.6	1382.1	1		0945	118	8311.	18569.6	1415.0	1		1805	218	4468.	14415.1	1412.6
1		0130	19	0.	34.1	1384.5	1		0950	119	8265.	18521.4	1415.0	1		1810	219	4442.	14384.4	1412.6
1		0135	20	4.	45.8	1387.3	1		0955	120	8218.	18472.7	1415.0	1		1815	220	4417.	14353.9	1412.6
1		0140	21	94.	59.5	1388.3	1		1000	121	8171.	18423.6	1414.9	1		1820	221	4391.	14323.6	1412.6
		0145	22	175.	75.2	1389.3	1		1005	122	8124.	18374.1	1414.9	1		1825	222	4365.	14293.5	1412.6
		0150	23	218.	93.2	1390.1	1		1010	123	8076.	18324.4	1414.9	1		1830	223	4340.	14263.5	1412.6
1		0155	24	263.	114.1	1390.9	1		1015	124	8028.	18274.4	1414.9	1		1835	224	4315.	14233.7	1412.5
1		0200	25	268.	138.7	1391.7	1		1020	125	7980.	18224.2	1414.8	1		1840	225	4290.	14204.0	1412.5
1		0205	26	273.	169.6	1392.6	1		1025	126	7931.	18173.9	1414.8	1		1845	226	4265.	14174.6	1412.5
1		0210	27	277.	212.1	1392.1	1		1030	127	7883.	18123.4	1414.8	1		1850	227	4240.	14145.3	1412.5
1		0215	28	282.	274.7	1391.4	1		1035	128	7834.	18072.9	1414.7	1		1855	228	4216.	14116.2	1412.5
1		0220	29	288.	367.9	1394.9	1		1040	129	7786.	18022.5	1414.7	1		1900	229	4191.	14087.2	1412.4

1	0230	31	299.	680.5	1397.6	*	1	1050	131	7689.	17921.6	1414.7	*	1	1910	231	4143.	14029.8	1412.4
1	0235	32	303.	906.6	1398.5	*	1	1055	132	7641.	17871.2	1414.6	*	1	1915	232	4118.	14001.4	1412.4
1	0240	33	307.	1176.6	1399.3	*	1	1100	133	7592.	17821.0	1414.6	*	1	1920	233	4095.	13973.1	1412.4
1	0245	34	310.	1485.6	1400.0	*	1	1105	134	7544.	17770.9	1414.6	*	1	1925	234	4071.	13945.0	1412.4
1	0250	35	313.	1828.3	1400.7	*	1	1110	135	7496.	17720.9	1414.6	*	1	1930	235	4047.	13917.0	1412.3
1	0255	36	316.	2200.1	1401.3	*	1	1115	136	7448.	17671.1	1414.5	*	1	1935	236	4024.	13889.2	1412.3
1	0300	37	320.	2598.2	1402.1	*	1	1120	137	7401.	17621.5	1414.5	*	1	1940	237	4000.	13861.6	1412.3
1	0305	38	324.	3021.7	1402.9	*	1	1125	138	7353.	17572.0	1414.5	*	1	1945	238	3977.	13834.1	1412.3
1	0310	39	327.	3469.8	1403.5	*	1	1130	139	7306.	17522.8	1414.4	*	1	1950	239	3954.	13806.8	1412.3
1	0315	40	329.	3941.4	1404.1	*	1	1135	140	7259.	17473.7	1414.4	*	1	1955	240	3931.	13779.7	1412.2
1	0320	41	332.	4434.2	1404.7	*	1	1140	141	7212.	17424.9	1414.4	*	1	2000	241	3908.	13752.7	1412.2
1	0325	42	334.	4945.1	1405.3	*	1	1145	142	7165.	17376.3	1414.4	*	1	2005	242	3885.	13725.9	1412.2
1	0330	43	336.	5470.9	1405.8	*	1	1150	143	7119.	17327.9	1414.3	*	1	2010	243	3863.	13699.2	1412.2
1	0335	44	339.	6008.1	1406.3	*	1	1155	144	7072.	17279.8	1414.3	*	1	2015	244	3840.	13672.6	1412.2
1	0340	45	341.	6554.0	1406.8	*	1	1200	145	7027.	17231.9	1414.3	*	1	2020	245	3818.	13646.3	1412.2
1	0345	46	343.	7105.9	1407.3	*	1	1205	146	6981.	17184.3	1414.3	*	1	2025	246	3796.	13620.1	1412.1
1	0350	47	345.	7661.7	1407.8	*	1	1210	147	6935.	17136.9	1414.2	*	1	2030	247	3774.	13594.0	1412.1
1	0355	48	348.	8218.8	1408.3	*	1	1215	148	6890.	17089.8	1414.2	*	1	2035	248	3752.	13568.1	1412.1
1	0400	49	547.	8774.0	1408.8	*	1	1220	149	6845.	17042.9	1414.2	*	1	2040	249	3730.	13542.3	1412.1
1	0405	50	773.	9324.0	1409.2	*	1	1225	150	6800.	16996.3	1414.2	*	1	2045	250	3709.	13516.7	1412.1
1	0410	51	995.	9866.5	1409.6	*	1	1230	151	6756.	16950.0	1414.1	*	1	2050	251	3687.	13491.2	1412.1
1	0415	52	1321.	10398.9	1410.0	*	1	1235	152	6712.	16903.9	1414.1	*	1	2055	252	3666.	13465.9	1412.1
1	0420	53	1673.	10918.6	1410.4	*	1	1240	153	6668.	16858.1	1414.1	*	1	2100	253	3644.	13440.7	1412.0
1	0425	54	2015.	11423.3	1410.7	*	1	1245	154	6624.	16812.6	1414.1	*	1	2105	254	3623.	13415.7	1412.0
1	0430	55	2351.	11911.0	1411.1	*	1	1250	155	6580.	16767.4	1414.0	*	1	2110	255	3602.	13390.8	1412.0
1	0435	56	2747.	12379.6	1411.4	*	1	1255	156	6537.	16722.4	1414.0	*	1	2115	256	3581.	13366.1	1412.0
1	0440	57	3126.	12827.5	1411.7	*	1	1300	157	6494.	16677.7	1414.0	*	1	2120	257	3560.	13341.5	1412.0
1	0445	58	3487.	13254.1	1411.9	*	1	1305	158	6452.	16633.2	1414.0	*	1	2125	258	3540.	13317.0	1412.0
1	0450	59	3829.	13659.5	1412.2	*	1	1310	159	6409.	16589.1	1413.9	*	1	2130	259	3519.	13292.7	1411.9
1	0455	60	4155.	14044.3	1412.4	*	1	1315	160	6367.	16545.2	1413.9	*	1	2135	260	3499.	13268.6	1411.9
1	0500	61	4463.	14409.3	1412.6	*	1	1320	161	6325.	16501.6	1413.9	*	1	2140	261	3478.	13244.5	1411.9
1	0505	62	4756.	14755.3	1412.9	*	1	1325	162	6283.	16458.2	1413.9	*	1	2145	262	3458.	13220.7	1411.9
1	0510	63	5033.	15083.1	1413.1	*	1	1330	163	6242.	16415.1	1413.8	*	1	2150	263	3438.	13196.9	1411.9
1	0515	64	5295.	15393.2	1413.3	*	1	1335	164	6201.	16372.3	1413.8	*	1	2155	264	3418.	13173.3	1411.9
1	0520	65	5543.	15686.3	1413.4	*	1	1340	165	6160.	16329.8	1413.8	*	1	2200	265	3398.	13149.8	1411.9
1	0525	66	5808.	15963.0	1413.6	*	1	1345	166	6119.	16287.5	1413.8	*	1	2205	266	3379.	13126.5	1411.8
1	0530	67	6059.	16224.1	1413.7	*	1	1350	167	6079.	16245.5	1413.7	*	1	2210	267	3359.	13103.3	1411.8
1	0535	68	6295.	16470.5	1413.9	*	1	1355	168	6039.	16203.8	1413.7	*	1	2215	268	3340.	13080.2	1411.8
1	0540	69	6518.	16702.9	1414.0	*	1	1400	169	5999.	16162.4	1413.7	*	1	2220	269	3320.	13057.3	1411.8
1	0545	70	6729.	16922.2	1414.1	*	1	1405	170	5960.	16121.2	1413.7	*	1	2225	270	3301.	13034.5	1411.8
1	0550	71	6928.	17129.1	1414.2	*	1	1410	171	5920.	16080.3	1413.7	*	1	2230	271	3282.	13011.8	1411.8
1	0555	72	7115.	17324.2	1414.3	*	1	1415	172	5881.	16039.6	1413.6	*	1	2235	272	3263.	12989.3	1411.8
1	0600	73	7292.	17508.2	1414.4	*	1	1420	173	5843.	15999.3	1413.6	*	1	2240	273	3244.	12966.9	1411.7
1	0605	74	7459.	17681.8	1414.5	*	1	1425	174	5804.	15959.2	1413.6	*	1	2245	274	3225.	12944.6	1411.7
1	0610	75	7616.	17845.5	1414.6	*	1	1430	175	5766.	15919.3	1413.6	*	1	2250	275	3206.	12922.5	1411.7
1	0615	76	7764.	17999.4	1414.7	*	1	1435	176	5728.	15879.7	1413.5	*	1	2255	276	3188.	12900.4	1411.7
1	0620	77	7902.	18143.6	1414.8	*	1	1440	177	5690.	15840.4	1413.5	*	1	2300	277	3169.	12878.6	1411.7
1	0625	78	8031.	18278.1	1414.9	*	1	1445	178	5653.	15801.4	1413.5	*	1	2305	278	3151.	12856.8	1411.7
1	0630	79	8151.	18402.8	1414.9	*	1	1450	179	5615.	15762.6	1413.5	*	1	2310	279	3132.	12835.2	1411.7
1	0635	80	8262.	18517.9	1415.0	*	1	1455	180	5578.	15724.0	1413.5	*	1	2315	280	3114.	12813.7	1411.6
1	0640	81	8363.	18623.6	1415.0	*	1	1500	181	5543.	15685.7	1413.4	*	1	2320	281	3096.	12792.3	1411.6
1	0645	82	8456.	18720.2	1415.1	*	1	1505	182	5510.	15647.7	1413.4	*	1	2325	282	3078.	12771.0	1411.6
1	0650	83	8540.	18808.0	1415.1	*	1	1510	183	5479.	15609.8	1413.4	*	1	2330	283	3060.	12749.9	1411.6
1	0655	84	8617.	18887.5	1415.2	*	1	1515	184	5447.	15572.2	1413.4	*	1	2335	284	3042.	12728.9	1411.6
1	0700	85	8685.	18958.9	1415.2	*	1	1520	185	5415.	15534.8	1413.3	*	1	2340	285	3025.	12708.0	1411.6
1	0705	86	8746.	19022.5	1415.3	*	1	1525	186	5384.	15497.6	1413.3	*	1	2345	286	3007.	12687.2	1411.6
1	0710	87	8800.	19078.6	1415.3	*	1	1530	187	5352.	15460.6	1413.3	*	1	2350	287	2990.	12666.5	1411.6
1	0715	88	8847.	19127.3	1415.3	*	1	1535	188	5321.	15423.9	1413.3	*	1	2355	288	2972.	12646.0	1411.5
1	0720	89	8887.	19169.0	1415.3	*	1	1540	189	5290.	15387.3	1413.3	*	2	0000	289	2955.	12625.6	1411.5
1	0725	90	8921.	19203.9	1415.4	*	1	1545	190	5260.	15351.0	1413.2	*	2	0005	290	2938.	12605.3	1411.5
1	0730	91	8948.	19232.4	1415.4	*	1	1550	191	5229.	15314.9	1413.2	*	2	0010	291	2921.	12585.1	1411.5
1	0735	92	8969.	19254.8	1415.4	*	1	1555	192	5199.	15279.0	1413.2	*	2	0015	292	2904.	12565.1	1411.5
1	0740	93	8985.	19271.3	1415.4	*	1	1600	193	5169.	15243.3	1413.2	*	2	0020	293	2887.	12545.1	1411.5
1	0745	94	8996.	19282.2	1415.4	*	1	1605	194	5139.	15207.8	1413.1	*	2	0025	294	2870.	12525.3	1411.5
1	0750	95	9001.	19287.8	1415.4	*	1	1610	195	5109.	15172.5	1413.1	*	2	0030	295	2854.	12505.6	1411.5

1	*0800	97	8998.	19284.2	1415.4	*	1	1620	197	5050.	15102.5	1413.1	*	2	0040	297	2821.	12466.5	1411.4
1	0805	98	8989.	19275.6	1415.4	*	1	1625	198	5020.	15067.9	1413.1	*	2	0045	298	2804.	12447.1	1411.4
1	0810	99	8977.	19262.8	1415.4	*	1	1630	199	4991.	15033.4	1413.0	*	2	0050	299	2788.	12427.9	1411.4
1	0815	100	8961.	19246.2	1415.4	*	1	1635	200	4962.	14999.1	1413.0	*	2	0055	300	2772.	12408.7	1411.4
						*							*						

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FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 9002.	7.92		8255.	4878.	4698.	4698.
		(INCHES)	.743	1.756	1.756	1.756
		(AC-FT)	4093.	9675.	9675.	9675.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
19288.	7.92	18511.	13843.	13334.	13334.

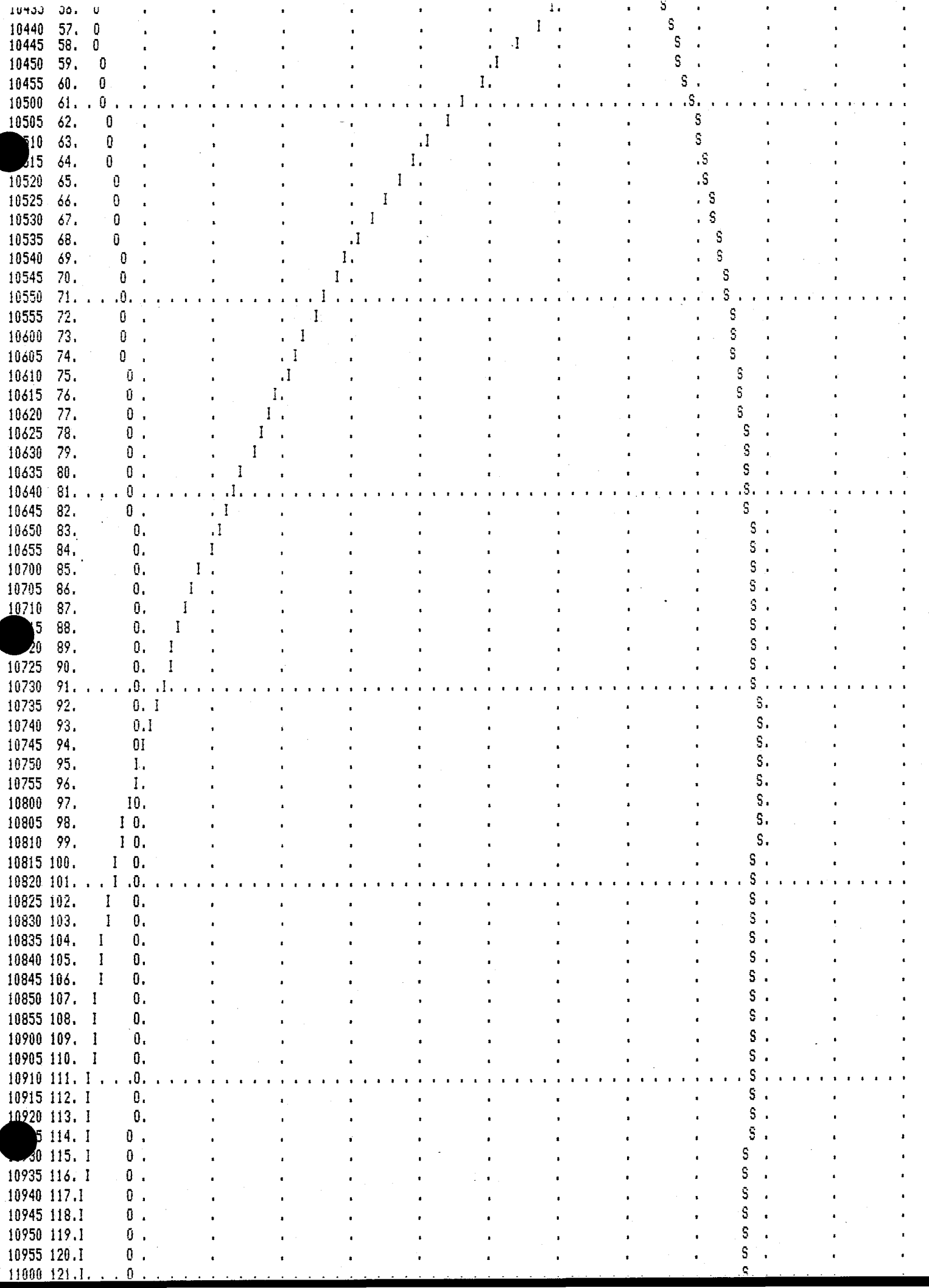
PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1415.41	7.92	1414.98	1410.95	1409.66	1409.66

CUMULATIVE AREA = 103.29 SQ MI

STATION HQFRS

(I) INFLOW, (O) OUTFLOW

	0.	10000.	20000.	30000.	40000.	50000.	60000.	70000.	80000.	90000.	0.	0.	0.
								(S) STORAGE					
	0.	0.	0.	0.	0.	0.	0.	5000.	10000.	15000.	20000.	0.	0.
DAHRMN	PER												
10000	1	I						S					
10005	2	I						S					
10010	3	I						S					
10015	4	I						S					
10020	5	I						S					
10025	6	I						S					
10030	7	I						S					
10035	8	I						S					
10040	9	I						S					
10045	10	I						S					
10050	11	I						S					
10055	12	I						S					
10100	13	I						S					
10105	14	I						S					
10110	15	I						S					
10115	16	I						S					
10120	17	I						S					
10125	18	I						S					
10130	19	I						S					
10135	20	I						S					
10140	21	I						S					
[illegible]	22	I						S					
[illegible]	23	I						S					
10155	24	I						S					
10200	25	I						S					
10205	26	I						S					
10210	27	I						S					
10215	28	I						S					
10220	29	I						S					
10225	30	I						S					
10230	31	I						S					
10235	32	I						S					
10240	33	I						S					
10245	34	I						S					
10250	35	I						S					
10255	36	I						S					
10300	37	I						S					
10305	38	I						S					
10310	39	I						S					
10315	40	I						S					
10320	41	I						S					
10325	42	I						S					
10330	43	I						S					
10335	44	I						S					
10340	45	I						S					
10345	46	I						S					
10350	47	I						S					
[illegible]	48	I						S					
[illegible]	49.0	I						S					
10405	50.0	I						S					
10410	51.0	I						S					
10415	52.0	I						S					
10420	53. 0	I						S					
10425	54. 0	I						S					
10430	55. 0	I						S					



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11010 123.I      0 .         .         .         .         .         .         .         .         .      S  .         .         .
11015 124.I      0 .         .         .         .         .         .         .         .         .      S  .         .         .
11020 125.I      0 .         .         .         .         .         .         .         .         .     S   .         .         .
11025 126.I      0 .         .         .         .         .         .         .         .         .     S   .         .         .
11030 127.I      0 .         .         .         .         .         .         .         .         .     S   .         .         .
11035 128.I      0 .         .         .         .         .         .         .         .         .     S   .         .         .
11040 129I       0 .         .         .         .         .         .         .         .         .     S   .         .         .
11045 130I       0 .         .         .         .         .         .         .         .         .     S   .         .         .
11050 131I . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . .
11055 132I       0 .         .         .         .         .         .         .         .         .     S   .         .         .
11100 133I       0 .         .         .         .         .         .         .         .         .     S   .         .         .
11105 134I       0 .         .         .         .         .         .         .         .         .     S   .         .         .
11110 135I      0  .         .         .         .         .         .         .         .         .    S    .         .         .
11115 136I      0  .         .         .         .         .         .         .         .         .    S    .         .         .
11120 137I      0  .         .         .         .         .         .         .         .         .    S    .         .         .
11125 138I      0  .         .         .         .         .         .         .         .         .    S    .         .         .
11130 139I      0  .         .         .         .         .         .         .         .         .    S    .         .         .
11135 140I      0  .         .         .         .         .         .         .         .         .    S    .         .         .
11140 141I . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . .
11145 142I      0  .         .         .         .         .         .         .         .         .    S    .         .         .
11150 143I      0  .         .         .         .         .         .         .         .         .    S    .         .         .
11155 144I      0  .         .         .         .         .         .         .         .         .    S    .         .         .
11200 145I      0  .         .         .         .         .         .         .         .         .   S     .         .         .
11205 146I      0  .         .         .         .         .         .         .         .         .   S     .         .         .
11210 147I      0  .         .         .         .         .         .         .         .         .   S     .         .         .
11215 148I      0  .         .         .         .         .         .         .         .         .   S     .         .         .
11220 149I      0  .         .         .         .         .         .         .         .         .   S     .         .         .
11225 150I      0  .         .         .         .         .         .         .         .         .   S     .         .         .
11230 151I . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . .
11235 152I      0  .         .         .         .         .         .         .         .         .   S     .         .         .
11240 153I      0  .         .         .         .         .         .         .         .         .   S     .         .         .
11245 154I      0  .         .         .         .         .         .         .         .         .   S     .         .         .
11250 155I      0  .         .         .         .         .         .         .         .         .   S     .         .         .
11255 156I      0  .         .         .         .         .         .         .         .         .  S      .         .         .
11300 157I     0   .         .         .         .         .         .         .         .         .  S      .         .         .
11305 158I     0   .         .         .         .         .         .         .         .         .  S      .         .         .
11310 159I     0   .         .         .         .         .         .         .         .         .  S      .         .         .
11315 160I     0   .         .         .         .         .         .         .         .         .  S      .         .         .
11320 161I . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . .
11325 162I     0   .         .         .         .         .         .         .         .         .  S      .         .         .
11330 163I     0   .         .         .         .         .         .         .         .         .  S      .         .         .
11335 164I     0   .         .         .         .         .         .         .         .         .  S      .         .         .
11340 165I     0   .         .         .         .         .         .         .         .         .  S      .         .         .
11345 166I     0   .         .         .         .         .         .         .         .         .  S      .         .         .
11350 167I     0   .         .         .         .         .         .         .         .         . S       .         .         .
11355 168I     0   .         .         .         .         .         .         .         .         . S       .         .         .
11400 169I     0   .         .         .         .         .         .         .         .         . S       .         .         .
11405 170I     0   .         .         .         .         .         .         .         .         . S       .         .         .
11410 171I . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . .
11415 172I     0   .         .         .         .         .         .         .         .         . S       .         .         .
11420 173I     0   .         .         .         .         .         .         .         .         . S       .         .         .
11425 174I     0   .         .         .         .         .         .         .         .         . S       .         .         .
11430 175I     0   .         .         .         .         .         .         .         .         . S       .         .         .
11435 176I     0   .         .         .         .         .         .         .         .         . S       .         .         .
11440 177I     0   .         .         .         .         .         .         .         .         . S       .         .         .
11445 178I     0   .         .         .         .         .         .         .         .         . S       .         .         .
11450 179I     0   .         .         .         .         .         .         .         .         . S       .         .         .
11455 180I     0   .         .         .         .         .         .         .         .         .S        .         .         .
11500 181I . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . .
11505 182I     0   .         .         .         .         .         .         .         .         .S        .         .         .
11510 183I    0    .         .         .         .         .         .         .         .         .S        .         .         .
11515 184I    0    .         .         .         .         .         .         .         .         .S        .         .         .
11520 185I    0    .         .         .         .         .         .         .         .         .S        .         .         .
11525 186I    0    .         .         .         .         .         .         .         .         .S        .         .         .
11530 187I    0    .         .         .         .         .         .         .         .         .S        .         .         .
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11535 188I   0   .   .   .   .   .   .   .   .   .S   .   .   .
11540 189I   0   .   .   .   .   .   .   .   .   .S   .   .   .
11545 190I   0   .   .   .   .   .   .   .   .   .S   .   .   .
11550 191I . .0. . . . . . . . . . . . . . . . . . . . . . . .S. . . . . .
11555 192I   0   .   .   .   .   .   .   .   .   .S   .   .   .
11600 193I   0   .   .   .   .   .   .   .   .   S    .   .   .
11605 194I   0   .   .   .   .   .   .   .   .   S    .   .   .
[illegible]0 195I   0   .   .   .   .   .   .   .   S    .   .   .
[illegible]15 196I   0   .   .   .   .   .   .   .   S    .   .   .
11620 197I   0   .   .   .   .   .   .   .   .   S    .   .   .
11625 198I   0   .   .   .   .   .   .   .   .   S    .   .   .
11630 199I   0   .   .   .   .   .   .   .   .   S    .   .   .
11635 200I   0   .   .   .   .   .   .   .   .   S    .   .   .
11640 201I . .0. . . . . . . . . . . . . . . . . . . . . . . S . . . . . .
11645 202I   0   .   .   .   .   .   .   .   .   S    .   .   .
11650 203I   0   .   .   .   .   .   .   .   .   S    .   .   .
11655 204I   0   .   .   .   .   .   .   .   .   S    .   .   .
11700 205I   0   .   .   .   .   .   .   .   .   S    .   .   .
11705 206I   0   .   .   .   .   .   .   .   .   S    .   .   .
11710 207I   0   .   .   .   .   .   .   .   .   S    .   .   .
11715 208I   0   .   .   .   .   .   .   .   .  S.    .   .   .
11720 209I   0   .   .   .   .   .   .   .   .  S.    .   .   .
11725 210I   0   .   .   .   .   .   .   .   .  S.    .   .   .
11730 211I . .0. . . . . . . . . . . . . . . . . . . . . . .S. . . . . .
11735 212I   0   .   .   .   .   .   .   .   .  S.    .   .   .
11740 213I   0   .   .   .   .   .   .   .   .  S.    .   .   .
11745 214I   0   .   .   .   .   .   .   .   .  S.    .   .   .
11750 215I   0   .   .   .   .   .   .   .   .  S.    .   .   .
11755 216I   0   .   .   .   .   .   .   .   .  S.    .   .   .
11800 217I   0   .   .   .   .   .   .   .   .  S.    .   .   .
11805 218I   0   .   .   .   .   .   .   .   .  S.    .   .   .
11810 219I   0   .   .   .   .   .   .   .   .  S.    .   .   .
[illegible]5 220I   0   .   .   .   .   .   .   .  S.    .   .   .
[illegible]20 221I . 0 . . . . . . . . . . . . . . . . . . . . . . .S. . . . . .
11825 222I   0   .   .   .   .   .   .   .   .  S.    .   .   .
11830 223I   0   .   .   .   .   .   .   .   .  S.    .   .   .
11835 224I   0   .   .   .   .   .   .   .   S .    .   .   .
11840 225I   0   .   .   .   .   .   .   .   S .    .   .   .
11845 226I   0   .   .   .   .   .   .   .   S .    .   .   .
11850 227I   0   .   .   .   .   .   .   .   S .    .   .   .
11855 228I   0   .   .   .   .   .   .   .   S .    .   .   .
11900 229I   0   .   .   .   .   .   .   .   S .    .   .   .
11905 230I   0   .   .   .   .   .   .   .   S .    .   .   .
11910 231I . 0 . . . . . . . . . . . . . . . . . . . . . . . S . . . . . .
11915 232I   0   .   .   .   .   .   .   .   S .    .   .   .
11920 233I   0   .   .   .   .   .   .   .   S .    .   .   .
11925 234I   0   .   .   .   .   .   .   .   S .    .   .   .
11930 235I   0   .   .   .   .   .   .   .   S .    .   .   .
11935 236I   0   .   .   .   .   .   .   .   S .    .   .   .
11940 237I   0   .   .   .   .   .   .   .   S .    .   .   .
11945 238I   0   .   .   .   .   .   .   .   S .    .   .   .
11950 239I   0   .   .   .   .   .   .   .   S .    .   .   .
11955 240I   0   .   .   .   .   .   .   .   S .    .   .   .
12000 241I . 0 . . . . . . . . . . . . . . . . . . . . . . . S . . . . . .
12005 242I   0   .   .   .   .   .   .   .  S  .    .   .   .
12010 243I   0   .   .   .   .   .   .   .  S  .    .   .   .
12015 244I   0   .   .   .   .   .   .   .  S  .    .   .   .
[illegible]20 245I   0   .   .   .   .   .   .   .  S  .    .   .   .
[illegible] 246I   0   .   .   .   .   .   .   .  S  .    .   .   .
12030 247I   0   .   .   .   .   .   .   .  S  .    .   .   .
12035 248I   0   .   .   .   .   .   .   .  S  .    .   .   .
12040 249I   0   .   .   .   .   .   .   .  S  .    .   .   .
12045 250I   0   .   .   .   .   .   .   .  S  .    .   .   .
12050 251I . 0 . . . . . . . . . . . . . . . . . . . . . . .S. . . . . .
12055 252I   0   .   .   .   .   .   .   .  S  .    .   .   .
12100 253I   0
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12110 255I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12115 256I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12120 257I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12125 258I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12130 259I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12135 260I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
140 261I .0.......................................................................S.........................
45 262I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12150 263I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12155 264I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12200 265I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12205 266I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12210 267I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12215 268I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12220 269I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12225 270I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12230 271I .0.......................................................................S.........................
12235 272I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12240 273I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12245 274I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12250 275I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12255 276I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12300 277I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12305 278I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12310 279I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12315 280I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12320 281I .0.......................................................................S.........................
12325 282I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12330 283I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12335 284I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12340 285I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
5 286I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
0 287I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
12355 288I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
20000 289I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
20005 290I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
20010 291I .0.......................................................................S.........................
20015 292I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
20020 293I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
20025 294I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
20030 295I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
20035 296I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
20040 297I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
20045 298I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
20050 299I  0     .         .         .         .         .         .         .         .         S         .         .         .         .
20055 300I--0-------.---------.---------.---------.---------.---------.---------.---------.----S----.---------.---------.---------.
```

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	WS-1	50678.	4.17	25795.	6703.	6456.	30.54		
+	HYDROGRAPH AT	WS-2	80830.	4.08	40070.	10351.	9970.	48.63		
+	HYDROGRAPH AT	WS-3	41398.	2.75	11093.	2782.	2680.	12.87		
+	HYDROGRAPH AT	WS-4	27514.	3.17	9642.	2432.	2342.	11.25		
+	4 COMBINED AT	CP-1	162504.	3.92	86009.	22267.	21448.	103.29		
+	DIVERSION TO	0.5PMP	81252.	3.92	43004.	11134.	10724.	103.29		
+	HYDROGRAPH AT	HQHYD	81252.	3.92	43004.	11134.	10724.	103.29		
+	ROUTED TO	HQFRS	9002.	7.92	8255.	4878.	4698.	103.29		
+									1415.41	7.92

*** NORMAL END OF HEC-1 ***

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID        DAMBREAK ANALYSIS FOR THE FAR-WEST MARICOPA COUNTY STRUCTURES
  2           ID        HARQUAHALA STRUCTURE
  3           ID        72 HOUR PMF STORM:  50% 72 HOUR HYDROGRAPH GENERATED FOR DAMBREAK
  4           ID        FILE:  HQFA.D72
              *DIAGRAM
  5           ID        SEPT.17,  1990
  6           IT      15       0       0     300
  7           IO       5
  8           IN      60

  9           KK    WS-1        WATERSHED NO. 1 DRAINING TO HQFRS
 10           BA   30.54
 11           PB       0
 12           PC       0     .03     .07     0.1    0.13    0.17     0.2    0.23    0.27     0.3
 13           PC    0.37    0.43     0.5    0.57    0.63     0.7     0.8     0.9     1.0     1.1
 14           PC     1.2     1.3     1.4     1.5     1.6     1.7     1.8     1.9    2.03    2.17
 15           PC     2.3    2.47    2.63     2.8     3.0     3.2     3.4     3.6     3.8     4.0
 16           PC    4.43    4.87     5.3     6.1     6.9     7.7    9.37   11.03    12.7    13.0
 17           PC    13.3    13.6   13.77   13.93    14.1    14.2    14.3    14.4    14.5    14.6
 18           PC    14.7    14.8    14.9    15.0   15.07   15.13    15.2   15.23   15.27    15.3
 19           PC   15.33   15.37    15.4
 20           LS       0      89
 21           UD    1.63

 22           KK    WS-2        WATERSHED NO. 2 DRAINING TO HQFRS
 23           BA   48.63
 24           LS       0      87
 25           UD    1.55

 26           KK    WS-3        WATERSHED NO. 3 DRAINING TO HQFRS
 27           BA   12.87
 28           LS       0      88
 29           UD    0.49

 30           KK    WS-4        WATERSHED NO. 4 DRAINING TO HQFRS
 31           BA   11.25
 32           LS       0      88
 33           UD    0.82

 34           KK    CP-1
 35           KM        COMBINE WS-1 THRU WS-4 AT HQFRS
 36           HC       4

 37           KK   HQHYD        50% 6 HOUR PMF HYDROGRAPH FOR ROUTING THRU HQFRS
 38           KO       2       2
 39           DT  0.5PMP
 40           DI       0 1000000
 41           DQ       0  500000

 42           KK   HQFRS
 43           KO       2       2
 44           KM        EMERGENCY SPILLWAY INV. = 1408.4
 45           KM        TOP OF HQFRS = 1419.7   BOTTOM ELE. = 1375.9
 46           KM        PRINCIPAL & EMERGENCY SPILLWAY TOTAL Q @  1419.7 = 15377.7 CFS
 47           RS       1    STOR       0       0
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  48          SV     0.0   45.19   70.09  111.98  166.29  272.73  401.06  718.81  1268.6 3160.99
  49          SV  4577.8  6287.6 8287.32 9998.0911880.79 15696.5 21075.9 28349.3 29006.6   30102
  50          SE  1375.9  1387.3  1389.1 1390.83 1392.59 1391.34  1396.1 1397.86 1399.61 1403.13
  51          SE  1404.9  1406.6  1408.4  1409.7 1411.06 1413.45 1416.38  1419.7  1420.0  1420.5
  52          SQ     0.0     0.2   162.5   262.6   272.6   281.8   290.8   299.8   308.1   325.0
  53          SQ   332.4   340.1   347.8  1049.3  2325.3  5551.8 10718.6 15377.7 22588.6   58752
  54          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

NO.       (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  9        WS-1
              .
              .
 22           .        WS-2
              .           .
              .           .
 26           .           .        WS-3
              .           .           .
              .           .           .
 30           .           .           .        WS-4
              .           .           .           .
              .           .           .           .
 34        CP-1.................................
              .
              .
 39           .-------)  0.5PMP
 37       HQHYD
              V
              V
 42       HQFRS
```

* RUNOFF ALSO COMPUTED AT THIS LOCATION

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                                        ****
                    FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
          U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
                                        ****


                    DAMBREAK ANALYSIS FOR THE FAR-WEST MARICOPA COUNTY STRUCTURES
                    HARQUAHALA STRUCTURE
                    72 HOUR PMF STORM:  50% 72 HOUR HYDROGRAPH GENERATED FOR DAMBREAK
                    FILE:  HQFA.D72
                    SEPT.17,  1990

  7 IO        OUTPUT CONTROL VARIABLES
                   IPRNT          5  PRINT CONTROL
                   IPLOT          0  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT         HYDROGRAPH TIME DATA
                    NMIN         15  MINUTES IN COMPUTATION INTERVAL
                   IDATE     1    0  STARTING DATE
                   ITIME       0000  STARTING TIME
                      NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE     4    0  ENDING DATE
                  NDTIME       0245  ENDING TIME

             COMPUTATION INTERVAL     .25 HOURS
                  TOTAL TIME BASE   74.75 HOURS

       ENGLISH UNITS

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


          **************
          *            *
 37 KK    *    HQHYD   *          50% 6 HOUR PMF HYDROGRAPH FOR ROUTING THRU HQFRS
          *            *
          **************

 38 KO        OUTPUT CONTROL VARIABLES
                  IPRNT          2  PRINT CONTROL
                  IPLOT          2  PLOT CONTROL
                  QSCAL         0.  HYDROGRAPH PLOT SCALE

   DT         DIVERSION
                  ISTAD     0.5PMP  DIVERSION HYDROGRAPH IDENTIFICATION

   DI           INFLOW       .001000000.00

   DQ     DIVERTED FLOW       .00 500000.00

                                        ***

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DIVERSION HYDROGRAPH 0.5PMP

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	1		1845	76	1703.	2		1330	151	5982.	3		0815	226	3994.
1		0015	2	0.	1		1900	77	1747.	2		1345	152	6003.	3		0830	227	3837.
1		0030	3	0.	1		1915	78	1788.	2		1400	153	6022.	3		0845	228	3719.
1		0045	4	0.	1		1930	79	1828.	2		1415	154	6040.	3		0900	229	3630.
1		0100	5	0.	1		1945	80	1866.	2		1430	155	6056.	3		0915	230	3560.
1		0115	6	0.	1		2000	81	1902.	2		1445	156	6071.	3		0930	231	3505.
1		0130	7	0.	1		2015	82	1936.	2		1500	157	6085.	3		0945	232	3461.
1		0145	8	0.	1		2030	83	1969.	2		1515	158	6248.	3		1000	233	3427.
1		0200	9	0.	1		2045	84	2001.	2		1530	159	6708.	3		1015	234	3399.
1		0215	10	0.	1		2100	85	2031.	2		1545	160	7338.	3		1030	235	3378.
1		0230	11	0.	1		2115	86	2061.	2		1600	161	8033.	3		1045	236	3361.
1		0245	12	0.	1		2130	87	2089.	2		1615	162	8774.	3		1100	237	3349.
1		0300	13	0.	1		2145	88	2116.	2		1630	163	9527.	3		1115	238	3339.
1		0315	14	0.	1		2200	89	2143.	2		1645	164	10249.	3		1130	239	3332.
1		0330	15	0.	1		2215	90	2168.	2		1700	165	10917.	3		1145	240	3326.
1		0345	16	0.	1		2230	91	2193.	2		1715	166	11502.	3		1200	241	3321.
1		0400	17	0.	1		2245	92	2217.	2		1730	167	11986.	3		1215	242	3318.
1		0415	18	0.	1		2300	93	2240.	2		1745	168	12357.	3		1230	243	3315.
1		0430	19	0.	1		2315	94	2262.	2		1800	169	12640.	3		1245	244	3313.
1		0445	20	0.	1		2330	95	2284.	2		1815	170	13107.	3		1300	245	3311.
1		0500	21	0.	1		2345	96	2305.	2		1830	171	14021.	3		1315	246	3310.
1		0515	22	0.	2		0000	97	2325.	2		1845	172	15183.	3		1330	247	3309.
1		0530	23	0.	2		0015	98	2345.	2		1900	173	16422.	3		1345	248	3308.
1		0545	24	0.	2		0030	99	2364.	2		1915	174	17705.	3		1400	249	3308.
1		0600	25	0.	2		0045	100	2382.	2		1930	175	18971.	3		1415	250	3307.
1		0615	26	0.	2		0100	101	2401.	2		1945	176	20163.	3		1430	251	3307.
1		0630	27	0.	2		0115	102	2418.	2		2000	177	21252.	3		1445	252	3307.
1		0645	28	0.	2		0130	103	2435.	2		2015	178	22204.	3		1500	253	3307.
1		0700	29	0.	2		0145	104	2452.	2		2030	179	23005.	3		1515	254	3287.
1		0715	30	0.	2		0200	105	2468.	2		2045	180	23628.	3		1530	255	3225.
1		0730	31	0.	2		0215	106	2484.	2		2100	181	24110.	3		1545	256	3139.
1		0745	32	0.	2		0230	107	2499.	2		2115	182	25088.	3		1600	257	3044.
1		0800	33	0.	2		0245	108	2514.	2		2130	183	27177.	3		1615	258	2938.
1		0815	34	1.	2		0300	109	2528.	2		2145	184	29887.	3		1630	259	2818.
1		0830	35	1.	2		0315	110	2559.	2		2200	185	32805.	3		1645	260	2696.
1		0845	36	3.	2		0330	111	2622.	2		2215	186	35832.	3		1700	261	2579.
1		0900	37	6.	2		0345	112	2705.	2		2230	187	38807.	3		1715	262	2478.
1		0915	38	11.	2		0400	113	2795.	2		2245	188	41595.	3		1730	263	2404.
1		0930	39	20.	2		0415	114	2895.	2		2300	189	44130.	3		1745	264	2354.
1		0945	40	35.	2		0430	115	3006.	2		2315	190	46342.	3		1800	265	2321.
1		1000	41	54.	2		0445	116	3119.	2		2330	191	48205.	3		1815	266	2274.
1		1015	42	76.	2		0500	117	3229.	2		2345	192	49649.	3		1830	267	2181.
1		1030	43	101.	2		0515	118	3326.	3		0000	193	50760.	3		1845	268	2065.
1		1045	44	128.	2		0530	119	3402.	3		0015	194	50698.	3		1900	269	1941.
1		1100	45	157.	2		0545	120	3459.	3		0030	195	48578.	3		1915	270	1820.
1		1115	46	188.	2		0600	121	3501.	3		0045	196	45251.	3		1930	271	1713.
1		1130	47	224.	2		0615	122	3556.	3		0100	197	41405.	3		1945	272	1620.
1		1145	48	262.	2		0630	123	3650.	3		0115	198	37230.	3		2000	273	1540.
1		1200	49	302.	2		0645	124	3764.	3		0130	199	33003.	3		2015	274	1469.
1		1215	50	342.	2		0700	125	3885.	3		0145	200	28967.	3		2030	275	1400.
1		1230	51	383.	2		0715	126	4004.	3		0200	201	25254.	3		2045	276	1340.
1		1245	52	424.	2		0730	127	4111.	3		0215	202	22007.	3		2100	277	1290.
1		1300	53	465.	2		0745	128	4207.	3		0230	203	19292.	3		2115	278	1245.
1		1315	54	503.	2		0800	129	4292.	3		0245	204	17220.	3		2130	279	1204.
1		1330	55	536.	2		0815	130	4370.	3		0300	205	15658.	3		2145	280	1165.
1		1345	56	564.	2		0830	131	4446.	3		0315	206	14348.	3		2200	281	1130.
1		1400	57	589.	2		0845	132	4514.	3		0330	207	13113.	3		2215	282	1108.
1		1415	58	615.	2		0900	133	4574.	3		0345	208	11973.	3		2230	283	1104.
1		1430	59	644.	2		0915	134	4648.	3		0400	209	10964.	3		2245	284	1114.

1	1500	61	709.	*	2	0945	136	4882.	*	3	0430	211	9235.	*	3	2315	286	1146.
1	1515	62	751.	*	2	1000	137	5013.	*	3	0445	212	8511.	*	3	2330	287	1150.
1	1530	63	813.	*	2	1015	138	5145.	*	3	0500	213	7883.	*	3	2345	288	1146.
1	1545	64	887.	*	2	1030	139	5271.	*	3	0515	214	7354.	*	4	0000	289	1137.
1	1600	65	966.	*	2	1045	140	5388.	*	3	0530	215	6927.	*	4	0015	290	1104.
1	1615	66	1049.	*	2	1100	141	5493.	*	3	0545	216	6604.	*	4	0030	291	1026.
1	1630	67	1132.	*	2	1115	142	5586.	*	3	0600	217	6361.	*	4	0045	292	922.
1	1645	68	1214.	*	2	1130	143	5666.	*	3	0615	218	6128.	*	4	0100	293	809.
1	1700	69	1292.	*	2	1145	144	5732.	*	3	0630	219	5843.	*	4	0115	294	692.
1	1715	70	1366.	*	2	1200	145	5785.	*	3	0645	220	5537.	*	4	0130	295	578.
1	1730	71	1435.	*	2	1215	146	5830.	*	3	0700	221	5237.	*	4	0145	296	474.
1	1745	72	1497.	*	2	1230	147	5869.	*	3	0715	222	4943.	*	4	0200	297	380.
1	1800	73	1554.	*	2	1245	148	5903.	*	3	0730	223	4665.	*	4	0215	298	299.
1	1815	74	1607.	*	2	1300	149	5933.	*	3	0745	224	4411.	*	4	0230	299	233.
1	1830	75	1656.	*	2	1315	150	5959.	*	3	0800	225	4185.	*	4	0245	300	181.
				*					*					*				

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	74.75-HR
+ (CFS)	(HR)					
		(CFS)				
+ 50760.	48.00		36396.	15711.	6410.	6174.
		(INCHES)	3.276	5.657	6.923	6.923
		(AC-FT)	18048.	31162.	38140.	38140.

CUMULATIVE AREA = 103.29 SQ MI

****

HYDROGRAPH AT STATION HQHYD

****

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
					*						*						*					
1		0000	1	0.	*	1		1845	76	1703.	*	2		1330	151	5982.	*	3		0815	226	3994.
1		0015	2	0.	*	1		1900	77	1747.	*	2		1345	152	6003.	*	3		0830	227	3837.
1		0030	3	0.	*	1		1915	78	1788.	*	2		1400	153	6022.	*	3		0845	228	3719.
1		0045	4	0.	*	1		1930	79	1828.	*	2		1415	154	6040.	*	3		0900	229	3630.
1		0100	5	0.	*	1		1945	80	1866.	*	2		1430	155	6056.	*	3		0915	230	3560.
1		0115	6	0.	*	1		2000	81	1902.	*	2		1445	156	6071.	*	3		0930	231	3505.
1		0130	7	0.	*	1		2015	82	1936.	*	2		1500	157	6085.	*	3		0945	232	3461.
1		0145	8	0.	*	1		2030	83	1969.	*	2		1515	158	6248.	*	3		1000	233	3427.
1		0200	9	0.	*	1		2045	84	2001.	*	2		1530	159	6708.	*	3		1015	234	3399.
1		0215	10	0.	*	1		2100	85	2031.	*	2		1545	160	7338.	*	3		1030	235	3378.
1		0230	11	0.	*	1		2115	86	2061.	*	2		1600	161	8033.	*	3		1045	236	3361.
1		0245	12	0.	*	1		2130	87	2089.	*	2		1615	162	8774.	*	3		1100	237	3349.
1		0300	13	0.	*	1		2145	88	2116.	*	2		1630	163	9527.	*	3		1115	238	3339.
1		0315	14	0.	*	1		2200	89	2143.	*	2		1645	164	10249.	*	3		1130	239	3332.
1		0330	15	0.	*	1		2215	90	2168.	*	2		1700	165	10917.	*	3		1145	240	3326.
1		0345	16	0.	*	1		2230	91	2193.	*	2		1715	166	11502.	*	3		1200	241	3321.
1		0400	17	0.	*	1		2245	92	2217.	*	2		1730	167	11986.	*	3		1215	242	3318.
1		0415	18	0.	*	1		2300	93	2240.	*	2		1745	168	12357.	*	3		1230	243	3315.
1		0430	19	0.	*	1		2315	94	2262.	*	2		1800	169	12640.	*	3		1245	244	3313.
1		0445	20	0.	*	1		2330	95	2284.	*	2		1815	170	13107.	*	3		1300	245	3311.
1		0500	21	0.	*	1		2345	96	2305.	*	2		1830	171	14021.	*	3		1315	246	3310.
		0515	22	0.	*	2		0000	97	2325.	*	2		1845	172	15183.	*	3		1330	247	3309.
1		0530	23	0.	*	2		0015	98	2345.	*	2		1900	173	16422.	*	3		1345	248	3308.
1		0545	24	0.	*	2		0030	99	2364.	*	2		1915	174	17705.	*	3		1400	249	3308.
1		0600	25	0.	*	2		0045	100	2382.	*	2		1930	175	18971.	*	3		1415	250	3307.
1		0615	26	0.	*	2		0100	101	2401.	*	2		1945	176	20163.	*	3		1430	251	3307.
1		0630	27	0.	*	2		0115	102	2418.	*	2		2000	177	21252.	*	3		1445	252	3307.
1		0645	28	0.	*	2		0130	103	2435.	*	2		2015	178	22204.	*	3		1500	253	3307.

1	0715	30	0.	*	2	0200	105	2468.	*	2	2045	180	23628.	*	3	1530	255	3225.
1	0730	31	0.	*	2	0215	106	2484.	*	2	2100	181	24110.	*	3	1545	256	3139.
1	0745	32	0.	*	2	0230	107	2499.	*	2	2115	182	25088.	*	3	1600	257	3044.
1	0800	33	0.	*	2	0245	108	2514.	*	2	2130	183	27177.	*	3	1615	258	2938.
1	0815	34	1.	*	2	0300	109	2528.	*	2	2145	184	29887.	*	3	1630	259	2818.
1	0830	35	1.	*	2	0315	110	2559.	*	2	2200	185	32805.	*	3	1645	260	2696.
1	0845	36	3.	*	2	0330	111	2622.	*	2	2215	186	35832.	*	3	1700	261	2579.
1	0900	37	6.	*	2	0345	112	2705.	*	2	2230	187	38807.	*	3	1715	262	2478.
1	0915	38	11.	*	2	0400	113	2795.	*	2	2245	188	41595.	*	3	1730	263	2404.
1	0930	39	20.	*	2	0415	114	2895.	*	2	2300	189	44130.	*	3	1745	264	2354.
1	0945	40	35.	*	2	0430	115	3006.	*	2	2315	190	46342.	*	3	1800	265	2321.
1	1000	41	54.	*	2	0445	116	3119.	*	2	2330	191	48205.	*	3	1815	266	2274.
1	1015	42	76.	*	2	0500	117	3229.	*	2	2345	192	49649.	*	3	1830	267	2181.
1	1030	43	101.	*	2	0515	118	3326.	*	3	0000	193	50760.	*	3	1845	268	2065.
1	1045	44	128.	*	2	0530	119	3402.	*	3	0015	194	50698.	*	3	1900	269	1941.
1	1100	45	157.	*	2	0545	120	3459.	*	3	0030	195	48578.	*	3	1915	270	1820.
1	1115	46	188.	*	2	0600	121	3501.	*	3	0045	196	45251.	*	3	1930	271	1713.
1	1130	47	224.	*	2	0615	122	3556.	*	3	0100	197	41405.	*	3	1945	272	1620.
1	1145	48	262.	*	2	0630	123	3650.	*	3	0115	198	37230.	*	3	2000	273	1540.
1	1200	49	302.	*	2	0645	124	3764.	*	3	0130	199	33003.	*	3	2015	274	1469.
1	1215	50	342.	*	2	0700	125	3885.	*	3	0145	200	28967.	*	3	2030	275	1400.
1	1230	51	383.	*	2	0715	126	4004.	*	3	0200	201	25254.	*	3	2045	276	1340.
1	1245	52	424.	*	2	0730	127	4111.	*	3	0215	202	22007.	*	3	2100	277	1290.
1	1300	53	465.	*	2	0745	128	4207.	*	3	0230	203	19292.	*	3	2115	278	1245.
1	1315	54	503.	*	2	0800	129	4292.	*	3	0245	204	17220.	*	3	2130	279	1204.
1	1330	55	536.	*	2	0815	130	4370.	*	3	0300	205	15658.	*	3	2145	280	1165.
1	1345	56	564.	*	2	0830	131	4446.	*	3	0315	206	14348.	*	3	2200	281	1130.
1	1400	57	589.	*	2	0845	132	4514.	*	3	0330	207	13113.	*	3	2215	282	1108.
1	1415	58	615.	*	2	0900	133	4574.	*	3	0345	208	11973.	*	3	2230	283	1104.
1	1430	59	644.	*	2	0915	134	4648.	*	3	0400	209	10964.	*	3	2245	284	1114.
1	1445	60	676.	*	2	0930	135	4756.	*	3	0415	210	10056.	*	3	2300	285	1131.
1	1500	61	709.	*	2	0945	136	4882.	*	3	0430	211	9235.	*	3	2315	286	1146.
1	1515	62	751.	*	2	1000	137	5013.	*	3	0445	212	8511.	*	3	2330	287	1150.
1	1530	63	813.	*	2	1015	138	5145.	*	3	0500	213	7883.	*	3	2345	288	1146.
1	1545	64	887.	*	2	1030	139	5271.	*	3	0515	214	7354.	*	4	0000	289	1137.
1	1600	65	966.	*	2	1045	140	5388.	*	3	0530	215	6927.	*	4	0015	290	1104.
1	1615	66	1049.	*	2	1100	141	5493.	*	3	0545	216	6604.	*	4	0030	291	1026.
1	1630	67	1132.	*	2	1115	142	5586.	*	3	0600	217	6361.	*	4	0045	292	922.
1	1645	68	1214.	*	2	1130	143	5666.	*	3	0615	218	6128.	*	4	0100	293	809.
1	1700	69	1292.	*	2	1145	144	5732.	*	3	0630	219	5843.	*	4	0115	294	692.
1	1715	70	1366.	*	2	1200	145	5785.	*	3	0645	220	5537.	*	4	0130	295	578.
1	1730	71	1435.	*	2	1215	146	5830.	*	3	0700	221	5237.	*	4	0145	296	474.
1	1745	72	1497.	*	2	1230	147	5869.	*	3	0715	222	4943.	*	4	0200	297	380.
1	1800	73	1554.	*	2	1245	148	5903.	*	3	0730	223	4665.	*	4	0215	298	299.
1	1815	74	1607.	*	2	1300	149	5933.	*	3	0745	224	4411.	*	4	0230	299	233.
1	1830	75	1656.	*	2	1315	150	5959.	*	3	0800	225	4185.	*	4	0245	300	181.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	74.75-HR
+ (CFS)	(HR)					
		(CFS)				
+ 50760.	48.00		36396.	15711.	6410.	6174.
		(INCHES)	3.276	5.657	6.923	6.923
		(AC-FT)	18048.	31162.	38140.	38140.

CUMULATIVE AREA = 103.29 SQ MI

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          *          *
42 KK     *    HQFRS *
          *          *
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43 KO          OUTPUT CONTROL VARIABLES
                    IPRNT          2  PRINT CONTROL
                    IPLOT          2  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE
                            EMERGENCY SPILLWAY INV. = 1408.4
                            TOP OF HQFRS = 1419.7   BOTTOM ELE. = 1375.9
                            PRINCIPAL & EMERGENCY SPILLWAY TOTAL Q @  1419.7 = 15377.7 CFS

            HYDROGRAPH ROUTING DATA

47 RS          STORAGE ROUTING
                    NSTPS          1  NUMBER OF SUBREACHES
                     ITYP       STOR  TYPE OF INITIAL CONDITION
                   RSVRIC        .00  INITIAL CONDITION
                        X        .00 WORKING R AND D COEFFICIENT

48 SV           STORAGE         .0     45.2     70.1    112.0    166.3    272.7    401.1    718.8   1268.6   3161.0
                             4577.8   6287.6   8287.3   9998.1  11880.8  15696.5  21075.9  28349.3  29006.6  30102.0

50 SE          ELEVATION    1375.90  1387.30  1389.10  1390.83  1392.59  1391.34  1396.10  1397.86  1399.61  1403.13
                            1404.90  1406.60  1408.40  1409.70  1411.06  1413.45  1416.38  1419.70  1420.00  1420.50

52 SQ          DISCHARGE        0.       0.      163.     263.     273.     282.     291.     300.     308.     325.
                              332.     340.     348.    1049.    2325.    5552.   10719.   15378.   22589.   58752.

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HYDROGRAPH AT STATION HQFRS

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	1375.9	*	2		0100	101	309.	1348.9	1399.8	*	3		0200	201	13314.	25128.4	1418.2
1		0015	2	0.	.0	1375.9	*	2		0115	102	309.	1392.3	1399.8	*	3		0215	202	13450.	25340.1	1418.3
1		0030	3	0.	.0	1375.9	*	2		0130	103	310.	1436.0	1399.9	*	3		0230	203	13545.	25487.9	1418.4
1		0045	4	0.	.0	1375.9	*	2		0145	104	310.	1480.1	1400.0	*	3		0245	204	13607.	25584.6	1418.4
1		0100	5	0.	.0	1375.9	*	2		0200	105	310.	1524.5	1400.1	*	3		0300	205	13644.	25642.8	1418.5
1		0115	6	0.	.0	1375.9	*	2		0215	106	311.	1569.3	1400.2	*	3		0315	206	13662.	25670.7	1418.5
1		0130	7	0.	.0	1375.9	*	2		0230	107	311.	1614.3	1400.3	*	3		0330	207	13663.	25672.1	1418.5
1		0145	8	0.	.0	1375.9	*	2		0245	108	312.	1659.6	1400.3	*	3		0345	208	13648.	25649.1	1418.5
1		0200	9	0.	.0	1375.9	*	2		0300	109	312.	1705.3	1400.4	*	3		0400	209	13619.	25604.3	1418.4
1		0215	10	0.	.0	1375.9	*	2		0315	110	312.	1751.4	1400.5	*	3		0415	210	13578.	25540.5	1418.4
1		0230	11	0.	.0	1375.9	*	2		0330	111	313.	1798.5	1400.6	*	3		0430	211	13527.	25459.8	1418.4
1		0245	12	0.	.0	1375.9	*	2		0345	112	313.	1847.0	1400.7	*	3		0445	212	13466.	25364.3	1418.3
1		0300	13	0.	.0	1375.9	*	2		0400	113	314.	1897.4	1400.8	*	3		0500	213	13396.	25256.2	1418.3
1		0315	14	0.	.0	1375.9	*	2		0415	114	314.	1949.6	1400.9	*	3		0515	214	13320.	25137.6	1418.2
1		0330	15	0.	.0	1375.9	*	2		0430	115	315.	2004.1	1401.0	*	3		0530	215	13239.	25010.7	1418.2
1		0345	16	0.	.0	1375.9	*	2		0445	116	315.	2060.9	1401.1	*	3		0545	216	13154.	24877.8	1418.1
1		0400	17	0.	.0	1375.9	*	2		0500	117	316.	2119.9	1401.2	*	3		0600	217	13066.	24740.9	1418.1
		0415	18	0.	.0	1375.9	*	2		0515	118	316.	2181.1	1401.3	*	3		0615	218	12977.	24600.9	1418.0
		0430	19	0.	.0	1375.9	*	2		0530	119	317.	2244.1	1401.4	*	3		0630	219	12885.	24457.4	1417.9
1		0445	20	0.	.0	1375.9	*	2		0545	120	317.	2308.4	1401.5	*	3		0645	220	12790.	24309.7	1417.9
1		0500	21	0.	.0	1375.9	*	2		0600	121	318.	2373.8	1401.7	*	3		0700	221	12693.	24157.8	1417.8
1		0515	22	0.	.0	1375.9	*	2		0615	122	319.	2440.1	1401.8	*	3		0715	222	12593.	24001.7	1417.7
1		0530	23	0.	.0	1375.9	*	2		0630	123	319.	2507.9	1401.9	*	3		0730	223	12490.	23841.9	1417.6
1		0545	24	0.	.0	1375.9	*	2		0645	124	320.	2577.9	1402.0	*	3		0745	224	12386.	23678.6	1417.6
1		0600	25	0.	.0	1375.9	*	2		0700	125	320.	2650.3	1402.2	*	3		0800	225	12279.	23512.6	1417.5

1	0630	27	0.	.0	1375.9	*	2	0730	127	322.	2802.4	1402.5	*	3	0830	227	12063.	23175.1	1417.3
1	0645	28	0.	.0	1375.9	*	2	0745	128	323.	2881.7	1402.6	*	3	0845	228	11954.	23005.0	1417.3
1	0700	29	0.	.0	1375.9	*	2	0800	129	323.	2962.8	1402.8	*	3	0900	229	11845.	22835.1	1417.2
1	0715	30	0.	.0	1375.9	*	2	0815	130	324.	3045.6	1402.9	*	3	0915	230	11737.	22665.7	1417.1
1	0730	31	0.	.0	1375.9	*	2	0830	131	325.	3130.0	1403.1	*	3	0930	231	11629.	22497.3	1417.0
1	0745	32	0.	.0	1375.9	*	2	0845	132	325.	3215.8	1403.2	*	3	0945	232	11522.	22330.1	1417.0
1	0800	33	0.	.0	1375.9	*	2	0900	133	326.	3303.0	1403.3	*	3	1000	233	11416.	22164.3	1416.9
1	0815	34	0.	.0	1375.9	*	2	0915	134	326.	3391.5	1403.4	*	3	1015	234	11311.	22000.0	1416.8
1	0830	35	0.	.0	1375.9	*	2	0930	135	327.	3481.9	1403.5	*	3	1030	235	11206.	21837.4	1416.7
1	0845	36	0.	.1	1375.9	*	2	0945	136	327.	3574.7	1403.6	*	3	1045	236	11103.	21676.6	1416.7
1	0900	37	0.	.2	1375.9	*	2	1000	137	328.	3670.2	1403.8	*	3	1100	237	11002.	21517.6	1416.6
1	0915	38	0.	.3	1376.0	*	2	1015	138	328.	3768.4	1403.9	*	3	1115	238	10901.	21360.4	1416.5
1	0930	39	0.	.7	1376.1	*	2	1030	139	329.	3869.2	1404.0	*	3	1130	239	10801.	21205.1	1416.4
1	0945	40	0.	1.2	1376.2	*	2	1045	140	329.	3972.5	1404.1	*	3	1145	240	10695.	21051.8	1416.4
1	1000	41	0.	2.1	1376.4	*	2	1100	141	330.	4078.1	1404.3	*	3	1200	241	10551.	20901.0	1416.3
1	1015	42	0.	3.5	1376.8	*	2	1115	142	330.	4185.7	1404.4	*	3	1215	242	10409.	20753.0	1416.2
1	1030	43	0.	5.3	1377.2	*	2	1130	143	331.	4295.1	1404.5	*	3	1230	243	10269.	20608.0	1416.1
1	1045	44	0.	7.7	1377.8	*	2	1145	144	332.	4406.0	1404.7	*	3	1245	244	10132.	20465.7	1416.0
1	1100	45	0.	10.6	1378.6	*	2	1200	145	332.	4518.1	1404.8	*	3	1300	245	9998.	20326.1	1416.0
1	1115	46	0.	14.2	1379.5	*	2	1215	146	333.	4631.3	1405.0	*	3	1315	246	9867.	20189.3	1415.9
1	1130	47	0.	18.4	1380.6	*	2	1230	147	333.	4745.3	1405.1	*	3	1330	247	9738.	20055.2	1415.8
1	1145	48	0.	23.5	1381.8	*	2	1245	148	334.	4860.0	1405.2	*	3	1345	248	9612.	19923.6	1415.8
1	1200	49	0.	29.3	1383.3	*	2	1300	149	334.	4975.3	1405.3	*	3	1400	249	9488.	19794.7	1415.7
1	1215	50	0.	35.9	1385.0	*	2	1315	150	335.	5091.3	1405.4	*	3	1415	250	9367.	19668.2	1415.6
1	1230	51	0.	43.4	1386.9	*	2	1330	151	335.	5207.7	1405.5	*	3	1430	251	9247.	19544.3	1415.5
1	1245	52	40.	51.3	1387.7	*	2	1345	152	336.	5324.6	1405.6	*	3	1445	252	9131.	19422.7	1415.5
1	1300	53	91.	59.2	1388.3	*	2	1400	153	336.	5441.9	1405.8	*	3	1500	253	9016.	19303.6	1415.4
1	1315	54	141.	66.8	1388.9	*	2	1415	154	337.	5559.5	1405.9	*	3	1515	254	8904.	19186.6	1415.4
1	1330	55	172.	74.3	1389.3	*	2	1430	155	337.	5677.5	1406.0	*	3	1530	255	8793.	19071.0	1415.3
1	1345	56	191.	81.9	1389.6	*	2	1445	156	338.	5795.8	1406.1	*	3	1545	256	8683.	18956.2	1415.2
1	1400	57	209.	89.7	1389.9	*	2	1500	157	338.	5914.4	1406.2	*	3	1600	257	8573.	18841.9	1415.2
1	1415	58	228.	97.6	1390.2	*	2	1515	158	339.	6034.9	1406.3	*	3	1615	258	8463.	18727.7	1415.1
1	1430	59	248.	105.7	1390.6	*	2	1530	159	340.	6161.7	1406.5	*	3	1630	259	8353.	18613.4	1415.0
1	1445	60	263.	114.1	1390.9	*	2	1545	160	340.	6299.8	1406.6	*	3	1645	260	8243.	18498.9	1415.0
1	1500	61	265.	122.9	1391.2	*	2	1600	161	341.	6451.5	1406.7	*	3	1700	261	8133.	18384.2	1414.9
1	1515	62	266.	132.5	1391.5	*	2	1615	162	341.	6618.1	1406.9	*	3	1715	262	8023.	18269.5	1414.9
1	1530	63	268.	143.2	1391.8	*	2	1630	163	342.	6800.1	1407.1	*	3	1730	263	7913.	18155.3	1414.8
1	1545	64	271.	155.1	1392.2	*	2	1645	164	343.	6997.3	1407.2	*	3	1745	264	7805.	18042.1	1414.7
1	1600	65	273.	168.7	1392.6	*	2	1700	165	344.	7208.9	1407.4	*	3	1800	265	7697.	17930.3	1414.7
1	1615	66	274.	183.8	1392.4	*	2	1715	166	345.	7433.4	1407.6	*	3	1815	266	7591.	17819.8	1414.6
1	1630	67	276.	200.7	1392.2	*	2	1730	167	345.	7668.9	1407.8	*	3	1830	267	7486.	17710.1	1414.5
1	1645	68	277.	219.2	1392.0	*	2	1745	168	346.	7913.2	1408.1	*	3	1845	268	7380.	17600.3	1414.5
1	1700	69	279.	239.4	1391.7	*	2	1800	169	347.	8164.3	1408.3	*	3	1900	269	7275.	17490.3	1414.4
1	1715	70	281.	261.0	1391.5	*	2	1815	170	403.	8422.5	1408.5	*	3	1915	270	7169.	17380.0	1414.4
1	1730	71	283.	284.2	1391.8	*	2	1830	171	514.	8693.3	1408.7	*	3	1930	271	7063.	17269.5	1414.3
1	1745	72	284.	308.6	1392.7	*	2	1845	172	633.	8983.2	1408.9	*	3	1945	272	6957.	17159.1	1414.2
1	1800	73	286.	334.2	1393.6	*	2	1900	173	761.	9295.2	1409.2	*	3	2000	273	6851.	17049.1	1414.2
1	1815	74	288.	360.9	1394.6	*	2	1915	174	899.	9630.7	1409.4	*	3	2015	274	6746.	16939.7	1414.1
1	1830	75	290.	388.7	1395.6	*	2	1930	175	1046.	9989.5	1409.7	*	3	2030	275	6641.	16831.0	1414.1
1	1845	76	291.	417.4	1396.2	*	2	1945	176	1301.	10369.5	1410.0	*	3	2045	276	6538.	16723.2	1414.0
1	1900	77	292.	447.0	1396.4	*	2	2000	177	1571.	10767.7	1410.3	*	3	2100	277	6435.	16616.3	1414.0
1	1915	78	293.	477.5	1396.5	*	2	2015	178	1851.	11181.2	1410.6	*	3	2115	278	6334.	16510.6	1413.9
1	1930	79	294.	508.8	1396.7	*	2	2030	179	2140.	11607.0	1410.9	*	3	2130	279	6233.	16406.1	1413.8
1	1945	80	295.	540.8	1396.9	*	2	2045	180	2461.	12041.3	1411.2	*	3	2145	280	6134.	16302.8	1413.8
1	2000	81	296.	573.7	1397.1	*	2	2100	181	2832.	12479.7	1411.4	*	3	2200	281	6036.	16200.8	1413.7
1	2015	82	297.	607.2	1397.2	*	2	2115	182	3209.	12925.6	1411.7	*	3	2215	282	5940.	16100.2	1413.7
1	2030	83	298.	641.4	1397.4	*	2	2130	183	3606.	13395.1	1412.0	*	3	2230	283	5845.	16001.3	1413.6
1	2045	84	299.	676.2	1397.6	*	2	2145	184	4037.	13905.6	1412.3	*	3	2245	284	5751.	15904.4	1413.6
1	2100	85	300.	711.7	1397.8	*	2	2200	185	4510.	14465.0	1412.7	*	3	2300	285	5661.	15809.7	1413.5
1	2115	86	300.	747.8	1398.0	*	2	2215	186	5027.	15075.5	1413.1	*	3	2315	286	5572.	15717.2	1413.5
1	2130	87	301.	784.4	1398.1	*	2	2230	187	5591.	15736.9	1413.5	*	3	2330	287	5493.	15626.6	1413.4
1	2145	88	301.	821.7	1398.2	*	2	2245	188	6271.	16444.9	1413.9	*	3	2345	288	5417.	15537.6	1413.4
1	2200	89	302.	859.4	1398.3	*	2	2300	189	6990.	17193.6	1414.3	*	4	0000	289	5343.	15450.0	1413.3
1	2215	90	303.	897.7	1398.4	*	2	2315	190	7741.	17976.0	1414.7	*	4	0015	290	5270.	15363.5	1413.2
1	2230	91	303.	936.5	1398.6	*	2	2330	191	8518.	18784.7	1415.1	*	4	0030	291	5197.	15277.4	1413.2

1	2245	92	304.	779.8	1398.7	*	2	2345	192	9312.	19611.4	1415.8	*	4	0045	292	5124.	15190.9	1413.1
1	2300	93	304.	1015.6	1398.8	*	3	0000	193	10116.	20448.0	1416.0	*	4	0100	293	5051.	15103.7	1413.1
1	2315	94	305.	1055.8	1398.9	*	3	0015	194	10849.	21279.6	1416.5	*	4	0115	294	4976.	15015.6	1413.0
1	2330	95	306.	1096.4	1399.1	*	3	0030	195	11359.	22075.7	1416.8	*	4	0130	295	4901.	14926.7	1413.0
1	2345	96	306.	1137.5	1399.2	*	3	0045	196	11827.	22805.5	1417.2	*	4	0145	296	4825.	14837.1	1412.9
2	0000	97	307.	1179.0	1399.3	*	3	0100	197	12241.	23452.1	1417.5	*	4	0200	297	4749.	14747.0	1412.9
2	0015	98	307.	1220.9	1399.5	*	3	0115	198	12597.	24007.9	1417.7	*	4	0215	298	4673.	14656.7	1412.8
	0030	99	308.	1263.2	1399.6	*	3	0130	199	12893.	24470.1	1417.9	*	4	0230	299	4596.	14566.5	1412.7
	0045	100	308.	1305.8	1399.7	*	3	0145	200	13131.	24841.4	1418.1	*	4	0245	300	4520.	14476.6	1412.7
						*							*						

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	74.75-HR
+ (CFS)	(HR)					
		(CFS)				
+ 13663.	51.50		13286.	10231.	3977.	3830.
		(INCHES)	1.196	3.684	4.296	4.296
		(AC-FT)	6588.	20292.	23663.	23663.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	74.75-HR
+ (AC-FT)	(HR)				
25672.	51.50	25084.	21015.	9616.	9263.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	74.75-HR
+ (FEET)	(HR)				
1418.48	51.50	1418.21	1416.23	1403.67	1402.65

CUMULATIVE AREA = 103.29 SQ MI

STATION HQFRS

(I) INFLOW, (O) OUTFLOW

		0.	10000.	20000.	30000.	40000.	50000.	60000.	0.	0.	0.	0.	0.	0.
									(S) STORAGE					
		0.	0.	0.	0.	0.	0.	0.	10000.	20000.	30000.	0.	0.	0.
DAHRMN	PER													
10000	1I	--------	--------	--------	--------	--------	--------	S	--------	--------	--------	--------	--------	--------
10015	2I	.	.	.	.	.	.	S	.	.	.	.	.	.
10030	3I	.	.	.	.	.	.	S	.	.	.	.	.	.
10045	4I	.	.	.	.	.	.	S	.	.	.	.	.	.
10100	5I	.	.	.	.	.	.	S	.	.	.	.	.	.
10115	6I	.	.	.	.	.	.	S	.	.	.	.	.	.
10130	7I	.	.	.	.	.	.	S	.	.	.	.	.	.
10145	8I	.	.	.	.	.	.	S	.	.	.	.	.	.
10200	9I	.	.	.	.	.	.	S	.	.	.	.	.	.
10215	10I	.	.	.	.	.	.	S	.	.	.	.	.	.
10230	11I	.	.	.	.	.	.	S	.	.	.	.	.	.
10245	12I	.	.	.	.	.	.	S	.	.	.	.	.	.
10300	13I	.	.	.	.	.	.	S	.	.	.	.	.	.
10315	14I	.	.	.	.	.	.	S	.	.	.	.	.	.
10330	15I	.	.	.	.	.	.	S	.	.	.	.	.	.
10345	16I	.	.	.	.	.	.	S	.	.	.	.	.	.
10400	17I	.	.	.	.	.	.	S	.	.	.	.	.	.
10415	18I	.	.	.	.	.	.	S	.	.	.	.	.	.
10430	19I	.	.	.	.	.	.	S	.	.	.	.	.	.
10445	20I	.	.	.	.	.	.	S	.	.	.	.	.	.
10500	21I	.	.	.	.	.	.	S	.	.	.	.	.	.
[illegible]	22I	.	.	.	.	.	.	S	.	.	.	.	.	.
[illegible]	23I	.	.	.	.	.	.	S	.	.	.	.	.	.
10545	24I	.	.	.	.	.	.	S	.	.	.	.	.	.
10600	25I	.	.	.	.	.	.	S	.	.	.	.	.	.
10615	26I	.	.	.	.	.	.	S	.	.	.	.	.	.
10630	27I	.	.	.	.	.	.	S	.	.	.	.	.	.
10645	28I	.	.	.	.	.	.	S	.	.	.	.	.	.
10700	29I	.	.	.	.	.	.	S	.	.	.	.	.	.
10715	30I	.	.	.	.	.	.	S	.	.	.	.	.	.
10730	31I	.	.	.	.	.	.	S	.	.	.	.	.	.
10745	32I	.	.	.	.	.	.	S	.	.	.	.	.	.
10800	33I	.	.	.	.	.	.	S	.	.	.	.	.	.
10815	34I	.	.	.	.	.	.	S	.	.	.	.	.	.
10830	35I	.	.	.	.	.	.	S	.	.	.	.	.	.
10845	36I	.	.	.	.	.	.	S	.	.	.	.	.	.
10900	37I	.	.	.	.	.	.	S	.	.	.	.	.	.
10915	38I	.	.	.	.	.	.	S	.	.	.	.	.	.
10930	39I	.	.	.	.	.	.	S	.	.	.	.	.	.
10945	40I	.	.	.	.	.	.	S	.	.	.	.	.	.
11000	41I	.	.	.	.	.	.	S	.	.	.	.	.	.
11015	42I	.	.	.	.	.	.	S	.	.	.	.	.	.
11030	43I	.	.	.	.	.	.	S	.	.	.	.	.	.
11045	44I	.	.	.	.	.	.	S	.	.	.	.	.	.
11100	45I	.	.	.	.	.	.	S	.	.	.	.	.	.
11115	46I	.	.	.	.	.	.	S	.	.	.	.	.	.
11130	47I	.	.	.	.	.	.	S	.	.	.	.	.	.
[illegible]	48I	.	.	.	.	.	.	S	.	.	.	.	.	.
[illegible]	49I	.	.	.	.	.	.	S	.	.	.	.	.	.
11215	50I	.	.	.	.	.	.	S	.	.	.	.	.	.
11230	51I	.	.	.	.	.	.	S	.	.	.	.	.	.
11245	52I	.	.	.	.	.	.	S	.	.	.	.	.	.
11300	53I	.	.	.	.	.	.	S	.	.	.	.	.	.
11315	540I	.	.	.	.	.	.	S	.	.	.	.	.	.
11330	550I	.	.	.	.	.	.	S	.	.	.	.	.	.

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11400  570I     .     .     .     .     .     S     .     .     .     .     .     .
11415  580I     .     .     .     .     .     S     .     .     .     .     .     .
11430  590I     .     .     .     .     .     S     .     .     .     .     .     .
11445  600I     .     .     .     .     .     S     .     .     .     .     .     .
11500  610I. . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . .
11515  620I     .     .     .     .     .     S     .     .     .     .     .     .
[illegible]30  630I     .     .     .     .     .     S     .     .     .     .     .     .
[illegible]45  640I     .     .     .     .     .     S     .     .     .     .     .     .
11600  650I     .     .     .     .     .     S     .     .     .     .     .     .
11615  660I     .     .     .     .     .     S     .     .     .     .     .     .
11630  670I     .     .     .     .     .     S     .     .     .     .     .     .
11645  680I     .     .     .     .     .     S     .     .     .     .     .     .
11700  690I     .     .     .     .     .     S     .     .     .     .     .     .
11715  700I     .     .     .     .     .     S     .     .     .     .     .     .
11730  710I. . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . .
11745  720I     .     .     .     .     .     S     .     .     .     .     .     .
11800  730 I    .     .     .     .     .     S     .     .     .     .     .     .
11815  740 I    .     .     .     .     .     S     .     .     .     .     .     .
11830  750 I    .     .     .     .     .     S     .     .     .     .     .     .
11845  760 I    .     .     .     .     .     S     .     .     .     .     .     .
11900  770 I    .     .     .     .     .     S     .     .     .     .     .     .
11915  780 I    .     .     .     .     .     S     .     .     .     .     .     .
11930  790 I    .     .     .     .     .     .S    .     .     .     .     .     .
11945  800 I    .     .     .     .     .     .S    .     .     .     .     .     .
12000  810 I. . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . .
12015  820 I    .     .     .     .     .     .S    .     .     .     .     .     .
12030  830 I    .     .     .     .     .     .S    .     .     .     .     .     .
12045  840 I    .     .     .     .     .     .S    .     .     .     .     .     .
12100  850 I    .     .     .     .     .     .S    .     .     .     .     .     .
12115  860 I    .     .     .     .     .     .S    .     .     .     .     .     .
12130  870 I    .     .     .     .     .     .S    .     .     .     .     .     .
[illegible]5  880 I    .     .     .     .     .     .S    .     .     .     .     .     .
[illegible]0  890 I    .     .     .     .     .     .S    .     .     .     .     .     .
12215  900 I    .     .     .     .     .     .S    .     .     .     .     .     .
12230  910 I. . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . .
12245  920 I    .     .     .     .     .     .S    .     .     .     .     .     .
12300  930 I    .     .     .     .     .     .S    .     .     .     .     .     .
12315  940 I    .     .     .     .     .     .S    .     .     .     .     .     .
12330  950 I    .     .     .     .     .     .S    .     .     .     .     .     .
12345  960 I    .     .     .     .     .     .S    .     .     .     .     .     .
20000  970 I    .     .     .     .     .     .S    .     .     .     .     .     .
20015  980 I    .     .     .     .     .     .S    .     .     .     .     .     .
20030  990 I    .     .     .     .     .     .S    .     .     .     .     .     .
20045 1000 I    .     .     .     .     .     .S    .     .     .     .     .     .
20100 1010 I. . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . .
20115 1020 I    .     .     .     .     .     .S    .     .     .     .     .     .
20130 1030 I    .     .     .     .     .     .S    .     .     .     .     .     .
20145 1040 I    .     .     .     .     .     .S    .     .     .     .     .     .
20200 1050 I    .     .     .     .     .     . S   .     .     .     .     .     .
20215 1060 I    .     .     .     .     .     . S   .     .     .     .     .     .
20230 1070 I    .     .     .     .     .     . S   .     .     .     .     .     .
20245 1080  I   .     .     .     .     .     . S   .     .     .     .     .     .
20300 1090  I   .     .     .     .     .     . S   .     .     .     .     .     .
20315 1100  I   .     .     .     .     .     . S   .     .     .     .     .     .
20330 1110 .I. . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . .
20345 1120  I   .     .     .     .     .     . S   .     .     .     .     .     .
20400 1130  I   .     .     .     .     .     . S   .     .     .     .     .     .
[illegible] 1140  I   .     .     .     .     .     . S   .     .     .     .     .     .
[illegible]0 1150  I   .     .     .     .     .     . S   .     .     .     .     .     .
20445 1160  I   .     .     .     .     .     . S   .     .     .     .     .     .
20500 1170  I   .     .     .     .     .     . S   .     .     .     .     .     .
20515 1180  I   .     .     .     .     .     . S   .     .     .     .     .     .
20530 1190  I   .     .     .     .     .     . S   .     .     .     .     .     .
20545 1200  I   .     .     .     .     .     . S   .     .     .     .     .     .
20600 1210 . I . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . .
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20615 1220  I    .    .    .    .    .    .S   .    .    .    .    .
20630 1230  I    .    .    .    .    .    .S   .    .    .    .    .
20645 1240  I    .    .    .    .    .    .S   .    .    .    .    .
20700 1250  I    .    .    .    .    .    .S   .    .    .    .    .
20715 1260  I    .    .    .    .    .    .S   .    .    .    .    .
20730 1270  I    .    .    .    .    .    .S   .    .    .    .    .
20745 1280  I    .    .    .    .    .    .S   .    .    .    .    .
20800 1290  I    .    .    .    .    .    .S   .    .    .    .    .
20815 1300  I    .    .    .    .    .    .S   .    .    .    .    .
20830 1310 .I.....................................S.....................
20845 1320   I   .    .    .    .    .    .S   .    .    .    .    .
20900 1330   I   .    .    .    .    .    .S   .    .    .    .    .
20915 1340   I   .    .    .    .    .    .S   .    .    .    .    .
20930 1350   I   .    .    .    .    .    .S   .    .    .    .    .
20945 1360   I   .    .    .    .    .    . S   .    .    .    .    .
21000 1370   I   .    .    .    .    .    . S   .    .    .    .    .
21015 1380   I   .    .    .    .    .    . S   .    .    .    .    .
21030 1390   I   .    .    .    .    .    . S   .    .    .    .    .
21045 1400   I   .    .    .    .    .    . S   .    .    .    .    .
21100 1410 . .I.....................................S.....................
21115 1420    I  .    .    .    .    .    . S   .    .    .    .    .
21130 1430    I  .    .    .    .    .    . S   .    .    .    .    .
21145 1440    I  .    .    .    .    .    . S   .    .    .    .    .
21200 1450    I  .    .    .    .    .    .  S  .    .    .    .    .
21215 1460    I  .    .    .    .    .    .  S  .    .    .    .    .
21230 1470    I  .    .    .    .    .    .  S  .    .    .    .    .
21245 1480    I  .    .    .    .    .    .  S  .    .    .    .    .
21300 1490    I  .    .    .    .    .    .  S  .    .    .    .    .
21315 1500    I  .    .    .    .    .    .  S  .    .    .    .    .
21330 1510 . . I.....................................S.....................
21345 1520    I  .    .    .    .    .    .  S  .    .    .    .    .
21400 1530    I  .    .    .    .    .    .  S  .    .    .    .    .
21415 1540    I  .    .    .    .    .    .   S .    .    .    .    .
21430 1550    I  .    .    .    .    .    .   S .    .    .    .    .
21445 1560    I  .    .    .    .    .    .   S .    .    .    .    .
21500 1570    I  .    .    .    .    .    .   S .    .    .    .    .
21515 1580    I  .    .    .    .    .    .   S .    .    .    .    .
21530 1590     I .    .    .    .    .    .   S .    .    .    .    .
21545 1600     I .    .    .    .    .    .   S .    .    .    .    .
21600 1610 . . . I...................................S.....................
21615 1620       I.   .    .    .    .    .    S .    .    .    .    .
21630 1630       I    .    .    .    .    .    S .    .    .    .    .
21645 1640       I    .    .    .    .    .    S .    .    .    .    .
21700 1650       .I   .    .    .    .    .    S .    .    .    .    .
21715 1660       . I  .    .    .    .    .    S .    .    .    .    .
21730 1670       . I  .    .    .    .    .     S.    .    .    .    .
21745 1680       . I  .    .    .    .    .     S.    .    .    .    .
21800 1690       .  I .    .    .    .    .     S.    .    .    .    .
21815 1700       .  I .    .    .    .    .     S.    .    .    .    .
21830 171.0. . . . . I...............................S.....................
21845 172.0      .   I .   .    .    .    .     S.    .    .    .    .
21900 173.0      .    I .  .    .    .    .     S.    .    .    .    .
21915 174.0      .     I . .    .    .    .      S    .    .    .    .
21930 175.0      .      I.  .    .    .    .      S    .    .    .    .
21945 176.0      .      I   .    .    .    .      S    .    .    .    .
22000 177. 0     .      .I  .    .    .    .      .S   .    .    .    .
22015 178. 0     .      . I .    .    .    .      .S   .    .    .    .
22030 179. 0     .      .  I .   .    .    .      . S  .    .    .    .
22045 180. 0     .      .   I .  .    .    .      . S  .    .    .    .
22100 181. .0. . . . . . . I...................... . S  .    .    .    .
22115 182.  0    .      .   I .  .    .    .      . S  .    .    .    .
22130 183.   0   .      .    I . .    .    .      . S  .    .    .    .
22145 184.   0   .      .     I  .    .    .      .  S .    .    .    .
22200 185.    0  .      .      . I   .    .      .  S .    .    .    .
22215 186.    0  .      .      .   I .    .      .   S.    .    .    .
22230 187.     0 .      .      .     I.   .      .    S    .    .    .
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22300 189.     0 .         .         .         . I       .         .         .     S .         .         .         .         .
22315 190.      0 .        .         .         .   I     .         .         .     S .         .         .         .         .
22330 191. . . .0. . . . . . . . . . . . . . . . . . . I . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . .
22345 192.       0.        .         .         .       I         .         .       S         .         .         .         .
30000 193.        0        .         .         .       .I        .         .       S         .         .         .         .
30015 194.        .0       .         .         .       .I        .         .       .S        .         .         .         .
30030 195.        .0       .         .         .      I.         .         .       . S       .         .         .         .
30045 196.        . 0      .         .         .   I     .         .         .       . S       .         .         .         .
30100 197.        . 0      .         .         .I        .         .         .       . S       .         .         .         .
30115 198.        .  0     .         .      I  .         .         .         .       .  S      .         .         .         .
30130 199.        .  0     .         . I       .         .         .         .       .  S      .         .         .         .
30145 200.        .  0     .      I. .         .         .         .         .       .   S     .         .         .         .
30200 201. . . . . .0. . . . . .I. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . .
30215 202.        .  0     . I       .         .         .         .         .       .   S     .         .         .         .
30230 203.        .   0   I.         .         .         .         .         .       .   S     .         .         .         .
30245 204.        .   0 I  .         .         .         .         .         .       .    S    .         .         .         .
30300 205.        .   0 I  .         .         .         .         .         .       .    S    .         .         .         .
30315 206.        .   I    .         .         .         .         .         .       .    S    .         .         .         .
30330 207.        .  I0    .         .         .         .         .         .       .    S    .         .         .         .
30345 208.        . I 0    .         .         .         .         .         .       .    S    .         .         .         .
30400 209.        .I  0    .         .         .         .         .         .       .    S    .         .         .         .
30415 210.        I   0    .         .         .         .         .         .       .    S    .         .         .         .
30430 211. . . . .I. . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . .
30445 212.       I.  0     .         .         .         .         .         .       .   S     .         .         .         .
30500 213.      I .  0     .         .         .         .         .         .       .   S     .         .         .         .
30515 214.     I  .  0     .         .         .         .         .         .       .   S     .         .         .         .
30530 215.     I  .  0     .         .         .         .         .         .       .   S     .         .         .         .
30545 216.     I  .  0     .         .         .         .         .         .       .   S     .         .         .         .
30600 217.    I   .  0     .         .         .         .         .         .       .   S     .         .         .         .
30615 218.    I   .  0     .         .         .         .         .         .       .   S     .         .         .         .
30630 219.    I   .  0     .         .         .         .         .         .       .  S      .         .         .         .
30645 220.    I   .  0     .         .         .         .         .         .       .  S      .         .         .         .
30700 221. . .I. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . .
30715 222.   I    . 0      .         .         .         .         .         .       .  S      .         .         .         .
30730 223.   I    .0       .         .         .         .         .         .       .  S      .         .         .         .
30745 224.  I     .0       .         .         .         .         .         .       .  S      .         .         .         .
30800 225.  I     .0       .         .         .         .         .         .       .  S      .         .         .         .
30815 226.  I     .0       .         .         .         .         .         .       . S       .         .         .         .
30830 227.  I     .0       .         .         .         .         .         .       . S       .         .         .         .
30845 228.  I     .0       .         .         .         .         .         .       . S       .         .         .         .
30900 229.  I     .0       .         .         .         .         .         .       . S       .         .         .         .
30915 230.  I     .0       .         .         .         .         .         .       . S       .         .         .         .
30930 231. . I . . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . .
30945 232.  I     .0       .         .         .         .         .         .       . S       .         .         .         .
31000 233.  I     .0       .         .         .         .         .         .       . S       .         .         .         .
31015 234.  I     .0       .         .         .         .         .         .       . S       .         .         .         .
31030 235.  I     .0       .         .         .         .         .         .       . S       .         .         .         .
31045 236.  I     .0       .         .         .         .         .         .       . S       .         .         .         .
31100 237.  I     .0       .         .         .         .         .         .       . S       .         .         .         .
31115 238.  I     .0       .         .         .         .         .         .       .S        .         .         .         .
31130 239.  I     .0       .         .         .         .         .         .       .S        .         .         .         .
31145 240.  I     .0       .         .         .         .         .         .       .S        .         .         .         .
31200 241. .I. . . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . .
31215 242.  I     0        .         .         .         .         .         .       .S        .         .         .         .
31230 243.  I     0        .         .         .         .         .         .       .S        .         .         .         .
31245 244.  I     0        .         .         .         .         .         .       S         .         .         .         .
31300 245.  I     0        .         .         .         .         .         .       S         .         .         .         .
31315 246.  I     0        .         .         .         .         .         .       S         .         .         .         .
31330 247.  I     0        .         .         .         .         .         .       S         .         .         .         .
31345 248.  I     0        .         .         .         .         .         .       S         .         .         .         .
31400 249.  I    0.        .         .         .         .         .         .       S         .         .         .         .
31415 250.  I    0.        .         .         .         .         .         .       S         .         .         .         .
31430 251. .I. . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . .
31445 252.  I    0.        .         .         .         .         .         .      S.         .         .         .         .
31500 253.  I    0.        .         .         .         .         .         .      S.         .         .         .         .
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31530 255.  I     0.         .         .         .         .         .         .        S.         .         .         .         .
31545 256.  I     0.         .         .         .         .         .         .        S.         .         .         .         .
31600 257.  I     0.         .         .         .         .         .         .        S.         .         .         .         .
31615 258.  I    0 .         .         .         .         .         .         .        S.         .         .         .         .
31630 259.  I    0 .         .         .         .         .         .         .        S.         .         .         .         .
31645 260.  I    0 .         .         .         .         .         .         .       S .         .         .         .         .
31700 261. I . . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . .
[illegible]5 262. I     0 .         .         .         .         .         .         .       S .         .         .         .         .
31730 263. I     0 .         .         .         .         .         .         .       S .         .         .         .         .
31745 264. I     0 .         .         .         .         .         .         .       S .         .         .         .         .
31800 265. I     0 .         .         .         .         .         .         .       S .         .         .         .         .
31815 266. I     0 .         .         .         .         .         .         .       S .         .         .         .         .
31830 267. I    0  .         .         .         .         .         .         .      S  .         .         .         .         .
31845 268. I    0  .         .         .         .         .         .         .      S  .         .         .         .         .
31900 269. I    0  .         .         .         .         .         .         .      S  .         .         .         .         .
31915 270. I    0  .         .         .         .         .         .         .      S  .         .         .         .         .
31930 271. I . .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . .
31945 272. I    0  .         .         .         .         .         .         .      S  .         .         .         .         .
32000 273. I    0  .         .         .         .         .         .         .      S  .         .         .         .         .
32015 274.I     0  .         .         .         .         .         .         .      S  .         .         .         .         .
32030 275.I     0  .         .         .         .         .         .         .      S  .         .         .         .         .
32045 276.I     0  .         .         .         .         .         .         .      S  .         .         .         .         .
32100 277.I    0   .         .         .         .         .         .         .      S  .         .         .         .         .
32115 278.I    0   .         .         .         .         .         .         .      S  .         .         .         .         .
32130 279.I    0   .         .         .         .         .         .         .     S   .         .         .         .         .
32145 280.I    0   .         .         .         .         .         .         .     S   .         .         .         .         .
32200 281.I. . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . .
32215 282.I    0   .         .         .         .         .         .         .     S   .         .         .         .         .
32230 283.I    0   .         .         .         .         .         .         .     S   .         .         .         .         .
32245 284.I    0   .         .         .         .         .         .         .     S   .         .         .         .         .
32300 285.I    0   .         .         .         .         .         .         .     S   .         .         .         .         .
[illegible]15 286.I    0   .         .         .         .         .         .         .     S   .         .         .         .         .
[illegible]0 287.I   0    .         .         .         .         .         .         .     S   .         .         .         .         .
32345 288.I   0    .         .         .         .         .         .         .     S   .         .         .         .         .
40000 289.I   0    .         .         .         .         .         .         .    S    .         .         .         .         .
40015 290.I   0    .         .         .         .         .         .         .    S    .         .         .         .         .
40030 291.I. .0. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . .
40045 292.I   0    .         .         .         .         .         .         .    S    .         .         .         .         .
40100 293.I   0    .         .         .         .         .         .         .    S    .         .         .         .         .
40115 294.I   0    .         .         .         .         .         .         .    S    .         .         .         .         .
40130 295.I   0    .         .         .         .         .         .         .    S    .         .         .         .         .
40145 296I    0    .         .         .         .         .         .         .    S    .         .         .         .         .
40200 297I    0    .         .         .         .         .         .         .    S    .         .         .         .         .
40215 298I    0    .         .         .         .         .         .         .    S    .         .         .         .         .
40230 299I    0    .         .         .         .         .         .         .    S    .         .         .         .         .
40245 300I----0----.---------.---------.---------.---------.---------.---------.---S-----.---------.---------.---------.---------.
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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	WS-1	29720.	48.50	21585.	9352.	3833.	30.54		
+	HYDROGRAPH AT	WS-2	47532.	48.25	34292.	14727.	5987.	48.63		
+	HYDROGRAPH AT	WS-3	13695.	48.00	9676.	3930.	1601.	12.87		
+	HYDROGRAPH AT	WS-4	11846.	48.00	8302.	3433.	1399.	11.25		
+	4 COMBINED AT	CP-1	101520.	48.00	72793.	31422.	12819.	103.29		
+	DIVERSION TO	0.5PMP	50760.	48.00	36396.	15711.	6410.	103.29		
+	HYDROGRAPH AT	HQHYD	50760.	48.00	36396.	15711.	6410.	103.29		
+	ROUTED TO	HQFRS	13663.	51.50	13286.	10231.	3977.	103.29		
+									1418.48	51.50

*** NORMAL END OF HEC-1 ***

APPENDIX B

Saddleback Flood Retarding Structure
6- and 72-Hour PMF HEC-1 Model

B

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID        DAMBREAK ANALYSIS FOR THE FAR-WEST MARICOPA COUNTY SRUCTURES
  2           ID        SADDLEBACK STRUCTURE
  3           ID        6 HOUR PMF STORM:  50% OF HYDROGRAPH GENERATED FOR DAMBREAK MODEL
  4           ID           FILE: SBFR.D6
              *DIAGRAM
  5           ID        SEPT.18, 1990
  6           IT       5       0       0     300
  7           IO       5       0

  8           KK    WS-5        WATERHED NO.5 DRAINING TO WATERSHEDS NO. 6&7
  9           BA   16.01
 10           IN      15
 11           PB    10.1
 12           PC       0    0.13    0.23    0.35     0.5    0.65    0.85     1.1     1.5     4.7
 13           PC     6.2     7.0     7.6    8.05    8.45    8.75     9.0    9.15    9.31    9.45
 14           PC     9.6    9.72    9.83    9.95    10.1
 15           LS       0      90
 16           UD    1.09

 17           KK    TO-7        70% DRAINS TO WATERSHED NO. 7
 18           KM                30% DRAINS TO WATERSHED NO. 6
 19           DT    TO-6
 20           DI       0  100000
 21           DQ       0   30000

 22           KK    CH-7
 23           KM                ROUTE 70% OF FLOWS FROM WS-5 TO WS-7
 24           RM       4    0.43      .3

 25           KK    WS-7        WATERSHED NO. 7 DRAINING TO GRANITE REEF AQUEDUCT DIKE
 26           BA   33.07
 27           LS       0      90
 28           UD    1.40

 29           KK    CP-2
 30           KM                COMBINE 70% SPLIT FLOW FROM WS-5 TO WS-7
 31           HC       2

 32           KK    TO-6
 33           KM                REINSTALL 30% OF WS-5 FOR ROUTING
 34           DR    TO-6

 35           KK    CH-6
 36           KM                ROUTE 30% OF FLOWS FROM WS-5 TO WS-6
 37           RM       5    0.47      .3

 38           KK    WS-6        WATERSHED NO. 6 DRAINING TO GRANITE REEF AQUEDUCT DIKE
 39           BA    5.65
 40           LS       0      89
 41           UD    0.80
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 42           KK    CP-3
 43           KM                COMBINE 30% SPLIT FLOW FROM WS-5 TO WS-6
 44           HC       2

 45           KK    CP-4
 46           KM                COMBINE WATERSHEDS 5, 6 & 7
 47           HC       2

 48           KK    GRAD
 49           KM                GRANITE REEF AQUIDUCT DIKE (REACH 6)
 50           KM                DISCHARGE THRU 5-72" PIPE OVERCHUTES AND OVER DIKE
 51           RS       1    STOR       0       0
 52           SV      50      65   105.3   271.3     590  1101.3  1815.5    2987    4300    5570
 53           SV    6940    7080    7220    7360    7500    7640    7780    8060
 54           SE  1380.6  1381.5    1382    1384    1386    1388    1390    1392    1394    1396
 55           SE    1398 1398.25  1398.5 1398.75    1399 1399.25  1399.5    1400
 56           SQ       0      60     105     370     765    1240    1600    1890    2130    2340
 57           SQ    5125   13015   26780   44400   65135   89640  117485  181145

 58           KK     OUT          OVERCHUTE AND FLOW OVER DIKE DRAINING EAST OF PROJECT
 59           KM                  OVERCHUTE AND FLOW OVER DIKE DRAINING TO SBFRS
 60           DT    8-12
 61           DI       0      60     105     370     765    1240    1600    1890    2130    2340
 62           DI    5125   13015   26780   44400   65135   89640  117485  181145
 63           DQ       0       0       5      50     125     220     300     360     410     450
 64           DQ     495     500     505     510     515    1588    3547    9083

 65           KK    8-12
 66           KM                  REINSTALL 8-12; OVERCHUTE AND FLOW OVER DIKE INTO
 67           KM                  WATERSHED NO. 8 AND/OR 12
 68           DR    8-12

 69           KK    TO-8          OVERCHUTE AND FLOW OVER DIKE DRAINING TO WATERSHED NO.8
 70           KM                  FLOW OVER DIKE DRAINING INTO WATERSHED NO. 12
 71           DT   TO-12
 72           DI       0       0       5      50     125     220     300     360     410     450
 73           DI     495     500     505     510     515    1588    3547    9083
 74           DQ       0       0       0       0       0       0       0       0       0       0
 75           DQ       0       0       0       0       0     609    1722    4872

 76           KK    CH-8
 77           KM                  ROUTE FLOWS FROM OVERCHUTE TO CP-5
 78           RM       2    0.20      .3

 79           KK    WS-8          WATERSHED NO. 8 DRAINING TO CP-5/DIVERSION
 80           BA     0.9
 81           LS       0      92
 82           UD    0.22
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  83          KK    CP-5
  84          KM                COMBINE WS-8 AND CH-8
  85          HC       2

  86          KK    TO-9        50% DRAINS TO WATERSHED NO. 9
  87          KM                50% DRAINS TO WATERSHED NO. 10
  88          DT   TO-10
  89          DI       0  100000
  90          DQ       0   50000

  91          KK    CH-9
  92          KM                ROUTE FLOWS FROM DIVERSION (CP-5) TO SBFRS
  93          RM       4    0.38      .3

  94          KK    WS-9        WATERSHED NO. 9 DRAINING TO SBFRS
  95          BA    1.67
  96          LS       0      86
  97          UD    0.39

  98          KK    CP-6
  99          KM                COMBINE WS-9 AND CH-9
 100          HC       2

 101          KK   TO-10
 102          KM                REINSTALL TO-10;  50% DIVERSION IN WATERSHED NO. 8
 103          DR   TO-10

 104          KK   CH-10
 105          KM                ROUTE FLOWS FROM DIVERSION (CP-5) TO SBFRS
 106          RM       5    0.46      .3

 107          KK   WS-10        WATERSHED NO. 10 DRAINING TO SBFRS
 108          BA    2.11
 109          LS       0      84
 110          UD    0.46

 111          KK    CP-7
 112          KM                COMBINE WS-10 CH-10
 113          HC       2

 114          KK   WS-11        WATERSHED NO.11 DRAINING SBFRS
 115          BA    6.35
 116          LS       0      87
 117          UD    0.52

 118          KK   TO-12
 119          KM                REINSTALL DIVERSION FROM FLOW OVER DIKE
 120          DR   TO-12
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 121          KK   CH-12
 122          KM                ROUTE FLOWS FROM GRA DIKE TO SBFRS
 123          RM      12    1.15      .3

 124          KK   WS-12        WATERSHED NO.12 DRAINING TO SBFRS
 125          BA    6.71
 126          LS       0      85
 127          UD    1.15

 128          KK   CP-12
 129          KM                COMBINE WS-12 AND CH-12
 130          HC       2

 131          KK   WS-13        WATERSHED NO.13 DRAINING SBFRS
 132          BA    4.46
 133          LS       0      88
 134          UD    0.55

 135          KK   SBFRS        TOTAL FLOW TO SBFRS
 136          HC       5

 137          KK   SBHYD        50% OF PMF HYDROGRAPH FOR ROUTING THRU SBFRS
 138          KO       2       0
 139          DT  0.5FRS
 140          DI       0 1000000
 141          DQ       0  500000

 142          KK   SBFRS
 143          KO       2       2
 144          KM        PRINCILAL & EMERGENCY SPILLWAY IS 1-10'X 8' CBC
 145          KM        INVERT= 1176.9 AND CREST OF DAM = 1193.0
 146          KM        DISCHARGE AT ELE. 1193.0 = 1315.0 CFS
 147          RS       1    STOR       0       0
 148          SV       0      21   108.1   327.3   699.7  1281.9  2199.8  3514.2  5292.1  7585.6
 149          SE  1175.0  1178.1  1179.5  1181.5  1183.5  1185.5  1187.5  1189.5  1191.5  1193.5
 150          SQ       0      10      60     230     470     700     900    1080    1210    1350
 151          ST    1193   16185    2.67     1.5
 152          ZZ
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            SCHEMATIC DIAGRAM OF STREAM NETWORK
NT
E     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

NO.   (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

 8      WS-5
           .
           .
19         .------->   TO-6
17      TO-7
          V
          V
22      CH-7
           .
           .
25         .       WS-7
           .          .
           .          .
29      CP-2............
           .
           .
34         .          .<-------   TO-6
32         .       TO-6
           .          V
           .          V
5          .       CH-6
           .          .
           .          .
38         .          .       WS-6
           .          .          .
           .          .          .
42         .       CP-3............
           .          .
           .          .
45      CP-4............
          V
          V
48      GRAD
           .
           .
60         .------->   8-12
58       OUT
           .
           .
68         .          .<-------   8-12
65         .       8-12
           .          .
           .          .
71         .          .------->   TO-12
69         .       TO-8
           .          V
           .          V
76         .       CH-8
           .          .
           .          .
79         .          .       WS-8
           .          .          .
           .          .          .
83         .       CP-5............
```

```
                .          .
                .          .
 88             .          .-------> TO-10
 86             .       TO-9
                .          V
                .          V
 91             .       CH-9
                .          .
                .          .
 94             .          .      WS-9
                .          .         .
                .          .         .
 98             .       CP-6............
                .          .
                .          .
103             .          .         .<-------  TO-10
101             .          .     TO-10
                .          .        V
                .          .        V
104             .          .     CH-10
                .          .         .
                .          .         .
107             .          .         .     WS-10
                .          .         .        .
                .          .         .        .
111             .          .      CP-7............
                .          .         .
                .          .         .
114             .          .         .     WS-11
                .          .         .        .
                .          .         .        .
120             .          .         .        .         .<-------  TO-12
 8              .          .         .        .     TO-12
                .          .         .        .        V
                .          .         .        .        V
121             .          .         .        .     CH-12
                .          .         .        .        .
                .          .         .        .        .
124             .          .         .        .        .     WS-12
                .          .         .        .        .        .
                .          .         .        .        .        .
128             .          .         .        .     CP-12............
                .          .         .        .        .
                .          .         .        .        .
131             .          .         .        .        .     WS-13
                .          .         .        .        .        .
                .          .         .        .        .        .
135             .       SBFRS.............................................
                .          .
                .          .
139             .          .-------> 0.5FRS
137             .       SBHYD
                .          V
                .          V
142             .       SBFRS
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

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                                        ****
                    FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
          U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
                                        ****


                         DAMBREAK ANALYSIS FOR THE FAR-WEST MARICOPA COUNTY SRUCTURES
                         SADDLEBACK STRUCTURE
                         6 HOUR PMF STORM:  50% OF HYDROGRAPH GENERATED FOR DAMBREAK MODEL
                            FILE: SBFR.D6
                         SEPT.18, 1990

  7 IO        OUTPUT CONTROL VARIABLES
                   IPRNT          5  PRINT CONTROL
                   IPLOT          0  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT         HYDROGRAPH TIME DATA
                    NMIN          5  MINUTES IN COMPUTATION INTERVAL
                   IDATE     1    0  STARTING DATE
                   ITIME       0000  STARTING TIME
                      NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE     2    0  ENDING DATE
                  NDTIME       0055  ENDING TIME

             COMPUTATION INTERVAL     .08 HOURS
                 TOTAL TIME BASE   24.92 HOURS

        ENGLISH UNITS

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


          **************
          *            *
 137 KK   *    SBHYD   *          50% OF PMF HYDROGRAPH FOR ROUTING THRU SBFRS
          *            *
          **************

 138 KO       OUTPUT CONTROL VARIABLES
                   IPRNT          2  PRINT CONTROL
                   IPLOT          0  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE

   DT         DIVERSION
                   ISTAD     0.5FRS  DIVERSION HYDROGRAPH IDENTIFICATION

   DI            INFLOW       .001000000.00

   DQ      DIVERTED FLOW       .00 500000.00

                                        ***

*****************************************************************************************************************
```

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	1		0615	76	4183.	1		1230	151	232.	1		1845	226	212.
1		0005	2	0.	1		0620	77	3947.	1		1235	152	232.	1		1850	227	212.
1		0010	3	0.	1		0625	78	3648.	1		1240	153	231.	1		1855	228	212.
1		0015	4	0.	1		0630	79	3309.	1		1245	154	231.	1		1900	229	211.
1		0020	5	0.	1		0635	80	2956.	1		1250	155	231.	1		1905	230	211.
1		0025	6	0.	1		0640	81	2612.	1		1255	156	230.	1		1910	231	211.
1		0030	7	0.	1		0645	82	2298.	1		1300	157	230.	1		1915	232	211.
1		0035	8	0.	1		0650	83	2023.	1		1305	158	230.	1		1920	233	210.
1		0040	9	0.	1		0655	84	1795.	1		1310	159	229.	1		1925	234	210.
1		0045	10	1.	1		0700	85	1607.	1		1315	160	229.	1		1930	235	210.
1		0050	11	5.	1		0705	86	1445.	1		1320	161	229.	1		1935	236	210.
1		0055	12	16.	1		0710	87	1304.	1		1325	162	228.	1		1940	237	210.
1		0100	13	38.	1		0715	88	1180.	1		1330	163	228.	1		1945	238	209.
1		0105	14	76.	1		0720	89	1070.	1		1335	164	228.	1		1950	239	209.
1		0110	15	132.	1		0725	90	973.	1		1340	165	227.	1		1955	240	209.
1		0115	16	206.	1		0730	91	886.	1		1345	166	227.	1		2000	241	209.
1		0120	17	300.	1		0735	92	808.	1		1350	167	227.	1		2005	242	208.
1		0125	18	412.	1		0740	93	738.	1		1355	168	227.	1		2010	243	208.
1		0130	19	544.	1		0745	94	676.	1		1400	169	226.	1		2015	244	208.
1		0135	20	700.	1		0750	95	621.	1		1405	170	226.	1		2020	245	208.
1		0140	21	882.	1		0755	96	574.	1		1410	171	226.	1		2025	246	207.
1		0145	22	1090.	1		0800	97	533.	1		1415	172	226.	1		2030	247	207.
1		0150	23	1337.	1		0805	98	498.	1		1420	173	225.	1		2035	248	207.
1		0155	24	1635.	1		0810	99	468.	1		1425	174	225.	1		2040	249	207.
1		0200	25	1993.	1		0815	100	442.	1		1430	175	225.	1		2045	250	206.
1		0205	26	2764.	1		0820	101	418.	1		1435	176	224.	1		2050	251	206.
1		0210	27	4319.	1		0825	102	398.	1		1440	177	224.	1		2055	252	206.
1		0215	28	7096.	1		0830	103	380.	1		1445	178	224.	1		2100	253	206.
1		0220	29	11189.	1		0835	104	364.	1		1450	179	224.	1		2105	254	206.
1		0225	30	16171.	1		0840	105	350.	1		1455	180	223.	1		2110	255	205.
1		0230	31	21278.	1		0845	106	338.	1		1500	181	223.	1		2115	256	205.
1		0235	32	25670.	1		0850	107	327.	1		1505	182	223.	1		2120	257	205.
1		0240	33	28941.	1		0855	108	318.	1		1510	183	223.	1		2125	258	205.
1		0245	34	30897.	1		0900	109	310.	1		1515	184	222.	1		2130	259	204.
1		0250	35	31541.	1		0905	110	303.	1		1520	185	222.	1		2135	260	204.
1		0255	36	31048.	1		0910	111	296.	1		1525	186	222.	1		2140	261	204.
1		0300	37	29846.	1		0915	112	290.	1		1530	187	222.	1		2145	262	203.
1		0305	38	28310.	1		0920	113	285.	1		1535	188	221.	1		2150	263	203.
1		0310	39	26738.	1		0925	114	280.	1		1540	189	221.	1		2155	264	203.
1		0315	40	25248.	1		0930	115	276.	1		1545	190	221.	1		2200	265	203.
1		0320	41	23818.	1		0935	116	272.	1		1550	191	221.	1		2205	266	202.
1		0325	42	22494.	1		0940	117	269.	1		1555	192	220.	1		2210	267	202.
1		0330	43	21278.	1		0945	118	266.	1		1600	193	220.	1		2215	268	202.
1		0335	44	20138.	1		0950	119	263.	1		1605	194	220.	1		2220	269	202.
1		0340	45	19077.	1		0955	120	261.	1		1610	195	220.	1		2225	270	201.
1		0345	46	18066.	1		1000	121	258.	1		1615	196	219.	1		2230	271	201.
1		0350	47	17069.	1		1005	122	256.	1		1620	197	219.	1		2235	272	201.
1		0355	48	16087.	1		1010	123	254.	1		1625	198	219.	1		2240	273	200.
1		0400	49	15132.	1		1015	124	253.	1		1630	199	219.	1		2245	274	200.
1		0405	50	14211.	1		1020	125	251.	1		1635	200	218.	1		2250	275	200.
1		0410	51	13350.	1		1025	126	250.	1		1640	201	218.	1		2255	276	200.
1		0415	52	12560.	1		1030	127	248.	1		1645	202	218.	1		2300	277	199.
1		0420	53	11837.	1		1035	128	247.	1		1650	203	218.	1		2305	278	199.
		0425	54	11172.	1		1040	129	246.	1		1655	204	217.	1		2310	279	199.
1		0430	55	10548.	1		1045	130	245.	1		1700	205	217.	1		2315	280	199.
1		0435	56	9960.	1		1050	131	244.	1		1705	206	217.	1		2320	281	198.
1		0440	57	9424.	1		1055	132	243.	1		1710	207	217.	1		2325	282	198.
1		0445	58	8954.	1		1100	133	242.	1		1715	208	216.	1		2330	283	198.
1		0450	59	8548.	1		1105	134	241.	1		1720	209	216.	1		2335	284	197.
1		0455	60	8200.	1		1110	135	240.	1		1725	210	216.	1		2340	285	197.

1	0505	62	7590.	*	1	1120	137	239.	*	1	1735	212	216.	*	1	2350	287	197.
1	0510	63	7290.	*	1	1125	138	238.	*	1	1740	213	215.	*	1	2355	288	196.
1	0515	64	6982.	*	1	1130	139	237.	*	1	1745	214	215.	*	2	0000	289	196.
1	0520	65	6661.	*	1	1135	140	237.	*	1	1750	215	215.	*	2	0005	290	196.
1	0525	66	6333.	*	1	1140	141	236.	*	1	1755	216	215.	*	2	0010	291	196.
1	0530	67	6004.	*	1	1145	142	236.	*	1	1800	217	214.	*	2	0015	292	195.
1	0535	68	5682.	*	1	1150	143	235.	*	1	1805	218	214.	*	2	0020	293	195.
1	0540	69	5383.	*	1	1155	144	235.	*	1	1810	219	214.	*	2	0025	294	195.
1	0545	70	5115.	*	1	1200	145	234.	*	1	1815	220	214.	*	2	0030	295	194.
1	0550	71	4891.	*	1	1205	146	234.	*	1	1820	221	213.	*	2	0035	296	194.
1	0555	72	4711.	*	1	1210	147	234.	*	1	1825	222	213.	*	2	0040	297	194.
1	0600	73	4578.	*	1	1215	148	233.	*	1	1830	223	213.	*	2	0045	298	194.
1	0605	74	4467.	*	1	1220	149	233.	*	1	1835	224	213.	*	2	0050	299	193.
1	0610	75	4347.	*	1	1225	150	232.	*	1	1840	225	212.	*	2	0055	300	193.
				*					*					*				

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 31541.	2.83		10331.	2764.	2663.	2663.
		(INCHES)	4.327	4.631	4.631	4.631
		(AC-FT)	5123.	5483.	5483.	5483.

CUMULATIVE AREA = 22.20 SQ MI

****

HYDROGRAPH AT STATION SBHYD

****

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	*	1		0615	76	4183.	*	1		1230	151	232.	*	1		1845	226	212.
1		0005	2	0.	*	1		0620	77	3947.	*	1		1235	152	232.	*	1		1850	227	212.
1		0010	3	0.	*	1		0625	78	3648.	*	1		1240	153	231.	*	1		1855	228	212.
1		0015	4	0.	*	1		0630	79	3309.	*	1		1245	154	231.	*	1		1900	229	211.
1		0020	5	0.	*	1		0635	80	2956.	*	1		1250	155	231.	*	1		1905	230	211.
1		0025	6	0.	*	1		0640	81	2612.	*	1		1255	156	230.	*	1		1910	231	211.
1		0030	7	0.	*	1		0645	82	2298.	*	1		1300	157	230.	*	1		1915	232	211.
1		0035	8	0.	*	1		0650	83	2023.	*	1		1305	158	230.	*	1		1920	233	210.
1		0040	9	0.	*	1		0655	84	1795.	*	1		1310	159	229.	*	1		1925	234	210.
1		0045	10	1.	*	1		0700	85	1607.	*	1		1315	160	229.	*	1		1930	235	210.
1		0050	11	5.	*	1		0705	86	1445.	*	1		1320	161	229.	*	1		1935	236	210.
1		0055	12	16.	*	1		0710	87	1304.	*	1		1325	162	228.	*	1		1940	237	210.
1		0100	13	38.	*	1		0715	88	1180.	*	1		1330	163	228.	*	1		1945	238	209.
1		0105	14	76.	*	1		0720	89	1070.	*	1		1335	164	228.	*	1		1950	239	209.
1		0110	15	132.	*	1		0725	90	973.	*	1		1340	165	227.	*	1		1955	240	209.
1		0115	16	206.	*	1		0730	91	886.	*	1		1345	166	227.	*	1		2000	241	209.
1		0120	17	300.	*	1		0735	92	808.	*	1		1350	167	227.	*	1		2005	242	208.
1		0125	18	412.	*	1		0740	93	738.	*	1		1355	168	227.	*	1		2010	243	208.
1		0130	19	544.	*	1		0745	94	676.	*	1		1400	169	226.	*	1		2015	244	208.
1		0135	20	700.	*	1		0750	95	621.	*	1		1405	170	226.	*	1		2020	245	208.
1		0140	21	882.	*	1		0755	96	574.	*	1		1410	171	226.	*	1		2025	246	207.
1		0145	22	1090.	*	1		0800	97	533.	*	1		1415	172	226.	*	1		2030	247	207.
		0150	23	1337.	*	1		0805	98	498.	*	1		1420	173	225.	*	1		2035	248	207.
1		0155	24	1635.	*	1		0810	99	468.	*	1		1425	174	225.	*	1		2040	249	207.
1		0200	25	1993.	*	1		0815	100	442.	*	1		1430	175	225.	*	1		2045	250	206.
1		0205	26	2764.	*	1		0820	101	418.	*	1		1435	176	224.	*	1		2050	251	206.
1		0210	27	4319.	*	1		0825	102	398.	*	1		1440	177	224.	*	1		2055	252	206.
1		0215	28	7096.	*	1		0830	103	380.	*	1		1445	178	224.	*	1		2100	253	206.
1		0220	29	11189.	*	1		0835	104	364.	*	1		1450	179	224.	*	1		2105	254	206.

1	0230	31	21278.	*	1	0845	106	338.	*	1	1500	181	223.	*	1	2115	256	205.
1	0235	32	25670.	*	1	0850	107	327.	*	1	1505	182	223.	*	1	2120	257	205.
1	0240	33	28941.	*	1	0855	108	318.	*	1	1510	183	223.	*	1	2125	258	205.
1	0245	34	30897.	*	1	0900	109	310.	*	1	1515	184	222.	*	1	2130	259	204.
1	0250	35	31541.	*	1	0905	110	303.	*	1	1520	185	222.	*	1	2135	260	204.
1	0255	36	31048.	*	1	0910	111	296.	*	1	1525	186	222.	*	1	2140	261	204.
1	0300	37	29846.	*	1	0915	112	290.	*	1	1530	187	222.	*	1	2145	262	203.
1	0305	38	28310.	*	1	0920	113	285.	*	1	1535	188	221.	*	1	2150	263	203.
1	0310	39	26738.	*	1	0925	114	280.	*	1	1540	189	221.	*	1	2155	264	203.
1	0315	40	25248.	*	1	0930	115	276.	*	1	1545	190	221.	*	1	2200	265	203.
1	0320	41	23818.	*	1	0935	116	272.	*	1	1550	191	221.	*	1	2205	266	202.
1	0325	42	22494.	*	1	0940	117	269.	*	1	1555	192	220.	*	1	2210	267	202.
1	0330	43	21278.	*	1	0945	118	266.	*	1	1600	193	220.	*	1	2215	268	202.
1	0335	44	20138.	*	1	0950	119	263.	*	1	1605	194	220.	*	1	2220	269	202.
1	0340	45	19077.	*	1	0955	120	261.	*	1	1610	195	220.	*	1	2225	270	201.
1	0345	46	18066.	*	1	1000	121	258.	*	1	1615	196	219.	*	1	2230	271	201.
1	0350	47	17069.	*	1	1005	122	256.	*	1	1620	197	219.	*	1	2235	272	201.
1	0355	48	16087.	*	1	1010	123	254.	*	1	1625	198	219.	*	1	2240	273	200.
1	0400	49	15132.	*	1	1015	124	253.	*	1	1630	199	219.	*	1	2245	274	200.
1	0405	50	14211.	*	1	1020	125	251.	*	1	1635	200	218.	*	1	2250	275	200.
1	0410	51	13350.	*	1	1025	126	250.	*	1	1640	201	218.	*	1	2255	276	200.
1	0415	52	12560.	*	1	1030	127	248.	*	1	1645	202	218.	*	1	2300	277	199.
1	0420	53	11837.	*	1	1035	128	247.	*	1	1650	203	218.	*	1	2305	278	199.
1	0425	54	11172.	*	1	1040	129	246.	*	1	1655	204	217.	*	1	2310	279	199.
1	0430	55	10548.	*	1	1045	130	245.	*	1	1700	205	217.	*	1	2315	280	199.
1	0435	56	9960.	*	1	1050	131	244.	*	1	1705	206	217.	*	1	2320	281	198.
1	0440	57	9424.	*	1	1055	132	243.	*	1	1710	207	217.	*	1	2325	282	198.
1	0445	58	8954.	*	1	1100	133	242.	*	1	1715	208	216.	*	1	2330	283	198.
1	0450	59	8548.	*	1	1105	134	241.	*	1	1720	209	216.	*	1	2335	284	197.
1	0455	60	8200.	*	1	1110	135	240.	*	1	1725	210	216.	*	1	2340	285	197.
1	0500	61	7888.	*	1	1115	136	239.	*	1	1730	211	216.	*	1	2345	286	197.
1	0505	62	7590.	*	1	1120	137	239.	*	1	1735	212	216.	*	1	2350	287	197.
1	0510	63	7290.	*	1	1125	138	238.	*	1	1740	213	215.	*	1	2355	288	196.
1	0515	64	6982.	*	1	1130	139	237.	*	1	1745	214	215.	*	2	0000	289	196.
1	0520	65	6661.	*	1	1135	140	237.	*	1	1750	215	215.	*	2	0005	290	196.
1	0525	66	6333.	*	1	1140	141	236.	*	1	1755	216	215.	*	2	0010	291	196.
1	0530	67	6004.	*	1	1145	142	236.	*	1	1800	217	214.	*	2	0015	292	195.
1	0535	68	5682.	*	1	1150	143	235.	*	1	1805	218	214.	*	2	0020	293	195.
1	0540	69	5383.	*	1	1155	144	235.	*	1	1810	219	214.	*	2	0025	294	195.
1	0545	70	5115.	*	1	1200	145	234.	*	1	1815	220	214.	*	2	0030	295	194.
1	0550	71	4891.	*	1	1205	146	234.	*	1	1820	221	213.	*	2	0035	296	194.
1	0555	72	4711.	*	1	1210	147	234.	*	1	1825	222	213.	*	2	0040	297	194.
1	0600	73	4578.	*	1	1215	148	233.	*	1	1830	223	213.	*	2	0045	298	194.
1	0605	74	4467.	*	1	1220	149	233.	*	1	1835	224	213.	*	2	0050	299	193.
1	0610	75	4347.	*	1	1225	150	232.	*	1	1840	225	212.	*	2	0055	300	193.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 31541.	2.83		10331.	2764.	2663.	2663.
		(INCHES)	4.327	4.631	4.631	4.631
		(AC-FT)	5123.	5483.	5483.	5483.

CUMULATIVE AREA = 22.20 SQ MI

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142 KK      *     SBFRS  *
            *            *
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143 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          2  PRINT CONTROL
                     IPLOT          2  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                             PRINCILAL & EMERGENCY SPILLWAY IS 1-10'X 8' CBC
                             INVERT= 1176.9 AND CREST OF DAM = 1193.0
                             DISCHARGE AT ELE. 1193.0 = 1315.0 CFS

              HYDROGRAPH ROUTING DATA

147 RS          STORAGE ROUTING
                     NSTPS          1  NUMBER OF SUBREACHES
                      ITYP       STOR  TYPE OF INITIAL CONDITION
                    RSVRIC        .00  INITIAL CONDITION
                         X        .00 WORKING R AND D COEFFICIENT

148 SV           STORAGE         .0     21.0     108.1     327.3     699.7    1281.9    2199.8    3514.2    5292.1    7585.6

149 SE          ELEVATION    1175.00   1178.10   1179.50   1181.50   1183.50   1185.50   1187.50   1189.50   1191.50   1193.50

150 SQ          DISCHARGE        0.      10.       60.      230.      470.      700.      900.     1080.     1210.     1350.

151 ST          TOP OF DAM
                     TOPEL     1193.00  ELEVATION AT TOP OF DAM
                    DAMWID    16185.00  DAM WIDTH
                      COQD        2.67  WEIR COEFFICIENT
                      EXPD        1.50  EXPONENT OF HEAD

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HYDROGRAPH AT STATION SBFRS

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	1175.0	1		0820	101	1164.	4656.3	1190.8	1		1640	201	1118.	4039.7	1190.1
1		0005	2	0.	.0	1175.0	1		0825	102	1163.	4651.1	1190.8	1		1645	202	1118.	4033.6	1190.1
1		0010	3	0.	.0	1175.0	1		0830	103	1163.	4645.8	1190.8	1		1650	203	1118.	4027.4	1190.1
1		0015	4	0.	.0	1175.0	1		0835	104	1162.	4640.4	1190.8	1		1655	204	1117.	4021.2	1190.1
1		0020	5	0.	.0	1175.0	1		0840	105	1162.	4634.8	1190.8	1		1700	205	1117.	4015.0	1190.1
1		0025	6	0.	.0	1175.0	1		0845	106	1162.	4629.2	1190.8	1		1705	206	1116.	4008.8	1190.1
1		0030	7	0.	.0	1175.0	1		0850	107	1161.	4623.4	1190.7	1		1710	207	1116.	4002.6	1190.0
1		0035	8	0.	.0	1175.0	1		0855	108	1161.	4617.7	1190.7	1		1715	208	1115.	3996.4	1190.0
1		0040	9	0.	.0	1175.0	1		0900	109	1160.	4611.8	1190.7	1		1720	209	1115.	3990.3	1190.0
1		0045	10	0.	.0	1175.0	1		0905	110	1160.	4606.0	1190.7	1		1725	210	1114.	3984.1	1190.0
1		0050	11	0.	.0	1175.0	1		0910	111	1159.	4600.0	1190.7	1		1730	211	1114.	3977.9	1190.0
1		0055	12	0.	.1	1175.0	1		0915	112	1159.	4594.0	1190.7	1		1735	212	1113.	3971.7	1190.0
		0100	13	0.	.3	1175.0	1		0920	113	1159.	4588.1	1190.7	1		1740	213	1113.	3965.5	1190.0
		0105	14	0.	.7	1175.1	1		0925	114	1158.	4582.0	1190.7	1		1745	214	1113.	3959.3	1190.0
1		0110	15	1.	1.4	1175.2	1		0930	115	1158.	4575.9	1190.7	1		1750	215	1112.	3953.1	1190.0
1		0115	16	1.	2.6	1175.4	1		0935	116	1157.	4569.8	1190.7	1		1755	216	1112.	3947.0	1190.0
1		0120	17	2.	4.3	1175.6	1		0940	117	1157.	4563.8	1190.7	1		1800	217	1111.	3940.8	1190.0
1		0125	18	3.	6.7	1176.0	1		0945	118	1156.	4557.7	1190.7	1		1805	218	1111.	3934.6	1190.0
1		0130	19	5.	10.0	1176.5	1		0950	119	1156.	4551.5	1190.7	1		1810	219	1110.	3928.4	1190.0
1		0135	20	7.	14.2	1177.1	1		0955	120	1155.	4545.3	1190.7	1		1815	220	1110.	3922.2	1190.0

1	0145	22	13.	26.3	1178.2	*	1	1005	122	1154.	4532.9	1190.6	*	1	1825	222	1109.	3909.8	1189.9
1	0150	23	18.	34.6	1178.3	*	1	1010	123	1154.	4526.7	1190.6	*	1	1830	223	1108.	3903.7	1189.9
1	0155	24	24.	44.7	1178.5	*	1	1015	124	1154.	4520.6	1190.6	*	1	1835	224	1108.	3897.5	1189.9
1	0200	25	31.	57.0	1178.7	*	1	1020	125	1153.	4514.4	1190.6	*	1	1840	225	1108.	3891.3	1189.9
1	0205	26	40.	73.1	1178.9	*	1	1025	126	1153.	4508.2	1190.6	*	1	1845	226	1107.	3885.1	1189.9
1	0210	27	54.	97.2	1179.3	*	1	1030	127	1152.	4502.0	1190.6	*	1	1850	227	1107.	3878.9	1189.9
1	0215	28	82.	136.0	1179.8	*	1	1035	128	1152.	4495.8	1190.6	*	1	1855	228	1106.	3872.7	1189.9
	0220	29	130.	198.3	1180.3	*	1	1040	129	1151.	4489.6	1190.6	*	1	1900	229	1106.	3866.5	1189.9
	0225	30	202.	291.4	1181.2	*	1	1045	130	1151.	4483.5	1190.6	*	1	1905	230	1105.	3860.4	1189.9
1	0230	31	289.	418.6	1182.0	*	1	1050	131	1150.	4477.2	1190.6	*	1	1910	231	1105.	3854.2	1189.9
1	0235	32	392.	577.9	1182.8	*	1	1055	132	1150.	4470.9	1190.6	*	1	1915	232	1104.	3848.0	1189.9
1	0240	33	495.	763.0	1183.7	*	1	1100	133	1149.	4464.6	1190.6	*	1	1920	233	1104.	3841.8	1189.9
1	0245	34	575.	965.3	1184.4	*	1	1105	134	1149.	4458.3	1190.6	*	1	1925	234	1104.	3835.6	1189.9
1	0250	35	658.	1176.1	1185.1	*	1	1110	135	1149.	4452.0	1190.6	*	1	1930	235	1103.	3829.4	1189.9
1	0255	36	723.	1386.8	1185.7	*	1	1115	136	1148.	4445.7	1190.5	*	1	1935	236	1103.	3823.2	1189.8
1	0300	37	767.	1591.4	1186.2	*	1	1120	137	1148.	4439.4	1190.5	*	1	1940	237	1102.	3817.1	1189.8
1	0305	38	810.	1786.2	1186.6	*	1	1125	138	1147.	4433.1	1190.5	*	1	1945	238	1102.	3810.9	1189.8
1	0310	39	850.	1970.0	1187.0	*	1	1130	139	1147.	4426.8	1190.5	*	1	1950	239	1101.	3804.7	1189.8
1	0315	40	888.	2143.0	1187.4	*	1	1135	140	1146.	4420.5	1190.5	*	1	1955	240	1101.	3798.5	1189.8
1	0320	41	915.	2305.8	1187.7	*	1	1140	141	1146.	4414.2	1190.5	*	1	2000	241	1100.	3792.3	1189.8
1	0325	42	935.	2458.8	1187.9	*	1	1145	142	1145.	4407.9	1190.5	*	1	2005	242	1100.	3786.1	1189.8
1	0330	43	955.	2603.1	1188.1	*	1	1150	143	1145.	4401.6	1190.5	*	1	2010	243	1099.	3780.0	1189.8
1	0335	44	974.	2739.1	1188.3	*	1	1155	144	1144.	4395.3	1190.5	*	1	2015	244	1099.	3773.8	1189.8
1	0340	45	991.	2867.3	1188.5	*	1	1200	145	1144.	4389.0	1190.5	*	1	2020	245	1099.	3767.6	1189.8
1	0345	46	1008.	2988.3	1188.7	*	1	1205	146	1144.	4382.7	1190.5	*	1	2025	246	1098.	3761.4	1189.8
1	0350	47	1024.	3102.3	1188.9	*	1	1210	147	1143.	4376.5	1190.5	*	1	2030	247	1098.	3755.2	1189.8
1	0355	48	1038.	3209.4	1189.0	*	1	1215	148	1143.	4370.2	1190.5	*	1	2035	248	1097.	3749.0	1189.8
1	0400	49	1052.	3309.6	1189.2	*	1	1220	149	1142.	4363.9	1190.5	*	1	2040	249	1097.	3742.9	1189.8
1	0405	50	1065.	3403.1	1189.3	*	1	1225	150	1142.	4357.6	1190.4	*	1	2045	250	1096.	3736.9	1189.8
1	0410	51	1077.	3490.4	1189.5	*	1	1230	151	1141.	4351.3	1190.4	*	1	2050	251	1096.	3730.8	1189.7
1	0415	52	1084.	3572.1	1189.6	*	1	1235	152	1141.	4345.0	1190.4	*	1	2055	252	1095.	3724.7	1189.7
1	0420	53	1090.	3648.6	1189.7	*	1	1240	153	1140.	4338.7	1190.4	*	1	2100	253	1095.	3718.6	1189.7
	0425	54	1095.	3720.4	1189.7	*	1	1245	154	1140.	4332.4	1190.4	*	1	2105	254	1095.	3712.6	1189.7
	0430	55	1100.	3787.7	1189.8	*	1	1250	155	1139.	4326.1	1190.4	*	1	2110	255	1094.	3706.5	1189.7
1	0435	56	1105.	3850.7	1189.9	*	1	1255	156	1139.	4319.8	1190.4	*	1	2115	256	1094.	3700.4	1189.7
1	0440	57	1109.	3909.8	1189.9	*	1	1300	157	1138.	4313.5	1190.4	*	1	2120	257	1093.	3694.3	1189.7
1	0445	58	1113.	3965.5	1190.0	*	1	1305	158	1138.	4307.2	1190.4	*	1	2125	258	1093.	3688.3	1189.7
1	0450	59	1117.	4018.1	1190.1	*	1	1310	159	1138.	4300.9	1190.4	*	1	2130	259	1092.	3682.2	1189.7
1	0455	60	1120.	4068.1	1190.1	*	1	1315	160	1137.	4294.6	1190.4	*	1	2135	260	1092.	3676.1	1189.7
1	0500	61	1124.	4115.7	1190.2	*	1	1320	161	1137.	4288.3	1190.4	*	1	2140	261	1091.	3670.0	1189.7
1	0505	62	1127.	4161.3	1190.2	*	1	1325	162	1136.	4282.0	1190.4	*	1	2145	262	1091.	3663.9	1189.7
1	0510	63	1130.	4204.8	1190.3	*	1	1330	163	1136.	4275.8	1190.4	*	1	2150	263	1091.	3657.9	1189.7
1	0515	64	1134.	4246.1	1190.3	*	1	1335	164	1135.	4269.5	1190.3	*	1	2155	264	1090.	3651.8	1189.7
1	0520	65	1136.	4285.3	1190.4	*	1	1340	165	1135.	4263.2	1190.3	*	1	2200	265	1090.	3645.7	1189.6
1	0525	66	1139.	4322.2	1190.4	*	1	1345	166	1134.	4256.9	1190.3	*	1	2205	266	1089.	3639.6	1189.6
1	0530	67	1142.	4356.8	1190.4	*	1	1350	167	1134.	4250.6	1190.3	*	1	2210	267	1089.	3633.6	1189.6
1	0535	68	1144.	4389.2	1190.5	*	1	1355	168	1133.	4244.3	1190.3	*	1	2215	268	1088.	3627.5	1189.6
1	0540	69	1146.	4419.3	1190.5	*	1	1400	169	1133.	4238.0	1190.3	*	1	2220	269	1088.	3621.4	1189.6
1	0545	70	1148.	4447.5	1190.5	*	1	1405	170	1132.	4231.7	1190.3	*	1	2225	270	1087.	3615.3	1189.6
1	0550	71	1150.	4474.1	1190.6	*	1	1410	171	1132.	4225.4	1190.3	*	1	2230	271	1087.	3609.3	1189.6
1	0555	72	1152.	4499.3	1190.6	*	1	1415	172	1132.	4219.1	1190.3	*	1	2235	272	1087.	3603.2	1189.6
1	0600	73	1154.	4523.4	1190.6	*	1	1420	173	1131.	4212.9	1190.3	*	1	2240	273	1086.	3597.1	1189.6
1	0605	74	1155.	4546.6	1190.7	*	1	1425	174	1131.	4206.7	1190.3	*	1	2245	274	1086.	3591.0	1189.6
1	0610	75	1157.	4569.0	1190.7	*	1	1430	175	1130.	4200.6	1190.3	*	1	2250	275	1085.	3585.0	1189.6
1	0615	76	1159.	4590.3	1190.7	*	1	1435	176	1130.	4194.4	1190.3	*	1	2255	276	1085.	3578.9	1189.6
1	0620	77	1160.	4610.3	1190.7	*	1	1440	177	1129.	4188.2	1190.3	*	1	2300	277	1084.	3572.8	1189.6
1	0625	78	1161.	4628.4	1190.8	*	1	1445	178	1129.	4182.0	1190.3	*	1	2305	278	1084.	3566.7	1189.6
1	0630	79	1163.	4644.4	1190.8	*	1	1450	179	1128.	4175.8	1190.2	*	1	2310	279	1083.	3560.6	1189.6
	0635	80	1164.	4657.9	1190.8	*	1	1455	180	1128.	4169.6	1190.2	*	1	2315	280	1083.	3554.6	1189.5
	0640	81	1164.	4669.1	1190.8	*	1	1500	181	1127.	4163.4	1190.2	*	1	2320	281	1083.	3548.5	1189.5
1	0645	82	1165.	4678.0	1190.8	*	1	1505	182	1127.	4157.3	1190.2	*	1	2325	282	1082.	3542.4	1189.5
1	0650	83	1166.	4684.9	1190.8	*	1	1510	183	1127.	4151.1	1190.2	*	1	2330	283	1082.	3536.3	1189.5
1	0655	84	1166.	4690.0	1190.8	*	1	1515	184	1126.	4144.9	1190.2	*	1	2335	284	1081.	3530.3	1189.5
1	0700	85	1166.	4693.6	1190.8	*	1	1520	185	1126.	4138.7	1190.2	*	1	2340	285	1081.	3524.2	1189.5
1	0705	86	1166.	4696.1	1190.8	*	1	1525	186	1125.	4132.5	1190.2	*	1	2345	286	1080.	3518.1	1189.5

1	0715	88	1167.	4698.1	1190.8	*	1	1535	188	1124.	4120.1	1190.2	*	1	2355	288	1079.	3505.9	1189.5
1	0720	89	1167.	4697.8	1190.8	*	1	1540	189	1124.	4114.0	1190.2	*	2	0000	289	1078.	3499.8	1189.5
1	0725	90	1166.	4696.8	1190.8	*	1	1545	190	1123.	4107.8	1190.2	*	2	0005	290	1077.	3493.7	1189.5
1	0730	91	1166.	4695.2	1190.8	*	1	1550	191	1123.	4101.6	1190.2	*	2	0010	291	1076.	3487.6	1189.5
1	0735	92	1166.	4693.0	1190.8	*	1	1555	192	1122.	4095.4	1190.2	*	2	0015	292	1076.	3481.5	1189.5
1	0740	93	1166.	4690.3	1190.8	*	1	1600	193	1122.	4089.2	1190.1	*	2	0020	293	1075.	3475.5	1189.4
1	0745	94	1166.	4687.1	1190.8	*	1	1605	194	1122.	4083.0	1190.1	*	2	0025	294	1074.	3469.4	1189.4
1	0750	95	1166.	4683.6	1190.8	*	1	1610	195	1121.	4076.8	1190.1	*	2	0030	295	1073.	3463.4	1189.4
1	0755	96	1165.	4679.6	1190.8	*	1	1615	196	1121.	4070.7	1190.1	*	2	0035	296	1072.	3457.4	1189.4
1	0800	97	1165.	4675.4	1190.8	*	1	1620	197	1120.	4064.5	1190.1	*	2	0040	297	1071.	3451.4	1189.4
1	0805	98	1165.	4671.0	1190.8	*	1	1625	198	1120.	4058.3	1190.1	*	2	0045	298	1071.	3445.4	1189.4
1	0810	99	1164.	4666.3	1190.8	*	1	1630	199	1119.	4052.1	1190.1	*	2	0050	299	1070.	3439.4	1189.4
1	0815	100	1164.	4661.4	1190.8	*	1	1635	200	1119.	4045.9	1190.1	*	2	0055	300	1069.	3433.3	1189.4
						*							*						

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PEAK OUTFLOW IS 1167. AT TIME 7.25 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	24.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 1167.	7.25		1158.	1033.	995.	995.
		(INCHES)	.485	1.730	1.730	1.730
		(AC-FT)	574.	2049.	2049.	2049.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (AC-FT)	(HR)				
4698.	7.25	4583.	3717.	3580.	3580.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	24.92-HR
+ (FEET)	(HR)				
1190.83	7.25	1190.70	1189.13	1188.61	1188.61

CUMULATIVE AREA = 22.20 SQ MI

STATION   SBFRS

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                      (I) INFLOW,   (O) OUTFLOW
         0.      4000.      8000.     12000.     16000.     20000.     24000.     28000.     32000.         0.         0.         0.         0.
                                                                                        (S) STORAGE
         0.         0.         0.         0.         0.         0.         0.      2000.      4000.      6000.         0.         0.         0.
DAHRMN PER
10000   1I---------.---------.---------.---------.---------.---------S---------.---------.---------.---------.---------.---------.
10005   2I         .         .         .         .         .         S         .         .         .         .         .         .
10010   3I         .         .         .         .         .         S         .         .         .         .         .         .
10015   4I         .         .         .         .         .         S         .         .         .         .         .         .
10020   5I         .         .         .         .         .         S         .         .         .         .         .         .
10025   6I         .         .         .         .         .         S         .         .         .         .         .         .
10030   7I         .         .         .         .         .         S         .         .         .         .         .         .
10035   8I         .         .         .         .         .         S         .         .         .         .         .         .
10040   9I         .         .         .         .         .         S         .         .         .         .         .         .
10045  10I         .         .         .         .         .         S         .         .         .         .         .         .
10050  11I...........................................................S............................................................
10055  12I         .         .         .         .         .         S         .         .         .         .         .         .
10100  13I         .         .         .         .         .         S         .         .         .         .         .         .
10105  14I         .         .         .         .         .         S         .         .         .         .         .         .
10110  15I         .         .         .         .         .         S         .         .         .         .         .         .
10115  160I        .         .         .         .         .         S         .         .         .         .         .         .
10120  170I        .         .         .         .         .         S         .         .         .         .         .         .
10125  180I        .         .         .         .         .         S         .         .         .         .         .         .
10130  190I        .         .         .         .         .         S         .         .         .         .         .         .
10135  200 I       .         .         .         .         .         S         .         .         .         .         .         .
10140  210 I.........................................................S............................................................
10145  220  I      .         .         .         .         .         S         .         .         .         .         .         .
10150  230  I      .         .         .         .         .         S         .         .         .         .         .         .
10155  240   I     .         .         .         .         .         S         .         .         .         .         .         .
10200  250    I    .         .         .         .         .         S         .         .         .         .         .         .
10205  260      I  .         .         .         .         .         S         .         .         .         .         .         .
10210  270         .I        .         .         .         .         S         .         .         .         .         .         .
10215  280         .       I .         .         .         .         .S        .         .         .         .         .         .
10220  290         .         .       I .         .         .         .S        .         .         .         .         .         .
10225  30.0        .         .         .         I         .         .S        .         .         .         .         .         .
10230  31.0...................................................I........S..........................................................
10235  32.0        .         .         .         .         .         .  SI     .         .         .         .         .         .
10240  33.0        .         .         .         .         .         .   S     . I       .         .         .         .         .
10245  34.0        .         .         .         .         .         .    S    .      I  .         .         .         .         .
10250  35. 0       .         .         .         .         .         .     S   .        I.         .         .         .         .
10255  36. 0       .         .         .         .         .         .      S  .       I .         .         .         .         .
10300  37. 0       .         .         .         .         .         .       S .    I    .         .         .         .         .
10305  38. 0       .         .         .         .         .         .        S.I        .         .         .         .         .
10310  39. 0       .         .         .         .         .         .      I  S         .         .         .         .         .
10315  40. 0       .         .         .         .         .         .  I      .S        .         .         .         .         .
10320  41. 0.........................................................I...........S................................................
10325  42. 0       .         .         .         .         .     I   .         . S       .         .         .         .         .
10330  43. 0       .         .         .         .         .  I      .         .  S      .         .         .         .         .
10335  44. 0       .         .         .         .         I         .         .   S     .         .         .         .         .
10340  45. 0       .         .         .         .       I .         .         .   S     .         .         .         .         .
10345  46.  0      .         .         .         .   I     .         .         .    S    .         .         .         .         .
10350  47.  0      .         .         .         . I       .         .         .     S   .         .         .         .         .
10355  48.  0      .         .         .         I         .         .         .     S   .         .         .         .         .
10400  49.  0      .         .         .      I  .         .         .         .      S  .         .         .         .         .
10405  50.  0      .         .         .    I    .         .         .         .      S  .         .         .         .         .
10410  51. .0............................I............................................S...........................................
10415  52.  0      .         .         .I        .         .         .         .       S .         .         .         .         .
10420  53.  0      .         .         I         .         .         .         .       S .         .         .         .         .
10425  54.  0      .         .       I .         .         .         .         .        S.         .         .         .         .
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10430  55.  0     .        .   I   .        .        .        .        .        S.       .        .        .        .
10435  56.  0     .        .  I    .        .        .        .        .        S.       .        .        .        .
10440  57.  0     .        . I     .        .        .        .        .        S        .        .        .        .
10445  58.  0     .        .I      .        .        .        .        .        S        .        .        .        .
10450  59.  0     .        .I      .        .        .        .        .        S        .        .        .        .
10455  60.  0     .        .I      .        .        .        .        .        S        .        .        .        .
10500  61. .0.....        .I      .........................................S.........................................
10505  62.  0     .       I.       .        .        .        .        .        .S       .        .        .        .
10510  63.  0     .      I .       .        .        .        .        .        .S       .        .        .        .
10515  64.  0     .     I  .       .        .        .        .        .        .S       .        .        .        .
10520  65.  0     .     I  .       .        .        .        .        .        .S       .        .        .        .
10525  66.  0     .    I   .       .        .        .        .        .        . S      .        .        .        .
10530  67.  0     .   I    .       .        .        .        .        .        . S      .        .        .        .
10535  68.  0     .  I     .       .        .        .        .        .        . S      .        .        .        .
10540  69.  0     . I      .       .        .        .        .        .        . S      .        .        .        .
10545  70.  0     . I      .       .        .        .        .        .        . S      .        .        .        .
10550  71. .0.....I        .........................................................S.........................................
10555  72.  0     . I      .       .        .        .        .        .        . S      .        .        .        .
10600  73.  0     .I       .       .        .        .        .        .        .  S     .        .        .        .
10605  74.  0     .I       .       .        .        .        .        .        .  S     .        .        .        .
10610  75.  0     .I       .       .        .        .        .        .        .  S     .        .        .        .
10615  76.  0     I        .       .        .        .        .        .        .  S     .        .        .        .
10620  77.  0     I        .       .        .        .        .        .        .  S     .        .        .        .
10625  78.  0    I.        .       .        .        .        .        .        .  S     .        .        .        .
10630  79.  0   I .        .       .        .        .        .        .        .  S     .        .        .        .
10635  80.  0  I  .        .       .        .        .        .        .        .  S     .        .        .        .
10640  81. .0. .I.........        .........................................................S.........................................
10645  82.  0 I  .        .       .        .        .        .        .        .  S     .        .        .        .
10650  83.  0I   .        .       .        .        .        .        .        .  S     .        .        .        .
10655  84.  0I   .        .       .        .        .        .        .        .  S     .        .        .        .
10700  85.  0I   .        .       .        .        .        .        .        .  S     .        .        .        .
10705  86.  0I   .        .       .        .        .        .        .        .  S     .        .        .        .
10710  87.  I    .        .       .        .        .        .        .        .  S     .        .        .        .
10715  88.  I    .        .       .        .        .        .        .        .  S     .        .        .        .
10720  89.  I    .        .       .        .        .        .        .        .  S     .        .        .        .
10725  90. I0    .        .       .        .        .        .        .        .  S     .        .        .        .
10730  91. I0.....        .........................................................S.........................................
10735  92. I0    .        .       .        .        .        .        .        .  S     .        .        .        .
10740  93. I0    .        .       .        .        .        .        .        .  S     .        .        .        .
10745  94. I0    .        .       .        .        .        .        .        .  S     .        .        .        .
10750  95. I0    .        .       .        .        .        .        .        .  S     .        .        .        .
10755  96.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10800  97.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10805  98.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10810  99.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10815 100.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10820 101.I.0.....        .........................................................S.........................................
10825 102.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10830 103.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10835 104.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10840 105.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10845 106.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10850 107.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10855 108.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10900 109.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10905 110.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10910 111.I.0.....        .........................................................S.........................................
10915 112.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10920 113.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10925 114.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10930 115.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10935 116.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10940 117.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10945 118.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10950 119.I 0    .        .       .        .        .        .        .        .  S     .        .        .        .
10955 120.I 0    .        .       .        .                                          S
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11000 121.I.0. . . . . .S. . . . . .
11005 122.I 0 . . . . . S . . . .
11010 123.I 0 . . . . . S . . . .
11015 124.I 0 . . . . . S . . . .
11020 125.I 0 . . . . . S . . . .
11025 126.I 0 . . . . . S . . . .
11030 127.I 0 . . . . . S . . . .
11035 128.I 0 . . . . . S . . . .
11040 129.I 0 . . . . . S . . . .
11045 130.I 0 . . . . . S . . . .
11050 131.I.0. . . . . S . . . . . .
11055 132.I 0 . . . . . S . . . .
11100 133.I 0 . . . . . S . . . .
11105 134.I 0 . . . . . S . . . .
11110 135.I 0 . . . . . S . . . .
11115 136.I 0 . . . . . S . . . .
11120 137.I 0 . . . . . S . . . .
11125 138.I 0 . . . . . S . . . .
11130 139.I 0 . . . . . S . . . .
11135 140.I 0 . . . . . S . . . .
11140 141.I.0. . . . . S . . . . . .
11145 142.I 0 . . . . . S . . . .
11150 143.I 0 . . . . . S . . . .
11155 144.I 0 . . . . . S . . . .
11200 145.I 0 . . . . . S . . . .
11205 146.I 0 . . . . . S . . . .
11210 147.I 0 . . . . . S . . . .
11215 148.I 0 . . . . . S . . . .
11220 149.I 0 . . . . . S . . . .
11225 150.I 0 . . . . . S . . . .
11230 151.I.0. . . . . S . . . . . .
11235 152.I 0 . . . . . S . . . .
11240 153.I 0 . . . . . S . . . .
11245 154.I 0 . . . . . S . . . .
11250 155.I 0 . . . . . S . . . .
11255 156.I 0 . . . . . S . . . .
11300 157.I 0 . . . . . S . . . .
11305 158.I 0 . . . . . S . . . .
11310 159.I 0 . . . . . S . . . .
11315 160.I 0 . . . . . .S . . . .
11320 161.I.0. . . . . .S. . . . . .
11325 162.I 0 . . . . . .S . . . .
11330 163.I 0 . . . . . .S . . . .
11335 164.I 0 . . . . . .S . . . .
11340 165.I 0 . . . . . .S . . . .
11345 166.I 0 . . . . . .S . . . .
11350 167.I 0 . . . . . .S . . . .
11355 168.I 0 . . . . . .S . . . .
11400 169.I 0 . . . . . .S . . . .
11405 170.I 0 . . . . . .S . . . .
11410 171.I.0. . . . . .S. . . . . .
11415 172.I 0 . . . . . .S . . . .
11420 173.I 0 . . . . . .S . . . .
11425 174.I 0 . . . . . .S . . . .
11430 175.I 0 . . . . . .S . . . .
11435 176.I 0 . . . . . .S . . . .
11440 177.I 0 . . . . . .S . . . .
11445 178.I 0 . . . . . .S . . . .
11450 179.I 0 . . . . . .S . . . .
11455 180.I 0 . . . . . .S . . . .
11500 181.I.0. . . . . .S. . . . . .
11505 182.I 0 . . . . . .S . . . .
11510 183.I 0 . . . . . .S . . . .
11515 184.I 0 . . . . . .S . . . .
11520 185.I 0 . . . . . .S . . . .
11525 186.I 0 . . . . . .S . . . .
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11530 187.I 0   .   .   .   .   .   .   .S  .   .   .
11535 188.I 0   .   .   .   .   .   .   .S  .   .   .
11540 189.I 0   .   .   .   .   .   .   .S  .   .   .
11545 190.I 0   .   .   .   .   .   .   .S  .   .   .
11550 191.I.0. . . . . . . . . . . . . . .S. . . . . .
11555 192.I 0   .   .   .   .   .   .   S   .   .   .
11600 193.I 0   .   .   .   .   .   .   S   .   .   .
11605 194.I 0   .   .   .   .   .   .   S   .   .   .
11610 195.I 0   .   .   .   .   .   .   S   .   .   .
11615 196.I 0   .   .   .   .   .   .   S   .   .   .
11620 197.I 0   .   .   .   .   .   .   S   .   .   .
11625 198.I 0   .   .   .   .   .   .   S   .   .   .
11630 199.I 0   .   .   .   .   .   .   S   .   .   .
11635 200.I 0   .   .   .   .   .   .   S   .   .   .
11640 201.I.0. . . . . . . . . . . . . . S. . . . . .
11645 202.I 0   .   .   .   .   .   .   S   .   .   .
11650 203.I 0   .   .   .   .   .   .   S   .   .   .
11655 204.I 0   .   .   .   .   .   .   S   .   .   .
11700 205.I 0   .   .   .   .   .   .   S   .   .   .
11705 206.I 0   .   .   .   .   .   .   S   .   .   .
11710 207.I 0   .   .   .   .   .   .   S   .   .   .
11715 208.I 0   .   .   .   .   .   .   S   .   .   .
11720 209.I 0   .   .   .   .   .   .   S   .   .   .
11725 210.I 0   .   .   .   .   .   .   S   .   .   .
11730 211.I.0. . . . . . . . . . . . . . S. . . . . .
11735 212.I 0   .   .   .   .   .   .   S   .   .   .
11740 213.I 0   .   .   .   .   .   .   S   .   .   .
11745 214.I 0   .   .   .   .   .   .   S   .   .   .
11750 215.I 0   .   .   .   .   .   .   S   .   .   .
11755 216.I 0   .   .   .   .   .   .   S   .   .   .
11800 217.I 0   .   .   .   .   .   .   S   .   .   .
11805 218.I 0   .   .   .   .   .   .   S   .   .   .
11810 219.I 0   .   .   .   .   .   .   S   .   .   .
11815 220.I 0   .   .   .   .   .   .   S   .   .   .
11820 221.I.0. . . . . . . . . . . . . . S. . . . . .
11825 222.I 0   .   .   .   .   .   .   S   .   .   .
11830 223.I 0   .   .   .   .   .   .   S   .   .   .
11835 224.I 0   .   .   .   .   .   .   S.  .   .   .
11840 225.I 0   .   .   .   .   .   .   S.  .   .   .
11845 226.I 0   .   .   .   .   .   .   S.  .   .   .
11850 227.I 0   .   .   .   .   .   .   S.  .   .   .
11855 228.I 0   .   .   .   .   .   .   S.  .   .   .
11900 229.I 0   .   .   .   .   .   .   S.  .   .   .
11905 230.I 0   .   .   .   .   .   .   S.  .   .   .
11910 231.I.0. . . . . . . . . . . . . .S. . . . . .
11915 232.I 0   .   .   .   .   .   .   S.  .   .   .
11920 233.I 0   .   .   .   .   .   .   S.  .   .   .
11925 234.I 0   .   .   .   .   .   .   S.  .   .   .
11930 235.I 0   .   .   .   .   .   .   S.  .   .   .
11935 236.I 0   .   .   .   .   .   .   S.  .   .   .
11940 237.I 0   .   .   .   .   .   .   S.  .   .   .
11945 238.I 0   .   .   .   .   .   .   S.  .   .   .
11950 239.I 0   .   .   .   .   .   .   S.  .   .   .
11955 240.I 0   .   .   .   .   .   .   S.  .   .   .
12000 241.I.0. . . . . . . . . . . . . .S. . . . . .
12005 242.I 0   .   .   .   .   .   .   S.  .   .   .
12010 243.I 0   .   .   .   .   .   .   S.  .   .   .
12015 244.I 0   .   .   .   .   .   .   S.  .   .   .
12020 245.I 0   .   .   .   .   .   .   S.  .   .   .
12025 246.I 0   .   .   .   .   .   .   S.  .   .   .
12030 247.I 0   .   .   .   .   .   .   S.  .   .   .
12035 248.I 0   .   .   .   .   .   .   S.  .   .   .
12040 249.I 0   .   .   .   .   .   .   S.  .   .   .
12045 250.I 0   .   .   .   .   .   .   S.  .   .   .
12050 251.I.0. . . . . . . . . . . . . .S. . . . . .
12055 252.I 0                           S
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12105 254.I 0     .         .         .         .         .         .         .         S.        .         .         .         .
12110 255.I 0     .         .         .         .         .         .         .         S.        .         .         .         .
12115 256.I 0     .         .         .         .         .         .         .         S.        .         .         .         .
12120 257.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12125 258.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12130 259.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12135 260.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12140 261.I.0.....................................................S.........................
12145 262.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12150 263.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12155 264.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12200 265.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12205 266.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12210 267.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12215 268.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12220 269.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12225 270.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12230 271.I.0.....................................................S.........................
12235 272.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12240 273.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12245 274.I 0     .         .         .         .         .         .         .        S .        .         .         .         .
12250 275I  0     .         .         .         .         .         .         .        S .        .         .         .         .
12255 276I  0     .         .         .         .         .         .         .        S .        .         .         .         .
12300 277I  0     .         .         .         .         .         .         .        S .        .         .         .         .
12305 278I  0     .         .         .         .         .         .         .        S .        .         .         .         .
12310 279I  0     .         .         .         .         .         .         .        S .        .         .         .         .
12315 280I  0     .         .         .         .         .         .         .        S .        .         .         .         .
12320 281I .0.....................................................S.........................
12325 282I  0     .         .         .         .         .         .         .        S .        .         .         .         .
12330 283I  0     .         .         .         .         .         .         .        S .        .         .         .         .
12335 284I  0     .         .         .         .         .         .         .        S .        .         .         .         .
12340 285I  0     .         .         .         .         .         .         .        S .        .         .         .         .
12345 286I  0     .         .         .         .         .         .         .        S .        .         .         .         .
12350 287I  0     .         .         .         .         .         .         .        S .        .         .         .         .
12355 288I  0     .         .         .         .         .         .         .        S .        .         .         .         .
20000 289I  0     .         .         .         .         .         .         .       S  .        .         .         .         .
20005 290I  0     .         .         .         .         .         .         .       S  .        .         .         .         .
20010 291I .0.....................................................S.........................
20015 292I  0     .         .         .         .         .         .         .       S  .        .         .         .         .
20020 293I  0     .         .         .         .         .         .         .       S  .        .         .         .         .
20025 294I  0     .         .         .         .         .         .         .       S  .        .         .         .         .
20030 295I  0     .         .         .         .         .         .         .       S  .        .         .         .         .
20035 296I  0     .         .         .         .         .         .         .       S  .        .         .         .         .
20040 297I  0     .         .         .         .         .         .         .       S  .        .         .         .         .
20045 298I  0     .         .         .         .         .         .         .       S  .        .         .         .         .
20050 299I  0     .         .         .         .         .         .         .       S  .        .         .         .         .
20055 300I--0------.---------.---------.---------.---------.---------.---------.------S--.---------.---------.---------.---------.
```

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	WS-5	38477.	3.50	15084.	3822.	3682.	16.01		
+	DIVERSION TO	TO-6	11543.	3.50	4525.	1147.	1105.	16.01		
+	HYDROGRAPH AT	TO-7	26934.	3.50	10559.	2676.	2577.	16.01		
+	ROUTED TO	CH-7	26539.	3.92	10553.	2676.	2577.	16.01		
+	HYDROGRAPH AT	WS-7	67695.	3.83	30831.	7895.	7605.	33.07		
+	2 COMBINED AT	CP-2	94085.	3.83	41379.	10571.	10182.	49.08		
	HYDROGRAPH AT	TO-6	11543.	3.50	4525.	1147.	1105.	.00		
+	ROUTED TO	CH-6	11370.	3.92	4523.	1147.	1105.	.00		
+	HYDROGRAPH AT	WS-6	16168.	3.17	5284.	1330.	1281.	5.65		
+	2 COMBINED AT	CP-3	22844.	3.42	9767.	2477.	2386.	5.65		
+	2 COMBINED AT	CP-4	115709.	3.83	51125.	13048.	12568.	54.73		
+	ROUTED TO	GRAD	114375.	4.00	38247.	11245.	10832.	54.73		
+									1399.47	4.00
+	DIVERSION TO	8-12	3328.	4.00	858.	504.	486.	54.73		
+	HYDROGRAPH AT	OUT	111047.	4.00	37389.	10741.	10346.	54.73		
+	HYDROGRAPH AT	8-12	3328.	4.00	858.	504.	486.	.00		
+	DIVERSION TO	TO-12	1598.	4.00	201.	50.	48.	.00		
+	HYDROGRAPH AT	TO-8	1731.	4.00	657.	454.	437.	.00		

+		CH-8	1672.	4.25	657.	451.	434.	.00	
	HYDROGRAPH AT								
+		WS-8	4986.	2.42	883.	221.	213.	.90	
	2 COMBINED AT								
+		CP-5	5013.	2.42	1408.	671.	647.	.90	
	DIVERSION TO								
+		TO-10	2507.	2.42	704.	336.	324.	.90	
	HYDROGRAPH AT								
+		TO-9	2507.	2.42	704.	336.	324.	.90	
	ROUTED TO								
+		CH-9	2226.	2.83	703.	333.	321.	.90	
	HYDROGRAPH AT								
+		WS-9	6671.	2.67	1504.	376.	362.	1.67	
	2 COMBINED AT								
+		CP-6	8555.	2.67	2188.	709.	683.	2.57	
	HYDROGRAPH AT								
+		TO-10	2507.	2.42	704.	336.	324.	.00	
	ROUTED TO								
+		CH-10	2194.	2.92	703.	332.	320.	.00	
	HYDROGRAPH AT								
+		WS-10	7547.	2.75	1842.	461.	444.	2.11	
	2 COMBINED AT								
+		CP-7	9414.	2.75	2528.	793.	764.	2.11	
	HYDROGRAPH AT								
+		WS-11	22382.	2.83	5795.	1452.	1399.	6.35	
	HYDROGRAPH AT								
+		TO-12	1598.	4.00	201.	50.	48.	.00	
	ROUTED TO								
+		CH-12	1306.	5.25	201.	50.	48.	.00	
	HYDROGRAPH AT								
+		WS-12	14446.	3.58	5883.	1489.	1434.	6.71	
	2 COMBINED AT								
+		CP-12	14446.	3.58	6084.	1539.	1483.	6.71	
	HYDROGRAPH AT								
+		WS-13	15578.	2.83	4128.	1035.	997.	4.46	
	5 COMBINED AT								
+		SBFRS	63083.	2.83	20662.	5529.	5325.	22.20	
	DIVERSION TO								
+		0.5FRS	31541.	2.83	10331.	2764.	2663.	22.20	
	HYDROGRAPH AT								
+		SBHYD	31541.	2.83	10331.	2764.	2663.	22.20	
	ROUTED TO								
+		SBFRS	1167.	7.25	1158.	1033.	995.	22.20	
+									1190.83 7.25

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION SBFRS

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1175.00	1193.00	1193.00
STORAGE	0.	7012.	7012.
OUTFLOW	0.	1315.	1315.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1190.83	.00	4698.	1167.	.00	7.25	.00

*** NORMAL END OF HEC-1 ***

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID        DAMBREAK ANALYSIS FOR THE FAR-WEST MARICOPA COUNTY SRUCTURES
  2           ID        SADDLEBACK STRUCTURE
  3           ID        72 HOUR PMF STORM:  50% 72 HOUR HYDROGRAPH GENERATED FOR DAMBREAK
  4           ID           FILE:SBFR.D72
              *DIAGRAM
  5           ID         SEPT.18, 1990
  6           IT      15       0       0     300
  7           IO       5       0

  8           KK    WS-5        WATERHED NO.5 DRAINING TO WATERSHEDS NO. 6&7
  9           BA   16.01
 10           IN      60
 11           PB    15.4
 12           PC       0     .03     .07     0.1    0.13    0.17     0.2    0.23    0.27     0.3
 13           PC    0.37    0.43     0.5    0.57    0.63     0.7     0.8     0.9     1.0     1.1
 14           PC     1.2     1.3     1.4     1.5     1.6     1.7     1.8     1.9    2.03    2.17
 15           PC     2.3    2.47    2.63     2.8     3.0     3.2     3.4     3.6     3.8     4.0
 16           PC    4.43    4.87     5.3     6.1     6.9     7.7    9.37   11.03    12.7    13.0
 17           PC    13.3    13.6   13.77   13.93    14.1    14.2    14.3    14.4    14.5    14.6
 18           PC    14.7    14.8    14.9    15.0   15.07   15.13    15.2   15.23   15.27    15.3
 19           PC   15.33   15.37    15.4
 20           LS       0      90
 21           UD    1.09

 22           KK    TO-7        70% DRAINS TO WATERSHED NO. 7
 23           KM                30% DRAINS TO WATERSHED NO. 6
 24           DT    TO-6
 25           DI       0  100000
 26           DQ       0   30000

 27           KK    CH-7
 28           KM                ROUTE 70% OF FLOWS FROM WS-5 TO WS-7
 29           RM       2    0.43      .3

 30           KK    WS-7        WATERSHED NO. 7 DRAINING TO GRANITE REEF AQUEDUCT DIKE
 31           BA   33.07
 32           LS       0      90
 33           UD    1.40

 34           KK    CP-2
 35           KM                COMBINE 70% SPLIT FLOW FROM WS-5 TO WS-7
 36           HC       2

 37           KK    TO-6
 38           KM                REINSTALL 30% OF WS-5 FOR ROUTING
 39           DR    TO-6

 40           KK    CH-6
 41           KM                ROUTE 30% OF FLOWS FROM WS-5 TO WS-6
 42           RM       2    0.47      .3
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  43          KK    WS-6        WATERSHED NO. 6 DRAINING TO GRANITE REEF AQUEDUCT DIKE
  44          BA    5.65
  45          LS       0      89
  46          UD    0.80

  47          KK    CP-3
  48          KM                COMBINE 30% SPLIT FLOW FROM WS-5 TO WS-6
  49          HC       2

  50          KK    CP-4
  51          KM                COMBINE WATERSHEDS 5, 6 & 7
  52          HC       2

  53          KK    GRAD
  54          KM                GRANITE REEF AQUIDUCT DIKE (REACH 6)
  55          KM                DISCHARGE THRU 5-72" PIPE OVERCHUTES AND OVER DIKE
  56          RS       1    STOR       0       0
  57          SV      50      65   105.3   271.3     590  1101.3  1815.5    2987    4300    5570
  58          SV    6940    7080    7220    7360    7500    7640    7780    8060
  59          SE  1380.6  1381.5    1382    1384    1386    1388    1390    1392    1394    1396
  60          SE    1398 1398.25  1398.5 1398.75    1399 1399.25  1399.5    1400
  61          SQ       0      60     105     370     765    1240    1600    1890    2130    2340
  62          SQ    5125   13015   26780   44400   65135   89648  117485  181145

  63          KK     OUT        OVERCHUTE AND FLOW OVER DIKE DRAINING EAST OF PROJECT
  64          KM                OVERCHUTE AND FLOW OVER DIKE DRAINING TO SBFRS
  65          DT    8-12
  66          DI       0      60     105     370     765    1240    1600    1890    2130    2340
  67          DI    5125   13015   26780   44400   65135   89640  117485  181145
  68          DQ       0       0       5      50     125     220     300     360     410     450
  69          DQ     495     500     505     510     515    1588    3547    9083

  70          KK    8-12
  71          KM                REINSTALL 8-12; OVERCHUTE AND FLOW OVER DIKE INTO
  72          KM                WATERSHED NO. 8 AND/OR 12
  73          DR    8-12

  74          KK    TO-8        OVERCHUTE AND FLOW OVER DIKE DRAINING TO WATERSHED NO.8
  75          KM                FLOW OVER DIKE DRAINING INTO WATERSHED NO. 12
  76          DT   TO-12
  77          DI       0       0       5      50     125     220     300     360     410     450
  78          DI     495     500     505     510     515    1588    3547    9083
  79          DQ       0       0       0       0       0       0       0       0       0       0
  80          DQ       0       0       0       0       0     609    1722    4872

  81          KK    CH-8
  82          KM                ROUTE FLOWS FROM OVERCHUTE TO CP-5
  83          RM       1    0.20      .3
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  84          KK    WS-8       WATERSHED NO. 8 DRAINING TO CP-5/DIVERSION
  85          BA     0.9
  86          LS       0      92
  87          UD    0.22

  88          KK    CP-5
  89          KM               COMBINE WS-8 AND CH-8
  90          HC       2

  91          KK    TO-9       50% DRAINS TO WATERSHED NO. 9
  92          KM               50% DRAINS TO WATERSHED NO. 10
  93          DT   TO-10
  94          DI       0  100000
  95          DQ       0   50000

  96          KK    CH-9
  97          KM               ROUTE FLOWS FROM DIVERSION (CP-5) TO SBFRS
  98          RM       1    0.38      .3

  99          KK    WS-9       WATERSHED NO. 9 DRAINING TO SBFRS
 100          BA    1.67
 101          LS       0      86
 102          UD    0.39

 103          KK    CP-6
 104          KM               COMBINE WS-9 AND CH-9
 105          HC       2

 106          KK   TO-10
 107          KM               REINSTALL TO-10;  50% DIVERSION IN WATERSHED NO. 8
 108          DR   TO-10

 109          KK   CH-10
 110          KM               ROUTE FLOWS FROM DIVERSION (CP-5) TO SBFRS
 111          RM       2    0.46      .3

 112          KK   WS-10       WATERSHED NO. 10 DRAINING TO SBFRS
 113          BA    2.11
 114          LS       0      84
 115          UD    0.46

 116          KK    CP-7
 117          KM               COMBINE WS-10 CH-10
 118          HC       2

 119          KK   WS-11       WATERSHED NO.11 DRAINING SBFRS
 120          BA    6.35
 121          LS       0      87
 122          UD    0.52
```

```
LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 123        KK   TO-12
 124        KM                REINSTALL DIVERSION FROM FLOW OVER DIKE
 125        DR   TO-12

 126        KK   CH-12
 127        KM                ROUTE FLOWS FROM GRA DIKE TO SBFRS
 128        RM       4    1.15      .3

 129        KK   WS-12        WATERSHED NO.12 DRAINING TO SBFRS
 130        BA    6.71
 131        LS       0      85
 132        UD    1.15

 133        KK   CP-12
 134        KM                COMBINE WS-12 AND CH-12
 135        HC       2

 136        KK   WS-13        WATERSHED NO.13 DRAINING SBFRS
 137        BA    4.46
 138        LS       0      88
 139        UD    0.55

 140        KK   SBFRS        TOTAL FLOW TO SBFRS
 141        HC       5

 142        KK   SBHYD        50% OF PMF HYDROGRAPH FOR ROUTING THRU SBFRS
 143        KO       2       0
 144        DT  0.5FRS
 145        DI       0 1000000
 146        DQ       0  500000

 147        KK   SBFRS
 148        KO       2       2
 149        KM        PRINCILAL & EMERGENCY SPILLWAY IS 1-10'X 8' CBC
 150        KM        INVERT= 1176.9 AND CREST OF DAM = 1193.0
 151        KM        DISCHARGE AT ELE. 1193.0 = 1315.0 CFS
 152        RS       1    STOR       0       0
 153        SV       0      21   108.1   327.3   699.7  1281.9  2199.8  3514.2  5292.1  7585.6
 154        SE  1175.0  1178.1  1179.5  1181.5  1183.5  1185.5  1187.5  1189.5  1191.5  1193.5
 155        SQ       0      10      60     230     470     700     900    1080    1210    1350
 156        ST    1193   16185    2.67     1.5
 157        ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

 NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  8        WS-5
              .
              .
 24           .------->   TO-6
 22        TO-7
              V
              V
 27        CH-7
              .
              .
 30           .       WS-7
              .          .
              .          .
 34        CP-2............
              .
              .
 39           .          .<-------   TO-6
 37           .       TO-6
              .          V
              .          V
 40           .       CH-6
              .          .
              .          .
 43           .          .       WS-6
              .          .          .
              .          .          .
 47           .       CP-3............
              .          .
              .          .
 50        CP-4............
              V
              V
 53        GRAD
              .
              .
 65           .------->   8-12
 63         OUT
              .
              .
 73           .          .<-------   8-12
 70           .       8-12
              .          .
              .          .
 76           .          .------->  TO-12
 74           .       TO-8
              .          V
              .          V
 81           .       CH-8
              .          .
              .          .
 4            .          .       WS-8
              .          .          .
              .          .          .
 88           .       CP-5............
              .          .
              .          .
 93           .          .------->  TO-10
```

```
                .        V
                .        V
   96           .      CH-9
                .        .
                .        .
   99           .        .      WS-9
                .        .        .
                .        .        .
  103           .      CP-6............
                .        .
                .        .
  108           .        .        .<-------  TO-10
  106           .        .     TO-10
                .        .        V
                .        .        V
  109           .        .     CH-10
                .        .        .
                .        .        .
  112           .        .        .     WS-10
                .        .        .        .
                .        .        .        .
  116           .        .      CP-7............
                .        .        .
                .        .        .
  119           .        .        .     WS-11
                .        .        .        .
                .        .        .        .
  125           .        .        .        .        .<-------  TO-12
  123           .        .        .        .     TO-12
                .        .        .        .        V
                .        .        .        .        V
  126           .        .        .        .     CH-12
                .        .        .        .        .
                .        .        .        .        .
  129           .        .        .        .        .     WS-12
                .        .        .        .        .        .
                .        .        .        .        .        .
  133           .        .        .        .     CP-12............
                .        .        .        .        .
                .        .        .        .        .
  136           .        .        .        .        .     WS-13
                .        .        .        .        .        .
                .        .        .        .        .        .
  140           .      SBFRS.............................................
                .        .
                .        .
  144           .        .-------> 0.5FRS
  142           .      SBHYD
                .        V
                .        V
  147           .      SBFRS
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
                                    ****
              FLOOD HYDROGRAPH PACKAGE HEC-1 (IBM XT 512K VERSION) -FEB 1,1985
       U.S. ARMY CORPS OF ENGINEERS, THE HYDROLOGIC ENGINEERING CENTER, 609 SECOND STREET, DAVIS, CA. 95616
                                    ****


                        DAMBREAK ANALYSIS FOR THE FAR-WEST MARICOPA COUNTY SRUCTURES
                        SADDLEBACK STRUCTURE
                        72 HOUR PMF STORM:  50% 72 HOUR HYDROGRAPH GENERATED FOR DAMBREAK
                          FILE:SBFR.D72
                         SEPT.18, 1990

  7 IO         OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT          HYDROGRAPH TIME DATA
                     NMIN         15  MINUTES IN COMPUTATION INTERVAL
                    IDATE     1    0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE     4    0  ENDING DATE
                   NDTIME       0245  ENDING TIME

             COMPUTATION INTERVAL     .25 HOURS
                  TOTAL TIME BASE   74.75 HOURS

        ENGLISH UNITS

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN    13015. TO   181145.
               THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
               THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


          **************
          *            *
 142 KK   *    SBHYD   *          50% OF PMF HYDROGRAPH FOR ROUTING THRU SBFRS
          *            *
          **************

 143 KO         OUTPUT CONTROL VARIABLES
                    IPRNT          2  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE
```

ISTAD 0.5FRS DIVERSION HYDROGRAPH IDENTIFICATION

DI INFLOW .001000000.00

DQ DIVERTED FLOW .00 500000.00

***

DIVERSION HYDROGRAPH 0.5FRS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	1		1845	76	413.	2		1330	151	1473.	3		0815	226	983.
1		0015	2	0.	1		1900	77	424.	2		1345	152	1478.	3		0830	227	975.
1		0030	3	0.	1		1915	78	435.	2		1400	153	1483.	3		0845	228	969.
1		0045	4	0.	1		1930	79	446.	2		1415	154	1488.	3		0900	229	965.
1		0100	5	0.	1		1945	80	456.	2		1430	155	1493.	3		0915	230	962.
1		0115	6	0.	1		2000	81	465.	2		1445	156	1497.	3		0930	231	960.
1		0130	7	0.	1		2015	82	475.	2		1500	157	1502.	3		0945	232	958.
1		0145	8	0.	1		2030	83	484.	2		1515	158	1608.	3		1000	233	957.
1		0200	9	0.	1		2045	84	493.	2		1530	159	1918.	3		1015	234	956.
1		0215	10	0.	1		2100	85	502.	2		1545	160	2261.	3		1030	235	955.
1		0230	11	0.	1		2115	86	510.	2		1600	161	2515.	3		1045	236	954.
1		0245	12	0.	1		2130	87	519.	2		1615	162	2686.	3		1100	237	953.
1		0300	13	0.	1		2145	88	527.	2		1630	163	2820.	3		1115	238	953.
1		0315	14	0.	1		2200	89	535.	2		1645	164	2923.	3		1130	239	952.
1		0330	15	0.	1		2215	90	543.	2		1700	165	2997.	3		1145	240	952.
1		0345	16	0.	1		2230	91	551.	2		1715	166	3044.	3		1200	241	951.
		0400	17	0.	1		2245	92	558.	2		1730	167	3069.	3		1215	242	951.
1		0415	18	0.	1		2300	93	566.	2		1745	168	3085.	3		1230	243	951.
1		0430	19	0.	1		2315	94	573.	2		1800	169	3098.	3		1245	244	951.
1		0445	20	0.	1		2330	95	580.	2		1815	170	3281.	3		1300	245	950.
1		0500	21	0.	1		2345	96	587.	2		1830	171	3801.	3		1315	246	950.
1		0515	22	0.	2		0000	97	594.	2		1845	172	4375.	3		1330	247	950.
1		0530	23	0.	2		0015	98	600.	2		1900	173	4800.	3		1345	248	950.
1		0545	24	0.	2		0030	99	606.	2		1915	174	5080.	3		1400	249	949.
1		0600	25	0.	2		0045	100	611.	2		1930	175	5281.	3		1415	250	949.
1		0615	26	0.	2		0100	101	617.	2		1945	176	5426.	3		1430	251	949.
1		0630	27	0.	2		0115	102	622.	2		2000	177	5527.	3		1445	252	949.
1		0645	28	1.	2		0130	103	627.	2		2015	178	5598.	3		1500	253	949.
1		0700	29	1.	2		0145	104	633.	2		2030	179	5649.	3		1515	254	934.
1		0715	30	1.	2		0200	105	638.	2		2045	180	5689.	3		1530	255	891.
1		0730	31	1.	2		0215	106	643.	2		2100	181	5719.	3		1545	256	843.
1		0745	32	1.	2		0230	107	648.	2		2115	182	6153.	3		1600	257	808.
1		0800	33	2.	2		0245	108	652.	2		2130	183	7398.	3		1615	258	781.
1		0815	34	2.	2		0300	109	657.	2		2145	184	8771.	3		1630	259	750.
1		0830	35	2.	2		0315	110	673.	2		2200	185	9783.	3		1645	260	723.
1		0845	36	2.	2		0330	111	711.	2		2215	186	10440.	3		1700	261	704.
1		0900	37	2.	2		0345	112	753.	2		2230	187	10897.	3		1715	262	696.
1		0915	38	3.	2		0400	113	785.	2		2245	188	11219.	3		1730	263	702.
1		0930	39	6.	2		0415	114	811.	2		2300	189	11440.	3		1745	264	711.
1		0945	40	11.	2		0430	115	840.	2		2315	190	11596.	3		1800	265	718.
1		1000	41	17.	2		0445	116	867.	2		2330	191	11717.	3		1815	266	703.
		1015	42	23.	2		0500	117	888.	2		2345	192	11813.	3		1830	267	649.
		1030	43	28.	2		0515	118	900.	3		0000	193	11883.	3		1845	268	587.
1		1045	44	32.	2		0530	119	901.	3		0015	194	11276.	3		1900	269	542.
1		1100	45	38.	2		0545	120	899.	3		0030	195	9354.	3		1915	270	517.
1		1115	46	44.	2		0600	121	898.	3		0045	196	7220.	3		1930	271	511.
1		1130	47	53.	2		0615	122	915.	3		0100	197	5657.	3		1945	272	512.
1		1145	48	62.	2		0630	123	965.	3		0115	198	4648.	3		2000	273	513.
1		1200	49	71.	2		0645	124	1020.	3		0130	199	3940.	3		2015	274	509.

1	1230	51	88.	*	2	0715	126	1088.	*	3	0200	201	3105.	*	3	2045	276	480.
1	1245	52	97.	*	2	0730	127	1099.	*	3	0215	202	2886.	*	3	2100	277	468.
1	1300	53	105.	*	2	0745	128	1103.	*	3	0230	203	2736.	*	3	2115	278	460.
1	1315	54	112.	*	2	0800	129	1107.	*	3	0245	204	2629.	*	3	2130	279	454.
1	1330	55	116.	*	2	0815	130	1116.	*	3	0300	205	2555.	*	3	2145	280	450.
1	1345	56	120.	*	2	0830	131	1133.	*	3	0315	206	2442.	*	3	2200	281	447.
1	1400	57	124.	*	2	0845	132	1151.	*	3	0330	207	2219.	*	3	2215	282	450.
1	1415	58	131.	*	2	0900	133	1167.	*	3	0345	208	1987.	*	3	2230	283	462.
1	1430	59	142.	*	2	0915	134	1191.	*	3	0400	209	1818.	*	3	2245	284	477.
1	1445	60	154.	*	2	0930	135	1238.	*	3	0415	210	1702.	*	3	2300	285	488.
1	1500	61	165.	*	2	0945	136	1289.	*	3	0430	211	1609.	*	3	2315	286	489.
1	1515	62	180.	*	2	1000	137	1327.	*	3	0445	212	1538.	*	3	2330	287	480.
1	1530	63	206.	*	2	1015	138	1354.	*	3	0500	213	1488.	*	3	2345	288	467.
1	1545	64	235.	*	2	1030	139	1375.	*	3	0515	214	1460.	*	4	0000	289	457.
1	1600	65	259.	*	2	1045	140	1391.	*	3	0530	215	1451.	*	4	0015	290	436.
1	1615	66	279.	*	2	1100	141	1404.	*	3	0545	216	1451.	*	4	0030	291	389.
1	1630	67	297.	*	2	1115	142	1414.	*	3	0600	217	1451.	*	4	0045	292	338.
1	1645	68	312.	*	2	1130	143	1423.	*	3	0615	218	1418.	*	4	0100	293	301.
1	1700	69	327.	*	2	1145	144	1431.	*	3	0630	219	1319.	*	4	0115	294	277.
1	1715	70	340.	*	2	1200	145	1438.	*	3	0645	220	1208.	*	4	0130	295	260.
1	1730	71	353.	*	2	1215	146	1445.	*	3	0700	221	1127.	*	4	0145	296	247.
1	1745	72	366.	*	2	1230	147	1451.	*	3	0715	222	1075.	*	4	0200	297	239.
1	1800	73	378.	*	2	1245	148	1457.	*	3	0730	223	1038.	*	4	0215	298	233.
1	1815	74	390.	*	2	1300	149	1463.	*	3	0745	224	1012.	*	4	0230	299	229.
1	1830	75	402.	*	2	1315	150	1468.	*	3	0800	225	994.	*	4	0245	300	226.

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	74.75-HR
		(CFS)				
1883.	48.00		8349.	3577.	1519.	1463.
		(INCHES)	3.496	5.993	7.635	7.635
		(AC-FT)	4140.	7096.	9040.	9040.

CUMULATIVE AREA = 22.20 SQ MI

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HYDROGRAPH AT STATION SBHYD

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	*	1		1845	76	413.	*	2		1330	151	1473.	*	3		0815	226	983.
1		0015	2	0.	*	1		1900	77	424.	*	2		1345	152	1478.	*	3		0830	227	975.
1		0030	3	0.	*	1		1915	78	435.	*	2		1400	153	1483.	*	3		0845	228	969.
1		0045	4	0.	*	1		1930	79	446.	*	2		1415	154	1488.	*	3		0900	229	965.
1		0100	5	0.	*	1		1945	80	456.	*	2		1430	155	1493.	*	3		0915	230	962.
1		0115	6	0.	*	1		2000	81	465.	*	2		1445	156	1497.	*	3		0930	231	960.
1		0130	7	0.	*	1		2015	82	475.	*	2		1500	157	1502.	*	3		0945	232	958.
1		0145	8	0.	*	1		2030	83	484.	*	2		1515	158	1608.	*	3		1000	233	957.
1		0200	9	0.	*	1		2045	84	493.	*	2		1530	159	1918.	*	3		1015	234	956.
1		0215	10	0.	*	1		2100	85	502.	*	2		1545	160	2261.	*	3		1030	235	955.
1		0230	11	0.	*	1		2115	86	510.	*	2		1600	161	2515.	*	3		1045	236	954.
		0245	12	0.	*	1		2130	87	519.	*	2		1615	162	2686.	*	3		1100	237	953.
1		0300	13	0.	*	1		2145	88	527.	*	2		1630	163	2820.	*	3		1115	238	953.
1		0315	14	0.	*	1		2200	89	535.	*	2		1645	164	2923.	*	3		1130	239	952.
1		0330	15	0.	*	1		2215	90	543.	*	2		1700	165	2997.	*	3		1145	240	952.
1		0345	16	0.	*	1		2230	91	551.	*	2		1715	166	3044.	*	3		1200	241	951.
1		0400	17	0.	*	1		2245	92	558.	*	2		1730	167	3069.	*	3		1215	242	951.
1		0415	18	0.	*	1		2300	93	566.	*	2		1745	168	3085.	*	3		1230	243	951.

1	0445	20	0.	*	1	2330	95	580.	*	2	1815	170	3281.	*	3	1300	245	950.
1	0500	21	0.	*	1	2345	96	587.	*	2	1830	171	3801.	*	3	1315	246	950.
1	0515	22	0.	*	2	0000	97	594.	*	2	1845	172	4375.	*	3	1330	247	950.
1	0530	23	0.	*	2	0015	98	600.	*	2	1900	173	4800.	*	3	1345	248	950.
1	0545	24	0.	*	2	0030	99	606.	*	2	1915	174	5080.	*	3	1400	249	949.
1	0600	25	0.	*	2	0045	100	611.	*	2	1930	175	5281.	*	3	1415	250	949.
1	0615	26	0.	*	2	0100	101	617.	*	2	1945	176	5426.	*	3	1430	251	949.
1	0630	27	0.	*	2	0115	102	622.	*	2	2000	177	5527.	*	3	1445	252	949.
1	0645	28	1.	*	2	0130	103	627.	*	2	2015	178	5598.	*	3	1500	253	949.
1	0700	29	1.	*	2	0145	104	633.	*	2	2030	179	5649.	*	3	1515	254	934.
1	0715	30	1.	*	2	0200	105	638.	*	2	2045	180	5689.	*	3	1530	255	891.
1	0730	31	1.	*	2	0215	106	643.	*	2	2100	181	5719.	*	3	1545	256	843.
1	0745	32	1.	*	2	0230	107	648.	*	2	2115	182	6153.	*	3	1600	257	808.
1	0800	33	2.	*	2	0245	108	652.	*	2	2130	183	7398.	*	3	1615	258	781.
1	0815	34	2.	*	2	0300	109	657.	*	2	2145	184	8771.	*	3	1630	259	750.
1	0830	35	2.	*	2	0315	110	673.	*	2	2200	185	9783.	*	3	1645	260	723.
1	0845	36	2.	*	2	0330	111	711.	*	2	2215	186	10440.	*	3	1700	261	704.
1	0900	37	2.	*	2	0345	112	753.	*	2	2230	187	10897.	*	3	1715	262	696.
1	0915	38	3.	*	2	0400	113	785.	*	2	2245	188	11219.	*	3	1730	263	702.
1	0930	39	6.	*	2	0415	114	811.	*	2	2300	189	11440.	*	3	1745	264	711.
1	0945	40	11.	*	2	0430	115	840.	*	2	2315	190	11596.	*	3	1800	265	718.
1	1000	41	17.	*	2	0445	116	867.	*	2	2330	191	11717.	*	3	1815	266	703.
1	1015	42	23.	*	2	0500	117	888.	*	2	2345	192	11813.	*	3	1830	267	649.
1	1030	43	28.	*	2	0515	118	900.	*	3	0000	193	11883.	*	3	1845	268	587.
1	1045	44	32.	*	2	0530	119	901.	*	3	0015	194	11276.	*	3	1900	269	542.
1	1100	45	38.	*	2	0545	120	899.	*	3	0030	195	9354.	*	3	1915	270	517.
1	1115	46	44.	*	2	0600	121	898.	*	3	0045	196	7220.	*	3	1930	271	511.
1	1130	47	53.	*	2	0615	122	915.	*	3	0100	197	5657.	*	3	1945	272	512.
1	1145	48	62.	*	2	0630	123	965.	*	3	0115	198	4648.	*	3	2000	273	513.
1	1200	49	71.	*	2	0645	124	1020.	*	3	0130	199	3940.	*	3	2015	274	509.
1	1215	50	80.	*	2	0700	125	1063.	*	3	0145	200	3441.	*	3	2030	275	495.
1	1230	51	88.	*	2	0715	126	1088.	*	3	0200	201	3105.	*	3	2045	276	480.
1	1245	52	97.	*	2	0730	127	1099.	*	3	0215	202	2886.	*	3	2100	277	468.
1	1300	53	105.	*	2	0745	128	1103.	*	3	0230	203	2736.	*	3	2115	278	460.
1	1315	54	112.	*	2	0800	129	1107.	*	3	0245	204	2629.	*	3	2130	279	454.
1	1330	55	116.	*	2	0815	130	1116.	*	3	0300	205	2555.	*	3	2145	280	450.
1	1345	56	120.	*	2	0830	131	1133.	*	3	0315	206	2442.	*	3	2200	281	447.
1	1400	57	124.	*	2	0845	132	1151.	*	3	0330	207	2219.	*	3	2215	282	450.
1	1415	58	131.	*	2	0900	133	1167.	*	3	0345	208	1987.	*	3	2230	283	462.
1	1430	59	142.	*	2	0915	134	1191.	*	3	0400	209	1818.	*	3	2245	284	477.
1	1445	60	154.	*	2	0930	135	1238.	*	3	0415	210	1702.	*	3	2300	285	488.
1	1500	61	165.	*	2	0945	136	1289.	*	3	0430	211	1609.	*	3	2315	286	489.
1	1515	62	180.	*	2	1000	137	1327.	*	3	0445	212	1538.	*	3	2330	287	480.
1	1530	63	206.	*	2	1015	138	1354.	*	3	0500	213	1488.	*	3	2345	288	467.
1	1545	64	235.	*	2	1030	139	1375.	*	3	0515	214	1460.	*	4	0000	289	457.
1	1600	65	259.	*	2	1045	140	1391.	*	3	0530	215	1451.	*	4	0015	290	436.
1	1615	66	279.	*	2	1100	141	1404.	*	3	0545	216	1451.	*	4	0030	291	389.
1	1630	67	297.	*	2	1115	142	1414.	*	3	0600	217	1451.	*	4	0045	292	338.
1	1645	68	312.	*	2	1130	143	1423.	*	3	0615	218	1418.	*	4	0100	293	301.
1	1700	69	327.	*	2	1145	144	1431.	*	3	0630	219	1319.	*	4	0115	294	277.
1	1715	70	340.	*	2	1200	145	1438.	*	3	0645	220	1208.	*	4	0130	295	260.
1	1730	71	353.	*	2	1215	146	1445.	*	3	0700	221	1127.	*	4	0145	296	247.
1	1745	72	366.	*	2	1230	147	1451.	*	3	0715	222	1075.	*	4	0200	297	239.
1	1800	73	378.	*	2	1245	148	1457.	*	3	0730	223	1038.	*	4	0215	298	233.
1	1815	74	390.	*	2	1300	149	1463.	*	3	0745	224	1012.	*	4	0230	299	229.
1	1830	75	402.	*	2	1315	150	1468.	*	3	0800	225	994.	*	4	0245	300	226.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	74.75-HR
+ (CFS)	(HR)					
		(CFS)				
+ 11883.	48.00		8349.	3577.	1519.	1463.
		(INCHES)	3.496	5.993	7.635	7.635

CUMULATIVE AREA = 22.20 SQ MI

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          *            *
147 KK    *    SBFRS   *
          *            *
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148 KO        OUTPUT CONTROL VARIABLES
                   IPRNT          2  PRINT CONTROL
                   IPLOT          2  PLOT CONTROL
                   QSCAL         0.  HYDROGRAPH PLOT SCALE
                          PRINCILAL & EMERGENCY SPILLWAY IS 1-10'X 8' CBC
                          INVERT= 1176.9 AND CREST OF DAM = 1193.0
                          DISCHARGE AT ELE. 1193.0 = 1315.0 CFS

            HYDROGRAPH ROUTING DATA

152 RS        STORAGE ROUTING
                   NSTPS          1  NUMBER OF SUBREACHES
                    ITYP       STOR  TYPE OF INITIAL CONDITION
                  RSVRIC        .00  INITIAL CONDITION
                       X        .00 WORKING R AND D COEFFICIENT

153 SV          STORAGE         .0     21.0    108.1    327.3    699.7   1281.9   2199.8   3514.2   5292.1   7585.6

154 SE        ELEVATION    1175.00  1178.10  1179.50  1181.50  1183.50  1185.50  1187.50  1189.50  1191.50  1193.50

155 SQ        DISCHARGE        0.      10.      60.     230.     470.     700.     900.    1080.    1210.    1350.

156 ST        TOP OF DAM
                   TOPEL    1193.00  ELEVATION AT TOP OF DAM
                  DAMWID   16185.00  DAM WIDTH
                    COQD       2.67  WEIR COEFFICIENT
                    EXPD       1.50  EXPONENT OF HEAD

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HYDROGRAPH AT STATION SBFRS

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	.0	1175.0	*	2		0100	101	221.	315.2	1181.4	*	3		0200	201	1234.	5688.5	1191.8
		0015	2	0.	.0	1175.0	*	2		0115	102	227.	323.4	1181.5	*	3		0215	202	1236.	5724.9	1191.9
		0030	3	0.	.0	1175.0	*	2		0130	103	233.	331.6	1181.5	*	3		0230	203	1238.	5757.4	1191.9
1		0045	4	0.	.0	1175.0	*	2		0145	104	238.	339.7	1181.6	*	3		0245	204	1240.	5787.2	1191.9
1		0100	5	0.	.0	1175.0	*	2		0200	105	243.	347.9	1181.6	*	3		0300	205	1242.	5815.1	1192.0
1		0115	6	0.	.0	1175.0	*	2		0215	106	249.	356.0	1181.7	*	3		0315	206	1244.	5841.0	1192.0
1		0130	7	0.	.0	1175.0	*	2		0230	107	254.	364.1	1181.7	*	3		0330	207	1245.	5863.4	1192.0
1		0145	8	0.	.0	1175.0	*	2		0245	108	259.	372.3	1181.7	*	3		0345	208	1246.	5881.2	1192.0
1		0200	9	0.	.0	1175.0	*	2		0300	109	264.	380.4	1181.8	*	3		0400	209	1247.	5894.7	1192.0

1	0230	11	0.	.0	1175.0	*	2	0330	111	275.	397.3	1181.9	*	3	0430	211	1248.	5913.8	1192.0
1	0245	12	0.	.0	1175.0	*	2	0345	112	281.	406.6	1181.9	*	3	0445	212	1248.	5920.5	1192.0
1	0300	13	0.	.0	1175.0	*	2	0400	113	288.	416.6	1182.0	*	3	0500	213	1249.	5925.9	1192.1
1	0315	14	0.	.0	1175.0	*	2	0415	114	294.	427.1	1182.0	*	3	0515	214	1249.	5930.6	1192.1
1	0330	15	0.	.0	1175.0	*	2	0430	115	301.	438.0	1182.1	*	3	0530	215	1249.	5934.8	1192.1
1	0345	16	0.	.0	1175.0	*	2	0445	116	309.	449.4	1182.2	*	3	0545	216	1249.	5939.0	1192.1
1	0400	17	0.	.0	1175.0	*	2	0500	117	316.	461.1	1182.2	*	3	0600	217	1250.	5943.2	1192.1
1	0415	18	0.	.0	1175.0	*	2	0515	118	324.	472.9	1182.3	*	3	0615	218	1250.	5946.9	1192.1
1	0430	19	0.	.0	1175.0	*	2	0530	119	331.	484.8	1182.3	*	3	0630	219	1250.	5949.3	1192.1
1	0445	20	0.	.0	1175.0	*	2	0545	120	339.	496.5	1182.4	*	3	0645	220	1250.	5949.6	1192.1
1	0500	21	0.	.0	1175.0	*	2	0600	121	346.	507.9	1182.5	*	3	0700	221	1250.	5947.9	1192.1
1	0515	22	0.	.0	1175.0	*	2	0615	122	354.	519.4	1182.5	*	3	0715	222	1250.	5944.8	1192.1
1	0530	23	0.	.0	1175.0	*	2	0630	123	362.	531.5	1182.6	*	3	0730	223	1250.	5940.8	1192.1
1	0545	24	0.	.0	1175.0	*	2	0645	124	370.	544.4	1182.7	*	3	0745	224	1249.	5936.2	1192.1
1	0600	25	0.	.0	1175.0	*	2	0700	125	379.	558.2	1182.7	*	3	0800	225	1249.	5931.1	1192.1
1	0615	26	0.	.0	1175.0	*	2	0715	126	388.	572.5	1182.8	*	3	0815	226	1249.	5925.8	1192.1
1	0630	27	0.	.0	1175.0	*	2	0730	127	397.	587.0	1182.9	*	3	0830	227	1248.	5920.2	1192.0
1	0645	28	0.	.0	1175.0	*	2	0745	128	407.	601.4	1183.0	*	3	0845	228	1248.	5914.5	1192.0
1	0700	29	0.	.0	1175.0	*	2	0800	129	416.	615.7	1183.0	*	3	0900	229	1248.	5908.7	1192.0
1	0715	30	0.	.0	1175.0	*	2	0815	130	425.	630.0	1183.1	*	3	0915	230	1247.	5902.9	1192.0
1	0730	31	0.	.1	1175.0	*	2	0830	131	434.	644.3	1183.2	*	3	0930	231	1247.	5897.0	1192.0
1	0745	32	0.	.1	1175.0	*	2	0845	132	444.	658.7	1183.3	*	3	0945	232	1247.	5891.0	1192.0
1	0800	33	0.	.1	1175.0	*	2	0900	133	453.	673.3	1183.4	*	3	1000	233	1246.	5884.9	1192.0
1	0815	34	0.	.1	1175.0	*	2	0915	134	463.	688.2	1183.4	*	3	1015	234	1246.	5878.9	1192.0
1	0830	35	0.	.2	1175.0	*	2	0930	135	472.	703.6	1183.5	*	3	1030	235	1245.	5872.9	1192.0
1	0845	36	0.	.2	1175.0	*	2	0945	136	478.	719.9	1183.6	*	3	1045	236	1245.	5866.9	1192.0
1	0900	37	0.	.3	1175.0	*	2	1000	137	485.	737.0	1183.6	*	3	1100	237	1245.	5860.9	1192.0
1	0915	38	0.	.3	1175.0	*	2	1015	138	492.	754.6	1183.7	*	3	1115	238	1244.	5854.8	1192.0
1	0930	39	0.	.4	1175.1	*	2	1030	139	499.	772.6	1183.8	*	3	1130	239	1244.	5848.8	1192.0
1	0945	40	0.	.6	1175.1	*	2	1045	140	506.	790.8	1183.8	*	3	1145	240	1244.	5842.8	1192.0
1	1000	41	0.	.9	1175.1	*	2	1100	141	513.	809.1	1183.9	*	3	1200	241	1243.	5836.8	1192.0
1	1015	42	1.	1.3	1175.2	*	2	1115	142	521.	827.6	1183.9	*	3	1215	242	1243.	5830.8	1192.0
1	1030	43	1.	1.8	1175.3	*	2	1130	143	528.	846.0	1184.0	*	3	1230	243	1243.	5824.7	1192.0
1	1045	44	1.	2.4	1175.3	*	2	1145	144	535.	864.5	1184.1	*	3	1245	244	1242.	5818.7	1192.0
1	1100	45	1.	3.1	1175.5	*	2	1200	145	542.	883.1	1184.1	*	3	1300	245	1242.	5812.7	1192.0
1	1115	46	2.	3.9	1175.6	*	2	1215	146	550.	901.6	1184.2	*	3	1315	246	1241.	5806.7	1191.9
1	1130	47	2.	4.8	1175.7	*	2	1230	147	557.	920.1	1184.3	*	3	1330	247	1241.	5800.7	1191.9
1	1145	48	3.	6.0	1175.9	*	2	1245	148	564.	938.5	1184.3	*	3	1345	248	1241.	5794.6	1191.9
1	1200	49	3.	7.3	1176.1	*	2	1300	149	572.	956.9	1184.4	*	3	1400	249	1240.	5788.6	1191.9
1	1215	50	4.	8.7	1176.3	*	2	1315	150	579.	975.3	1184.4	*	3	1415	250	1240.	5782.6	1191.9
1	1230	51	5.	10.4	1176.5	*	2	1330	151	586.	993.6	1184.5	*	3	1430	251	1240.	5776.6	1191.9
1	1245	52	6.	12.2	1176.8	*	2	1345	152	593.	1011.9	1184.6	*	3	1445	252	1239.	5770.6	1191.9
1	1300	53	7.	14.2	1177.1	*	2	1400	153	601.	1030.2	1184.6	*	3	1500	253	1239.	5764.5	1191.9
1	1315	54	8.	16.2	1177.4	*	2	1415	154	608.	1048.4	1184.7	*	3	1515	254	1238.	5758.4	1191.9
1	1330	55	9.	18.4	1177.7	*	2	1430	155	615.	1066.6	1184.8	*	3	1530	255	1238.	5751.7	1191.9
1	1345	56	10.	20.7	1178.1	*	2	1445	156	622.	1084.7	1184.8	*	3	1545	256	1238.	5744.0	1191.9
1	1400	57	11.	23.0	1178.1	*	2	1500	157	629.	1102.7	1184.9	*	3	1600	257	1237.	5735.4	1191.9
1	1415	58	13.	25.4	1178.2	*	2	1515	158	637.	1121.8	1184.9	*	3	1615	258	1237.	5726.3	1191.9
1	1430	59	14.	27.9	1178.2	*	2	1530	159	646.	1144.9	1185.0	*	3	1630	259	1236.	5716.7	1191.9
1	1445	60	16.	30.7	1178.3	*	2	1545	160	658.	1174.6	1185.1	*	3	1645	260	1235.	5706.3	1191.9
1	1500	61	17.	33.6	1178.3	*	2	1600	161	672.	1210.1	1185.3	*	3	1700	261	1235.	5695.5	1191.9
1	1515	62	19.	36.8	1178.4	*	2	1615	162	687.	1249.6	1185.4	*	3	1715	262	1234.	5684.5	1191.8
1	1530	63	21.	40.4	1178.4	*	2	1630	163	702.	1292.2	1185.5	*	3	1730	263	1233.	5673.4	1191.8
1	1545	64	23.	44.5	1178.5	*	2	1645	164	712.	1336.9	1185.6	*	3	1745	264	1233.	5662.5	1191.8
1	1600	65	26.	49.1	1178.6	*	2	1700	165	722.	1383.2	1185.7	*	3	1800	265	1232.	5651.9	1191.8
1	1615	66	29.	54.1	1178.6	*	2	1715	166	732.	1430.6	1185.8	*	3	1815	266	1231.	5641.1	1191.8
1	1630	67	32.	59.4	1178.7	*	2	1730	167	743.	1478.5	1185.9	*	3	1830	267	1231.	5629.6	1191.8
1	1645	68	35.	65.0	1178.8	*	2	1745	168	753.	1526.6	1186.0	*	3	1845	268	1230.	5617.0	1191.8
1	1700	69	39.	70.9	1178.9	*	2	1800	169	764.	1574.8	1186.1	*	3	1900	269	1229.	5603.3	1191.8
1	1715	70	42.	76.9	1179.0	*	2	1815	170	775.	1624.8	1186.2	*	3	1915	270	1228.	5588.9	1191.8
1	1730	71	46.	83.2	1179.1	*	2	1830	171	787.	1681.9	1186.4	*	3	1930	271	1227.	5574.2	1191.7
1	1745	72	49.	89.6	1179.2	*	2	1845	172	802.	1749.9	1186.5	*	3	1945	272	1226.	5559.3	1191.7
1	1800	73	53.	96.2	1179.3	*	2	1900	173	819.	1827.9	1186.7	*	3	2000	273	1225.	5544.6	1191.7
1	1815	74	57.	103.0	1179.4	*	2	1915	174	837.	1912.8	1186.9	*	3	2015	274	1225.	5529.9	1191.7
1	1830	75	61.	109.9	1179.5	*	2	1930	175	857.	2002.4	1187.1	*	3	2030	275	1224.	5515.0	1191.7

1	1900	77	72.	124.2	1179.6	*	2	2000	177	898.	2189.0	1187.5	*	3	2100	277	1222.	5484.3	1191.7
1	1915	78	78.	131.5	1179.7	*	2	2015	178	912.	2285.2	1187.6	*	3	2115	278	1221.	5468.6	1191.7
1	1930	79	84.	139.0	1179.8	*	2	2030	179	925.	2382.5	1187.8	*	3	2130	279	1220.	5452.8	1191.6
1	1945	80	90.	146.5	1179.9	*	2	2045	180	938.	2480.3	1187.9	*	3	2145	280	1219.	5437.0	1191.6
1	2000	81	96.	154.1	1179.9	*	2	2100	181	952.	2578.7	1188.1	*	3	2200	281	1218.	5421.0	1191.6
1	2015	82	102.	161.7	1180.0	*	2	2115	182	966.	2681.5	1188.2	*	3	2215	282	1217.	5405.1	1191.6
1	2030	83	108.	169.5	1180.1	*	2	2130	183	982.	2801.4	1188.4	*	3	2230	283	1216.	5389.4	1191.6
1	2045	84	114.	177.3	1180.1	*	2	2145	184	1002.	2948.0	1188.6	*	3	2245	284	1215.	5374.0	1191.6
1	2100	85	120.	185.2	1180.2	*	2	2200	185	1026.	3118.7	1188.9	*	3	2300	285	1214.	5358.9	1191.6
1	2115	86	126.	193.1	1180.3	*	2	2215	186	1052.	3306.2	1189.2	*	3	2315	286	1213.	5343.9	1191.5
1	2130	87	132.	201.0	1180.3	*	2	2230	187	1079.	3504.3	1189.5	*	3	2330	287	1212.	5328.9	1191.5
1	2145	88	138.	209.1	1180.4	*	2	2245	188	1094.	3710.4	1189.7	*	3	2345	288	1211.	5313.7	1191.5
1	2200	89	145.	217.1	1180.5	*	2	2300	189	1110.	3921.7	1190.0	*	4	0000	289	1210.	5298.1	1191.5
1	2215	90	151.	225.2	1180.6	*	2	2315	190	1126.	4136.5	1190.2	*	4	0015	290	1209.	5282.3	1191.5
1	2230	91	157.	233.3	1180.6	*	2	2330	191	1141.	4354.0	1190.4	*	4	0030	291	1208.	5265.8	1191.5
1	2245	92	163.	241.5	1180.7	*	2	2345	192	1157.	4573.3	1190.7	*	4	0045	292	1207.	5248.4	1191.5
1	2300	93	170.	249.6	1180.8	*	3	0000	193	1174.	4794.0	1190.9	*	4	0100	293	1205.	5230.0	1191.4
1	2315	94	176.	257.8	1180.9	*	3	0015	194	1189.	5008.9	1191.2	*	4	0115	294	1204.	5211.1	1191.4
1	2330	95	182.	266.0	1180.9	*	3	0030	195	1203.	5196.8	1191.4	*	4	0130	295	1203.	5191.8	1191.4
1	2345	96	189.	274.3	1181.0	*	3	0045	196	1213.	5343.1	1191.5	*	4	0145	296	1201.	5172.2	1191.4
2	0000	97	195.	282.5	1181.1	*	3	0100	197	1220.	5451.0	1191.6	*	4	0200	297	1200.	5152.4	1191.3
2	0015	98	202.	290.7	1181.2	*	3	0115	198	1225.	5532.2	1191.7	*	4	0215	298	1198.	5132.6	1191.3
2	0030	99	208.	298.9	1181.2	*	3	0130	199	1229.	5595.6	1191.8	*	4	0230	299	1197.	5112.6	1191.3
2	0045	100	214.	307.1	1181.3	*	3	0145	200	1232.	5646.4	1191.8	*	4	0245	300	1195.	5092.7	1191.3
						*							*						

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PEAK OUTFLOW IS 1250. AT TIME 54.75 HOURS

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	74.75-HR
(CFS)	(HR)					
		(CFS)				
+ 1250.	54.75		1249.	1236.	663.	639.
		(INCHES)	.523	2.070	3.332	3.332
		(AC-FT)	619.	2451.	3945.	3945.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	74.75-HR
+ (AC-FT)	(HR)				
5950.	54.75	5925.	5717.	2539.	2446.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	74.75-HR
+ (FEET)	(HR)				
1192.07	54.75	1192.05	1191.87	1185.16	1184.78

CUMULATIVE AREA = 22.20 SQ MI

STATION SBFRS

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                    (I) INFLOW,  (O) OUTFLOW
      0.    2000.    4000.    6000.    8000.   10000.   12000.      0.      0.      0.      0.      0.      0.
                                                                          (S) STORAGE
      0.      0.       0.       0.       0.       0.       0.   2000.   4000.   6000.      0.      0.      0.
 TRMN PER
 10000  1I---------.---------.---------.---------.---------.---------S---------.---------.---------.---------.---------.---------.
 10015  2I         .         .         .         .         .         S         .         .         .         .         .         .
 10030  3I         .         .         .         .         .         S         .         .         .         .         .         .
 10045  4I         .         .         .         .         .         S         .         .         .         .         .         .
 10100  5I         .         .         .         .         .         S         .         .         .         .         .         .
 10115  6I         .         .         .         .         .         S         .         .         .         .         .         .
 10130  7I         .         .         .         .         .         S         .         .         .         .         .         .
 10145  8I         .         .         .         .         .         S         .         .         .         .         .         .
 10200  9I         .         .         .         .         .         S         .         .         .         .         .         .
 10215 10I         .         .         .         .         .         S         .         .         .         .         .         .
 10230 11I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10245 12I         .         .         .         .         .         S         .         .         .         .         .         .
 10300 13I         .         .         .         .         .         S         .         .         .         .         .         .
 10315 14I         .         .         .         .         .         S         .         .         .         .         .         .
 10330 15I         .         .         .         .         .         S         .         .         .         .         .         .
 10345 16I         .         .         .         .         .         S         .         .         .         .         .         .
 10400 17I         .         .         .         .         .         S         .         .         .         .         .         .
 10415 18I         .         .         .         .         .         S         .         .         .         .         .         .
 10430 19I         .         .         .         .         .         S         .         .         .         .         .         .
 10445 20I         .         .         .         .         .         S         .         .         .         .         .         .
 10500 21I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10515 22I         .         .         .         .         .         S         .         .         .         .         .         .
 10530 23I         .         .         .         .         .         S         .         .         .         .         .         .
 10545 24I         .         .         .         .         .         S         .         .         .         .         .         .
 10600 25I         .         .         .         .         .         S         .         .         .         .         .         .
 10615 26I         .         .         .         .         .         S         .         .         .         .         .         .
 10630 27I         .         .         .         .         .         S         .         .         .         .         .         .
 10645 28I         .         .         .         .         .         S         .         .         .         .         .         .
 10700 29I         .         .         .         .         .         S         .         .         .         .         .         .
 10715 30I         .         .         .         .         .         S         .         .         .         .         .         .
 10730 31I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 10745 32I         .         .         .         .         .         S         .         .         .         .         .         .
 10800 33I         .         .         .         .         .         S         .         .         .         .         .         .
 10815 34I         .         .         .         .         .         S         .         .         .         .         .         .
 10830 35I         .         .         .         .         .         S         .         .         .         .         .         .
 10845 36I         .         .         .         .         .         S         .         .         .         .         .         .
 10900 37I         .         .         .         .         .         S         .         .         .         .         .         .
 10915 38I         .         .         .         .         .         S         .         .         .         .         .         .
 10930 39I         .         .         .         .         .         S         .         .         .         .         .         .
 10945 40I         .         .         .         .         .         S         .         .         .         .         .         .
 11000 41I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 11015 42I         .         .         .         .         .         S         .         .         .         .         .         .
 11030 43I         .         .         .         .         .         S         .         .         .         .         .         .
 11045 44I         .         .         .         .         .         S         .         .         .         .         .         .
 11100 45I         .         .         .         .         .         S         .         .         .         .         .         .
 11115 46I         .         .         .         .         .         S         .         .         .         .         .         .
 11130 47I         .         .         .         .         .         S         .         .         .         .         .         .
 11145 48I         .         .         .         .         .         S         .         .         .         .         .         .
 11200 49I         .         .         .         .         .         S         .         .         .         .         .         .
 11215 50I         .         .         .         .         .         S         .         .         .         .         .         .
 11230 51I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
 11245 52I         .         .         .         .         .         S         .         .         .         .         .         .
 11300 53OI        .         .         .         .         .         S         .         .         .         .         .         .
 11315 54OI        .         .         .         .         .         S         .         .         .         .         .         .
 11330 55OI        .         .         .         .         .         S         .         .         .         .         .         .
 11345 56OI        .         .         .         .         .         S         .         .         .         .         .         .
 11400 57OI        .         .         .         .         .         S         .         .         .         .         .         .
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11430  590I      .         .         .         .         .         S         .         .         .         .         .         .
11445  600I      .         .         .         .         .         S         .         .         .         .         .         .
11500  610I.. . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11515  620I      .         .         .         .         .         S         .         .         .         .         .         .
11530  630I      .         .         .         .         .         S         .         .         .         .         .         .
11545  640I      .         .         .         .         .         S         .         .         .         .         .         .
11600  650I      .         .         .         .         .         S         .         .         .         .         .         .
11615  660I      .         .         .         .         .         S         .         .         .         .         .         .
11630  670I      .         .         .         .         .         S         .         .         .         .         .         .
11645  680 I     .         .         .         .         .         S         .         .         .         .         .         .
11700  690 I     .         .         .         .         .         S         .         .         .         .         .         .
11715  700 I     .         .         .         .         .         S         .         .         .         .         .         .
11730  710 I . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
11745  720 I     .         .         .         .         .         S         .         .         .         .         .         .
11800  730 I     .         .         .         .         .         S         .         .         .         .         .         .
11815  740 I     .         .         .         .         .         .S        .         .         .         .         .         .
11830  750 I     .         .         .         .         .         .S        .         .         .         .         .         .
11845  760 I     .         .         .         .         .         .S        .         .         .         .         .         .
11900  770 I     .         .         .         .         .         .S        .         .         .         .         .         .
11915  780 I     .         .         .         .         .         .S        .         .         .         .         .         .
11930  790 I     .         .         .         .         .         .S        .         .         .         .         .         .
11945  800 I     .         .         .         .         .         .S        .         .         .         .         .         .
12000  810 I . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
12015  82.0I     .         .         .         .         .         .S        .         .         .         .         .         .
12030  83.0I     .         .         .         .         .         .S        .         .         .         .         .         .
12045  84.0I     .         .         .         .         .         .S        .         .         .         .         .         .
12100  85.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
12115  86.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
12130  87.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
12145  88.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
12200  89.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
12215  90.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
12230  91.0.I. . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
12245  92.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
12300  93.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
12315  94.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
12330  95.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
12345  96.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
20000  97.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
20015  98.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
20030  99.0 I    .         .         .         .         .         .S        .         .         .         .         .         .
20045 100.0 I    .         .         .         .         .         . S       .         .         .         .         .         .
20100 101.0.I. . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
20115 102.0 I    .         .         .         .         .         . S       .         .         .         .         .         .
20130 103.0 I    .         .         .         .         .         . S       .         .         .         .         .         .
20145 104.0 I    .         .         .         .         .         . S       .         .         .         .         .         .
20200 105.0 I    .         .         .         .         .         . S       .         .         .         .         .         .
20215 106.0 I    .         .         .         .         .         . S       .         .         .         .         .         .
20230 107.0 I    .         .         .         .         .         . S       .         .         .         .         .         .
20245 108.0 I    .         .         .         .         .         . S       .         .         .         .         .         .
20300 109.0 I    .         .         .         .         .         . S       .         .         .         .         .         .
20315 110.0 I    .         .         .         .         .         . S       .         .         .         .         .         .
20330 111.0. I . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
20345 112.0  I   .         .         .         .         .         . S       .         .         .         .         .         .
20400 113.0  I   .         .         .         .         .         . S       .         .         .         .         .         .
20415 114.0  I   .         .         .         .         .         . S       .         .         .         .         .         .
20430 115. 0 I   .         .         .         .         .         . S       .         .         .         .         .         .
20445 116. 0 I   .         .         .         .         .         . S       .         .         .         .         .         .
20460 117. 0 I   .         .         .         .         .         . S       .         .         .         .         .         .
20515 118. 0  I  .         .         .         .         .         . S       .         .         .         .         .         .
20530 119. 0  I  .         .         .         .         .         . S       .         .         .         .         .         .
20545 120. 0 I   .         .         .         .         .         . S       .         .         .         .         .         .
20600 121. 0 I . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
20615 122. 0  I  .         .         .         .         .         .  S      .         .         .         .         .         .
20630 123. 0  I  .         .         .         .         .         .  S      .         .         .         .         .         .
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20700 125. 0 I    .         .         .         .         .         . S         .         .         .         .         .         .
20715 126. 0 I    .         .         .         .         .         . S         .         .         .         .         .         .
20730 127. 0 I    .         .         .         .         .         . S         .         .         .         .         .         .
20745 128. 0  I   .         .         .         .         .         . S         .         .         .         .         .         .
20800 129. 0  I   .         .         .         .         .         . S         .         .         .         .         .         .
20815 130. 0  I   .         .         .         .         .         . S         .         .         .         .         .         .
20830 131. 0 . I . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
[illegible]45 132. 0  I   .         .         .         .         .         . S         .         .         .         .         .         .
20900 133. 0  I   .         .         .         .         .         . S         .         .         .         .         .         .
20915 134. 0  I   .         .         .         .         .         . S         .         .         .         .         .         .
20930 135. 0  I   .         .         .         .         .         .  S        .         .         .         .         .         .
20945 136. 0  I   .         .         .         .         .         .  S        .         .         .         .         .         .
21000 137. 0   I  .         .         .         .         .         .  S        .         .         .         .         .         .
21015 138. 0   I  .         .         .         .         .         .  S        .         .         .         .         .         .
21030 139. 0   I  .         .         .         .         .         .  S        .         .         .         .         .         .
21045 140.  0  I  .         .         .         .         .         .  S        .         .         .         .         .         .
21100 141. .0. .I. . . . . . . . . . . . . . . . . . . . . . . . . . S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
21115 142.  0  I  .         .         .         .         .         .  S        .         .         .         .         .         .
21130 143.  0  I  .         .         .         .         .         .  S        .         .         .         .         .         .
21145 144.  0  I  .         .         .         .         .         .  S        .         .         .         .         .         .
21200 145.  0  I  .         .         .         .         .         .  S        .         .         .         .         .         .
21215 146.  0  I  .         .         .         .         .         .   S       .         .         .         .         .         .
21230 147.  0  I  .         .         .         .         .         .   S       .         .         .         .         .         .
21245 148.  0  I  .         .         .         .         .         .   S       .         .         .         .         .         .
21300 149.  0  I  .         .         .         .         .         .   S       .         .         .         .         .         .
21315 150.  0  I  .         .         .         .         .         .   S       .         .         .         .         .         .
21330 151. .0. .I. . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
21345 152.  0  I  .         .         .         .         .         .   S       .         .         .         .         .         .
21400 153.  0  I  .         .         .         .         .         .   S       .         .         .         .         .         .
21415 154.  0  I  .         .         .         .         .         .   S       .         .         .         .         .         .
21430 155.  0  I  .         .         .         .         .         .   S       .         .         .         .         .         .
[illegible]445 156.  0  I  .         .         .         .         .         .   S       .         .         .         .         .         .
[illegible]0 157.  0   I  .         .         .         .         .         .    S      .         .         .         .         .         .
21515 158.  0   I  .         .         .         .         .         .    S      .         .         .         .         .         .
21530 159.  0     I         .         .         .         .         .    S      .         .         .         .         .         .
21545 160.  0     .I        .         .         .         .         .    S      .         .         .         .         .         .
21600 161. .0. . . . .I. . . . . . . . . . . . . . . . . . . . . . . . . S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
21615 162.  0     . I       .         .         .         .         .    S      .         .         .         .         .         .
21630 163.  0     .  I      .         .         .         .         .    S      .         .         .         .         .         .
21645 164.  0     .   I     .         .         .         .         .     S     .         .         .         .         .         .
21700 165.  0     .   I     .         .         .         .         .     S     .         .         .         .         .         .
21715 166.  0     .   I     .         .         .         .         .     S     .         .         .         .         .         .
21730 167.  0     .   I     .         .         .         .         .     S     .         .         .         .         .         .
21745 168.  0     .   I     .         .         .         .         .      S    .         .         .         .         .         .
21800 169.  0     .   I     .         .         .         .         .      S    .         .         .         .         .         .
21815 170.  0     .    I    .         .         .         .         .      S    .         .         .         .         .         .
21830 171. . 0 . . . . . . .I. . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
21845 172.  0     .        . I       .         .         .         .       S.   .         .         .         .         .         .
21900 173.  0     .        .  I      .         .         .         .       S.   .         .         .         .         .         .
21915 174.  0     .        .   I     .         .         .         .        S   .         .         .         .         .         .
21930 175.  0     .        .    I    .         .         .         .        S   .         .         .         .         .         .
21945 176.  0     .        .     I   .         .         .         .        S   .         .         .         .         .         .
22000 177.  0     .        .      I  .         .         .         .        .S  .         .         .         .         .         .
22015 178.   0    .        .      I  .         .         .         .        .S  .         .         .         .         .         .
22030 179.   0    .        .      I  .         .         .         .         . S .         .         .         .         .         .
22045 180.   0    .        .      I  .         .         .         .         . S .         .         .         .         .         .
22100 181. . .0. . . . . . . . . . .I. . . . . . . . . . . . . . . . . . . . . .S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
[illegible]15 182.   0    .        .       .I        .         .         .         . S .         .         .         .         .         .
[illegible]0 183.   0    .        .         .    I    .         .         .         .  S .         .         .         .         .         .
22145 184.   0    .        .         .         .  I   .         .         .         .   S .         .         .         .         .         .
22200 185.   0    .        .         .         .     I.         .         .         .    S .         .         .         .         .         .
22215 186.   0    .        .         .         .      .I        .         .         .     S .         .         .         .         .         .
22230 187.   0    .        .         .         .       . I      .         .         .      S .         .         .         .         .         .
22245 188.   0    .        .         .         .        .  I    .         .         .       S.         .         .         .         .         .
22300 189.    0   .        .         .         .         .   I   .         .         .        S         .         .         .         .         .
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22330 191. . . 0 . . . . . I . . . . . S . . . . . .
22345 192.     0 .       .       .       .       .   I.      .       . S     .       .       .
30000 193.     0 .       .       .       .       .   I.      .       .  S    .       .       .
30015 194.     0 .       .       .       .       .  I  .     .       .   S   .       .       .
30030 195.     0 .       .       .       .     I .       .     .       .    S  .       .       .
30045 196.     0 .       .       .     I .       .       .     .       .     S .       .       .
30100 197.     0 .       .     I .       .       .       .     .       .     S .       .       .
30115 198.     0 .       . I     .       .       .       .     .       .      S .       .       .
30130 199.     0 .       I       .       .       .       .     .       .      S .       .       .
30145 200.     0 .     I .       .       .       .       .     .       .      S .       .       .
30200 201. . . 0 . . . I . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . .
30215 202.     0 .   I   .       .       .       .       .     .       .       S.      .       .
30230 203.     0 .   I   .       .       .       .       .     .       .       S.      .       .
30245 204.     0 .  I    .       .       .       .       .     .       .       S.      .       .
30300 205.     0 .  I    .       .       .       .       .     .       .       S.      .       .
30315 206.     0 . I     .       .       .       .       .     .       .       S.      .       .
30330 207.     0 .I      .       .       .       .       .     .       .       S.      .       .
30345 208.     0  I      .       .       .       .       .     .       .       S.      .       .
30400 209.     0 I.      .       .       .       .       .     .       .       S.      .       .
30415 210.     0 I.      .       .       .       .       .     .       .        S      .       .
30430 211. . . 0 I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . .
30445 212.     0 I .     .       .       .       .       .     .       .        S      .       .
30500 213.     0I  .     .       .       .       .       .     .       .        S      .       .
30515 214.     0I  .     .       .       .       .       .     .       .        S      .       .
30530 215.     0I  .     .       .       .       .       .     .       .        S      .       .
30545 216.     0I  .     .       .       .       .       .     .       .        S      .       .
30600 217.     0I  .     .       .       .       .       .     .       .        S      .       .
30615 218.     0I  .     .       .       .       .       .     .       .        S      .       .
30630 219.     0I  .     .       .       .       .       .     .       .        S      .       .
30645 220.     I   .     .       .       .       .       .     .       .        S      .       .
30700 221. . . I . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . .
30715 222.    I0   .     .       .       .       .       .     .       .        S      .       .
30730 223.    I0   .     .       .       .       .       .     .       .        S      .       .
30745 224.    I0   .     .       .       .       .       .     .       .        S      .       .
30800 225.    I0   .     .       .       .       .       .     .       .        S      .       .
30815 226.    I0   .     .       .       .       .       .     .       .        S      .       .
30830 227.    I0   .     .       .       .       .       .     .       .        S      .       .
30845 228.    I0   .     .       .       .       .       .     .       .        S      .       .
30900 229.    I0   .     .       .       .       .       .     .       .        S      .       .
30915 230.    I0   .     .       .       .       .       .     .       .        S      .       .
30930 231. . .I0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . .
30945 232.    I0   .     .       .       .       .       .     .       .       S.      .       .
31000 233.    I0   .     .       .       .       .       .     .       .       S.      .       .
31015 234.    I0   .     .       .       .       .       .     .       .       S.      .       .
31030 235.    I0   .     .       .       .       .       .     .       .       S.      .       .
31045 236.    I0   .     .       .       .       .       .     .       .       S.      .       .
31100 237.    I0   .     .       .       .       .       .     .       .       S.      .       .
31115 238.    I0   .     .       .       .       .       .     .       .       S.      .       .
31130 239.    I0   .     .       .       .       .       .     .       .       S.      .       .
31145 240.    I0   .     .       .       .       .       .     .       .       S.      .       .
31200 241. . .I0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . .
31215 242.    I0   .     .       .       .       .       .     .       .       S.      .       .
31230 243.    I0   .     .       .       .       .       .     .       .       S.      .       .
31245 244.    I0   .     .       .       .       .       .     .       .       S.      .       .
31300 245.    I0   .     .       .       .       .       .     .       .       S.      .       .
31315 246.    I0   .     .       .       .       .       .     .       .       S.      .       .
31330 247.    I0   .     .       .       .       .       .     .       .       S.      .       .
31345 248.    I0   .     .       .       .       .       .     .       .       S.      .       .
31400 249.    I0   .     .       .       .       .       .     .       .       S.      .       .
31415 250.    I0   .     .       .       .       .       .     .       .       S.      .       .
31430 251. . .I0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .S. . . . . .
31445 252.    I0   .     .       .       .       .       .     .       .       S.      .       .
31500 253.    I0   .     .       .       .       .       .     .       .       S.      .       .
31515 254.    I0   .     .       .       .       .       .     .       .       S.      .       .
31530 255.   I 0   .     .       .       .       .       .     .       .       S.      .       .
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31600 257.   I 0  .         .         .         .         .         .         .         .         S.        .         .         .
31615 258.   I 0  .         .         .         .         .         .         .         .         S.        .         .         .
31630 259.   I 0  .         .         .         .         .         .         .         .         S.        .         .         .
31645 260.   I 0  .         .         .         .         .         .         .         .         S.        .         .         .
31700 261. . I 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . .
31715 262.  I  0  .         .         .         .         .         .         .         .         S .       .         .         .
31730 263.   I 0  .         .         .         .         .         .         .         .         S .       .         .         .
31745 264.   I 0  .         .         .         .         .         .         .         .         S .       .         .         .
31800 265.   I 0  .         .         .         .         .         .         .         .         S .       .         .         .
31815 266.   I 0  .         .         .         .         .         .         .         .         S .       .         .         .
31830 267.  I  0  .         .         .         .         .         .         .         .         S .       .         .         .
31845 268.  I  0  .         .         .         .         .         .         .         .         S .       .         .         .
31900 269.  I  0  .         .         .         .         .         .         .         .         S .       .         .         .
31915 270.  I  0  .         .         .         .         .         .         .         .         S .       .         .         .
31930 271. .I. 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . .
31945 272.  I  0  .         .         .         .         .         .         .         .         S .       .         .         .
32000 273.  I  0  .         .         .         .         .         .         .         .         S .       .         .         .
32015 274.  I  0  .         .         .         .         .         .         .         .         S .       .         .         .
32030 275. I   0  .         .         .         .         .         .         .         .         S .       .         .         .
32045 276. I   0  .         .         .         .         .         .         .         .        S  .       .         .         .
32100 277. I   0  .         .         .         .         .         .         .         .        S  .       .         .         .
32115 278. I   0  .         .         .         .         .         .         .         .        S  .       .         .         .
32130 279. I   0  .         .         .         .         .         .         .         .        S  .       .         .         .
32145 280. I   0  .         .         .         .         .         .         .         .        S  .       .         .         .
32200 281. I . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S. . . . . . . . . . . . . . . . . . .
32215 282. I   0  .         .         .         .         .         .         .         .        S  .       .         .         .
32230 283. I   0  .         .         .         .         .         .         .         .        S  .       .         .         .
32245 284. I   0  .         .         .         .         .         .         .         .        S  .       .         .         .
32300 285. I   0  .         .         .         .         .         .         .         .        S  .       .         .         .
32315 286. I   0  .         .         .         .         .         .         .         .        S  .       .         .         .
32330 287. I   0  .         .         .         .         .         .         .         .        S  .       .         .         .
32345 288. I   0  .         .         .         .         .         .         .         .        S  .       .         .         .
32400 289. I   0  .         .         .         .         .         .         .         .       S   .       .         .         .
40015 290. I   0  .         .         .         .         .         .         .         .       S   .       .         .         .
40030 291. I . 0 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . S . . . . . . . . . . . . . . . . . . .
40045 292. I   0  .         .         .         .         .         .         .         .       S   .       .         .         .
40100 293. I   0  .         .         .         .         .         .         .         .       S   .       .         .         .
40115 294.I    0  .         .         .         .         .         .         .         .       S   .       .         .         .
40130 295.I    0  .         .         .         .         .         .         .         .       S   .       .         .         .
40145 296.I    0  .         .         .         .         .         .         .         .       S   .       .         .         .
40200 297.I    0  .         .         .         .         .         .         .         .       S   .       .         .         .
40215 298.I    0  .         .         .         .         .         .         .         .       S   .       .         .         .
40230 299.I    0  .         .         .         .         .         .         .         .       S   .       .         .         .
40245 300.I----0---.---------.---------.---------.---------.---------.---------.---------.----S----.---------.---------.---------.
```

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	WS-5	16581.	48.00	11710.	4935.	2029.	16.01		
+	DIVERSION TO	TO-6	4974.	48.00	3513.	1480.	609.	16.01		
+	HYDROGRAPH AT	TO-7	11607.	48.00	8197.	3454.	1420.	16.01		
+	ROUTED TO	CH-7	11549.	48.50	8181.	3454.	1420.	16.01		
+	HYDROGRAPH AT	WS-7	33207.	48.25	23757.	10186.	4191.	33.07		
+	2 COMBINED AT	CP-2	44695.	48.25	31938.	13640.	5611.	49.08		
+	HYDROGRAPH AT	TO-6	4974.	48.00	3513.	1480.	609.	.00		
	ROUTED TO	CH-6	4947.	48.50	3505.	1480.	609.	.00		
+	HYDROGRAPH AT	WS-6	5968.	48.00	4189.	1734.	709.	5.65		
+	2 COMBINED AT	CP-3	10802.	48.00	7608.	3213.	1318.	5.65		
+	2 COMBINED AT	CP-4	55437.	48.25	39492.	16852.	6929.	54.73		
+	ROUTED TO	GRAD	55347.	48.25	39489.	15464.	6064.	54.73		
+									1398.88	48.25
+	DIVERSION TO	8-12	513.	48.25	508.	494.	324.	54.73		
+	HYDROGRAPH AT	OUT	54834.	48.25	38981.	14970.	5740.	54.73		
+	HYDROGRAPH AT	8-12	513.	48.25	508.	494.	324.	.00		
	DIVERSION TO	TO-12	0.	48.25	0.	0.	0.	.00		
+	HYDROGRAPH AT	TO-8	513.	48.25	508.	494.	324.	.00		
+	ROUTED TO	CH-8	513.	48.50	508.	494.	322.	.00		

+		WS-8	965.	48.00	695.	280.	116.	.90	
	2 COMBINED AT								
+		CP-5	1478.	48.00	1201.	754.	439.	.90	
	DIVERSION TO								
+		TO-10	739.	48.00	600.	377.	219.	.90	
	HYDROGRAPH AT								
+		TO-9	739.	48.00	600.	377.	219.	.90	
	ROUTED TO								
+		CH-9	738.	48.00	597.	377.	218.	.90	
	HYDROGRAPH AT								
+		WS-9	1771.	48.00	1254.	504.	204.	1.67	
	2 COMBINED AT								
+		CP-6	2509.	48.00	1851.	871.	422.	2.57	
	HYDROGRAPH AT								
+		TO-10	739.	48.00	600.	377.	219.	.00	
	ROUTED TO								
+		CH-10	738.	48.00	598.	377.	218.	.00	
	HYDROGRAPH AT								
+		WS-10	2224.	48.00	1564.	628.	252.	2.11	
	2 COMBINED AT								
+		CP-7	2962.	48.00	2160.	995.	470.	2.11	
	HYDROGRAPH AT								
+		WS-11	6741.	48.00	4747.	1928.	782.	6.35	
	HYDROGRAPH AT								
+		TO-12	0.	.25	0.	0.	0.	.00	
	ROUTED TO								
+		CH-12	0.	.25	0.	0.	0.	.00	
	HYDROGRAPH AT								
+		WS-12	6813.	48.00	4800.	2008.	810.	6.71	
	2 COMBINED AT								
+		CP-12	6813.	48.00	4800.	2008.	810.	6.71	
	HYDROGRAPH AT								
+		WS-13	4742.	48.00	3343.	1362.	555.	4.46	
	5 COMBINED AT								
+		SBFRS	23766.	48.00	16697.	7155.	3038.	22.20	
	DIVERSION TO								
+		0.5FRS	11883.	48.00	8349.	3577.	1519.	22.20	
	HYDROGRAPH AT								
		SBHYD	11883.	48.00	8349.	3577.	1519.	22.20	
	ROUTED TO								
+		SBFRS	1250.	54.75	1249.	1236.	663.	22.20	
+									1192.07 54.75

SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION SBFRS

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1175.00	1193.00	1193.00
STORAGE	0.	7012.	7012.
OUTFLOW	0.	1315.	1315.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1192.07	.00	5950.	1250.	.00	54.75	.00

*** NORMAL END OF HEC-1 ***

APPENDIX C

Curve Number Modification Calculation

CURVE NUMBER CALCULATION

WATERSHED NUMBER	SOIL GROUP NUMBER	CURVE NUMBER	WATERSHED AREA (SQ.MI.)	WEIGHTED CURVE NUMBER	
8	2	83	0.0333	3.10	
	10	92	0.8667	88.60	
			---	---	
			0.9000	91.70	92
9	2	83	0.1561	7.76	
	4	88	0.8896	46.88	
	5	83	0.6243	31.03	
			---	---	
			1.6700	85.70	86
10	2	83	0.2641	10.39	
	4	88	0.2641	11.01	
	5	83	1.5818	62.22	
			---	---	
			2.1100	83.63	84
11	2	83	3.5154	45.95	
	10	92	2.8346	41.07	
			---	---	
			6.3500	87.02	87
12	1	83	4.1563	51.41	
	2	83	0.1908	2.36	
	4	88	1.7088	22.41	
	5	83	0.2589	3.20	
	10	92	0.3952	5.42	
			---	---	
			6.7100	84.80	85

JOB NO.: CARTER = 016-83394-02
FDCMC = FDC-88-66

CALC. BY B. Mill
CHECK BY RJS

APPENDIX D

Time of Concentration and Lag Time Calculation

A

TIME OF CONCENTRATION

AND

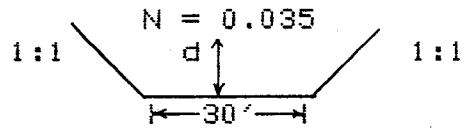
TIME OF LAG CALCULATION

COMPUTE TIME OF CONCENTRATION (Tc) AND TIME OF LAG (TL) FOR GIVEN WATERSHED AREAS:

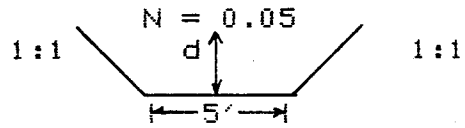
1) HQFRS WATERSHED AREAS
2) SBFRS WATERSHED AREAS

PROCEDURE:

1) TYPICAL SECTION FOR SLOPES < 10%.



2) FOR SLOPES > 10% USE :



3) ASSUME BANK-FULL CONDITIONS:
   A) d = 1' @ SLOPE > 3%
   B) d = 2' @ SLOPE < 3%

4) BREAK EACH AREA INTO REACHES WITH UNIFORM SLOPES. WHERE REACH LENGTHS (L) ARE SET @ 200' INTERVALS.

5) SOLVE FOR VELOCITY USING MANNING EQUATION:

$$V = \frac{1.486 * R^{2/3} * S^{1/2}}{N}$$

6) SOLVE FOR Tc: $Tc = \frac{L}{V * 3600}$ ASSUME: Tc > 0.01

7) SOLVE FOR TL = Tc * 0.6

JOB NO.: CARTER = 016-83394-02
FDCMC = FDC-88-66

CALC. BY BWM
CHECK BY RJS

TIME OF CONCENTRATION

AND

TIME OF LAG CALCULATION

WSD NO.	ELEVATION FROM	TO	REACH LENGTH (FT)	SLOPE (%)	V (FPS)	Tc (HRS.)	TOTAL TL (HRS.)
1	2400	2200	9000	2.22	9.3	0.27	
	2200	2000	11000	1.82	8.5	0.36	
	2000	1800	11250	1.78	8.4	0.37	
	1800	1600	15000	1.33	7.2	0.58	
	1600	1400	23500	0.85	5.8	1.13	
						2.71	1.63
2	2800	2600	600	33.33	14.4	0.01	
	2600	2400	4250	4.71	8.9	0.13	
	2400	2200	10000	2.00	8.9	0.31	
	2200	2000	10500	1.90	8.6	0.34	
	2000	1800	12250	1.63	8.0	0.43	
	1800	1600	14500	1.38	7.4	0.54	
	1600	1400	19000	1.05	6.4	0.82	
						2.58	1.55
3	2800	2600	800	25.00	12.4	0.02	
	2600	2400	1700	11.76	8.5	0.06	
	2400	2200	500	40.00	15.7	0.01	
	2200	2000	3500	5.71	9.8	0.10	
	2000	1800	4000	5.00	9.1	0.12	
	1800	1600	8000	2.50	9.9	0.22	
	1600	1400	9500	2.11	9.1	0.29	
						0.82	0.49
4	2800	2600	300	66.67	20.3	0.01	
	2600	2400	500	40.00	15.7	0.01	
	2400	2200	1000	20.00	11.1	0.03	
	2200	2000	3000	6.67	10.6	0.08	
	2000	1800	7500	2.67	10.3	0.20	
	1800	1600	12500	1.60	7.9	0.44	
	1600	1400	15500	1.29	7.1	0.61	
						1.38	0.83
5	2800	2600	600	33.33	14.4	0.01	
	2600	2400	2200	9.09	12.3	0.05	
	2400	2200	4000	5.00	9.1	0.12	
	2200	2000	9000	2.22	9.3	0.27	
	2000	1800	12500	1.60	7.9	0.44	
	1800	1600	20500	0.98	6.2	0.92	
						1.81	1.09

6	2000	1800	1000	20.00	11.1	0.03	
	1800	1600	14000	1.43	7.5	0.52	
	1600	1400	18500	1.08	6.5	0.79	
						1.34	0.80
7	3000	2800	500	40.00	15.7	0.01	
	2800	2600	1000	20.00	11.1	0.03	
	2600	2400	1500	13.33	9.1	0.05	
	2400	2200	3800	5.36	9.4	0.11	
	2200	2000	5000	4.00	8.2	0.17	
	2000	1800	16500	1.21	6.9	0.66	
	1800	1600	15000	1.33	7.2	0.58	
	1600	1400	17500	1.14	6.7	0.73	
						2.34	1.40
8	2200	2000	500	40.00	15.7	0.01	
	2000	1800	300	66.67	20.3	0.01	
	1800	1600	300	66.67	20.3	0.01	
	1600	1400	600	33.33	14.4	0.01	
	1400	1310	8000	1.13	6.7	0.33	
						0.37	0.22
9	1310	1190	13750	0.87	5.9	0.65	0.39
10*	1300	1190	11250	0.98	4.1	0.76	0.46
11*	2800	2000	1500	53.33	18.2	0.02	
	2000	1800	600	33.33	14.4	0.01	
	1800	1600	1300	15.38	9.8	0.04	
	1600	1400	2500	8.00	11.6	0.06	
	1400	1200	10000	2.00	5.8	0.48	
	1200	1180	3200	0.63	3.2	0.28	
						0.89	0.53
12	1370	1240	15500	0.84	5.8	0.74	
	1240	1170	17000	0.41	4.0	1.18	
						1.92	1.15
13	2000	1600	600	66.67	20.3	0.01	
	1600	1400	2000	10.00	7.9	0.07	
	1400	1200	10000	2.00	8.9	0.31	
	1200	1170	7500	0.40	4.0	0.52	
						0.91	0.55

* USE d = 1'

JOB NO.: CARTER = 016-83394-02
FDCMC = FDC-88-66

CALC. BY BWM
CHECK BY RJS

APPENDIX E

Probable Maximum Precipitation Calculations

ONE HOUR INCREMENT
OF
72-HOUR PMP

HOUR	TOTAL RAINFALL (INCH)	HOUR	TOTAL RAINFALL (RAIN)	HOUR	TOTAL RAINFALL (RAIN)
1	0.03	25	1.70	49	13.00
2	0.07	26	1.80	50	13.30
3	0.10	27	1.90	51	13.60
4	0.13	28	2.03	52	13.77
5	0.17	29	2.17	53	13.93
6	0.20	30	2.30	54	14.11
7	0.23	31	2.47	55	14.20
8	0.27	32	2.63	56	14.30
9	0.30	33	2.80	57	14.40
10	0.37	34	3.00	58	14.50
11	0.43	35	3.20	59	14.60
12	0.50	36	3.40	60	14.70
13	0.57	37	3.60	61	14.80
14	0.63	38	3.80	62	14.90
15	0.70	39	4.00	63	15.00
16	0.80	40	4.43	64	15.07
17	1.90	41	4.87	65	15.13
18	1.00	42	5.30	66	15.20
19	1.10	43	6.10	67	15.23
20	1.20	44	6.90	68	15.27
21	1.30	45	7.70	69	15.30
22	1.40	46	9.37	70	15.33
23	1.50	47	11.03	71	15.37
24	1.60	48	12.70	72	15.40

JOB NO.: CARTER = 016-83394-02
FDCMC = FDC-88-66

CALC. BY BWM
CHECK BY RJS

CARTER ASSOCIATES, INC.
ENGINEERING
SURVEYING
PLANNING

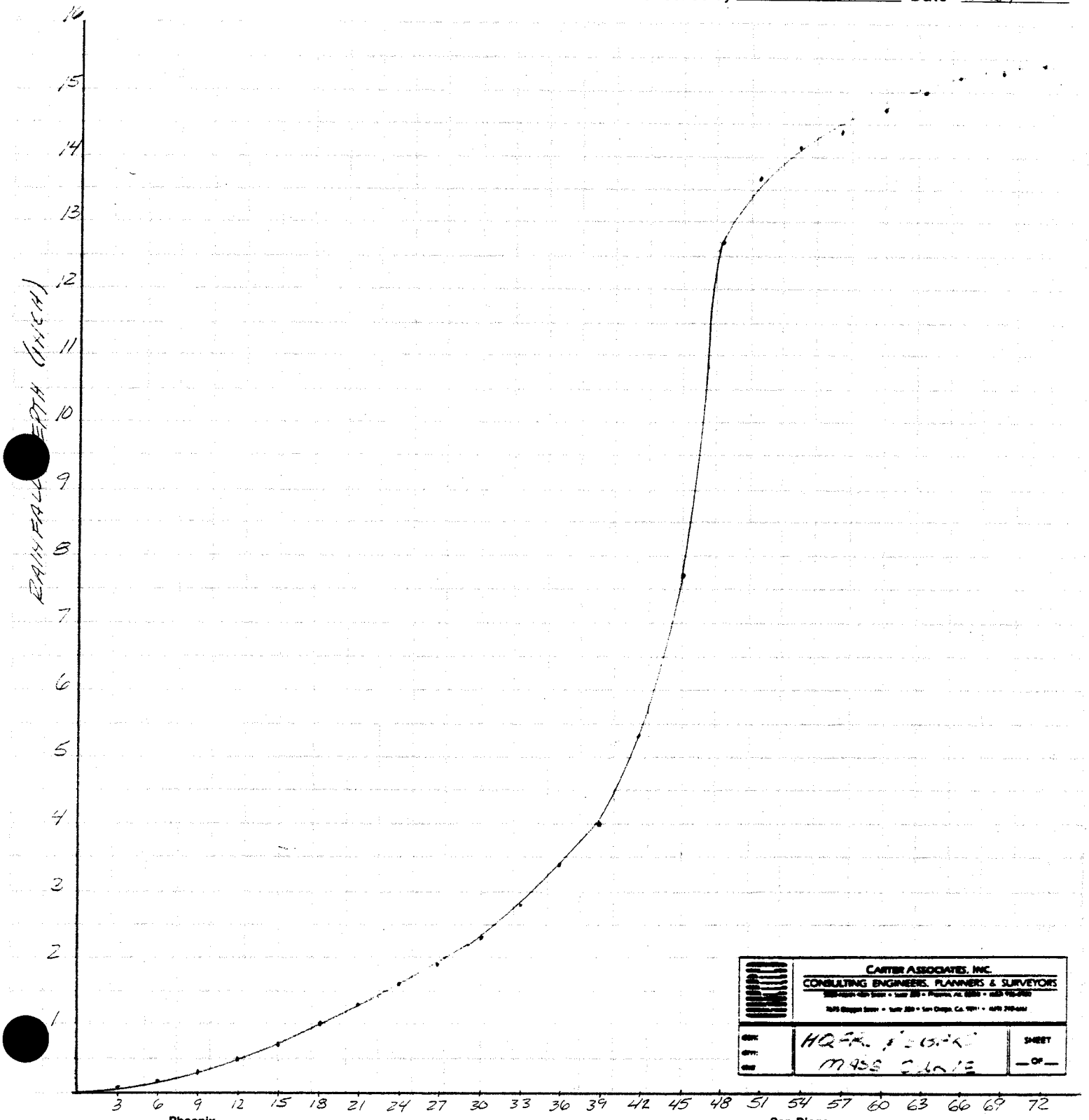
Project No. 016-83394-02 FCD 88-66

Project Name HQ FRS & SBFRS

Sheet No. _____ of _____

Calculated by BWM Date June 90

Checked by RJS Date Jun 90



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Job No. 016.83394.02
FCD-88-66
computed by EM
checked by RWM

Table 6.1.--General-storm PMP computations for the Colorado River and Great basin

Drainage Harquahala & Saddleback FRS Area 180.22 mi^2 (km^2)

Latitude 33° 37', Longitude 113° 08' of basin center

Month August

Step	Duration (hrs) 6	12	18	24	48	72
A. Convergence PMP						
1. Drainage average value from one of figures 2.5 to 2.16	13.5 in. (mm)					
2. Reduction for barrier-elevation [fig. 2.18]	85 %					
3. Barrier-elevation reduced PMP [step 1 X step 2]	11.5 in. (mm)					
4. Durational variation [figs. 2.25 to 2.27 and table 2.7].	74	89	95	100	112	117%
5. Convergence PMP for indicated durations [steps 3 X 4]	8.5	10.2	10.9	11.5	12.9	13.5 in. (mm)
6. Incremental 10 mi^2 (26 km^2) PMP [successive subtraction in step 5]	8.5	1.7	0.7	0.6	1.4	0.6 in. (mm)
7. Areal reduction [select from figs. 2.28 and 2.29]	76	91	95	98	100	100 %
8. Areally reduced PMP [step 6 X step 7]	6.46	1.55	0.67	0.59	1.4	0.6 in. (mm)
9. Drainage average PMP [accumulated values of step 8]	6.46	8.01	8.68	9.27	10.67	11.27 in. (mm)
B. Orographic PMP						
1. Drainage average orographic index from figure 3.11a to d.	2.7 in. (mm) (Revised)					
2. Areal reduction [figure 3.20]	93 %					
3. Adjustment for month [one of figs. 3.12 to 3.17]	100%					
4. Areally and seasonally adjusted PMP [steps 1 X 2 X 3]	2.5 in. (mm)					
5. Durational variation [table 3.9]	35	62	83	100	143	162%
6. Orographic PMP for given durations [steps 4 X 5]	.9	1.6	2.1	2.5	3.6	4.1 in. (mm)
C. Total PMP						
1. Add steps A9 and B6	7.36	9.61	10.8	11.8	14.3	15.4 in. (mm)

2. PMP for other durations from smooth curve fitted to plot of computed data.

3. Comparison with local-storm PMP (see sec. 6.3).

72-HOUR PMP
FOR
HQFRS AND SBFRS

RAINFALL DISTRIBUTION			MASS CURVE		
RATING	HOUR	INCREMENTAL RAINFALL (INCH)	HOUR	INCREMENTAL RAINFALL	TOTAL RAINFALL (INCH)
1	48	5.0	3	0.1	0.1
2	45	2.4	6	0.1	0.2
3	42	1.3	9	0.1	0.3
4	51	0.9	12	0.2	0.5
5	39	0.6	15	0.2	0.7
6	36	0.6	18	0.3	1.0
7	54	0.5	21	0.3	1.3
8	33	0.5	24	0.3	1.6
9	30	0.4	27	0.3	1.9
10	57	0.3	30	0.4	2.3
11	27	0.3	33	0.5	2.8
12	24	0.3	36	0.6	3.4
13	60	0.3	39	0.6	4.0
14	21	0.3	42	1.3	5.3
15	18	0.3	45	2.4	7.7
16	63	0.3	48	5.0	12.7
17	15	0.2	51	0.9	13.6
18	12	0.2	54	0.5	14.1
19	66	0.2	57	0.3	14.4
20	9	0.1	60	0.3	14.7
21	6	0.1	63	0.3	15.0
22	69	0.1	66	0.2	15.2
23	3	0.1	69	0.1	15.3
24	24	0.1	72	0.1	15.4

JOB NO.: CARTER = 016-83394-02
FDCMC = FDC-88-66

CALC. BY RWM
CHECK BY RJS

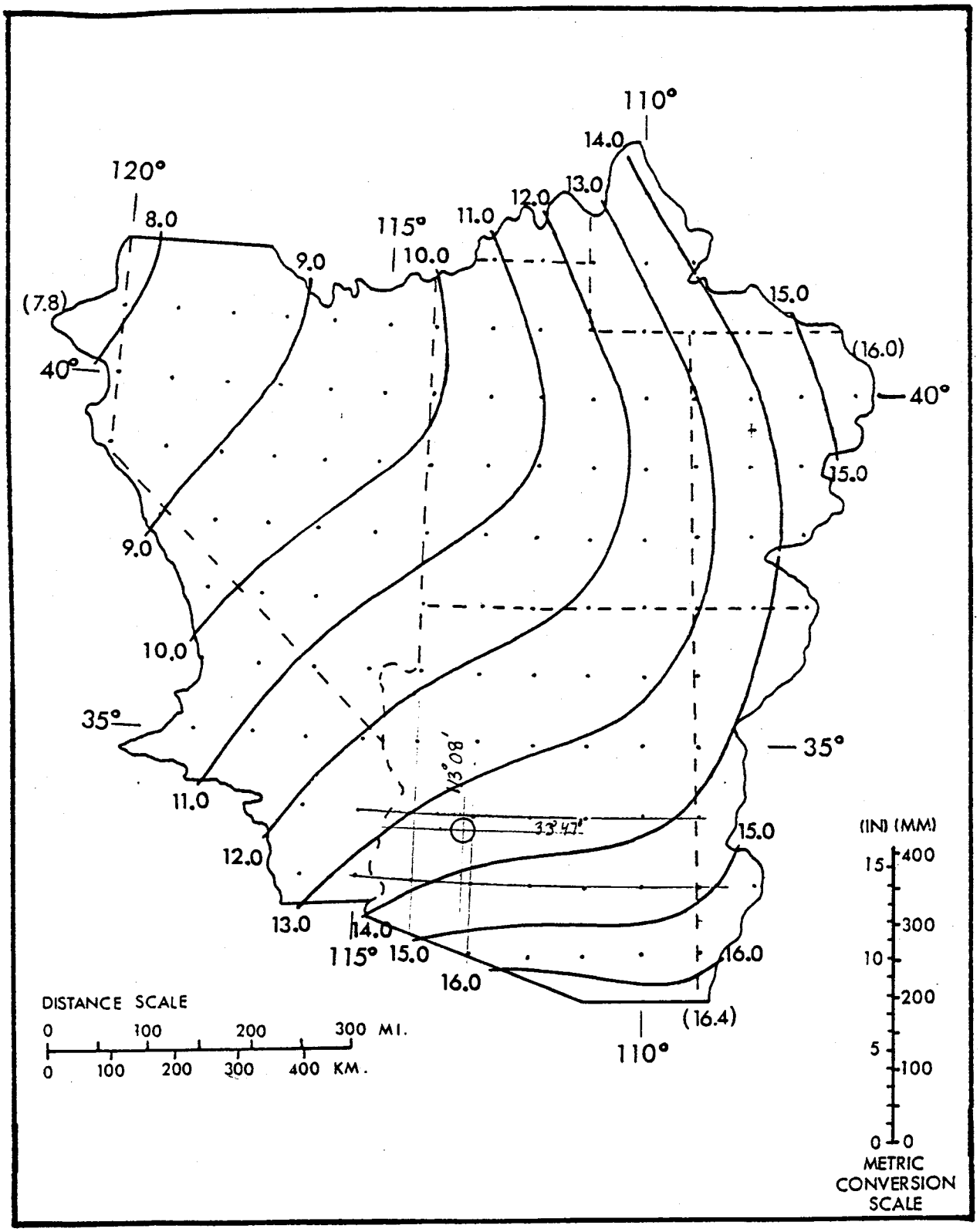


Figure 2.12.--1000-mb (100-kPa) 24-hr convergence PMP (inches) for 10 mi^2 (26 km^2) for August. Values in parentheses are limiting values and are to facilitate extrapolation beyond the indicated gradient.

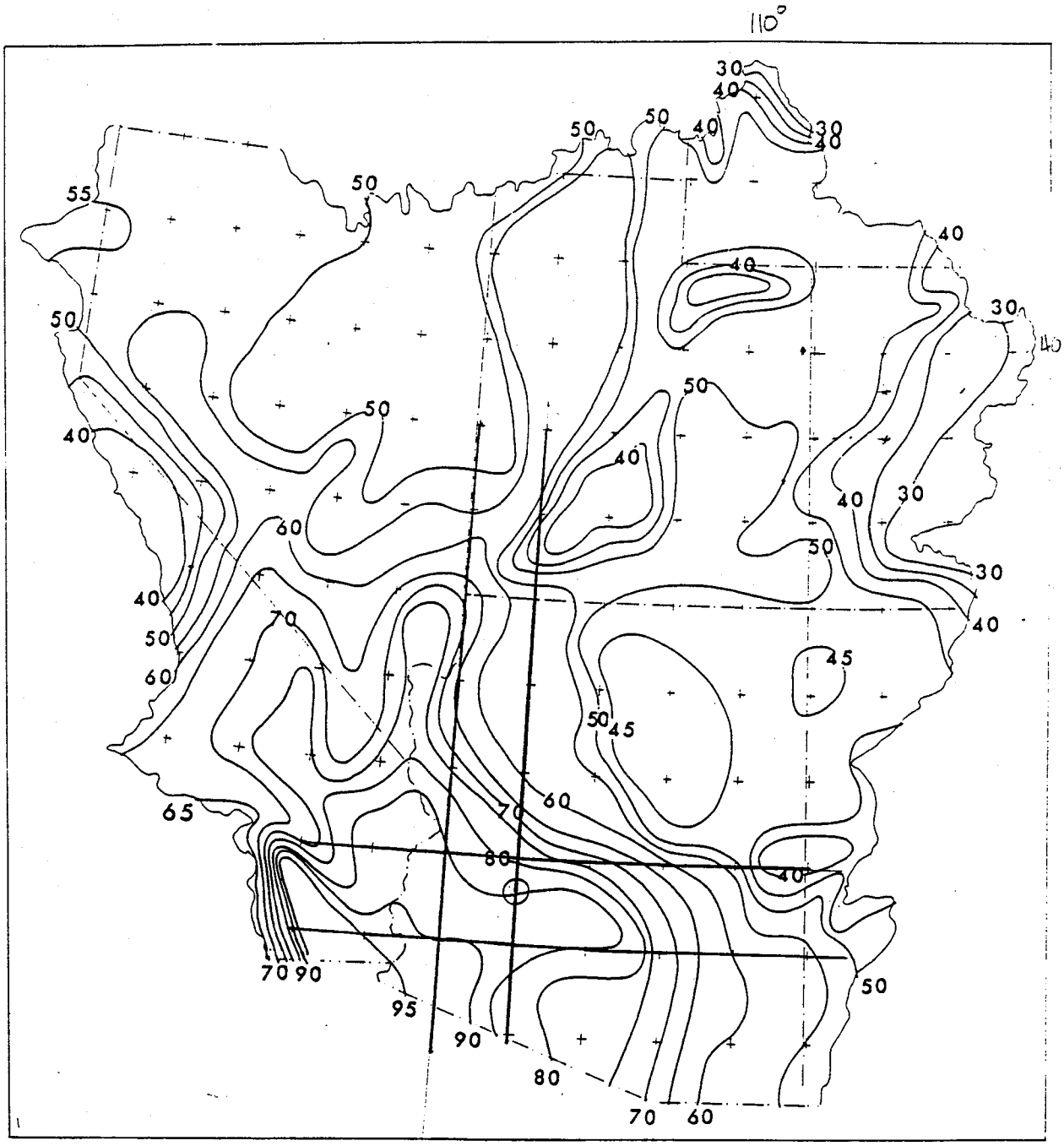
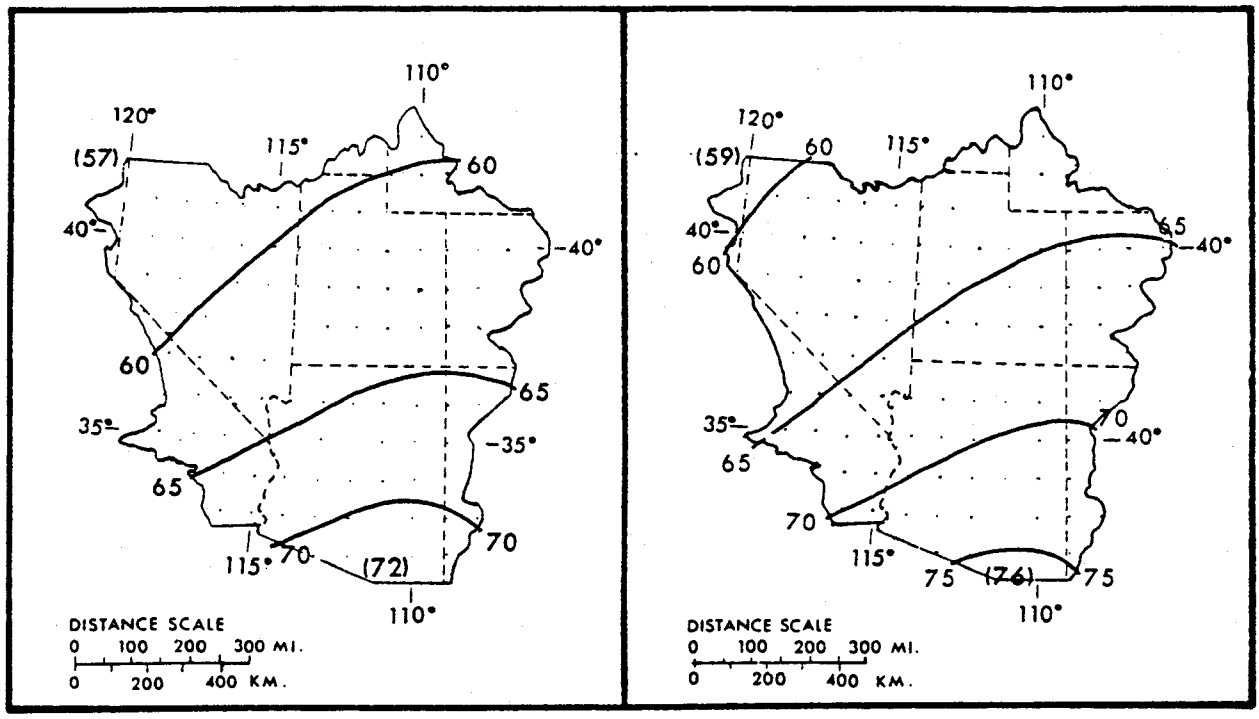
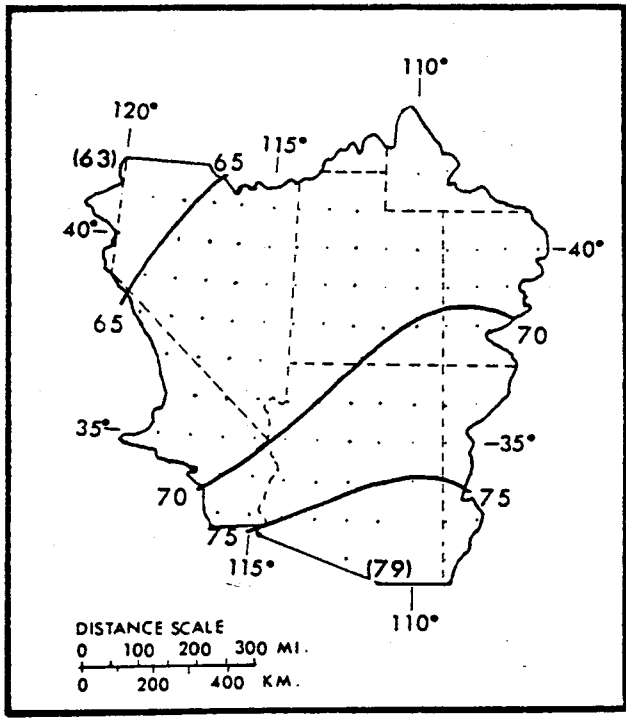


Figure 2.18.--Percent of 1000-mb (100-kPa) convergence PMP resulting from effective elevation and barrier considerations. Isolines drawn for every five percent.

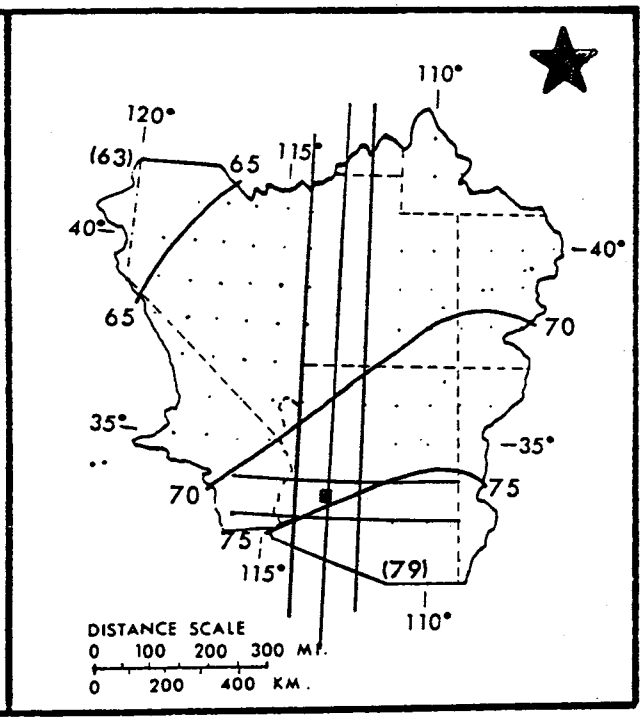


May

June

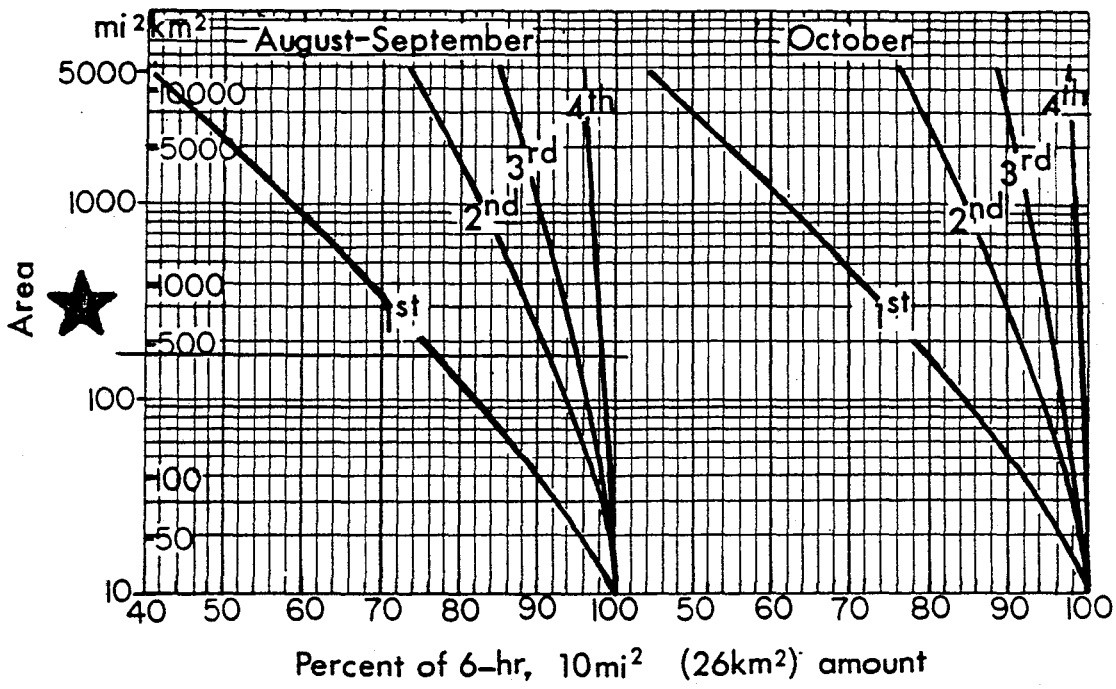


July



August

Figure 2.26.--Regional variation of 6/24-hr ratios by month (percent). Values in parentheses are limiting values and are to facilitate extrapolation beyond the indicated gradient.



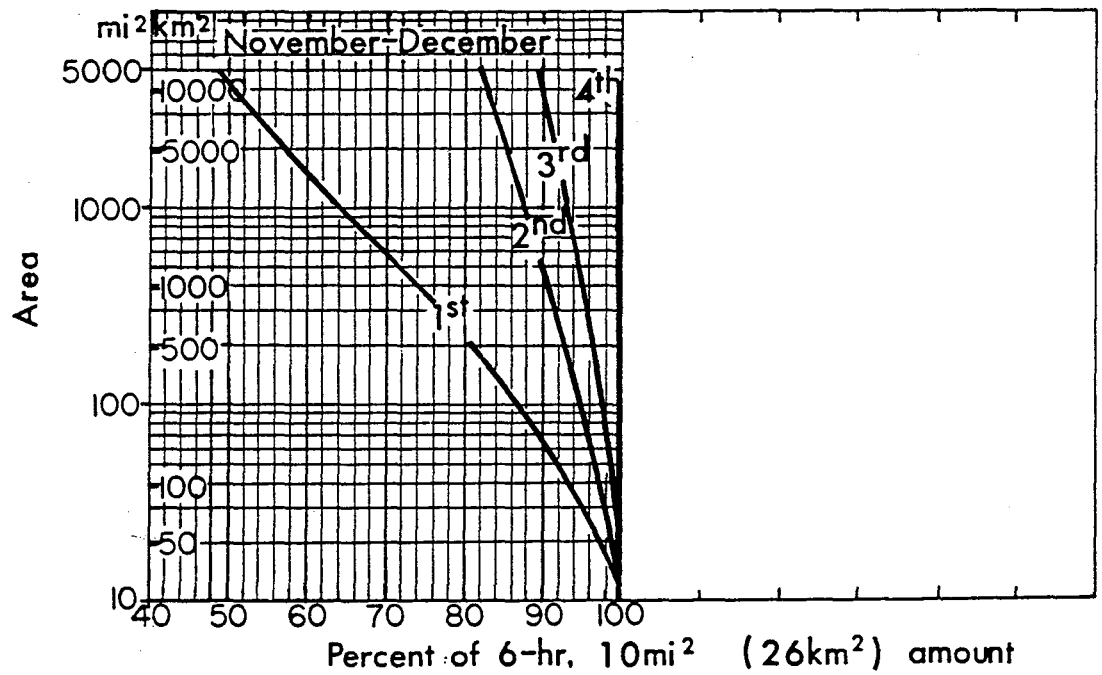
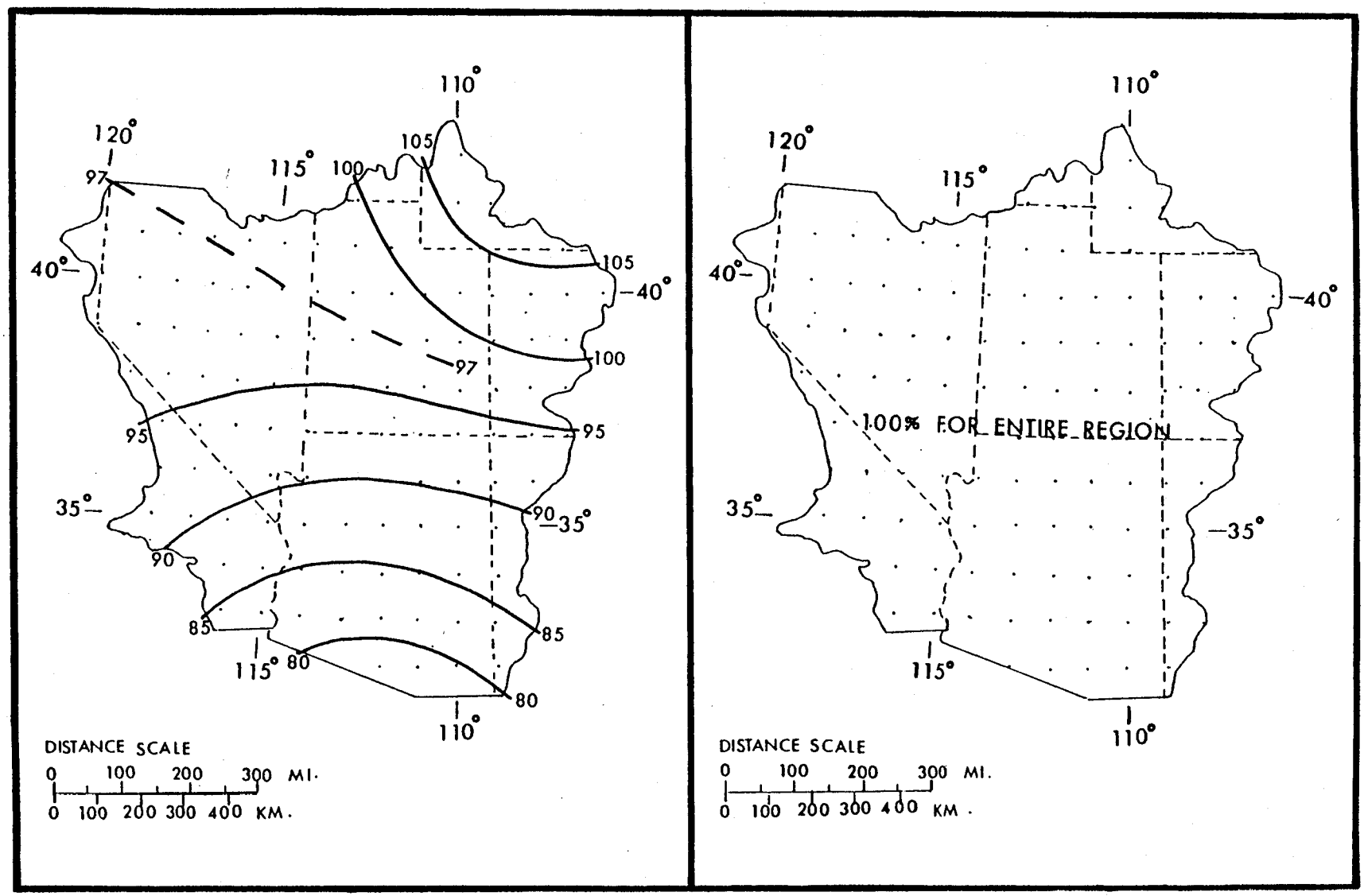


Figure 2.29.--Depth-area variation for convergence PMP for first to fourth 6-hr increments.



July *August*

Figure 3.15.--Seasonal variation in 10-mi^2 (26-km^2) 24-hr orographic PMP for the study region (in percent of values in figure 3.11).

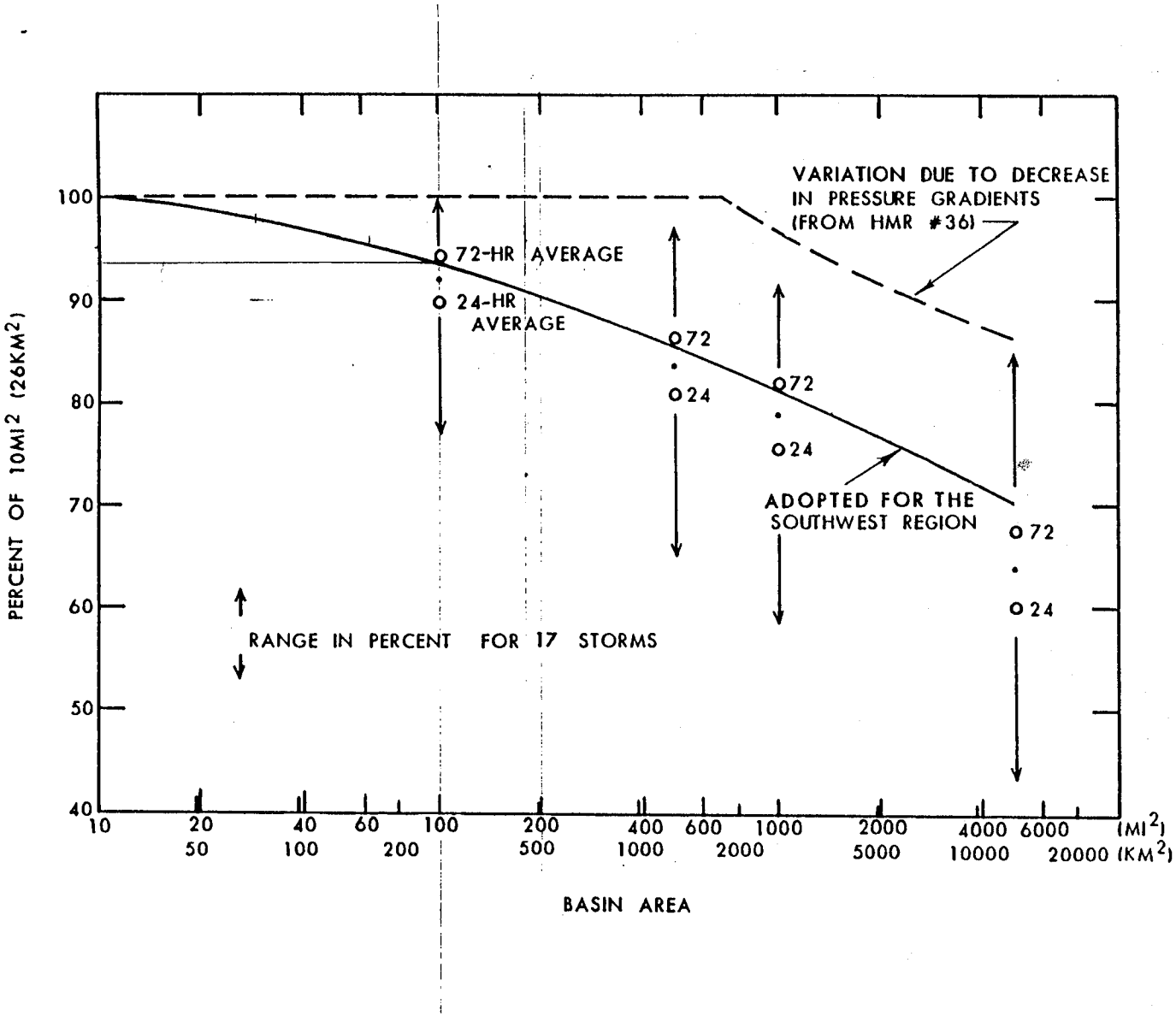


Figure 3.20.--Variation of orographic PMP with basin size.

Table 3.9.--Durational variation of orographic PMP

Latitude °N	Percent of 24-hr value					
	6 hr	12	18	24	48	72
42	28	55	79	100	161	190
41	29	56	79	100	160	189
40	30	57	80	100	159	187
39	30	57	80	100	157	185
38	31	58	81	100	155	182
37	32	59	81	100	152	177
36	33	60	82	100	149	172
35	34	61	82	100	146	167
34	35	62	83	100	143	162
33	36	63	84	100	139	157
32	37	64	84	100	135	152
31	39	66	85	100	132	146

4. LOCAL-STORM PMP FOR THE SOUTHWESTERN REGION AND CALIFORNIA

4.1 Introduction

This chapter provides generalized estimates of local or thunderstorm probable maximum precipitation. By "generalized" is meant that mapped values are given from which estimates of PMP may be determined for any selected drainage.

4.1.1 Region of Interest

Local-storm PMP was not included in the "Interim Report, Probable Maximum Precipitation in California" (HMR No. 36). During the formulation of the present study, we decided that the local-storm part of the study should include California west of the Sierra Nevada. It was also noted that PMP for summer thunderstorms was not considered west of the Cascade Divide in the Northwestern Region (HMR No. 43). As stated in the latter report, "No summer thunderstorms have been reported there (west of the Divide) of an intensity of those to the east, for which the moisture source is often the Gulf of Mexico or Gulf of California. The Cascade Divide offers an additional barrier to such moisture inflows to coastal areas where, in addition, the Pacific Ocean to the west has a stabilizing influence on the air to hinder the occurrence of intense summer local storms." Therefore, it was necessary to establish some continuation of the Cascade Divide into California so that the local-storm PMP definition would have continuity between the two regions.

The stabilizing influence of the Pacific air is at times interrupted by the warm moist tropical air from the south pushing into California, although it is difficult to determine where the limit of southerly flow occurs. General storms having the tropical characteristic of excessive thunderstorm rains are observed as far north as the northern end of the Sacramento Valley. Thus, a northern boundary has been selected for this study, excluding that portion of

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

DESIGN OF SMALL DAMS

A Water Resources Technical Publication

Second Edition
1973
Revised Reprint
1977

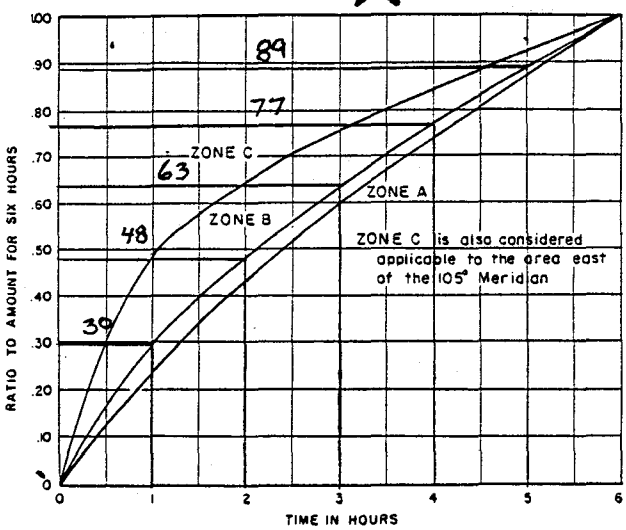


Figure 18. Distribution of 6-hour rainfall for area west of 105° meridian. See figure 17 for area included within each zone. 288–D–2758.

(2) *Generalized charts for the United States west of 105° meridian.*—Separate charts of probable maximum precipitation are presented for general-type storms which cover relatively large areas of rainfall, and for thunderstorm rainfall having limited areal coverage.

a. *General-type storm.*—Figure 17 shows probable maximum 6-hour point general-type storm values for areas of the United States west of the 105° meridian. This chart is based on the results of approximately 330 design storm analyses prepared by the Bureau of Reclamation for specific drainage basins west of the 105° meridian, as well as consideration of numerous design storm analyses made by the Special Studies and Hydrometeorological Branches of the National Weather Service. The variable topography of this part of the United States greatly influences the storm potential and permits only limited transposition of storms. These point storm values can be applied to areas up to 1,000 square miles by use of the curves presented on figure 19. The 6-hour general-type storm values can be extended for longer duration periods by multiplying the 6-hour value by the appropriate factor shown in table 1. Values for duration of less than 6 hours can be obtained from the appropriate curve of figure 18.

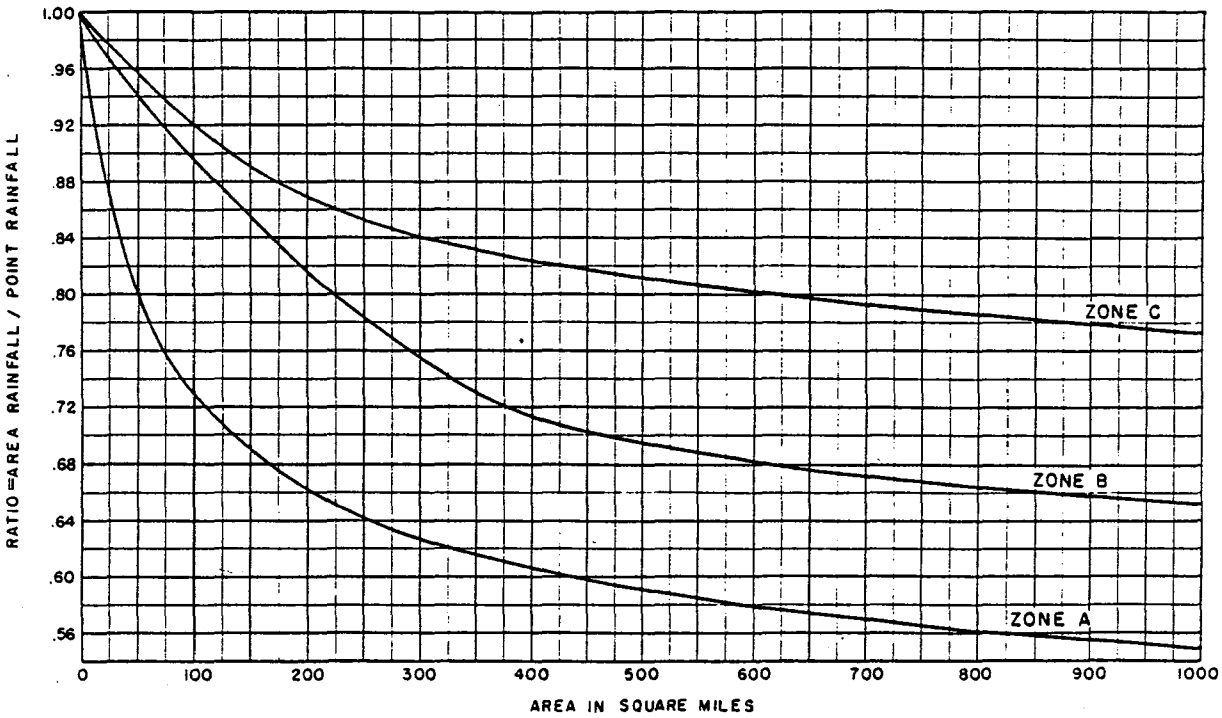


Figure 19. General storm: conversion ratio from 6-hour point rainfall to 6-hour area rainfall for area west of 105° meridian. 288–D–2759.

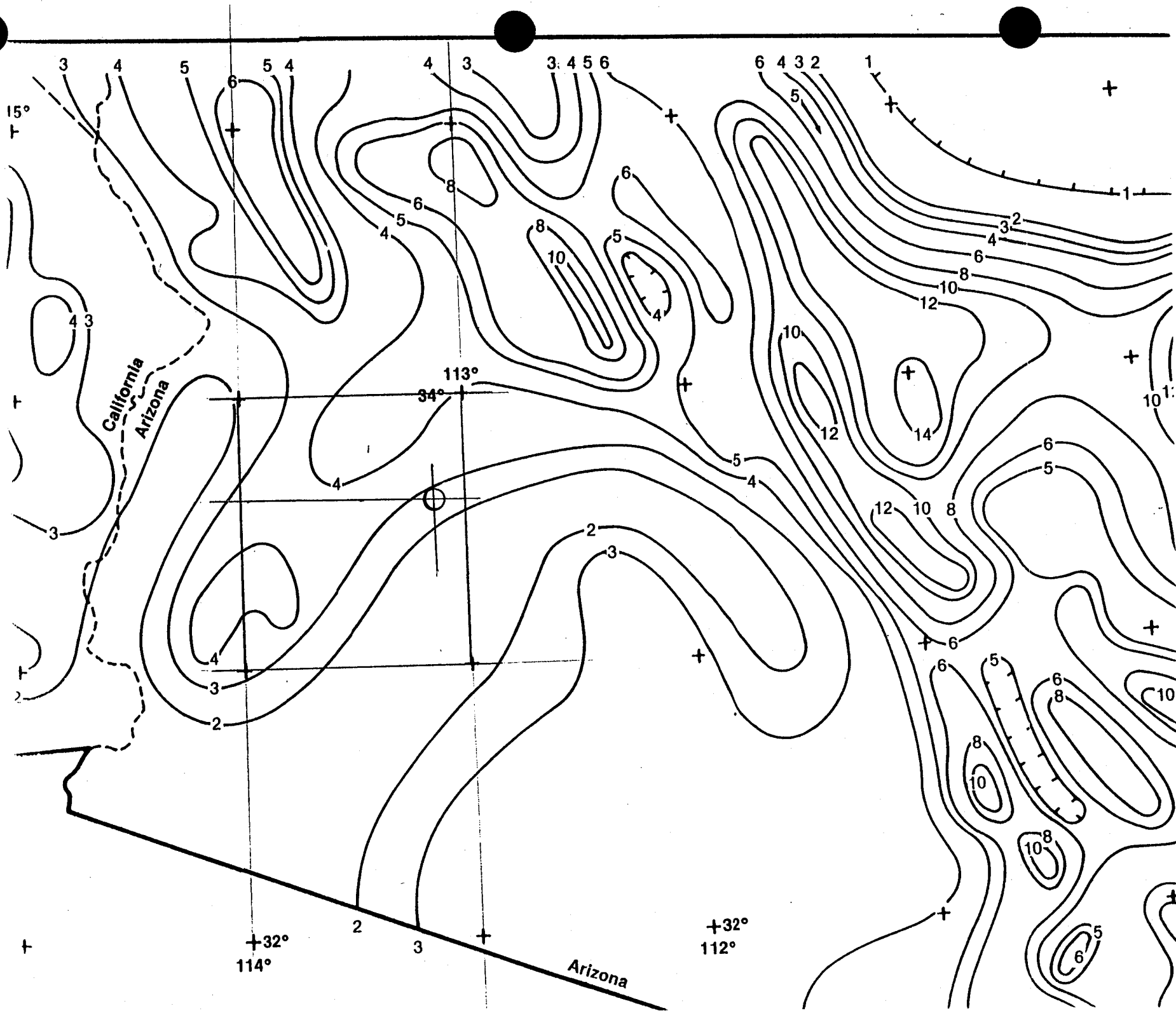


FIGURE 3.11d (Revised) — 10-mi² (26-km²) 24-hr orographic PMP index map (inches), southern section.

6-HOUR PMP
FOR
HQFRS AND SBFRS

HQFRS		SBFRS	
15 MINUTE INCREMENT	TOTAL RAINFALL	15 MINUTE INCREMENT	TOTAL RAINFALL
0:15	0.00	0:00	0.00
0:15	0.14	0:15	0.13
0:30	0.29	0:30	0.23
0:45	0.43	0:45	0.35
1:00	0.60	1:00	0.50
1:15	0.78	1:15	0.65
1:30	0.95	1:30	0.85
1:45	1.12	1:45	1.10
2:00	1.50	2:00	1.50
2:15	4.30	2:15	4.70
2:30	5.60	2:30	6.20
2:45	6.30	2:45	7.00
3:00	7.00	3:00	7.60
3:15	7.50	3:15	8.05
3:30	7.85	3:30	8.45
3:45	8.15	3:45	8.75
4:00	8.40	4:00	9.00
4:15	8.55	4:15	9.15
4:30	8.70	4:30	9.31
4:45	8.85	4:45	9.45
5:00	9.00	5:00	9.60
5:15	9.1	5:15	9.72
5:30	9.25	5:30	9.83
5:45	9.36	5:45	9.95
6:00	9.50	6:00	10.10

FILE: 6HRPMP
JOB NO.: CARTER = 016-83394-02
FDCMC = FDC-88-66

CALC. BY BWM
CHECK BY RTB

Job No. 016.83394.02
FCD-88-66
computed by RM
checked by SWM

Table 6.3A.--Local-storm PMP computation, Colorado River, Great Basin and California drainages. For drainage average depth PMP. Go to table 6.3B if areal variation is required.

Drainage Harquahala FRS Area 103.29 mi^2 (km^2)
Latitude 33° 40' Longitude 113.12 Minimum Elevation 1400 ft (m)

Steps correspond to those in sec. 6.3A.

1. Average 1-hr 1-mi^2 (2.6-km^2) PMP for drainage [fig. 4.5]. 11.5 in. (mm)

2. a. Reduction for elevation. [No adjustment for elevations up to 5,000 feet (1,524 m): 5% decrease per 1,000 feet (305 m) above 5,000 feet (1,524 m)]. 100 %

   b. Multiply step 1 by step 2a. 11.5 in. (mm)

3. Average 6/1-hr ratio for drainage [fig. 4.7]. 1.3

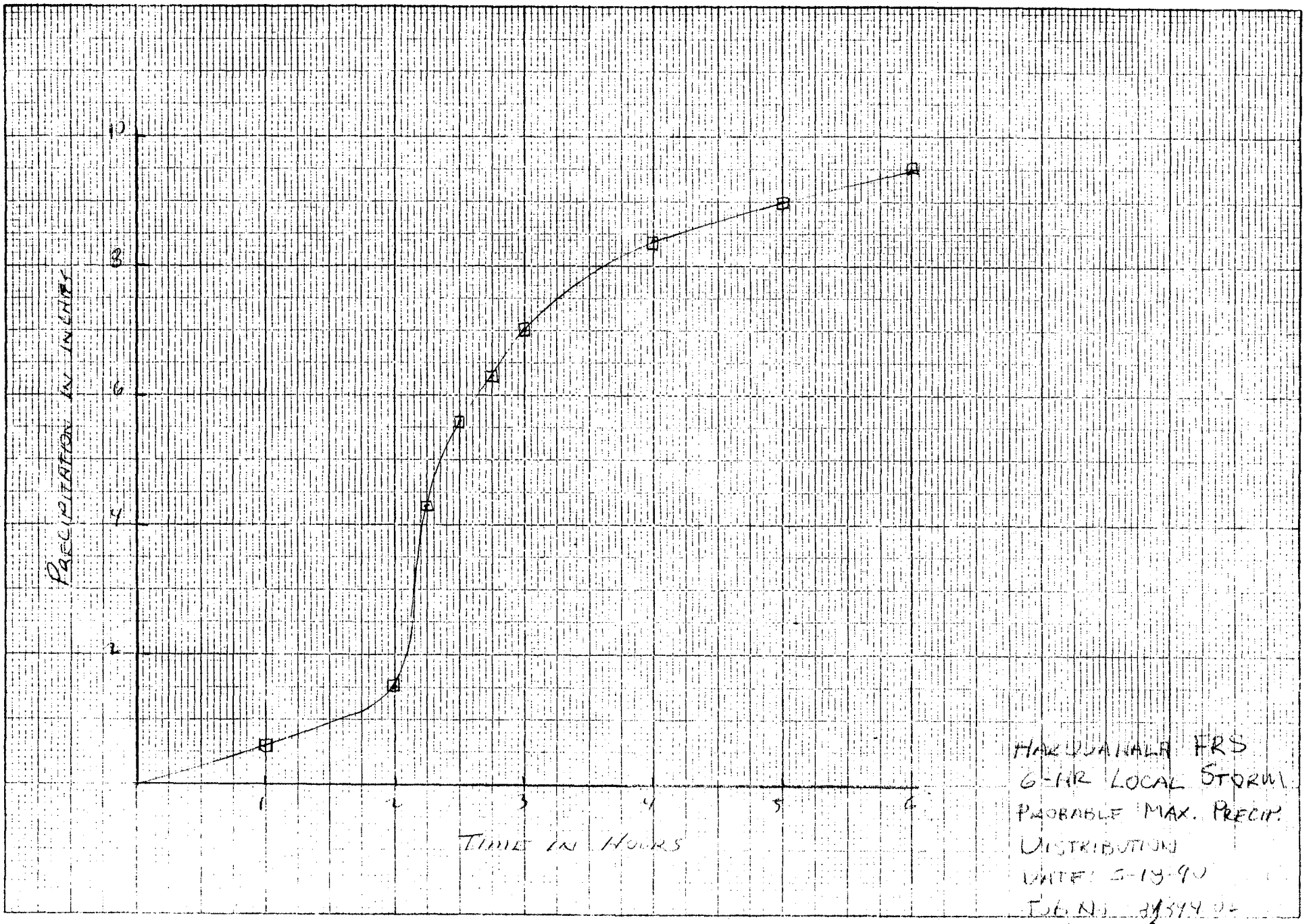
	Duration (hr)									
	1/4	1/2	3/4	1	2	3	4	5	6	
4. Durational variation for 6/1-hr ratio of step 3 [table 4.4].	74	89	95	100	114	121	125	128	130	%
5. 1-mi^2 (2.6-km^2) PMP for indicated durations [step 2b X step 4].	8.5	10.2	10.9	11.5	13.1	13.9	14.4	14.7	15.0	in. (mm)
6. Areal reduction [fig. 4.9].	33	40	44	48	53	56	58	61	63	%
7. Areal reduced PMP [steps 5 X 6].	2.8	4.1	4.8	5.5	6.9	7.8	8.4	9.0	9.5	in. (mm)
8. Incremental PMP [successive subtraction in step 7].				5.5	1.4	0.9	0.6	0.6	0.5	in. (mm)
	2.8	1.3	0.7	0.7 } 15-min. increments						

9. Time sequence of incremental PMP according to:

Hourly increments [table 4.7].	0.6	0.9	5.5	1.4	0.6	0.5	in. (mm)
Four largest 15-min. increments [table 4.8].	2.8	1.3	0.7	0.7			in. (mm)

Form No. 999—20 Squares to Inch
AMERICAN PAD & PAPER CO., HOLYOKE, MASS.

PREPARED BY RM
CHECKED BY RWK



HAWAIIAN FRS
6-HR LOCAL STORM
PROBABLE MAX. PRECIP.
DISTRIBUTION
DATE: 5-19-90
JOB NO. 84544-02

Table 6.3A.--Local-storm PMP computation, Colorado River, Great Basin and California drainages. For drainage average depth PMP. Go to table 6.3B if areal variation is required.

Drainage Saddleback FRS Area 76.93 mi^2 (km^2)
Latitude 33° 35' Longitude 113° 03' Minimum Elevation 1180 ft (m)

Steps correspond to those in sec. 6.3A.

1. Average 1-hr 1-mi^2 (2.6-km^2) PMP for drainage [fig. 4.5]. 11.5 in. (mm)

2. a. Reduction for elevation. [No adjustment for elevations up to 5,000 feet (1,524 m): 5% decrease per 1,000 feet (305 m) above 5,000 feet (1,524 m)]. 100 %

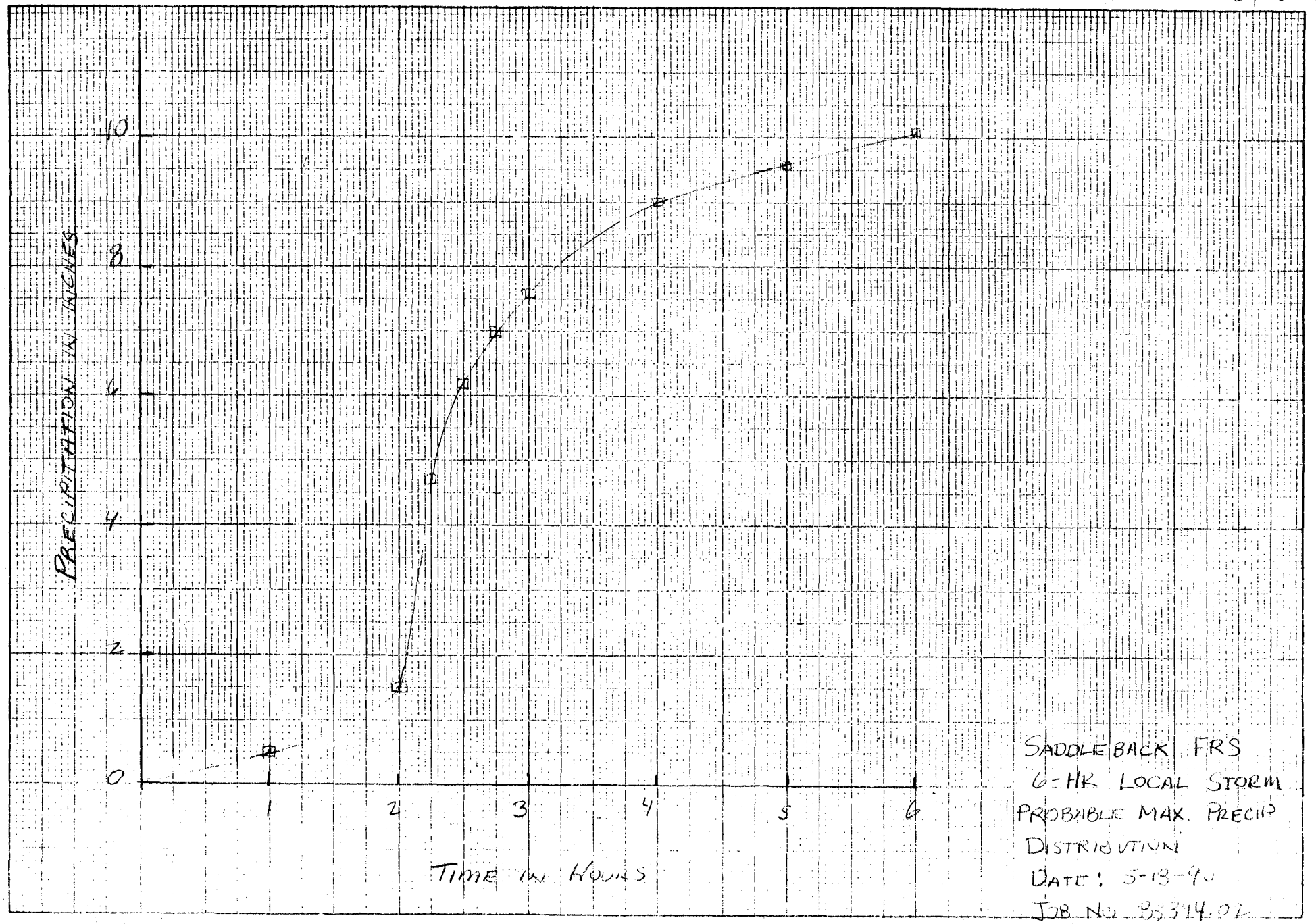
   b. Multiply step 1 by step 2a. 11.5 in. (mm)

3. Average 6/1-hr ratio for drainage [fig. 4.7]. 1.3

	Duration (hr)									
	1/4	1/2	3/4	1	2	3	4	5	6	
4. Durational variation for 6/1-hr ratio of step 3 [table 4.4].	74	89	95	100	114	121	125	128	130	%
5. 1-mi^2 (2.6-km^2) PMP for indicated durations [step 2b X step 4].	8.5	10.2	11.5	13.1	13.9	14.4	14.7	15.0		in. (mm)
6. Areal reduction [fig. 4.9].	38	46	50	53	57	61	63	64	67	%
7. Areal reduced PMP [steps 5 X 6].	3.2	4.7	5.5	6.1	7.5	8.5	9.1	9.6	10.1	in. (mm)
8. Incremental PMP [successive subtraction in step 7].				6.1	1.4	1.0	0.6	0.5	0.5	in. (mm)
	3.2	1.5	0.8	0.6	} 15-min. increments					
9. Time sequence of incremental PMP according to:										
Hourly increments [table 4.7].				0.5	1.0	6.1	1.4	0.6	0.5	in. (mm)
Four largest 15-min. increments [table 4.8].				3.2	1.5	0.8	0.6			in. (mm)

Form No. 999—20 Squares to Inch
AMERICAN PAD & PAPER CO., HOLYOKE, MASS.

PREPARED BY RM
CHECKED BY BWM



SADDLEBACK FRS
6-HR LOCAL STORM
PROBABLE MAX. PRECIP
DISTRIBUTION
DATE: 5-13-90
JOB NO. 83314.02

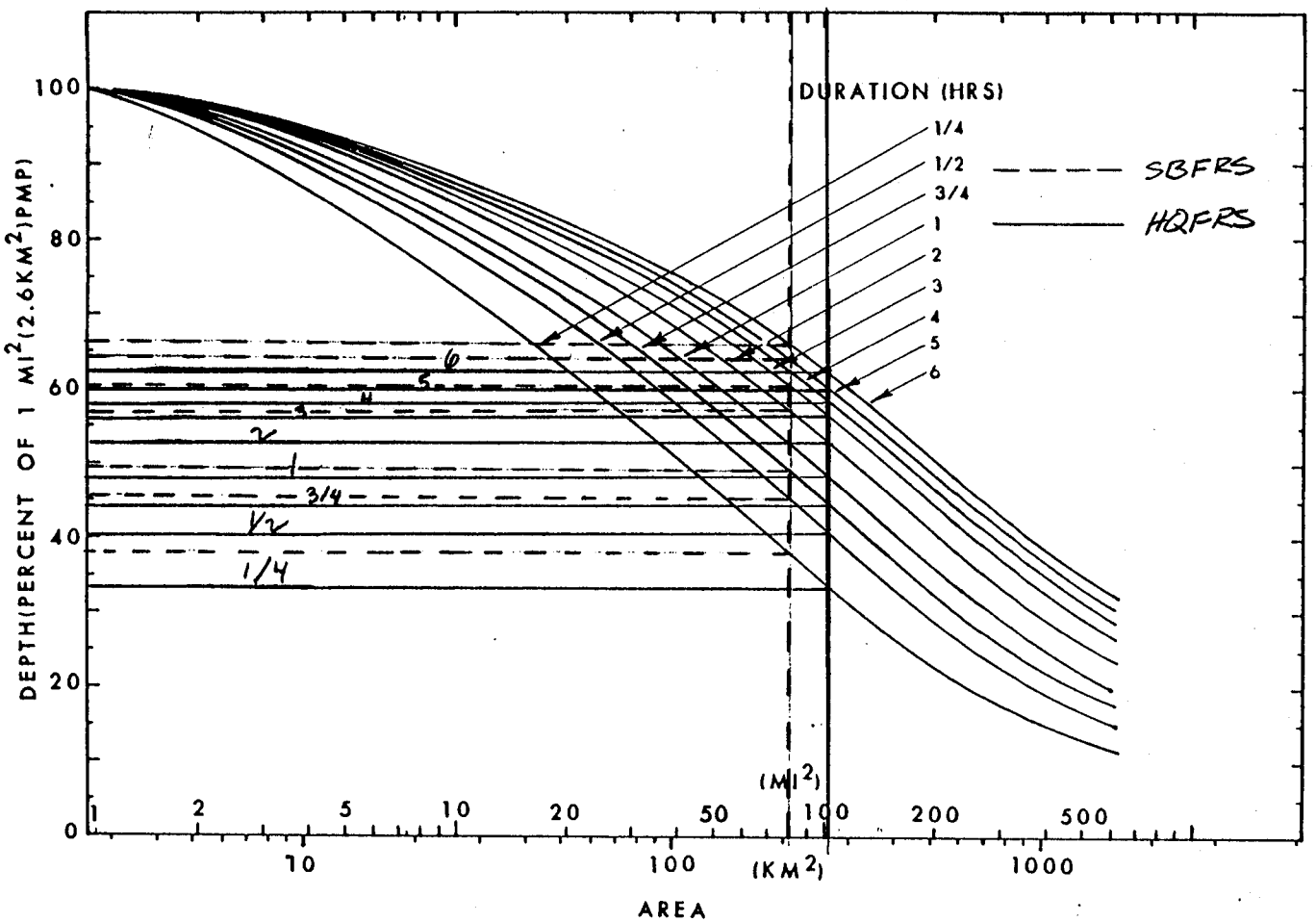


Figure 4.9.--Adopted depth-area relations for local-storm PMP.

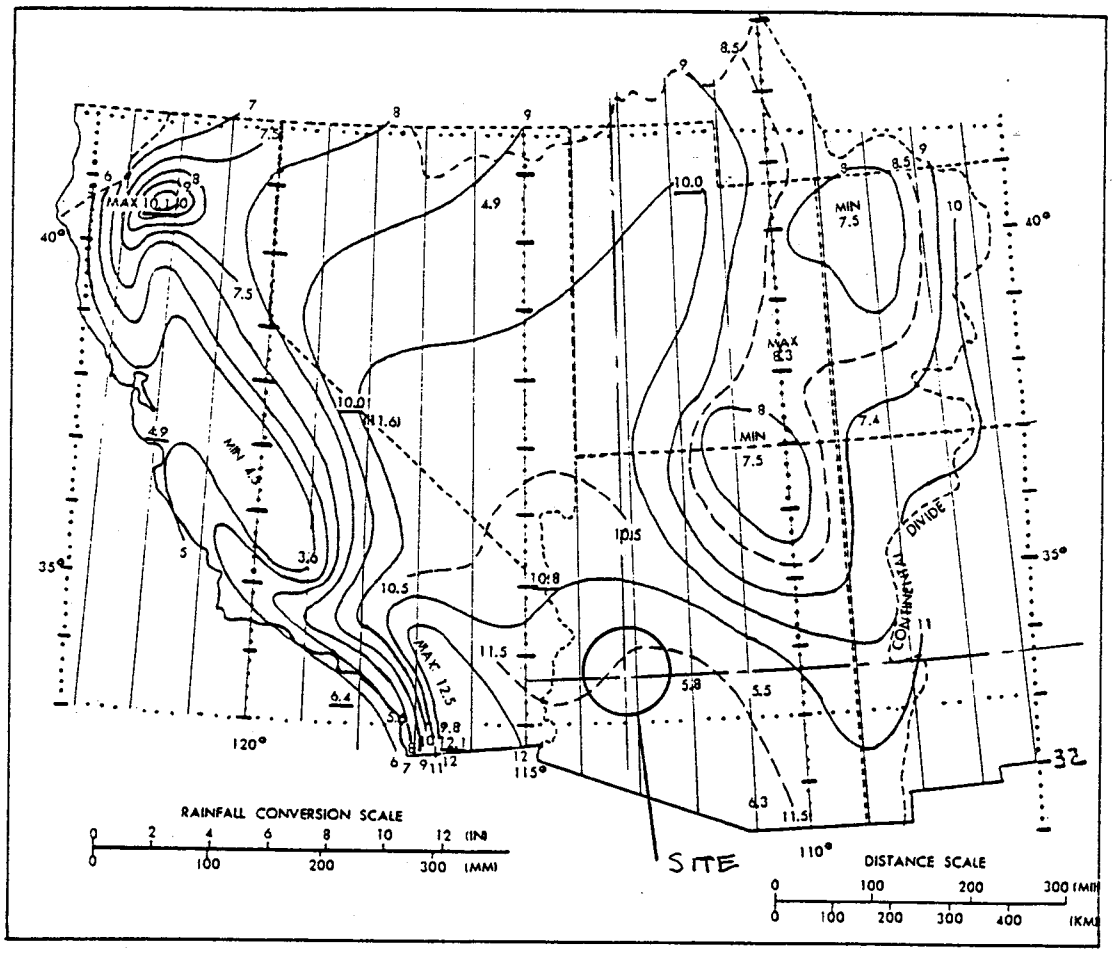


Figure 4.5--Local-storm PMP for 1 mi^2 (2.6 km^2) 1 hr. Directly applicable for locations between sea level and 5000 ft (1524 m). Elevation adjustment must be applied for locations above 5000 ft.

events. In contrast to figure 4.4, figure 4.5 maintains a maximum between these two locations. There is no known meteorological basis for a different solution. The analysis suggests that in the northern portion of the region maximum PMP occurs between the Sierra Nevada on the west and the Wasatch range on the east.

A discrete maximum (> 10 inches, 254 mm) occurs at the north end of the Sacramento Valley in northern California because the northward-flowing moist air is increasingly channeled and forced upslope. Support for this PMP center comes from the Newton, Kennett, and Red Bluff storms (fig. 4.1). Although the analysis in this region appears to be an extension of the broad maximum through the center of the Southwestern Region, it does not indicate the direction of moist inflow. The pattern has evolved primarily as a result of attempts to tie plotted maxima into a reasonable picture while considering inflow directions, terrain effects, and moisture potential.

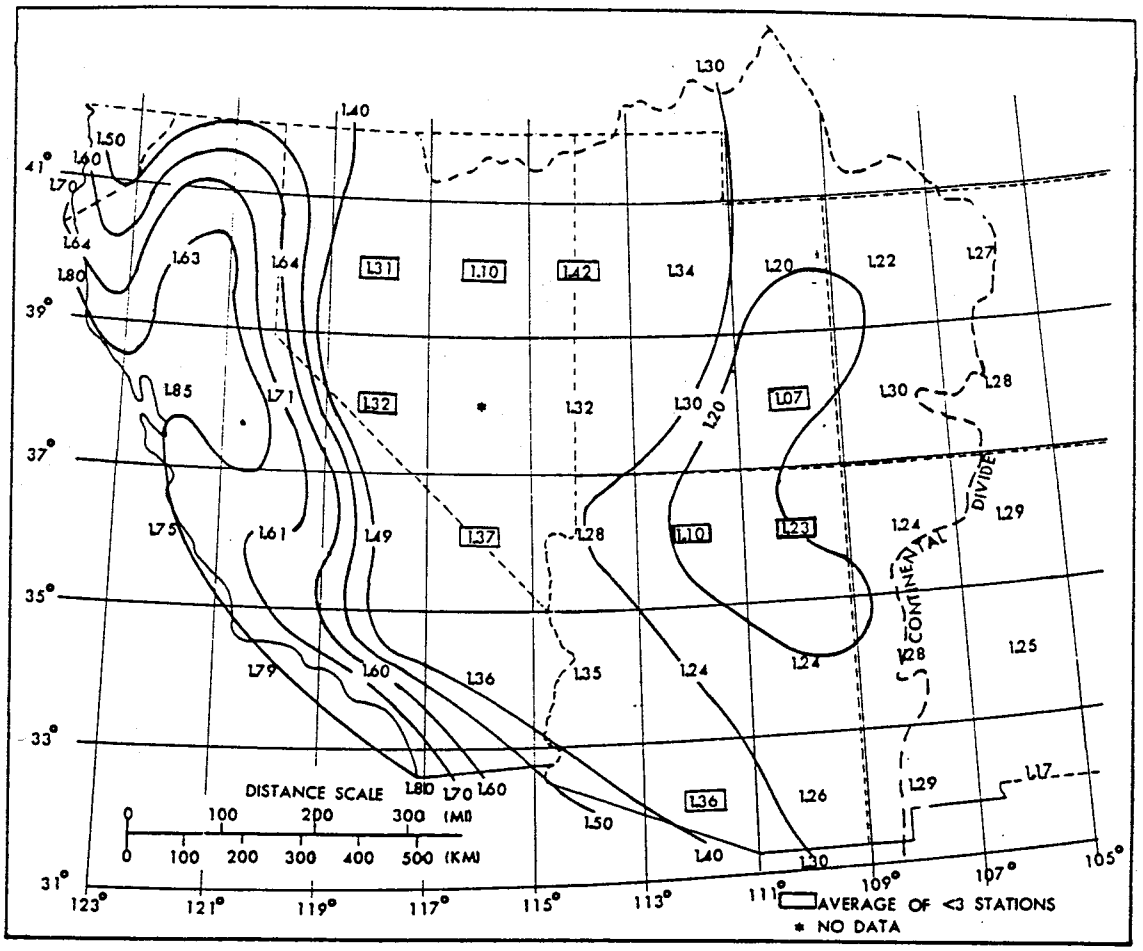


Figure 4.7.--Analysis of 6/1-hr ratios of averaged maximum station data (plotted at midpoints of a 2° latitude-longitude grid).

establish the basic depth-duration curve, then structure a variable set of depth-duration curves to cover the range of 6/1-hr ratios that are needed.

Three sets of data were considered for obtaining a base relation (see table 4.3 for depth-duration data):

a. An average of depth-duration relations from each of 17 greatest 3-hr rains from summer storms (1940-49) in Utah (U. S. Weather Bureau 1951b) and in unpublished tabulations for Nevada and Arizona (1940-63). The 3-hr amounts ranged from 1 to 3 inches (25 to 76 mm) in these events.

b. An average depth-duration relation from 14 of the most extreme short-duration storms listed in Storm Rainfall (U. S. Army, Corps of Engineers 1945-). These storms come from Eastern and Central States and have 3-hr amounts of 5 to 22 inches (127 to 559 mm).

ratios than storms with high 3/1-hr ratios. The geographical distribution of 15-min to 1-hr ratios also were inversely correlated with magnitudes of the 6/1-hr ratios of figure 4.7. For example, Los Angeles and San Diego (high 6/1-hr ratios) have low 15-min to 1-hr ratios (approximately 0.60) whereas the 15-min to 1-hr ratios in Arizona and Utah (low 6/1-hr ratios) were generally higher (approximately 0.75).

Depth-duration relations for durations less than 1 hour were then smoothed to provide a family of curves consistent with the relations determined for 1 to 6 hours, as shown in figure 4.3. Adjustment was necessary to some of the curves to provide smoother relations through the common point at 1 hour.

We believe we were justified in reducing the number of the curves shown in figure 4.3 for durations less than 1 hour, letting one curve apply to a range of 6/1-hr ratios. The corresponding curves have been indicated by letter designators, A-D, on figure 4.3. As an example, for any 6-hr amount between 115% and 135% of 1-hr, 1-mi^2 (2.6-km^2) PMP, the associated values for durations less than 1 hour are obtained from the curve designated as "B".

Table 4.4 lists durational variations in percent of 1-hr PMP for selected 6/1-hr rain ratios. These values were interpolated from figure 4.3.

To determine 6-hr PMP for a basin, use figure 4.3 (or table 4.4) and the geographical distribution of 6/1-hr ratios given in figure 4.7.

Table 4.4.--Durational variation of 1-mi^2 (2.6-km^2) local-storm PMP in percent of 1-hr PMP (see figure 4.3)

6/1-hr ratio	Duration (hr) 1/4	1/2	3/4	1	2	3	4	5	6
1.1	86	93	97	100	107	109	110	110	110
1.2	74	89	95	100	110	115	118	119	120
1.3	74	89	95	100	114	121	125	128	130
1.4	63	83	93	100	118	126	132	137	140
1.5	63	83	93	100	121	132	140	145	150
1.6	43	70	87	100	124	138	147	154	160
1.8	43	70	87	100	130	149	161	171	180
2.0	43	70	87	100	137	161	175	188	200

4.5 Depth-Area Relation

We have thus far developed local-storm PMP for an area of 1 mi^2 (2.6 km^2). To apply PMP to a basin, we need to determine how 1-mi^2 (2.6-km^2) PMP should decrease with increasing area. We have adopted depth-area relations based on rainfalls in the Southwest and from consideration of a model thunderstorm.

APPENDIX F

Muskingum Routing Calculations

MUSKINGUM CHANNEL ROUTING METHOD

AS PER THE DISTRICT'S DIRECTION, THE MUSKINGUM ROUTING METHOD WAS USED FOR CHANNEL ROUTING WITHIN THE HQFRS AND SBFRS HEC-1 MODELS.

ASSUMPTIONS: "K" = TRAVEL TIME = AMSKK (HEC-1 PROGRAM)
"X" = MUSKINGUM WEIGHTING FACTOR, WHERE
$0 < X < .5$ AND $0.3 = X$ WAS USED.

$$K = \frac{L}{3600 * V * 1.67}$$

WHERE: L = LENGTH OF REACH
VM = 1.67*V
VM = CELERITY OF THE ELEMENTARY DISCHARGE WAVE.
V = AVERAGE VELOCITY IN A REACH
FOR "V" USE MANNING EQUATION AS PER Tc CALCULATION.

FIND NSTPS WHERE :

$$\frac{1}{2(1-X)} \leq \frac{AMSKK(HRS) * 60 \frac{MIN}{HR}}{T * NSTPS} \leq \frac{1}{2X}$$

$$\therefore \text{USE THE INTEGER OF NSTPS} = \frac{AMSKK * 60}{T * \left[\frac{\frac{1}{2(X-1)} + \frac{1}{2X}}{2}\right]} = \frac{K * 60}{T * 1.19}$$

T = INTEGER NUMBER OF MINUTES IN TABULATION INTERVAL.
FOR 6-HOUR PMP T = 5 MIN.
FOR 72-HOUR PMP T = 15 MIN.
NSTPS = INTERGER STEPS FOR THE MUSKINGUM ROUTING

FILE: MCRM
JOB NO.: CARTER = 016-83394-02
FDCMC = FDC-88-66

CALC. BY BWM
CHECK BY RJS

CHANNEL ROUTING TABLE

REACH	L (FT)	E1	E2	S (%)	V (FPS)	K (HRS)	6HR NSTPS	6HR INTEGER NSTPS	72HR NSTPS	72HR INTEGER NSTPS
CH-6	18500	1600	1400	1.08	6.52	0.47	4.74	5	1.58	2
CH-7	17500	1600	1400	1.14	6.70	0.43	4.34	4	1.45	2
CH-8	8000	1400	1310	1.13	6.67	0.20	2.02	2	0.67	1
CH-9	13750	1310	1190	0.87	5.85	0.39	3.93	4	1.31	1
CH-10	11250	1300	1190	0.98	4.05	0.46	4.64	5	1.55	2
CH-12	15500	1370	1240	0.84	5.75	0.45				
	17000	1240	1170	0.41	4.02	0.70				
						1.15	11.60	12	3.87	4

FILE: MCRM.NO2
JOB NO.: CARTER = 016-83394-02
FDCMC = FDC-88-66

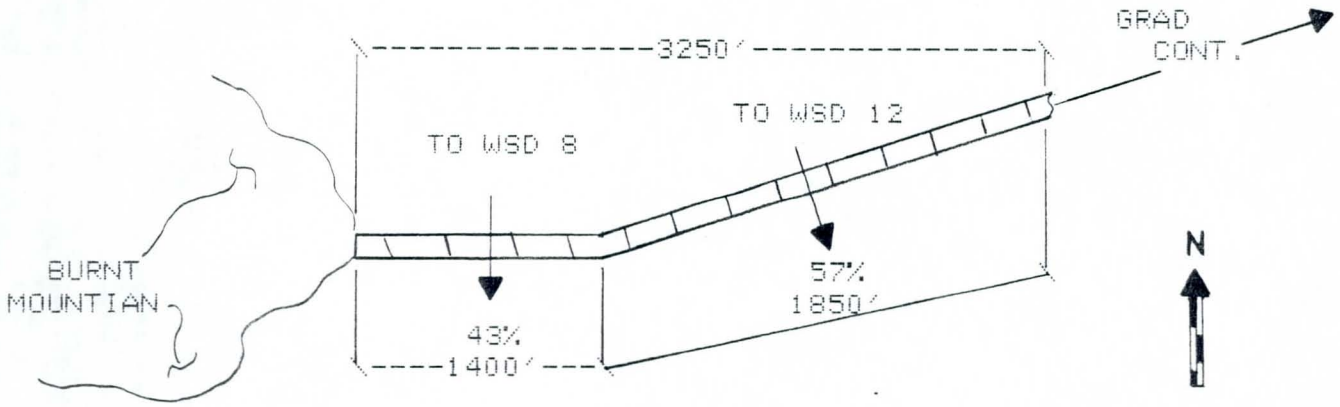
CALC. BY BLM
CHECK BY RJS

APPENDIX G

Granite Reef Aqueduct Dike Weir Revisions

GRANITE REEF AQUADUCT DIKE
DIVERSION FROM DIKE TO
WATERSHED 8 AND WATERSHED 12

STRUCTURE "A"



STRUCTURE "A" DISCHARGE

ELE.	WEIR (CFS)	57% TO WSD 12 (CFS)	43% TO WSD 8 (CFS)	72" PIPE (CFS)	TOTAL FLOW TO WSD 8 (CFS)
1399.25	1068	609	459	520	979
1399.50	3022	1722	1300	525	1825
1400.00	8548	4872	3676	535	4211

TOTAL FLOW TO WSD 8 = 43% TO WSD 8 + 72" PIPE

FILE: REEF
JOB NO.: CARTER = 016-83394-02
FDCMC = FDC-88-66

CALC. BY BWM
CHECK BY RJS

GRANITE REEF AQUADUCT DIKE DISCHARGE REVISION

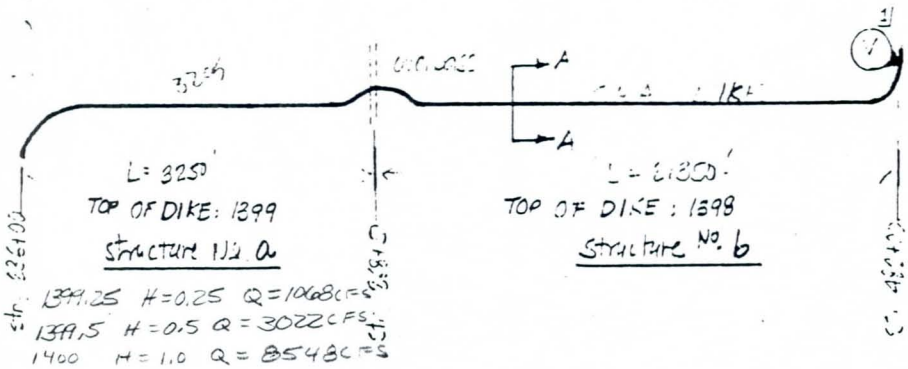
ELE.	STRUCTURE "A" 72" PIPE (CFS)	STRUCTURE "A" WEIR (CFS)	STRUCTRE "B" 4-72" PIPE (CFS)	STRUCTRE "B" WEIR (CFS)	STRUCTRE "B" V-NOTCH (CFS)	TOTAL (CFS)
1399.00	515	0	2100	56150	6370	65135
1399.25	520	1068	2120	78472	7468	89648
1399.50	525	3022	2140	103155	8610	117485
1400.00	535	8548	2192	158820	11050	118145

NOTE: REVISIONS START ABOVE ELEVATION 1399.0

JOB NO.: CARTER = 016-83394-02
FDCMC = FDC-88-66

CALC. BY BWM
CHECK BY RJS

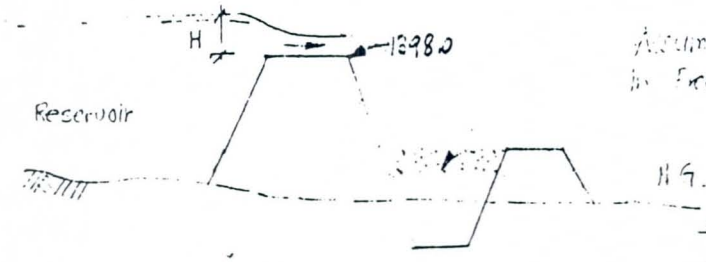
Site overtopping



Assume weir flow conditions.

$Q = CLH^{3/2}$ 2] $C = 2.63$ (King's handbook - broad crested weir)

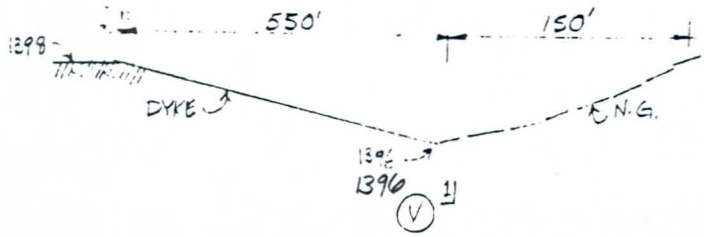
Elev	H (ft)	Structure No b (cfs) V-notch @ stn 1]	Dike	Total outflow
1396.0	0	0	0	0
1398.0	0	2600	0	2600
1398.25	.25	3450	7020	10470
1398.50	.5	4360	19850	24210
1398.75	.75	5340	36470	41810
1399.00	1.00	6370	56150	62520
1399.25	1.25	7468	78472	85940
1399.50	1.50	8610	103155	111765
1400.0	2.0	11050	158820	169870



Assumed storage volume in freeboard is insignificant

H	ELV	AREA	Q
3	1399	1400	6377
3.25	1399.25	1575	7468
3.5	1399.50	1750	8610
4.0	1400	2100	11050

SEC. A-A



C = 2.63

$Q = CAH^{1/2}$
(Section 4, 14.46)

1] GRA SPECS. REACH 6 344-330-1411
2] Eqn. gives more conservative outflow conditions than that in NEH.4

INPUT TO TR-20 - Structure NO. 1 (GEA DIKE)

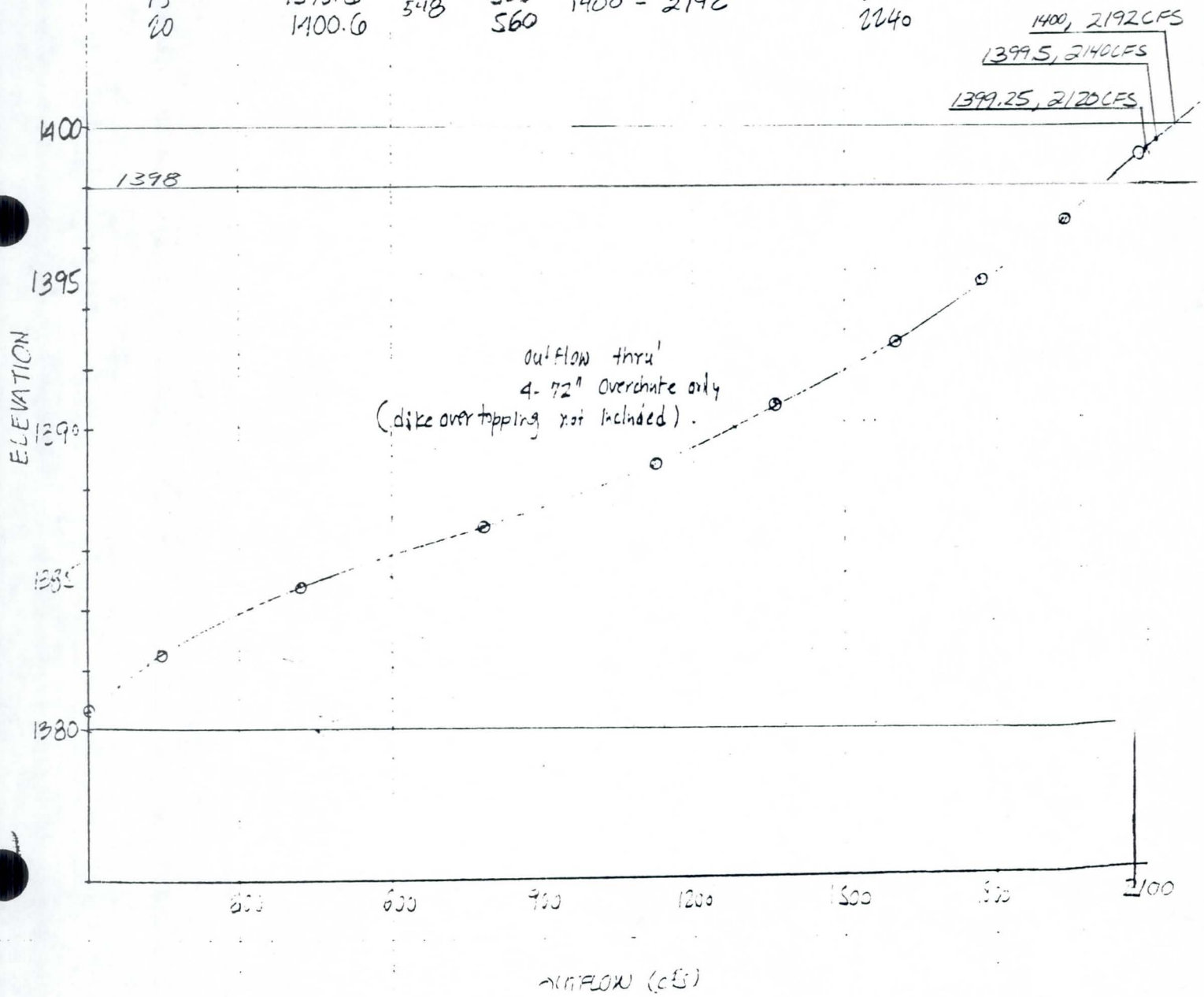
Elev.	Discharge (cfs)						Flow Area (ft²)		Storage (AcFt)		
	Struct. a 72" PIPE		Struct. b 4-72" PIPES + DIKE O.T. = total			Total	Struct. a	Struct. b	Struct. a	Struct. b	Total
1380.60	0	"FLOW FROM STRUCTURE a. WEIR."	0	0	0	0	0	0	2	48	50
1381.5	–		60	0	60	60	–	10.64	2	63	65
1382.0	5		100	0	105	105	1.06	19.66	3.8	101.5	105.3
1384.0	50		320	0	370	370	11.28	66.6	8.3	263	271.3
1386.0	125		640	0	765	765	22.74	107.2	16.4	573.6	590.0
1388.0	220		1020	0	1240	1240	28.27	113.1	31.3	1070	1101.3
1390.0	300		1300	0	1600	1600	28.27	113.1	51.7	1763.8	1815.5
1392.0	360		1530	0	1890	1890	28.27	113.1	73.6	2913.4	2987.0
1394.0	410		1720	0	2130	2130	28.27	113.1	300	4000	4300.0
1396.0	450		1890	0	2340	2340	28.27	113.1	420	5200	5570.
1398.0	495		2030	2600	4630	5125	28.27	812	540	6400	6940
1398.25	500		2045	10470	12515	13015	28.27	4324	555	6525	7080
1398.5	505		2065	24210	26275	26780	28.27	11837	570	6650	7220
1398.75	510		2080	41810	43890	44400	28.27	17350	585	6775	7360
1399.0	515		2100	62520	64620	65135	28.27	22862	600	6900	7500
1399.25	520	1068	2120	85940	88060	89648			615	7025	7640
1399.50	525	3022	2140	111765	113905	117485			630	7150	7780
1400.0	535	8548	2192	169870	172062	181145			660	7400	8060

Revised
3/19/78

* average of 4- inverts

STAGE Vs DISCHARGE
Stn. 296-42 to 443+00
Structure No b

Head (ft)	Elev.	Outflow (cfs) 1-72"Φ		Outflow (cfs) 4-72"Φ
0	1380.6*	0		0
2	1382.6	35		140
4	1384.6	105		420
6	1386.6	195		780
8	1388.6	280		1120
10	1390.6	340		1360
12	1392.6	400		1600
14	1394.6	440		1760
16	1396.6	480		1920
18	1398.6	520		2080
20	1400.6	560	1400 - 2192	2240



APPENDIX H

Breach Model - Input and Output Variables

H

INPUT DATA FOR BREACH EROSION MODEL (BREACH): VERSION 1/2/85

Card No.	Data Description and Input Form	
(1)	MESSAGE - 20A4	
	MESSAGE	Any message such as name of dam, message may be < 80 characters.
(2)	HI, HU, HL, HPI, HSP, - 5F10.2	
	HI	Initial elevation (ft) of water surface in reservoir at t = 0.
	HU	Elevation of top of dam.
	HL	Elevation of bottom of dam (usually original stream-bed elevation).
	HPI	Elevation at which piping failure commences (if no piping failure is simulated, leave blank).
	HSP	Elevation of spillway crest (if no spillway, leave blank).
(3)	QIN(I) - 8F10.2	
	QIN	Inflow (cfs) to reservoir. I subscript goes from 1 to 8. Inflow hydrograph may be defined with from 2 to 8 values.
(4)	TIN(I) - 8F10.2	
	TIN(I)	Time (hrs) associated with QIN(I) reservoir inflow.
(5)	RSA(I) - 8F10.2	
	RSA(I)	Surface area (acres) of reservoir. I subscript goes from 1 to 8. Surface area is defined at from 2 to 8 elevations starting at the highest elevation and proceeding to the reservoir bottom.
(6)	HSA(I) - 8F10.2	
	HSA(I)	Elevation (ft) associated with RSA(I) surface area.

Card No.	Data Description and Input Format

(7) ZU, ZD, ZC, PORW, GL, GS, VMP - 7F10.2

ZU	Slope of upstream face of dam [1 (vertical) : ZU (horizontal)]
ZD	Slope of downstream face of dam (1 (vertical) : ZD (horizontal)]
ZC	Average slope of upstream and downstream faces of inner core of dam [1 (vertical) : ZC (horiz.)]. If no inner core, leave blank.
PORW	Ratio of total pore space of dam material which contains water (0.0 to 1.0)
GL	Average length of grass (inches). If no grass, leave blank.
GS	Condition of stand of grass. If good, GS=1.0; if poor stand or no grass exists, GS=0.0.
VMP	Maximum permissible velocity (ft/sec) for grass-lined channel before grass cover is eroded away. Can vary from 3 to 6 ft/sec. If no grass, leave blank.

(8) D50C, PORC, UWC, CNC, AFRC, COHC, UNFCC - 3F10.2, F10.4, 3F10.2

D50C	D50 (mm) grain size of inner core material (50% finer). If no core, leave blank.
PORC	Porosity ratio of inner core material. If no core, leave blank.
UWC	Unit weight (lb/ft^3) of inner core material. If no core, leave blank.
CNC	Manning n of inner core material. If left blank, it will be computed from the Strickler Equation which is a function of the grain size. If a value greater than 0.99 is entered, it will be computed from a Moody diagram (Darcy f vs. D50 relationship). If no core, leave blank.
AFRC	Internal friction angle (degree) of inner core material. If no core, leave blank.
COHC	Cohesive strength (lb/ft^2) of inner core material. If no core, leave blank.
UNFCC	Ratio of D90 to D30 grain sizes of inner core material. If no core, leave blank. If core exists and left blank, default value is 10.

Card No.	Data Description and Input Format

(9) D50S, PORS, UWS, CNS, AFRS, COHS, UNFCS - 3F10.2, F10.4, 3F10.2

D50S	D50(mm) of outer material of dam (50% finer).
PORS	Porosity ratio of outer material.
UWS	Unit weight (lb/ft^3) of outer material.
CNS	Manning n of outer material. If left blank, it will be computed from the Strickler Equation which is a function of the grain size. If a value greater than 0.99 is entered, it will be computed from a Moody diagram (Darcy f vs. D50 relationship).
AFRS	Internal friction angle (degree) of outer material.
COHS	Cohesive strength (lb/ft^2) of outer material.
UNFCS	Ratio of D90 to D30 grain size of outer material. If left blank, default value is 10.

Note: If dam material is homogeneous, use the outer layer to represent the entire homogenous dam material.

(10) BR, WC, CRL, SM, WV, CNV, D50DF, UNFCDF - 5F10.2, F10.4

BR	Ratio of breach width to flow depth for initial rectangular-shaped breach. Range of values are: $1 < B_r < 2$. Usually use 2.0 for overtopping failure and 1.0 for a piping failure. If left blank, BR = 2.
WC	Width (ft) of crest of dam (can be zero).
CRL	Length (ft) of crest of dam.
SM	Bottom slope (ft/mile) of downstream river for first few thousand feet below the dam.
WV	Width (ft) of valley for which SM is applicable.
CNV	Manning n of valley for which SM is applicable.
D50DF	D50 (mm) grain size of material composing the top one-foot of the downstream face of the dam. If left blank, D50DF=D50S.
UNFCDF	Ratio of D90 to D30 grain size of material of downstream face. If left blank, UNFCDF=3.0 when D50DF>0.0, or UNFCDF=UNFCS when D50DF=0.0.

Card No.	Data Description and Input Format

(11) DTH, DBG, H, TEH, ERR, FPT - 2F10.3, 4F10.2

DTH	Basic time step size (hr). 0.02 < DTH < 0.20, lower values for man-made dams, larger values for large landslide dams. If left blank, DTH = 0.05.
DBG	Output control parameter. DBG = 0.0, minimal output of discharge hydrograph only. DBG = 0.001, output at each time step + hydrograph. DBG = 0.002, output at each iteration of each time step + hydrograph. DBG = 0.003, maximum output.
H	Initial depth (ft) of breach along the downstream face of dam for overtopping failure. Initial width of piping breach. Usually, 0.1 < H < 1.0. If left blank, H = 0.10.
TEH	Duration (hrs) of simulation.
ERR	Error tolerance in iterative solution, expressed as a percentage ratio (0.1 < ERR < 1.0). If left blank, ERR = 0.10.
FPT	Interval of time steps at which computed discharges are plotted. (1. < FPT < 10.) If left blank, FPT = 1.0.

Note: Omit cards no. (12) and (13) if spillway crest elev., HSP, (card no. 2) is blank or zero.

(12) SPQ(I) - 8F10.2

SPQ(I)	Spillway flow (cfs). I subscript goes from 1 to 8. Spillway flow is defined for from 2 to 8 elevations starting at the spillway crest elev. and proceeding upwards until maximum spillway discharge is specified.

(13) SPH(I) - 8F10.2

SPH(I)	Elevation (ft) associated with SPQ(I) spillway flow.

OUTPUT PARAMETERS FOR "BREACH" MODEL ,VERSION 7/2/84

I	COUNTER
T	TIME,HR
DTH	TIME STEP,HR
KG	CODE FOR REGION OF FAILURE : 1 EROSION OF DOWNSTREAM FACE 2 EROSION OF UPSTREAM FACE 3 DRAINING OF RESERVOIR WITH BREACH SIZE FIXED AT MAX DIMENSIONS 4 PIPING MODE 5 COLLAPSE MODE
KC	COLLAPSE HEIGHT
QTOT	TOTAL OUTFLOW,CFS
QTS	SPILLWAY OUTFLOW,CFS
QB	BREACH OUTFLOW,CFS
SUB	SUBMERGENCE CORRECTION FACTOR
BT	TOP WIDTH OF BREACH,FT
HY	ELEV OF RESERVOIR WATER SURFACE,FT
HC	ELEV OF BOTTOM OF BREACH,FT
BO	BOTTOM WIDTH OF BREACH,FT
PPP	PIPING LENGTH(FT) WHEN KG=4; MAX DEPTH ALLOWABLE PRIOR TO SIDE SLOPE FAILURE WHEN KG=2; REMAINING CREST WIDTH (FT) TO BE ERODED WHEN KG=1
HP	TOP OF PIPING BREACH OR DEPTH OF BREACH,FT
YN	NORMAL DEPTH OF FLOW IN BREACH CHANNEL,FT
DH	ESTIMATED EROSION DEPTH(FT) DURING TIME STEP
DHH	COMPUTED EROSION DEPTH(FT) DURING TIME STEP
KIT	ITERATION COUNTER
TH	ACUTE ANGLE(DEG) THAT BREACH SIDE MAKES WITH VERTICAL

OTHER OUTPUT CONSISTS OF A HYDROGRAPH OF TOTAL OUTFLOW

THE FOLLOWING SUMMARY INFORMATION IS ALSO PRINTED OUT:

TF	TIME(HR) AT WHICH FAILURE MODE 2 STARTS
QTF	FLOW(CFS) AT TIME TF
TP	TIME(HR) AT WHICH PEAK OUTFLOW OCCURS
QP	MAX OUTFLOW(CFS) OCCURRING AT TIME TP
TRS	DURATION(HR) OF RISING LIMB OF HYDROGRAPH
TB	TIME(HR) AT WHICH SIGNIFICANT RISE IN OUTFLOW STARTS
TRSB	TP-TB
BRD	FINAL DEPTH(FT) OF BREACH
BRW	FINAL TOP WIDTH(FT) OF BREACH
HU	ELEV (FT) OF TOP OF DAM
HY	FINAL ELEV (FT) OF RESERVOIR WATER SURFACE
HC	FINAL ELEV (FT) OF BOTTOM OF BREACH
THETA	FINAL ACUTE ANGLE THAT BREACH SIDE MAKES WITH VERTICAL
QO	OUTFLOW (CFS) AT T=0.0
YNM	MAX NORMAL FLOW DEPTH (FT) IN BREACH CHANNEL
HMC	MAX CRITICAL FLOW DEPTH (FT) IN BREACH CHANNEL
DTC	DURATION (HR) TO REMOVE COLLAPSED MATERIAL
Z	FINAL SIDE SLOPE OF BREACH (FT/FT)
TFH	TIME OF FAILURE (HR) WHICH IS SAME AS TRS
BO	BOTTOM WIDTH (FT) OF BREACH

APPENDIX I

Breach Output - HQFRS

I

BREACH MODEL, MICRO-VERSION: 1/87

ING FAILURE AT EAST END OF HQFRS STA. 1045+90 FILE: HQETOP.72 24OCT90

HI= 1418.50 HU= 1419.70 HL= 1375.90 HPI= 1397.80 HSP= 1408.40

(QIN(I),I=1,8)
15658.00 10964.00 7883.00 3630.00 3311.00 1290.00 1137.00 .00

(TIN(I),I=1,8)
.00 1.00 2.00 6.00 10.00 18.00 21.00 .00

(RSA(I),I=1,8)
2975.00 2240.30 1221.70 114.80 76.80 44.40 18.85 .00

(HSA(I),I=1,8)
1428.30 1419.70 1408.40 1396.10 1394.30 1392.60 1389.10 1375.90

ZU= 3.00 ZD= 2.00 ZC= .00 PORW= .00 GL= .00 GS= .00 VMP= .00

D50C= .00 PORC= .00 UWC= .00 CNC= .0000 AFRC= .00 COHC= .0 UNFCC= .00

D50S= .18 PORS= .33 UWS=125.60 CNS= .0000 AFRS= 39.00 COHS= 100.0 UNFCS= 10.00

BR= 1.00 WC= 14.0 CRL= 5280.0 SM= 70.40 WV= 5280.0 CNV= .0450 D50DF= .00 UNFCDF= .00

DTH= .020 DBG= .001 H= .1000 TEH= 10.0 ERR= .10 FPT= 2.0 TPR= 1.0

(SPQ(I),I=1,8)
.00 1049.30 2325.30 5551.80 10718.60 15377.70 22588.60 58752.00

(SPH(I),I=1,8)
.00 1.30 2.66 5.05 8.05 11.30 11.60 13.80

CRL= 5280. BM= 91. AFR= 39.00 BO= 21.9 Z= .79

1

AFR= 39.0 TH1= 64.50 H1= 6.68 TH2= 51.75 H2= 22.93 TH3= 45.38 H3= 78.83

1

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
51	1.020	.020	4	0	27012.	13272.	13739.68	1.000	19.6	1418.2	1388.0	19.6	1407.6	20.4	.0098	.200	.200	1	.0
52	1.040	.020	4	0	27267.	13254.	14012.93	1.000	19.8	1418.2	1387.9	19.8	1407.7	20.4	.0098	.198	.198	1	.0
53	1.060	.020	4	0	27521.	13236.	14285.48	1.000	20.0	1418.2	1387.8	20.0	1407.8	20.4	.0098	.195	.195	1	.0
[illegible]	1.080	.020	4	0	27774.	13217.	14557.33	1.000	20.1	1418.2	1387.7	20.1	1407.9	20.4	.0098	.193	.193	1	.0
55	1.100	.020	4	0	28026.	13197.	14828.40	1.000	20.3	1418.2	1387.6	20.3	1408.0	20.4	.0098	.191	.191	1	.0

PIPE FLOW TO WEIR FLOW TRANSITION

1388. 12. 21. 10292. 20879. 31171. .019 1.139 175. 198. 18. 455.
.05867 .05874 .33122 2.76116 .0098 6.0 32.5 3.8 11.6 226.6
2 25.4 22.9 24.7 95569.3 .0583 3 1.1400 1.1983 38.3 198.7 455.5

57	1.140	.020	2	0	33045.	13178.	19866.90	1.000	51.3	1418.2	1387.5	20.6	198.4	.0	.0098	.000	.000	0	25.5
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
59	1.144	.002	2	0	36579.	13172.	23407.05	1.000	71.3	1418.2	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
60	1.146	.002	2	0	36563.	13160.	23403.69	1.000	71.3	1418.2	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
61	1.148	.002	2	0	36557.	13157.	23400.33	1.000	71.3	1418.2	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
62	1.150	.002	2	0	36551.	13154.	23397.17	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
63	1.152	.002	2	0	36545.	13151.	23393.80	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
64	1.154	.002	2	0	36539.	13148.	23390.45	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
65	1.156	.002	2	0	36532.	13145.	23387.08	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
66	1.158	.002	2	0	36526.	13142.	23383.72	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
67	1.160	.002	2	0	36520.	13139.	23380.56	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
68	1.162	.002	2	0	36514.	13136.	23377.20	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
69	1.164	.002	2	0	36507.	13133.	23373.84	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
70	1.166	.002	2	0	36501.	13130.	23370.48	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
71	1.168	.002	2	0	36495.	13127.	23367.12	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
72	1.170	.002	2	0	36489.	13125.	23363.96	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
73	1.172	.002	2	0	36482.	13122.	23360.61	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
74	1.174	.002	2	0	36476.	13119.	23357.25	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
75	1.176	.002	2	0	36470.	13116.	23353.89	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
76	1.178	.002	2	0	36463.	13113.	23350.53	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
77	1.180	.002	2	0	36457.	13110.	23347.37	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
78	1.182	.002	2	0	36451.	13107.	23344.01	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
79	1.184	.002	2	0	36445.	13104.	23340.65	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
80	1.186	.002	2	0	36438.	13101.	23337.29	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
81	1.188	.002	2	0	36432.	13098.	23333.94	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
82	1.190	.002	2	0	36426.	13095.	23330.58	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
83	1.192	.002	2	0	36420.	13092.	23327.42	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
84	1.194	.002	2	0	36413.	13089.	23324.06	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
85	1.196	.002	2	0	36407.	13086.	23320.71	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
[illegible]	1.198	.002	2	0	36401.	13083.	23317.35	1.000	71.3	1418.1	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
87	1.200	.002	2	0	37140.	13080.	24059.31	1.000	72.2	1418.1	1386.9	20.6	200.1	.6	.0098	.592	.591	3	38.3
88	1.202	.002	2	0	37847.	13077.	24769.64	1.000	73.1	1418.1	1386.4	20.6	201.7	1.1	.0098	.555	.555	2	38.3
89	1.204	.002	2	0	38524.	13074.	25449.88	1.000	73.9	1418.1	1385.9	20.6	203.3	1.7	.0098	.522	.522	2	38.3
90	1.206	.002	2	0	39169.	13071.	26098.28	1.000	74.7	1418.1	1385.4	20.6	204.7	2.2	.0098	.490	.490	3	38.3
91	1.208	.002	2	0	39785.	13068.	26717.16	1.000	75.4	1418.1	1384.9	20.6	206.0	2.6	.0098	.460	.460	2	38.3
92	1.210	.002	2	0	40371.	13064.	27306.97	1.000	76.1	1418.1	1384.5	20.6	207.2	3.1	.0098	.432	.432	2	38.3
93	1.212	.002	2	0	40929.	13061.	27867.80	1.000	76.8	1418.1	1384.1	20.6	208.4	3.5	.0098	.406	.406	2	38.3
94	1.214	.002	2	0	41459.	13058.	28401.61	1.000	77.4	1418.1	1383.7	20.6	209.5	3.8	.0098	.382	.382	2	38.3
95	1.216	.002	2	0	41962.	13054.	28907.73	1.000	77.9	1418.1	1383.3	20.6	210.6	4.2	.0098	.358	.358	2	38.3
96	1.218	.002	2	0	42439.	13050.	29388.14	1.000	78.5	1418.1	1383.0	20.6	211.5	4.5	.0098	.336	.336	2	38.3
97	1.220	.002	2	0	42892.	13047.	29844.98	1.000	79.0	1418.1	1382.7	20.6	212.4	4.8	.0098	.316	.316	2	38.3
98	1.222	.002	2	0	43322.	13043.	30278.38	1.000	79.4	1418.1	1382.4	20.6	213.3	5.1	.0098	.298	.298	2	38.3
99	1.224	.002	2	0	43729.	13039.	30689.06	1.000	79.9	1418.1	1382.1	20.6	214.1	5.4	.0098	.280	.280	2	38.3
100	1.226	.002	2	0	44115.	13036.	31078.96	1.000	80.3	1418.1	1381.8	20.6	214.9	5.7	.0098	.264	.264	2	38.3
101	1.228	.002	2	0	44480.	13032.	31448.15	1.000	80.7	1418.1	1381.6	20.6	215.6	5.9	.0098	.248	.248	2	38.3
102	1.230	.002	2	0	44827.	13028.	31798.76	1.000	81.0	1418.1	1381.4	20.6	216.3	6.2	.0098	.234	.234	2	38.3
103	1.232	.002	2	0	45155.	13024.	32130.64	1.000	81.4	1418.1	1381.1	20.6	216.9	6.4	.0098	.220	.220	3	38.3
104	1.234	.002	2	0	45466.	13020.	32445.94	1.000	81.7	1418.1	1380.9	20.6	217.5	6.6	.0098	.208	.208	2	38.3
105	1.236	.002	2	0	45762.	13016.	32745.34	1.000	82.0	1418.1	1380.7	20.6	218.1	6.8	.0098	.197	.197	2	38.3
106	1.238	.002	2	0	46042.	13012.	33029.34	1.000	82.3	1418.0	1380.5	20.6	218.6	7.0	.0098	.186	.186	2	38.3
107	1.240	.002	2	0	46307.	13008.	33299.01	1.000	82.6	1418.0	1380.4	20.6	219.1	7.2	.0098	.176	.176	2	38.3
108	1.242	.002	2	0	46559.	13004.	33555.40	1.000	82.9	1418.0	1380.2	20.6	219.6	7.3	.0098	.166	.166	2	38.3
109	1.244	.002	2	0	46799.	13000.	33798.96	1.000	83.1	1418.0	1380.0	20.6	220.0	7.5	.0098	.157	.157	2	38.3
110	1.246	.002	2	0	47026.	12996.	34030.38	1.000	83.3	1418.0	1379.9	20.6	220.5	7.6	.0098	.149	.149	2	38.3
111	1.248	.002	2	0	47242.	12992.	34250.52	1.000	83.6	1418.0	1379.8	20.6	220.9	7.8	.0098	.141	.142	2	38.3
[illegible]	1.250	.002	2	0	47448.	12987.	34460.39	1.000	83.8	1418.0	1379.6	20.6	221.3	7.9	.0098	.134	.134	2	38.3
113	1.252	.002	2	0	47643.	12983.	34659.88	1.000	84.0	1418.0	1379.5	20.6	221.6	8.0	.0098	.128	.128	3	38.3
114	1.254	.002	2	0	47829.	12979.	34849.83	1.000	84.2	1418.0	1379.4	20.6	222.0	8.2	.0098	.121	.121	2	38.3
115	1.256	.002	2	0	48005.	12975.	35030.50	1.000	84.3	1418.0	1379.3	20.6	222.3	8.3	.0098	.115	.115	2	38.3
116	1.258	.002	2	0	48173.	12970.	35203.08	1.000	84.5	1418.0	1379.1	20.6	222.6	8.4	.0098	.110	.110	2	38.3
117	1.260	.002	2	0	48333.	12966.	35367.38	1.000	84.7	1418.0	1379.0	20.6	222.9	8.5	.0098	.104	.104	2	38.3
118	1.262	.002	2	0	48486.	12962.	35523.97	1.000	84.8	1418.0	1378.9	20.6	223.2	8.6	.0098	.100	.099	2	38.3
119	1.264	.002	2	0	48631.	12957.	35672.45	1.000	85.0	1418.0	1378.8	20.6	223.5	8.7	.0098	.095	.095	2	38.3

121	1.268	.002	2	0	48901.	12949.	35952.75	1.000	85.3	1418.0	1378.7	20.6	224.0	8.9	.0098	.086	.086	3 38.3

i	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
122	1.270	.002	2	0	49027.	12944.	36082.90	1.000	85.4	1418.0	1378.6	20.6	224.2	8.9	.0098	.083	.083	2	38.3
[illegible]	1.272	.002	2	0	49147.	12940.	36207.31	1.000	85.5	1418.0	1378.5	20.6	224.5	9.0	.0098	.079	.079	2	38.3
124	1.274	.002	2	0	49262.	12935.	36326.53	1.000	85.6	1418.0	1378.4	20.6	224.7	9.1	.0098	.075	.075	2	38.3
125	1.276	.002	2	0	49371.	12931.	36440.52	1.000	85.8	1418.0	1378.4	20.6	224.9	9.2	.0098	.072	.072	3	38.3
126	1.278	.002	2	0	49476.	12926.	36549.19	1.000	85.9	1418.0	1378.3	20.6	225.1	9.2	.0098	.069	.069	2	38.3
127	1.280	.002	2	0	49575.	12922.	36653.38	1.000	86.0	1418.0	1378.2	20.6	225.3	9.3	.0098	.066	.066	2	38.3
128	1.282	.002	2	0	49671.	12917.	36753.51	1.000	86.1	1418.0	1378.2	20.6	225.5	9.4	.0098	.064	.064	2	38.3
129	1.284	.002	2	0	49762.	12913.	36849.07	1.000	86.2	1418.0	1378.1	20.6	225.6	9.4	.0098	.061	.061	2	38.3
130	1.286	.002	2	0	49849.	12908.	36940.49	1.000	86.3	1418.0	1378.0	20.6	225.8	9.5	.0098	.058	.058	1	38.3
131	1.288	.002	2	0	49932.	12904.	37028.40	1.000	86.3	1418.0	1378.0	20.6	226.0	9.5	.0098	.056	.056	2	38.3
132	1.290	.002	2	0	50012.	12899.	37112.70	1.000	86.4	1418.0	1377.9	20.6	226.1	9.6	.0098	.054	.054	2	38.3
133	1.292	.002	3	0	53647.	12895.	40751.73	1.000	89.8	1418.0	1375.9	20.7	.1	17.8	.0098	.071	.071	1	38.3
134	1.312	.020	3	0	54776.	12867.	41908.23	1.000	91.3	1417.9	1375.9	22.2	1.5	17.6	.0098	.732	.732	3	38.3
135	1.332	.020	3	0	55875.	12816.	43058.89	1.000	92.8	1417.9	1375.9	23.7	1.5	17.3	.0098	.752	.752	2	38.3
136	1.352	.020	3	0	57002.	12764.	44238.39	1.000	94.3	1417.9	1375.9	25.2	1.5	17.1	.0098	.773	.773	2	38.3
137	1.372	.020	3	0	58157.	12710.	45447.30	1.000	95.9	1417.8	1375.9	26.8	1.6	16.9	.0098	.794	.794	2	38.3
138	1.392	.020	3	0	59340.	12655.	46684.97	1.000	97.5	1417.8	1375.9	28.5	1.6	16.6	.0098	.816	.816	2	38.3
139	1.412	.020	3	0	60550.	12598.	47951.67	1.000	99.2	1417.8	1375.9	30.1	1.7	16.4	.0098	.837	.837	1	38.3
140	1.432	.020	3	0	61789.	12540.	49248.94	1.000	100.9	1417.7	1375.9	31.9	1.7	16.2	.0098	.860	.860	1	38.3
141	1.452	.020	3	0	63058.	12479.	50578.20	1.000	102.7	1417.7	1375.9	33.6	1.8	16.0	.0098	.884	.884	2	38.3
142	1.472	.020	3	0	64354.	12418.	51936.09	1.000	104.5	1417.6	1375.9	35.4	1.8	15.8	.0098	.906	.907	1	38.3
143	1.492	.020	3	0	65681.	12355.	53325.45	1.000	106.4	1417.6	1375.9	37.3	1.9	15.6	.0098	.930	.931	1	38.3
144	1.512	.020	3	0	67040.	12290.	54750.09	1.000	108.3	1417.5	1375.9	39.2	1.9	15.4	.0098	.957	.957	2	38.3
145	1.532	.020	3	0	68429.	12223.	56205.96	1.000	110.2	1417.5	1375.9	41.2	2.0	15.3	.0098	.982	.981	1	38.3
146	1.552	.020	3	0	69849.	12155.	57694.55	1.000	112.3	1417.5	1375.9	43.2	2.0	15.1	.0098	1.008	1.009	1	38.3
[illegible]	1.572	.020	3	0	71300.	12084.	59215.93	1.000	114.3	1417.4	1375.9	45.3	2.1	14.9	.0098	1.034	1.035	1	38.3
[illegible]	1.592	.020	3	0	72783.	12012.	60771.53	1.000	116.4	1417.4	1375.9	47.4	2.1	14.8	.0098	1.061	1.062	1	38.3
149	1.612	.020	3	0	74298.	11937.	62361.20	1.000	118.6	1417.3	1375.9	49.6	2.2	14.6	.0098	1.089	1.090	1	38.3
150	1.632	.020	3	0	75847.	11861.	63986.79	1.000	120.9	1417.2	1375.9	51.8	2.2	14.5	.0098	1.118	1.117	1	38.3
151	1.652	.020	3	0	77427.	11782.	65645.19	1.000	123.1	1417.2	1375.9	54.1	2.3	14.3	.0098	1.146	1.146	1	38.3
152	1.672	.020	3	0	79042.	11702.	67340.79	1.000	125.5	1417.1	1375.9	56.4	2.4	14.2	.0098	1.176	1.176	1	38.3
153	1.692	.020	3	0	80690.	11619.	69071.23	1.000	127.9	1417.1	1375.9	58.9	2.4	14.1	.0098	1.206	1.207	1	38.3
154	1.712	.020	3	0	82372.	11534.	70837.98	1.000	130.4	1417.0	1375.9	61.3	2.5	13.9	.0098	1.237	1.238	1	38.3
155	1.732	.020	3	0	84087.	11446.	72640.39	1.000	132.9	1417.0	1375.9	63.9	2.5	13.8	.0098	1.269	1.270	1	38.3
156	1.752	.020	3	0	85836.	11357.	74478.88	1.000	135.5	1416.9	1375.9	66.5	2.6	13.7	.0098	1.300	1.301	1	38.3
157	1.772	.020	3	0	87617.	11264.	76353.00	1.000	138.2	1416.8	1375.9	69.1	2.7	13.6	.0098	1.333	1.333	3	38.3
158	1.792	.020	3	0	89434.	11169.	78264.69	1.000	140.9	1416.8	1375.9	71.9	2.7	13.4	.0098	1.367	1.367	2	38.3
159	1.812	.020	3	0	91286.	11072.	80213.85	1.000	143.7	1416.7	1375.9	74.7	2.8	13.3	.0098	1.401	1.402	2	38.3
160	1.832	.020	3	0	93172.	10972.	82199.20	1.000	146.6	1416.6	1375.9	77.5	2.9	13.2	.0098	1.436	1.436	2	38.3
161	1.852	.020	3	0	95091.	10870.	84221.35	1.000	149.5	1416.6	1375.9	80.5	2.9	13.1	.0098	1.471	1.471	2	38.3
162	1.872	.020	3	0	97043.	10765.	86278.17	1.000	152.5	1416.5	1375.9	83.5	3.0	13.0	.0098	1.506	1.506	2	38.3
163	1.892	.020	3	0	99020.	10644.	88375.75	1.000	155.6	1416.4	1375.9	86.6	3.1	12.9	.0098	1.545	1.545	2	38.3
164	1.912	.020	3	0	101018.	10511.	90507.14	1.000	158.8	1416.3	1375.9	89.7	3.2	12.8	.0098	1.580	1.581	2	38.3
165	1.932	.020	3	0	103051.	10374.	92677.38	1.000	162.0	1416.2	1375.9	93.0	3.2	12.7	.0098	1.620	1.621	2	38.3
166	1.952	.020	3	0	105114.	10234.	94880.59	1.000	165.3	1416.2	1375.9	96.3	3.3	12.6	.0098	1.656	1.657	2	38.3
167	1.972	.020	3	0	107210.	10089.	97120.38	1.000	168.7	1416.1	1375.9	99.7	3.4	12.6	.0098	1.696	1.697	2	38.3
168	1.992	.020	3	0	109339.	9942.	99397.44	1.000	172.2	1416.0	1375.9	103.2	3.5	12.5	.0098	1.737	1.738	2	38.3
169	2.012	.020	3	0	111500.	9790.	101710.00	1.000	175.8	1415.9	1375.9	106.7	3.6	12.4	.0098	1.778	1.779	2	38.3
170	2.032	.020	3	0	113692.	9634.	104057.50	1.000	179.4	1415.8	1375.9	110.3	3.6	12.3	.0098	1.819	1.820	2	38.3
171	2.052	.020	3	0	115914.	9474.	106439.50	1.000	183.1	1415.7	1375.9	114.1	3.7	12.2	.0098	1.861	1.862	2	38.3
172	2.072	.020	3	0	118164.	9311.	108853.60	1.000	186.9	1415.6	1375.9	117.9	3.8	12.1	.0098	1.903	1.904	2	38.3
[illegible]	2.092	.020	3	0	120443.	9143.	111300.00	1.000	190.8	1415.5	1375.9	121.8	3.9	12.1	.0098	1.945	1.946	2	38.3
[illegible]	2.112	.020	3	0	122747.	8970.	113776.40	1.000	194.8	1415.4	1375.9	125.7	4.0	12.0	.0098	1.988	1.989	2	38.3
175	2.132	.020	3	0	125075.	8793.	116281.70	1.000	198.9	1415.3	1375.9	129.8	4.1	11.9	.0098	2.031	2.031	2	38.3
176	2.152	.020	3	0	127426.	8612.	118814.40	1.000	203.0	1415.2	1375.9	134.0	4.1	11.8	.0098	2.074	2.075	2	38.3
177	2.172	.020	3	0	129806.	8426.	121380.50	1.000	207.3	1415.1	1375.9	138.2	4.2	11.8	.0098	2.122	2.123	2	38.3
178	2.192	.020	3	0	132205.	8236.	123968.30	1.000	211.6	1415.0	1375.9	142.5	4.3	11.7	.0098	2.164	2.166	1	38.3
179	2.212	.020	3	0	134622.	8040.	126582.30	1.000	216.0	1414.9	1375.9	146.9	4.4	11.6	.0098	2.210	2.211	3	38.3
180	2.232	.020	3	0	137060.	7838.	129224.60	1.000	220.5	1414.8	1375.9	151.5	4.5	11.6	.0098	2.258	2.260	2	38.3

181	2.252	.020	3	0	139517.	7634.	131882.50	1.000	225.1	1414.7	1375.9	156.1	4.6	11.5	.0098	2.301	2.304	1	38.3

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
182	2.272	.020	3	0	141990.	7422.	134567.90	1.000	229.8	1414.5	1375.9	160.8	4.7	11.4	.0098	2.353	2.354	2	38.3
[illegible]	2.292	.020	3	0	144472.	7207.	137264.70	1.000	234.6	1414.4	1375.9	165.6	4.8	11.3	.0098	2.395	2.398	1	38.3
[illegible]	2.312	.020	3	0	146967.	6985.	139981.90	1.000	239.5	1414.3	1375.9	170.4	4.9	11.3	.0098	2.445	2.448	1	38.3
185	2.332	.020	3	0	149466.	6758.	142707.90	1.000	244.5	1414.1	1375.9	175.4	5.0	11.2	.0098	2.489	2.492	1	38.3
186	2.352	.020	3	0	151974.	6525.	145449.20	1.000	249.6	1414.0	1375.9	180.5	5.1	11.1	.0098	2.539	2.542	1	38.3
187	2.372	.020	3	0	154483.	6285.	148198.00	1.000	254.7	1413.9	1375.9	185.7	5.2	11.1	.0098	2.586	2.587	2	38.3
188	2.392	.020	3	0	156996.	6042.	150954.70	1.000	260.0	1413.7	1375.9	191.0	5.3	11.0	.0098	2.636	2.638	1	38.3
189	2.412	.020	3	0	159503.	5789.	153713.70	1.000	265.4	1413.6	1375.9	196.3	5.4	10.9	.0098	2.683	2.684	2	38.3
190	2.432	.020	3	0	162014.	5537.	156476.20	1.000	270.8	1413.4	1375.9	201.8	5.5	10.9	.0098	2.732	2.735	1	38.3
191	2.452	.020	3	0	164564.	5330.	159234.60	1.000	276.4	1413.3	1375.9	207.3	5.6	10.8	.0098	2.780	2.781	2	38.3
192	2.472	.020	3	0	167108.	5119.	161989.20	1.000	282.1	1413.1	1375.9	213.0	5.7	10.7	.0098	2.830	2.832	1	38.3
193	2.492	.020	3	0	169632.	4902.	164730.00	1.000	287.8	1413.0	1375.9	218.7	5.7	10.7	.0098	2.874	2.877	1	38.3
194	2.512	.020	3	0	172142.	4679.	167462.80	1.000	293.7	1412.8	1375.9	224.6	5.9	10.6	.0098	2.926	2.928	1	38.3
195	2.532	.020	3	0	174625.	4451.	170174.40	1.000	299.6	1412.6	1375.9	230.5	5.9	10.5	.0098	2.970	2.973	1	38.3
196	2.552	.020	3	0	177080.	4216.	172864.00	1.000	305.6	1412.5	1375.9	236.6	6.0	10.5	.0098	3.017	3.018	2	38.3
197	2.572	.020	3	0	179510.	3977.	175533.30	1.000	311.8	1412.3	1375.9	242.7	6.1	10.4	.0098	3.067	3.070	1	38.3
198	2.592	.020	3	0	181902.	3731.	178170.30	1.000	318.0	1412.1	1375.9	248.9	6.2	10.3	.0098	3.111	3.114	1	38.3
199	2.612	.020	3	0	184249.	3479.	180769.40	1.000	324.3	1411.9	1375.9	255.2	6.3	10.3	.0098	3.155	3.158	1	38.3
200	2.632	.020	3	0	186549.	3221.	183328.10	1.000	330.7	1411.7	1375.9	261.6	6.4	10.2	.0098	3.199	3.201	1	38.3
201	2.652	.020	3	0	188799.	2956.	185843.20	1.000	337.2	1411.5	1375.9	268.1	6.5	10.1	.0098	3.244	3.245	2	38.3
202	2.672	.020	3	0	190993.	2685.	188307.20	1.000	343.8	1411.3	1375.9	274.7	6.6	10.1	.0098	3.286	3.288	1	38.3
203	2.692	.020	3	0	193124.	2408.	190716.00	1.000	350.4	1411.1	1375.9	281.4	6.7	10.0	.0098	3.328	3.331	1	38.3
204	2.712	.020	3	0	195249.	2185.	193064.50	1.000	357.2	1410.9	1375.9	288.1	6.7	9.9	.0098	3.370	3.373	1	38.3
205	2.732	.020	3	0	197330.	1982.	195347.90	1.000	364.0	1410.7	1375.9	294.9	6.8	9.9	.0098	3.412	3.414	1	38.3
206	2.752	.020	3	0	199335.	1774.	197561.10	1.000	370.9	1410.5	1375.9	301.8	6.9	9.8	.0098	3.453	3.455	1	38.3
207	2.772	.020	3	0	201247.	1561.	199686.30	1.000	377.9	1410.2	1375.9	308.8	7.0	9.7	.0098	3.485	3.487	1	38.3
[illegible]	2.792	.020	3	0	203073.	1342.	201730.60	1.000	384.9	1410.0	1375.9	315.8	7.1	9.6	.0098	3.525	3.527	1	38.3
[illegible]	2.812	.020	3	0	204794.	1118.	203676.00	1.000	392.0	1409.8	1375.9	323.0	7.1	9.6	.0098	3.556	3.558	1	38.3
210	2.832	.020	3	0	206428.	911.	205517.00	1.000	399.2	1409.5	1375.9	330.1	7.2	9.5	.0098	3.586	3.588	1	38.3
211	2.852	.020	3	0	207958.	707.	207250.60	1.000	406.4	1409.3	1375.9	337.4	7.2	9.4	.0098	3.617	3.618	2	38.3
212	2.872	.020	3	0	209366.	500.	208866.50	1.000	413.7	1409.0	1375.9	344.7	7.3	9.3	.0098	3.644	3.646	1	38.3
213	2.892	.020	3	0	210646.	286.	210359.90	1.000	421.1	1408.8	1375.9	352.0	7.3	9.3	.0098	3.671	3.673	1	38.3
214	2.912	.020	3	0	211790.	67.	211722.50	1.000	428.4	1408.5	1375.9	359.4	7.4	9.2	.0098	3.698	3.700	1	38.3
215	2.932	.020	3	0	212941.	0.	212941.10	1.000	435.9	1408.2	1375.9	366.8	7.4	9.1	.0098	3.716	3.717	2	38.3
216	2.952	.020	3	0	214013.	0.	214013.00	1.000	443.4	1407.9	1375.9	374.3	7.5	9.0	.0098	3.739	3.741	1	38.3
217	2.972	.020	3	0	214921.	0.	214920.60	1.000	450.9	1407.6	1375.9	381.8	7.5	8.9	.0098	3.754	3.755	1	38.3
218	2.992	.020	3	0	215745.	0.	215745.20	1.000	458.4	1407.3	1375.9	389.3	7.5	8.8	.0098	3.766	3.768	1	38.3
219	3.012	.020	3	0	216413.	0.	216413.10	1.000	466.0	1407.0	1375.9	396.9	7.6	8.8	.0098	3.778	3.780	1	38.3
220	3.032	.020	3	0	216894.	0.	216893.60	1.000	473.5	1406.7	1375.9	404.5	7.6	8.7	.0098	3.788	3.790	1	38.3
221	3.052	.020	3	0	217169.	0.	217169.40	1.000	481.1	1406.4	1375.9	412.1	7.6	8.6	.0098	3.790	3.791	2	38.3
222	3.072	.020	3	0	217237.	0.	217236.90	1.000	488.7	1406.0	1375.9	419.6	7.6	8.5	.0098	3.798	3.799	1	38.3
223	3.092	.020	3	0	217080.	0.	217080.40	1.000	496.3	1405.7	1375.9	427.2	7.6	8.5	.0098	3.798	3.795	0	38.3
224	3.112	.020	3	0	216672.	0.	216672.50	1.000	503.9	1405.3	1375.9	434.8	7.6	8.3	.0098	3.782	3.783	2	38.3
225	3.132	.020	3	0	216014.	0.	216014.30	1.000	511.4	1404.9	1375.9	442.4	7.6	8.2	.0098	3.776	3.778	1	38.3
226	3.152	.020	3	0	215074.	0.	215074.10	1.000	518.9	1404.5	1375.9	449.9	7.5	8.1	.0098	3.752	3.754	2	38.3
227	3.172	.020	3	0	213846.	0.	213845.60	1.000	526.4	1404.1	1375.9	457.3	7.5	8.0	.0098	3.735	3.736	1	38.3
228	3.192	.020	3	0	212302.	0.	212302.50	1.000	533.8	1403.7	1375.9	464.7	7.4	7.9	.0098	3.707	3.708	1	38.3
229	3.212	.020	3	0	210423.	0.	210423.10	1.000	541.2	1403.3	1375.9	472.1	7.4	7.8	.0098	3.678	3.679	1	38.3
230	3.232	.020	3	0	208174.	0.	208174.40	1.000	548.4	1402.8	1375.9	479.4	7.3	7.6	.0098	3.639	3.640	1	38.3
231	3.252	.020	3	0	205519.	0.	205518.60	1.000	555.6	1402.4	1375.9	486.6	7.2	7.5	.0098	3.589	3.590	1	38.3
232	3.272	.020	3	0	202415.	0.	202415.10	1.000	562.7	1401.9	1375.9	493.6	7.1	7.4	.0098	3.539	3.540	1	38.3
233	3.292	.020	3	0	198799.	0.	198799.10	1.000	569.6	1401.3	1375.9	500.6	6.9	7.2	.0098	3.470	3.471	1	38.3
[illegible]	3.312	.020	3	0	194596.	0.	194596.00	1.000	576.4	1400.8	1375.9	507.4	6.8	7.1	.0098	3.401	3.402	1	38.3
[illegible]	3.332	.020	3	0	189684.	0.	189683.60	1.000	583.1	1400.1	1375.9	514.0	6.6	6.9	.0098	3.316	3.316	1	38.3
236	3.352	.020	3	0	183876.	0.	183875.80	1.000	589.5	1399.5	1375.9	520.4	6.4	6.7	.0098	3.210	3.208	2	38.3
237	3.372	.020	3	0	176832.	0.	176831.70	1.000	595.7	1398.7	1375.9	526.6	6.2	6.5	.0098	3.084	3.082	2	38.3
238	3.392	.020	3	0	167764.	0.	167763.60	1.000	601.5	1397.8	1375.9	532.5	5.9	6.3	.0098	2.931	2.929	2	38.3
239	3.412	.020	3	0	152741.	0.	152740.80	1.000	606.9	1396.3	1375.9	537.8	5.3	5.9	.0098	2.672	2.670	2	38.3
240	3.432	.020	3	0	125438.	0.	125438.20	1.000	611.3	1393.8	1375.9	542.2	4.4	5.2	.0098	2.194	2.193	2	38.3
241	3.452	.020	3	0	47090.	0.	47090.20	1.000	612.4	1387.7	1375.9	544.5	2.3	3.4	.0098	1.170	1.170	2	38.3

KTI= 0 T= 242 T= 3.47

TF= .06 QTF= 28026. TP= 3.07 QP= 217237. TRS= 1.95 TB= 1.12
BRD= 43.8 BRW= 615.9 HU=1419.7 HY=1187.3 HC=1375.9 ALG=38.250 QO= 158.2816
Z= .79 TFH= 2.21 BO= 546.9 TFI= .87

1

OTIME	DISCHARGE
.060	14176.
.100	14620.
.140	15110.
.180	15628.
.220	16163.
.260	16708.
.300	17259.
.340	17814.
.380	18371.
.420	18928.
.460	19485.
.500	20042.
.540	20596.
.580	21148.
.620	21698.
.660	22245.
.700	22789.
.740	23330.
.780	23868.
.820	24402.
.860	24932.
.900	25458.
.940	25980.
.980	26498.
1.020	27012.
1.060	27521.
1.100	28026.
1.140	33046.
1.180	36457.
1.220	42892.
1.260	48333.
1.300	54098.
1.340	56326.
1.380	58631.
1.420	61046.
1.460	63576.
1.500	66224.
1.540	68997.
1.580	71893.
1.620	74918.
1.660	78074.
1.700	81363.
1.740	84786.
1.780	88344.
1.820	92040.
1.860	95872.
1.900	99819.
1.940	103877.
1.980	108062.
2.020	112377.
2.060	116814.
2.100	121344.

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2.140.  .  .  .  *  .  .  .  .  .  .  .  126016.
2.180.  .  .  .  *.  .  .  .  .  .  .  .  130766.
2.220.  .  .  .  *  .  .  .  .  .  .  .  135599.
2.260.  .  .  .  . *  .  .  .  .  .  .  .  140506.
2.300.  .  .  .  .  *  .  .  .  .  .  .  .  145470.
2.340.  .  .  .  .   *  .  .  .  .  .  .  .  150470.
2.380.  .  .  .  .     *  .  .  .  .  .  .  155489.
2.420.  .  .  .  .      *.  .  .  .  .  .  .  160508.
2.460.  .  .  .  .      *  .  .  .  .  .  .  165582.
2.500.  .  .  .  .       . *  .  .  .  .  .  .  170636.
2.540.  .  .  .  .       .  *  .  .  .  .  .  .  175607.
2.580.  .  .  .  .       .   *  .  .  .  .  .  .  180467.
2.620.  .  .  .  .       .     * .  .  .  .  .  .  185169.
2.660.  .  .  .  .       .      *.  .  .  .  .  .  189677.
2.700.  .  .  .  .       .       *  .  .  .  .  .  193974.
2.740.  .  .  .  .       .       .* .  .  .  .  .  198132.
2.780.  .  .  .  .       .       .  * .  .  .  .  .  201977.
2.820.  .  .  .  .       .       .   * .  .  .  .  .  205448.
2.860.  .  .  .  .       .       .    * .  .  .  .  .  208521.
2.900.  .  .  .  .       .       .     * .  .  .  .  .  211104.
2.940.  .  .  .  .       .       .     * .  .  .  .  .  213370.
2.980.  .  .  .  .       .       .      * .  .  .  .  .  215251.
3.020.  .  .  .  .       .       .      * .  .  .  .  .  216605.
3.060.  .  .  .  .       .       .       * .  .  .  .  .  217196.
3.100.  .  .  .  .       .       .       * .  .  .  .  .  216917.
3.140.  .  .  .  .       .       .      * .  .  .  .  .  215638.
3.180.  .  .  .  .       .       .     * .  .  .  .  .  213228.
3.220.  .  .  .  .       .       .    * .  .  .  .  .  209523.
3.260.  .  .  .  .       .       .  * .  .  .  .  .  204277.
3.300.  .  .  .  .       .       .* .  .  .  .  .  197117.
3.340.  .  .  .  .       .      * .  .  .  .  .  .  187360.
3.380.  .  .  .  .       . *  .  .  .  .  .  .  173203.
3.420.  .  .  .  . *  .  .  .  .  .  .  .  141817.
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        BREACH MODEL, MICRO-VERSION: 1/87

    ING FAILURE AT EAST END OF HQFRS  STA. 1045+90 FILE: HQETOP.6      24OCT90

 HI=   1415.40  HU=   1419.70  HL=   1375.90  HPI=   1397.80  HSP=  1408.40

        (QIN(I),I=1,8)
  8060.00   2934.00   1012.00    306.00     92.00       .00       .00       .00

        (TIN(I),I=1,8)
     .00      1.00      2.00      3.00      4.00      6.00       .00       .00

        (RSA(I),I=1,8)
  2975.00   2240.30   1221.70    114.80     76.80     44.40     18.85       .00

        (HSA(I),I=1,8)
  1428.30   1419.70   1408.40   1396.10   1394.30   1392.60   1389.10   1375.90

 ZU=  3.00  ZD=  2.00  ZC=   .00  PORW=   .00  GL=   .00  GS=   .00  VMP=   .00

 D50C=   .00  PORC=   .00  UWC=   .00  CNC= .0000  AFRC=   .00  COHC=    .0  UNFCC=   .00

 D50S=   .18  PORS=   .33  UWS=125.60  CNS= .0000  AFRS= 39.00  COHS= 100.0  UNFCS= 10.00

 BR=  1.00  WC=  14.0  CRL= 5280.0  SM= 70.40  WV= 5280.0  CNV= .0450  D50DF=   .00  UNFCDF=   .00

 DTH=  .020  DBG=  .001   H=   .1000   TEH=    6.0  ERR=   .10  FPT=   2.0  TPR=   1.0

        (SPQ(I),I=1,8)
     .00   1049.30   2325.30   5551.80  10718.60  15377.70  22588.60  58752.00

        (SPH(I),I=1,8)
     .00      1.30      2.66      5.05      8.05     11.30     11.60     13.80

                CRL= 5280.   BM=   91.   AFR= 39.00   BO=  21.9   Z=   .79


1


        AFR=  39.0   TH1= 64.50   H1=  6.68   TH2= 51.75   H2= 22.93   TH3= 45.38   H3= 78.83


1
   I      T  DTH KG KC     QTOT       QTS           QB   SUB     BT     HY     HC    BO    PPP     HP  CNN     DH    DHH   KIT ALG
  51  1.020  .020 4 0    17143.     8331.      8811.50 1.000   16.4 1415.1 1389.6  16.4 1406.0   17.3  .0098   .170   .170   1   .0
  52  1.040  .020 4 0    17298.     8309.      8988.93 1.000   16.5 1415.1 1389.5  16.5 1406.1   17.3  .0098   .168   .168   1   .0
  53  1.060  .020 4 0    17452.     8287.      9165.84 1.000   16.7 1415.0 1389.4  16.7 1406.2   17.2  .0098   .166   .166   1   .0
      1.080  .020 4 0    17606.     8264.      9342.29 1.000   16.9 1415.0 1389.4  16.9 1406.2   17.2  .0098   .164   .164   1   .0
      1.100  .020 4 0    17759.     8240.      9518.17 1.000   17.0 1415.0 1389.3  17.0 1406.3   17.2  .0098   .162   .162   1   .0
  56  1.120  .020 4 0    17911.     8217.      9693.55 1.000   17.2 1415.0 1389.2  17.2 1406.4   17.2  .0098   .160   .160   1   .0
 PIPE FLOW TO WEIR FLOW TRANSITION
    1389.       13.       17.    10799.    19138.    29937.      .022     1.162      167.      194.       13.      383.
 .06833  .06844  .33122 2.75150  .0098      4.9     27.1      3.1     13.2    226.6
                   2      24.8      22.9      24.7   93189.9     .0676    4    1.1600    1.2276      38.3     193.8     382.9
  58  1.160  .020 2 0    21692.     8193.     13498.82 1.000   50.8 1415.0 1389.1  17.3  193.8     .0  .0098   .000   .000   0 28.7
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60	1.164	.002	2	0	23475.	8186.	15289.00	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
61	1.166	.002	2	0	23458.	8171.	15286.55	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
62	1.168	.002	2	0	23452.	8168.	15284.11	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
63	1.170	.002	2	0	23447.	8165.	15281.82	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
64	1.172	.002	2	0	23441.	8162.	15279.37	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
65	1.174	.002	2	0	23435.	8158.	15277.08	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
66	1.176	.002	2	0	23430.	8155.	15274.64	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
67	1.178	.002	2	0	23424.	8152.	15272.35	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
68	1.180	.002	2	0	23418.	8149.	15269.91	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
69	1.182	.002	2	0	23413.	8145.	15267.62	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
70	1.184	.002	2	0	23407.	8142.	15265.17	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
71	1.186	.002	2	0	23401.	8139.	15262.73	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
72	1.188	.002	2	0	23396.	8135.	15260.44	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
73	1.190	.002	2	0	23390.	8132.	15258.00	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
74	1.192	.002	2	0	23385.	8129.	15255.71	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
75	1.194	.002	2	0	23379.	8126.	15253.27	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
76	1.196	.002	2	0	23373.	8122.	15250.98	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
77	1.198	.002	2	0	23368.	8119.	15248.54	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
78	1.200	.002	2	0	23362.	8116.	15246.10	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
79	1.202	.002	2	0	23356.	8113.	15243.81	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
80	1.204	.002	2	0	23351.	8109.	15241.37	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
81	1.206	.002	2	0	23345.	8106.	15239.08	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
82	1.208	.002	2	0	23339.	8103.	15236.64	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
83	1.210	.002	2	0	23334.	8100.	15234.35	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
84	1.212	.002	2	0	23328.	8096.	15231.91	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
85	1.214	.002	2	0	23323.	8093.	15229.62	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
86	1.216	.002	2	0	23317.	8090.	15227.18	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
87	1.218	.002	2	0	23311.	8086.	15224.74	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
88	1.220	.002	2	0	23306.	8083.	15222.45	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
89	1.222	.002	2	0	23300.	8080.	15220.01	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
90	1.224	.002	2	0	23294.	8077.	15217.72	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
91	1.226	.002	2	0	23289.	8073.	15215.28	1.000	65.5	1414.9	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
92	1.228	.002	2	0	23806.	8070.	15736.20	1.000	66.4	1414.9	1388.6	17.3	195.3	.5	.0098	.536	.535	4	38.3
93	1.230	.002	2	0	24313.	8067.	16245.80	1.000	67.2	1414.9	1388.1	17.3	196.8	1.0	.0098	.513	.513	2	38.3
94	1.232	.002	2	0	24807.	8063.	16743.73	1.000	68.0	1414.9	1387.6	17.3	198.2	1.5	.0098	.491	.492	2	38.3
95	1.234	.002	2	0	25289.	8060.	17229.17	1.000	68.7	1414.9	1387.1	17.3	199.6	2.0	.0098	.470	.470	3	38.3
96	1.236	.002	2	0	25758.	8056.	17702.23	1.000	69.4	1414.9	1386.7	17.3	200.9	2.5	.0098	.450	.450	2	38.3
97	1.238	.002	2	0	26214.	8052.	18161.93	1.000	70.1	1414.9	1386.2	17.3	202.1	2.9	.0098	.430	.430	2	38.3
98	1.240	.002	2	0	26656.	8049.	18607.55	1.000	70.8	1414.9	1385.8	17.3	203.3	3.3	.0098	.410	.410	2	38.3
99	1.242	.002	2	0	27083.	8045.	19038.42	1.000	71.4	1414.9	1385.4	17.3	204.4	3.7	.0098	.391	.391	2	38.3
100	1.244	.002	2	0	27496.	8041.	19455.25	1.000	72.0	1414.9	1385.1	17.3	205.5	4.1	.0098	.373	.373	2	38.3
101	1.246	.002	2	0	27894.	8037.	19857.31	1.000	72.5	1414.9	1384.7	17.3	206.5	4.4	.0098	.355	.355	3	38.3
102	1.248	.002	2	0	28279.	8033.	20245.56	1.000	73.1	1414.9	1384.4	17.3	207.5	4.8	.0098	.339	.339	2	38.3
103	1.250	.002	2	0	28649.	8029.	20619.58	1.000	73.6	1414.9	1384.0	17.3	208.4	5.1	.0098	.322	.323	2	38.3
104	1.252	.002	2	0	29005.	8025.	20979.84	1.000	74.0	1414.9	1383.7	17.3	209.3	5.4	.0098	.307	.307	2	38.3
105	1.254	.002	2	0	29347.	8021.	21326.22	1.000	74.5	1414.9	1383.4	17.3	210.1	5.7	.0098	.293	.293	2	38.3
106	1.256	.002	2	0	29676.	8016.	21659.52	1.000	74.9	1414.9	1383.2	17.3	210.9	6.0	.0098	.279	.279	2	38.3
107	1.258	.002	2	0	29992.	8012.	21980.25	1.000	75.4	1414.9	1382.9	17.3	211.7	6.2	.0098	.266	.266	2	38.3
108	1.260	.002	2	0	30296.	8008.	22288.50	1.000	75.8	1414.9	1382.6	17.3	212.4	6.5	.0098	.253	.253	2	38.3
109	1.262	.002	2	0	30587.	8003.	22583.95	1.000	76.1	1414.9	1382.4	17.3	213.1	6.7	.0098	.241	.241	2	38.3
110	1.264	.002	2	0	30867.	7999.	22867.46	1.000	76.5	1414.9	1382.2	17.3	213.8	6.9	.0098	.230	.230	3	38.3
111	1.266	.002	2	0	31134.	7994.	23139.61	1.000	76.9	1414.9	1382.0	17.3	214.4	7.2	.0098	.219	.219	2	38.3
112	1.268	.002	2	0	31391.	7990.	23401.40	1.000	77.2	1414.9	1381.7	17.3	215.0	7.4	.0098	.209	.209	2	38.3
113	1.270	.002	2	0	31638.	7985.	23652.18	1.000	77.5	1414.9	1381.5	17.3	215.6	7.6	.0098	.199	.199	2	38.3
114	1.272	.002	2	0	31874.	7981.	23892.83	1.000	77.8	1414.9	1381.4	17.3	216.1	7.8	.0098	.190	.190	2	38.3
115	1.274	.002	2	0	32100.	7976.	24123.45	1.000	78.1	1414.9	1381.2	17.3	216.7	7.9	.0098	.181	.181	3	38.3
116	1.276	.002	2	0	32317.	7972.	24345.11	1.000	78.4	1414.9	1381.0	17.3	217.2	8.1	.0098	.173	.173	2	38.3
117	1.278	.002	2	0	32524.	7967.	24557.59	1.000	78.6	1414.9	1380.8	17.3	217.6	8.3	.0098	.165	.165	2	38.3
118	1.280	.002	2	0	32723.	7962.	24761.28	1.000	78.9	1414.8	1380.7	17.3	218.1	8.4	.0098	.158	.158	3	38.3
119	1.282	.002	2	0	32914.	7957.	24956.92	1.000	79.1	1414.8	1380.5	17.3	218.5	8.6	.0098	.151	.151	2	38.3

120	1.284	.002	2	0	33077.	7952.	25144.25	1.000	79.3	1414.8	1380.4	17.3	218.7	8.7	.0098	.144	.144	2	38.3
121	1.286	.002	2	0	33272.	7948.	25323.96	1.000	79.5	1414.8	1380.2	17.3	219.3	8.9	.0098	.138	.138	1	38.3

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
[illegible]	1.288	.002	2	0	33439.	7943.	25496.61	1.000	79.8	1414.8	1380.1	17.3	219.7	9.0	.0098	.132	.132	1	38.3
[illegible]	1.290	.002	2	0	33600.	7938.	25662.03	1.000	80.0	1414.8	1380.0	17.3	220.1	9.1	.0098	.126	.126	1	38.3
124	1.292	.002	2	0	33754.	7933.	25821.54	1.000	80.1	1414.8	1379.9	17.3	220.4	9.3	.0098	.121	.121	2	38.3
125	1.294	.002	2	0	33902.	7928.	25974.32	1.000	80.3	1414.8	1379.8	17.3	220.8	9.4	.0098	.116	.116	2	38.3
126	1.296	.002	2	0	34044.	7923.	26121.37	1.000	80.5	1414.8	1379.6	17.3	221.1	9.5	.0098	.111	.111	2	38.3
127	1.298	.002	2	0	34180.	7918.	26262.38	1.000	80.7	1414.8	1379.5	17.3	221.4	9.6	.0098	.106	.106	2	38.3
128	1.300	.002	2	0	34310.	7913.	26397.64	1.000	80.8	1414.8	1379.4	17.3	221.7	9.7	.0098	.102	.102	3	38.3
129	1.302	.002	2	0	34436.	7908.	26527.80	1.000	81.0	1414.8	1379.3	17.3	222.0	9.8	.0098	.098	.098	2	38.3
130	1.304	.002	2	0	34556.	7903.	26652.77	1.000	81.1	1414.8	1379.2	17.3	222.2	9.9	.0098	.094	.094	1	38.3
131	1.306	.002	2	0	34671.	7898.	26773.38	1.000	81.3	1414.8	1379.1	17.3	222.5	10.0	.0098	.090	.090	2	38.3
132	1.308	.002	2	0	34781.	7892.	26888.85	1.000	81.4	1414.8	1379.1	17.3	222.7	10.1	.0098	.087	.087	2	38.3
133	1.310	.002	2	0	34888.	7887.	27000.41	1.000	81.5	1414.8	1379.0	17.3	223.0	10.1	.0098	.083	.083	2	38.3
134	1.312	.002	2	0	34990.	7882.	27107.45	1.000	81.7	1414.8	1378.9	17.3	223.2	10.2	.0098	.080	.080	2	38.3
135	1.314	.002	2	0	35088.	7877.	27210.50	1.000	81.8	1414.8	1378.8	17.3	223.4	10.3	.0098	.077	.077	1	38.3
136	1.316	.002	2	0	35182.	7872.	27309.65	1.000	81.9	1414.8	1378.7	17.3	223.7	10.4	.0098	.074	.074	2	38.3
137	1.318	.002	2	0	35272.	7867.	27405.07	1.000	82.0	1414.8	1378.7	17.3	223.9	10.4	.0098	.071	.071	2	38.3
138	1.320	.002	2	0	35358.	7861.	27496.74	1.000	82.1	1414.8	1378.6	17.3	224.1	10.5	.0098	.069	.069	1	38.3
139	1.322	.002	2	0	35442.	7856.	27585.53	1.000	82.2	1414.8	1378.5	17.3	224.2	10.6	.0098	.066	.066	2	38.3
140	1.324	.002	2	0	35522.	7851.	27670.99	1.000	82.3	1414.8	1378.5	17.3	224.4	10.6	.0098	.064	.064	2	38.3
141	1.326	.002	2	0	35599.	7846.	27753.16	1.000	82.4	1414.8	1378.4	17.3	224.6	10.7	.0098	.062	.062	1	38.3
142	1.328	.002	2	0	35673.	7841.	27832.36	1.000	82.5	1414.8	1378.4	17.3	224.8	10.8	.0098	.059	.059	1	38.3
143	1.330	.002	2	0	35744.	7835.	27908.53	1.000	82.6	1414.8	1378.3	17.3	224.9	10.8	.0098	.057	.057	1	38.3
144	1.332	.002	2	0	35812.	7830.	27982.25	1.000	82.7	1414.8	1378.2	17.3	225.1	10.9	.0098	.055	.055	2	38.3
145	1.334	.002	2	0	35878.	7825.	28053.48	1.000	82.8	1414.8	1378.2	17.3	225.3	10.9	.0098	.053	.053	2	38.3
146	1.336	.002	2	0	35941.	7819.	28122.02	1.000	82.9	1414.8	1378.1	17.3	225.4	11.0	.0098	.052	.052	1	38.3
[illegible]	1.338	.002	2	0	36002.	7814.	28188.19	1.000	82.9	1414.8	1378.1	17.3	225.5	11.0	.0098	.050	.050	2	38.3
[illegible]	1.340	.002	2	0	36061.	7809.	28252.03	1.000	83.0	1414.8	1378.0	17.3	225.7	11.1	.0098	.048	.048	2	38.3
149	1.342	.002	2	0	36117.	7803.	28313.64	1.000	83.1	1414.8	1378.0	17.3	225.8	11.1	.0098	.047	.047	2	38.3
150	1.344	.002	2	0	36171.	7798.	28373.44	1.000	83.2	1414.8	1377.9	17.3	226.0	11.2	.0098	.045	.045	2	38.3
151	1.346	.002	2	0	36223.	7792.	28430.82	1.000	83.2	1414.8	1377.9	17.3	226.1	11.2	.0098	.044	.044	2	38.3
152	1.348	.002	3	0	39279.	7787.	31491.92	1.000	86.5	1414.7	1375.9	17.4	.1	16.7	.0098	.055	.055	1	38.3
153	1.368	.020	3	0	40031.	7755.	32275.88	1.000	87.6	1414.7	1375.9	18.6	1.1	16.5	.0098	.564	.564	2	38.3
154	1.388	.020	3	0	40743.	7695.	33047.97	1.000	88.8	1414.7	1375.9	19.7	1.2	16.3	.0098	.577	.578	1	38.3
155	1.408	.020	3	0	41469.	7633.	33835.63	1.000	90.0	1414.7	1375.9	20.9	1.2	16.1	.0098	.590	.591	1	38.3
156	1.428	.020	3	0	42211.	7571.	34639.96	1.000	91.2	1414.6	1375.9	22.1	1.2	15.9	.0098	.605	.605	1	38.3
157	1.448	.020	3	0	42968.	7506.	35461.21	1.000	92.4	1414.6	1375.9	23.4	1.2	15.7	.0098	.619	.620	1	38.3
158	1.468	.020	3	0	43740.	7441.	36299.36	1.000	93.7	1414.5	1375.9	24.6	1.3	15.5	.0098	.634	.634	1	38.3
159	1.488	.020	3	0	44529.	7374.	37155.29	1.000	95.0	1414.5	1375.9	25.9	1.3	15.3	.0098	.649	.649	1	38.3
160	1.508	.020	3	0	45333.	7306.	38027.51	1.000	96.3	1414.5	1375.9	27.3	1.3	15.2	.0098	.664	.664	1	38.3
161	1.528	.020	3	0	46153.	7236.	38917.57	1.000	97.7	1414.4	1375.9	28.6	1.4	15.0	.0098	.679	.680	1	38.3
162	1.548	.020	3	0	46991.	7164.	39826.18	1.000	99.1	1414.4	1375.9	30.0	1.4	14.8	.0098	.696	.696	1	38.3
163	1.568	.020	3	0	47844.	7091.	40752.28	1.000	100.5	1414.3	1375.9	31.4	1.4	14.7	.0098	.711	.712	1	38.3
164	1.588	.020	3	0	48714.	7017.	41696.96	1.000	101.9	1414.3	1375.9	32.9	1.5	14.5	.0098	.728	.729	1	38.3
165	1.608	.020	3	0	49600.	6941.	42659.59	1.000	103.4	1414.3	1375.9	34.4	1.5	14.4	.0098	.745	.745	1	38.3
166	1.628	.020	3	0	50503.	6863.	43640.27	1.000	105.0	1414.2	1375.9	35.9	1.5	14.2	.0098	.762	.762	1	38.3
167	1.648	.020	3	0	51424.	6783.	44640.48	1.000	106.5	1414.2	1375.9	37.5	1.6	14.1	.0098	.779	.780	1	38.3
168	1.668	.020	3	0	52361.	6702.	45659.25	1.000	108.1	1414.1	1375.9	39.0	1.6	13.9	.0098	.797	.798	1	38.3
169	1.688	.020	3	0	53316.	6619.	46697.27	1.000	109.7	1414.1	1375.9	40.7	1.6	13.8	.0098	.815	.816	1	38.3
170	1.708	.020	3	0	54288.	6533.	47754.92	1.000	111.4	1414.0	1375.9	42.3	1.7	13.7	.0098	.834	.835	1	38.3
171	1.728	.020	3	0	55279.	6446.	48832.63	1.000	113.1	1414.0	1375.9	44.1	1.7	13.5	.0098	.853	.854	2	38.3
172	1.748	.020	3	0	56286.	6357.	49928.55	1.000	114.9	1413.9	1375.9	45.8	1.7	13.4	.0098	.872	.872	2	38.3
[illegible]	1.768	.020	3	0	57310.	6266.	51043.41	1.000	116.6	1413.9	1375.9	47.6	1.8	13.3	.0098	.891	.891	3	38.3
[illegible]	1.788	.020	3	0	58353.	6174.	52179.01	1.000	118.5	1413.8	1375.9	49.4	1.8	13.2	.0098	.911	.912	2	38.3
175	1.808	.020	3	0	59414.	6079.	53335.34	1.000	120.3	1413.8	1375.9	51.3	1.9	13.1	.0098	.932	.933	2	38.3
176	1.828	.020	3	0	60491.	5982.	54508.95	1.000	122.2	1413.7	1375.9	53.2	1.9	13.0	.0098	.951	.952	2	38.3
177	1.848	.020	3	0	61585.	5882.	55702.74	1.000	124.2	1413.6	1375.9	55.1	1.9	12.8	.0098	.972	.973	2	38.3
178	1.868	.020	3	0	62697.	5781.	56916.46	1.000	126.2	1413.6	1375.9	57.1	2.0	12.7	.0098	.993	.994	2	38.3
179	1.888	.020	3	0	63826.	5677.	58149.11	1.000	128.2	1413.5	1375.9	59.1	2.0	12.6	.0098	1.015	1.015	2	38.3
180	1.908	.020	3	0	64976.	5571.	59404.59	1.000	130.3	1413.5	1375.9	61.2	2.1	12.6	.0098	1.039	1.039	2	38.3

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
182	1.948	.020	3	0	67366.	5395.	61970.79	1.000	134.5	1413.3	1375.9	65.5	2.2	12.4	.0098	1.082	1.082	2	38.3
[illegible]	1.968	.020	3	0	68591.	5306.	63284.40	1.000	136.8	1413.3	1375.9	67.7	2.2	12.3	.0098	1.106	1.106	2	38.3
[illegible]	1.988	.020	3	0	69830.	5215.	64615.00	1.000	139.0	1413.2	1375.9	70.0	2.3	12.2	.0098	1.128	1.128	2	38.3
185	2.008	.020	3	0	71088.	5122.	65966.18	1.000	141.3	1413.1	1375.9	72.3	2.3	12.1	.0098	1.152	1.153	2	38.3
186	2.028	.020	3	0	72365.	5027.	67337.36	1.000	143.7	1413.1	1375.9	74.6	2.4	12.0	.0098	1.177	1.177	2	38.3
187	2.048	.020	3	0	73655.	4930.	68724.96	1.000	146.1	1413.0	1375.9	77.0	2.4	11.9	.0098	1.199	1.200	3	38.3
188	2.068	.020	3	0	74962.	4831.	70131.68	1.000	148.5	1412.9	1375.9	79.5	2.4	11.8	.0098	1.224	1.225	2	38.3
189	2.088	.020	3	0	76285.	4730.	71555.37	1.000	151.0	1412.8	1375.9	82.0	2.5	11.8	.0098	1.248	1.249	1	38.3
190	2.108	.020	3	0	77623.	4625.	72997.95	1.000	153.6	1412.8	1375.9	84.5	2.5	11.7	.0098	1.274	1.275	2	38.3
191	2.128	.020	3	0	78976.	4519.	74457.52	1.000	156.2	1412.7	1375.9	87.1	2.6	11.6	.0098	1.299	1.300	2	38.3
192	2.148	.020	3	0	80345.	4410.	75934.70	1.000	158.8	1412.6	1375.9	89.8	2.7	11.5	.0098	1.325	1.326	3	38.3
193	2.168	.020	3	0	81728.	4299.	77428.99	1.000	161.5	1412.5	1375.9	92.5	2.7	11.5	.0098	1.351	1.352	3	38.3
194	2.188	.020	3	0	83127.	4186.	78940.76	1.000	164.3	1412.4	1375.9	95.2	2.8	11.4	.0098	1.379	1.380	1	38.3
195	2.208	.020	3	0	84537.	4070.	80466.66	1.000	167.1	1412.4	1375.9	98.0	2.8	11.3	.0098	1.404	1.405	1	38.3
196	2.228	.020	3	0	85962.	3952.	82010.50	1.000	169.9	1412.3	1375.9	100.9	2.9	11.3	.0098	1.433	1.434	1	38.3
197	2.248	.020	3	0	87397.	3831.	83566.30	1.000	172.9	1412.2	1375.9	103.8	2.9	11.2	.0098	1.458	1.460	1	38.3
198	2.268	.020	3	0	88845.	3707.	85138.34	1.000	175.8	1412.1	1375.9	106.8	3.0	11.1	.0098	1.487	1.489	1	38.3
199	2.288	.020	3	0	90300.	3580.	86720.37	1.000	178.9	1412.0	1375.9	109.8	3.0	11.0	.0098	1.513	1.514	1	38.3
200	2.308	.020	3	0	91768.	3450.	88317.30	1.000	181.9	1411.9	1375.9	112.9	3.1	11.0	.0098	1.542	1.543	1	38.3
201	2.328	.020	3	0	93245.	3318.	89927.56	1.000	185.1	1411.8	1375.9	116.0	3.1	10.9	.0098	1.571	1.573	1	38.3
202	2.348	.020	3	0	94728.	3182.	91545.47	1.000	188.3	1411.7	1375.9	119.2	3.2	10.9	.0098	1.597	1.599	1	38.3
203	2.368	.020	3	0	96219.	3044.	93174.95	1.000	191.5	1411.6	1375.9	122.5	3.3	10.8	.0098	1.627	1.628	1	38.3
204	2.388	.020	3	0	97717.	2902.	94814.84	1.000	194.9	1411.5	1375.9	125.8	3.3	10.7	.0098	1.657	1.658	1	38.3
205	2.408	.020	3	0	99218.	2757.	96460.99	1.000	198.2	1411.4	1375.9	129.2	3.4	10.7	.0098	1.684	1.685	2	38.3
206	2.428	.020	3	0	100724.	2610.	98114.09	1.000	201.6	1411.3	1375.9	132.6	3.4	10.6	.0098	1.713	1.715	1	38.3
207	2.448	.020	3	0	102233.	2459.	99774.24	1.000	205.1	1411.2	1375.9	136.1	3.5	10.6	.0098	1.743	1.745	1	38.3
[illegible]	2.468	.020	3	0	103747.	2310.	101437.00	1.000	208.7	1411.0	1375.9	139.6	3.5	10.5	.0098	1.771	1.771	2	38.3
[illegible]	2.488	.020	3	0	105304.	2201.	103103.20	1.000	212.3	1410.9	1375.9	143.2	3.6	10.4	.0098	1.800	1.802	1	38.3
210	2.508	.020	3	0	106860.	2088.	104772.10	1.000	215.9	1410.8	1375.9	146.9	3.7	10.4	.0098	1.830	1.832	1	38.3
211	2.528	.020	3	0	108411.	1973.	106438.30	1.000	219.7	1410.7	1375.9	150.6	3.7	10.3	.0098	1.858	1.858	2	38.3
212	2.548	.020	3	0	109960.	1856.	108104.00	1.000	223.4	1410.6	1375.9	154.4	3.8	10.2	.0098	1.887	1.889	1	38.3
213	2.568	.020	3	0	111504.	1736.	109768.10	1.000	227.3	1410.4	1375.9	158.2	3.8	10.2	.0098	1.918	1.919	1	38.3
214	2.588	.020	3	0	113037.	1612.	111424.40	1.000	231.2	1410.3	1375.9	162.1	3.9	10.1	.0098	1.945	1.946	2	38.3
215	2.608	.020	3	0	114563.	1487.	113075.70	1.000	235.1	1410.2	1375.9	166.0	3.9	10.1	.0098	1.974	1.976	1	38.3
216	2.628	.020	3	0	116078.	1358.	114719.50	1.000	239.1	1410.0	1375.9	170.1	4.0	10.0	.0098	2.005	2.006	1	38.3
217	2.648	.020	3	0	117576.	1227.	116349.40	1.000	243.2	1409.9	1375.9	174.1	4.1	9.9	.0098	2.030	2.032	1	38.3
218	2.668	.020	3	0	119061.	1092.	117968.80	1.000	247.3	1409.7	1375.9	178.2	4.1	9.9	.0098	2.060	2.062	1	38.3
219	2.688	.020	3	0	120539.	968.	119571.50	1.000	251.5	1409.6	1375.9	182.4	4.2	9.8	.0098	2.087	2.088	2	38.3
220	2.708	.020	3	0	122006.	847.	121159.10	1.000	255.7	1409.4	1375.9	186.6	4.2	9.8	.0098	2.116	2.118	1	38.3
221	2.728	.020	3	0	123448.	723.	122724.20	1.000	260.0	1409.3	1375.9	190.9	4.3	9.7	.0098	2.141	2.143	1	38.3
222	2.748	.020	3	0	124867.	597.	124270.30	1.000	264.3	1409.1	1375.9	195.3	4.3	9.7	.0098	2.171	2.173	1	38.3
223	2.768	.020	3	0	126256.	467.	125788.90	1.000	268.7	1409.0	1375.9	199.7	4.4	9.6	.0098	2.195	2.197	1	38.3
224	2.788	.020	3	0	127615.	334.	127280.60	1.000	273.2	1408.8	1375.9	204.1	4.4	9.5	.0098	2.221	2.222	2	38.3
225	2.808	.020	3	0	128944.	199.	128744.90	1.000	277.7	1408.6	1375.9	208.6	4.5	9.5	.0098	2.250	2.251	1	38.3
226	2.828	.020	3	0	130235.	60.	130174.70	1.000	282.2	1408.5	1375.9	213.1	4.5	9.4	.0098	2.273	2.275	1	38.3
227	2.848	.020	3	0	131568.	0.	131567.80	1.000	286.8	1408.3	1375.9	217.7	4.6	9.3	.0098	2.297	2.298	1	38.3
228	2.868	.020	3	0	132921.	0.	132920.80	1.000	291.4	1408.1	1375.9	222.4	4.6	9.3	.0098	2.320	2.321	1	38.3
229	2.888	.020	3	0	134230.	0.	134229.70	1.000	296.1	1407.9	1375.9	227.1	4.7	9.2	.0098	2.342	2.344	1	38.3
230	2.908	.020	3	0	135492.	0.	135491.80	1.000	300.8	1407.7	1375.9	231.8	4.7	9.2	.0098	2.365	2.366	1	38.3
231	2.928	.020	3	0	136703.	0.	136703.20	1.000	305.6	1407.6	1375.9	236.6	4.8	9.1	.0098	2.387	2.388	1	38.3
232	2.948	.020	3	0	137863.	0.	137862.50	1.000	310.4	1407.4	1375.9	241.4	4.8	9.0	.0098	2.408	2.410	1	38.3
233	2.968	.020	3	0	138960.	0.	138960.30	1.000	315.3	1407.2	1375.9	246.2	4.9	9.0	.0098	2.425	2.426	2	38.3
[illegible]	2.988	.020	3	0	139999.	0.	139998.50	1.000	320.2	1406.9	1375.9	251.1	4.9	8.9	.0098	2.445	2.447	1	38.3
[illegible]	3.008	.020	3	0	140967.	0.	140966.50	1.000	325.1	1406.7	1375.9	256.0	4.9	8.8	.0098	2.459	2.461	1	38.3
236	3.028	.020	3	0	141868.	0.	141868.00	1.000	330.1	1406.5	1375.9	261.0	5.0	8.8	.0098	2.479	2.481	1	38.3
237	3.048	.020	3	0	142692.	0.	142692.10	1.000	335.0	1406.3	1375.9	266.0	5.0	8.7	.0098	2.492	2.494	1	38.3
238	3.068	.020	3	0	143436.	0.	143436.20	1.000	340.1	1406.1	1375.9	271.0	5.0	8.6	.0098	2.505	2.506	1	38.3
239	3.088	.020	3	0	144139.	0.	144138.60	1.000	345.1	1405.8	1375.9	276.0	5.0	8.5	.0098	2.517	2.518	1	38.3
240	3.108	.020	3	0	144777.	0.	144776.80	1.000	350.1	1405.6	1375.9	281.1	5.1	8.5	.0098	2.528	2.529	1	38.3
241	3.128	.020	3	0	145322.	0.	145322.50	1.000	355.2	1405.3	1375.9	286.2	5.1	8.4	.0098	2.539	2.540	1	38.3

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
242	3.148	.020	3	0	145766.	0.	145765.80	1.000	360.3	1405.1	1375.9	291.2	5.1	8.3	.0098	2.544	2.545	2	38.3
243	3.168	.020	3	0	146106.	0.	146106.00	1.000	365.4	1404.8	1375.9	296.4	5.1	8.3	.0098	2.553	2.554	1	38.3
244	3.188	.020	3	0	146332.	0.	146332.50	1.000	370.5	1404.5	1375.9	301.5	5.1	8.2	.0098	2.556	2.557	1	38.3
245	3.208	.020	3	0	146437.	0.	146437.50	1.000	375.6	1404.3	1375.9	306.6	5.1	8.2	.0098	2.556	2.558	0	38.3
246	3.228	.020	3	0	146416.	0.	146415.70	1.000	380.7	1404.0	1375.9	311.7	5.1	8.1	.0098	2.556	2.557	0	38.3
247	3.248	.020	3	0	146259.	0.	146258.60	1.000	385.9	1403.7	1375.9	316.8	5.1	8.0	.0098	2.556	2.557	0	38.3
248	3.268	.020	3	0	145956.	0.	145956.10	1.000	391.0	1403.4	1375.9	321.9	5.1	7.8	.0098	2.549	2.550	1	38.3
249	3.288	.020	3	0	145498.	0.	145498.20	1.000	396.0	1403.0	1375.9	327.0	5.1	7.8	.0098	2.541	2.542	1	38.3
250	3.308	.020	3	0	144872.	0.	144871.70	1.000	401.1	1402.7	1375.9	332.0	5.1	7.7	.0098	2.528	2.529	2	38.3
251	3.328	.020	3	0	144065.	0.	144065.20	1.000	406.1	1402.4	1375.9	337.1	5.0	7.6	.0098	2.514	2.515	2	38.3
252	3.348	.020	3	0	143063.	0.	143063.20	1.000	411.1	1402.0	1375.9	342.1	5.0	7.5	.0098	2.498	2.499	1	38.3
253	3.368	.020	3	0	141846.	0.	141846.40	1.000	416.1	1401.6	1375.9	347.0	4.9	7.4	.0098	2.475	2.476	1	38.3
254	3.388	.020	3	0	140394.	0.	140394.40	1.000	421.0	1401.2	1375.9	351.9	4.9	7.3	.0098	2.451	2.452	1	38.3
255	3.408	.020	3	0	138677.	0.	138676.50	1.000	425.8	1400.8	1375.9	356.8	4.8	7.1	.0098	2.421	2.422	1	38.3
256	3.428	.020	3	0	136656.	0.	136655.50	1.000	430.6	1400.4	1375.9	361.5	4.8	7.0	.0098	2.385	2.385	1	38.3
257	3.448	.020	3	0	134285.	0.	134284.90	1.000	435.3	1399.9	1375.9	366.2	4.7	6.9	.0098	2.348	2.348	1	38.3
258	3.468	.020	3	0	131487.	0.	131486.60	1.000	439.9	1399.4	1375.9	370.8	4.6	6.8	.0098	2.296	2.294	2	38.3
259	3.488	.020	3	0	128148.	0.	128147.90	1.000	444.3	1398.8	1375.9	375.3	4.5	6.6	.0098	2.240	2.238	2	38.3
260	3.508	.020	3	0	124061.	0.	124060.90	1.000	448.7	1398.2	1375.9	379.6	4.3	6.4	.0098	2.171	2.169	3	38.3
261	3.528	.020	3	0	118750.	0.	118749.80	1.000	452.8	1397.4	1375.9	383.8	4.1	6.2	.0098	2.074	2.072	2	38.3
262	3.548	.020	3	0	110148.	0.	110148.30	1.000	456.7	1396.2	1375.9	387.6	3.9	5.9	.0098	1.929	1.927	2	38.3
263	3.568	.020	3	0	96427.	0.	96426.61	1.000	460.1	1394.4	1375.9	391.0	3.4	5.4	.0098	1.683	1.681	2	38.3
264	3.588	.020	3	0	73865.	0.	73865.34	1.000	462.6	1391.4	1375.9	393.6	2.6	4.6	.0098	1.290	1.289	2	38.3
265	3.608	.020	3	0	40175.	0.	40175.07	1.000	464.1	1386.3	1375.9	395.0	1.4	3.2	.0098	.704	.699	5	38.3

KTT= 0 I= 266 T= 3.63

.08 QTF= 17911. TP= 3.21 QP= 146437. TRS= 2.07 TB= 1.14
BRD= 43.8 BRW= 465.5 HU=1419.7 HY=1374.8 HC=1375.9 ALG=38.250 QO= 71.4663
Z= .79 TFH= 2.38 BO= 396.4 TFI= .83

1

QTIME*****	29310.0	49310.0	69310.0	89310.0	109310.0	129310.0	149310.0	169310.0	189310.0	209310.0	DISCHARGE
.080*	.	.	.	.	.	.	.	.	.	.	9311.
.120*	.	.	.	.	.	.	.	.	.	.	9594.
.160*	.	.	.	.	.	.	.	.	.	.	9903.
.200*	.	.	.	.	.	.	.	.	.	.	10230.
.240.*	.	.	.	.	.	.	.	.	.	.	10567.
.280.*	.	.	.	.	.	.	.	.	.	.	10910.
.320.*	.	.	.	.	.	.	.	.	.	.	11257.
.360.*	.	.	.	.	.	.	.	.	.	.	11606.
.400.*	.	.	.	.	.	.	.	.	.	.	11956.
.440.*	.	.	.	.	.	.	.	.	.	.	12306.
.480. *	.	.	.	.	.	.	.	.	.	.	12655.
.520. *	.	.	.	.	.	.	.	.	.	.	13003.
.560. *	.	.	.	.	.	.	.	.	.	.	13350.
.600. *	.	.	.	.	.	.	.	.	.	.	13694.
.640. *	.	.	.	.	.	.	.	.	.	.	14036.
.680. *	.	.	.	.	.	.	.	.	.	.	14376.
.720. *	.	.	.	.	.	.	.	.	.	.	14713.
.760. *	.	.	.	.	.	.	.	.	.	.	15048.
.800. *	.	.	.	.	.	.	.	.	.	.	15379.
.840. *	.	.	.	.	.	.	.	.	.	.	15707.
.880. *	.	.	.	.	.	.	.	.	.	.	16032.
.920. *	.	.	.	.	.	.	.	.	.	.	16354.
.960. *	.	.	.	.	.	.	.	.	.	.	16672.

1.040.	17298.
1.080.	17606.
1.120.	17911.
1.160.	21692.
1.200.	23362.
1.240.	26657.
1.280.	32724.
1.320.	35358.
1.360.	39730.
1.400.	41178.
1.440.	42665.
1.480.	44214.
1.520.	45825.
1.560.	47503.
1.600.	49246.
1.640.	51055.
1.680.	52934.
1.720.	54883.
1.760.	56900.
1.800.	58989.
1.840.	61147.
1.880.	63375.
1.920.	65687.
1.960.	68101.
2.000.	70585.
2.040.	73139.
2.080.	75756.
2.120.	78435.
2.160.	81175.
2.200.	83973.
2.240.	86823.
2.280.	89718.
2.320.	92655.
2.360.	95623.
2.400.	98618.
2.440.	101629.
2.480.	104681.
2.520.	107791.
2.560.	110886.
2.600.	113952.
2.640.	116977.
2.680.	119948.
2.720.	122871.
2.760.	125701.
2.800.	128413.
2.840.	131035.
2.880.	133706.
2.920.	136219.
2.960.	138521.
3.000.	140579.
3.040.	142363.
3.080.	143858.
3.120.	145104.
3.160.	145970.
3.200.	146396.
3.240.	146321.
3.280.	145681.
3.320.	144388.
3.360.	142333.
3.400.	139363.
3.440.	135233.
3.480.	129483.
3.520.	120874.
3.560.	101913.
3.600.	53647.

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BREACH MODEL, MICRO-VERSION: 1/87

NG FAILURE IN MIDDLE OF HQFRS;STA. 762+00    FILE:HQMTOF.72      24OCT90

HI=   1418.50  HU=   1419.70  HL=   1390.00  HPI=   1404.90  HSP=  1408.40

       (QIN(I),I=1,8)
15658.00  10964.00   7883.00   3630.00   3311.00   1290.00   1137.00       .00

       (TIN(I),I=1,8)
    .00      1.00      2.00      6.00     10.00     18.00     21.00       .00

       (RSA(I),I=1,8)
 2975.00   2240.30   1221.70    114.80     76.80     44.40     18.85       .00

       (HSA(I),I=1,8)
 1428.30   1419.70   1408.40   1396.10   1394.30   1392.60   1389.10   1375.90

ZU=  3.00  ZD=  2.00  ZC=   .00  PORW=   .00  GL=   .00  GS=   .00  VMP=   .00

D50C=   .00  PORC=   .00  UWC=   .00  CNC= .0000  AFRC=   .00  COHC=    .0  UNFCC=   .00

D50S=   .18  PORS=   .33  UWS=125.60  CNS= .0000  AFRS= 39.00  COHS= 100.0  UNFCS= 10.00

BR=  1.00  WC=  14.0  CRL= 5280.0  SM= 70.40  WV= 5280.0  CNV= .0450  D50DF=   .00  UNFCDF=   .00

DTH=  .020  DBG=  .001   H=   .1000   TEH=   10.0  ERR=   .10  FPT=   2.0  TPR=   1.0

       (SPQ(I),I=1,8)
    .00   1049.30   2325.30   5551.80  10718.60  15377.70  22588.60  58752.00

       (SPH(I),I=1,8)
    .00      1.30      2.66      5.05      8.05     11.30     11.60     13.80

                CRL= 5280.   SM=   43.   AFR= 39.00   BO=  14.8   Z=   .48


1


       AFR=  39.0   TH1= 64.50   H1=  6.68   TH2= 51.75   H2= 22.93   TH3= 45.38   H3= 78.83


1
  I      T  DTH KG KC     QTOT       QTS            QB   SUB     BT     HY     HC    BO    PPP     HP  CNN     DH    DHH   KIT ALG
PIPE FLOW TO WEIR FLOW TRANSITION
   1398.       8.       14.     3704.     6709.    10413.      .018      .838      122.      138.       8.      159.
.05676  .05882  .33122 2.76107  .0098     4.1     21.7      2.5      8.1    158.0
                 1      17.1       6.7      17.6   20597.7     .0361    2     .8400     .8761      25.5     138.6     158.7
                 2      23.4      22.9      16.1   13162.8     .0747   38     .9460    1.0207      12.8     162.5      49.0


  I      T  DTH KG KC     QTOT       QTS            QB   SUB     BT     HY     HC    BO    PPP     HP  CNN     DH    DHH   KIT ALG
  98  1.006  .020 3 0    25787.    13449.      12345.85 1.000   44.9 1418.3 1390.0  13.7     .0   12.6  .0098   .000   .000   0 77.2
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100	1.046	.020	3	0	26695.	13408.	13287.59	1.000	46.3	1418.3	1390.0	15.8	1.1	12.1	.0098	.543	.543	2	27.2
101	1.066	.020	3	0	27174.	13390.	13783.55	1.000	47.4	1418.3	1390.0	16.9	1.1	11.9	.0098	.562	.562	3	27.2
102	1.086	.020	3	0	27669.	13372.	14297.36	1.000	48.6	1418.3	1390.0	18.1	1.2	11.7	.0098	.583	.583	3	27.2
103	1.106	.020	3	0	28183.	13353.	14830.16	1.000	49.8	1418.3	1390.0	19.3	1.2	11.5	.0098	.605	.606	1	27.2
104	1.126	.020	3	0	28715.	13333.	15381.91	1.000	51.0	1418.3	1390.0	20.6	1.3	11.3	.0098	.628	.628	2	27.2
105	1.146	.020	3	0	29266.	13313.	15953.23	1.000	52.4	1418.3	1390.0	21.9	1.3	11.2	.0098	.651	.651	1	27.2
[illegible]6	1.166	.020	3	0	29837.	13291.	16545.22	1.000	53.7	1418.2	1390.0	23.2	1.4	11.0	.0098	.676	.676	2	27.2
[illegible]7	1.186	.020	3	0	30427.	13270.	17157.48	1.000	55.1	1418.2	1390.0	24.6	1.4	10.8	.0098	.700	.700	3	27.2
108	1.206	.020	3	0	31038.	13247.	17791.26	1.000	56.6	1418.2	1390.0	26.1	1.5	10.7	.0098	.726	.726	3	27.2
109	1.226	.020	3	0	31672.	13224.	18448.13	1.000	58.1	1418.2	1390.0	27.6	1.5	10.6	.0098	.753	.754	2	27.2
110	1.246	.020	3	0	32328.	13200.	19128.37	1.000	59.6	1418.2	1390.0	29.1	1.6	10.4	.0098	.782	.782	2	27.2
111	1.266	.020	3	0	33007.	13175.	19832.35	1.000	61.2	1418.2	1390.0	30.7	1.6	10.3	.0098	.810	.811	2	27.2
112	1.286	.020	3	0	33709.	13149.	20560.12	1.000	62.9	1418.1	1390.0	32.4	1.7	10.2	.0098	.839	.839	1	27.2
113	1.306	.020	3	0	34436.	13122.	21313.42	1.000	64.7	1418.1	1390.0	34.2	1.7	10.1	.0098	.870	.871	2	27.2
114	1.326	.020	3	0	35187.	13095.	22092.66	1.000	66.5	1418.1	1390.0	36.0	1.8	10.0	.0098	.902	.903	2	27.2
115	1.346	.020	3	0	35965.	13067.	22898.53	1.000	68.3	1418.1	1390.0	37.8	1.9	9.9	.0098	.935	.935	1	27.2
116	1.366	.020	3	0	36769.	13037.	23732.56	1.000	70.3	1418.1	1390.0	39.8	1.9	9.7	.0098	.969	.970	2	27.2
117	1.386	.020	3	0	37600.	13006.	24593.67	1.000	72.3	1418.0	1390.0	41.8	2.0	9.6	.0098	1.003	1.004	3	27.2
118	1.406	.020	3	0	38459.	12975.	25484.28	1.000	74.4	1418.0	1390.0	43.9	2.1	9.6	.0098	1.040	1.040	1	27.2
119	1.426	.020	3	0	39348.	12942.	26406.07	1.000	76.5	1418.0	1390.0	46.0	2.2	9.5	.0098	1.079	1.079	2	27.2
120	1.446	.020	3	0	40267.	12909.	27358.01	1.000	78.8	1418.0	1390.0	48.3	2.2	9.4	.0098	1.117	1.117	1	27.2
121	1.466	.020	3	0	41215.	12874.	28341.84	1.000	81.1	1418.0	1390.0	50.6	2.3	9.3	.0098	1.157	1.158	2	27.2

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
122	1.486	.020	3	0	42196.	12838.	29358.40	1.000	83.5	1417.9	1390.0	53.0	2.4	9.2	.0098	1.199	1.200	2	27.2
123	1.506	.020	3	0	43209.	12800.	30408.56	1.000	86.0	1417.9	1390.0	55.5	2.5	9.2	.0098	1.242	1.243	2	27.2
124	1.526	.020	3	0	44254.	12762.	31492.54	1.000	88.5	1417.9	1390.0	58.0	2.6	9.1	.0098	1.286	1.286	2	27.2
125	1.546	.020	3	0	45333.	12722.	32611.06	1.000	91.2	1417.8	1390.0	60.7	2.7	9.0	.0098	1.331	1.330	1	27.2
[illegible]	1.566	.020	3	0	46446.	12681.	33765.76	1.000	93.9	1417.8	1390.0	63.4	2.8	8.9	.0098	1.378	1.379	2	27.2
[illegible]	1.586	.020	3	0	47596.	12638.	34958.55	1.000	96.8	1417.8	1390.0	66.3	2.9	8.9	.0098	1.428	1.429	2	27.2
128	1.606	.020	3	0	48783.	12594.	36189.53	1.000	99.8	1417.8	1390.0	69.3	3.0	8.8	.0098	1.479	1.479	2	27.2
129	1.626	.020	3	0	50007.	12548.	37459.20	1.000	102.8	1417.7	1390.0	72.3	3.1	8.8	.0098	1.531	1.531	2	27.2
130	1.646	.020	3	0	51269.	12501.	38768.35	1.000	106.0	1417.7	1390.0	75.5	3.2	8.7	.0098	1.584	1.534	2	27.2
131	1.666	.020	3	0	52570.	12452.	40117.18	1.000	109.3	1417.7	1390.0	78.8	3.3	8.7	.0098	1.638	1.638	2	27.2
132	1.686	.020	3	0	53909.	12402.	41506.82	1.000	112.6	1417.6	1390.0	82.1	3.4	8.6	.0098	1.694	1.693	1	27.2
133	1.706	.020	3	0	55289.	12350.	42939.21	1.000	116.2	1417.6	1390.0	85.7	3.5	8.6	.0098	1.753	1.754	2	27.2
134	1.726	.020	3	0	56712.	12296.	44415.98	1.000	119.8	1417.6	1390.0	89.3	3.6	8.5	.0098	1.815	1.816	2	27.2
135	1.746	.020	3	0	58177.	12241.	45935.66	1.000	123.5	1417.5	1390.0	93.0	3.8	8.5	.0098	1.875	1.874	1	27.2
136	1.766	.020	3	0	59683.	12184.	47499.84	1.000	127.4	1417.5	1390.0	96.9	3.9	8.4	.0098	1.939	1.938	1	27.2
137	1.786	.020	3	0	61234.	12124.	49109.84	1.000	131.4	1417.4	1390.0	100.9	4.0	8.4	.0098	2.005	2.004	1	27.2
138	1.806	.020	3	0	62828.	12063.	50765.49	1.000	135.6	1417.4	1390.0	105.1	4.1	8.3	.0098	2.072	2.071	1	27.2
139	1.826	.020	3	0	64466.	11999.	52467.22	1.000	139.8	1417.3	1390.0	109.3	4.3	8.3	.0098	2.140	2.141	3	27.2
140	1.846	.020	3	0	66150.	11933.	54216.62	1.000	144.3	1417.3	1390.0	113.8	4.4	8.2	.0098	2.212	2.213	3	27.2
141	1.866	.020	3	0	67881.	11866.	56015.05	1.000	148.8	1417.3	1390.0	118.3	4.6	8.2	.0098	2.286	2.285	1	27.2
142	1.886	.020	3	0	69660.	11796.	57863.92	1.000	153.6	1417.2	1390.0	123.1	4.7	8.2	.0098	2.364	2.365	2	27.2
143	1.906	.020	3	0	71484.	11723.	59761.15	1.000	158.4	1417.2	1390.0	128.0	4.9	8.1	.0098	2.440	2.441	2	27.2
144	1.926	.020	3	0	73358.	11649.	61708.47	1.000	163.5	1417.1	1390.0	133.0	5.0	8.1	.0098	2.520	2.519	1	27.2
145	1.946	.020	3	0	75279.	11571.	63707.08	1.000	168.7	1417.0	1390.0	138.2	5.2	8.0	.0098	2.602	2.604	2	27.2
146	1.966	.020	3	0	77246.	11492.	65754.15	1.000	174.1	1417.0	1390.0	143.6	5.4	8.0	.0098	2.684	2.685	2	27.2
147	1.986	.020	3	0	79261.	11409.	67851.58	1.000	179.6	1416.9	1390.0	149.1	5.5	8.0	.0098	2.768	2.769	3	27.2
148	2.006	.020	3	0	81327.	11324.	70002.87	1.000	185.3	1416.9	1390.0	154.8	5.7	7.9	.0098	2.859	2.861	2	27.2
149	2.026	.020	3	0	83439.	11236.	72202.65	1.000	191.2	1416.8	1390.0	160.7	5.9	7.9	.0098	2.946	2.948	2	27.2
150	2.046	.020	3	0	85603.	11146.	74457.16	1.000	197.3	1416.7	1390.0	166.8	6.1	7.9	.0098	3.042	3.044	2	27.2
151	2.066	.020	3	0	87813.	11052.	76760.26	1.000	203.6	1416.7	1390.0	173.1	6.3	7.8	.0098	3.133	3.134	2	27.2
[illegible]	2.086	.020	3	0	90074.	10956.	79117.81	1.000	210.0	1416.6	1390.0	179.5	6.5	7.8	.0098	3.233	3.234	2	27.2
[illegible]	2.106	.020	3	0	92379.	10856.	81522.63	1.000	216.7	1416.5	1390.0	186.2	6.7	7.8	.0098	3.327	3.329	2	27.2
154	2.126	.020	3	0	94729.	10754.	83975.76	1.000	223.5	1416.5	1390.0	193.0	6.9	7.7	.0098	3.425	3.426	3	27.2
155	2.146	.020	3	0	97116.	10634.	86482.08	1.000	230.6	1416.4	1390.0	200.1	7.1	7.7	.0098	3.531	3.533	2	27.2
156	2.166	.020	3	0	99540.	10503.	89037.08	1.000	237.9	1416.3	1390.0	207.4	7.3	7.7	.0098	3.635	3.632	1	27.2
157	2.186	.020	3	0	102007.	10367.	91640.02	1.000	245.3	1416.2	1390.0	214.8	7.5	7.6	.0098	3.741	3.743	2	27.2
158	2.206	.020	3	0	104515.	10228.	94287.52	1.000	253.0	1416.2	1390.0	222.5	7.7	7.6	.0098	3.847	3.848	3	27.2
159	2.226	.020	3	0	107069.	10084.	96985.23	1.000	261.0	1416.1	1390.0	230.5	7.9	7.6	.0098	3.962	3.964	2	27.2

161	2.266	.020	3	0	112288.	9783.	102505.00	1.000	277.5	1415.9	1390.0	247.0	8.4	7.5	.0098	4.181	4.183	3	27.2
162	2.286	.020	3	0	114958.	9626.	105332.00	1.000	286.1	1415.8	1390.0	255.6	8.6	7.5	.0098	4.303	4.305	2	27.2
163	2.306	.020	3	0	117659.	9464.	108195.20	1.000	294.9	1415.7	1390.0	264.4	8.8	7.4	.0098	4.417	4.418	2	27.2
164	2.326	.020	3	0	120390.	9297.	111093.20	1.000	304.0	1415.6	1390.0	273.5	9.1	7.4	.0098	4.532	4.534	2	27.2
165	2.346	.020	3	0	123150.	9125.	114024.90	1.000	313.3	1415.5	1390.0	282.8	9.3	7.3	.0098	4.651	4.653	3	27.2
166	2.366	.020	3	0	125935.	8947.	116987.50	1.000	322.8	1415.4	1390.0	292.3	9.5	7.3	.0098	4.772	4.773	3	27.2
[illegible]	2.386	.020	3	0	128745.	8765.	119979.90	1.000	332.6	1415.3	1390.0	302.1	9.8	7.3	.0098	4.894	4.896	3	27.2
[illegible]	2.406	.020	3	0	131577.	8578.	122999.00	1.000	342.6	1415.2	1390.0	312.1	10.0	7.2	.0098	5.016	5.020	3	27.2
169	2.426	.020	3	0	134424.	8385.	126039.10	1.000	352.9	1415.1	1390.0	322.4	10.3	7.2	.0098	5.141	5.143	2	27.2
170	2.446	.020	3	0	137286.	8186.	129099.70	1.000	363.5	1415.0	1390.0	333.0	10.5	7.2	.0098	5.267	5.269	2	27.2
171	2.466	.020	3	0	140156.	7982.	132174.70	1.000	374.2	1414.9	1390.0	343.7	10.8	7.1	.0098	5.393	5.395	2	27.2
172	2.486	.020	3	0	143033.	7771.	135261.60	1.000	385.3	1414.7	1390.0	354.8	11.0	7.1	.0098	5.521	5.523	2	27.2
173	2.506	.020	3	0	145913.	7555.	138357.30	1.000	396.6	1414.6	1390.0	366.1	11.3	7.0	.0098	5.651	5.653	2	27.2
174	2.526	.020	3	0	148794.	7333.	141450.40	1.000	408.1	1414.5	1390.0	377.6	11.5	7.0	.0098	5.770	5.772	3	27.2
175	2.546	.020	3	0	151648.	7105.	144542.80	1.000	419.9	1414.4	1390.0	389.4	11.8	7.0	.0098	5.901	5.904	2	27.2
176	2.566	.020	3	0	154493.	6870.	147622.90	1.000	432.0	1414.2	1390.0	401.5	12.0	6.9	.0098	6.023	6.025	3	27.2
177	2.586	.020	3	0	157325.	6630.	150695.90	1.000	444.3	1414.1	1390.0	413.8	12.3	6.9	.0098	6.156	6.159	2	27.2
178	2.606	.020	3	0	160123.	6383.	153739.60	1.000	456.8	1413.9	1390.0	426.3	12.5	6.8	.0098	6.269	6.275	1	27.2
179	2.626	.020	3	0	162893.	6129.	156763.80	1.000	469.6	1413.8	1390.0	439.1	12.8	6.8	.0098	6.402	6.400	1	27.2
180	2.646	.020	3	0	165622.	5869.	159753.50	1.000	482.7	1413.6	1390.0	452.2	13.0	6.8	.0098	6.519	6.518	1	27.2
181	2.666	.020	3	0	168303.	5601.	162701.00	1.000	495.9	1413.5	1390.0	465.4	13.3	6.7	.0098	6.637	6.635	1	27.2

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BD	PPP	HP	CNN	DH	DHH	KIT	ALG
182	2.686	.020	3	0	170979.	5376.	165602.70	1.000	509.4	1413.3	1390.0	478.9	13.5	6.7	.0098	6.754	6.752	1	27.2
183	2.706	.020	3	0	173606.	5155.	168450.70	1.000	523.2	1413.2	1390.0	492.7	13.7	6.6	.0098	6.871	6.869	1	27.2
184	2.726	.020	3	0	176170.	4929.	171241.20	1.000	537.2	1413.0	1390.0	506.7	14.0	6.6	.0098	6.987	6.985	1	27.2
185	2.746	.020	3	0	178662.	4698.	173964.60	1.000	551.4	1412.8	1390.0	520.9	14.2	6.5	.0098	7.104	7.101	1	27.2
186	2.766	.020	3	0	181080.	4460.	176619.70	1:000	565.8	1412.6	1390.0	535.3	14.4	6.5	.0098	7.220	7.217	1	27.2
[illegible]	2.786	.020	3	0	183408.	4216.	179192.40	1.000	580.5	1412.5	1390.0	550.0	14.7	6.4	.0098	7.331	7.326	2	27.2
[illegible]	2.806	.020	3	0	185627.	3968.	181659.50	1.000	595.3	1412.3	1390.0	564.8	14.8	6.4	.0098	7.407	7.403	1	27.2
189	2.826	.020	3	0	187749.	3713.	184035.90	1.000	610.3	1412.1	1390.0	579.8	15.0	6.3	.0098	7.519	7.515	1	27.2
190	2.846	.020	3	0	189743.	3452.	186291.70	1.000	625.5	1411.9	1390.0	595.0	15.2	6.3	.0098	7.593	7.589	1	27.2
191	2.866	.020	3	0	191631.	3185.	188446.50	1.000	640.9	1411.7	1390.0	610.4	15.4	6.2	.0098	7.702	7.698	1	27.2
192	2.886	.020	3	0	193381.	2912.	190468.90	1.000	656.5	1411.5	1390.0	626.0	15.5	6.2	.0098	7.773	7.768	1	27.2
193	2.906	.020	3	0	194987.	2633.	192354.10	1.000	672.1	1411.3	1390.0	641.6	15.7	6.1	.0098	7.840	7.835	1	27.2
194	2.926	.020	3	0	196484.	2348.	194135.70	1.000	688.0	1411.1	1390.0	657.5	15.9	6.1	.0098	7.943	7.939	1	27.2
195	2.946	.020	3	0	197926.	2139.	195787.40	1.000	704.0	1410.9	1390.0	673.5	16.0	6.0	.0098	8.007	8.002	1	27.2
196	2.966	.020	3	0	199216.	1932.	197283.90	1.000	720.2	1410.6	1390.0	689.7	16.1	5.9	.0098	8.068	8.062	1	27.2
197	2.986	.020	3	0	200339.	1721.	198618.00	1.000	736.4	1410.4	1390.0	705.9	16.3	5.9	.0098	8.125	8.120	1	27.2
198	3.006	.020	3	0	201286.	1505.	199780.60	1.000	752.8	1410.2	1390.0	722.3	16.3	5.8	.0098	8.173	8.167	2	27.2
199	3.026	.020	3	0	202032.	1286.	200746.30	1.000	769.1	1410.0	1390.0	738.6	16.4	5.8	.0098	8.184	8.178	1	27.2
200	3.046	.020	3	0	202595.	1062.	201533.70	1.000	785.6	1409.7	1390.0	755.1	16.5	5.7	.0098	8.231	8.226	1	27.2
201	3.066	.020	3	0	202982.	863.	202118.70	1.000	802.1	1409.5	1390.0	771.6	16.5	5.7	.0098	8.231	8.236	0	27.2
202	3.086	.020	3	0	203186.	663.	202522.50	1.000	818.6	1409.2	1390.0	788.1	16.6	5.6	.0098	8.283	8.277	1	27.2
203	3.106	.020	3	0	203173.	459.	202714.00	1.000	835.2	1409.0	1390.0	804.7	16.6	5.6	.0098	8.283	8.281	0	27.2
204	3.126	.020	3	0	202945.	252.	202693.50	1.000	851.8	1408.7	1390.0	821.3	16.6	5.5	.0098	8.283	8.282	0	27.2
205	3.146	.020	3	0	202498.	40.	202457.80	1.000	868.3	1408.4	1390.0	837.8	16.6	5.4	.0098	8.283	8.278	0	27.2
206	3.166	.020	3	0	201999.	0.	201998.60	1.000	884.9	1408.2	1390.0	854.4	16.5	5.3	.0098	8.264	8.258	2	27.2
207	3.186	.020	3	0	201300.	0.	201300.30	1.000	901.3	1407.9	1390.0	870.8	16.4	5.2	.0098	8.207	8.199	1	27.2
208	3.206	.020	3	0	200374.	0.	200373.80	1.000	917.6	1407.6	1390.0	887.1	16.4	5.2	.0098	8.185	8.178	1	27.2
209	3.226	.020	3	0	199202.	0.	199202.20	1.000	933.9	1407.4	1390.0	903.4	16.2	5.1	.0098	8.121	8.113	1	27.2
210	3.246	.020	3	0	197805.	0.	197805.10	1.000	950.1	1407.1	1390.0	919.6	16.2	5.0	.0098	8.093	8.086	1	27.2
211	3.266	.020	3	0	196164.	0.	196163.50	1.000	966.1	1406.8	1390.0	935.6	16.0	4.9	.0098	8.022	8.014	1	27.2
212	3.286	.020	3	0	194281.	0.	194280.50	1.000	982.0	1406.5	1390.0	951.5	15.9	4.9	.0098	7.948	7.940	1	27.2
[illegible]	3.306	.020	3	0	192154.	0.	192154.30	1.000	997.7	1406.2	1390.0	967.2	15.7	4.8	.0098	7.862	7.856	2	27.2
[illegible]	3.326	.020	3	0	189774.	0.	189773.60	1.000	1013.2	1405.9	1390.0	982.7	15.5	4.7	.0098	7.737	7.731	2	27.2
215	3.346	.020	3	0	187160.	0.	187159.90	1.000	1028.5	1405.6	1390.0	998.0	15.3	4.6	.0098	7.656	7.649	1	27.2
216	3.366	.020	3	0	184302.	0.	184301.80	1.000	1043.6	1405.3	1390.0	1013.1	15.1	4.5	.0098	7.526	7.520	2	27.2
217	3.386	.020	3	0	181205.	0.	181205.10	1.000	1058.4	1404.9	1390.0	1027.9	14.8	4.4	.0098	7.396	7.390	2	27.2
218	3.406	.020	3	0	177876.	0.	177876.10	1.000	1072.9	1404.6	1390.0	1042.4	14.5	4.4	.0098	7.265	7.259	2	27.2
219	3.426	.020	3	0	174319.	0.	174318.50	1.000	1087.2	1404.3	1390.0	1056.7	14.3	4.3	.0098	7.131	7.126	2	27.2
220	3.446	.020	3	0	170529.	0.	170528.70	1.000	1101.1	1404.0	1390.0	1070.6	13.9	4.2	.0098	6.964	6.958	2	27.2

222	3.486	.020	3	0	162290.	0.	162290.30	1.000	1127.9	1403.3	1390.01097.4	13.3	4.0	.0098	6.630	6.625	2	27.2
223	3.506	.020	3	0	157845.	0.	157844.90	1.000	1140.8	1402.9	1390.01110.3	12.9	3.9	.0098	6.432	6.427	2	27.2
224	3.526	.020	3	0	153203.	0.	153202.80	1.000	1153.3	1402.6	1390.01122.8	12.5	3.8	.0098	6.263	6.258	3	27.2
225	3.546	.020	3	0	148358.	0.	148357.70	1.000	1165.5	1402.2	1390.01135.0	12.1	3.7	.0098	6.065	6.060	3	27.2
226	3.566	.020	3	0	143312.	0.	143312.30	1.000	1177.1	1401.9	1390.01146.6	11.7	3.6	.0098	5.846	5.842	2	27.2
227	3.586	.020	3	0	138079.	0.	138078.80	1.000	1188.4	1401.5	1390.01157.9	11.3	3.5	.0098	5.633	5.628	2	27.2
[illegible]	3.606	.020	3	0	132657.	0.	132657.10	1.000	1199.2	1401.1	1390.01168.7	10.8	3.4	.0098	5.407	5.415	6	27.2
[illegible]	3.626	.020	3	0	127053.	0.	127053.50	1.000	1209.6	1400.7	1390.01179.1	10.4	3.3	.0098	5.189	5.198	5	27.2
230	3.646	.020	3	0	121264.	0.	121264.30	1.000	1219.5	1400.4	1390.01189.0	9.9	3.2	.0098	4.930	4.938	5	27.2
231	3.666	.020	3	0	115289.	0.	115288.70	1.000	1228.8	1400.0	1390.01198.3	9.4	3.1	.0098	4.682	4.689	5	27.2
232	3.686	.020	3	0	109123.	0.	109123.20	1.000	1237.7	1399.6	1390.01207.2	8.9	3.0	.0098	4.443	4.451	5	27.2
233	3.706	.020	3	0	102751.	0.	102751.10	1.000	1246.1	1399.1	1390.01215.6	8.3	2.8	.0098	4.173	4.179	5	27.2
234	3.726	.020	3	0	96152.	0.	96152.16	1.000	1253.9	1398.7	1390.01223.4	7.8	2.7	.0098	3.917	3.923	5	27.2
235	3.746	.020	3	0	89278.	0.	89277.88	1.000	1261.2	1398.3	1390.01230.7	7.3	2.6	.0098	3.637	3.643	5	27.2
236	3.766	.020	3	0	82047.	0.	82047.37	1.000	1267.9	1397.8	1390.01237.4	6.7	2.5	.0098	3.341	3.347	5	27.2
237	3.786	.020	3	0	74301.	0.	74301.04	1.000	1273.9	1397.3	1390.01243.4	6.1	2.3	.0098	3.035	3.040	5	27.2
238	3.806	.020	3	0	65651.	0.	65651.29	1.000	1279.3	1396.7	1390.01248.8	5.3	2.1	.0098	2.671	2.675	5	27.2
239	3.826	.020	3	0	55412.	0.	55412.30	1.000	1283.8	1395.9	1390.01253.3	4.5	1.9	.0098	2.248	2.252	5	27.2
240	3.846	.020	3	0	44829.	0.	44829.14	1.000	1287.4	1395.1	1390.01256.9	3.7	1.7	.0098	1.830	1.824	6	27.2
241	3.866	.020	3	0	35521.	0.	35521.29	1.000	1290.3	1394.4	1390.01259.8	2.9	1.5	.0098	1.451	1.447	5	27.2

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
242	3.886	.020	3	0	27626.	0.	27625.95	1.000	1292.6	1393.7	1390.01262.1	2.2	1.3	.0098	1.124	1.121	5	27.2
243	3.906	.020	3	0	21170.	0.	21169.64	1.000	1294.3	1393.1	1390.01263.8	1.7	1.1	.0098	.868	.865	6	27.2
244	3.926	.020	3	0	16085.	0.	16085.40	1.000	1295.6	1392.6	1390.01265.1	1.3	.9	.0098	.656	.654	5	27.2
245	3.946	.020	3	0	12449.	0.	12448.97	1.000	1296.6	1392.2	1390.01266.1	1.0	.8	.0098	.508	.511	5	27.2
246	3.966	.020	3	0	10102.	0.	10101.91	1.000	1297.5	1391.9	1390.01267.0	.8	.7	.0098	.410	.413	5	27.2
247	3.986	.020	3	0	8602.	0.	8602.22	1.000	1298.1	1391.7	1390.01267.6	.7	.6	.0098	.346	.349	5	27.2
[illegible]	4.006	.020	3	0	7633.	0.	7632.99	1.000	1298.8	1391.6	1390.01268.3	.6	.6	.0098	.307	.309	5	27.2
[illegible]	4.026	.020	3	0	6999.	0.	6998.54	1.000	1299.3	1391.5	1390.01268.8	.6	.6	.0098	.283	.285	5	27.2
250	4.046	.020	3	0	6577.	0.	6576.98	1.000	1299.9	1391.4	1390.01269.4	.5	.5	.0098	.272	.263	5	27.2
251	4.066	.020	3	0	6291.	0.	6291.12	1.000	1300.4	1391.4	1390.01269.9	.5	.5	.0098	.251	.253	5	27.2
252	4.086	.020	3	0	6094.	0.	6094.29	1.000	1300.9	1391.4	1390.01270.4	.5	.5	.0098	.251	.243	5	27.2
253	4.106	.020	3	0	5956.	0.	5955.87	1.000	1301.4	1391.3	1390.01270.9	.5	.5	.0098	.242	.243	5	27.2
254	4.126	.020	3	0	5857.	0.	5856.75	1.000	1301.8	1391.3	1390.01271.3	.5	.5	.0098	.242	.234	5	27.2
255	4.146	.020	3	0	5783.	0.	5783.22	1.000	1302.3	1391.3	1390.01271.8	.5	.5	.0098	.232	.234	5	27.2
256	4.166	.020	3	0	5727.	0.	5726.97	1.000	1302.8	1391.3	1390.01272.3	.5	.5	.0098	.232	.234	5	27.2
257	4.186	.020	3	0	5682.	0.	5682.19	1.000	1303.2	1391.3	1390.01272.7	.5	.5	.0098	.232	.234	5	27.2
258	4.206	.020	3	0	5645.	0.	5644.76	1.000	1303.7	1391.3	1390.01273.2	.5	.5	.0098	.232	.225	5	27.2
259	4.226	.020	3	0	5613.	0.	5612.95	1.000	1304.1	1391.3	1390.01273.6	.4	.5	.0098	.223	.225	5	27.2
260	4.246	.020	3	0	5584.	0.	5584.39	1.000	1304.6	1391.3	1390.01274.1	.4	.5	.0098	.223	.225	5	27.2
261	4.266	.020	3	0	5558.	0.	5558.28	1.000	1305.0	1391.3	1390.01274.5	.4	.5	.0098	.223	.225	5	27.2
262	4.286	.020	3	0	5533.	0.	5533.00	1.000	1305.5	1391.3	1390.01275.0	.4	.5	.0098	.223	.225	5	27.2
263	4.306	.020	3	0	5510.	0.	5510.15	1.000	1305.9	1391.3	1390.01275.4	.4	.5	.0098	.223	.225	5	27.2
264	4.326	.020	3	0	5487.	0.	5487.32	1.000	1306.4	1391.3	1390.01275.9	.4	.5	.0098	.223	.225	5	27.2
265	4.346	.020	3	0	5465.	0.	5464.51	1.000	1306.8	1391.3	1390.01276.3	.4	.5	.0098	.223	.225	5	27.2
266	4.366	.020	3	0	5443.	0.	5443.31	1.000	1307.3	1391.2	1390.01276.8	.4	.5	.0098	.223	.225	5	27.2
267	4.386	.020	3	0	5421.	0.	5421.33	1.000	1307.7	1391.2	1390.01277.2	.4	.5	.0098	.223	.216	5	27.2
268	4.406	.020	3	0	5399.	0.	5399.37	1.000	1308.2	1391.2	1390.01277.7	.4	.5	.0098	.223	.216	5	27.2
269	4.426	.020	3	0	5378.	0.	5378.15	1.000	1308.6	1391.2	1390.01278.1	.4	.5	.0098	.214	.216	5	27.2
270	4.446	.020	3	0	5357.	0.	5356.95	1.000	1309.0	1391.2	1390.01278.5	.4	.5	.0098	.214	.216	5	27.2
271	4.466	.020	3	0	5335.	0.	5334.96	1.000	1309.4	1391.2	1390.01278.9	.4	.5	.0098	.214	.216	5	27.2
272	4.486	.020	3	0	5314.	0.	5313.79	1.000	1309.9	1391.2	1390.01279.4	.4	.5	.0098	.214	.216	5	27.2
273	4.506	.020	3	0	5293.	0.	5292.64	1.000	1310.3	1391.2	1390.01279.8	.4	.5	.0098	.214	.216	5	27.2
[illegible]	4.526	.020	3	0	5272.	0.	5271.51	1.000	1310.7	1391.2	1390.01280.2	.4	.5	.0098	.214	.216	5	27.2
[illegible]	4.546	.020	3	0	5250.	0.	5250.39	1.000	1311.2	1391.2	1390.01280.7	.4	.5	.0098	.214	.216	5	27.2
276	4.566	.020	3	0	5228.	0.	5228.50	1.000	1311.6	1391.2	1390.01281.1	.4	.5	.0098	.214	.216	5	27.2
277	4.586	.020	3	0	5207.	0.	5207.42	1.000	1312.0	1391.2	1390.01281.5	.4	.5	.0098	.214	.207	5	27.2
278	4.606	.020	3	0	5186.	0.	5186.28	1.000	1312.4	1391.2	1390.01281.9	.4	.5	.0098	.206	.207	5	27.2
279	4.626	.020	3	0	5164.	0.	5164.38	1.000	1312.8	1391.2	1390.01282.3	.4	.5	.0098	.206	.207	5	27.2
280	4.646	.020	3	0	5143.	0.	5143.29	1.000	1313.3	1391.2	1390.01282.8	.4	.5	.0098	.206	.207	5	27.2
281	4.666	.020	3	0	5122.	0.	5122.21	1.000	1313.7	1391.2	1390.01283.2	.4	.5	.0098	.206	.207	5	27.2

283	4.706	.020	3	0	5080.	0.	5080.11	1.000	1314.5	1391.2	1390.01284.0	.4	.5	.0098	.206	.207	5	27.2
284	4.726	.020	3	0	5058.	0.	5058.30	1.000	1314.9	1391.2	1390.01284.4	.4	.5	.0098	.206	.207	5	27.2
285	4.746	.020	3	0	5037.	0.	5037.30	1.000	1315.3	1391.2	1390.01284.8	.4	.5	.0098	.206	.207	5	27.2
286	4.766	.020	3	0	5016.	0.	5015.54	1.000	1315.7	1391.2	1390.01285.2	.4	.5	.0098	.206	.199	5	27.2
287	4.786	.020	3	0	4995.	0.	4994.58	1.000	1316.1	1391.2	1390.01285.6	.4	.5	.0098	.206	.199	5	27.2
288	4.806	.020	3	0	4974.	0.	4973.57	1.000	1316.5	1391.2	1390.01286.0	.4	.4	.0098	.198	.199	5	27.2
[illegible]	4.826	.020	3	0	4952.	0.	4951.80	1.000	1316.9	1391.2	1390.01286.4	.4	.4	.0098	.198	.199	5	27.2
[illegible]	4.846	.020	3	0	4931.	0.	4930.83	1.000	1317.3	1391.2	1390.01286.8	.4	.4	.0098	.198	.199	5	27.2
291	4.866	.020	3	0	4909.	0.	4909.11	1.000	1317.7	1391.2	1390.01287.2	.4	.4	.0098	.198	.199	5	27.2
292	4.886	.020	3	0	4888.	0.	4888.18	1.000	1318.1	1391.2	1390.01287.6	.4	.4	.0098	.198	.199	5	27.2
293	4.906	.020	3	0	4867.	0.	4866.50	1.000	1318.5	1391.2	1390.01288.0	.4	.4	.0098	.198	.199	5	27.2
294	4.926	.020	3	0	4846.	0.	4845.62	1.000	1318.9	1391.1	1390.01288.4	.4	.4	.0098	.198	.199	5	27.2
295	4.946	.020	3	0	4825.	0.	4824.75	1.000	1319.3	1391.1	1390.01288.8	.4	.4	.0098	.198	.199	5	27.2
296	4.966	.020	3	0	4803.	0.	4803.14	1.000	1319.7	1391.1	1390.01289.2	.4	.4	.0098	.198	.191	5	27.2
297	4.986	.020	3	0	4781.	0.	4781.49	1.000	1320.1	1391.1	1390.01289.6	.4	.4	.0098	.190	.191	5	27.2
298	5.006	.020	3	0	4761.	0.	4760.62	1.000	1320.5	1391.1	1390.01290.0	.4	.4	.0098	.190	.191	5	27.2
299	5.026	.020	3	0	4739.	0.	4739.02	1.000	1320.8	1391.1	1390.01290.3	.4	.4	.0098	.190	.191	5	27.2
300	5.046	.020	3	0	4718.	0.	4718.20	1.000	1321.2	1391.1	1390.01290.7	.4	.4	.0098	.190	.191	5	27.2
301	5.066	.020	3	0	4697.	0.	4696.64	1.000	1321.6	1391.1	1390.01291.1	.4	.4	.0098	.190	.191	5	27.2

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
302	5.086	.020	3	0	4675.	0.	4675.10	1.000	1322.0	1391.1	1390.01291.5	.4	.4	.0098	.190	.191	5	27.2
303	5.106	.020	3	0	4654.	0.	4654.34	1.000	1322.4	1391.1	1390.01291.9	.4	.4	.0098	.189	.191	5	27.2
304	5.126	.020	3	0	4633.	0.	4632.84	1.000	1322.7	1391.1	1390.01292.2	.4	.4	.0098	.189	.190	5	27.2
305	5.146	.020	3	0	4611.	0.	4611.37	1.000	1323.1	1391.1	1390.01292.6	.4	.4	.0098	.189	.190	5	27.2
306	5.166	.020	3	0	4590.	0.	4590.64	1.000	1323.5	1391.1	1390.01293.0	.4	.4	.0098	.185	.182	5	27.2
307	5.186	.020	3	0	4569.	0.	4569.16	1.000	1323.8	1391.1	1390.01293.3	.4	.4	.0098	.181	.178	5	27.2
308	5.206	.020	3	0	4548.	0.	4547.75	1.000	1324.2	1391.1	1390.01293.7	.4	.4	.0098	.189	.183	6	27.2
[illegible]	5.226	.020	3	0	4526.	0.	4526.32	1.000	1324.6	1391.1	1390.01294.1	.4	.4	.0098	.181	.179	5	27.2
[illegible]	5.246	.020	3	0	4505.	0.	4504.96	1.000	1325.0	1391.1	1390.01294.5	.4	.4	.0098	.189	.183	6	27.2
311	5.266	.020	3	0	4484.	0.	4484.34	1.000	1325.3	1391.1	1390.01294.8	.4	.4	.0098	.182	.179	5	27.2
312	5.286	.020	3	0	4463.	0.	4462.97	1.000	1325.7	1391.1	1390.01295.2	.4	.4	.0098	.181	.179	5	27.2
313	5.306	.020	3	0	4442.	0.	4441.64	1.000	1326.0	1391.1	1390.01295.5	.4	.4	.0098	.181	.179	5	27.2
314	5.326	.020	3	0	4420.	0.	4420.32	1.000	1326.4	1391.1	1390.01295.9	.4	.4	.0098	.181	.179	5	27.2
315	5.346	.020	3	0	4399.	0.	4399.03	1.000	1326.8	1391.1	1390.01296.3	.4	.4	.0098	.181	.178	5	27.2
316	5.366	.020	3	0	4378.	0.	4377.77	1.000	1327.1	1391.1	1390.01296.6	.4	.4	.0098	.180	.178	5	27.2
317	5.386	.020	3	0	4357.	0.	4356.53	1.000	1327.5	1391.1	1390.01297.0	.4	.4	.0098	.180	.178	5	27.2
318	5.406	.020	3	0	4335.	0.	4335.31	1.000	1327.9	1391.1	1390.01297.4	.4	.4	.0098	.180	.178	5	27.2
319	5.426	.020	3	0	4313.	0.	4313.37	1.000	1328.2	1391.1	1390.01297.7	.4	.4	.0098	.180	.177	5	27.2
320	5.446	.020	3	0	4293.	0.	4292.95	1.000	1328.6	1391.1	1390.01298.1	.4	.4	.0098	.180	.177	5	27.2
321	5.466	.020	3	0	4272.	0.	4271.81	1.000	1328.9	1391.0	1390.01298.4	.4	.4	.0098	.179	.177	5	27.2
322	5.486	.020	3	0	4250.	0.	4249.93	1.000	1329.3	1391.0	1390.01298.8	.4	.4	.0098	.177	.175	6	27.2
323	5.506	.020	3	0	4229.	0.	4228.82	1.000	1329.6	1391.0	1390.01299.1	.4	.4	.0098	.177	.174	5	27.2
324	5.526	.020	3	0	4208.	0.	4207.73	1.000	1330.0	1391.0	1390.01299.5	.4	.4	.0098	.176	.174	5	27.2
325	5.546	.020	3	0	4187.	0.	4186.66	1.000	1330.3	1391.0	1390.01299.8	.3	.4	.0098	.174	.172	6	27.2
326	5.566	.020	3	0	4165.	0.	4164.87	1.000	1330.7	1391.0	1390.01300.2	.3	.4	.0098	.174	.171	5	27.2
327	5.586	.020	3	0	4144.	0.	4143.85	1.000	1331.0	1391.0	1390.01300.5	.3	.4	.0098	.173	.171	5	27.2
328	5.606	.020	3	0	4123.	0.	4122.86	1.000	1331.4	1391.0	1390.01300.9	.3	.4	.0098	.173	.171	5	27.2
329	5.626	.020	3	0	4101.	0.	4101.14	1.000	1331.7	1391.0	1390.01301.2	.3	.4	.0098	.171	.169	6	27.2
330	5.646	.020	3	0	4080.	0.	4080.18	1.000	1332.1	1391.0	1390.01301.6	.3	.4	.0098	.171	.168	5	27.2
331	5.666	.020	3	0	4059.	0.	4059.25	1.000	1332.4	1391.0	1390.01301.9	.3	.4	.0098	.170	.168	5	27.2
332	5.686	.020	3	0	4038.	0.	4037.60	1.000	1332.7	1391.0	1390.01302.2	.3	.4	.0098	.168	.166	6	27.2
333	5.706	.020	3	0	4017.	0.	4016.71	1.000	1333.1	1391.0	1390.01302.6	.3	.4	.0098	.168	.165	5	27.2
334	5.726	.020	3	0	3995.	0.	3995.12	1.000	1333.4	1391.0	1390.01302.9	.3	.4	.0098	.167	.165	5	27.2

KTT= 0 I= 335 T= 5.75

TF= .08 QTF= 4038. TP= 3.07 QP= 202982. TRS= .01 TB= 5.69
BRD= 29.7 BRW=1333.7 HU=1419.7 HY=1391.0 HC=1390.0 ALG=27.178 QO= 76.3585
Z= .51 TFH= 1.85 BO=1303.2 TFI= 1.22

1

TIME	34044.0	64044.0	94044.0	124044.0	154044.0	184044.0	214044.0	244044.0	274044.0	304044.0	DISCHARGE
.080.	*	.	.	.	.	.	.	.	.	.	14015.
.120.	*	.	.	.	.	.	.	.	.	.	14245.
.160.	*	.	.	.	.	.	.	.	.	.	14492.
.200.	*	.	.	.	.	.	.	.	.	.	14749.
.240.	*	.	.	.	.	.	.	.	.	.	15013.
.280.	*	.	.	.	.	.	.	.	.	.	15281.
.320.	*	.	.	.	.	.	.	.	.	.	15551.
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.880.	*	.	.	.	.	.	.	.	.	.	20965.
.920.	*	.	.	.	.	.	.	.	.	.	23442.
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1.000.	*	.	.	.	.	.	.	.	.	.	25773.
1.040.	*	.	.	.	.	.	.	.	.	.	26557.
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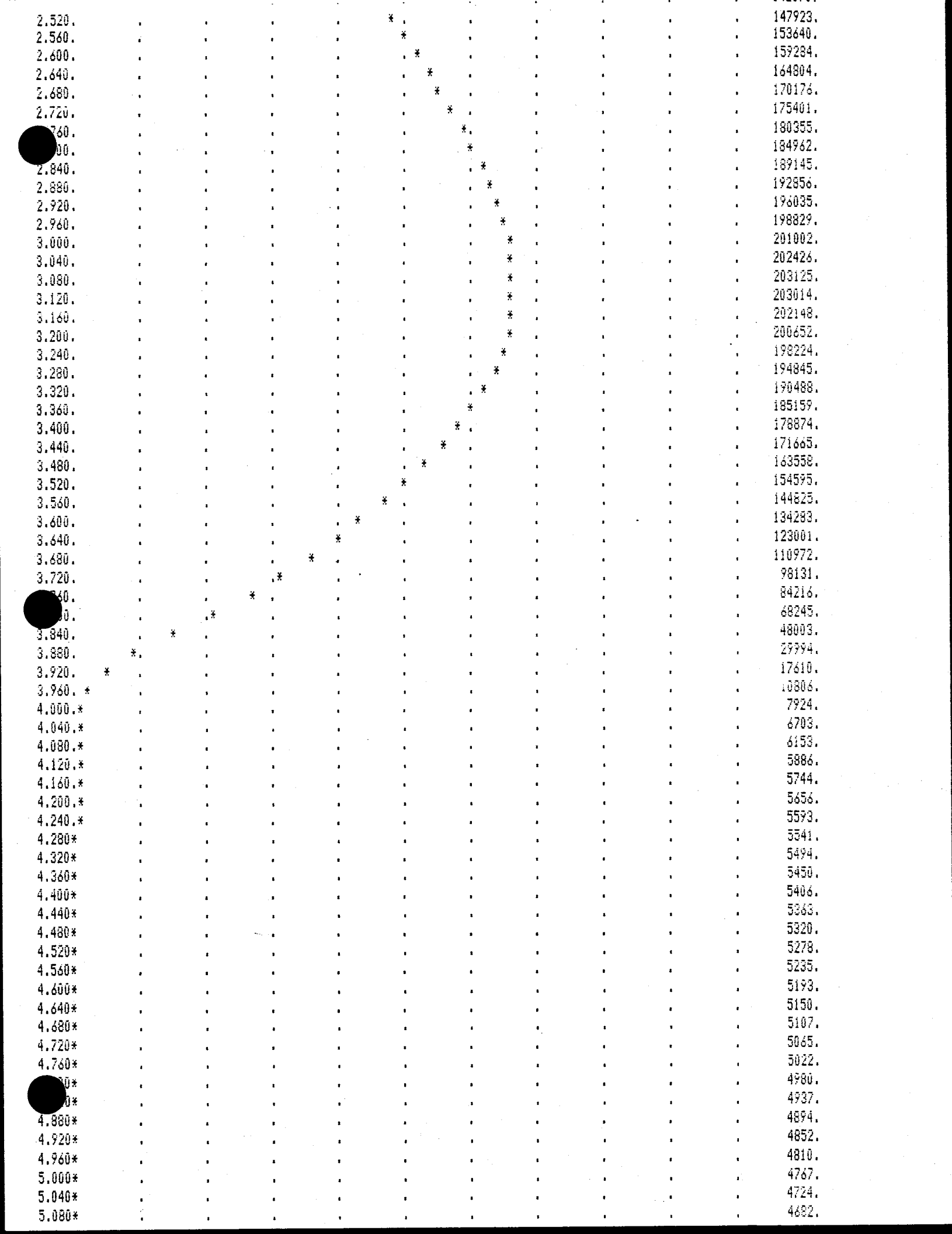
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5.680*	.	.	.	.	.	.	.	.	.	.	4044.

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        BREACH MODEL, MICRO-VERSION: 1/87

 ING FAILURE IN MIDDLE OF HQFRS;STA. 762+00    FILE:HQMTOP.6       24OCT90

 HI=   1415.40  HU=   1419.70  HL=   1390.00  HPI=   1404.90  HSP=  1408.40

        (QIN(I),I=1,8)
  8060.00   2934.00   1012.00    306.00     92.00       .00       .00       .00

        (TIN(I),I=1,8)
      .00      1.00      2.00      3.00      4.00      6.00       .00       .00

        (RSA(I),I=1,8)
  2975.00   2240.30   1221.70    114.80     76.80     44.40     18.85       .00

        (HSA(I),I=1,8)
  1428.30   1419.70   1408.40   1396.10   1394.30   1392.60   1389.10   1375.90

 ZU=  3.00  ZD=  2.00  ZC=   .00  PORW=   .00  GL=   .00  GS=   .00  VMP=   .00

 D50C=   .00  PORC=   .00  UWC=   .00  CNC= .0000  AFRC=   .00  COHC=    .0  UNFCC=   .00

 D50S=   .18  PORS=   .33  UWS=125.60  CNS= .0000  AFRS= 39.00  COHS= 100.0  UNFCS= 10.00

 BR=  1.00  WC=  14.0  CRL= 5280.0  SM= 70.40  WV= 5280.0  CNV= .0450  D50DF=   .00  UNFCDF=   .00

 DTH=  .020  DBG=  .001   H=   .1000  TEH=    6.0  ERR=   .10  FPT=   2.0  TPR=   1.0

        (SPQ(I),I=1,8)
      .00   1049.30   2325.30   5551.80  10718.60  15377.70  22588.60  58752.00

        (SPH(I),I=1,8)
      .00      1.30      2.66      5.05      8.05     11.30     11.60     13.80

                 CRL= 5280.   BM=   43.   AFR= 39.00   BO=  14.8   Z=   .48


1


        AFR=  39.0   TH1= 64.50   H1=  6.68   TH2= 51.75   H2= 22.93   TH3= 45.38   H3= 78.83


1
   I      T  DTH KG KC     QTOT       QTS            QB   SUB     BT     HY     HC    BO    PPP     HP  CNN     DH    DHH   KIT ALG
 PIPE FLOW TO WEIR FLOW TRANSITION
    1400.       10.       10.     3793.     5744.     9537.      .023      .883      114.      134.       5.      115.
 .07266  .07279  .33122 2.74717  .0098      3.0     16.4      1.9      9.7    158.0
                  1      16.5       6.7      17.6   19870.2      .0480    3     .8800     .9280      25.5     133.7     115.0


   I      T  DTH KG KC     QTOT       QTS            QB   SUB     BT     HY     HC    BO    PPP     HP  CNN     DH    DHH   KIT ALG
  105  1.002  .002 2 0    14929.     8536.      6393.24 1.000   35.9 1415.2 1392.9  10.4  153.2    6.8  .0098   .078   .078   2 25.5
  106  1.004  .002 2 0    14964.     8534.      6430.05 1.000   36.0 1415.2 1392.9  10.4  153.4    6.8  .0098   .075   .075   1 25.5
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107	1.006	.002	2	0	14998.	8533.	6465.66	1.000	36.1	1415.2	1392.8	10.4	153.6	6.9	.0098	.073	.073	1	25.5
108	1.008	.002	2	0	15031.	8531.	6500.03	1.000	36.1	1415.2	1392.7	10.4	153.8	7.0	.0098	.070	.070	1	25.5
109	1.010	.002	2	0	15062.	8529.	6533.29	1.000	36.2	1415.2	1392.7	10.4	154.0	7.0	.0098	.068	.068	2	25.5
110	1.012	.002	2	0	15092.	8527.	6565.36	1.000	36.3	1415.2	1392.6	10.4	154.2	7.1	.0098	.065	.065	1	25.5
111	1.014	.002	2	0	15122.	8525.	6596.48	1.000	36.3	1415.2	1392.5	10.4	154.4	7.2	.0098	.063	.063	2	25.5
112	1.016	.002	2	0	15150.	8523.	6626.51	1.000	36.4	1415.2	1392.5	10.4	154.6	7.2	.0098	.061	.061	1	25.5
113	1.018	.002	2	0	15177.	8521.	6655.51	1.000	36.4	1415.2	1392.4	10.4	154.7	7.3	.0098	.059	.059	1	25.5
[illegible]	1.020	.002	2	0	15203.	8519.	6683.65	1.000	36.5	1415.2	1392.4	10.4	154.9	7.3	.0098	.057	.057	3	25.5
[illegible]	1.022	.002	2	0	15228.	8517.	6710.73	1.000	36.5	1415.2	1392.3	10.4	155.0	7.4	.0098	.055	.055	1	25.5
116	1.024	.002	2	0	15252.	8515.	6737.08	1.000	36.6	1415.2	1392.2	10.4	155.2	7.5	.0098	.053	.053	1	25.5
117	1.026	.002	2	0	15276.	8514.	6762.62	1.000	36.6	1415.2	1392.2	10.4	155.3	7.5	.0098	.051	.051	2	25.5
118	1.028	.002	2	0	15299.	8512.	6787.27	1.000	36.7	1415.2	1392.1	10.4	155.5	7.6	.0098	.049	.049	1	25.5
119	1.030	.002	2	0	15321.	8510.	6811.16	1.000	36.7	1415.2	1392.1	10.4	155.6	7.6	.0098	.048	.048	2	25.5
120	1.032	.002	2	0	15342.	8508.	6834.28	1.000	36.8	1415.2	1392.0	10.4	155.8	7.7	.0098	.046	.046	1	25.5
121	1.034	.002	2	0	15362.	8506.	6856.67	1.000	36.8	1415.2	1392.0	10.4	155.9	7.7	.0098	.045	.045	2	25.5
			2		24.1	22.9	16.1	13162.8	.1137	57	1.0360	1.1497	12.8	162.5	32.1				

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
122	1.036	.002	3	0	16513.	8504.	8009.34	1.000	39.3	1415.2	1390.0	10.4	.0	11.4	.0098	.000	.000	0	25.9
123	1.056	.020	3	0	16540.	8501.	8038.48	1.000	39.6	1415.2	1390.0	10.4	.0	11.5	.0098	.000	.000	0	26.2
124	1.076	.020	3	0	16525.	8461.	8063.69	1.000	39.9	1415.1	1390.0	10.4	.0	11.5	.0098	.000	.000	0	26.4
125	1.096	.020	3	0	16539.	8450.	8089.04	1.000	40.2	1415.1	1390.0	10.4	.0	11.4	.0098	.000	.000	0	26.6
126	1.116	.020	3	0	16543.	8428.	8114.35	1.000	40.5	1415.1	1390.0	10.4	.0	11.4	.0098	.000	.000	0	26.8
127	1.136	.020	3	0	16546.	8406.	8139.64	1.000	40.8	1415.1	1390.0	10.4	.0	11.4	.0098	.000	.000	0	27.1
128	1.156	.020	3	0	16774.	8385.	8389.45	1.000	41.4	1415.1	1390.0	11.1	.7	11.2	.0098	.343	.343	3	27.1
129	1.176	.020	3	0	17009.	8363.	8646.35	1.000	42.2	1415.1	1390.0	11.8	.7	11.1	.0098	.353	.353	1	27.1
130	1.196	.020	3	0	17251.	8340.	8910.80	1.000	42.9	1415.1	1390.0	12.5	.7	10.9	.0098	.364	.364	1	27.1
131	1.216	.020	3	0	17500.	8317.	9182.90	1.000	43.6	1415.1	1390.0	13.3	.7	10.8	.0098	.375	.375	3	27.1
132	1.236	.020	3	0	17757.	8294.	9462.87	1.000	44.4	1415.0	1390.0	14.0	.8	10.6	.0098	.386	.386	3	27.1
[illegible]	1.256	.020	3	0	18022.	8270.	9751.55	1.000	45.2	1415.0	1390.0	14.8	.8	10.5	.0098	.399	.399	2	27.1
[illegible]	1.276	.020	3	0	18294.	8246.	10048.35	1.000	46.0	1415.0	1390.0	15.7	.8	10.3	.0098	.411	.410	1	27.1
135	1.296	.020	3	0	18575.	8221.	10353.76	1.000	46.9	1415.0	1390.0	16.5	.8	10.2	.0098	.423	.423	1	27.1
136	1.316	.020	3	0	18863.	8195.	10668.08	1.000	47.7	1415.0	1390.0	17.4	.9	10.1	.0098	.436	.436	1	27.1
137	1.336	.020	3	0	19160.	8169.	10991.01	1.000	48.6	1415.0	1390.0	18.3	.9	9.9	.0098	.449	.449	3	27.1
138	1.356	.020	3	0	19467.	8143.	11323.77	1.000	49.6	1415.0	1390.0	19.2	.9	9.8	.0098	.463	.463	2	27.1
139	1.376	.020	3	0	19782.	8116.	11665.81	1.000	50.5	1414.9	1390.0	20.2	1.0	9.7	.0098	.477	.476	1	27.1
140	1.396	.020	3	0	20106.	8088.	12017.75	1.000	51.5	1414.9	1390.0	21.1	1.0	9.6	.0098	.491	.491	1	27.1
141	1.416	.020	3	0	20440.	8060.	12379.59	1.000	52.5	1414.9	1390.0	22.2	1.0	9.5	.0098	.506	.506	1	27.1
142	1.436	.020	3	0	20783.	8031.	12751.29	1.000	53.6	1414.9	1390.0	23.2	1.0	9.4	.0098	.521	.521	3	27.1
143	1.456	.020	3	0	21136.	8002.	13134.05	1.000	54.6	1414.9	1390.0	24.3	1.1	9.3	.0098	.537	.537	2	27.1
144	1.476	.020	3	0	21499.	7972.	13527.22	1.000	55.7	1414.9	1390.0	25.4	1.1	9.2	.0098	.553	.552	1	27.1
145	1.496	.020	3	0	21873.	7941.	13931.65	1.000	56.9	1414.8	1390.0	26.5	1.1	9.1	.0098	.569	.569	1	27.1
146	1.516	.020	3	0	22257.	7909.	14347.32	1.000	58.0	1414.8	1390.0	27.7	1.2	9.0	.0098	.586	.586	1	27.1
147	1.536	.020	3	0	22651.	7877.	14774.02	1.000	59.2	1414.8	1390.0	28.9	1.2	8.9	.0098	.603	.603	3	27.1
148	1.556	.020	3	0	23058.	7845.	15213.18	1.000	60.5	1414.8	1390.0	30.1	1.2	8.9	.0098	.622	.622	2	27.1
149	1.576	.020	3	0	23475.	7811.	15664.10	1.000	61.8	1414.8	1390.0	31.4	1.3	8.8	.0098	.640	.640	2	27.1
150	1.596	.020	3	0	23904.	7776.	16127.61	1.000	63.1	1414.7	1390.0	32.7	1.3	8.7	.0098	.659	.660	2	27.1
151	1.616	.020	3	0	24344.	7741.	16603.17	1.000	64.4	1414.7	1390.0	34.1	1.4	8.6	.0098	.678	.678	3	27.1
152	1.636	.020	3	0	24798.	7706.	17092.02	1.000	65.8	1414.7	1390.0	35.5	1.4	8.6	.0098	.698	.698	1	27.1
153	1.656	.020	3	0	25262.	7669.	17593.70	1.000	67.3	1414.7	1390.0	36.9	1.4	8.5	.0098	.718	.718	3	27.1
154	1.676	.020	3	0	25741.	7631.	18109.59	1.000	68.8	1414.7	1390.0	38.4	1.5	8.4	.0098	.741	.741	2	27.1
155	1.696	.020	3	0	26231.	7593.	18638.74	1.000	70.3	1414.6	1390.0	39.9	1.5	8.4	.0098	.761	.762	2	27.1
156	1.716	.020	3	0	26736.	7553.	19182.63	1.000	71.9	1414.6	1390.0	41.5	1.6	8.3	.0098	.785	.785	2	27.1
157	1.736	.020	3	0	27254.	7513.	19740.39	1.000	73.5	1414.6	1390.0	43.1	1.6	8.3	.0098	.807	.806	1	27.1
158	1.756	.020	3	0	27785.	7472.	20312.93	1.000	75.1	1414.6	1390.0	44.8	1.7	8.2	.0098	.830	.830	1	27.1
[illegible]	1.776	.020	3	0	28330.	7430.	20900.39	1.000	76.8	1414.5	1390.0	46.5	1.7	8.1	.0098	.854	.853	1	27.1
[illegible]	1.796	.020	3	0	28889.	7387.	21502.42	1.000	78.6	1414.5	1390.0	48.2	1.8	8.1	.0098	.878	.878	3	27.1
161	1.816	.020	3	0	29462.	7342.	22119.91	1.000	80.4	1414.5	1390.0	50.0	1.8	8.0	.0098	.903	.904	3	27.1
162	1.836	.020	3	0	30052.	7297.	22754.30	1.000	82.3	1414.5	1390.0	51.9	1.9	8.0	.0098	.931	.931	2	27.1
163	1.856	.020	3	0	30655.	7251.	23403.99	1.000	84.2	1414.4	1390.0	53.8	1.9	7.9	.0098	.956	.957	2	27.1
164	1.876	.020	3	0	31273.	7204.	24069.86	1.000	86.1	1414.4	1390.0	55.8	2.0	7.9	.0098	.983	.983	3	27.1
165	1.896	.020	3	0	31908.	7155.	24752.90	1.000	88.2	1414.4	1390.0	57.8	2.0	7.8	.0098	1.012	1.012	2	27.1
166	1.916	.020	3	0	32558.	7105.	25452.20	1.000	90.2	1414.4	1390.0	59.9	2.1	7.8	.0098	1.039	1.040	3	27.1

167	1.936	.020	3	0	33223.	7034.	26188.78	1.000	92.4	1414.3	1390.0	62.0	2.1	7.8	.0098	1.069	1.070	2	27.1
168	1.956	.020	3	0	33906.	7003.	26903.52	1.000	94.6	1414.3	1390.0	64.2	2.2	7.7	.0098	1.100	1.100	2	27.1
169	1.976	.020	3	0	34605.	6949.	27656.23	1.000	96.8	1414.3	1390.0	66.5	2.3	7.7	.0098	1.131	1.131	2	27.1
170	1.996	.020	3	0	35321.	6894.	28426.79	1.000	99.2	1414.2	1390.0	68.8	2.3	7.6	.0098	1.162	1.163	2	27.1
171	2.016	.020	3	0	36054.	6839.	29215.59	1.000	101.6	1414.2	1390.0	71.2	2.4	7.6	.0098	1.194	1.195	2	27.1
172	2.036	.020	3	0	36804.	6781.	30022.76	1.000	104.0	1414.2	1390.0	73.7	2.5	7.6	.0098	1.227	1.227	2	27.1
173	2.056	.020	3	0	37571.	6723.	30848.17	1.000	106.5	1414.1	1390.0	76.2	2.5	7.5	.0098	1.260	1.261	2	27.1
174	2.076	.020	3	0	38355.	6663.	31691.99	1.000	109.1	1414.1	1390.0	78.8	2.6	7.5	.0098	1.294	1.294	2	27.1
175	2.096	.020	3	0	39158.	6601.	32556.77	1.000	111.8	1414.1	1390.0	81.4	2.7	7.5	.0098	1.331	1.332	2	27.1
176	2.116	.020	3	0	39979.	6538.	33440.18	1.000	114.5	1414.0	1390.0	84.2	2.7	7.4	.0098	1.366	1.367	2	27.1
177	2.136	.020	3	0	40817.	6474.	34342.80	1.000	117.3	1414.0	1390.0	87.0	2.8	7.4	.0098	1.402	1.403	3	27.1
178	2.156	.020	3	0	41674.	6408.	35266.28	1.000	120.2	1413.9	1390.0	89.8	2.9	7.4	.0098	1.442	1.443	2	27.1
179	2.176	.020	3	0	42549.	6340.	36208.75	1.000	123.2	1413.9	1390.0	92.8	3.0	7.3	.0098	1.479	1.479	2	27.1
180	2.196	.020	3	0	43444.	6272.	37172.71	1.000	126.2	1413.9	1390.0	95.8	3.0	7.3	.0098	1.520	1.520	2	27.1
181	2.216	.020	3	0	44356.	6201.	38155.20	1.000	129.3	1413.8	1390.0	99.0	3.1	7.3	.0098	1.558	1.558	2	27.1

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
182	2.236	.020	3	0	45287.	6128.	39159.05	1.000	132.5	1413.8	1390.0	102.2	3.2	7.2	.0098	1.600	1.601	2	27.1
183	2.256	.020	3	0	46238.	6054.	40184.53	1.000	135.8	1413.7	1390.0	105.4	3.3	7.2	.0098	1.644	1.644	2	27.1
184	2.276	.020	3	0	47207.	5978.	41228.98	1.000	139.2	1413.7	1390.0	108.8	3.4	7.2	.0098	1.684	1.684	2	27.1
185	2.296	.020	3	0	48195.	5900.	42294.73	1.000	142.6	1413.7	1390.0	112.3	3.5	7.1	.0098	1.728	1.729	2	27.1
186	2.316	.020	3	0	49203.	5821.	43381.98	1.000	146.2	1413.6	1390.0	115.8	3.5	7.1	.0098	1.774	1.775	2	27.1
187	2.336	.020	3	0	50227.	5739.	44488.34	1.000	149.8	1413.6	1390.0	119.4	3.6	7.1	.0098	1.817	1.817	3	27.1
188	2.356	.020	3	0	51271.	5655.	45615.69	1.000	153.5	1413.5	1390.0	123.2	3.7	7.0	.0098	1.864	1.865	2	27.1
189	2.376	.020	3	0	52334.	5570.	46764.58	1.000	157.4	1413.5	1390.0	127.0	3.8	7.0	.0098	1.912	1.913	2	27.1
190	2.396	.020	3	0	53432.	5497.	47934.63	1.000	161.3	1413.4	1390.0	130.9	3.9	7.0	.0098	1.961	1.961	2	27.1
191	2.416	.020	3	0	54549.	5427.	49122.53	1.000	165.3	1413.4	1390.0	134.9	4.0	7.0	.0098	2.005	2.006	2	27.1
192	2.436	.020	3	0	55685.	5355.	50330.85	1.000	169.4	1413.3	1390.0	139.0	4.1	6.9	.0098	2.056	2.057	2	27.1
193	2.456	.020	3	0	56841.	5281.	51560.04	1.000	173.6	1413.2	1390.0	143.3	4.2	6.9	.0098	2.107	2.108	2	27.1
194	2.476	.020	3	0	58015.	5205.	52809.56	1.000	177.9	1413.2	1390.0	147.6	4.3	6.9	.0098	2.159	2.160	2	27.1
195	2.496	.020	3	0	59207.	5128.	54079.31	1.000	182.4	1413.1	1390.0	152.0	4.4	6.9	.0098	2.212	2.213	2	27.1
196	2.516	.020	3	0	60414.	5048.	55365.68	1.000	186.9	1413.1	1390.0	156.5	4.5	6.8	.0098	2.261	2.259	3	27.1
197	2.536	.020	3	0	61638.	4968.	56670.02	1.000	191.5	1413.0	1390.0	161.1	4.6	6.8	.0098	2.313	2.313	1	27.1
198	2.556	.020	3	0	62877.	4884.	57992.69	1.000	196.2	1413.0	1390.0	165.9	4.7	6.8	.0098	2.367	2.367	1	27.1
199	2.576	.020	3	0	64132.	4799.	59333.39	1.000	201.1	1412.9	1390.0	170.7	4.8	6.7	.0098	2.422	2.422	1	27.1
200	2.596	.020	3	0	65403.	4712.	60691.33	1.000	206.0	1412.8	1390.0	175.7	5.0	6.7	.0098	2.478	2.477	1	27.1
201	2.616	.020	3	0	66689.	4622.	62066.63	1.000	211.1	1412.8	1390.0	180.7	5.1	6.7	.0098	2.534	2.534	1	27.1
202	2.636	.020	3	0	67989.	4531.	63457.82	1.000	216.3	1412.7	1390.0	185.9	5.2	6.7	.0098	2.592	2.591	1	27.1
203	2.656	.020	3	0	69303.	4437.	64865.57	1.000	221.6	1412.6	1390.0	191.2	5.3	6.6	.0098	2.650	2.650	1	27.1
204	2.676	.020	3	0	70630.	4341.	66288.30	1.000	227.0	1412.6	1390.0	196.7	5.4	6.6	.0098	2.709	2.709	1	27.1
205	2.696	.020	3	0	71969.	4243.	67725.48	1.000	232.5	1412.5	1390.0	202.2	5.5	6.6	.0098	2.769	2.768	1	27.1
206	2.716	.020	3	0	73319.	4143.	69176.57	1.000	238.2	1412.4	1390.0	207.8	5.7	6.6	.0098	2.830	2.829	1	27.1
207	2.736	.020	3	0	74681.	4040.	70640.95	1.000	244.0	1412.3	1390.0	213.6	5.8	6.5	.0098	2.891	2.890	1	27.1
208	2.756	.020	3	0	76051.	3934.	72116.65	1.000	249.9	1412.3	1390.0	219.5	5.9	6.5	.0098	2.952	2.950	2	27.1
209	2.776	.020	3	0	77430.	3827.	73603.45	1.000	255.9	1412.2	1390.0	225.6	6.0	6.5	.0098	3.014	3.013	1	27.1
210	2.796	.020	3	0	78815.	3716.	75099.39	1.000	262.1	1412.1	1390.0	231.7	6.2	6.5	.0098	3.076	3.074	2	27.1
211	2.816	.020	3	0	80206.	3603.	76602.76	1.000	268.3	1412.0	1390.0	238.0	6.3	6.4	.0098	3.138	3.136	2	27.1
212	2.836	.020	3	0	81594.	3488.	78105.23	1.000	274.7	1411.9	1390.0	244.4	6.4	6.4	.0098	3.186	3.184	1	27.1
213	2.856	.020	3	0	82984.	3370.	79613.77	1.000	281.2	1411.8	1390.0	250.9	6.5	6.4	.0098	3.250	3.249	1	27.1
214	2.876	.020	3	0	84378.	3250.	81128.36	1.000	287.8	1411.7	1390.0	257.5	6.6	6.3	.0098	3.316	3.315	1	27.1
215	2.896	.020	3	0	85774.	3127.	82647.37	1.000	294.6	1411.7	1390.0	264.3	6.8	6.3	.0098	3.382	3.381	1	27.1
216	2.916	.020	3	0	87161.	3000.	84160.38	1.000	301.5	1411.6	1390.0	271.1	6.9	6.3	.0098	3.433	3.431	1	27.1
217	2.936	.020	3	0	88547.	2871.	85675.16	1.000	308.5	1411.5	1390.0	278.1	7.0	6.2	.0098	3.500	3.498	1	27.1
218	2.956	.020	3	0	89930.	2740.	87190.09	1.000	315.6	1411.4	1390.0	285.3	7.1	6.2	.0098	3.567	3.566	1	27.1
219	2.976	.020	3	0	91299.	2605.	88694.30	1.000	322.8	1411.3	1390.0	292.5	7.2	6.2	.0098	3.618	3.617	1	27.1
220	2.996	.020	3	0	92664.	2468.	90196.55	1.000	330.2	1411.2	1390.0	299.9	7.4	6.2	.0098	3.686	3.685	1	27.1
221	3.016	.020	3	0	94020.	2326.	91693.09	1.000	337.7	1411.1	1390.0	307.4	7.5	6.1	.0098	3.753	3.751	2	27.1
222	3.036	.020	3	0	95400.	2227.	93173.05	1.000	345.3	1411.0	1390.0	315.0	7.6	6.1	.0098	3.803	3.801	1	27.1
223	3.056	.020	3	0	96770.	2125.	94645.12	1.000	353.1	1410.8	1390.0	322.7	7.7	6.1	.0098	3.872	3.871	1	27.1
224	3.076	.020	3	0	98118.	2021.	96097.30	1.000	360.9	1410.7	1390.0	330.6	7.8	6.0	.0098	3.923	3.921	1	27.1
225	3.096	.020	3	0	99453.	1915.	97538.52	1.000	368.9	1410.6	1390.0	338.6	8.0	6.0	.0098	3.992	3.991	1	27.1
226	3.116	.020	3	0	100762.	1806.	98956.46	1.000	377.0	1410.5	1390.0	346.6	8.1	6.0	.0098	4.043	4.041	1	27.1
227	3.136	.020	3	0	102052.	1695.	100357.10	1.000	385.2	1410.4	1390.0	354.9	8.2	5.9	.0098	4.110	4.107	2	27.1

228	3.156	.020	3	0	105512.	1682.	101730.50	1.000	393.5	1410.3	1390.0	383.2	8.3	5.9	.0098	4.137	4.137	1	27.1
229	3.176	.020	3	0	104539.	1467.	103072.70	1.000	401.9	1410.1	1390.0	371.6	8.4	5.8	.0098	4.209	4.206	1	27.1
230	3.196	.020	3	0	105742.	1349.	104393.30	1.000	410.5	1410.0	1390.0	380.1	8.6	5.8	.0098	4.276	4.273	2	27.1
231	3.216	.020	3	0	106909.	1229.	105680.00	1.000	419.1	1409.9	1390.0	388.8	8.6	5.8	.0098	4.324	4.321	1	27.1
232	3.236	.020	3	0	108036.	1106.	106929.20	1.000	427.9	1409.8	1390.0	397.5	8.7	5.7	.0098	4.372	4.369	1	27.1
233	3.256	.020	3	0	109132.	991.	108141.10	1.000	436.7	1409.6	1390.0	406.4	8.8	5.7	.0098	4.419	4.417	1	27.1
234	3.276	.020	3	0	110206.	881.	109324.50	1.000	445.7	1409.5	1390.0	415.3	8.9	5.7	.0098	4.466	4.464	1	27.1
235	3.296	.020	3	0	111239.	770.	110469.20	1.000	454.7	1409.4	1390.0	424.3	9.0	5.6	.0098	4.513	4.510	1	27.1
[illegible]	3.316	.020	3	0	112225.	656.	111568.80	1.000	463.8	1409.2	1390.0	433.5	9.1	5.6	.0098	4.558	4.556	1	27.1
237	3.336	.020	3	0	113161.	540.	112621.30	1.000	473.0	1409.1	1390.0	442.7	9.2	5.5	.0098	4.603	4.600	1	27.1
238	3.356	.020	3	0	114048.	422.	113625.90	1.000	482.3	1408.9	1390.0	452.0	9.3	5.5	.0098	4.647	4.645	1	27.1
239	3.376	.020	3	0	114880.	302.	114578.40	1.000	491.7	1408.8	1390.0	461.3	9.4	5.5	.0098	4.691	4.688	1	27.1
240	3.396	.020	3	0	115645.	179.	115465.60	1.000	501.1	1408.6	1390.0	470.8	9.4	5.4	.0098	4.711	4.707	1	27.1
241	3.416	.020	3	0	116353.	54.	116298.80	1.000	510.6	1408.5	1390.0	480.3	9.5	5.4	.0098	4.751	4.748	1	27.1

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
242	3.436	.020	3	0	117074.	0.	117074.00	1.000	520.2	1408.3	1390.0	489.8	9.6	5.3	.0098	4.792	4.789	1	27.1
243	3.456	.020	3	0	117777.	0.	117777.00	1.000	529.8	1408.1	1390.0	499.5	9.6	5.3	.0098	4.808	4.805	1	27.1
244	3.476	.020	3	0	118417.	0.	118416.80	1.000	539.5	1408.0	1390.0	509.2	9.7	5.3	.0098	4.846	4.843	1	27.1
245	3.496	.020	3	0	118982.	0.	118982.10	1.000	549.2	1407.8	1390.0	518.9	9.7	5.2	.0098	4.860	4.856	1	27.1
246	3.516	.020	3	0	119477.	0.	119477.50	1.000	559.0	1407.7	1390.0	528.7	9.8	5.2	.0098	4.892	4.888	2	27.1
247	3.536	.020	3	0	119892.	0.	119892.30	1.000	568.8	1407.5	1390.0	538.5	9.8	5.1	.0098	4.903	4.899	1	27.1
248	3.556	.020	3	0	120226.	0.	120226.10	1.000	578.6	1407.3	1390.0	548.3	9.8	5.1	.0098	4.912	4.908	1	27.1
249	3.576	.020	3	0	120478.	0.	120477.60	1.000	588.5	1407.1	1390.0	558.1	9.8	5.0	.0098	4.920	4.916	1	27.1
250	3.596	.020	3	0	120644.	0.	120644.10	1.000	598.3	1406.9	1390.0	568.0	9.9	5.0	.0098	4.926	4.922	1	27.1
251	3.616	.020	3	0	120725.	0.	120725.50	1.000	608.2	1406.8	1390.0	577.8	9.9	4.9	.0098	4.931	4.927	1	27.1
252	3.636	.020	3	0	120717.	0.	120716.60	1.000	618.1	1406.6	1390.0	587.7	9.9	4.9	.0098	4.931	4.935	0	27.1
253	3.656	.020	3	0	120623.	0.	120622.90	1.000	627.9	1406.4	1390.0	597.6	9.9	4.8	.0098	4.936	4.933	2	27.1
254	3.676	.020	3	0	120429.	0.	120428.70	1.000	637.8	1406.2	1390.0	607.4	9.8	4.8	.0098	4.913	4.909	1	27.1
[illegible]	3.696	.020	3	0	120143.	0.	120143.00	1.000	647.6	1406.0	1390.0	617.2	9.8	4.8	.0098	4.913	4.912	0	27.1
[illegible]	3.716	.020	3	0	119759.	0.	119759.40	1.000	657.4	1405.8	1390.0	627.0	9.8	4.7	.0098	4.890	4.885	1	27.1
257	3.736	.020	3	0	119284.	0.	119284.10	1.000	667.1	1405.6	1390.0	636.8	9.8	4.7	.0098	4.890	4.885	0	27.1
258	3.756	.020	3	0	118709.	0.	118709.10	1.000	676.9	1405.4	1390.0	646.5	9.7	4.6	.0098	4.860	4.856	1	27.1
259	3.776	.020	3	0	118033.	0.	118032.90	1.000	686.5	1405.2	1390.0	656.2	9.7	4.5	.0098	4.830	4.825	1	27.1
260	3.796	.020	3	0	117257.	0.	117257.20	1.000	696.1	1405.0	1390.0	665.8	9.6	4.4	.0098	4.798	4.793	1	27.1
261	3.816	.020	3	0	116381.	0.	116380.80	1.000	705.6	1404.8	1390.0	675.3	9.5	4.4	.0098	4.764	4.760	1	27.1
262	3.836	.020	3	0	115403.	0.	115402.50	1.000	715.1	1404.5	1390.0	684.7	9.4	4.3	.0098	4.725	4.721	2	27.1
263	3.856	.020	3	0	114316.	0.	114315.90	1.000	724.4	1404.3	1390.0	694.1	9.3	4.3	.0098	4.667	4.662	1	27.1
264	3.876	.020	3	0	113131.	0.	113130.60	1.000	733.7	1404.1	1390.0	703.3	9.3	4.2	.0098	4.629	4.625	1	27.1
265	3.896	.020	3	0	111839.	0.	111839.20	1.000	742.8	1403.9	1390.0	712.5	9.1	4.1	.0098	4.569	4.564	1	27.1
266	3.916	.020	3	0	110443.	0.	110443.20	1.000	751.8	1403.6	1390.0	721.5	9.0	4.1	.0098	4.507	4.503	1	27.1
267	3.936	.020	3	0	108944.	0.	108944.30	1.000	760.7	1403.4	1390.0	730.4	8.9	4.0	.0098	4.445	4.441	1	27.1
268	3.956	.020	3	0	107344.	0.	107344.50	1.000	769.5	1403.2	1390.0	739.1	8.8	3.9	.0098	4.382	4.378	1	27.1
269	3.976	.020	3	0	105644.	0.	105644.30	1.000	778.1	1402.9	1390.0	747.8	8.6	3.9	.0098	4.319	4.315	1	27.1
270	3.996	.020	3	0	103845.	0.	103844.80	1.000	786.6	1402.7	1390.0	756.3	8.5	3.8	.0098	4.250	4.247	2	27.1
271	4.016	.020	3	0	101943.	0.	101943.20	1.000	795.0	1402.4	1390.0	764.6	8.3	3.8	.0098	4.162	4.159	2	27.1
272	4.036	.020	3	0	99943.	0.	99942.60	1.000	803.1	1402.2	1390.0	772.8	8.2	3.7	.0098	4.091	4.088	3	27.1
273	4.056	.020	3	0	97843.	0.	97843.16	1.000	811.1	1401.9	1390.0	780.8	8.0	3.6	.0098	4.003	4.000	2	27.1
274	4.076	.020	3	0	95647.	0.	95647.03	1.000	819.0	1401.7	1390.0	788.6	7.8	3.5	.0098	3.916	3.913	2	27.1
275	4.096	.020	3	0	93349.	0.	93349.05	1.000	826.6	1401.4	1390.0	796.2	7.6	3.5	.0098	3.810	3.807	2	27.1
276	4.116	.020	3	0	90952.	0.	90951.71	1.000	834.0	1401.2	1390.0	803.6	7.4	3.4	.0098	3.697	3.703	5	27.1
277	4.136	.020	3	0	88465.	0.	88464.77	1.000	841.2	1400.9	1390.0	810.9	7.2	3.3	.0098	3.621	3.627	5	27.1
278	4.156	.020	3	0	85879.	0.	85879.01	1.000	848.3	1400.6	1390.0	817.9	7.0	3.3	.0098	3.511	3.517	5	27.1
279	4.176	.020	3	0	83198.	0.	83198.30	1.000	855.1	1400.3	1390.0	824.7	6.8	3.2	.0098	3.403	3.408	5	27.1
280	4.196	.020	3	0	80414.	0.	80414.31	1.000	861.6	1400.0	1390.0	831.2	6.5	3.1	.0098	3.270	3.275	6	27.1
[illegible]	4.216	.020	3	0	77535.	0.	77534.67	1.000	867.9	1399.8	1390.0	837.6	6.3	3.0	.0098	3.167	3.172	5	27.1
[illegible]	4.236	.020	3	0	74550.	0.	74550.23	1.000	874.0	1399.5	1390.0	843.7	6.1	2.9	.0098	3.036	3.041	5	27.1
283	4.256	.020	3	0	71458.	0.	71457.63	1.000	879.8	1399.2	1390.0	849.5	5.8	2.8	.0098	2.909	2.914	5	27.1
284	4.276	.020	3	0	68251.	0.	68251.45	1.000	885.4	1398.8	1390.0	855.0	5.6	2.8	.0098	2.787	2.791	5	27.1
285	4.296	.020	3	0	64918.	0.	64917.69	1.000	890.7	1398.5	1390.0	860.3	5.3	2.7	.0098	2.642	2.646	5	27.1
286	4.316	.020	3	0	61439.	0.	61439.44	1.000	895.7	1398.2	1390.0	865.3	5.0	2.6	.0098	2.503	2.508	5	27.1
287	4.336	.020	3	0	57787.	0.	57787.48	1.000	900.4	1397.8	1390.0	870.0	4.7	2.5	.0098	2.351	2.355	6	27.1
288	4.356	.020	3	0	53917.	0.	53917.05	1.000	904.8	1397.4	1390.0	874.4	4.4	2.4	.0098	2.203	2.207	5	27.1

[illegible]	[illegible]	.020	3	0	47741.	0.	47741.27	1.000	908.8	1397.0	1390.0	878.5	4.0	2.2	.0098	2.023	2.026	5	27.1
290	4.396	.020	3	0	45080.	0.	45080.30	1.000	912.5	1396.6	1390.0	882.2	3.7	2.1	.0098	1.837	1.840	5	27.1
291	4.416	.020	3	0	39593.	0.	39592.74	1.000	915.7	1396.0	1390.0	885.4	3.2	1.9	.0098	1.614	1.617	5	27.1
292	4.436	.020	3	0	33800.	0.	33800.43	1.000	918.5	1395.4	1390.0	888.1	2.7	1.8	.0098	1.373	1.375	5	27.1
293	4.456	.020	3	0	28427.	0.	28426.82	1.000	920.8	1394.8	1390.0	890.4	2.3	1.6	.0098	1.154	1.150	5	27.1
294	4.476	.020	3	0	23503.	0.	23503.44	1.000	922.7	1394.2	1390.0	892.4	1.9	1.4	.0098	.960	.957	5	27.1
295	4.496	.020	3	0	19062.	0.	19061.90	1.000	924.3	1393.7	1390.0	893.9	1.6	1.3	.0098	.781	.778	5	27.1
[illegible]	4.516	.020	3	0	15123.	0.	15122.62	1.000	925.5	1393.1	1390.0	895.2	1.2	1.1	.0098	.619	.617	5	27.1
[illegible]	4.536	.020	3	0	11669.	0.	11668.97	1.000	926.5	1392.6	1390.0	896.1	1.0	.9	.0098	.479	.477	5	27.1
298	4.556	.020	3	0	8844.	0.	8844.49	1.000	927.2	1392.2	1390.0	896.8	.7	.8	.0098	.362	.364	5	27.1
299	4.576	.020	3	0	6722.	0.	6722.19	1.000	927.7	1391.8	1390.0	897.4	.5	.7	.0098	.269	.270	5	27.1
300	4.596	.020	3	0	5154.	0.	5153.97	1.000	928.2	1391.5	1390.0	897.8	.4	.6	.0098	.207	.209	5	27.1
301	4.616	.020	3	0	3994.	0.	3993.94	1.000	928.5	1391.3	1390.0	898.1	.3	.5	.0098	.161	.162	5	27.1

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
302	4.636	.020	3	0	3132.	0.	3132.27	1.000	928.7	1391.1	1390.0	898.4	.3	.4	.0098	.127	.126	5	27.1

KTT= 0 I= 303 T= 4.66

TF= .12 QTF= 5154. TP= 3.62 QP= 120725. TRS= .01 TB= 4.60
BRD= 29.7 BRW= 929.0 HU=1419.7 HY=1390.9 HC=1390.0 ALG=27.066 QO= 17.5777
Z= .51 TFH= 2.33 BO= 898.6 TFI= 1.29

1

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0[illegible]**** 24921.0   44921.0   64921.0   84921.0  104921.0  124921.0  144921.0  164921.0  184921.0  204921.0     DISCHARGE
[illegible]20. *      .         .         .         .         .         .         .         .         .         .      9133.
 .160. *      .         .         .         .         .         .         .         .         .         .      9241.
 .200. *      .         .         .         .         .         .         .         .         .         .      9357.
 .240. *      .         .         .         .         .         .         .         .         .         .      9478.
 .280. *      .         .         .         .         .         .         .         .         .         .      9600.
 .320. *      .         .         .         .         .         .         .         .         .         .      9725.
 .360. *      .         .         .         .         .         .         .         .         .         .      9850.
 .400.  *     .         .         .         .         .         .         .         .         .         .      9976.
 .440.  *     .         .         .         .         .         .         .         .         .         .     10102.
 .480.  *     .         .         .         .         .         .         .         .         .         .     10226.
 .520.  *     .         .         .         .         .         .         .         .         .         .     10351.
 .560.  *     .         .         .         .         .         .         .         .         .         .     10475.
 .600.  *     .         .         .         .         .         .         .         .         .         .     10597.
 .640.  *     .         .         .         .         .         .         .         .         .         .     10719.
 .680.  *     .         .         .         .         .         .         .         .         .         .     10839.
 .720.  *     .         .         .         .         .         .         .         .         .         .     10958.
 .760.  *     .         .         .         .         .         .         .         .         .         .     11076.
 .800.  *     .         .         .         .         .         .         .         .         .         .     11192.
 .840.  *     .         .         .         .         .         .         .         .         .         .     11307.
 .880.   *    .         .         .         .         .         .         .         .         .         .     12222.
 .920.   *    .         .         .         .         .         .         .         .         .         .     12180.
 .960.   *    .         .         .         .         .         .         .         .         .         .     13811.
1.000.    *   .         .         .         .         .         .         .         .         .         .     14893.
1.040.     *  .         .         .         .         .         .         .         .         .         .     16519.
1.080.     *  .         .         .         .         .         .         .         .         .         .     16528.
[illegible]20.     *  .         .         .         .         .         .         .         .         .         .     16543.
[illegible]60.     *  .         .         .         .         .         .         .         .         .         .     16821.
1.200.     *  .         .         .         .         .         .         .         .         .         .     17301.
1.240.     *  .         .         .         .         .         .         .         .         .         .     17810.
1.280.      * .         .         .         .         .         .         .         .         .         .     18350.
1.320.      * .         .         .         .         .         .         .         .         .         .     18923.
1.360.      * .         .         .         .         .         .         .         .         .         .     19530.
1.400.       * .        .         .         .         .         .         .         .         .         .     20173.
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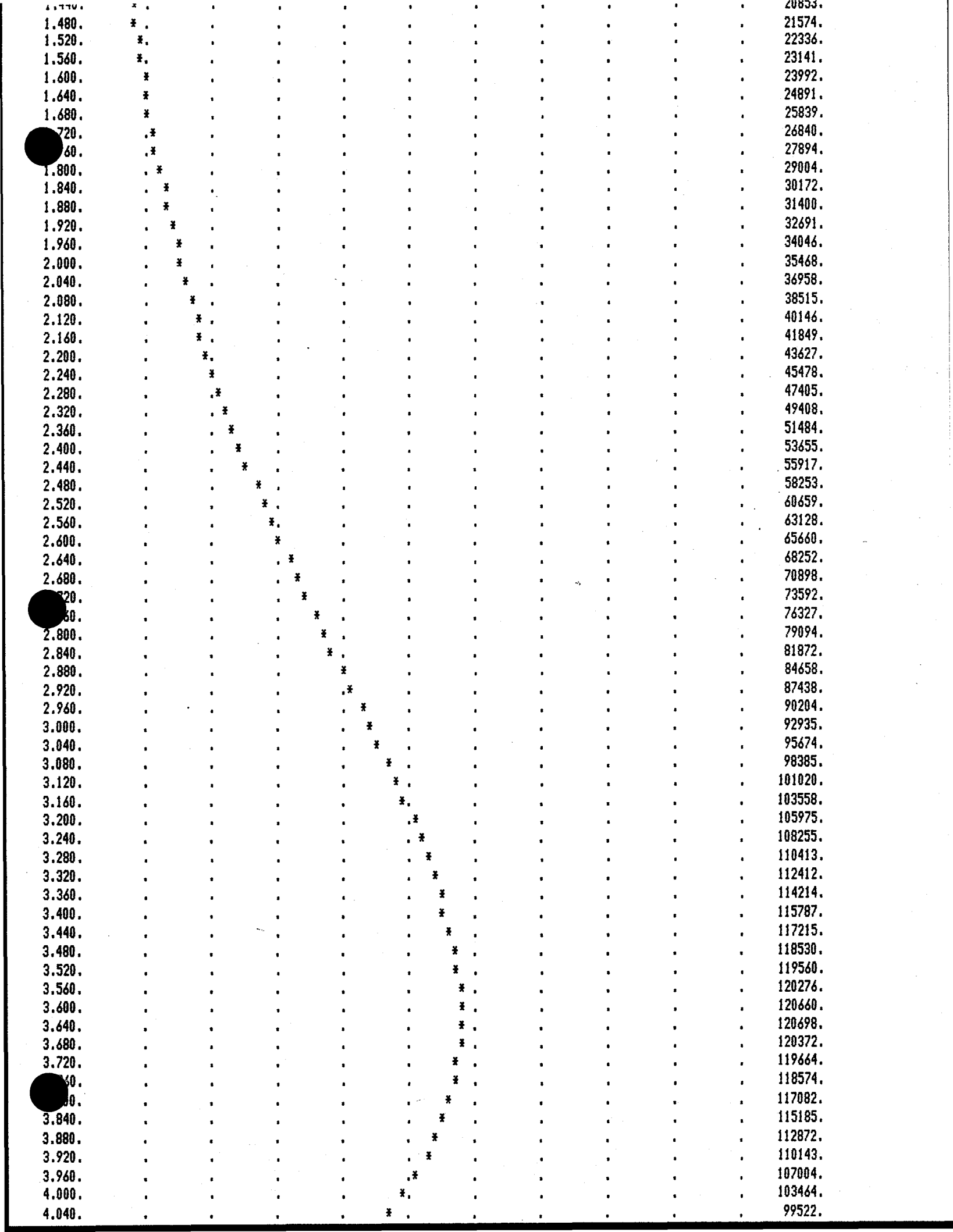

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4.120.        .         .         .         .  *      .         .         .         .         .         .      90454.
4.160.        .         .         .         *         .         .         .         .         .         .      85343.
4.200.        .         .         .       *   .         .         .         .         .         .         .      79838.
4.240.        .         .         .     *     .         .         .         .         .         .         .      73931.
4.280.        .         .         .*          .         .         .         .         .         .         .      67584.
4.320.        .         .       * .           .         .         .         .         .         .         .      60709.
4.360.        .         .   *     .           .         .         .         .         .         .         .      53081.
4.400.        .         *         .           .         .         .         .         .         .         .      43982.
4.440.        .   *     .         .           .         .         .         .         .         .         .      32725.
4.480.      *.          .         .           .         .         .         .         .         .         .      22615.
4.520.   *    .         .         .           .         .         .         .         .         .         .      14431.
4.560. *      .         .         .           .         .         .         .         .         .         .       8420.
4.600*        .         .         .           .         .         .         .         .         .         .       4922.
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        BREACH MODEL, MICRO-VERSION: 1/87

ING FAILURE AT WEST END OF HQFRS; STA.499+00  FILE:HQWTOP.72      24OCT90

 HI=   1418.50  HU=   1419.70  HL=   1396.00  HPI=   1407.90  HSP=  1408.40

        (QIN(I),I=1,8)
 15658.00  10964.00   7883.00   3630.00   3311.00   1290.00   1137.00       .00

        (TIN(I),I=1,8)
     .00      1.00      2.00      6.00     10.00     18.00     21.00       .00

        (RSA(I),I=1,8)
  2975.00   2240.30   1221.70    114.80     76.80     44.40     18.85       .00

        (HSA(I),I=1,8)
  1428.30   1419.70   1408.40   1396.10   1394.30   1392.60   1389.10   1375.90

 ZU=  3.00  ZD=  2.00  ZC=   .00  PORW=   .00  GL=   .00  GS=   .00  VMP=   .00

 D50C=   .00  PORC=   .00  UWC=   .00  CNC= .0000  AFRC=   .00  COHC=    .0  UNFCC=   .00

 D50S=   .18  PORS=   .33  UWS=125.60  CNS= .0000  AFRS= 39.00  COHS= 100.0  UNFCS= 10.00

 BR=  1.00  WC=  14.0  CRL= 5280.0  SM= 42.24  WV= 5280.0  CNV= .0450  D50DF=   .00  UNFCDF=   .00

 [illegible]=  .020  DBG=  .001   H=   .1000   TEH=   12.0  ERR=   .10  FPT=   2.0  TPR=   1.0

        (SPQ(I),I=1,8)
     .00   1049.30   2325.30   5551.80  10718.60  15377.70  22588.60  58752.00

        (SPH(I),I=1,8)
     .00      1.30      2.66      5.05      8.05     11.30     11.60     13.80

                 CRL= 5280.   BM=   34.   AFR= 39.00   BO=  11.8   Z=   .48


1


        AFR=  39.0   TH1= 64.50   H1=  6.68   TH2= 51.75   H2= 22.93   TH3= 45.38   H3= 78.83


1
   I      T  DTH KG KC     QTOT       QTS            QB   SUB     BT     HY     HC    BO    PPP     HP  CNN     DH    DHH   KIT ALG
 PIPE FLOW TO WEIR FLOW TRANSITION
    1403.        6.       11.     2083.     3484.     5567.      .018      .718      100.      113.        5.       84.
    [illegible]37  .05844  .32975 2.76146  .0098      3.3     17.2      2.0      6.6    129.4
                 1      13.6       6.7      14.6   11585.5     .0382    2     .7200     .7582      25.5     113.2      84.2


   I      T  DTH KG KC     QTOT       QTS            QB   SUB     BT     HY     HC    BO    PPP     HP  CNN     DH    DHH   KIT ALG
   94  1.016  .020 3 0    22473.    13481.       8992.12 1.000   40.9 1418.4 1396.0  18.3     .9    9.4  .0098    .429    .429   1 25.5
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96	1.056	.020	3	0	23002.	13455.	9547.39	1.000	42.7	1418.4	1396.0	20.1	.9	9.2	.0098	.456	.455	1	25.5
97	1.076	.020	3	0	23278.	13441.	9836.91	1.000	43.6	1418.3	1396.0	21.0	.9	9.1	.0098	.469	.469	3	25.5
98	1.096	.020	3	0	23562.	13427.	10135.29	1.000	44.6	1418.3	1396.0	22.0	1.0	9.0	.0098	.484	.484	2	25.5
99	1.116	.020	3	0	23855.	13413.	10442.15	1.000	45.6	1418.3	1396.0	23.0	1.0	8.9	.0098	.498	.498	1	25.5
100	1.136	.020	3	0	24156.	13398.	10757.86	1.000	46.6	1418.3	1396.0	24.0	1.0	8.8	.0098	.514	.513	1	25.5
101	1.156	.020	3	0	24465.	13383.	11082.64	1.000	47.7	1418.3	1396.0	25.1	1.1	8.7	.0098	.529	.529	1	25.5
102	1.176	.020	3	0	24783.	13367.	11416.37	1.000	48.8	1418.3	1396.0	26.2	1.1	8.6	.0098	.544	.545	3	25.5
[illegible]	1.196	.020	3	0	25111.	13351.	11760.24	1.000	49.9	1418.3	1396.0	27.3	1.1	8.6	.0098	.562	.562	2	25.5
104	1.216	.020	3	0	25448.	13334.	12113.88	1.000	51.0	1418.3	1396.0	28.4	1.2	8.5	.0098	.578	.578	1	25.5
105	1.236	.020	3	0	25794.	13317.	12477.28	1.000	52.2	1418.3	1396.0	29.6	1.2	8.4	.0098	.596	.596	2	25.5
106	1.256	.020	3	0	26151.	13300.	12851.35	1.000	53.5	1418.3	1396.0	30.9	1.2	8.3	.0098	.614	.614	2	25.5
107	1.276	.020	3	0	26518.	13282.	13235.86	1.000	54.7	1418.2	1396.0	32.1	1.3	8.3	.0098	.632	.632	2	25.5
108	1.296	.020	3	0	26895.	13263.	13631.17	1.000	56.0	1418.2	1396.0	33.4	1.3	8.2	.0098	.651	.651	2	25.5
109	1.316	.020	3	0	27282.	13245.	14037.47	1.000	57.4	1418.2	1396.0	34.8	1.3	8.2	.0098	.670	.670	1	25.5
110	1.336	.020	3	0	27680.	13225.	14455.32	1.000	58.8	1418.2	1396.0	36.1	1.4	8.1	.0098	.690	.691	2	25.5
111	1.356	.020	3	0	28090.	13205.	14884.58	1.000	60.2	1418.2	1396.0	37.6	1.4	8.0	.0098	.710	.710	1	25.5
112	1.376	.020	3	0	28510.	13185.	15325.88	1.000	61.6	1418.2	1396.0	39.0	1.5	8.0	.0098	.732	.731	1	25.5
113	1.396	.020	3	0	28943.	13164.	15779.24	1.000	63.1	1418.2	1396.0	40.5	1.5	7.9	.0098	.753	.753	1	25.5
114	1.416	.020	3	0	29387.	13142.	16244.93	1.000	64.7	1418.1	1396.0	42.1	1.6	7.9	.0098	.775	.775	1	25.5
115	1.436	.020	3	0	29843.	13119.	16723.84	1.000	66.3	1418.1	1396.0	43.7	1.6	7.8	.0098	.799	.799	2	25.5
116	1.456	.020	3	0	30312.	13097.	17215.60	1.000	67.9	1418.1	1396.0	45.3	1.6	7.8	.0098	.822	.822	2	25.5
117	1.476	.020	3	0	30794.	13073.	17720.67	1.000	69.6	1418.1	1396.0	47.0	1.7	7.7	.0098	.846	.845	1	25.5
118	1.496	.020	3	0	31288.	13049.	18239.29	1.000	71.4	1418.1	1396.0	48.8	1.7	7.7	.0098	.871	.871	2	25.5
119	1.516	.020	3	0	31796.	13024.	18771.49	1.000	73.2	1418.1	1396.0	50.6	1.8	7.6	.0098	.896	.896	3	25.5
120	1.536	.020	3	0	32317.	12999.	19318.08	1.000	75.0	1418.0	1396.0	52.4	1.8	7.6	.0098	.922	.923	2	25.5
121	1.556	.020	3	0	32852.	12973.	19879.69	1.000	76.9	1418.0	1396.0	54.3	1.9	7.5	.0098	.950	.950	2	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
122	1.576	.020	3	0	33401.	12946.	20455.20	1.000	78.9	1418.0	1396.0	56.3	2.0	7.5	.0098	.976	.976	3	25.5
[illegible]	1.596	.020	3	0	33965.	12919.	21046.46	1.000	80.9	1418.0	1396.0	58.3	2.0	7.5	.0098	1.005	1.004	1	25.5
124	1.616	.020	3	0	34543.	12890.	21652.58	1.000	82.9	1418.0	1396.0	60.3	2.1	7.4	.0098	1.033	1.033	3	25.5
125	1.636	.020	3	0	35136.	12861.	22274.37	1.000	85.1	1417.9	1396.0	62.5	2.1	7.4	.0098	1.063	1.063	3	25.5
126	1.656	.020	3	0	35744.	12832.	22912.21	1.000	87.2	1417.9	1396.0	64.6	2.2	7.3	.0098	1.093	1.093	3	25.5
127	1.676	.020	3	0	36369.	12801.	23567.64	1.000	89.5	1417.9	1396.0	66.9	2.3	7.3	.0098	1.126	1.127	2	25.5
128	1.696	.020	3	0	37009.	12770.	24238.88	1.000	91.8	1417.9	1396.0	69.2	2.3	7.3	.0098	1.157	1.158	2	25.5
129	1.716	.020	3	0	37664.	12738.	24926.56	1.000	94.2	1417.9	1396.0	71.6	2.4	7.2	.0098	1.189	1.189	2	25.5
130	1.736	.020	3	0	38337.	12705.	25632.59	1.000	96.6	1417.8	1396.0	74.0	2.4	7.2	.0098	1.224	1.225	2	25.5
131	1.756	.020	3	0	39026.	12671.	26355.01	1.000	99.2	1417.8	1396.0	76.5	2.5	7.2	.0098	1.257	1.258	2	25.5
132	1.776	.020	3	0	39732.	12636.	27096.00	1.000	101.7	1417.8	1396.0	79.1	2.6	7.2	.0098	1.294	1.294	2	25.5
133	1.796	.020	3	0	40454.	12600.	27854.33	1.000	104.4	1417.8	1396.0	81.8	2.7	7.1	.0098	1.328	1.329	3	25.5
134	1.816	.020	3	0	41195.	12563.	28631.40	1.000	107.1	1417.7	1396.0	84.5	2.7	7.1	.0098	1.366	1.367	2	25.5
135	1.836	.020	3	0	41954.	12526.	29427.83	1.000	109.9	1417.7	1396.0	87.3	2.8	7.1	.0098	1.405	1.406	2	25.5
136	1.856	.020	3	0	42731.	12487.	30243.88	1.000	112.8	1417.7	1396.0	90.2	2.9	7.0	.0098	1.445	1.446	2	25.5
137	1.876	.020	3	0	43525.	12447.	31077.49	1.000	115.8	1417.7	1396.0	93.2	3.0	7.0	.0098	1.483	1.483	3	25.5
138	1.896	.020	3	0	44338.	12407.	31931.01	1.000	118.8	1417.6	1396.0	96.2	3.0	7.0	.0098	1.524	1.524	2	25.5
139	1.916	.020	3	0	45169.	12365.	32804.20	1.000	122.0	1417.6	1396.0	99.4	3.1	7.0	.0098	1.566	1.566	2	25.5
140	1.936	.020	3	0	46020.	12322.	33697.84	1.000	125.2	1417.6	1396.0	102.6	3.2	6.9	.0098	1.608	1.609	2	25.5
141	1.956	.020	3	0	46890.	12278.	34611.56	1.000	128.5	1417.5	1396.0	105.9	3.3	6.9	.0098	1.652	1.653	2	25.5
142	1.976	.020	3	0	47779.	12233.	35545.52	1.000	131.9	1417.5	1396.0	109.3	3.4	6.9	.0098	1.697	1.697	2	25.5
143	1.996	.020	3	0	48687.	12187.	36500.24	1.000	135.4	1417.5	1396.0	112.8	3.5	6.9	.0098	1.742	1.743	2	25.5
144	2.016	.020	3	0	49615.	12140.	37475.56	1.000	138.9	1417.4	1396.0	116.3	3.6	6.8	.0098	1.788	1.789	2	25.5
145	2.036	.020	3	0	50564.	12091.	38472.98	1.000	142.6	1417.4	1396.0	120.0	3.7	6.8	.0098	1.838	1.838	1	25.5
146	2.056	.020	3	0	51532.	12041.	39490.97	1.000	146.4	1417.4	1396.0	123.8	3.8	6.8	.0098	1.885	1.885	1	25.5
147	2.076	.020	3	0	52521.	11991.	40529.96	1.000	150.3	1417.3	1396.0	127.7	3.9	6.8	.0098	1.933	1.933	1	25.5
148	2.096	.020	3	0	53528.	11938.	41589.30	1.000	154.2	1417.3	1396.0	131.6	4.0	6.7	.0098	1.982	1.982	1	25.5
[illegible]	2.116	.020	3	0	54559.	11884.	42675.13	1.000	158.3	1417.3	1396.0	135.7	4.1	6.7	.0098	2.042	2.041	2	25.5
150	2.136	.020	3	0	55611.	11830.	43780.93	1.000	162.5	1417.2	1396.0	139.9	4.2	6.7	.0098	2.092	2.092	1	25.5
151	2.156	.020	3	0	56681.	11773.	44907.45	1.000	166.8	1417.2	1396.0	144.2	4.3	6.7	.0098	2.144	2.144	1	25.5
152	2.176	.020	3	0	57771.	11716.	46055.11	1.000	171.2	1417.1	1396.0	148.6	4.4	6.6	.0098	2.197	2.197	1	25.5
153	2.196	.020	3	0	58880.	11657.	47223.09	1.000	175.7	1417.1	1396.0	153.1	4.5	6.6	.0098	2.251	2.251	1	25.5
154	2.216	.020	3	0	60014.	11596.	48418.10	1.000	180.3	1417.1	1396.0	157.7	4.6	6.6	.0098	2.316	2.315	2	25.5
155	2.236	.020	3	0	61167.	11534.	49633.29	1.000	185.1	1417.0	1396.0	162.4	4.7	6.6	.0098	2.371	2.371	1	25.5
156	2.256	.020	3	0	62340.	11471.	50869.97	1.000	189.9	1417.0	1396.0	167.2	4.8	6.6	.0098	2.428	2.428	1	25.5

158	2.296	.020	3	0	64740.	11339.	53400.84	1.000	200.0	1416.9	1396.0	177.4	5.1	6.5	.0098	2.544	2.544	1	25.5
159	2.316	.020	3	0	65974.	11270.	54703.95	1.000	205.2	1416.8	1396.0	182.6	5.2	6.5	.0098	2.616	2.614	2	25.5
160	2.336	.020	3	0	67227.	11201.	56026.46	1.000	210.6	1416.8	1396.0	187.9	5.4	6.5	.0098	2.676	2.675	1	25.5
161	2.356	.020	3	0	68497.	11129.	57367.88	1.000	216.0	1416.7	1396.0	193.4	5.5	6.4	.0098	2.737	2.737	1	25.5
162	2.376	.020	3	0	69785.	11056.	58729.03	1.000	221.6	1416.7	1396.0	199.0	5.6	6.4	.0098	2.800	2.800	1	25.5
163	2.396	.020	3	0	71091.	10981.	60109.70	1.000	227.4	1416.6	1396.0	204.7	5.7	6.4	.0098	2.864	2.863	1	25.5
164	2.416	.020	3	0	72419.	10903.	61515.60	1.000	233.2	1416.6	1396.0	210.6	5.9	6.4	.0098	2.942	2.940	2	25.5
165	2.436	.020	3	0	73765.	10825.	62939.93	1.000	239.3	1416.5	1396.0	216.6	6.0	6.4	.0098	3.007	3.006	1	25.5
166	2.456	.020	3	0	75126.	10745.	64381.38	1.000	245.4	1416.5	1396.0	222.8	6.1	6.3	.0098	3.074	3.073	1	25.5
167	2.476	.020	3	0	76492.	10651.	65840.77	1.000	251.7	1416.4	1396.0	229.1	6.3	6.3	.0098	3.141	3.141	1	25.5
168	2.496	.020	3	0	77867.	10550.	67317.09	1.000	258.1	1416.4	1396.0	235.5	6.4	6.3	.0098	3.210	3.209	1	25.5
169	2.516	.020	3	0	79256.	10446.	68809.89	1.000	264.7	1416.3	1396.0	242.1	6.6	6.3	.0098	3.280	3.279	1	25.5
170	2.536	.020	3	0	80659.	10340.	70318.70	1.000	271.4	1416.2	1396.0	248.8	6.7	6.2	.0098	3.350	3.350	1	25.5
171	2.556	.020	3	0	82082.	10231.	71850.93	1.000	278.2	1416.2	1396.0	255.6	6.9	6.2	.0098	3.437	3.435	2	25.5
172	2.576	.020	3	0	83517.	10121.	73396.91	1.000	285.3	1416.1	1396.0	262.6	7.0	6.2	.0098	3.509	3.508	1	25.5
173	2.596	.020	3	0	84965.	10007.	74957.53	1.000	292.4	1416.0	1396.0	269.8	7.2	6.2	.0098	3.583	3.582	1	25.5
174	2.616	.020	3	0	86422.	9891.	76530.77	1.000	299.7	1416.0	1396.0	277.1	7.3	6.2	.0098	3.658	3.657	1	25.5
175	2.636	.020	3	0	87889.	9773.	78116.68	1.000	307.2	1415.9	1396.0	284.6	7.5	6.1	.0098	3.733	3.732	1	25.5
176	2.656	.020	3	0	89365.	9651.	79713.78	1.000	314.8	1415.8	1396.0	292.2	7.6	6.1	.0098	3.810	3.809	1	25.5
177	2.676	.020	3	0	90850.	9527.	81322.09	1.000	322.6	1415.8	1396.0	300.0	7.8	6.1	.0098	3.887	3.886	1	25.5
178	2.696	.020	3	0	92341.	9401.	82940.04	1.000	330.5	1415.7	1396.0	307.9	7.9	6.1	.0098	3.966	3.965	1	25.5
179	2.716	.020	3	0	93838.	9272.	84566.80	1.000	338.6	1415.6	1396.0	316.0	8.1	6.0	.0098	4.045	4.044	1	25.5
180	2.736	.020	3	0	95339.	9139.	86200.50	1.000	346.9	1415.5	1396.0	324.3	8.2	6.0	.0098	4.123	4.120	2	25.5
181	2.756	.020	3	0	96842.	9004.	87838.46	1.000	355.3	1415.5	1396.0	332.7	8.4	6.0	.0098	4.201	4.198	2	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
182	2.776	.020	3	0	98347.	8867.	89480.68	1.000	363.8	1415.4	1396.0	341.2	8.6	6.0	.0098	4.280	4.279	1	25.5
183	2.796	.020	3	0	99852.	8725.	91126.70	1.000	372.5	1415.3	1396.0	349.9	8.7	5.9	.0098	4.361	4.358	2	25.5
184	2.816	.020	3	0	101346.	8582.	92763.88	1.000	381.4	1415.2	1396.0	358.8	8.8	5.9	.0098	4.420	4.418	1	25.5
[illegible]	2.836	.020	3	0	102837.	8436.	94401.34	1.000	390.4	1415.1	1396.0	367.8	9.0	5.9	.0098	4.503	4.501	1	25.5
186	2.856	.020	3	0	104326.	8286.	96040.07	1.000	399.6	1415.0	1396.0	377.0	9.2	5.8	.0098	4.586	4.585	1	25.5
187	2.876	.020	3	0	105811.	8134.	97676.99	1.000	408.9	1414.9	1396.0	386.3	9.3	5.8	.0098	4.671	4.669	1	25.5
188	2.896	.020	3	0	107278.	7978.	99300.45	1.000	418.4	1414.9	1396.0	395.8	9.5	5.8	.0098	4.733	4.731	1	25.5
189	2.916	.020	3	0	108738.	7819.	100919.00	1.000	428.0	1414.8	1396.0	405.4	9.6	5.8	.0098	4.817	4.815	1	25.5
190	2.936	.020	3	0	110190.	7658.	102532.70	1.000	437.8	1414.7	1396.0	415.2	9.8	5.7	.0098	4.903	4.901	1	25.5
191	2.956	.020	3	0	111619.	7493.	104126.30	1.000	447.7	1414.6	1396.0	425.1	9.9	5.7	.0098	4.965	4.963	1	25.5
192	2.976	.020	3	0	113036.	7325.	105711.70	1.000	457.8	1414.5	1396.0	435.2	10.1	5.7	.0098	5.051	5.049	1	25.5
193	2.996	.020	3	0	114427.	7153.	107273.80	1.000	468.1	1414.4	1396.0	445.5	10.2	5.6	.0098	5.112	5.110	1	25.5
194	3.016	.020	3	0	115804.	6979.	108824.60	1.000	478.5	1414.3	1396.0	455.9	10.4	5.6	.0098	5.198	5.196	1	25.5
195	3.036	.020	3	0	117150.	6801.	110348.50	1.000	489.0	1414.2	1396.0	466.4	10.5	5.6	.0098	5.260	5.257	1	25.5
196	3.056	.020	3	0	118477.	6621.	111856.90	1.000	499.7	1414.1	1396.0	477.1	10.7	5.6	.0098	5.346	5.343	1	25.5
197	3.076	.020	3	0	119773.	6437.	113336.10	1.000	510.5	1414.0	1396.0	487.9	10.8	5.5	.0098	5.407	5.404	1	25.5
198	3.096	.020	3	0	121042.	6249.	114793.60	1.000	521.5	1413.9	1396.0	498.9	11.0	5.5	.0098	5.490	5.486	2	25.5
199	3.116	.020	3	0	122277.	6059.	116217.90	1.000	532.6	1413.7	1396.0	510.0	11.1	5.5	.0098	5.548	5.545	1	25.5
200	3.136	.020	3	0	123472.	5865.	117607.30	1.000	543.8	1413.6	1396.0	521.2	11.2	5.4	.0098	5.607	5.604	1	25.5
201	3.156	.020	3	0	124637.	5668.	118969.60	1.000	555.2	1413.5	1396.0	532.6	11.4	5.4	.0098	5.689	5.685	2	25.5
202	3.176	.020	3	0	125779.	5486.	120293.10	1.000	566.7	1413.4	1396.0	544.0	11.5	5.4	.0098	5.746	5.743	1	25.5
203	3.196	.020	3	0	126903.	5327.	121576.50	1.000	578.3	1413.3	1396.0	555.7	11.6	5.3	.0098	5.803	5.800	1	25.5
204	3.216	.020	3	0	127981.	5165.	122816.30	1.000	590.0	1413.2	1396.0	567.4	11.7	5.3	.0098	5.859	5.856	1	25.5
205	3.236	.020	3	0	129011.	5000.	124010.90	1.000	601.8	1413.0	1396.0	579.2	11.8	5.3	.0098	5.914	5.911	1	25.5
206	3.256	.020	3	0	129992.	4833.	125159.60	1.000	613.7	1412.9	1396.0	591.1	11.9	5.2	.0098	5.969	5.965	1	25.5
207	3.276	.020	3	0	130922.	4663.	126259.20	1.000	625.8	1412.8	1396.0	603.2	12.0	5.2	.0098	6.022	6.018	1	25.5
208	3.296	.020	3	0	131806.	4491.	127315.30	1.000	637.9	1412.7	1396.0	615.3	12.1	5.1	.0098	6.074	6.071	1	25.5
209	3.316	.020	3	0	132646.	4316.	128330.20	1.000	650.2	1412.5	1396.0	627.6	12.3	5.1	.0098	6.126	6.122	1	25.5
[illegible]	3.336	.020	3	0	133431.	4139.	129292.40	1.000	662.5	1412.4	1396.0	639.9	12.4	5.1	.0098	6.176	6.172	1	25.5
[illegible]	3.356	.020	3	0	134159.	3959.	130200.00	1.000	675.0	1412.3	1396.0	652.4	12.5	5.0	.0098	6.226	6.222	1	25.5
212	3.376	.020	3	0	134825.	3777.	131047.90	1.000	687.5	1412.1	1396.0	664.9	12.5	5.0	.0098	6.269	6.265	2	25.5
213	3.396	.020	3	0	135420.	3593.	131827.10	1.000	700.1	1412.0	1396.0	677.5	12.6	5.0	.0098	6.285	6.280	1	25.5
214	3.416	.020	3	0	135954.	3406.	132548.10	1.000	712.8	1411.9	1396.0	690.2	12.7	4.9	.0098	6.330	6.326	1	25.5
215	3.436	.020	3	0	136422.	3216.	133206.00	1.000	725.5	1411.7	1396.0	702.9	12.7	4.9	.0098	6.369	6.365	2	25.5
216	3.456	.020	3	0	136817.	3025.	133792.50	1.000	738.3	1411.6	1396.0	715.7	12.8	4.8	.0098	6.381	6.376	1	25.5
217	3.476	.020	3	0	137142.	2831.	134314.20	1.000	751.1	1411.4	1396.0	728.5	12.9	4.8	.0098	6.422	6.417	1	25.5

219	3.516	.020	3	0	137572.	2436.	135135.50	1.000	776.8	1411.1	1396.0	754.2	12.9	4.8	.0098	6.430	6.437	0	25.5
220	3.536	.020	3	0	137712.	2263.	135448.90	1.000	789.8	1411.0	1396.0	767.2	13.0	4.7	.0098	6.478	6.473	1	25.5
221	3.556	.020	3	0	137803.	2123.	135680.50	1.000	802.7	1410.8	1396.0	780.1	13.0	4.7	.0098	6.478	6.482	0	25.5
222	3.576	.020	3	0	137821.	1981.	135840.40	1.000	815.7	1410.7	1396.0	793.1	13.0	4.6	.0098	6.488	6.483	1	25.5
223	3.596	.020	3	0	137757.	1837.	135919.70	1.000	828.7	1410.5	1396.0	806.1	13.0	4.6	.0098	6.488	6.488	0	25.5
224	3.616	.020	3	0	137615.	1692.	135923.30	1.000	841.7	1410.4	1396.0	819.1	13.0	4.5	.0098	6.488	6.492	0	25.5
[illegible]	3.636	.020	3	0	137395.	1546.	135849.40	1.000	854.6	1410.2	1396.0	832.0	13.0	4.5	.0098	6.488	6.493	0	25.5
[illegible]	3.656	.020	3	0	137098.	1398.	135699.50	1.000	867.6	1410.1	1396.0	845.0	13.0	4.4	.0098	6.487	6.483	2	25.5
227	3.676	.020	3	0	136722.	1250.	135472.00	1.000	880.6	1409.9	1396.0	858.0	13.0	4.4	.0098	6.487	6.481	0	25.5
228	3.696	.020	3	0	136259.	1100.	135159.60	1.000	893.5	1409.8	1396.0	870.9	12.9	4.3	.0098	6.446	6.441	1	25.5
229	3.716	.020	3	0	135733.	963.	134770.50	1.000	906.4	1409.6	1396.0	883.8	12.9	4.3	.0098	6.436	6.430	1	25.5
230	3.736	.020	3	0	135138.	832.	134306.70	1.000	919.2	1409.4	1396.0	896.6	12.8	4.2	.0098	6.424	6.418	1	25.5
231	3.756	.020	3	0	134459.	700.	133758.70	1.000	932.0	1409.3	1396.0	909.4	12.8	4.2	.0098	6.379	6.373	1	25.5
232	3.776	.020	3	0	133703.	567.	133136.10	1.000	944.7	1409.1	1396.0	922.1	12.7	4.1	.0098	6.363	6.358	1	25.5
233	3.796	.020	3	0	132868.	434.	132433.90	1.000	957.3	1408.9	1396.0	934.7	12.6	4.1	.0098	6.315	6.309	1	25.5
234	3.816	.020	3	0	131959.	300.	131659.60	1.000	969.9	1408.8	1396.0	947.3	12.6	4.1	.0098	6.297	6.291	1	25.5
235	3.836	.020	3	0	130974.	165.	130808.90	1.000	982.4	1408.6	1396.0	959.8	12.5	4.0	.0098	6.246	6.240	1	25.5
236	3.856	.020	3	0	129911.	30.	129880.70	1.000	994.8	1408.4	1396.0	972.2	12.4	3.9	.0098	6.194	6.188	1	25.5
237	3.876	.020	3	0	128886.	0.	128886.50	1.000	1007.1	1408.3	1396.0	984.5	12.3	3.9	.0098	6.164	6.160	2	25.5
238	3.896	.020	3	0	127819.	0.	127818.80	1.000	1019.3	1408.1	1396.0	996.7	12.2	3.9	.0098	6.111	6.105	1	25.5
239	3.916	.020	3	0	126679.	0.	126678.50	1.000	1031.5	1407.9	1396.0	1008.8	12.1	3.8	.0098	6.055	6.050	1	25.5
240	3.936	.020	3	0	125469.	0.	125469.00	1.000	1043.5	1407.8	1396.0	1020.8	12.0	3.8	.0098	5.998	5.993	1	25.5
241	3.956	.020	3	0	124191.	0.	124191.30	1.000	1055.3	1407.6	1396.0	1032.7	11.9	3.7	.0098	5.941	5.935	1	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
242	3.976	.020	3	0	122847.	0.	122847.50	1.000	1067.1	1407.4	1396.0	1044.5	11.8	3.7	.0098	5.876	5.871	2	25.5
243	3.996	.020	3	0	121436.	0.	121435.80	1.000	1078.7	1407.2	1396.0	1056.1	11.6	3.6	.0098	5.789	5.783	1	25.5
244	4.016	.020	3	0	119965.	0.	119964.70	1.000	1090.1	1407.1	1396.0	1067.5	11.5	3.6	.0098	5.728	5.723	1	25.5
[illegible]	4.036	.020	3	0	118436.	0.	118436.20	1.000	1101.4	1406.9	1396.0	1078.8	11.3	3.5	.0098	5.661	5.657	2	25.5
[illegible]	4.056	.020	3	0	116848.	0.	116847.70	1.000	1112.6	1406.7	1396.0	1090.0	11.1	3.5	.0098	5.573	5.567	1	25.5
247	4.076	.020	3	0	115211.	0.	115210.70	1.000	1123.6	1406.6	1396.0	1101.0	11.0	3.4	.0098	5.511	5.506	1	25.5
248	4.096	.020	3	0	113518.	0.	113517.60	1.000	1134.4	1406.4	1396.0	1111.8	10.8	3.4	.0098	5.402	5.411	5	25.5
249	4.116	.020	3	0	111782.	0.	111781.60	1.000	1145.1	1406.2	1396.0	1122.5	10.7	3.3	.0098	5.348	5.356	5	25.5
250	4.136	.020	3	0	109998.	0.	109998.10	1.000	1155.6	1406.0	1396.0	1133.0	10.5	3.3	.0098	5.241	5.249	5	25.5
251	4.156	.020	3	0	108169.	0.	108169.30	1.000	1165.9	1405.9	1396.0	1143.3	10.3	3.2	.0098	5.143	5.151	6	25.5
252	4.176	.020	3	0	106309.	0.	106309.40	1.000	1176.0	1405.7	1396.0	1153.4	10.2	3.2	.0098	5.087	5.095	5	25.5
253	4.196	.020	3	0	104413.	0.	104413.00	1.000	1186.0	1405.5	1396.0	1163.4	10.0	3.1	.0098	4.982	4.990	5	25.5
254	4.216	.020	3	0	102481.	0.	102480.60	1.000	1195.8	1405.3	1396.0	1173.2	9.8	3.1	.0098	4.877	4.885	5	25.5
255	4.236	.020	3	0	100519.	0.	100518.90	1.000	1205.3	1405.2	1396.0	1182.7	9.5	3.0	.0098	4.774	4.782	5	25.5
256	4.256	.020	3	0	98531.	0.	98531.46	1.000	1214.7	1405.0	1396.0	1192.1	9.4	3.0	.0098	4.680	4.687	6	25.5
257	4.276	.020	3	0	96523.	0.	96522.66	1.000	1223.8	1404.8	1396.0	1201.2	9.2	2.9	.0098	4.586	4.593	6	25.5
258	4.296	.020	3	0	94497.	0.	94496.69	1.000	1232.8	1404.7	1396.0	1210.2	9.0	2.9	.0098	4.493	4.500	6	25.5
259	4.316	.020	3	0	92453.	0.	92452.55	1.000	1241.6	1404.5	1396.0	1219.0	8.8	2.8	.0098	4.394	4.401	5	25.5
260	4.336	.020	3	0	90399.	0.	90398.54	1.000	1250.2	1404.3	1396.0	1227.6	8.6	2.8	.0098	4.296	4.303	5	25.5
261	4.356	.020	3	0	88335.	0.	88334.79	1.000	1258.6	1404.2	1396.0	1236.0	8.4	2.7	.0098	4.199	4.206	5	25.5
262	4.376	.020	3	0	86265.	0.	86265.39	1.000	1266.8	1404.0	1396.0	1244.2	8.2	2.7	.0098	4.104	4.111	5	25.5
263	4.396	.020	3	0	84192.	0.	84192.40	1.000	1274.8	1403.8	1396.0	1252.2	8.0	2.6	.0098	4.010	4.017	5	25.5
264	4.416	.020	3	0	82122.	0.	82121.74	1.000	1282.7	1403.7	1396.0	1260.1	7.8	2.6	.0098	3.918	3.924	5	25.5
265	4.436	.020	3	0	80053.	0.	80053.20	1.000	1290.3	1403.5	1396.0	1267.7	7.7	2.5	.0098	3.826	3.832	5	25.5
266	4.456	.020	3	0	77989.	0.	77988.69	1.000	1297.7	1403.4	1396.0	1275.1	7.4	2.5	.0098	3.706	3.711	6	25.5
267	4.476	.020	3	0	75934.	0.	75934.09	1.000	1305.0	1403.2	1396.0	1282.4	7.2	2.4	.0098	3.618	3.624	5	25.5
268	4.496	.020	3	0	73891.	0.	73890.95	1.000	1312.0	1403.0	1396.0	1289.4	7.1	2.4	.0098	3.531	3.537	5	25.5
269	4.516	.020	3	0	71859.	0.	71858.90	1.000	1318.9	1402.9	1396.0	1296.3	6.8	2.3	.0098	3.413	3.418	5	25.5
270	4.536	.020	3	0	69844.	0.	69843.59	1.000	1325.5	1402.7	1396.0	1302.9	6.7	2.3	.0098	3.330	3.335	5	25.5
[illegible]	4.556	.020	3	0	67845.	0.	67845.38	1.000	1332.0	1402.6	1396.0	1309.4	6.4	2.2	.0098	3.222	3.227	6	25.5
[illegible]	4.576	.020	3	0	65869.	0.	65868.63	1.000	1338.3	1402.4	1396.0	1315.6	6.3	2.2	.0098	3.143	3.148	5	25.5
273	4.596	.020	3	0	63915.	0.	63915.20	1.000	1344.3	1402.3	1396.0	1321.7	6.1	2.1	.0098	3.035	3.040	5	25.5
274	4.616	.020	3	0	61986.	0.	61985.66	1.000	1350.2	1402.1	1396.0	1327.6	5.9	2.1	.0098	2.960	2.964	5	25.5
275	4.636	.020	3	0	60082.	0.	60082.05	1.000	1356.0	1402.0	1396.0	1333.3	5.7	2.1	.0098	2.857	2.862	5	25.5
276	4.656	.020	3	0	58208.	0.	58207.88	1.000	1361.5	1401.9	1396.0	1338.9	5.5	2.0	.0098	2.762	2.767	6	25.5
277	4.676	.020	3	0	56363.	0.	56362.52	1.000	1366.9	1401.7	1396.0	1344.3	5.4	2.0	.0098	2.692	2.696	5	25.5
278	4.696	.020	3	0	54550.	0.	54549.91	1.000	1372.1	1401.6	1396.0	1349.5	5.2	1.9	.0098	2.598	2.602	5	25.5

280	4.736	.020	3	0	51020.	0.	51019.79	1.000	1381.9	1401.3	1396.01359.3	4.8	1.8	.0098	2.422	2.426	6	25.5
281	4.756	.020	3	0	49308.	0.	49307.64	1.000	1386.6	1401.2	1396.01364.0	4.7	1.8	.0098	2.340	2.343	6	25.5
282	4.776	.020	3	0	47632.	0.	47631.55	1.000	1391.1	1401.0	1396.01368.5	4.5	1.8	.0098	2.260	2.264	6	25.5
283	4.796	.020	3	0	45992.	0.	45992.00	1.000	1395.5	1400.9	1396.01372.9	4.4	1.7	.0098	2.183	2.186	6	25.5
284	4.816	.020	3	0	44392.	0.	44392.26	1.000	1399.7	1400.8	1396.01377.1	4.3	1.7	.0098	2.125	2.118	5	25.5
285	4.836	.020	3	0	42829.	0.	42829.42	1.000	1403.8	1400.7	1396.01381.2	4.1	1.6	.0098	2.049	2.042	5	25.5
[illegible]	4.856	.020	3	0	41305.	0.	41305.45	1.000	1407.8	1400.6	1396.01385.2	3.9	1.6	.0098	1.974	1.968	5	25.5
[illegible]	4.876	.020	3	0	39822.	0.	39822.21	1.000	1411.6	1400.4	1396.01389.0	3.8	1.6	.0098	1.903	1.897	5	25.5
288	4.896	.020	3	0	38377.	0.	38376.50	1.000	1415.3	1400.3	1396.01392.6	3.7	1.5	.0098	1.833	1.827	5	25.5
289	4.916	.020	3	0	36972.	0.	36971.67	1.000	1418.8	1400.2	1396.01396.2	3.5	1.5	.0098	1.766	1.761	5	25.5
290	4.936	.020	3	0	35608.	0.	35607.65	1.000	1422.2	1400.1	1396.01399.6	3.4	1.5	.0098	1.702	1.696	5	25.5
291	4.956	.020	3	0	34283.	0.	34282.77	1.000	1425.5	1400.0	1396.01402.9	3.3	1.4	.0098	1.639	1.634	5	25.5
292	4.976	.020	3	0	32998.	0.	32998.45	1.000	1428.6	1399.9	1396.01406.0	3.2	1.4	.0098	1.579	1.574	5	25.5
293	4.996	.020	3	0	31753.	0.	31752.95	1.000	1431.7	1399.8	1396.01409.1	3.0	1.4	.0098	1.521	1.516	5	25.5
294	5.016	.020	3	0	30549.	0.	30549.10	1.000	1434.6	1399.7	1396.01412.0	2.9	1.3	.0098	1.464	1.460	5	25.5
295	5.036	.020	3	0	29384.	0.	29383.52	1.000	1437.4	1399.6	1396.01414.8	2.8	1.3	.0098	1.410	1.406	5	25.5
296	5.056	.020	3	0	28257.	0.	28257.41	1.000	1440.1	1399.5	1396.01417.5	2.7	1.3	.0098	1.358	1.353	5	25.5
297	5.076	.020	3	0	27169.	0.	27168.72	1.000	1442.7	1399.4	1396.01420.1	2.6	1.2	.0098	1.303	1.299	6	25.5
			2		22.9	22.9	13.1	7082.0	.0423	3	5.0960	5.1383	12.8		132.5	46.5		
298	5.096	.020	3	0	26080.	0.	26079.80	1.000	1452.1	1399.3	1396.01420.1	.0	1.2	.0098	.000	.000	0	34.0
299	5.116	.020	3	0	25018.	0.	25018.44	1.000	1457.5	1399.2	1396.01420.1	.0	1.2	.0098	.000	.000	0	38.3
300	5.136	.020	3	0	23984.	0.	23983.75	1.000	1457.5	1399.1	1396.01420.1	.0	1.2	.0098	.000	.000	0	38.3
301	5.156	.020	3	0	23036.	0.	23036.44	1.000	1459.4	1399.0	1396.01422.0	1.9	1.1	.0098	.956	.953	5	38.3

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
302	5.176	.020	3	0	22140.	0.	22140.30	1.000	1461.2	1398.9	1396.01423.9	1.8	1.1	.0098	.920	.917	5	38.3
303	5.196	.020	3	0	21279.	0.	21279.23	1.000	1463.0	1398.9	1396.01425.6	1.8	1.1	.0098	.885	.882	5	38.3
304	5.216	.020	3	0	20453.	0.	20452.66	1.000	1464.7	1398.8	1396.01427.4	1.7	1.0	.0098	.852	.849	5	38.3
[illegible]	5.236	.020	3	0	19660.	0.	19659.99	1.000	1466.4	1398.7	1396.01429.0	1.6	1.0	.0098	.819	.817	5	38.3
[illegible]	5.256	.020	3	0	18899.	0.	18899.29	1.000	1467.9	1398.6	1396.01430.6	1.6	1.0	.0098	.788	.786	5	38.3
307	5.276	.020	3	0	18170.	0.	18170.00	1.000	1469.5	1398.6	1396.01432.1	1.5	1.0	.0098	.758	.756	5	38.3
308	5.296	.020	3	0	17472.	0.	17471.54	1.000	1470.9	1398.5	1396.01433.5	1.5	.9	.0098	.729	.727	5	38.3
309	5.316	.020	3	0	16803.	0.	16803.33	1.000	1472.3	1398.4	1396.01434.9	1.4	.9	.0098	.702	.699	5	38.3
310	5.336	.020	3	0	16164.	0.	16163.52	1.000	1473.7	1398.4	1396.01436.3	1.3	.9	.0098	.675	.673	5	38.3
311	5.356	.020	3	0	15552.	0.	15551.58	1.000	1475.0	1398.3	1396.01437.6	1.3	.9	.0098	.649	.647	5	38.3
312	5.376	.020	3	0	14967.	0.	14966.80	1.000	1476.2	1398.3	1396.01438.8	1.2	.9	.0098	.618	.622	5	38.3
313	5.396	.020	3	0	14409.	0.	14408.67	1.000	1477.4	1398.2	1396.01440.0	1.2	.8	.0098	.589	.593	5	38.3
314	5.416	.020	3	0	13876.	0.	13875.57	1.000	1478.5	1398.1	1396.01441.1	1.1	.8	.0098	.566	.570	5	38.3
315	5.436	.020	3	0	13366.	0.	13365.82	1.000	1479.6	1398.1	1396.01442.2	1.1	.8	.0098	.544	.548	5	38.3
316	5.456	.020	3	0	12881.	0.	12881.26	1.000	1480.6	1398.0	1396.01443.3	1.0	.8	.0098	.523	.527	5	38.3
317	5.476	.020	3	0	12418.	0.	12417.90	1.000	1481.7	1398.0	1396.01444.3	1.0	.8	.0098	.503	.507	5	38.3
318	5.496	.020	3	0	11976.	0.	11976.49	1.000	1482.6	1397.9	1396.01445.3	1.0	.7	.0098	.487	.490	6	38.3
319	5.516	.020	3	0	11555.	0.	11555.40	1.000	1483.6	1397.9	1396.01446.2	.9	.7	.0098	.468	.471	5	38.3
320	5.536	.020	3	0	11155.	0.	11155.35	1.000	1484.5	1397.8	1396.01447.1	.9	.7	.0098	.453	.456	6	38.3
321	5.556	.020	3	0	10774.	0.	10773.69	1.000	1485.3	1397.8	1396.01448.0	.9	.7	.0098	.439	.442	6	38.3
322	5.576	.020	3	0	10410.	0.	10409.99	1.000	1486.2	1397.8	1396.01448.8	.8	.7	.0098	.422	.425	5	38.3
323	5.596	.020	3	0	10065.	0.	10064.98	1.000	1487.0	1397.7	1396.01449.6	.8	.7	.0098	.408	.411	6	38.3
324	5.616	.020	3	0	9736.	0.	9736.13	1.000	1487.8	1397.7	1396.01450.4	.8	.6	.0098	.395	.398	6	38.3
325	5.636	.020	3	0	9423.	0.	9423.10	1.000	1488.6	1397.6	1396.01451.2	.8	.6	.0098	.382	.385	6	38.3
326	5.656	.020	3	0	9125.	0.	9124.53	1.000	1489.3	1397.6	1396.01451.9	.7	.6	.0098	.370	.372	6	38.3
327	5.676	.020	3	0	8842.	0.	8842.16	1.000	1490.0	1397.6	1396.01452.6	.7	.6	.0098	.358	.360	6	38.3
328	5.696	.020	3	0	8573.	0.	8572.75	1.000	1490.7	1397.5	1396.01453.4	.7	.6	.0098	.358	.360	5	38.3
329	5.716	.020	3	0	8317.	0.	8316.86	1.000	1491.4	1397.5	1396.01454.1	.7	.6	.0098	.344	.346	5	38.3
330	5.736	.020	3	0	8073.	0.	8073.23	1.000	1492.1	1397.5	1396.01454.7	.7	.6	.0098	.331	.333	5	38.3
[illegible]	5.756	.020	3	0	7842.	0.	7841.60	1.000	1492.7	1397.5	1396.01455.3	.6	.6	.0098	.318	.320	5	38.3
[illegible]	5.776	.020	3	0	7621.	0.	7620.90	1.000	1493.4	1397.4	1396.01456.0	.6	.6	.0098	.318	.320	5	38.3
333	5.796	.020	3	0	7412.	0.	7411.74	1.000	1494.0	1397.4	1396.01456.6	.6	.6	.0098	.306	.308	5	38.3
334	5.816	.020	3	0	7212.	0.	7211.99	1.000	1494.5	1397.4	1396.01457.2	.6	.5	.0098	.294	.296	5	38.3
335	5.836	.020	3	0	7023.	0.	7022.53	1.000	1495.1	1397.3	1396.01457.8	.6	.5	.0098	.294	.284	5	38.3
336	5.856	.020	3	0	6843.	0.	6843.05	1.000	1495.7	1397.3	1396.01458.3	.6	.5	.0098	.282	.284	5	38.3
337	5.876	.020	3	0	6671.	0.	6671.49	1.000	1496.2	1397.3	1396.01458.9	.5	.5	.0098	.271	.273	5	38.3
[illegible]	5.896	.020	3	0	[illegible]	0.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.5	.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

339	5.916	.020	3	0	6353.	0.	6352.70	1.000	1497.3	1397.3	1396.01459.9	.5	.5	.0098	.261	.263	5	38.3
340	5.936	.020	3	0	6204.	0.	6204.17	1.000	1497.8	1397.2	1396.01460.4	.5	.5	.0098	.251	.252	5	38.3
341	5.956	.020	3	0	6064.	0.	6064.01	1.000	1498.3	1397.2	1396.01460.9	.5	.5	.0098	.251	.252	5	38.3
342	5.976	.020	3	0	5929.	0.	5929.29	1.000	1498.8	1397.2	1396.01461.4	.5	.5	.0098	.241	.242	5	38.3
343	5.996	.020	3	0	5802.	0.	5801.79	1.000	1499.3	1397.2	1396.01461.9	.5	.5	.0098	.241	.242	5	38.3
344	6.016	.020	3	0	5680.	0.	5679.54	1.000	1499.7	1397.2	1396.01462.4	.5	.5	.0098	.232	.233	5	38.3
345	6.036	.020	3	0	5564.	0.	5564.30	1.000	1500.2	1397.2	1396.01462.8	.5	.5	.0098	.232	.233	5	38.3
[illegible]	6.056	.020	3	0	5456.	0.	5455.87	1.000	1500.6	1397.1	1396.01463.3	.4	.5	.0098	.222	.224	5	38.3
[illegible]	6.076	.020	3	0	5352.	0.	5352.48	1.000	1501.1	1397.1	1396.01463.7	.4	.5	.0098	.222	.224	5	38.3
348	6.096	.020	3	0	5255.	0.	5254.84	1.000	1501.5	1397.1	1396.01464.2	.4	.4	.0098	.214	.215	5	38.3
349	6.116	.020	3	0	5164.	0.	5163.81	1.000	1501.9	1397.1	1396.01464.6	.4	.4	.0098	.214	.215	5	38.3
350	6.136	.020	3	0	5077.	0.	5076.65	1.000	1502.4	1397.1	1396.01465.0	.4	.4	.0098	.205	.207	5	38.3
351	6.156	.020	3	0	4995.	0.	4995.07	1.000	1502.8	1397.1	1396.01465.4	.4	.4	.0098	.205	.207	5	38.3
352	6.176	.020	3	0	4917.	0.	4917.30	1.000	1503.2	1397.1	1396.01465.8	.4	.4	.0098	.205	.199	5	38.3
353	6.196	.020	3	0	4844.	0.	4844.14	1.000	1503.6	1397.0	1396.01466.2	.4	.4	.0098	.206	.200	6	38.3
354	6.216	.020	3	0	4775.	0.	4775.45	1.000	1504.0	1397.0	1396.01466.6	.4	.4	.0098	.194	.192	5	38.3
355	6.236	.020	3	0	4710.	0.	4710.38	1.000	1504.4	1397.0	1396.01467.0	.4	.4	.0098	.190	.188	5	38.3
356	6.256	.020	3	0	4648.	0.	4648.09	1.000	1504.7	1397.0	1396.01467.4	.4	.4	.0098	.190	.187	5	38.3
357	6.276	.020	3	0	4590.	0.	4590.21	1.000	1505.1	1397.0	1396.01467.8	.4	.4	.0098	.190	.187	5	38.3
358	6.296	.020	3	0	4535.	0.	4535.03	1.000	1505.5	1397.0	1396.01468.1	.4	.4	.0098	.189	.187	5	38.3

KTT= 0 I= 359 T= 6.32

TF= .08 QTF= 4648. TP= 3.54 QP= 137712. TRS= .01 TB= 6.26
BRD= 23.7 BRW=1505.9 HU=1419.7 HY=1397.0 HC=1396.0 ALG=38.250 QO= 48.6855
Z= .79 TFH= 2.30 BO=1468.5 TFI= 1.23

1

OTIME*****	24579.0	44579.0	64579.0	84579.0	104579.0	124579.0	144579.0	164579.0	184579.0	204579.0	DISCHARGE
.080.	*	.	.	.	.	.	.	.	.	.	13887.
.120.	*	.	.	.	.	.	.	.	.	.	14035.
.160.	*	.	.	.	.	.	.	.	.	.	14194.
.200.	*	.	.	.	.	.	.	.	.	.	14359.
.240.	*	.	.	.	.	.	.	.	.	.	14529.
.280.	*	.	.	.	.	.	.	.	.	.	14701.
.320.	*	.	.	.	.	.	.	.	.	.	14875.
.360.	*	.	.	.	.	.	.	.	.	.	15049.
.400.	*	.	.	.	.	.	.	.	.	.	15224.
.440.	*	.	.	.	.	.	.	.	.	.	15399.
.480.	*	.	.	.	.	.	.	.	.	.	15573.
.520.	*	.	.	.	.	.	.	.	.	.	15747.
.560.	*	.	.	.	.	.	.	.	.	.	15920.
.600.	*	.	.	.	.	.	.	.	.	.	16092.
.640.	*	.	.	.	.	.	.	.	.	.	16263.
.680.	*	.	.	.	.	.	.	.	.	.	16433.
.720.	*	.	.	.	.	.	.	.	.	.	17420.
.760.	*	.	.	.	.	.	.	.	.	.	17519.
.800.	*	.	.	.	.	.	.	.	.	.	18987.
.840.	*	.	.	.	.	.	.	.	.	.	20477.
.880.	*	.	.	.	.	.	.	.	.	.	20887.
.920.	*	.	.	.	.	.	.	.	.	.	21322.
.960.	*	.	.	.	.	.	.	.	.	.	21782.
1.000.	*	.	.	.	.	.	.	.	.	.	22271.
[illegible]	*	.	.	.	.	.	.	.	.	.	22788.
1.080.	*	.	.	.	.	.	.	.	.	.	23335.
1.120.	*	.	.	.	.	.	.	.	.	.	23915.
1.160.	*	.	.	.	.	.	.	.	.	.	24529.
1.200.	*	.	.	.	.	.	.	.	.	.	25178.
1.240.	.*	.	.	.	.	.	.	.	.	.	25866.
1.280.	.*	.	.	.	.	.	.	.	.	.	26593.
1.320.	*										[illegible]

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1.440.	29937.
1.480.	30893.
1.520.	31900.
1.560.	32962.
1.600.	34081.
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2.240.	61402.
2.280.	63772.
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2.360.	68755.
2.400.	71356.
2.440.	74037.
2.480.	76767.
2.520.	79537.
2.560.	82369.
2.600.	85256.
2.640.	88185.
2.680.	91148.
2.720.	94139.
2.760.	97144.
2.800.	100151.
2.840.	103135.
2.880.	106104.
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2.960.	111903.
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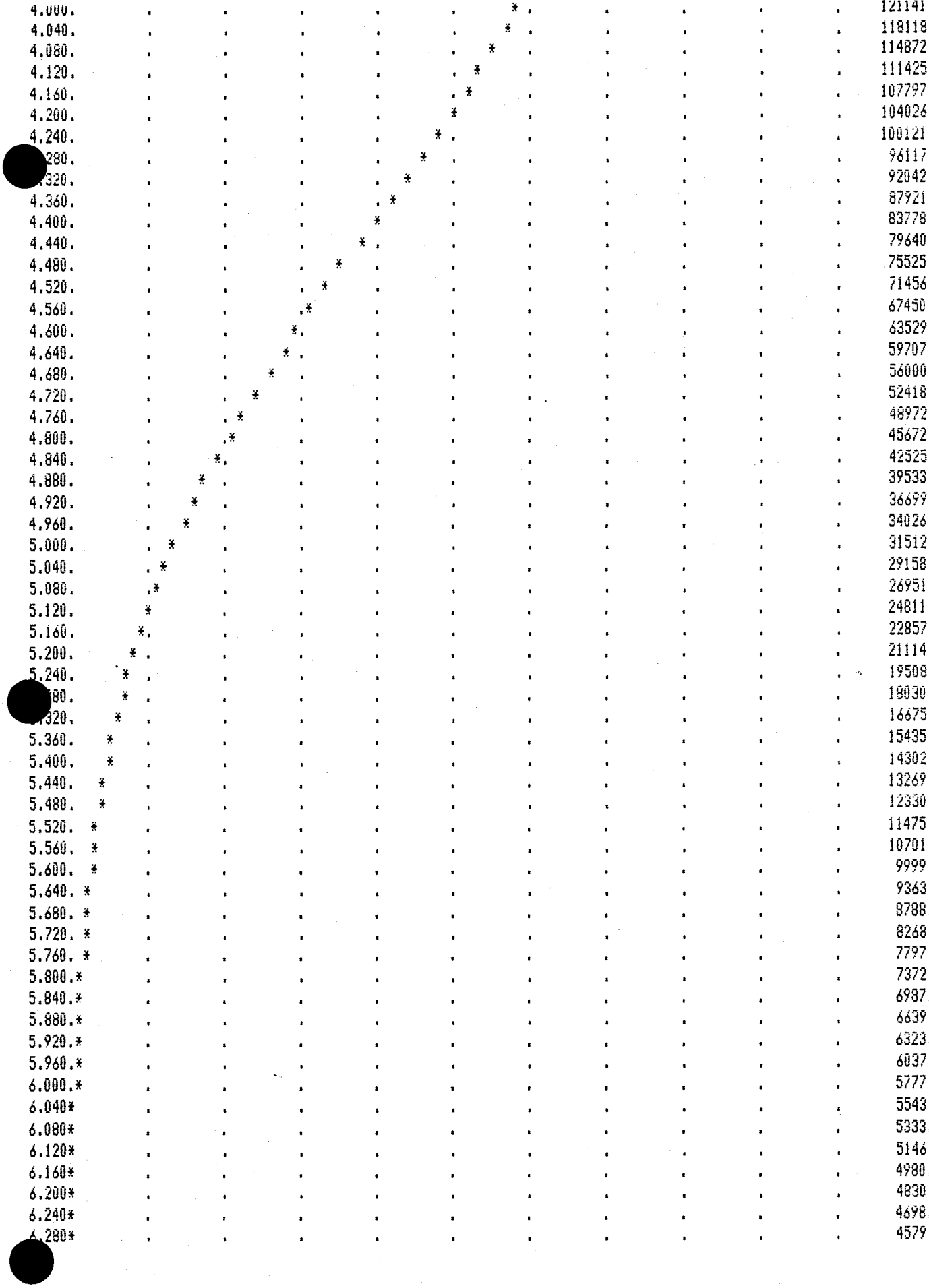
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        BREACH MODEL, MICRO-VERSION: 1/87

PIPING FAILURE AT WEST END OF HQFRS; STA.499+00  FILE:HQWTOP.6       24OCT90

HI=   1415.40  HU=   1419.70  HL=   1396.00  HPI=   1407.90  HSP=  1408.40

        (QIN(I),I=1,8)
 8060.00   2934.00   1012.00    306.00     92.00       .00       .00       .00

        (TIN(I),I=1,8)
     .00      1.00      2.00      3.00      4.00      6.00       .00       .00

        (RSA(I),I=1,8)
 2975.00   2240.30   1221.70    114.80     76.80     44.40     18.85       .00

        (HSA(I),I=1,8)
 1428.30   1419.70   1408.40   1396.10   1394.30   1392.60   1389.10   1375.90

ZU=  3.00  ZD=  2.00  ZC=   .00  PORW=   .00  GL=   .00  GS=   .00  VMP=   .00

D50C=   .00  PORC=   .00  UWC=   .00  CNC= .0000  AFRC=   .00  COHC=    .0  UNFCC=   .00

D50S=   .18  PORS=   .33  UWS=125.60  CNS= .0000  AFRS= 39.00  COHS= 100.0  UNFCS= 10.00

BR=  1.00  WC=  14.0  CRL= 5280.0  SM= 42.24  WV= 5280.0  CNV= .0450  D50DF=   .00  UNFCDF=   .00

DTH=  .020  DBG=  .001   H=   .1000   TEH=    6.0  ERR=   .10  FPT=   2.0  TPR=   1.0

        (SPQ(I),I=1,8)
     .00   1049.30   2325.30   5551.80  10718.60  15377.70  22588.60  58752.00

        (SPH(I),I=1,8)
     .00      1.30      2.66      5.05      8.05     11.30     11.60     13.80

                CRL= 5280.   BM=   34.   AFR= 39.00   BO=  11.8   Z=   .48


1


        AFR=  39.0   TH1= 64.50   H1=  6.68   TH2= 51.75   H2= 22.93   TH3= 45.38   H3= 78.83


1
   I      T  DTH KG KC     QTOT       QTS            QB   SUB     BT     HY     HC    BO    PPP     HP  CNN     DH    DHH   KIT ALG
PIPE FLOW TO WEIR FLOW TRANSITION
   1404.        8.        7.     2054.     2782.     4836.      .026      .786      92.      108.        2.       52.
.07574  .07589  .32975 2.74409  .0098      2.2     11.8      1.4      8.2    129.4
                 1      13.0       6.7      14.6   11080.3     .0589    3     .7800     .8389      25.5     108.2      52.2


   I      T  DTH KG KC     QTOT       QTS            QB   SUB     BT     HY     HC    BO    PPP     HP  CNN     DH    DHH   KIT ALG
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I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
124	1.004	.020	3	0	12747.	8591.	4155.81	1.000	31.2	1415.2	1396.0	8.6	.4	9.2	.0098	.198	.198	3	25.5
125	1.024	.020	3	0	12830.	8576.	4254.14	1.000	31.7	1415.2	1396.0	9.0	.4	9.1	.0098	.203	.203	3	25.5
126	1.044	.020	3	0	12915.	8560.	4354.91	1.000	32.1	1415.2	1396.0	9.5	.4	9.0	.0098	.208	.208	2	25.5
127	1.064	.020	3	0	13003.	8545.	4457.83	1.000	32.5	1415.2	1396.0	9.9	.4	8.9	.0098	.213	.213	2	25.5
128	1.084	.020	3	0	13092.	8529.	4563.14	1.000	32.9	1415.2	1396.0	10.3	.4	8.8	.0098	.218	.218	2	25.5
[illegible]	1.104	.020	3	0	13184.	8513.	4670.76	1.000	33.4	1415.2	1396.0	10.8	.4	8.7	.0098	.223	.223	3	25.5
130	1.124	.020	3	0	13278.	8497.	4780.85	1.000	33.8	1415.2	1396.0	11.2	.5	8.6	.0098	.228	.228	2	25.5
131	1.144	.020	3	0	13373.	8480.	4893.41	1.000	34.3	1415.2	1396.0	11.7	.5	8.5	.0098	.234	.234	2	25.5
132	1.164	.020	3	0	13472.	8463.	5008.57	1.000	34.8	1415.1	1396.0	12.2	.5	8.5	.0098	.239	.239	2	25.5
133	1.184	.020	3	0	13573.	8447.	5126.31	1.000	35.3	1415.1	1396.0	12.7	.5	8.4	.0098	.245	.245	2	25.5
134	1.204	.020	3	0	13676.	8429.	5246.56	1.000	35.8	1415.1	1396.0	13.2	.5	8.3	.0098	.250	.251	2	25.5
135	1.224	.020	3	0	13782.	8412.	5369.50	1.000	36.3	1415.1	1396.0	13.7	.5	8.2	.0098	.256	.256	2	25.5
136	1.244	.020	3	0	13890.	8395.	5495.04	1.000	36.8	1415.1	1396.0	14.2	.5	8.1	.0098	.262	.262	3	25.5
137	1.264	.020	3	0	14000.	8377.	5623.54	1.000	37.3	1415.1	1396.0	14.7	.5	8.1	.0098	.268	.269	2	25.5
138	1.284	.020	3	0	14114.	8359.	5754.78	1.000	37.9	1415.1	1396.0	15.3	.5	8.0	.0098	.274	.274	2	25.5
139	1.304	.020	3	0	14229.	8340.	5888.87	1.000	38.4	1415.1	1396.0	15.8	.6	7.9	.0098	.281	.281	2	25.5
140	1.324	.020	3	0	14348.	8322.	6026.08	1.000	39.0	1415.1	1396.0	16.4	.6	7.9	.0098	.288	.288	2	25.5
141	1.344	.020	3	0	14469.	8303.	6166.35	1.000	39.6	1415.0	1396.0	17.0	.6	7.8	.0098	.294	.295	2	25.5
142	1.364	.020	3	0	14594.	8284.	6309.64	1.000	40.2	1415.0	1396.0	17.6	.6	7.7	.0098	.301	.301	2	25.5
143	1.384	.020	3	0	14721.	8265.	6456.02	1.000	40.8	1415.0	1396.0	18.2	.6	7.7	.0098	.308	.308	2	25.5
144	1.404	.020	3	0	14851.	8245.	6605.54	1.000	41.5	1415.0	1396.0	18.9	.6	7.6	.0098	.315	.315	2	25.5
145	1.424	.020	3	0	14983.	8225.	6758.13	1.000	42.1	1415.0	1396.0	19.5	.6	7.6	.0098	.322	.322	2	25.5
146	1.444	.020	3	0	15119.	8205.	6914.25	1.000	42.8	1415.0	1396.0	20.2	.7	7.5	.0098	.330	.330	2	25.5
147	1.464	.020	3	0	15258.	8184.	7073.58	1.000	43.4	1415.0	1396.0	20.8	.7	7.4	.0098	.337	.337	2	25.5
148	1.484	.020	3	0	15400.	8164.	7236.42	1.000	44.1	1415.0	1396.0	21.5	.7	7.4	.0098	.345	.346	2	25.5
149	1.504	.020	3	0	15546.	8143.	7402.89	1.000	44.8	1415.0	1396.0	22.2	.7	7.3	.0098	.354	.354	2	25.5
150	1.524	.020	3	0	15694.	8121.	7572.70	1.000	45.6	1414.9	1396.0	23.0	.7	7.3	.0098	.361	.361	3	25.5
151	1.544	.020	3	0	15846.	8100.	7746.10	1.000	46.3	1414.9	1396.0	23.7	.7	7.2	.0098	.370	.370	2	25.5
152	1.564	.020	3	0	16001.	8078.	7923.13	1.000	47.1	1414.9	1396.0	24.4	.8	7.2	.0098	.378	.378	2	25.5
[illegible]	1.584	.020	3	0	16159.	8055.	8103.89	1.000	47.8	1414.9	1396.0	25.2	.8	7.1	.0098	.387	.387	2	25.5
[illegible]	1.604	.020	3	0	16321.	8033.	8288.50	1.000	48.6	1414.9	1396.0	26.0	.8	7.1	.0098	.395	.395	3	25.5
155	1.624	.020	3	0	16487.	8010.	8477.26	1.000	49.4	1414.9	1396.0	26.8	.8	7.1	.0098	.405	.405	2	25.5
156	1.644	.020	3	0	16656.	7987.	8669.75	1.000	50.3	1414.9	1396.0	27.7	.8	7.0	.0098	.414	.414	2	25.5
157	1.664	.020	3	0	16829.	7963.	8866.19	1.000	51.1	1414.9	1396.0	28.5	.8	7.0	.0098	.423	.423	3	25.5
158	1.684	.020	3	0	17006.	7939.	9066.88	1.000	52.0	1414.8	1396.0	29.4	.9	6.9	.0098	.433	.433	2	25.5
159	1.704	.020	3	0	17186.	7915.	9271.47	1.000	52.9	1414.8	1396.0	30.2	.9	6.9	.0098	.442	.442	3	25.5
160	1.724	.020	3	0	17371.	7890.	9480.49	1.000	53.8	1414.8	1396.0	31.2	.9	6.9	.0098	.453	.453	2	25.5
161	1.744	.020	3	0	17559.	7865.	9693.65	1.000	54.7	1414.8	1396.0	32.1	.9	6.8	.0098	.462	.462	1	25.5
162	1.764	.020	3	0	17751.	7840.	9911.66	1.000	55.6	1414.8	1396.0	33.0	.9	6.8	.0098	.474	.474	1	25.5
163	1.784	.020	3	0	17947.	7814.	10133.51	1.000	56.6	1414.8	1396.0	34.0	1.0	6.7	.0098	.483	.483	1	25.5
164	1.804	.020	3	0	18148.	7788.	10360.29	1.000	57.6	1414.7	1396.0	35.0	1.0	6.7	.0098	.495	.495	1	25.5
165	1.824	.020	3	0	18352.	7761.	10591.05	1.000	58.6	1414.7	1396.0	36.0	1.0	6.7	.0098	.505	.505	1	25.5
166	1.844	.020	3	0	18561.	7734.	10826.70	1.000	59.6	1414.7	1396.0	37.0	1.0	6.6	.0098	.517	.517	1	25.5
167	1.864	.020	3	0	18774.	7707.	11067.56	1.000	60.7	1414.7	1396.0	38.1	1.1	6.6	.0098	.529	.529	1	25.5
168	1.884	.020	3	0	18991.	7679.	11312.22	1.000	61.8	1414.7	1396.0	39.2	1.1	6.6	.0098	.539	.539	1	25.5
169	1.904	.020	3	0	19213.	7650.	11562.14	1.000	62.9	1414.7	1396.0	40.3	1.1	6.6	.0098	.552	.551	1	25.5
170	1.924	.020	3	0	19439.	7622.	11817.15	1.000	64.0	1414.7	1396.0	41.4	1.1	6.5	.0098	.564	.564	1	25.5
171	1.944	.020	3	0	19670.	7593.	12077.57	1.000	65.2	1414.6	1396.0	42.5	1.2	6.5	.0098	.577	.577	1	25.5
172	1.964	.020	3	0	19906.	7563.	12343.11	1.000	66.3	1414.6	1396.0	43.7	1.2	6.5	.0098	.590	.590	2	25.5
173	1.984	.020	3	0	20147.	7533.	12613.78	1.000	67.5	1414.6	1396.0	44.9	1.2	6.4	.0098	.603	.603	2	25.5
174	2.004	.020	3	0	20392.	7502.	12889.59	1.000	68.8	1414.6	1396.0	46.2	1.2	6.4	.0098	.616	.616	1	25.5
175	2.024	.020	3	0	20642.	7471.	13170.91	1.000	70.0	1414.6	1396.0	47.4	1.3	6.4	.0098	.630	.630	2	25.5
176	2.044	.020	3	0	20897.	7440.	13457.45	1.000	71.3	1414.5	1396.0	48.7	1.3	6.4	.0098	.644	.643	1	25.5
177	2.064	.020	3	0	21157.	7408.	13749.42	1.000	72.6	1414.5	1396.0	50.0	1.3	6.3	.0098	.657	.657	2	25.5
178	2.084	.020	3	0	21423.	7376.	14046.85	1.000	74.0	1414.5	1396.0	51.4	1.3	6.3	.0098	.671	.671	1	25.5
[illegible]	2.104	.020	3	0	21693.	7343.	14349.91	1.000	75.4	1414.5	1396.0	52.7	1.4	6.3	.0098	.686	.686	1	25.5
[illegible]	2.124	.020	3	0	21968.	7309.	14658.50	1.000	76.8	1414.5	1396.0	54.1	1.4	6.3	.0098	.701	.700	1	25.5
181	2.144	.020	3	0	22248.	7275.	14972.80	1.000	78.2	1414.5	1396.0	55.6	1.4	6.2	.0098	.716	.715	1	25.5

I T DTH KG KC QTOT QTS QB SUB BT HY HC BO PPP HP CNN DH DHH KIT ALG

183	2.184	.020	3	0	22825.	7206.	15618.37	1.000	81.1	1414.4	1396.0	58.5	1.5	6.2	.0098	.746	.746	1	25.5
184	2.204	.020	3	0	23120.	7171.	15949.71	1.000	82.7	1414.4	1396.0	60.1	1.5	6.2	.0098	.761	.761	1	25.5
185	2.224	.020	3	0	23422.	7135.	16286.91	1.000	84.2	1414.4	1396.0	61.6	1.6	6.1	.0098	.777	.777	1	25.5
186	2.244	.020	3	0	23728.	7098.	16629.99	1.000	85.8	1414.3	1396.0	63.2	1.6	6.1	.0098	.793	.793	1	25.5
187	2.264	.020	3	0	24040.	7061.	16978.62	1.000	87.4	1414.3	1396.0	64.8	1.6	6.1	.0098	.809	.809	1	25.5
188	2.284	.020	3	0	24358.	7023.	17334.93	1.000	89.1	1414.3	1396.0	66.5	1.7	6.1	.0098	.829	.828	2	25.5
189	2.304	.020	3	0	24682.	6985.	17696.92	1.000	90.8	1414.3	1396.0	68.2	1.7	6.1	.0098	.845	.845	1	25.5
[illegible]	2.324	.020	3	0	25011.	6946.	18064.96	1.000	92.5	1414.3	1396.0	69.9	1.7	6.0	.0098	.862	.862	1	25.5
191	2.344	.020	3	0	25346.	6907.	18438.67	1.000	94.2	1414.2	1396.0	71.6	1.8	6.0	.0098	.879	.879	1	25.5
192	2.364	.020	3	0	25687.	6867.	18820.32	1.000	96.0	1414.2	1396.0	73.4	1.8	6.0	.0098	.900	.899	2	25.5
193	2.384	.020	3	0	26034.	6826.	19207.57	1.000	97.9	1414.2	1396.0	75.3	1.8	6.0	.0098	.917	.917	1	25.5
194	2.404	.020	3	0	26386.	6785.	19600.77	1.000	99.8	1414.2	1396.0	77.1	1.9	6.0	.0098	.935	.935	1	25.5
195	2.424	.020	3	0	26743.	6743.	20000.14	1.000	101.7	1414.1	1396.0	79.0	1.9	5.9	.0098	.953	.953	1	25.5
196	2.444	.020	3	0	27108.	6700.	20407.42	1.000	103.6	1414.1	1396.0	81.0	2.0	5.9	.0098	.976	.975	1	25.5
197	2.464	.020	3	0	27478.	6657.	20820.79	1.000	105.6	1414.1	1396.0	83.0	2.0	5.9	.0098	.994	.994	1	25.5
198	2.484	.020	3	0	27853.	6613.	21240.20	1.000	107.6	1414.1	1396.0	85.0	2.0	5.9	.0098	1.013	1.012	1	25.5
199	2.504	.020	3	0	28236.	6568.	21667.51	1.000	109.7	1414.0	1396.0	87.1	2.1	5.9	.0098	1.036	1.036	2	25.5
200	2.524	.020	3	0	28624.	6523.	22100.74	1.000	111.8	1414.0	1396.0	89.2	2.1	5.9	.0098	1.055	1.055	1	25.5
201	2.544	.020	3	0	29017.	6477.	22540.05	1.000	114.0	1414.0	1396.0	91.3	2.1	5.8	.0098	1.075	1.074	1	25.5
202	2.564	.020	3	0	29418.	6430.	22987.58	1.000	116.2	1414.0	1396.0	93.5	2.2	5.8	.0098	1.099	1.099	1	25.5
203	2.584	.020	3	0	29823.	6382.	23441.03	1.000	118.4	1413.9	1396.0	95.8	2.2	5.8	.0098	1.120	1.119	1	25.5
204	2.604	.020	3	0	30235.	6334.	23900.57	1.000	120.7	1413.9	1396.0	98.1	2.3	5.8	.0098	1.140	1.139	1	25.5
205	2.624	.020	3	0	30653.	6285.	24368.25	1.000	123.0	1413.9	1396.0	100.4	2.3	5.8	.0098	1.165	1.164	2	25.5
206	2.644	.020	3	0	31077.	6235.	24841.87	1.000	125.4	1413.8	1396.0	102.8	2.4	5.7	.0098	1.186	1.185	1	25.5
207	2.664	.020	3	0	31505.	6184.	25321.02	1.000	127.8	1413.8	1396.0	105.2	2.4	5.7	.0098	1.207	1.206	1	25.5
208	2.684	.020	3	0	31941.	6133.	25808.87	1.000	130.3	1413.8	1396.0	107.6	2.5	5.7	.0098	1.234	1.233	1	25.5
209	2.704	.020	3	0	32383.	6080.	26302.58	1.000	132.8	1413.8	1396.0	110.2	2.5	5.7	.0098	1.255	1.255	1	25.5
210	2.724	.020	3	0	32829.	6027.	26801.74	1.000	135.3	1413.7	1396.0	112.7	2.6	5.7	.0098	1.277	1.276	1	25.5
211	2.744	.020	3	0	33282.	5973.	27309.68	1.000	137.9	1413.7	1396.0	115.3	2.6	5.7	.0098	1.305	1.305	1	25.5
212	2.764	.020	3	0	33741.	5918.	27823.10	1.000	140.6	1413.7	1396.0	118.0	2.7	5.6	.0098	1.328	1.327	1	25.5
213	2.784	.020	3	0	34207.	5862.	28345.11	1.000	143.3	1413.6	1396.0	120.7	2.7	5.6	.0098	1.356	1.355	2	25.5
[illegible]	2.804	.020	3	0	34677.	5805.	28872.00	1.000	146.1	1413.6	1396.0	123.4	2.8	5.6	.0098	1.379	1.378	1	25.5
[illegible]	2.824	.020	3	0	35152.	5747.	29404.77	1.000	148.9	1413.6	1396.0	126.2	2.8	5.6	.0098	1.402	1.401	1	25.5
216	2.844	.020	3	0	35635.	5689.	29945.76	1.000	151.7	1413.5	1396.0	129.1	2.9	5.6	.0098	1.432	1.431	1	25.5
217	2.864	.020	3	0	36122.	5629.	30492.32	1.000	154.6	1413.5	1396.0	132.0	2.9	5.6	.0098	1.456	1.455	1	25.5
218	2.884	.020	3	0	36613.	5569.	31043.98	1.000	157.6	1413.5	1396.0	135.0	3.0	5.5	.0098	1.480	1.479	1	25.5
219	2.904	.020	3	0	37121.	5517.	31603.78	1.000	160.6	1413.4	1396.0	138.0	3.0	5.5	.0098	1.511	1.510	1	25.5
220	2.924	.020	3	0	37637.	5468.	32168.98	1.000	163.7	1413.4	1396.0	141.1	3.1	5.5	.0098	1.536	1.535	1	25.5
221	2.944	.020	3	0	38157.	5418.	32738.68	1.000	166.8	1413.4	1396.0	144.2	3.1	5.5	.0098	1.560	1.560	1	25.5
222	2.964	.020	3	0	38684.	5367.	33316.79	1.000	170.0	1413.3	1396.0	147.4	3.2	5.5	.0098	1.593	1.592	1	25.5
223	2.984	.020	3	0	39216.	5316.	33899.68	1.000	173.2	1413.3	1396.0	150.6	3.2	5.5	.0098	1.618	1.617	1	25.5
224	3.004	.020	3	0	39751.	5264.	34487.16	1.000	176.5	1413.2	1396.0	153.9	3.3	5.4	.0098	1.644	1.643	1	25.5
225	3.024	.020	3	0	40293.	5210.	35082.15	1.000	179.9	1413.2	1396.0	157.3	3.4	5.4	.0098	1.677	1.677	1	25.5
226	3.044	.020	3	0	40838.	5157.	35681.61	1.000	183.3	1413.2	1396.0	160.7	3.4	5.4	.0098	1.704	1.703	1	25.5
227	3.064	.020	3	0	41387.	5102.	36285.31	1.000	186.7	1413.1	1396.0	164.1	3.5	5.4	.0098	1.730	1.729	1	25.5
228	3.084	.020	3	0	41942.	5046.	36896.71	1.000	190.3	1413.1	1396.0	167.7	3.5	5.4	.0098	1.765	1.764	1	25.5
229	3.104	.020	3	0	42501.	4989.	37512.24	1.000	193.8	1413.0	1396.0	171.2	3.6	5.4	.0098	1.792	1.791	1	25.5
230	3.124	.020	3	0	43063.	4932.	38131.21	1.000	197.5	1413.0	1396.0	174.9	3.6	5.4	.0098	1.819	1.818	1	25.5
231	3.144	.020	3	0	43630.	4873.	38756.80	1.000	201.2	1412.9	1396.0	178.6	3.7	5.3	.0098	1.854	1.853	2	25.5
232	3.164	.020	3	0	44200.	4814.	39385.80	1.000	205.0	1412.9	1396.0	182.3	3.8	5.3	.0098	1.881	1.880	1	25.5
233	3.184	.020	3	0	44771.	4754.	40017.78	1.000	208.8	1412.9	1396.0	186.2	3.8	5.3	.0098	1.909	1.908	1	25.5
234	3.204	.020	3	0	45348.	4692.	40655.99	1.000	212.7	1412.8	1396.0	190.1	3.9	5.3	.0098	1.945	1.944	2	25.5
235	3.224	.020	3	0	45927.	4630.	41297.13	1.000	216.6	1412.8	1396.0	194.0	3.9	5.3	.0098	1.973	1.972	1	25.5
236	3.244	.020	3	0	46508.	4567.	41940.70	1.000	220.6	1412.7	1396.0	198.0	4.0	5.3	.0098	2.001	2.000	1	25.5
237	3.264	.020	3	0	47089.	4503.	42585.98	1.000	224.7	1412.7	1396.0	202.1	4.1	5.2	.0098	2.030	2.029	1	25.5
238	3.284	.020	3	0	47675.	4438.	43237.34	1.000	228.8	1412.6	1396.0	206.2	4.1	5.2	.0098	2.068	2.066	2	25.5
239	3.304	.020	3	0	48262.	4372.	43890.35	1.000	233.0	1412.6	1396.0	210.4	4.2	5.2	.0098	2.096	2.095	1	25.5
[illegible]	3.324	.020	3	0	48849.	4305.	44544.44	1.000	237.3	1412.5	1396.0	214.6	4.3	5.2	.0098	2.126	2.124	1	25.5
[illegible]	3.344	.020	3	0	49437.	4236.	45200.35	1.000	241.6	1412.5	1396.0	219.0	4.3	5.2	.0098	2.155	2.154	1	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
242	3.364	.020	3	0	50028.	4167.	45860.59	1.000	246.0	1412.4	1396.0	223.3	4.4	5.2	.0098	2.194	2.192	2	25.5

244	3.404	.020	3	0	51208.	4026.	47182.60	1.000	254.9	1412.3	1396.0	232.3	4.5	5.1	.0098	2.253	2.252	1	25.5
245	3.424	.020	3	0	51797.	3953.	47843.97	1.000	259.5	1412.3	1396.0	236.9	4.6	5.1	.0098	2.283	2.282	1	25.5
246	3.444	.020	3	0	52385.	3880.	48505.41	1.000	264.1	1412.2	1396.0	241.5	4.6	5.1	.0098	2.313	2.312	1	25.5
247	3.464	.020	3	0	52971.	3805.	49166.05	1.000	268.8	1412.2	1396.0	246.2	4.7	5.1	.0098	2.344	2.342	1	25.5
248	3.484	.020	3	0	53555.	3730.	49825.57	1.000	273.5	1412.1	1396.0	250.9	4.7	5.0	.0098	2.374	2.373	1	25.5
249	3.504	.020	3	0	54141.	3653.	50488.25	1.000	278.4	1412.0	1396.0	255.8	4.8	5.0	.0098	2.415	2.413	2	25.5
250	3.524	.020	3	0	54724.	3575.	51149.11	1.000	283.3	1412.0	1396.0	260.6	4.9	5.0	.0098	2.445	2.444	1	25.5
251	3.544	.020	3	0	55305.	3497.	51807.99	1.000	288.2	1411.9	1396.0	265.6	5.0	5.0	.0098	2.476	2.475	1	25.5
252	3.564	.020	3	0	55882.	3416.	52465.16	1.000	293.2	1411.9	1396.0	270.6	5.0	5.0	.0098	2.507	2.506	1	25.5
253	3.584	.020	3	0	56455.	3335.	53119.68	1.000	298.3	1411.8	1396.0	275.7	5.1	5.0	.0098	2.538	2.537	1	25.5
254	3.604	.020	3	0	57024.	3253.	53770.56	1.000	303.4	1411.7	1396.0	280.8	5.1	4.9	.0098	2.570	2.568	1	25.5
255	3.624	.020	3	0	57588.	3170.	54418.72	1.000	308.6	1411.7	1396.0	286.0	5.2	4.9	.0098	2.601	2.599	1	25.5
256	3.644	.020	3	0	58148.	3085.	55063.18	1.000	313.9	1411.6	1396.0	291.3	5.3	4.9	.0098	2.632	2.631	1	25.5
257	3.664	.020	3	0	58703.	2999.	55703.55	1.000	319.2	1411.6	1396.0	296.6	5.3	4.9	.0098	2.663	2.662	1	25.5
258	3.684	.020	3	0	59252.	2913.	56339.49	1.000	324.6	1411.5	1396.0	302.0	5.4	4.9	.0098	2.695	2.693	1	25.5
259	3.704	.020	3	0	59794.	2824.	56969.90	1.000	330.1	1411.4	1396.0	307.5	5.4	4.8	.0098	2.724	2.722	2	25.5
260	3.724	.020	3	0	60329.	2735.	57593.57	1.000	335.6	1411.4	1396.0	313.0	5.5	4.8	.0098	2.753	2.751	2	25.5
261	3.744	.020	3	0	60857.	2645.	58212.20	1.000	341.1	1411.3	1396.0	318.5	5.6	4.8	.0098	2.784	2.783	1	25.5
262	3.764	.020	3	0	61377.	2553.	58824.13	1.000	346.8	1411.2	1396.0	324.2	5.6	4.8	.0098	2.814	2.812	2	25.5
263	3.784	.020	3	0	61889.	2460.	59428.08	1.000	352.5	1411.2	1396.0	329.8	5.7	4.8	.0098	2.843	2.841	2	25.5
264	3.804	.020	3	0	62392.	2367.	60025.64	1.000	358.2	1411.1	1396.0	335.6	5.7	4.7	.0098	2.871	2.869	2	25.5
265	3.824	.020	3	0	62902.	2288.	60614.36	1.000	364.0	1411.0	1396.0	341.4	5.8	4.7	.0098	2.888	2.886	1	25.5
266	3.844	.020	3	0	63416.	2221.	61195.38	1.000	369.8	1410.9	1396.0	347.2	5.8	4.7	.0098	2.919	2.917	1	25.5
267	3.864	.020	3	0	63921.	2153.	61767.63	1.000	375.7	1410.9	1396.0	353.1	5.9	4.7	.0098	2.950	2.948	1	25.5
268	3.884	.020	3	0	64416.	2085.	62331.44	1.000	381.7	1410.8	1396.0	359.1	6.0	4.6	.0098	2.980	2.979	1	25.5
269	3.904	.020	3	0	64896.	2015.	62880.63	1.000	387.7	1410.7	1396.0	365.1	6.0	4.6	.0098	2.997	2.994	1	25.5
270	3.924	.020	3	0	65365.	1945.	63420.41	1.000	393.7	1410.7	1396.0	371.1	6.1	4.6	.0098	3.027	3.025	1	25.5
271	3.944	.020	3	0	65824.	1874.	63950.49	1.000	399.8	1410.6	1396.0	377.2	6.1	4.6	.0098	3.057	3.055	1	25.5
272	3.964	.020	3	0	66266.	1802.	64464.61	1.000	406.0	1410.5	1396.0	383.4	6.1	4.5	.0098	3.072	3.070	1	25.5
273	3.984	.020	3	0	66696.	1729.	64967.20	1.000	412.2	1410.4	1396.0	389.6	6.2	4.5	.0098	3.102	3.100	1	25.5
274	4.004	.020	3	0	67113.	1655.	65457.97	1.000	418.4	1410.3	1396.0	395.8	6.3	4.5	.0098	3.129	3.127	2	25.5
275	4.024	.020	3	0	67513.	1580.	65932.20	1.000	424.7	1410.3	1396.0	402.1	6.3	4.5	.0098	3.143	3.141	1	25.5
276	4.044	.020	3	0	67900.	1505.	66394.45	1.000	431.1	1410.2	1396.0	408.5	6.3	4.5	.0098	3.173	3.170	1	25.5
277	4.064	.020	3	0	68267.	1429.	66838.55	1.000	437.4	1410.1	1396.0	414.8	6.4	4.4	.0098	3.186	3.184	1	25.5
278	4.084	.020	3	0	68622.	1352.	67269.80	1.000	443.9	1410.0	1396.0	421.3	6.4	4.4	.0098	3.215	3.213	1	25.5
279	4.104	.020	3	0	68957.	1274.	67682.91	1.000	450.3	1409.9	1396.0	427.7	6.5	4.4	.0098	3.228	3.225	1	25.5
280	4.124	.020	3	0	69278.	1195.	68082.37	1.000	456.8	1409.9	1396.0	434.2	6.5	4.4	.0098	3.256	3.253	1	25.5
281	4.144	.020	3	0	69577.	1116.	68461.95	1.000	463.4	1409.8	1396.0	440.8	6.5	4.3	.0098	3.268	3.265	1	25.5
282	4.164	.020	3	0	69864.	1037.	68827.17	1.000	470.0	1409.7	1396.0	447.4	6.6	4.3	.0098	3.293	3.290	2	25.5
283	4.184	.020	3	0	70139.	967.	69171.66	1.000	476.6	1409.6	1396.0	454.0	6.6	4.3	.0098	3.304	3.301	1	25.5
284	4.204	.020	3	0	70394.	897.	69496.92	1.000	483.2	1409.5	1396.0	460.6	6.6	4.3	.0098	3.314	3.312	1	25.5
285	4.224	.020	3	0	70631.	826.	69805.70	1.000	489.9	1409.4	1396.0	467.3	6.7	4.2	.0098	3.338	3.335	2	25.5
286	4.244	.020	3	0	70846.	754.	70092.63	1.000	496.6	1409.3	1396.0	474.0	6.7	4.2	.0098	3.348	3.345	1	25.5
287	4.264	.020	3	0	71041.	681.	70359.27	1.000	503.3	1409.2	1396.0	480.7	6.7	4.2	.0098	3.357	3.354	1	25.5
288	4.284	.020	3	0	71213.	608.	70605.30	1.000	510.0	1409.2	1396.0	487.4	6.7	4.2	.0098	3.366	3.363	1	25.5
289	4.304	.020	3	0	71367.	534.	70832.39	1.000	516.8	1409.1	1396.0	494.2	6.8	4.1	.0098	3.388	3.385	2	25.5
290	4.324	.020	3	0	71499.	460.	71039.26	1.000	523.6	1409.0	1396.0	501.0	6.8	4.1	.0098	3.396	3.393	1	25.5
291	4.344	.020	3	0	71608.	385.	71223.60	1.000	530.4	1408.9	1396.0	507.8	6.8	4.1	.0098	3.403	3.400	1	25.5
292	4.364	.020	3	0	71694.	309.	71385.13	1.000	537.2	1408.8	1396.0	514.6	6.8	4.0	.0098	3.410	3.407	1	25.5
293	4.384	.020	3	0	71758.	233.	71525.61	1.000	544.0	1408.7	1396.0	521.4	6.8	4.0	.0098	3.416	3.414	1	25.5
294	4.404	.020	3	0	71799.	156.	71642.77	1.000	550.9	1408.6	1396.0	528.3	6.8	4.0	.0098	3.422	3.419	1	25.5
295	4.424	.020	3	0	71817.	78.	71738.43	1.000	557.7	1408.5	1396.0	535.1	6.9	4.0	.0098	3.427	3.425	1	25.5
296	4.444	.020	3	0	71810.	0.	71810.27	1.000	564.6	1408.4	1396.0	542.0	6.9	3.9	.0098	3.432	3.430	1	25.5
297	4.464	.020	3	0	71860.	0.	71860.22	1.000	571.5	1408.3	1396.0	548.9	6.9	3.9	.0098	3.437	3.434	1	25.5
298	4.484	.020	3	0	71886.	0.	71886.20	1.000	578.4	1408.2	1396.0	555.7	6.9	3.9	.0098	3.437	3.435	2	25.5
299	4.504	.020	3	0	71888.	0.	71888.09	1.000	585.2	1408.1	1396.0	562.6	6.9	3.9	.0098	3.438	3.435	2	25.5
300	4.524	.020	3	0	71865.	0.	71864.63	1.000	592.1	1408.0	1396.0	569.5	6.9	3.8	.0098	3.437	3.435	2	25.5
301	4.544	.020	3	0	71813.	0.	71813.33	1.000	598.9	1407.9	1396.0	576.3	6.8	3.8	.0098	3.423	3.420	1	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
302	4.564	.020	3	0	71739.	0.	71739.02	1.000	605.8	1407.8	1396.0	583.2	6.8	3.8	.0098	3.423	3.424	0	25.5
303	4.584	.020	3	0	71640.	0.	71639.99	1.000	612.6	1407.7	1396.0	590.0	6.9	3.7	.0098	3.425	3.423	2	25.5

304	4.604	.020	3	0	71513.	0.	71513.23	1.000	617.9	1407.8	1396.0	598.7	6.8	3.7	.0098	3.407	3.408	1	25.5
305	4.624	.020	3	0	71367.	0.	71366.52	1.000	626.3	1407.5	1396.0	603.7	6.8	3.7	.0098	3.409	3.409	0	25.5
306	4.644	.020	3	0	71190.	0.	71190.36	1.000	633.1	1407.4	1396.0	610.5	6.8	3.6	.0098	3.395	3.392	1	25.5
307	4.664	.020	3	0	70993.	0.	70992.68	1.000	639.9	1407.3	1396.0	617.2	6.8	3.6	.0098	3.395	3.393	0	25.5
308	4.684	.020	3	0	70767.	0.	70767.42	1.000	646.6	1407.2	1396.0	624.0	6.8	3.6	.0098	3.378	3.375	1	25.5
309	4.704	.020	3	0	70521.	0.	70520.84	1.000	653.4	1407.1	1396.0	630.8	6.7	3.6	.0098	3.373	3.370	2	25.5
310	4.724	.020	3	0	70248.	0.	70247.71	1.000	660.1	1407.0	1396.0	637.5	6.7	3.5	.0098	3.354	3.351	1	25.5
311	4.744	.020	3	0	69949.	0.	69949.33	1.000	666.7	1406.9	1396.0	644.1	6.7	3.5	.0098	3.334	3.331	1	25.5
312	4.764	.020	3	0	69629.	0.	69628.70	1.000	673.4	1406.8	1396.0	650.8	6.7	3.5	.0098	3.327	3.325	2	25.5
313	4.784	.020	3	0	69283.	0.	69283.18	1.000	680.0	1406.7	1396.0	657.4	6.6	3.4	.0098	3.307	3.304	1	25.5
314	4.804	.020	3	0	68911.	0.	68910.66	1.000	686.6	1406.5	1396.0	663.9	6.6	3.4	.0098	3.275	3.281	5	25.5
315	4.824	.020	3	0	68519.	0.	68519.20	1.000	693.1	1406.4	1396.0	670.5	6.6	3.4	.0098	3.275	3.281	5	25.5
316	4.844	.020	3	0	68101.	0.	68101.24	1.000	699.6	1406.3	1396.0	677.0	6.5	3.3	.0098	3.243	3.248	5	25.5
317	4.864	.020	3	0	67661.	0.	67660.66	1.000	706.0	1406.2	1396.0	683.4	6.4	3.3	.0098	3.215	3.220	6	25.5
318	4.884	.020	3	0	67202.	0.	67201.66	1.000	712.4	1406.1	1396.0	689.8	6.4	3.3	.0098	3.214	3.219	5	25.5
319	4.904	.020	3	0	66718.	0.	66718.30	1.000	718.8	1406.0	1396.0	696.2	6.4	3.2	.0098	3.180	3.186	5	25.5
320	4.924	.020	3	0	66212.	0.	66212.31	1.000	725.1	1405.9	1396.0	702.5	6.3	3.2	.0098	3.147	3.152	5	25.5
321	4.944	.020	3	0	65689.	0.	65688.55	1.000	731.4	1405.8	1396.0	708.8	6.3	3.2	.0098	3.144	3.149	5	25.5
322	4.964	.020	3	0	65144.	0.	65144.00	1.000	737.6	1405.7	1396.0	715.0	6.2	3.1	.0098	3.110	3.115	5	25.5
323	4.984	.020	3	0	64578.	0.	64577.92	1.000	743.8	1405.6	1396.0	721.2	6.2	3.1	.0098	3.076	3.081	5	25.5
324	5.004	.020	3	0	63992.	0.	63992.05	1.000	749.8	1405.4	1396.0	727.2	6.1	3.1	.0098	3.042	3.046	5	25.5
325	5.024	.020	3	0	63386.	0.	63386.44	1.000	755.9	1405.3	1396.0	733.3	6.0	3.0	.0098	3.012	3.017	6	25.5
326	5.044	.020	3	0	62763.	0.	62762.79	1.000	761.8	1405.2	1396.0	739.2	6.0	3.0	.0098	2.983	2.987	6	25.5
327	5.064	.020	3	0	62123.	0.	62122.76	1.000	767.7	1405.1	1396.0	745.1	5.9	3.0	.0098	2.953	2.957	6	25.5
328	5.084	.020	3	0	61465.	0.	61464.78	1.000	773.6	1405.0	1396.0	751.0	5.8	2.9	.0098	2.918	2.923	5	25.5
329	5.104	.020	3	0	60790.	0.	60790.11	1.000	779.4	1404.9	1396.0	756.7	5.8	2.9	.0098	2.888	2.893	6	25.5
330	5.124	.020	3	0	60101.	0.	60100.97	1.000	785.1	1404.8	1396.0	762.5	5.7	2.9	.0098	2.853	2.858	5	25.5
331	5.144	.020	3	0	59397.	0.	59397.35	1.000	790.7	1404.7	1396.0	768.1	5.6	2.8	.0098	2.823	2.828	6	25.5
332	5.164	.020	3	0	58679.	0.	58679.02	1.000	796.3	1404.6	1396.0	773.7	5.6	2.8	.0098	2.788	2.793	5	25.5
333	5.184	.020	3	0	57948.	0.	57947.75	1.000	801.8	1404.4	1396.0	779.2	5.5	2.8	.0098	2.754	2.758	5	25.5
334	5.204	.020	3	0	57204.	0.	57204.05	1.000	807.2	1404.3	1396.0	784.6	5.4	2.7	.0098	2.719	2.723	5	25.5
335	5.224	.020	3	0	56447.	0.	56447.16	1.000	812.6	1404.2	1396.0	790.0	5.4	2.7	.0098	2.684	2.689	5	25.5
[illegible]	5.244	.020	3	0	55681.	0.	55681.42	1.000	817.9	1404.1	1396.0	795.3	5.3	2.7	.0098	2.650	2.654	5	25.5
[illegible]	5.264	.020	3	0	54904.	0.	54903.54	1.000	823.1	1404.0	1396.0	800.5	5.2	2.6	.0098	2.615	2.620	5	25.5
338	5.284	.020	3	0	54118.	0.	54117.81	1.000	828.3	1403.9	1396.0	805.7	5.2	2.6	.0098	2.581	2.585	5	25.5
339	5.304	.020	3	0	53324.	0.	53323.50	1.000	833.4	1403.8	1396.0	810.8	5.1	2.6	.0098	2.547	2.551	5	25.5
340	5.324	.020	3	0	52521.	0.	52521.05	1.000	838.4	1403.7	1396.0	815.8	5.0	2.6	.0098	2.513	2.517	5	25.5
341	5.344	.020	3	0	51708.	0.	51707.91	1.000	843.3	1403.6	1396.0	820.7	4.9	2.5	.0098	2.454	2.458	5	25.5
342	5.364	.020	3	0	50889.	0.	50889.05	1.000	848.2	1403.4	1396.0	825.6	4.8	2.5	.0098	2.421	2.425	5	25.5
343	5.384	.020	3	0	50065.	0.	50064.98	1.000	852.9	1403.3	1396.0	830.3	4.8	2.5	.0098	2.387	2.391	5	25.5
344	5.404	.020	3	0	49236.	0.	49236.16	1.000	857.6	1403.2	1396.0	835.0	4.7	2.4	.0098	2.354	2.358	5	25.5
345	5.424	.020	3	0	48400.	0.	48400.38	1.000	862.2	1403.1	1396.0	839.6	4.6	2.4	.0098	2.298	2.302	5	25.5
346	5.444	.020	3	0	47563.	0.	47563.44	1.000	866.8	1403.0	1396.0	844.2	4.5	2.4	.0098	2.265	2.269	5	25.5
347	5.464	.020	3	0	46722.	0.	46721.99	1.000	871.2	1402.9	1396.0	848.6	4.5	2.3	.0098	2.233	2.236	5	25.5
348	5.484	.020	3	0	45878.	0.	45877.89	1.000	875.6	1402.8	1396.0	853.0	4.4	2.3	.0098	2.179	2.182	5	25.5
349	5.504	.020	3	0	45034.	0.	45034.03	1.000	879.9	1402.7	1396.0	857.3	4.3	2.3	.0098	2.147	2.151	5	25.5
350	5.524	.020	3	0	44187.	0.	44186.54	1.000	884.1	1402.6	1396.0	861.5	4.2	2.2	.0098	2.099	2.102	6	25.5
351	5.544	.020	3	0	43340.	0.	43340.21	1.000	888.2	1402.5	1396.0	865.6	4.1	2.2	.0098	2.067	2.071	5	25.5
352	5.564	.020	3	0	42493.	0.	42493.43	1.000	892.3	1402.4	1396.0	869.6	4.0	2.2	.0098	2.017	2.020	5	25.5
353	5.584	.020	3	0	41649.	0.	41648.70	1.000	896.2	1402.3	1396.0	873.6	4.0	2.1	.0098	1.986	1.990	5	25.5
354	5.604	.020	3	0	40806.	0.	40805.75	1.000	900.1	1402.2	1396.0	877.5	3.9	2.1	.0098	1.937	1.940	5	25.5
355	5.624	.020	3	0	39966.	0.	39965.63	1.000	903.9	1402.1	1396.0	881.3	3.8	2.1	.0098	1.908	1.911	5	25.5
356	5.644	.020	3	0	39127.	0.	39127.05	1.000	907.6	1402.0	1396.0	885.0	3.7	2.0	.0098	1.860	1.863	5	25.5
357	5.664	.020	3	0	38293.	0.	38293.25	1.000	911.3	1401.9	1396.0	888.7	3.7	2.0	.0098	1.831	1.834	5	25.5
358	5.684	.020	3	0	37463.	0.	37463.05	1.000	914.9	1401.8	1396.0	892.3	3.6	2.0	.0098	1.785	1.788	5	25.5
359	5.704	.020	3	0	36637.	0.	36636.91	1.000	918.3	1401.7	1396.0	895.7	3.5	1.9	.0098	1.740	1.743	5	25.5
360	5.724	.020	3	0	35818.	0.	35817.79	1.000	921.8	1401.6	1396.0	899.2	3.4	1.9	.0098	1.712	1.715	5	25.5
361	5.744	.020	3	0	35003.	0.	35003.49	1.000	925.1	1401.5	1396.0	902.5	3.3	1.9	.0098	1.668	1.671	5	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
362	5.764	.020	3	0	34194.	0.	34194.40	1.000	928.4	1401.4	1396.0	905.8	3.3	1.8	.0098	1.626	1.628	5	25.5
363	5.784	.020	3	0	33393.	0.	33393.23	1.000	931.5	1401.3	1396.0	908.9	3.2	1.8	.0098	1.584	1.586	5	25.5
364	5.804	.020	3	0	32599.	0.	32599.12	1.000	934.6	1401.2	1396.0	912.0	3.1	1.8	.0098	1.558	1.561	5	25.5

365	5.824	.020	3	0	31812.	0.	31812.38	1.000	937.7	1401.1	1396.0	915.1	3.0	1.8	.0098	1.518	1.520	5 25.5
366	5.844	.020	3	0	31034.	0.	31034.42	1.000	940.6	1401.0	1396.0	918.0	3.0	1.7	.0098	1.478	1.481	5 25.5
367	5.864	.020	3	0	30263.	0.	30263.45	1.000	943.5	1400.9	1396.0	920.9	2.9	1.7	.0098	1.442	1.437	6 25.5
368	5.884	.020	3	0	29504.	0.	29503.87	1.000	946.4	1400.8	1396.0	923.7	2.8	1.7	.0098	1.418	1.414	5 25.5
369	5.904	.020	3	0	28752.	0.	28751.80	1.000	949.1	1400.7	1396.0	926.5	2.7	1.6	.0098	1.367	1.362	5 25.5
370	5.924	.020	3	0	28009.	0.	28009.26	1.000	951.8	1400.6	1396.0	929.2	2.7	1.6	.0098	1.344	1.340	5 25.5
371	5.944	.020	3	0	27276.	0.	27275.93	1.000	954.4	1400.5	1396.0	931.8	2.6	1.6	.0098	1.295	1.291	5 25.5
372	5.964	.020	3	0	26555.	0.	26554.66	1.000	956.9	1400.4	1396.0	934.3	2.5	1.6	.0098	1.273	1.269	5 25.5
373	5.984	.020	3	0	25842.	0.	25841.94	1.000	959.4	1400.4	1396.0	936.8	2.5	1.5	.0098	1.227	1.223	5 25.5

KTT= 0 I= 374 T= 6.00

TF= .16 QTF= 8913. TP= 4.50 QP= 71888. TRS= 4.48 TB= .02
BRD= 23.7 BRW= 959.4 HU=1419.7 HY=1400.4 HC=1396.0 ALG=25.500 QO= 3.6260
Z= .48 TFH= 3.24 BO= 936.8 TFI= 1.27

1

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QTIME***** 16045.0   23045.0   30045.0   37045.0   44045.0   51045.0   58045.0   65045.0   72045.0   79045.0     DISCHARGE
   .160*        .         .         .         .         .         .         .         .         .         .        9046.
   .200*        .         .         .         .         .         .         .         .         .         .        9099.
   .240*        .         .         .         .         .         .         .         .         .         .        9155.
   .280*        .         .         .         .         .         .         .         .         .         .        9212.
   .320*        .         .         .         .         .         .         .         .         .         .        9270.
   .360*        .         .         .         .         .         .         .         .         .         .        9329.
   .400*        .         .         .         .         .         .         .         .         .         .        9388.
   .440.*       .         .         .         .         .         .         .         .         .         .        9447.
   .480.*       .         .         .         .         .         .         .         .         .         .        9505.
   .520.*       .         .         .         .         .         .         .         .         .         .        9563.
   .560.*       .         .         .         .         .         .         .         .         .         .        9620.
   .600.*       .         .         .         .         .         .         .         .         .         .        9677.
   .640.*       .         .         .         .         .         .         .         .         .         .        9732.
   .680.*       .         .         .         .         .         .         .         .         .         .        9787.
   .720.*       .         .         .         .         .         .         .         .         .         .        9841.
   .760.*       .         .         .         .         .         .         .         .         .         .        9868.
   .800. *      .         .         .         .         .         .         .         .         .         .       10245.
   .840. *      .         .         .         .         .         .         .         .         .         .       10271.
   .880.  *     .         .         .         .         .         .         .         .         .         .       11115.
   .920.   *    .         .         .         .         .         .         .         .         .         .       11624.
   .960.    *   .         .         .         .         .         .         .         .         .         .       12569.
  1.000.    *   .         .         .         .         .         .         .         .         .         .       12731.
  1.040.     *  .         .         .         .         .         .         .         .         .         .       12898.
  1.080.     *  .         .         .         .         .         .         .         .         .         .       13074.
  1.120.     *  .         .         .         .         .         .         .         .         .         .       13259.
  1.160.     *  .         .         .         .         .         .         .         .         .         .       13452.
  1.200.      * .         .         .         .         .         .         .         .         .         .       13655.
  1.240.      * .         .         .         .         .         .         .         .         .         .       13868.
  1.280.      * .         .         .         .         .         .         .         .         .         .       14091.
  1.320.       *.         .         .         .         .         .         .         .         .         .       14324.
  1.360.       *.         .         .         .         .         .         .         .         .         .       14569.
  1.400.       *.         .         .         .         .         .         .         .         .         .       14825.
  1.440.        *         .         .         .         .         .         .         .         .         .       15092.
  1.480.        *         .         .         .         .         .         .         .         .         .       15372.
  1.520.        *         .         .         .         .         .         .         .         .         .       15664.
  1.560.         *        .         .         .         .         .         .         .         .         .       15970.
  1.600.         *        .         .         .         .         .         .         .         .         .       16289.
  1.640.         .*       .         .         .         .         .         .         .         .         .       16623.
  1.680.         .*       .         .         .         .         .         .         .         .         .       16971.
  1.720.         . *      .         .         .         .         .         .         .         .         .       17334.
  1.760.         . *      .         .         .         .         .         .         .         .         .       17713.
  1.800.         .  *     .         .         .         .         .         .         .         .         .       18108.
  1.840.         .   *    .         .         .         .         .         .         .         .         .       18519.
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1.880.	18948.
1.920.	19394.
1.960.	19859.
2.000.	20343.
2.040.	20846.
2.080.	21370.
2.120.	21913.
2.160.	22477.
2.200.	23061.
2.240.	23667.
2.280.	24295.
2.320.	24946.
2.360.	25619.
2.400.	26315.
2.440.	27035.
2.480.	27778.
2.520.	28546.
2.560.	29338.
2.600.	30152.
2.640.	30992.
2.680.	31854.
2.720.	32739.
2.760.	33649.
2.800.	34583.
2.840.	35538.
2.880.	36515.
2.920.	37534.
2.960.	38579.
3.000.	39644.
3.040.	40729.
3.080.	41831.
3.120.	42951.
3.160.	44086.
3.200.	45233.
3.240.	46392.
3.280.	47558.
3.320.	48732.
3.360.	49909.
3.400.	51090.
3.440.	52268.
3.480.	53439.
3.520.	54608.
3.560.	55766.
3.600.	56910.
3.640.	58036.
3.680.	59142.
3.720.	60222.
3.760.	61273.
3.800.	62292.
3.840.	63314.
3.880.	64317.
3.920.	65271.
3.960.	66178.
4.000.	67030.
4.040.	67822.
4.080.	68551.
4.120.	69213.
4.160.	69807.
4.200.	70343.
4.240.	70803.
4.280.	71179.
4.320.	71473.
4.360.	71677.
4.400.	71791.
4.440.	71812.
4.480.	71881.

4.520.	71869.
4.560.	71754.
4.600.	71540.
4.640.	71226.
4.680.	70812.
4.720.	70302.
4.760.	69693.
4.800.	68985.
4.840.	68185.
4.880.	67293.
4.920.	66313.
4.960.	65253.
5.000.	64109.
5.040.	62887.
5.080.	61596.
5.120.	60239.
5.160.	58823.
5.200.	57353.
5.240.	55834.
5.280.	54275.
5.320.	52681.
5.360.	51053.
5.400.	49402.
5.440.	47731.
5.480.	46047.
5.520.	44356.
5.560.	42663.
5.600.	40974.
5.640.	39295.
5.680.	37629.
5.720.	35982.
5.760.	34356.
5.800.	32758.
5.840.	31190.
5.880.	29656.
5.920.	28158.
5.960.	26699.

APPENDIX J

Breach Output - SBFRS

BREACH MODEL, MICRO-VERSION: 1/87

NG FAILURE AT STA 60+50 IN SBFRS FILL: SB72TOP.STH 23OCT90

HI= 1192.00 HU= 1193.33 HL= 1175.00 HPI= 1176.90 HSP= 1176.90

(QIN(I),I=1,8)
2555.00 1488.00 1127.00 965.00 953.00 .00 .00 .00

(TIN(I),I=1,8)
.00 2.00 4.00 6.00 8.00 .00 .00 .00

(RSA(I),I=1,8)
1317.00 967.00 723.00 500.00 350.00 250.00 133.00 .00

(HSA(I),I=1,8)
1193.50 1191.50 1189.50 1187.50 1185.50 1183.50 1181.50 1175.00

ZU= 3.00 ZD= 2.00 ZC= .00 PORW= .00 GL= .00 GS= .00 VMP= .00

D50C= .00 PORC= .00 UWC= .00 CNC= .0000 AFRC= .00 COHC= .0 UNFCC= .00

D50S= .18 PORS= .33 UWS=125.60 CNS= .0000 AFRS= 39.00 COHS= 100.0 UNFCS= 10.00

BR= 1.00 WC= 12.0 CRL= 5280.0 SM= 21.00 WV= 5280.0 CNV= .0450 D50DF= .00 UNFCDF= .00

DTH= .020 DBG= .001 H= .1000 TEH= 8.0 ERR= .10 FPT= 2.0 TPR= 1.0

(SPQ(I),I=1,8)
.00 230.00 470.00 700.00 900.00 1080.00 1210.00 1350.00

(SPH(I),I=1,8)
.00 3.00 5.40 7.40 9.40 11.40 13.40 15.40

CRL= 5280. BM= 34. AFR= 39.00 BO= 16.4 Z= .48

1

AFR= 39.0 TH1= 64.50 H1= 6.68 TH2= 51.75 H2= 22.93 TH3= 45.38 H3= 78.83

1

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
51	1.020	.020	4	0	8468.	1313.	7155.48	1.000	16.2	1191.8	1175.0	16.2	1185.0	11.8	.0098	.136	.136	1	.0
52	1.040	.020	4	0	8572.	1312.	7259.40	1.000	16.3	1191.8	1175.0	16.3	1185.1	11.7	.0098	.134	.134	1	.0
53	1.060	.020	4	0	8674.	1311.	7362.06	1.000	16.5	1191.7	1175.0	16.5	1185.1	11.7	.0098	.131	.132	1	.0
[illegible]	1.080	.020	4	0	8774.	1311.	7463.49	1.000	16.6	1191.7	1175.0	16.6	1185.2	11.6	.0098	.129	.129	1	.0
55	1.100	.020	4	0	8874.	1310.	7563.61	1.000	16.7	1191.7	1175.0	16.7	1185.3	11.6	.0098	.127	.127	1	.0
56	1.120	.020	4	0	8972.	1309.	7662.50	1.000	16.8	1191.7	1175.0	16.8	1185.3	11.6	.0098	.125	.125	1	.0
57	1.140	.020	4	0	9069.	1308.	7760.20	1.000	17.0	1191.7	1175.0	17.0	1185.4	11.5	.0098	.123	.124	1	.0
58	1.160	.020	4	0	9164.	1308.	7856.69	1.000	17.1	1191.7	1175.0	17.1	1185.4	11.5	.0098	.122	.122	1	.0
59	1.180	.020	4	0	9259.	1307.	7951.92	1.000	17.2	1191.7	1175.0	17.2	1185.5	11.4	.0098	.120	.120	1	.0
60	1.200	.020	4	0	9352.	1306.	8045.97	1.000	17.3	1191.7	1175.0	17.3	1185.6	11.4	.0098	.118	.118	1	.0

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
61	1.220	.020	4	0	9444.	1305.	8138.85	1.000	17.4	1191.7	1175.0	17.4	1185.6	11.3	.0098	.116	.116	1	.0
62	1.240	.020	4	0	9535.	1304.	8230.57	1.000	17.6	1191.6	1175.0	17.6	1185.7	11.3	.0098	.115	.115	1	.0
63	1.260	.020	4	0	9624.	1303.	8321.13	1.000	17.7	1191.6	1175.0	17.7	1185.7	11.3	.0098	.113	.113	1	.0
64	1.280	.020	4	0	9713.	1302.	8410.52	1.000	17.8	1191.6	1175.0	17.8	1185.8	11.2	.0098	.111	.111	1	.0
65	1.300	.020	4	0	9800.	1301.	8498.78	1.000	17.9	1191.6	1175.0	17.9	1185.8	11.2	.0098	.110	.110	1	.0
66	1.320	.020	4	0	9886.	1300.	8585.92	1.000	18.0	1191.6	1175.0	18.0	1185.9	11.1	.0098	.108	.108	1	.0
67	1.340	.020	4	0	9971.	1299.	8671.94	1.000	18.1	1191.6	1175.0	18.1	1185.9	11.1	.0098	.107	.107	1	.0
68	1.360	.020	4	0	10055.	1299.	8756.85	1.000	18.2	1191.6	1175.0	18.2	1186.0	11.1	.0098	.105	.105	1	.0

PIPE FLOW TO WEIR FLOW TRANSITION

1175.		7.		18.	4023.	6401.	10424.		.027	1.407		140.		150.		5.	108.		
.03334	.03335	.32573	2.78649	.0098	5.5	29.4	3.4	5.0	163.0										
		1	14.6	6.7	10.2	5169.9	.0133	1	1.4000	1.4133	25.5	103.6	107.7						
70	1.400	.020	3	0	10696.	1298.	9398.69	1.000	35.7	1191.6	1175.0	18.2	.0	11.0	.0098	.000	.000	0	25.5
71	1.420	.020	3	0	10763.	1296.	9466.56	1.000	36.1	1191.5	1175.0	18.6	.4	11.0	.0098	.215	.215	2	25.5
72	1.440	.020	3	0	10831.	1295.	9535.68	1.000	36.6	1191.5	1175.0	19.1	.4	11.0	.0098	.220	.220	1	25.5
73	1.460	.020	3	0	10901.	1294.	9606.38	1.000	37.0	1191.5	1175.0	19.5	.4	11.0	.0098	.225	.225	1	25.5
74	1.480	.020	3	0	10972.	1293.	9678.54	1.000	37.5	1191.5	1175.0	20.0	.5	11.0	.0098	.230	.230	1	25.5
75	1.500	.020	3	0	11045.	1292.	9752.36	1.000	37.9	1191.5	1175.0	20.4	.5	11.0	.0098	.235	.235	1	25.5
76	1.520	.020	3	0	11119.	1291.	9827.70	1.000	38.4	1191.5	1175.0	20.9	.5	11.0	.0098	.240	.240	1	25.5
77	1.540	.020	3	0	11195.	1290.	9904.76	1.000	38.9	1191.4	1175.0	21.4	.5	11.0	.0098	.246	.246	1	25.5
78	1.560	.020	3	0	11272.	1289.	9983.43	1.000	39.4	1191.4	1175.0	21.9	.5	11.0	.0098	.251	.251	1	25.5
79	1.580	.020	3	0	11352.	1288.	10063.89	1.000	39.9	1191.4	1175.0	22.4	.5	10.9	.0098	.257	.257	1	25.5
80	1.600	.020	3	0	11431.	1286.	10144.72	1.000	40.4	1191.4	1175.0	23.0	.5	10.8	.0098	.259	.259	2	25.5
81	1.620	.020	3	0	11511.	1285.	10225.73	1.000	41.0	1191.4	1175.0	23.5	.5	10.7	.0098	.261	.262	1	25.5
82	1.640	.020	3	0	11591.	1284.	10307.16	1.000	41.5	1191.4	1175.0	24.0	.5	10.6	.0098	.263	.263	1	25.5
83	1.660	.020	3	0	11671.	1283.	10388.55	1.000	42.0	1191.3	1175.0	24.5	.5	10.5	.0098	.265	.265	2	25.5
84	1.680	.020	3	0	11752.	1282.	10470.36	1.000	42.6	1191.3	1175.0	25.1	.5	10.4	.0098	.268	.268	1	25.5
85	1.700	.020	3	0	11833.	1280.	10552.23	1.000	43.1	1191.3	1175.0	25.6	.5	10.3	.0098	.269	.270	2	25.5
86	1.720	.020	3	0	11914.	1279.	10634.48	1.000	43.6	1191.3	1175.0	26.1	.5	10.3	.0098	.272	.272	1	25.5
87	1.740	.020	3	0	11995.	1278.	10716.93	1.000	44.2	1191.3	1175.0	26.7	.5	10.2	.0098	.274	.274	1	25.5
88	1.760	.020	3	0	12076.	1277.	10799.35	1.000	44.7	1191.3	1175.0	27.2	.6	10.1	.0098	.276	.276	2	25.5
89	1.780	.020	3	0	12157.	1275.	10882.05	1.000	45.3	1191.2	1175.0	27.8	.6	10.0	.0098	.278	.278	1	25.5
90	1.800	.020	3	0	12239.	1274.	10964.93	1.000	45.8	1191.2	1175.0	28.4	.6	9.9	.0098	.280	.280	2	25.5
91	1.820	.020	3	0	12321.	1273.	11047.87	1.000	46.4	1191.2	1175.0	28.9	.6	9.8	.0098	.282	.282	1	25.5
92	1.840	.020	3	0	12402.	1271.	11130.92	1.000	47.0	1191.2	1175.0	29.5	.6	9.8	.0098	.284	.284	2	25.5
93	1.860	.020	3	0	12484.	1270.	11214.22	1.000	47.6	1191.2	1175.0	30.1	.6	9.7	.0098	.286	.286	2	25.5
94	1.880	.020	3	0	12566.	1269.	11297.75	1.000	48.1	1191.1	1175.0	30.6	.6	9.6	.0098	.289	.289	1	25.5
95	1.900	.020	3	0	12648.	1267.	11381.26	1.000	48.7	1191.1	1175.0	31.2	.6	9.5	.0098	.291	.291	1	25.5
96	1.920	.020	3	0	12731.	1266.	11464.94	1.000	49.3	1191.1	1175.0	31.8	.6	9.5	.0098	.293	.293	2	25.5
97	1.940	.020	3	0	12813.	1264.	11548.60	1.000	49.9	1191.1	1175.0	32.4	.6	9.4	.0098	.295	.295	1	25.5
98	1.960	.020	3	0	12895.	1263.	11632.39	1.000	50.5	1191.1	1175.0	33.0	.6	9.3	.0098	.297	.297	2	25.5
99	1.980	.020	3	0	12978.	1262.	11716.28	1.000	51.1	1191.0	1175.0	33.6	.6	9.3	.0098	.299	.299	1	25.5
100	2.000	.020	3	0	13060.	1260.	11800.27	1.000	51.7	1191.0	1175.0	34.2	.6	9.2	.0098	.302	.302	1	25.5
101	2.020	.020	3	0	13143.	1259.	11884.11	1.000	52.3	1191.0	1175.0	34.8	.6	9.1	.0098	.303	.303	2	25.5
102	2.040	.020	3	0	13225.	1257.	11967.98	1.000	52.9	1191.0	1175.0	35.4	.6	9.1	.0098	.306	.306	1	25.5
103	2.060	.020	3	0	13308.	1256.	12052.04	1.000	53.5	1191.0	1175.0	36.0	.6	9.0	.0098	.308	.308	1	25.5
104	2.080	.020	3	0	13390.	1254.	12136.10	1.000	54.1	1190.9	1175.0	36.6	.6	8.9	.0098	.310	.310	1	25.5
105	2.100	.020	3	0	13473.	1253.	12220.12	1.000	54.8	1190.9	1175.0	37.3	.6	8.9	.0098	.312	.312	1	25.5
106	2.120	.020	3	0	13555.	1251.	12304.06	1.000	55.4	1190.9	1175.0	37.9	.6	8.8	.0098	.314	.314	1	25.5
107	2.140	.020	3	0	13637.	1249.	12387.91	1.000	56.0	1190.9	1175.0	38.5	.6	8.7	.0098	.316	.316	1	25.5
108	2.160	.020	3	0	13719.	1248.	12471.64	1.000	56.7	1190.8	1175.0	39.2	.6	8.7	.0098	.318	.318	1	25.5
109	2.180	.020	3	0	13802.	1246.	12555.48	1.000	57.3	1190.8	1175.0	39.8	.6	8.6	.0098	.320	.321	2	25.5
110	2.200	.020	3	0	13884.	1245.	12639.21	1.000	57.9	1190.8	1175.0	40.5	.6	8.6	.0098	.323	.323	1	25.5
111	2.220	.020	3	0	13966.	1243.	12722.94	1.000	58.6	1190.8	1175.0	41.1	.6	8.5	.0098	.325	.325	1	25.5
112	2.240	.020	3	0	14048.	1241.	12806.44	1.000	59.2	1190.7	1175.0	41.8	.7	8.5	.0098	.327	.327	1	25.5
113	2.260	.020	3	0	14129.	1240.	12889.77	1.000	59.9	1190.7	1175.0	42.4	.7	8.4	.0098	.329	.330	1	25.5
114	2.280	.020	3	0	14211.	1238.	12973.02	1.000	60.6	1190.7	1175.0	43.1	.7	8.4	.0098	.331	.331	1	25.5
115	2.300	.020	3	0	14293.	1236.	13056.25	1.000	61.2	1190.7	1175.0	43.7	.7	8.3	.0098	.334	.334	1	25.5
116	2.320	.020	3	0	14373.	1235.	13138.93	1.000	61.9	1190.7	1175.0	44.4	.7	8.3	.0098	.335	.336	1	25.5
117	2.340	.020	3	0	14455.	1233.	13221.75	1.000	62.6	1190.6	1175.0	45.1	.7	8.2	.0098	.338	.338	1	25.5
118	2.360	.020	3	0	14535.	1231.	13304.18	1.000	63.3	1190.6	1175.0	45.8	.7	8.2	.0098	.340	.340	1	25.5
119	2.380	.020	3	0	14616.	1229.	13386.27	1.000	63.9	1190.6	1175.0	46.5	.7	8.1	.0098	.342	.342	1	25.5

120	2.400	.020	3	0	14696.	1228.	13468.42	1.000	64.6	1190.6	1175.0	47.1	.7	8.1	.0098	.344	.344	1	25.5
121	2.420	.020	3	0	14776.	1226.	13549.90	1.000	65.3	1190.5	1175.0	47.8	.7	8.0	.0098	.346	.346	1	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
[illegible]	2.440	.020	3	0	14855.	1224.	13631.16	1.000	66.0	1190.5	1175.0	48.5	.7	8.0	.0098	.348	.348	1	25.5
[illegible]	2.460	.020	3	0	14934.	1222.	13712.20	1.000	66.7	1190.5	1175.0	49.2	.7	7.9	.0098	.350	.350	1	25.5
124	2.480	.020	3	0	15013.	1220.	13792.98	1.000	67.4	1190.4	1175.0	49.9	.7	7.9	.0098	.353	.353	1	25.5
125	2.500	.020	3	0	15092.	1218.	13873.25	1.000	68.1	1190.4	1175.0	50.6	.7	7.8	.0098	.354	.354	2	25.5
126	2.520	.020	3	0	15169.	1216.	13952.98	1.000	68.8	1190.4	1175.0	51.4	.7	7.8	.0098	.356	.356	1	25.5
127	2.540	.020	3	0	15247.	1214.	14032.60	1.000	69.6	1190.4	1175.0	52.1	.7	7.8	.0098	.358	.358	1	25.5
128	2.560	.020	3	0	15324.	1213.	14111.63	1.000	70.3	1190.3	1175.0	52.8	.7	7.7	.0098	.360	.361	1	25.5
129	2.580	.020	3	0	15401.	1211.	14190.28	1.000	71.0	1190.3	1175.0	53.5	.7	7.7	.0098	.362	.363	1	25.5
130	2.600	.020	3	0	15477.	1209.	14268.30	1.000	71.7	1190.3	1175.0	54.3	.7	7.6	.0098	.364	.365	1	25.5
131	2.620	.020	3	0	15553.	1207.	14345.88	1.000	72.5	1190.3	1175.0	55.0	.7	7.6	.0098	.366	.367	1	25.5
132	2.640	.020	3	0	15628.	1205.	14423.00	1.000	73.2	1190.2	1175.0	55.7	.7	7.5	.0098	.368	.369	1	25.5
133	2.660	.020	3	0	15703.	1203.	14499.62	1.000	73.9	1190.2	1175.0	56.5	.7	7.5	.0098	.370	.371	1	25.5
134	2.680	.020	3	0	15777.	1201.	14575.51	1.000	74.7	1190.2	1175.0	57.2	.7	7.5	.0098	.372	.372	1	25.5
135	2.700	.020	3	0	15850.	1199.	14650.61	1.000	75.4	1190.1	1175.0	58.0	.7	7.4	.0098	.374	.374	1	25.5
136	2.720	.020	3	0	15923.	1197.	14725.38	1.000	76.2	1190.1	1175.0	58.7	.8	7.4	.0098	.376	.376	1	25.5
137	2.740	.020	3	0	15995.	1195.	14799.32	1.000	76.9	1190.1	1175.0	59.5	.8	7.3	.0098	.378	.378	1	25.5
138	2.760	.020	3	0	16066.	1193.	14872.47	1.000	77.7	1190.0	1175.0	60.2	.8	7.3	.0098	.380	.380	2	25.5
139	2.780	.020	3	0	16136.	1191.	14945.02	1.000	78.5	1190.0	1175.0	61.0	.8	7.3	.0098	.381	.382	2	25.5
140	2.800	.020	3	0	16206.	1189.	15016.95	1.000	79.2	1190.0	1175.0	61.8	.8	7.2	.0098	.383	.383	2	25.5
141	2.820	.020	3	0	16275.	1187.	15087.75	1.000	80.0	1189.9	1175.0	62.5	.8	7.2	.0098	.385	.385	2	25.5
142	2.840	.020	3	0	16343.	1185.	15158.12	1.000	80.8	1189.9	1175.0	63.3	.8	7.2	.0098	.387	.387	2	25.5
143	2.860	.020	3	0	16411.	1183.	15227.54	1.000	81.6	1189.9	1175.0	64.1	.8	7.1	.0098	.389	.389	2	25.5
144	2.880	.020	3	0	16477.	1181.	15296.00	1.000	82.3	1189.9	1175.0	64.9	.8	7.1	.0098	.390	.390	2	25.5
145	2.900	.020	3	0	16543.	1179.	15363.71	1.000	83.1	1189.8	1175.0	65.6	.8	7.1	.0098	.393	.393	1	25.5
146	2.920	.020	3	0	16607.	1177.	15430.58	1.000	83.9	1189.8	1175.0	66.4	.8	7.0	.0098	.394	.394	1	25.5
[illegible]	2.940	.020	3	0	16671.	1175.	15496.61	1.000	84.7	1189.8	1175.0	67.2	.8	7.0	.0098	.396	.396	1	25.5
[illegible]	2.960	.020	3	0	16734.	1172.	15561.24	1.000	85.5	1189.7	1175.0	68.0	.8	6.9	.0098	.397	.397	1	25.5
149	2.980	.020	3	0	16795.	1170.	15625.28	1.000	86.3	1189.7	1175.0	68.8	.8	6.9	.0098	.399	.400	1	25.5
150	3.000	.020	3	0	16856.	1168.	15688.13	1.000	87.1	1189.7	1175.0	69.6	.8	6.9	.0098	.401	.401	1	25.5
151	3.020	.020	3	0	16915.	1166.	15749.77	1.000	87.9	1189.6	1175.0	70.4	.8	6.8	.0098	.402	.402	1	25.5
152	3.040	.020	3	0	16974.	1163.	15810.73	1.000	88.7	1189.6	1175.0	71.2	.8	6.8	.0098	.404	.404	1	25.5
153	3.060	.020	3	0	17031.	1161.	15870.01	1.000	89.5	1189.5	1175.0	72.0	.8	6.8	.0098	.404	.405	0	25.5
154	3.080	.020	3	0	17087.	1159.	15928.50	1.000	90.3	1189.5	1175.0	72.8	.8	6.7	.0098	.407	.407	1	25.5
155	3.100	.020	3	0	17142.	1156.	15985.73	1.000	91.2	1189.5	1175.0	73.7	.8	6.7	.0098	.409	.409	1	25.5
156	3.120	.020	3	0	17196.	1154.	16041.76	1.000	92.0	1189.4	1175.0	74.5	.8	6.7	.0098	.409	.409	0	25.5
157	3.140	.020	3	0	17248.	1152.	16096.62	1.000	92.8	1189.4	1175.0	75.3	.8	6.7	.0098	.412	.412	1	25.5
158	3.160	.020	3	0	17299.	1149.	16149.98	1.000	93.6	1189.4	1175.0	76.1	.8	6.6	.0098	.412	.412	0	25.5
159	3.180	.020	3	0	17349.	1147.	16202.37	1.000	94.4	1189.3	1175.0	77.0	.8	6.6	.0098	.414	.414	1	25.5
160	3.200	.020	3	0	17397.	1144.	16252.97	1.000	95.3	1189.3	1175.0	77.8	.8	6.6	.0098	.414	.414	0	25.5
161	3.220	.020	3	0	17444.	1142.	16302.51	1.000	96.1	1189.3	1175.0	78.6	.8	6.5	.0098	.417	.416	1	25.5
162	3.240	.020	3	0	17490.	1139.	16350.86	1.000	96.9	1189.2	1175.0	79.5	.8	6.5	.0098	.418	.418	1	25.5
163	3.260	.020	3	0	17534.	1137.	16397.38	1.000	97.8	1189.2	1175.0	80.3	.8	6.5	.0098	.418	.418	0	25.5
164	3.280	.020	3	0	17577.	1134.	16443.01	1.000	98.6	1189.1	1175.0	81.1	.8	6.4	.0098	.421	.420	1	25.5
165	3.300	.020	3	0	17618.	1132.	16486.50	1.000	99.5	1189.1	1175.0	82.0	.8	6.4	.0098	.421	.420	0	25.5
166	3.320	.020	3	0	17658.	1129.	16528.74	1.000	100.3	1189.1	1175.0	82.8	.8	6.4	.0098	.422	.422	1	25.5
167	3.340	.020	3	0	17695.	1126.	16569.10	1.000	101.2	1189.0	1175.0	83.7	.8	6.4	.0098	.422	.422	0	25.5
168	3.360	.020	3	0	17732.	1124.	16608.13	1.000	102.0	1189.0	1175.0	84.5	.8	6.3	.0098	.424	.424	1	25.5
169	3.380	.020	3	0	17767.	1121.	16645.79	1.000	102.9	1188.9	1175.0	85.4	.9	6.3	.0098	.426	.426	1	25.5
170	3.400	.020	3	0	17800.	1118.	16681.52	1.000	103.7	1188.9	1175.0	86.2	.9	6.3	.0098	.426	.426	0	25.5
171	3.420	.020	3	0	17831.	1116.	16715.53	1.000	104.6	1188.8	1175.0	87.1	.9	6.2	.0098	.428	.427	1	25.5
172	3.440	.020	3	0	17860.	1113.	16747.46	1.000	105.4	1188.8	1175.0	87.9	.9	6.2	.0098	.427	.427	1	25.5
[illegible]	3.460	.020	3	0	17888.	1110.	16777.89	1.000	106.3	1188.8	1175.0	88.8	.9	6.1	.0098	.429	.428	1	25.5
[illegible]	3.480	.020	3	0	17914.	1107.	16806.84	1.000	107.1	1188.7	1175.0	89.6	.9	6.1	.0098	.430	.430	1	25.5
175	3.500	.020	3	0	17938.	1104.	16833.33	1.000	108.0	1188.7	1175.0	90.5	.9	6.1	.0098	.430	.429	1	25.5
176	3.520	.020	3	0	17960.	1102.	16858.27	1.000	108.9	1188.6	1175.0	91.4	.9	6.1	.0098	.431	.431	1	25.5
177	3.540	.020	3	0	17980.	1099.	16881.01	1.000	109.7	1188.6	1175.0	92.2	.9	6.0	.0098	.431	.430	1	25.5
178	3.560	.020	3	0	17998.	1096.	16901.85	1.000	110.6	1188.5	1175.0	93.1	.9	6.0	.0098	.432	.432	1	25.5
179	3.580	.020	3	0	18014.	1093.	16920.66	1.000	111.4	1188.5	1175.0	94.0	.9	6.0	.0098	.433	.433	2	25.5
180	3.600	.020	3	0	18027.	1090.	16937.21	1.000	112.3	1188.5	1175.0	94.8	.9	5.9	.0098	.432	.432	1	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
182	3.640	.020	3	0	18048.	1084.	16964.33	1.000	114.0	1188.4	1175.0	96.6	.9	5.9	.0098	.433	.432	1	25.5
183	3.660	.020	3	0	18055.	1081.	16974.57	1.000	114.9	1188.3	1175.0	97.4	.9	5.8	.0098	.434	.434	1	25.5
[illegible]	3.680	.020	3	0	18060.	1077.	16982.96	1.000	115.8	1188.3	1175.0	98.3	.9	5.8	.0098	.435	.434	2	25.5
[illegible]	3.700	.020	3	0	18061.	1073.	16988.68	1.000	116.6	1188.2	1175.0	99.2	.9	5.8	.0098	.434	.433	1	25.5
186	3.720	.020	3	0	18061.	1068.	16992.31	1.000	117.5	1188.2	1175.0	100.0	.9	5.7	.0098	.435	.435	1	25.5
187	3.740	.020	3	0	18057.	1064.	16993.22	1.000	118.4	1188.1	1175.0	100.9	.9	5.7	.0098	.434	.434	1	25.5
188	3.760	.020	3	0	18051.	1059.	16991.99	1.000	119.3	1188.1	1175.0	101.8	.9	5.7	.0098	.435	.435	1	25.5
189	3.780	.020	3	0	18043.	1055.	16988.32	1.000	120.1	1188.0	1175.0	102.6	.9	5.6	.0098	.434	.434	1	25.5
190	3.800	.020	3	0	18032.	1050.	16982.05	1.000	121.0	1188.0	1175.0	103.5	.9	5.6	.0098	.434	.434	2	25.5
191	3.820	.020	3	0	18019.	1046.	16973.31	1.000	121.9	1187.9	1175.0	104.4	.9	5.6	.0098	.433	.433	1	25.5
192	3.840	.020	3	0	18003.	1041.	16961.93	1.000	122.7	1187.9	1175.0	105.2	.9	5.6	.0098	.434	.434	2	25.5
193	3.860	.020	3	0	17985.	1037.	16948.04	1.000	123.6	1187.8	1175.0	106.1	.9	5.5	.0098	.433	.432	1	25.5
194	3.880	.020	3	0	17963.	1032.	16931.46	1.000	124.5	1187.8	1175.0	107.0	.9	5.5	.0098	.433	.433	2	25.5
195	3.900	.020	3	0	17939.	1027.	16911.72	1.000	125.3	1187.7	1175.0	107.8	.9	5.5	.0098	.432	.432	1	25.5
196	3.920	.020	3	0	17912.	1022.	16889.89	1.000	126.2	1187.7	1175.0	108.7	.9	5.4	.0098	.432	.432	2	25.5
197	3.940	.020	3	0	17882.	1018.	16864.87	1.000	127.0	1187.6	1175.0	109.6	.9	5.4	.0098	.431	.431	1	25.5
198	3.960	.020	3	0	17849.	1013.	16836.62	1.000	127.9	1187.6	1175.0	110.4	.9	5.4	.0098	.430	.429	1	25.5
199	3.980	.020	3	0	17814.	1008.	16805.91	1.000	128.8	1187.5	1175.0	111.3	.9	5.3	.0098	.430	.430	2	25.5
200	4.000	.020	3	0	17775.	1003.	16772.28	1.000	129.6	1187.4	1175.0	112.1	.9	5.3	.0098	.428	.428	1	25.5
201	4.020	.020	3	0	17734.	998.	16736.04	1.000	130.5	1187.4	1175.0	113.0	.9	5.3	.0098	.427	.427	1	25.5
202	4.040	.020	3	0	17690.	993.	16697.63	1.000	131.3	1187.3	1175.0	113.8	.9	5.2	.0098	.427	.427	2	25.5
203	4.060	.020	3	0	17644.	988.	16656.94	1.000	132.2	1187.3	1175.0	114.7	.9	5.2	.0098	.426	.425	1	25.5
204	4.080	.020	3	0	17596.	982.	16613.62	1.000	133.0	1187.2	1175.0	115.5	.8	5.2	.0098	.424	.424	1	25.5
205	4.100	.020	3	0	17545.	977.	16567.67	1.000	133.9	1187.2	1175.0	116.4	.8	5.1	.0098	.422	.422	1	25.5
206	4.120	.020	3	0	17491.	972.	16519.18	1.000	134.7	1187.1	1175.0	117.2	.8	5.1	.0098	.422	.423	0	25.5
207	4.140	.020	3	0	17435.	967.	16468.56	1.000	135.6	1187.0	1175.0	118.1	.8	5.1	.0098	.422	.421	1	25.5
[illegible]	4.160	.020	3	0	17377.	962.	16415.32	1.000	136.4	1187.0	1175.0	118.9	.8	5.0	.0098	.420	.419	1	25.5
[illegible]	4.180	.020	3	0	17316.	956.	16359.76	1.000	137.2	1186.9	1175.0	119.8	.8	5.0	.0098	.418	.418	1	25.5
[illegible]	4.200	.020	3	0	17252.	951.	16301.24	1.000	138.1	1186.9	1175.0	120.6	.8	5.0	.0098	.416	.416	1	25.5
211	4.220	.020	3	0	17186.	946.	16240.41	1.000	138.9	1186.8	1175.0	121.4	.8	4.9	.0098	.415	.414	1	25.5
212	4.240	.020	3	0	17117.	940.	16176.95	1.000	139.7	1186.7	1175.0	122.2	.8	4.9	.0098	.413	.412	1	25.5
213	4.260	.020	3	0	17046.	935.	16110.86	1.000	140.6	1186.7	1175.0	123.1	.8	4.9	.0098	.411	.411	1	25.5
214	4.280	.020	3	0	16972.	930.	16042.14	1.000	141.4	1186.6	1175.0	123.9	.8	4.8	.0098	.409	.409	1	25.5
215	4.300	.020	3	0	16895.	924.	15970.79	1.000	142.2	1186.6	1175.0	124.7	.8	4.8	.0098	.407	.407	1	25.5
216	4.320	.020	3	0	16815.	919.	15896.83	1.000	143.0	1186.5	1175.0	125.5	.8	4.8	.0098	.405	.405	1	25.5
217	4.340	.020	3	0	16733.	913.	15820.24	1.000	143.8	1186.4	1175.0	126.3	.8	4.7	.0098	.403	.403	1	25.5
218	4.360	.020	3	0	16649.	908.	15741.05	1.000	144.6	1186.4	1175.0	127.1	.8	4.7	.0098	.402	.401	1	25.5
219	4.380	.020	3	0	16562.	902.	15659.59	1.000	145.4	1186.3	1175.0	127.9	.8	4.7	.0098	.400	.399	1	25.5
220	4.400	.020	3	0	16471.	896.	15575.20	1.000	146.2	1186.3	1175.0	128.7	.8	4.6	.0098	.398	.397	1	25.5
221	4.420	.020	3	0	16378.	890.	15488.56	1.000	147.0	1186.2	1175.0	129.5	.8	4.6	.0098	.396	.395	1	25.5
222	4.440	.020	3	0	16282.	883.	15398.99	1.000	147.8	1186.1	1175.0	130.3	.8	4.6	.0098	.394	.393	1	25.5
223	4.460	.020	3	0	16184.	877.	15306.85	1.000	148.6	1186.1	1175.0	131.1	.8	4.6	.0098	.392	.391	1	25.5
224	4.480	.020	3	0	16083.	871.	15212.42	1.000	149.3	1186.0	1175.0	131.9	.8	4.5	.0098	.389	.389	2	25.5
225	4.500	.020	3	0	15979.	864.	15115.02	1.000	150.1	1185.9	1175.0	132.6	.8	4.5	.0098	.387	.386	2	25.5
226	4.520	.020	3	0	15872.	858.	15014.68	1.000	150.9	1185.9	1175.0	133.4	.8	4.4	.0098	.383	.382	1	25.5
227	4.540	.020	3	0	15763.	851.	14912.16	1.000	151.6	1185.8	1175.0	134.2	.8	4.4	.0098	.381	.380	1	25.5
228	4.560	.020	3	0	15651.	845.	14806.78	1.000	152.4	1185.7	1175.0	134.9	.8	4.4	.0098	.379	.378	1	25.5
229	4.580	.020	3	0	15537.	838.	14698.83	1.000	153.1	1185.7	1175.0	135.7	.8	4.3	.0098	.376	.376	2	25.5
230	4.600	.020	3	0	15419.	831.	14588.03	1.000	153.9	1185.6	1175.0	136.4	.7	4.3	.0098	.372	.372	1	25.5
231	4.620	.020	3	0	15301.	825.	14476.73	1.000	154.6	1185.5	1175.0	137.1	.7	4.3	.0098	.370	.370	1	25.5
232	4.640	.020	3	0	15230.	818.	14411.52	1.000	155.4	1185.5	1175.0	137.9	.7	4.2	.0098	.368	.368	1	25.5
233	4.660	.020	3	0	15156.	811.	14344.42	1.000	156.1	1185.4	1175.0	138.6	.7	4.2	.0098	.366	.365	1	25.5
[illegible]	4.680	.020	3	0	15080.	805.	14275.27	1.000	156.8	1185.3	1175.0	139.3	.7	4.2	.0098	.365	.365	1	25.5
[illegible]	4.700	.020	3	0	15002.	798.	14204.25	1.000	157.6	1185.3	1175.0	140.1	.7	4.2	.0098	.363	.363	1	25.5
236	4.720	.020	3	0	14922.	791.	14131.36	1.000	158.3	1185.2	1175.0	140.8	.7	4.1	.0098	.361	.361	1	25.5
237	4.740	.020	3	0	14840.	784.	14056.38	1.000	159.0	1185.1	1175.0	141.5	.7	4.1	.0098	.359	.358	1	25.5
238	4.760	.020	3	0	14757.	777.	13979.32	1.000	159.7	1185.1	1175.0	142.2	.7	4.1	.0098	.356	.356	1	25.5
239	4.780	.020	3	0	14671.	770.	13900.72	1.000	160.4	1185.0	1175.0	142.9	.7	4.1	.0098	.356	.355	2	25.5
240	4.800	.020	3	0	14583.	763.	13820.07	1.000	161.1	1184.9	1175.0	143.6	.7	4.0	.0098	.353	.353	1	25.5
241	4.820	.020	3	0	14494.	756.	13737.65	1.000	161.8	1184.9	1175.0	144.3	.7	4.0	.0098	.351	.351	1	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
242	4.840	.020	3	0	14403.	749.	13653.22	1.000	162.5	1184.8	1175.0	145.0	.7	4.0	.0098	.349	.349	1	25.5
243	4.860	.020	3	0	14309.	742.	13567.05	1.000	163.2	1184.7	1175.0	145.7	.7	4.0	.0098	.347	.346	1	25.5
244	4.880	.020	3	0	14214.	735.	13478.91	1.000	163.9	1184.7	1175.0	146.4	.7	3.9	.0098	.344	.344	1	25.5
245	4.900	.020	3	0	14117.	728.	13388.81	1.000	164.6	1184.6	1175.0	147.1	.7	3.9	.0098	.342	.342	1	25.5
246	4.920	.020	3	0	14018.	721.	13297.04	1.000	165.3	1184.5	1175.0	147.8	.7	3.9	.0098	.340	.340	1	25.5
247	4.940	.020	3	0	13917.	714.	13203.37	1.000	165.9	1184.4	1175.0	148.5	.7	3.9	.0098	.338	.337	1	25.5
248	4.960	.020	3	0	13815.	707.	13108.06	1.000	166.6	1184.4	1175.0	149.1	.7	3.8	.0098	.335	.335	1	25.5
249	4.980	.020	3	0	13710.	699.	13010.83	1.000	167.3	1184.3	1175.0	149.8	.7	3.8	.0098	.333	.332	2	25.5
250	5.000	.020	3	0	13603.	691.	12911.72	1.000	167.9	1184.2	1175.0	150.5	.7	3.8	.0098	.330	.330	2	25.5
251	5.020	.020	3	0	13493.	682.	12811.00	1.000	168.6	1184.1	1175.0	151.1	.7	3.7	.0098	.328	.327	2	25.5
252	5.040	.020	3	0	13382.	674.	12708.43	1.000	169.2	1184.1	1175.0	151.8	.7	3.7	.0098	.325	.325	2	25.5
253	5.060	.020	3	0	13269.	666.	12603.85	1.000	169.9	1184.0	1175.0	152.4	.6	3.7	.0098	.321	.321	1	25.5
254	5.080	.020	3	0	13155.	657.	12497.79	1.000	170.5	1183.9	1175.0	153.0	.6	3.7	.0098	.319	.319	1	25.5
255	5.100	.020	3	0	13039.	648.	12390.28	1.000	171.2	1183.9	1175.0	153.7	.6	3.6	.0098	.317	.316	1	25.5
256	5.120	.020	3	0	12920.	640.	12280.58	1.000	171.8	1183.8	1175.0	154.3	.6	3.6	.0098	.313	.313	1	25.5
257	5.140	.020	3	0	12801.	631.	12169.48	1.000	172.4	1183.7	1175.0	154.9	.6	3.6	.0098	.311	.310	1	25.5
258	5.160	.020	3	0	12679.	623.	12056.76	1.000	173.0	1183.6	1175.0	155.5	.6	3.5	.0098	.308	.308	1	25.5
259	5.180	.020	3	0	12556.	614.	11942.20	1.000	173.6	1183.6	1175.0	156.2	.6	3.5	.0098	.305	.304	1	25.5
260	5.200	.020	3	0	12431.	605.	11826.08	1.000	174.2	1183.5	1175.0	156.8	.6	3.5	.0098	.302	.302	1	25.5
261	5.220	.020	3	0	12305.	596.	11708.20	1.000	174.8	1183.4	1175.0	157.4	.6	3.5	.0098	.299	.298	1	25.5
262	5.240	.020	3	0	12176.	587.	11588.03	1.000	175.4	1183.3	1175.0	157.9	.6	3.4	.0098	.296	.296	1	25.5
263	5.260	.020	3	0	12044.	579.	11465.79	1.000	176.0	1183.2	1175.0	158.5	.6	3.4	.0098	.292	.292	5	25.5
264	5.280	.020	3	0	11911.	570.	11341.66	1.000	176.6	1183.2	1175.0	159.1	.6	3.4	.0098	.290	.290	5	25.5
265	5.300	.020	3	0	11776.	561.	11215.28	1.000	177.2	1183.1	1175.0	159.7	.6	3.3	.0098	.285	.286	5	25.5
266	5.320	.020	3	0	11638.	551.	11086.82	1.000	177.7	1183.0	1175.0	160.2	.6	3.3	.0098	.284	.284	5	25.5
267	5.340	.020	3	0	11498.	542.	10956.21	1.000	178.3	1182.9	1175.0	160.8	.6	3.3	.0098	.279	.280	5	25.5
268	5.360	.020	3	0	11357.	533.	10823.85	1.000	178.8	1182.8	1175.0	161.4	.6	3.3	.0098	.277	.275	5	25.5
[illegible]	5.380	.020	3	0	11212.	523.	10688.92	1.000	179.4	1182.8	1175.0	161.9	.5	3.2	.0098	.273	.273	5	25.5
[illegible]	5.400	.020	3	0	11066.	514.	10551.73	1.000	179.9	1182.7	1175.0	162.4	.5	3.2	.0098	.269	.269	5	25.5
271	5.420	.020	3	0	10917.	504.	10412.41	1.000	180.5	1182.6	1175.0	163.0	.5	3.2	.0098	.267	.265	5	25.5
272	5.440	.020	3	0	10766.	495.	10270.94	1.000	181.0	1182.5	1175.0	163.5	.5	3.1	.0098	.263	.263	5	25.5
273	5.460	.020	3	0	10612.	485.	10127.12	1.000	181.5	1182.4	1175.0	164.0	.5	3.1	.0098	.258	.259	5	25.5
274	5.480	.020	3	0	10456.	475.	9980.51	1.000	182.0	1182.3	1175.0	164.5	.5	3.0	.0098	.254	.254	5	25.5
275	5.500	.020	3	0	10297.	466.	9831.68	1.000	182.5	1182.3	1175.0	165.0	.5	3.0	.0098	.250	.250	5	25.5
276	5.520	.020	3	0	10137.	457.	9680.19	1.000	183.0	1182.2	1175.0	165.5	.5	3.0	.0098	.246	.246	5	25.5
277	5.540	.020	3	0	9974.	448.	9526.39	1.000	183.5	1182.1	1175.0	166.0	.5	3.0	.0098	.244	.242	5	25.5
278	5.560	.020	3	0	9809.	439.	9369.57	1.000	184.0	1182.0	1175.0	166.5	.5	2.9	.0098	.240	.238	5	25.5
279	5.580	.020	3	0	9640.	430.	9209.81	1.000	184.4	1181.9	1175.0	167.0	.5	2.9	.0098	.234	.234	5	25.5
280	5.600	.020	3	0	9468.	421.	9046.96	1.000	184.9	1181.8	1175.0	167.4	.5	2.8	.0098	.230	.230	5	25.5
281	5.620	.020	3	0	9292.	411.	8881.11	1.000	185.4	1181.7	1175.0	167.9	.5	2.8	.0098	.226	.226	5	25.5
282	5.640	.020	3	0	9113.	402.	8711.86	1.000	185.8	1181.6	1175.0	168.3	.4	2.8	.0098	.222	.223	5	25.5
283	5.660	.020	3	0	8931.	392.	8539.06	1.000	186.2	1181.5	1175.0	168.7	.4	2.7	.0098	.219	.217	5	25.5
284	5.680	.020	3	0	8746.	382.	8364.56	1.000	186.7	1181.4	1175.0	169.2	.4	2.7	.0098	.213	.213	5	25.5
285	5.700	.020	3	0	8563.	372.	8191.28	1.000	187.1	1181.3	1175.0	169.6	.4	2.7	.0098	.209	.209	5	25.5
286	5.720	.020	3	0	8382.	362.	8019.54	1.000	187.5	1181.2	1175.0	170.0	.4	2.6	.0098	.204	.204	5	25.5
287	5.740	.020	3	0	8203.	353.	7850.04	1.000	187.9	1181.1	1175.0	170.4	.4	2.6	.0098	.200	.200	5	25.5
288	5.760	.020	3	0	8025.	343.	7682.32	1.000	188.3	1181.0	1175.0	170.8	.4	2.6	.0098	.197	.195	5	25.5
289	5.780	.020	3	0	7850.	333.	7516.47	1.000	188.7	1180.9	1175.0	171.2	.4	2.5	.0098	.191	.192	5	25.5
290	5.800	.020	3	0	7677.	324.	7352.69	1.000	189.0	1180.8	1175.0	171.6	.4	2.5	.0098	.188	.187	5	25.5
291	5.820	.020	3	0	7506.	315.	7190.84	1.000	189.4	1180.7	1175.0	171.9	.4	2.4	.0098	.183	.183	5	25.5
292	5.840	.020	3	0	7337.	305.	7031.32	1.000	189.8	1180.7	1175.0	172.3	.4	2.4	.0098	.180	.178	5	25.5
293	5.860	.020	3	0	7170.	296.	6873.77	1.000	190.1	1180.6	1175.0	172.6	.4	2.4	.0098	.175	.175	5	25.5
294	5.880	.020	3	0	7006.	287.	6718.35	1.000	190.5	1180.5	1175.0	173.0	.3	2.3	.0098	.172	.171	5	25.5
[illegible]	5.900	.020	3	0	6843.	278.	6564.94	1.000	190.8	1180.4	1175.0	173.3	.3	2.3	.0098	.167	.168	5	25.5
[illegible]	5.920	.020	3	0	6683.	269.	6413.79	1.000	191.1	1180.3	1175.0	173.6	.3	2.3	.0098	.163	.163	5	25.5
297	5.940	.020	3	0	6526.	261.	6265.03	1.000	191.4	1180.2	1175.0	174.0	.3	2.2	.0098	.160	.160	5	25.5
298	5.960	.020	3	0	6370.	252.	6118.54	1.000	191.7	1180.1	1175.0	174.3	.3	2.2	.0098	.156	.156	5	25.5
299	5.980	.020	3	0	6218.	243.	5974.44	1.000	192.1	1180.0	1175.0	174.6	.3	2.2	.0098	.153	.152	5	25.5
300	6.000	.020	3	0	6067.	235.	5832.41	1.000	192.4	1179.9	1175.0	174.9	.3	2.1	.0098	.149	.149	5	25.5
301	6.020	.020	3	0	5920.	227.	5692.90	1.000	192.6	1179.9	1175.0	175.2	.3	2.1	.0098	.144	.145	5	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
302	6.040	.020	3	0	5777.	221.	5555.78	1.000	192.9	1179.8	1175.0	175.4	.3	2.1	.0098	.142	.142	5	25.5
303	6.060	.020	3	0	5636.	215.	5420.97	1.000	193.2	1179.7	1175.0	175.7	.3	2.0	.0098	.138	.138	5	25.5
304	6.080	.020	3	0	5497.	208.	5288.66	1.000	193.5	1179.6	1175.0	176.0	.3	2.0	.0098	.134	.134	5	25.5
305	6.100	.020	3	0	5361.	202.	5158.53	1.000	193.7	1179.5	1175.0	176.2	.3	2.0	.0098	.132	.132	5	25.5
[illegible]	6.120	.020	3	0	5227.	196.	5030.90	1.000	194.0	1179.5	1175.0	176.5	.3	1.9	.0098	.128	.128	5	25.5
[illegible]	6.140	.020	3	0	5096.	190.	4905.77	1.000	194.2	1179.4	1175.0	176.8	.2	1.9	.0098	.125	.125	5	25.5
308	6.160	.020	3	0	4967.	184.	4782.99	1.000	194.5	1179.3	1175.0	177.0	.2	1.9	.0098	.122	.121	5	25.5
309	6.180	.020	3	0	4841.	178.	4662.70	1.000	194.7	1179.2	1175.0	177.2	.2	1.8	.0098	.119	.119	5	25.5
310	6.200	.020	3	0	4718.	173.	4544.88	1.000	194.9	1179.2	1175.0	177.5	.2	1.8	.0098	.116	.116	5	25.5
311	6.220	.020	3	0	4596.	167.	4429.32	1.000	195.2	1179.1	1175.0	177.7	.2	1.8	.0098	.112	.113	5	25.5
312	6.240	.020	3	0	4478.	162.	4316.46	1.000	195.4	1179.0	1175.0	177.9	.2	1.8	.0098	.110	.109	5	25.5
313	6.260	.020	3	0	4362.	156.	4205.84	1.000	195.6	1178.9	1175.0	178.1	.2	1.7	.0098	.107	.107	5	25.5
314	6.280	.020	3	0	4248.	151.	4097.68	1.000	195.8	1178.9	1175.0	178.3	.2	1.7	.0098	.105	.104	5	25.5
315	6.300	.020	3	0	4137.	145.	3992.05	1.000	196.0	1178.8	1175.0	178.5	.2	1.7	.0098	.101	.102	5	25.5
316	6.320	.020	3	0	4029.	140.	3888.65	1.000	196.2	1178.7	1175.0	178.7	.2	1.6	.0098	.099	.099	5	25.5
317	6.340	.020	3	0	3923.	135.	3787.84	1.000	196.4	1178.7	1175.0	178.9	.2	1.6	.0098	.097	.097	5	25.5
318	6.360	.020	3	0	3819.	130.	3689.35	1.000	196.6	1178.6	1175.0	179.1	.2	1.6	.0098	.093	.093	5	25.5
319	6.380	.020	3	0	3718.	125.	3593.21	1.000	196.8	1178.5	1175.0	179.3	.2	1.6	.0098	.092	.091	5	25.5
320	6.400	.020	3	0	3620.	120.	3499.53	1.000	197.0	1178.5	1175.0	179.5	.2	1.5	.0098	.088	.090	5	25.5
321	6.420	.020	3	0	3523.	115.	3408.17	1.000	197.1	1178.4	1175.0	179.6	.2	1.5	.0098	.087	.086	5	25.5
322	6.440	.020	3	0	3430.	111.	3319.27	1.000	197.3	1178.3	1175.0	179.8	.2	1.5	.0098	.085	.085	5	25.5
323	6.460	.020	3	0	3339.	106.	3232.58	1.000	197.5	1178.3	1175.0	180.0	.2	1.5	.0098	.082	.082	5	25.5
324	6.480	.020	3	0	3250.	101.	3148.12	1.000	197.6	1178.2	1175.0	180.1	.2	1.4	.0098	.080	.080	5	25.5
325	6.500	.020	3	0	3163.	97.	3066.01	1.000	197.8	1178.2	1175.0	180.3	.2	1.4	.0098	.077	.078	5	25.5
326	6.520	.020	3	0	3079.	93.	2986.25	1.000	197.9	1178.1	1175.0	180.4	.2	1.4	.0098	.076	.075	5	25.5
327	6.540	.020	3	0	2997.	88.	2908.65	1.000	198.1	1178.1	1175.0	180.6	.1	1.4	.0098	.074	.074	5	25.5
328	6.560	.020	3	0	2918.	84.	2833.30	1.000	198.2	1178.0	1175.0	180.7	.1	1.3	.0098	.072	.073	5	25.5
329	6.580	.020	3	0	2840.	80.	2760.06	1.000	198.4	1177.9	1175.0	180.9	.1	1.3	.0098	.070	.070	5	25.5
[illegible]	6.600	.020	3	0	2765.	76.	2689.06	1.000	198.5	1177.9	1175.0	181.0	.1	1.3	.0098	.069	.069	5	25.5
[illegible]	6.620	.020	3	0	2693.	72.	2620.24	1.000	198.6	1177.8	1175.0	181.1	.1	1.3	.0098	.066	.066	5	25.5
[illegible]	6.640	.020	3	0	2622.	68.	2553.60	1.000	198.8	1177.8	1175.0	181.3	.1	1.3	.0098	.065	.065	5	25.5
333	6.660	.020	3	0	2554.	65.	2488.94	1.000	198.9	1177.7	1175.0	181.4	.1	1.3	.0098	.064	.064	5	25.5
334	6.680	.020	3	0	2487.	61.	2426.21	1.000	199.0	1177.7	1175.0	181.5	.1	1.2	.0098	.061	.061	5	25.5
335	6.700	.020	3	0	2423.	58.	2365.58	1.000	199.1	1177.7	1175.0	181.7	.1	1.2	.0098	.060	.060	5	25.5
336	6.720	.020	3	0	2361.	54.	2307.00	1.000	199.3	1177.6	1175.0	181.8	.1	1.2	.0098	.059	.059	5	25.5
337	6.740	.020	3	0	2301.	51.	2250.28	1.000	199.4	1177.6	1175.0	181.9	.1	1.2	.0098	.057	.057	5	25.5
338	6.760	.020	3	0	2243.	48.	2195.55	1.000	199.5	1177.5	1175.0	182.0	.1	1.2	.0098	.056	.055	5	25.5
339	6.780	.020	3	0	2187.	44.	2142.81	1.000	199.6	1177.5	1175.0	182.1	.1	1.1	.0098	.055	.054	5	25.5
340	6.800	.020	3	0	2133.	41.	2091.69	1.000	199.7	1177.4	1175.0	182.2	.1	1.1	.0098	.054	.053	5	25.5
341	6.820	.020	3	0	2081.	38.	2042.47	1.000	199.8	1177.4	1175.0	182.3	.1	1.1	.0098	.052	.051	5	25.5
342	6.840	.020	3	0	2030.	35.	1995.13	1.000	199.9	1177.4	1175.0	182.4	.1	1.1	.0098	.051	.050	5	25.5
343	6.860	.020	3	0	1982.	33.	1949.35	1.000	200.0	1177.3	1175.0	182.5	.1	1.1	.0098	.050	.049	5	25.5
344	6.880	.020	3	0	1935.	30.	1905.41	1.000	200.1	1177.3	1175.0	182.6	.1	1.1	.0098	.049	.048	5	25.5
345	6.900	.020	3	0	1890.	27.	1862.95	1.000	200.2	1177.3	1175.0	182.7	.1	1.0	.0098	.047	.048	5	25.5
346	6.920	.020	3	0	1847.	25.	1822.27	1.000	200.3	1177.2	1175.0	182.8	.1	1.0	.0098	.046	.047	5	25.5
347	6.940	.020	3	0	1805.	22.	1783.20	1.000	200.4	1177.2	1175.0	182.9	.1	1.0	.0098	.045	.045	5	25.5
348	6.960	.020	3	0	1765.	20.	1745.57	1.000	200.5	1177.2	1175.0	183.0	.1	1.0	.0098	.044	.044	5	25.5
349	6.980	.020	3	0	1727.	17.	1709.34	1.000	200.5	1177.1	1175.0	183.1	.1	1.0	.0098	.043	.043	5	25.5
350	7.000	.020	3	0	1690.	15.	1674.80	1.000	200.6	1177.1	1175.0	183.1	.1	1.0	.0098	.042	.042	5	25.5
351	7.020	.020	3	0	1654.	13.	1641.49	1.000	200.7	1177.1	1175.0	183.2	.1	1.0	.0098	.042	.042	5	25.5
352	7.040	.020	3	0	1620.	11.	1609.67	1.000	200.8	1177.0	1175.0	183.3	.1	1.0	.0098	.041	.041	5	25.5
353	7.060	.020	3	0	1588.	9.	1579.18	1.000	200.9	1177.0	1175.0	183.4	.1	.9	.0098	.040	.040	5	25.5
354	7.080	.020	3	0	1557.	7.	1549.99	1.000	201.0	1177.0	1175.0	183.5	.1	.9	.0098	.039	.039	5	25.5
355	7.100	.020	3	0	1527.	5.	1522.11	1.000	201.0	1177.0	1175.0	183.5	.1	.9	.0098	.039	.038	5	25.5
[illegible]	7.120	.020	3	0	1498.	3.	1495.35	1.000	201.1	1176.9	1175.0	183.6	.1	.9	.0098	.038	.038	5	25.5
[illegible]	7.140	.020	3	0	1471.	1.	1469.71	1.000	201.2	1176.9	1175.0	183.7	.1	.9	.0098	.037	.037	5	25.5
358	7.160	.020	3	0	1445.	0.	1445.32	1.000	201.3	1176.9	1175.0	183.8	.1	.9	.0098	.036	.036	5	25.5
359	7.180	.020	3	0	1422.	0.	1422.01	1.000	201.3	1176.9	1175.0	183.8	.1	.9	.0098	.036	.036	5	25.5
360	7.200	.020	3	0	1400.	0.	1399.65	1.000	201.4	1176.9	1175.0	183.9	.1	.9	.0098	.036	.036	5	25.5
361	7.220	.020	3	0	1378.	0.	1378.36	1.000	201.5	1176.8	1175.0	184.0	.1	.9	.0098	.035	.035	5	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
362	7.240	.020	3	0	1358.	0.	1357.83	1.000	201.5	1176.8	1175.0	184.0	.1	.9	.0098	.034	.034	5	25.5
363	7.260	.020	3	0	1338.	0.	1338.36	1.000	201.6	1176.8	1175.0	184.1	.1	.9	.0098	.034	.034	5	25.5
364	7.280	.020	3	0	1320.	0.	1319.63	1.000	201.7	1176.8	1175.0	184.2	.1	.8	.0098	.033	.033	5	25.5
365	7.300	.020	3	0	1302.	0.	1301.79	1.000	201.7	1176.8	1175.0	184.2	.1	.8	.0098	.033	.033	5	25.5
366	7.320	.020	3	0	1285.	0.	1284.70	1.000	201.8	1176.7	1175.0	184.3	.1	.8	.0098	.033	.032	5	25.5
[illegible]	7.340	.020	3	0	1268.	0.	1268.47	1.000	201.9	1176.7	1175.0	184.4	.1	.8	.0098	.032	.032	5	25.5
368	7.360	.020	3	0	1253.	0.	1252.83	1.000	201.9	1176.7	1175.0	184.4	.1	.8	.0098	.032	.032	5	25.5
369	7.380	.020	3	0	1238.	0.	1238.05	1.000	202.0	1176.7	1175.0	184.5	.1	.8	.0098	.032	.032	5	25.5
370	7.400	.020	3	0	1224.	0.	1223.83	1.000	202.1	1176.7	1175.0	184.6	.1	.8	.0098	.030	.031	5	25.5
371	7.420	.020	3	0	1210.	0.	1210.33	1.000	202.1	1176.7	1175.0	184.6	.1	.8	.0098	.030	.031	5	25.5
372	7.440	.020	3	0	1198.	0.	1197.53	1.000	202.2	1176.7	1175.0	184.7	.1	.8	.0098	.030	.031	5	25.5
373	7.460	.020	3	0	1185.	0.	1185.29	1.000	202.2	1176.7	1175.0	184.7	.1	.8	.0098	.030	.029	5	25.5
374	7.480	.020	3	0	1174.	0.	1173.60	1.000	202.3	1176.6	1175.0	184.8	.1	.8	.0098	.029	.029	5	25.5
375	7.500	.020	3	0	1162.	0.	1162.47	1.000	202.4	1176.6	1175.0	184.9	.1	.8	.0098	.029	.029	5	25.5
376	7.520	.020	3	0	1152.	0.	1151.88	1.000	202.4	1176.6	1175.0	184.9	.1	.8	.0098	.029	.029	5	25.5
377	7.540	.020	3	0	1142.	0.	1141.85	1.000	202.5	1176.6	1175.0	185.0	.1	.8	.0098	.029	.028	5	25.5
378	7.560	.020	3	0	1132.	0.	1132.21	1.000	202.5	1176.6	1175.0	185.0	.1	.8	.0098	.028	.028	5	25.5
379	7.580	.020	3	0	1123.	0.	1123.11	1.000	202.6	1176.6	1175.0	185.1	.1	.8	.0098	.028	.028	5	25.5
380	7.600	.020	3	0	1115.	0.	1114.55	1.000	202.6	1176.6	1175.0	185.2	.1	.8	.0098	.028	.028	5	25.5
381	7.620	.020	3	0	1106.	0.	1106.27	1.000	202.7	1176.6	1175.0	185.2	.1	.8	.0098	.028	.028	5	25.5
382	7.640	.020	3	0	1099.	0.	1098.51	1.000	202.8	1176.6	1175.0	185.3	.1	.8	.0098	.028	.027	5	25.5
383	7.660	.020	3	0	1091.	0.	1091.02	1.000	202.8	1176.6	1175.0	185.3	.1	.7	.0098	.027	.027	5	25.5
384	7.680	.020	3	0	1084.	0.	1083.92	1.000	202.9	1176.6	1175.0	185.4	.1	.7	.0098	.027	.027	5	25.5
385	7.700	.020	3	0	1077.	0.	1077.21	1.000	202.9	1176.6	1175.0	185.4	.1	.7	.0098	.027	.027	5	25.5
386	7.720	.020	3	0	1071.	0.	1070.90	1.000	203.0	1176.5	1175.0	185.5	.1	.7	.0098	.027	.027	5	25.5
387	7.740	.020	3	0	1065.	0.	1064.86	1.000	203.0	1176.5	1175.0	185.5	.1	.7	.0098	.027	.027	5	25.5
388	7.760	.020	3	0	1059.	0.	1059.07	1.000	203.1	1176.5	1175.0	185.6	.1	.7	.0098	.027	.027	5	25.5
389	7.780	.020	3	0	1054.	0.	1053.67	1.000	203.1	1176.5	1175.0	185.6	.1	.7	.0098	.027	.026	5	25.5
390	7.800	.020	3	0	1049.	0.	1048.53	1.000	203.2	1176.5	1175.0	185.7	.1	.7	.0098	.026	.026	5	25.5
[illegible]	7.820	.020	3	0	1044.	0.	1043.64	1.000	203.2	1176.5	1175.0	185.7	.1	.7	.0098	.026	.026	5	25.5
[illegible]	7.840	.020	3	0	1039.	0.	1039.01	1.000	203.3	1176.5	1175.0	185.8	.1	.7	.0098	.026	.026	5	25.5
393	7.860	.020	3	0	1035.	0.	1034.51	1.000	203.3	1176.5	1175.0	185.9	.1	.7	.0098	.026	.026	5	25.5
394	7.880	.020	3	0	1030.	0.	1030.39	1.000	203.4	1176.5	1175.0	185.9	.1	.7	.0098	.026	.026	5	25.5
395	7.900	.020	3	0	1026.	0.	1026.40	1.000	203.4	1176.5	1175.0	186.0	.1	.7	.0098	.026	.026	5	25.5
396	7.920	.020	3	0	1023.	0.	1022.66	1.000	203.5	1176.5	1175.0	186.0	.1	.7	.0098	.026	.026	5	25.5
397	7.940	.020	3	0	1019.	0.	1019.06	1.000	203.5	1176.5	1175.0	186.1	.1	.7	.0098	.026	.026	5	25.5
398	7.960	.020	3	0	1016.	0.	1015.71	1.000	203.6	1176.5	1175.0	186.1	.1	.7	.0098	.026	.026	5	25.5
399	7.980	.020	3	0	1012.	0.	1012.48	1.000	203.6	1176.5	1175.0	186.2	.1	.7	.0098	.026	.025	5	25.5
400	8.000	.020	3	0	1009.	0.	1009.38	1.000	203.7	1176.5	1175.0	186.2	.1	.7	.0098	.026	.025	5	25.5

KTT= 0 I= 401 T= 8.02

TF= .08 QTF= 1638. TP= 3.16 QP= 17299. TRS= 3.10 TB= .06
BRD= 18.3 BRW= 203.7 HU=1193.3 HY=1176.5 HC=1175.0 ALG=25.500 QO= 96.0701
Z= .48 TFH= 3.43 BO= 186.2 TFI= .00

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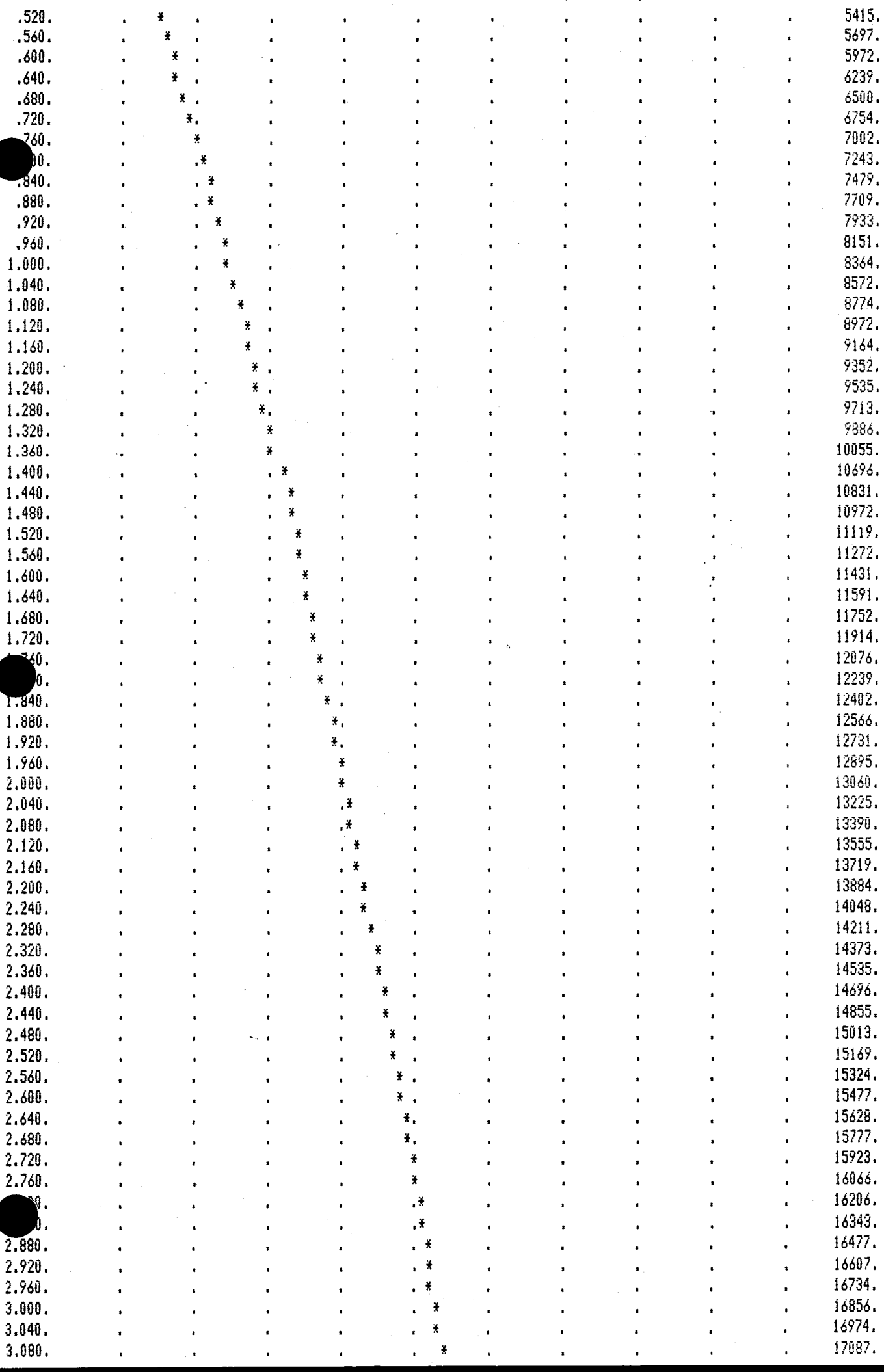
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6.400.       *.        .      .    .    .    .    .    .    .    .    3620.
6.440.      * .        .      .    .    .    .    .    .    .    .    3430.
6.480.     *  .        .      .    .    .    .    .    .    .    .    3250.
6.520.     *  .        .      .    .    .    .    .    .    .    .    3079.
6.560.    *   .        .      .    .    .    .    .    .    .    .    2918.
6.600.    *   .        .      .    .    .    .    .    .    .    .    2765.
6.640.   *    .        .      .    .    .    .    .    .    .    .    2622.
6.680.   *    .        .      .    .    .    .    .    .    .    .    2487.
6.720.  *     .        .      .    .    .    .    .    .    .    .    2361.
6.760.  *     .        .      .    .    .    .    .    .    .    .    2243.
6.800.  *     .        .      .    .    .    .    .    .    .    .    2133.
6.840. *      .        .      .    .    .    .    .    .    .    .    2030.
6.880. *      .        .      .    .    .    .    .    .    .    .    1935.
6.920. *      .        .      .    .    .    .    .    .    .    .    1847.
6.960. *      .        .      .    .    .    .    .    .    .    .    1765.
7.000. *      .        .      .    .    .    .    .    .    .    .    1690.
7.040. *      .        .      .    .    .    .    .    .    .    .    1620.
7.080. *      .        .      .    .    .    .    .    .    .    .    1557.
7.120. *      .        .      .    .    .    .    .    .    .    .    1498.
7.160.*       .        .      .    .    .    .    .    .    .    .    1445.
7.200.*       .        .      .    .    .    .    .    .    .    .    1400.
7.240.*       .        .      .    .    .    .    .    .    .    .    1358.
7.280.*       .        .      .    .    .    .    .    .    .    .    1320.
7.320.*       .        .      .    .    .    .    .    .    .    .    1285.
7.360.*       .        .      .    .    .    .    .    .    .    .    1253.
7.400.*       .        .      .    .    .    .    .    .    .    .    1224.
7.440.*       .        .      .    .    .    .    .    .    .    .    1198.
7.480.*       .        .      .    .    .    .    .    .    .    .    1174.
7.520*        .        .      .    .    .    .    .    .    .    .    1152.
7.560*        .        .      .    .    .    .    .    .    .    .    1132.
7.600*        .        .      .    .    .    .    .    .    .    .    1115.
7.640*        .        .      .    .    .    .    .    .    .    .    1099.
7.680*        .        .      .    .    .    .    .    .    .    .    1084.
7.720*        .        .      .    .    .    .    .    .    .    .    1071.
7.760*        .        .      .    .    .    .    .    .    .    .    1059.
7.800*        .        .      .    .    .    .    .    .    .    .    1049.
7.840*        .        .      .    .    .    .    .    .    .    .    1039.
7.880*        .        .      .    .    .    .    .    .    .    .    1030.
7.920*        .        .      .    .    .    .    .    .    .    .    1023.
7.960*        .        .      .    .    .    .    .    .    .    .    1016.
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BREACH MODEL, MICRO-VERSION: 1/87

NG FAILURE IN SBFRS; STA. 60+50 FILE: SB6TOP.STH 23OCT90

HI= 1190.80 HU= 1193.33 HL= 1175.00 HPI= 1176.90 HSF= 1176.90

(QIN(I),I=1,8)
33.09 16.07 8.86 5.33 2.58 2.34 2.03 .00

(TIN(I),I=1,8)
.00 .50 1.00 1.50 3.50 5.50 15.50 .00

(RSA(I),I=1,8)
1317.00 967.00 723.00 500.00 350.00 250.00 133.00 .00

(HSA(I),I=1,8)
1193.50 1191.50 1189.50 1187.50 1185.50 1183.50 1181.50 1175.00

ZU= 3.00 ZD= 2.00 ZC= .00 PORW= .00 GL= .00 GS= .00 VMP= .00

D50C= .00 PORC= .00 UWC= .00 CNC= .0000 AFRC= .00 COHC= .0 UNFCC= .00

D50S= .18 PORS= .33 UWS=125.60 CNS= .0000 AFRS= 39.00 COHS= 100.0 UNFCS= 10.00

BR= 1.00 WC= 12.0 CRL= 5280.0 SM= 21.00 WV= 5280.0 CNV= .0450 D50DF= .00 UNFCDF= .00

DTH= .020 DBG= .001 H= .1000 TEH= 15.5 ERR= .10 FPT= 2.0 TPR= 1.0

(SPQ(I),I=1,8)
.00 230.00 470.00 700.00 900.00 1080.00 1210.00 1350.00

(SPH(I),I=1,8)
.00 3.00 5.40 7.40 9.40 11.40 13.40 15.40

CRL= 5280. BM= 34. AFR= 39.00 BO= 16.4 Z= .48

1

AFR= 39.0 TH1= 64.50 H1= 6.68 TH2= 51.75 H2= 22.93 TH3= 45.38 H3= 78.83

1

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
51	1.020	.020	4	0	6901.	1216.	5685.29	1.000	14.8	1190.4	1175.0	14.8	1184.3	10.7	.0098	.123	.124	1	.0
52	1.040	.020	4	0	6982.	1215.	5766.46	1.000	14.9	1190.4	1175.0	14.9	1184.4	10.7	.0098	.121	.121	1	.0
53	1.060	.020	4	0	7061.	1214.	5846.49	1.000	15.0	1190.4	1175.0	15.0	1184.4	10.7	.0098	.119	.119	1	.0
	1.080	.020	4	0	7139.	1213.	5925.44	1.000	15.1	1190.3	1175.0	15.1	1184.5	10.6	.0098	.117	.117	1	.0
	1.100	.020	4	0	7216.	1212.	6003.29	1.000	15.3	1190.3	1175.0	15.3	1184.5	10.6	.0098	.116	.116	1	.0
56	1.120	.020	4	0	7291.	1211.	6080.05	1.000	15.4	1190.3	1175.0	15.4	1184.6	10.5	.0098	.114	.114	1	.0
57	1.140	.020	4	0	7366.	1210.	6155.75	1.000	15.5	1190.3	1175.0	15.5	1184.6	10.5	.0098	.112	.112	1	.0
58	1.160	.020	4	0	7440.	1209.	6230.44	1.000	15.6	1190.3	1175.0	15.6	1184.7	10.4	.0098	.110	.110	1	.0
59	1.180	.020	4	0	7512.	1208.	6304.05	1.000	15.7	1190.3	1175.0	15.7	1184.7	10.4	.0098	.108	.108	1	.0
60	1.200	.020	4	0	7584.	1207.	6376.62	1.000	15.8	1190.3	1175.0	15.8	1184.8	10.4	.0098	.107	.107	1	.0

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
61	1.220	.020	4	0	7654.	1206.	6448.17	1.000	15.9	1190.2	1175.0	15.9	1184.9	10.3	.0098	.105	.105	1	.0
62	1.240	.020	4	0	7724.	1205.	6518.72	1.000	16.0	1190.2	1175.0	16.0	1184.9	10.3	.0098	.103	.104	1	.0
63	1.260	.020	4	0	7793.	1204.	6588.27	1.000	16.1	1190.2	1175.0	16.1	1185.0	10.2	.0098	.102	.102	1	.0
64	1.280	.020	4	0	7860.	1203.	6656.80	1.000	16.2	1190.2	1175.0	16.2	1185.0	10.2	.0098	.100	.100	1	.0
65	1.300	.020	4	0	7927.	1202.	6724.38	1.000	16.3	1190.2	1175.0	16.3	1185.1	10.2	.0098	.099	.099	1	.0
66	1.320	.020	4	0	7992.	1201.	6790.95	1.000	16.4	1190.2	1175.0	16.4	1185.1	10.1	.0098	.098	.098	1	.0

PIPE FLOW TO WEIR FLOW TRANSITION

1175.		8.		16.	4380.	5584.	9964.		.032	1.372		135.		145.		4.		88.	
.03438	.03439	.32573	2.78545	.0098	5.0	26.5	3.1	5.0	158.5										
		1	15.0	6.7	10.2	5169.9	.0164	1	1.3600	1.3764	25.5	103.6	87.6						
68	1.360	.020	3	0	8523.	1200.	7323.08	1.000	33.9	1190.1	1175.0	16.4	.0	10.1	.0098	.000	.000	0	25.5
69	1.380	.020	3	0	8562.	1199.	7363.25	1.000	34.2	1190.1	1175.0	16.7	.3	10.1	.0098	.167	.167	2	25.5
70	1.400	.020	3	0	8602.	1198.	7403.91	1.000	34.6	1190.1	1175.0	17.1	.3	10.1	.0098	.170	.170	1	25.5
71	1.420	.020	3	0	8642.	1197.	7445.35	1.000	34.9	1190.1	1175.0	17.4	.3	10.1	.0098	.173	.173	1	25.5
72	1.440	.020	3	0	8683.	1195.	7487.43	1.000	35.3	1190.1	1175.0	17.8	.4	10.1	.0098	.176	.176	1	25.5
73	1.460	.020	3	0	8725.	1194.	7530.45	1.000	35.6	1190.1	1175.0	18.1	.4	10.0	.0098	.179	.179	1	25.5
74	1.480	.020	3	0	8767.	1193.	7574.27	1.000	36.0	1190.0	1175.0	18.5	.4	10.0	.0098	.183	.183	1	25.5
75	1.500	.020	3	0	8811.	1192.	7618.78	1.000	36.4	1190.0	1175.0	18.9	.4	10.0	.0098	.186	.186	1	25.5
76	1.520	.020	3	0	8855.	1191.	7664.12	1.000	36.7	1190.0	1175.0	19.2	.4	10.0	.0098	.189	.189	1	25.5
77	1.540	.020	3	0	8900.	1189.	7710.31	1.000	37.1	1190.0	1175.0	19.6	.4	10.0	.0098	.193	.193	1	25.5
78	1.560	.020	3	0	8946.	1188.	7757.36	1.000	37.5	1190.0	1175.0	20.0	.4	10.0	.0098	.197	.197	1	25.5
79	1.580	.020	3	0	8992.	1187.	7804.96	1.000	37.9	1189.9	1175.0	20.4	.4	9.9	.0098	.199	.199	1	25.5
80	1.600	.020	3	0	9038.	1186.	7852.48	1.000	38.3	1189.9	1175.0	20.8	.4	9.9	.0098	.201	.201	1	25.5
81	1.620	.020	3	0	9085.	1184.	7900.04	1.000	38.7	1189.9	1175.0	21.2	.4	9.8	.0098	.202	.202	1	25.5
82	1.640	.020	3	0	9131.	1183.	7947.48	1.000	39.1	1189.9	1175.0	21.6	.4	9.7	.0098	.203	.203	1	25.5
83	1.660	.020	3	0	9177.	1182.	7995.07	1.000	39.5	1189.9	1175.0	22.0	.4	9.6	.0098	.204	.204	1	25.5
84	1.680	.020	3	0	9223.	1181.	8042.51	1.000	39.9	1189.8	1175.0	22.5	.4	9.5	.0098	.205	.205	1	25.5
85	1.700	.020	3	0	9269.	1179.	8089.92	1.000	40.4	1189.8	1175.0	22.9	.4	9.5	.0098	.207	.207	1	25.5
86	1.720	.020	3	0	9315.	1178.	8137.18	1.000	40.8	1189.8	1175.0	23.3	.4	9.4	.0098	.208	.208	2	25.5
87	1.740	.020	3	0	9361.	1177.	8184.40	1.000	41.2	1189.8	1175.0	23.7	.4	9.3	.0098	.209	.209	2	25.5
88	1.760	.020	3	0	9407.	1175.	8231.57	1.000	41.6	1189.8	1175.0	24.1	.4	9.2	.0098	.210	.210	1	25.5
89	1.780	.020	3	0	9453.	1174.	8278.79	1.000	42.0	1189.7	1175.0	24.5	.4	9.2	.0098	.211	.211	1	25.5
90	1.800	.020	3	0	9499.	1173.	8325.80	1.000	42.5	1189.7	1175.0	25.0	.4	9.1	.0098	.212	.213	2	25.5
91	1.820	.020	3	0	9544.	1171.	8372.69	1.000	42.9	1189.7	1175.0	25.4	.4	9.0	.0098	.214	.214	1	25.5
92	1.840	.020	3	0	9589.	1170.	8419.49	1.000	43.3	1189.7	1175.0	25.8	.4	9.0	.0098	.215	.215	2	25.5
93	1.860	.020	3	0	9635.	1169.	8466.29	1.000	43.7	1189.7	1175.0	26.3	.4	8.9	.0098	.216	.216	1	25.5
94	1.880	.020	3	0	9680.	1167.	8512.80	1.000	44.2	1189.6	1175.0	26.7	.4	8.8	.0098	.217	.217	2	25.5
95	1.900	.020	3	0	9725.	1166.	8559.29	1.000	44.6	1189.6	1175.0	27.1	.4	8.8	.0098	.219	.219	1	25.5
96	1.920	.020	3	0	9770.	1164.	8605.60	1.000	45.1	1189.6	1175.0	27.6	.4	8.7	.0098	.220	.220	1	25.5
97	1.940	.020	3	0	9815.	1163.	8651.86	1.000	45.5	1189.6	1175.0	28.0	.4	8.6	.0098	.221	.221	1	25.5
98	1.960	.020	3	0	9859.	1162.	8697.91	1.000	45.9	1189.6	1175.0	28.5	.4	8.6	.0098	.222	.222	1	25.5
99	1.980	.020	3	0	9904.	1160.	8743.75	1.000	46.4	1189.5	1175.0	28.9	.4	8.5	.0098	.223	.223	2	25.5
100	2.000	.020	3	0	9948.	1159.	8789.33	1.000	46.8	1189.5	1175.0	29.3	.4	8.5	.0098	.224	.224	1	25.5
101	2.020	.020	3	0	9992.	1157.	8834.80	1.000	47.3	1189.5	1175.0	29.8	.5	8.4	.0098	.225	.226	1	25.5
102	2.040	.020	3	0	10036.	1156.	8880.02	1.000	47.7	1189.5	1175.0	30.3	.5	8.3	.0098	.227	.227	2	25.5
103	2.060	.020	3	0	10079.	1154.	8925.11	1.000	48.2	1189.4	1175.0	30.7	.5	8.3	.0098	.228	.228	1	25.5
104	2.080	.020	3	0	10123.	1153.	8969.91	1.000	48.7	1189.4	1175.0	31.2	.5	8.2	.0098	.229	.229	2	25.5
105	2.100	.020	3	0	10166.	1151.	9014.58	1.000	49.1	1189.4	1175.0	31.6	.5	8.2	.0098	.230	.230	2	25.5
106	2.120	.020	3	0	10209.	1150.	9059.08	1.000	49.6	1189.4	1175.0	32.1	.5	8.1	.0098	.232	.232	1	25.5
107	2.140	.020	3	0	10251.	1148.	9103.21	1.000	50.0	1189.3	1175.0	32.6	.5	8.1	.0098	.233	.233	1	25.5
108	2.160	.020	3	0	10294.	1146.	9147.13	1.000	50.5	1189.3	1175.0	33.0	.5	8.0	.0098	.233	.234	1	25.5
109	2.180	.020	3	0	10336.	1145.	9190.87	1.000	51.0	1189.3	1175.0	33.5	.5	8.0	.0098	.235	.235	2	25.5
110	2.200	.020	3	0	10378.	1143.	9234.37	1.000	51.4	1189.3	1175.0	34.0	.5	7.9	.0098	.236	.236	1	25.5
111	2.220	.020	3	0	10419.	1142.	9277.44	1.000	51.9	1189.2	1175.0	34.4	.5	7.9	.0098	.237	.237	1	25.5
112	2.240	.020	3	0	10460.	1140.	9320.43	1.000	52.4	1189.2	1175.0	34.9	.5	7.8	.0098	.238	.238	1	25.5
113	2.260	.020	3	0	10501.	1138.	9362.96	1.000	52.9	1189.2	1175.0	35.4	.5	7.8	.0098	.239	.239	1	25.5
114	2.280	.020	3	0	10542.	1137.	9405.20	1.000	53.4	1189.2	1175.0	35.9	.5	7.7	.0098	.240	.240	1	25.5
115	2.300	.020	3	0	10582.	1135.	9447.13	1.000	53.8	1189.1	1175.0	36.4	.5	7.7	.0098	.241	.241	1	25.5
116	2.320	.020	3	0	10622.	1133.	9488.74	1.000	54.3	1189.1	1175.0	36.8	.5	7.6	.0098	.242	.243	1	25.5
117	2.340	.020	3	0	10662.	1132.	9530.01	1.000	54.8	1189.1	1175.0	37.3	.5	7.6	.0098	.243	.243	1	25.5
118	2.360	.020	3	0	10701.	1130.	9570.75	1.000	55.3	1189.1	1175.0	37.8	.5	7.5	.0098	.244	.244	1	25.5
119	2.380	.020	3	0	10740.	1128.	9611.31	1.000	55.8	1189.0	1175.0	38.3	.5	7.5	.0098	.246	.246	1	25.5

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
121	2.420	.020	3	0	10816.	1125.	9691.07	1.000	56.8	1189.0	1175.0	39.3	.5	7.4	.0098	.247	.248	1	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	DNN	DH	DHH	KIT	ALG
[illegible]	2.440	.020	3	0	10854.	1123.	9730.44	1.000	57.3	1189.0	1175.0	39.8	.5	7.4	.0098	.249	.249	1	25.5
[illegible]	2.460	.020	3	0	10891.	1121.	9769.38	1.000	57.8	1188.9	1175.0	40.3	.5	7.3	.0098	.250	.250	1	25.5
124	2.480	.020	3	0	10927.	1120.	9807.74	1.000	58.3	1188.9	1175.0	40.8	.5	7.3	.0098	.250	.250	1	25.5
125	2.500	.020	3	0	10964.	1118.	9845.82	1.000	58.8	1188.9	1175.0	41.3	.5	7.2	.0098	.251	.251	1	25.5
126	2.520	.020	3	0	10999.	1116.	9883.26	1.000	59.3	1188.9	1175.0	41.8	.5	7.2	.0098	.252	.253	1	25.5
127	2.540	.020	3	0	11035.	1114.	9920.39	1.000	59.8	1188.8	1175.0	42.3	.5	7.2	.0098	.253	.254	1	25.5
128	2.560	.020	3	0	11069.	1112.	9957.03	1.000	60.3	1188.8	1175.0	42.8	.5	7.1	.0098	.254	.255	1	25.5
129	2.580	.020	3	0	11104.	1111.	9993.01	1.000	60.8	1188.8	1175.0	43.3	.5	7.1	.0098	.255	.255	2	25.5
130	2.600	.020	3	0	11137.	1109.	10028.45	1.000	61.3	1188.7	1175.0	43.8	.5	7.0	.0098	.256	.256	1	25.5
131	2.620	.020	3	0	11170.	1107.	10063.36	1.000	61.8	1188.7	1175.0	44.3	.5	7.0	.0098	.257	.257	1	25.5
132	2.640	.020	3	0	11203.	1105.	10097.90	1.000	62.3	1188.7	1175.0	44.9	.5	7.0	.0098	.258	.258	1	25.5
133	2.660	.020	3	0	11235.	1103.	10131.68	1.000	62.9	1188.7	1175.0	45.4	.5	6.9	.0098	.259	.259	1	25.5
134	2.680	.020	3	0	11266.	1101.	10165.07	1.000	63.4	1188.6	1175.0	45.9	.5	6.9	.0098	.259	.260	1	25.5
135	2.700	.020	3	0	11297.	1099.	10197.67	1.000	63.9	1188.6	1175.0	46.4	.5	6.9	.0098	.260	.260	1	25.5
136	2.720	.020	3	0	11327.	1097.	10229.85	1.000	64.4	1188.6	1175.0	46.9	.5	6.8	.0098	.261	.261	1	25.5
137	2.740	.020	3	0	11357.	1095.	10261.40	1.000	65.0	1188.5	1175.0	47.5	.5	6.8	.0098	.263	.262	1	25.5
138	2.760	.020	3	0	11386.	1093.	10292.28	1.000	65.5	1188.5	1175.0	48.0	.5	6.8	.0098	.263	.263	0	25.5
139	2.780	.020	3	0	11414.	1091.	10322.60	1.000	66.0	1188.5	1175.0	48.5	.5	6.7	.0098	.264	.264	1	25.5
140	2.800	.020	3	0	11441.	1089.	10352.23	1.000	66.5	1188.4	1175.0	49.1	.5	6.7	.0098	.264	.264	0	25.5
141	2.820	.020	3	0	11468.	1087.	10381.21	1.000	67.1	1188.4	1175.0	49.6	.5	6.7	.0098	.266	.265	2	25.5
142	2.840	.020	3	0	11495.	1085.	10409.49	1.000	67.6	1188.4	1175.0	50.1	.5	6.6	.0098	.266	.266	0	25.5
143	2.860	.020	3	0	11520.	1083.	10436.67	1.000	68.1	1188.3	1175.0	50.6	.5	6.6	.0098	.266	.266	0	25.5
144	2.880	.020	3	0	11544.	1081.	10463.46	1.000	68.7	1188.3	1175.0	51.2	.5	6.5	.0098	.267	.267	1	25.5
145	2.900	.020	3	0	11568.	1078.	10489.34	1.000	69.2	1188.3	1175.0	51.7	.5	6.5	.0098	.267	.267	0	25.5
146	2.920	.020	3	0	11590.	1076.	10514.70	1.000	69.7	1188.3	1175.0	52.3	.5	6.5	.0098	.269	.269	1	25.5
[illegible]	2.940	.020	3	0	11611.	1073.	10538.95	1.000	70.3	1188.2	1175.0	52.8	.5	6.5	.0098	.269	.269	0	25.5
[illegible]	2.960	.020	3	0	11632.	1070.	10562.64	1.000	70.8	1188.2	1175.0	53.3	.5	6.4	.0098	.270	.270	1	25.5
149	2.980	.020	3	0	11652.	1067.	10585.40	1.000	71.4	1188.2	1175.0	53.9	.5	6.4	.0098	.270	.270	0	25.5
150	3.000	.020	3	0	11671.	1064.	10607.57	1.000	71.9	1188.1	1175.0	54.4	.5	6.3	.0098	.271	.271	1	25.5
151	3.020	.020	3	0	11689.	1060.	10628.79	1.000	72.4	1188.1	1175.0	55.0	.5	6.3	.0098	.271	.271	0	25.5
152	3.040	.020	3	0	11707.	1057.	10649.18	1.000	73.0	1188.0	1175.0	55.5	.5	6.3	.0098	.272	.272	1	25.5
153	3.060	.020	3	0	11723.	1054.	10668.40	1.000	73.5	1188.0	1175.0	56.0	.5	6.3	.0098	.272	.272	0	25.5
154	3.080	.020	3	0	11738.	1051.	10687.16	1.000	74.1	1188.0	1175.0	56.6	.5	6.2	.0098	.273	.273	1	25.5
155	3.100	.020	3	0	11753.	1048.	10704.66	1.000	74.6	1187.9	1175.0	57.1	.5	6.2	.0098	.273	.273	1	25.5
156	3.120	.020	3	0	11766.	1045.	10721.26	1.000	75.2	1187.9	1175.0	57.7	.5	6.1	.0098	.274	.274	1	25.5
157	3.140	.020	3	0	11778.	1042.	10736.80	1.000	75.7	1187.9	1175.0	58.2	.5	6.1	.0098	.274	.274	1	25.5
158	3.160	.020	3	0	11790.	1038.	10751.61	1.000	76.3	1187.8	1175.0	58.8	.5	6.1	.0098	.275	.275	1	25.5
159	3.180	.020	3	0	11800.	1035.	10765.42	1.000	76.8	1187.8	1175.0	59.3	.6	6.1	.0098	.275	.275	2	25.5
160	3.200	.020	3	0	11810.	1032.	10777.91	1.000	77.4	1187.8	1175.0	59.9	.6	6.0	.0098	.275	.275	1	25.5
161	3.220	.020	3	0	11818.	1028.	10789.64	1.000	77.9	1187.7	1175.0	60.4	.6	6.0	.0098	.276	.276	1	25.5
162	3.240	.020	3	0	11825.	1025.	10800.04	1.000	78.5	1187.7	1175.0	61.0	.6	5.9	.0098	.276	.275	1	25.5
163	3.260	.020	3	0	11831.	1022.	10809.65	1.000	79.0	1187.7	1175.0	61.5	.6	5.9	.0098	.276	.276	1	25.5
164	3.280	.020	3	0	11836.	1018.	10817.90	1.000	79.6	1187.6	1175.0	62.1	.6	5.9	.0098	.276	.276	1	25.5
165	3.300	.020	3	0	11840.	1015.	10825.13	1.000	80.1	1187.6	1175.0	62.6	.6	5.9	.0098	.277	.276	1	25.5
166	3.320	.020	3	0	11843.	1011.	10831.26	1.000	80.7	1187.5	1175.0	63.2	.6	5.8	.0098	.277	.277	2	25.5
167	3.340	.020	3	0	11844.	1008.	10836.22	1.000	81.2	1187.5	1175.0	63.8	.6	5.8	.0098	.277	.276	1	25.5
168	3.360	.020	3	0	11844.	1004.	10840.11	1.000	81.8	1187.5	1175.0	64.3	.6	5.8	.0098	.277	.277	1	25.5
169	3.380	.020	3	0	11844.	1001.	10842.81	1.000	82.3	1187.4	1175.0	64.9	.6	5.7	.0098	.277	.277	1	25.5
170	3.400	.020	3	0	11842.	997.	10844.86	1.000	82.9	1187.4	1175.0	65.4	.6	5.7	.0098	.277	.277	1	25.5
171	3.420	.020	3	0	11839.	994.	10845.47	1.000	83.5	1187.3	1175.0	66.0	.6	5.7	.0098	.277	.277	1	25.5
172	3.440	.020	3	0	11835.	990.	10845.42	1.000	84.0	1187.3	1175.0	66.5	.6	5.7	.0098	.277	.277	1	25.5
[illegible]	3.460	.020	3	0	11830.	986.	10843.92	1.000	84.6	1187.3	1175.0	67.1	.6	5.6	.0098	.277	.277	1	25.5
[illegible]	3.480	.020	3	0	11824.	983.	10841.74	1.000	85.1	1187.2	1175.0	67.6	.6	5.6	.0098	.277	.277	1	25.5
175	3.500	.020	3	0	11817.	979.	10838.09	1.000	85.7	1187.2	1175.0	68.2	.6	5.6	.0098	.277	.276	1	25.5
176	3.520	.020	3	0	11809.	975.	10833.75	1.000	86.2	1187.1	1175.0	68.7	.6	5.5	.0098	.277	.277	1	25.5
177	3.540	.020	3	0	11800.	971.	10828.14	1.000	86.8	1187.1	1175.0	69.3	.6	5.5	.0098	.276	.276	1	25.5
178	3.560	.020	3	0	11789.	968.	10821.61	1.000	87.3	1187.1	1175.0	69.8	.6	5.5	.0098	.277	.277	1	25.5
179	3.580	.020	3	0	11778.	964.	10813.57	1.000	87.9	1187.0	1175.0	70.4	.6	5.4	.0098	.276	.276	1	25.5
180	3.600	.020	3	0	11765.	960.	10804.75	1.000	88.4	1187.0	1175.0	71.0	.6	5.4	.0098	.276	.276	2	25.5

181	3.620	.020	3	0	11751.	956.	10794.65	1.000	89.0	1186.9	1175.0	71.5	.6	5.4	.0098	.276	.275	1	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
182	3.640	.020	3	0	11736.	953.	10783.35	1.000	89.5	1186.9	1175.0	72.1	.6	5.4	.0098	.276	.276	1	25.5
[illegible]	3.660	.020	3	0	11720.	949.	10770.99	1.000	90.1	1186.8	1175.0	72.6	.6	5.3	.0098	.275	.275	1	25.5
[illegible]	3.680	.020	3	0	11702.	945.	10757.36	1.000	90.6	1186.8	1175.0	73.2	.6	5.3	.0098	.275	.275	2	25.5
185	3.700	.020	3	0	11684.	941.	10742.65	1.000	91.2	1186.8	1175.0	73.7	.5	5.3	.0098	.274	.274	1	25.5
186	3.720	.020	3	0	11664.	937.	10726.67	1.000	91.7	1186.7	1175.0	74.3	.5	5.2	.0098	.274	.274	2	25.5
187	3.740	.020	3	0	11643.	933.	10709.60	1.000	92.3	1186.7	1175.0	74.8	.5	5.2	.0098	.273	.273	1	25.5
188	3.760	.020	3	0	11620.	929.	10691.25	1.000	92.8	1186.6	1175.0	75.3	.5	5.2	.0098	.273	.273	2	25.5
189	3.780	.020	3	0	11597.	925.	10671.80	1.000	93.4	1186.6	1175.0	75.9	.5	5.1	.0098	.272	.272	1	25.5
190	3.800	.020	3	0	11572.	921.	10651.05	1.000	93.9	1186.5	1175.0	76.4	.5	5.1	.0098	.273	.272	2	25.5
191	3.820	.020	3	0	11546.	917.	10628.98	1.000	94.5	1186.5	1175.0	77.0	.5	5.1	.0098	.271	.271	1	25.5
192	3.840	.020	3	0	11518.	913.	10605.57	1.000	95.0	1186.4	1175.0	77.5	.5	5.0	.0098	.270	.270	1	25.5
193	3.860	.020	3	0	11490.	909.	10581.09	1.000	95.5	1186.4	1175.0	78.1	.5	5.0	.0098	.270	.271	0	25.5
194	3.880	.020	3	0	11460.	905.	10555.13	1.000	96.1	1186.4	1175.0	78.6	.5	5.0	.0098	.270	.270	1	25.5
195	3.900	.020	3	0	11429.	901.	10528.07	1.000	96.6	1186.3	1175.0	79.1	.5	5.0	.0098	.269	.268	1	25.5
196	3.920	.020	3	0	11396.	896.	10499.67	1.000	97.2	1186.3	1175.0	79.7	.5	4.9	.0098	.269	.268	2	25.5
197	3.940	.020	3	0	11362.	891.	10470.18	1.000	97.7	1186.2	1175.0	80.2	.5	4.9	.0098	.267	.267	1	25.5
198	3.960	.020	3	0	11326.	887.	10439.10	1.000	98.2	1186.2	1175.0	80.7	.5	4.9	.0098	.266	.266	1	25.5
199	3.980	.020	3	0	11289.	882.	10406.71	1.000	98.8	1186.1	1175.0	81.3	.5	4.9	.0098	.266	.266	0	25.5
200	4.000	.020	3	0	11251.	877.	10373.29	1.000	99.3	1186.1	1175.0	81.8	.5	4.8	.0098	.265	.265	1	25.5
201	4.020	.020	3	0	11211.	872.	10338.52	1.000	99.8	1186.0	1175.0	82.3	.5	4.8	.0098	.264	.264	1	25.5
202	4.040	.020	3	0	11170.	868.	10302.17	1.000	100.3	1186.0	1175.0	82.9	.5	4.8	.0098	.263	.263	1	25.5
203	4.060	.020	3	0	11128.	863.	10264.70	1.000	100.9	1185.9	1175.0	83.4	.5	4.7	.0098	.263	.262	2	25.5
204	4.080	.020	3	0	11084.	858.	10225.89	1.000	101.4	1185.9	1175.0	83.9	.5	4.7	.0098	.261	.261	1	25.5
205	4.100	.020	3	0	11039.	853.	10185.74	1.000	101.9	1185.8	1175.0	84.4	.5	4.7	.0098	.260	.260	1	25.5
206	4.120	.020	3	0	10992.	848.	10144.01	1.000	102.4	1185.8	1175.0	84.9	.5	4.6	.0098	.259	.259	1	25.5
207	4.140	.020	3	0	10945.	843.	10101.19	1.000	102.9	1185.7	1175.0	85.5	.5	4.6	.0098	.258	.257	1	25.5
[illegible]	4.160	.020	3	0	10895.	838.	10056.76	1.000	103.5	1185.7	1175.0	86.0	.5	4.6	.0098	.257	.257	2	25.5
[illegible]	4.180	.020	3	0	10845.	833.	10011.24	1.000	104.0	1185.6	1175.0	86.5	.5	4.6	.0098	.256	.256	1	25.5
210	4.200	.020	3	0	10793.	828.	9964.15	1.000	104.5	1185.6	1175.0	87.0	.5	4.5	.0098	.255	.254	1	25.5
211	4.220	.020	3	0	10739.	823.	9915.74	1.000	105.0	1185.5	1175.0	87.5	.5	4.5	.0098	.253	.253	1	25.5
212	4.240	.020	3	0	10684.	818.	9866.00	1.000	105.5	1185.5	1175.0	88.0	.5	4.5	.0098	.252	.252	1	25.5
213	4.260	.020	3	0	10626.	813.	9814.94	1.000	106.0	1185.4	1175.0	88.5	.5	4.4	.0098	.251	.250	1	25.5
214	4.280	.020	3	0	10571.	808.	9762.81	1.000	106.5	1185.4	1175.0	89.0	.5	4.4	.0098	.249	.249	1	25.5
215	4.300	.020	3	0	10513.	803.	9709.86	1.000	107.0	1185.3	1175.0	89.5	.5	4.4	.0098	.248	.248	1	25.5
216	4.320	.020	3	0	10454.	798.	9655.86	1.000	107.5	1185.3	1175.0	90.0	.5	4.3	.0098	.246	.246	1	25.5
217	4.340	.020	3	0	10394.	793.	9600.81	1.000	108.0	1185.2	1175.0	90.5	.5	4.3	.0098	.245	.245	1	25.5
218	4.360	.020	3	0	10332.	788.	9544.71	1.000	108.5	1185.2	1175.0	91.0	.5	4.3	.0098	.244	.243	1	25.5
219	4.380	.020	3	0	10270.	783.	9487.58	1.000	108.9	1185.1	1175.0	91.5	.5	4.3	.0098	.242	.242	1	25.5
220	4.400	.020	3	0	10207.	777.	9429.67	1.000	109.4	1185.1	1175.0	91.9	.5	4.2	.0098	.241	.241	1	25.5
221	4.420	.020	3	0	10143.	772.	9370.74	1.000	109.9	1185.0	1175.0	92.4	.5	4.2	.0098	.239	.239	1	25.5
222	4.440	.020	3	0	10078.	767.	9311.04	1.000	110.4	1185.0	1175.0	92.9	.5	4.2	.0098	.238	.238	1	25.5
223	4.460	.020	3	0	10012.	762.	9250.08	1.000	110.9	1184.9	1175.0	93.4	.5	4.1	.0098	.237	.236	1	25.5
224	4.480	.020	3	0	9945.	757.	9188.33	1.000	111.3	1184.9	1175.0	93.8	.5	4.1	.0098	.235	.235	2	25.5
225	4.500	.020	3	0	9878.	752.	9125.85	1.000	111.8	1184.8	1175.0	94.3	.5	4.1	.0098	.233	.233	1	25.5
226	4.520	.020	3	0	9809.	746.	9062.34	1.000	112.3	1184.8	1175.0	94.8	.5	4.0	.0098	.232	.232	2	25.5
227	4.540	.020	3	0	9739.	741.	8997.82	1.000	112.7	1184.7	1175.0	95.2	.5	4.0	.0098	.230	.230	2	25.5
228	4.560	.020	3	0	9669.	736.	8932.55	1.000	113.2	1184.7	1175.0	95.7	.5	4.0	.0098	.229	.228	2	25.5
229	4.580	.020	3	0	9623.	731.	8891.95	1.000	113.6	1184.6	1175.0	96.1	.5	4.0	.0098	.227	.227	1	25.5
230	4.600	.020	3	0	9584.	726.	8857.89	1.000	114.1	1184.6	1175.0	96.6	.5	3.9	.0098	.226	.226	2	25.5
231	4.620	.020	3	0	9543.	720.	8822.97	1.000	114.5	1184.5	1175.0	97.0	.5	3.9	.0098	.225	.225	1	25.5
232	4.640	.020	3	0	9502.	715.	8787.21	1.000	115.0	1184.5	1175.0	97.5	.4	3.9	.0098	.225	.224	1	25.5
233	4.660	.020	3	0	9460.	710.	8750.41	1.000	115.4	1184.4	1175.0	97.9	.4	3.9	.0098	.223	.223	1	25.5
[illegible]	4.680	.020	3	0	9417.	704.	8712.78	1.000	115.9	1184.3	1175.0	98.4	.4	3.9	.0098	.223	.223	1	25.5
[illegible]	4.700	.020	3	0	9373.	699.	8673.97	1.000	116.3	1184.3	1175.0	98.8	.4	3.8	.0098	.221	.221	1	25.5
236	4.720	.020	3	0	9327.	693.	8634.50	1.000	116.8	1184.2	1175.0	99.3	.4	3.8	.0098	.221	.221	1	25.5
237	4.740	.020	3	0	9281.	687.	8594.03	1.000	117.2	1184.2	1175.0	99.7	.4	3.8	.0098	.219	.219	1	25.5
238	4.760	.020	3	0	9233.	680.	8552.71	1.000	117.6	1184.1	1175.0	100.1	.4	3.8	.0098	.219	.219	2	25.5
239	4.780	.020	3	0	9185.	674.	8510.41	1.000	118.1	1184.1	1175.0	100.6	.4	3.8	.0098	.217	.217	1	25.5
240	4.800	.020	3	0	9135.	668.	8466.95	1.000	118.5	1184.0	1175.0	101.0	.4	3.7	.0098	.216	.216	1	25.5
241	4.820	.020	3	0	9084.	662.	8422.87	1.000	118.9	1184.0	1175.0	101.4	.4	3.7	.0098	.215	.215	1	25.5

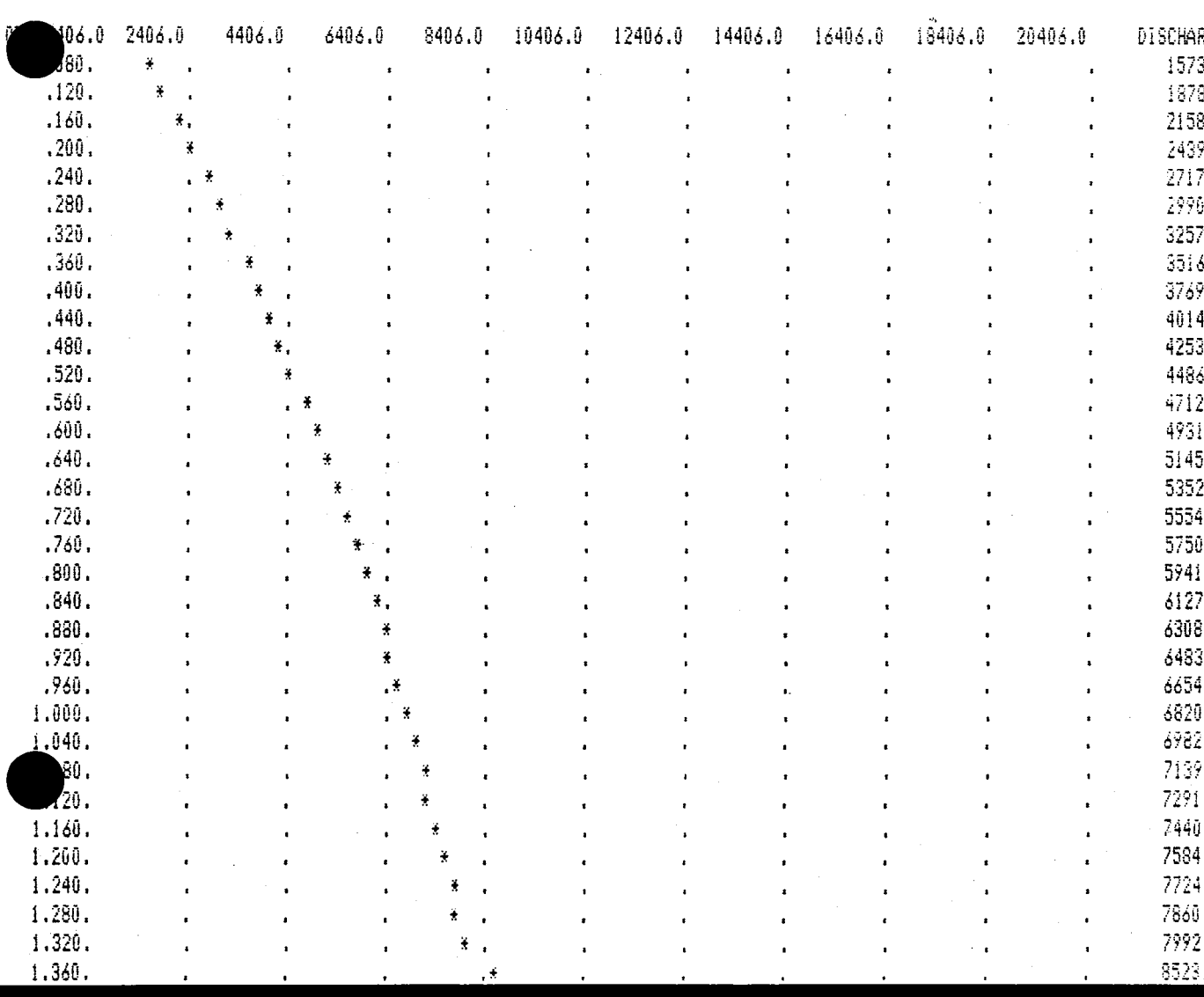
I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	QWN	DH	DHH	KIT	ALG
242	4.840	.020	3	0	9033.	655.	8377.83	1.000	119.4	1183.9	1175.0	101.9	.4	3.7	.0098	.214	.214	1	25.5
243	4.860	.020	3	0	8980.	649.	8331.65	1.000	119.8	1183.9	1175.0	102.3	.4	3.7	.0098	.212	.212	1	25.5
244	4.880	.020	3	0	8927.	642.	8264.87	1.000	120.2	1183.8	1175.0	102.7	.4	3.6	.0098	.212	.212	1	25.5
[illegible]	4.900	.020	3	0	8873.	636.	8236.98	1.000	120.6	1183.7	1175.0	103.1	.4	3.6	.0098	.210	.210	1	25.5
246	4.920	.020	3	0	8818.	629.	8188.33	1.000	121.0	1183.7	1175.0	103.6	.4	3.6	.0098	.209	.209	1	25.5
247	4.940	.020	3	0	8762.	623.	8138.72	1.000	121.5	1183.6	1175.0	104.0	.4	3.6	.0098	.208	.208	2	25.5
248	4.960	.020	3	0	8705.	616.	8088.20	1.000	121.9	1183.6	1175.0	104.4	.4	3.6	.0098	.207	.206	1	25.5
249	4.980	.020	3	0	8647.	610.	8036.78	1.000	122.3	1183.5	1175.0	104.8	.4	3.5	.0098	.205	.205	1	25.5
250	5.000	.020	3	0	8588.	603.	7984.30	1.000	122.7	1183.5	1175.0	105.2	.4	3.5	.0098	.204	.203	1	25.5
251	5.020	.020	3	0	8528.	597.	7930.94	1.000	123.1	1183.4	1175.0	105.6	.4	3.5	.0098	.202	.202	1	25.5
252	5.040	.020	3	0	8466.	590.	7876.47	1.000	123.5	1183.3	1175.0	106.0	.4	3.5	.0098	.201	.201	2	25.5
253	5.060	.020	3	0	8404.	583.	7820.80	1.000	123.9	1183.3	1175.0	106.4	.4	3.4	.0098	.200	.200	1	25.5
254	5.080	.020	3	0	8341.	576.	7764.28	1.000	124.3	1183.2	1175.0	106.8	.4	3.4	.0098	.198	.198	1	25.5
255	5.100	.020	3	0	8276.	570.	7706.31	1.000	124.7	1183.2	1175.0	107.2	.4	3.4	.0098	.196	.197	5	25.5
256	5.120	.020	3	0	8210.	563.	7647.57	1.000	125.1	1183.1	1175.0	107.6	.4	3.4	.0098	.195	.195	5	25.5
257	5.140	.020	3	0	8143.	556.	7587.52	1.000	125.5	1183.0	1175.0	108.0	.4	3.4	.0098	.194	.194	5	25.5
258	5.160	.020	3	0	8075.	549.	7526.55	1.000	125.8	1183.0	1175.0	108.4	.4	3.3	.0098	.193	.191	5	25.5
259	5.180	.020	3	0	8006.	542.	7464.23	1.000	126.2	1182.9	1175.0	108.7	.4	3.3	.0098	.190	.190	5	25.5
260	5.200	.020	3	0	7936.	535.	7400.83	1.000	126.6	1182.9	1175.0	109.1	.4	3.3	.0098	.189	.189	5	25.5
261	5.220	.020	3	0	7864.	528.	7336.20	1.000	127.0	1182.8	1175.0	109.5	.4	3.3	.0098	.187	.188	5	25.5
262	5.240	.020	3	0	7791.	520.	7270.68	1.000	127.4	1182.7	1175.0	109.9	.4	3.2	.0098	.186	.185	5	25.5
263	5.260	.020	3	0	7717.	513.	7203.72	1.000	127.7	1182.7	1175.0	110.2	.4	3.2	.0098	.183	.184	5	25.5
264	5.280	.020	3	0	7641.	506.	7135.57	1.000	128.1	1182.6	1175.0	110.6	.4	3.2	.0098	.182	.182	5	25.5
265	5.300	.020	3	0	7565.	498.	7066.41	1.000	128.4	1182.5	1175.0	111.0	.4	3.2	.0098	.181	.179	5	25.5
266	5.320	.020	3	0	7487.	491.	6995.69	1.000	128.8	1182.5	1175.0	111.3	.4	3.1	.0098	.178	.178	5	25.5
267	5.340	.020	3	0	7407.	483.	6924.01	1.000	129.2	1182.4	1175.0	111.7	.4	3.1	.0098	.177	.177	5	25.5
268	5.360	.020	3	0	7327.	476.	6850.81	1.000	129.5	1182.3	1175.0	112.0	.3	3.1	.0098	.174	.174	5	25.5
[illegible]	5.380	.020	3	0	7245.	468.	6776.34	1.000	129.8	1182.3	1175.0	112.4	.3	3.1	.0098	.173	.173	5	25.5
[illegible]	5.400	.020	3	0	7162.	462.	6700.60	1.000	130.2	1182.2	1175.0	112.7	.3	3.0	.0098	.172	.170	5	25.5
271	5.420	.020	3	0	7078.	455.	6623.60	1.000	130.5	1182.1	1175.0	113.0	.3	3.0	.0098	.169	.169	5	25.5
272	5.440	.020	3	0	6993.	448.	6544.86	1.000	130.9	1182.1	1175.0	113.4	.3	3.0	.0098	.166	.166	5	25.5
273	5.460	.020	3	0	6905.	441.	6464.74	1.000	131.2	1182.0	1175.0	113.7	.3	2.9	.0098	.165	.165	5	25.5
274	5.480	.020	3	0	6817.	434.	6383.11	1.000	131.5	1181.9	1175.0	114.0	.3	2.9	.0098	.162	.163	5	25.5
275	5.500	.020	3	0	6726.	426.	6299.99	1.000	131.8	1181.9	1175.0	114.4	.3	2.9	.0098	.161	.161	5	25.5
276	5.520	.020	3	0	6634.	419.	6215.25	1.000	132.2	1181.8	1175.0	114.7	.3	2.9	.0098	.159	.159	5	25.5
277	5.540	.020	3	0	6540.	412.	6128.74	1.000	132.5	1181.7	1175.0	115.0	.3	2.8	.0098	.156	.156	5	25.5
278	5.560	.020	3	0	6445.	404.	6040.35	1.000	132.8	1181.6	1175.0	115.3	.3	2.8	.0098	.153	.154	5	25.5
279	5.580	.020	3	0	6347.	397.	5950.08	1.000	133.1	1181.6	1175.0	115.6	.3	2.8	.0098	.152	.152	5	25.5
280	5.600	.020	3	0	6247.	389.	5858.18	1.000	133.4	1181.5	1175.0	115.9	.3	2.7	.0098	.150	.150	5	25.5
281	5.620	.020	3	0	6146.	381.	5765.51	1.000	133.7	1181.4	1175.0	116.2	.3	2.7	.0098	.147	.147	5	25.5
282	5.640	.020	3	0	6046.	373.	5673.27	1.000	134.0	1181.3	1175.0	116.5	.3	2.7	.0098	.145	.145	5	25.5
283	5.660	.020	3	0	5947.	365.	5581.31	1.000	134.2	1181.3	1175.0	116.8	.3	2.6	.0098	.142	.142	5	25.5
284	5.680	.020	3	0	5847.	358.	5489.82	1.000	134.5	1181.2	1175.0	117.0	.3	2.6	.0098	.140	.140	5	25.5
285	5.700	.020	3	0	5749.	350.	5398.81	1.000	134.8	1181.1	1175.0	117.3	.3	2.6	.0098	.137	.138	5	25.5
286	5.720	.020	3	0	5651.	342.	5308.30	1.000	135.1	1181.0	1175.0	117.6	.3	2.6	.0098	.135	.135	5	25.5
287	5.740	.020	3	0	5553.	335.	5218.15	1.000	135.3	1180.9	1175.0	117.9	.3	2.5	.0098	.133	.133	5	25.5
288	5.760	.020	3	0	5456.	327.	5128.54	1.000	135.6	1180.9	1175.0	118.1	.3	2.5	.0098	.130	.131	5	25.5
289	5.780	.020	3	0	5359.	320.	5039.64	1.000	135.9	1180.8	1175.0	118.4	.3	2.5	.0098	.128	.128	5	25.5
290	5.800	.020	3	0	5263.	312.	4951.14	1.000	136.1	1180.7	1175.0	118.6	.3	2.4	.0098	.126	.126	5	25.5
291	5.820	.020	3	0	5168.	305.	4863.22	1.000	136.4	1180.6	1175.0	118.9	.2	2.4	.0098	.124	.124	5	25.5
292	5.840	.020	3	0	5073.	297.	4776.05	1.000	136.6	1180.6	1175.0	119.1	.2	2.4	.0098	.122	.122	5	25.5
293	5.860	.020	3	0	4979.	290.	4689.33	1.000	136.8	1180.5	1175.0	119.4	.2	2.4	.0098	.120	.120	5	25.5
294	5.880	.020	3	0	4886.	282.	4603.38	1.000	137.1	1180.4	1175.0	119.6	.2	2.3	.0098	.117	.118	5	25.5
[illegible]	5.900	.020	3	0	4793.	275.	4518.06	1.000	137.3	1180.3	1175.0	119.8	.2	2.3	.0098	.115	.116	5	25.5
[illegible]	5.920	.020	3	0	4701.	268.	4433.54	1.000	137.5	1180.3	1175.0	120.0	.2	2.3	.0098	.113	.112	5	25.5
297	5.940	.020	3	0	4610.	260.	4349.43	1.000	137.7	1180.2	1175.0	120.3	.2	2.2	.0098	.110	.111	5	25.5
298	5.960	.020	3	0	4519.	253.	4266.15	1.000	138.0	1180.1	1175.0	120.5	.2	2.2	.0098	.108	.109	5	25.5
299	5.980	.020	3	0	4430.	246.	4183.70	1.000	138.2	1180.1	1175.0	120.7	.2	2.2	.0098	.106	.107	5	25.5
300	6.000	.020	3	0	4341.	239.	4101.93	1.000	138.4	1180.0	1175.0	120.9	.2	2.2	.0098	.105	.105	5	25.5
301	6.020	.020	3	0	4253.	232.	4020.85	1.000	138.6	1179.9	1175.0	121.1	.2	2.1	.0098	.103	.103	5	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
302	6.040	.020	3	0	4167.	226.	3940.57	1.000	138.8	1179.8	1175.0	121.3	.2	2.1	.0098	.100	.100	5	25.5
303	6.060	.020	3	0	4082.	221.	3861.14	1.000	139.0	1179.8	1175.0	121.5	.2	2.1	.0098	.098	.098	5	25.5
304	6.080	.020	3	0	3998.	215.	3782.44	1.000	139.2	1179.7	1175.0	121.7	.2	2.0	.0098	.096	.097	5	25.5
[illegible]	6.100	.020	3	0	3915.	210.	3704.47	1.000	139.4	1179.6	1175.0	121.9	.2	2.0	.0098	.095	.094	5	25.5
[illegible]	6.120	.020	3	0	3832.	205.	3627.32	1.000	139.6	1179.6	1175.0	122.1	.2	2.0	.0098	.092	.092	5	25.5
307	6.140	.020	3	0	3751.	200.	3550.91	1.000	139.7	1179.5	1175.0	122.3	.2	2.0	.0098	.090	.091	5	25.5
308	6.160	.020	3	0	3670.	194.	3475.55	1.000	139.9	1179.4	1175.0	122.4	.2	1.9	.0098	.089	.089	5	25.5
309	6.180	.020	3	0	3590.	189.	3400.74	1.000	140.1	1179.4	1175.0	122.6	.2	1.9	.0098	.086	.086	5	25.5
310	6.200	.020	3	0	3511.	184.	3326.99	1.000	140.3	1179.3	1175.0	122.8	.2	1.9	.0098	.085	.085	5	25.5
311	6.220	.020	3	0	3433.	179.	3253.99	1.000	140.4	1179.2	1175.0	122.9	.2	1.9	.0098	.083	.083	5	25.5
312	6.240	.020	3	0	3356.	174.	3181.73	1.000	140.6	1179.2	1175.0	123.1	.2	1.8	.0098	.081	.081	5	25.5
313	6.260	.020	3	0	3279.	169.	3110.52	1.000	140.7	1179.1	1175.0	123.3	.2	1.8	.0098	.079	.079	5	25.5
314	6.280	.020	3	0	3204.	164.	3040.05	1.000	140.9	1179.0	1175.0	123.4	.2	1.8	.0098	.077	.077	5	25.5
315	6.300	.020	3	0	3130.	159.	2970.51	1.000	141.0	1179.0	1175.0	123.6	.2	1.8	.0098	.076	.076	5	25.5
316	6.320	.020	3	0	3056.	154.	2901.85	1.000	141.2	1178.9	1175.0	123.7	.1	1.7	.0098	.074	.074	5	25.5
317	6.340	.020	3	0	2983.	149.	2834.11	1.000	141.3	1178.8	1175.0	123.9	.1	1.7	.0098	.072	.072	5	25.5
318	6.360	.020	3	0	2912.	144.	2767.30	1.000	141.5	1178.8	1175.0	124.0	.1	1.7	.0098	.071	.071	5	25.5
319	6.380	.020	3	0	2841.	140.	2701.35	1.000	141.6	1178.7	1175.0	124.1	.1	1.6	.0098	.068	.068	5	25.5
320	6.400	.020	3	0	2771.	135.	2636.33	1.000	141.8	1178.7	1175.0	124.3	.1	1.6	.0098	.067	.067	5	25.5
321	6.420	.020	3	0	2702.	130.	2572.24	1.000	141.9	1178.6	1175.0	124.4	.1	1.6	.0098	.066	.066	5	25.5
322	6.440	.020	3	0	2634.	125.	2509.02	1.000	142.0	1178.5	1175.0	124.5	.1	1.6	.0098	.063	.063	5	25.5
323	6.460	.020	3	0	2567.	121.	2446.73	1.000	142.1	1178.5	1175.0	124.7	.1	1.5	.0098	.062	.062	5	25.5
324	6.480	.020	3	0	2502.	116.	2385.37	1.000	142.3	1178.4	1175.0	124.8	.1	1.5	.0098	.061	.061	5	25.5
325	6.500	.020	3	0	2436.	112.	2324.89	1.000	142.4	1178.4	1175.0	124.9	.1	1.5	.0098	.059	.059	5	25.5
326	6.520	.020	3	0	2372.	107.	2265.45	1.000	142.5	1178.3	1175.0	125.0	.1	1.5	.0098	.058	.057	5	25.5
327	6.540	.020	3	0	2309.	103.	2206.94	1.000	142.6	1178.2	1175.0	125.1	.1	1.5	.0098	.057	.056	5	25.5
328	6.560	.020	3	0	2247.	98.	2149.30	1.000	142.7	1178.2	1175.0	125.2	.1	1.4	.0098	.054	.054	5	25.5
329	6.580	.020	3	0	2186.	94.	2092.70	1.000	142.8	1178.1	1175.0	125.3	.1	1.4	.0098	.053	.053	5	25.5
[illegible]	6.600	.020	3	0	2126.	89.	2036.86	1.000	142.9	1178.1	1175.0	125.4	.1	1.4	.0098	.051	.052	5	25.5
[illegible]	6.620	.020	3	0	2067.	85.	1982.05	1.000	143.0	1178.0	1175.0	125.5	.1	1.4	.0098	.050	.050	5	25.5
332	6.640	.020	3	0	2009.	81.	1928.24	1.000	143.1	1178.0	1175.0	125.6	.1	1.3	.0098	.049	.049	5	25.5
333	6.660	.020	3	0	1952.	76.	1875.32	1.000	143.2	1177.9	1175.0	125.7	.1	1.3	.0098	.048	.047	5	25.5
334	6.680	.020	3	0	1896.	72.	1823.31	1.000	143.3	1177.8	1175.0	125.8	.1	1.3	.0098	.047	.047	5	25.5
335	6.700	.020	3	0	1840.	68.	1772.27	1.000	143.4	1177.8	1175.0	125.9	.1	1.3	.0098	.045	.045	5	25.5
336	6.720	.020	3	0	1786.	64.	1722.25	1.000	143.5	1177.7	1175.0	126.0	.1	1.2	.0098	.044	.044	5	25.5
337	6.740	.020	3	0	1733.	60.	1673.07	1.000	143.6	1177.7	1175.0	126.1	.1	1.2	.0098	.042	.042	5	25.5
338	6.760	.020	3	0	1681.	56.	1624.78	1.000	143.7	1177.6	1175.0	126.2	.1	1.2	.0098	.042	.041	5	25.5
339	6.780	.020	3	0	1629.	52.	1577.45	1.000	143.7	1177.6	1175.0	126.3	.1	1.2	.0098	.040	.040	5	25.5
340	6.800	.020	3	0	1579.	48.	1531.10	1.000	143.8	1177.5	1175.0	126.3	.1	1.2	.0098	.039	.039	5	25.5
341	6.820	.020	3	0	1530.	44.	1485.70	1.000	143.9	1177.5	1175.0	126.4	.1	1.1	.0098	.038	.038	5	25.5
342	6.840	.020	3	0	1481.	40.	1441.13	1.000	144.0	1177.4	1175.0	126.5	.1	1.1	.0098	.036	.037	5	25.5
343	6.860	.020	3	0	1434.	36.	1397.52	1.000	144.0	1177.4	1175.0	126.5	.1	1.1	.0098	.036	.035	5	25.5
344	6.880	.020	3	0	1387.	33.	1354.73	1.000	144.1	1177.3	1175.0	126.6	.1	1.1	.0098	.034	.034	5	25.5
345	6.900	.020	3	0	1342.	29.	1312.99	1.000	144.2	1177.3	1175.0	126.7	.1	1.1	.0098	.034	.033	5	25.5
346	6.920	.020	3	0	1297.	25.	1272.06	1.000	144.2	1177.2	1175.0	126.7	.1	1.0	.0098	.032	.032	5	25.5
347	6.940	.020	3	0	1253.	21.	1232.04	1.000	144.3	1177.2	1175.0	126.8	.1	1.0	.0098	.031	.031	5	25.5
348	6.960	.020	3	0	1211.	18.	1192.93	1.000	144.4	1177.1	1175.0	126.9	.1	1.0	.0098	.030	.030	5	25.5
349	6.980	.020	3	0	1169.	14.	1154.72	1.000	144.4	1177.1	1175.0	126.9	.1	1.0	.0098	.029	.029	5	25.5
350	7.000	.020	3	0	1128.	11.	1117.38	1.000	144.5	1177.0	1175.0	127.0	.1	1.0	.0098	.028	.028	5	25.5
351	7.020	.020	3	0	1088.	7.	1080.93	1.000	144.5	1177.0	1175.0	127.0	.1	.9	.0098	.028	.028	5	25.5
352	7.040	.020	3	0	1049.	4.	1045.25	1.000	144.6	1177.0	1175.0	127.1	.1	.9	.0098	.027	.026	5	25.5
353	7.060	.020	3	0	1011.	0.	1010.52	1.000	144.6	1176.9	1175.0	127.1	.1	.9	.0098	.026	.025	5	25.5
354	7.080	.020	3	0	977.	0.	976.64	1.000	144.7	1176.9	1175.0	127.2	.0	.9	.0098	.025	.025	5	25.5
355	7.100	.020	3	0	944.	0.	943.51	1.000	144.7	1176.8	1175.0	127.2	.0	.9	.0098	.024	.024	5	25.5
[illegible]	7.120	.020	3	0	911.	0.	911.11	1.000	144.8	1176.8	1175.0	127.3	.0	.8	.0098	.023	.023	5	25.5
[illegible]	7.140	.020	3	0	879.	0.	879.45	1.000	144.8	1176.7	1175.0	127.3	.0	.8	.0098	.023	.022	5	25.5
358	7.160	.020	3	0	849.	0.	848.51	1.000	144.9	1176.7	1175.0	127.4	.0	.8	.0098	.022	.021	5	25.5
359	7.180	.020	3	0	818.	0.	818.28	1.000	144.9	1176.7	1175.0	127.4	.0	.8	.0098	.021	.021	5	25.5
360	7.200	.020	3	0	789.	0.	788.76	1.000	144.9	1176.6	1175.0	127.5	.0	.8	.0098	.020	.020	5	25.5
361	7.220	.020	3	0	760.	0.	759.94	1.000	145.0	1176.6	1175.0	127.5	.0	.8	.0098	.019	.019	5	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
362	7.240	.020	3	0	732.	0.	731.82	1.000	145.0	1176.5	1175.0	127.5	.0	.7	.0098	.019	.019	5	25.5
363	7.260	.020	3	0	704.	0.	704.29	1.000	145.1	1176.5	1175.0	127.6	.0	.7	.0098	.018	.018	5	25.5
364	7.280	.020	3	0	678.	0.	677.54	1.000	145.1	1176.5	1175.0	127.6	.0	.7	.0098	.017	.017	5	25.5
365	7.300	.020	3	0	651.	0.	651.45	1.000	145.1	1176.4	1175.0	127.6	.0	.7	.0098	.016	.017	5	25.5
366	7.320	.020	3	0	626.	0.	625.95	1.000	145.2	1176.4	1175.0	127.7	.0	.7	.0098	.016	.016	5	25.5
367	7.340	.020	3	0	601.	0.	601.18	1.000	145.2	1176.3	1175.0	127.7	.0	.7	.0098	.015	.015	5	25.5
368	7.360	.020	3	0	577.	0.	577.07	1.000	145.2	1176.3	1175.0	127.7	.0	.6	.0098	.015	.015	5	25.5
369	7.380	.020	3	0	554.	0.	553.51	1.000	145.2	1176.3	1175.0	127.8	.0	.6	.0098	.014	.014	5	25.5
370	7.400	.020	3	0	531.	0.	530.67	1.000	145.3	1176.2	1175.0	127.8	.0	.6	.0098	.013	.014	5	25.5
371	7.420	.020	3	0	508.	0.	508.46	1.000	145.3	1176.2	1175.0	127.8	.0	.6	.0098	.013	.013	5	25.5
372	7.440	.020	3	0	487.	0.	486.86	1.000	145.3	1176.2	1175.0	127.8	.0	.6	.0098	.012	.012	5	25.5
373	7.460	.020	3	0	466.	0.	465.80	1.000	145.3	1176.1	1175.0	127.9	.0	.6	.0098	.012	.012	5	25.5
374	7.480	.020	3	0	445.	0.	445.41	1.000	145.4	1176.1	1175.0	127.9	.0	.5	.0098	.011	.011	5	25.5
375	7.500	.020	3	0	426.	0.	425.62	1.000	145.4	1176.1	1175.0	127.9	.0	.5	.0098	.011	.011	5	25.5
376	7.520	.020	3	0	406.	0.	406.41	1.000	145.4	1176.0	1175.0	127.9	.0	.5	.0098	.010	.010	5	25.5
377	7.540	.020	3	0	388.	0.	387.77	1.000	145.4	1176.0	1175.0	127.9	.0	.5	.0098	.010	.010	5	25.5

KTT= 0 I= 378 T= 7.56

TF= .08 QTF= 1313. TP= 2.62 QP= 11170. TRS= 2.60 TB= .02
BRD= 18.3 BRW= 145.4 HU=1193.3 HY=1176.0 HC=1175.0 ALG=25.500 QO= 67.5797
Z= .48 TFH= 2.91 BO= 128.0 TFI= .00



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1.440.	8683.
1.480.	8767.
1.520.	8855.
1.560.	8946.
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1.640.	9131.
1.680.	9223.
1.720.	9315.
1.760.	9407.
1.800.	9499.
1.840.	9589.
1.880.	9680.
1.920.	9770.
1.960.	9859.
2.000.	9948.
2.040.	10036.
2.080.	10123.
2.120.	10209.
2.160.	10294.
2.200.	10378.
2.240.	10460.
2.280.	10542.
2.320.	10622.
2.360.	10701.
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2.440.	10854.
2.480.	10927.
2.520.	10999.
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2.800.	11441.
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2.880.	11544.
2.920.	11590.
2.960.	11632.
3.000.	11671.
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3.080.	11738.
3.120.	11766.
3.160.	11790.
3.200.	11810.
3.240.	11825.
3.280.	11836.
3.320.	11843.
3.360.	11844.
3.400.	11842.
3.440.	11835.
3.480.	11824.
3.520.	11809.
3.560.	11789.
3.600.	11765.
3.640.	11736.
3.680.	11702.
3.720.	11664.
3.760.	11620.
3.800.	11572.
3.840.	11518.
3.880.	11460.
3.920.	11396.
3.960.	11326.
4.000.	11251.

4.080.	11084.
4.120.	10992.
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4.200.	10793.
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4.280.	10571.
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5.560.	6445.
5.600.	6247.
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6.080.	3998.
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6.480.	2502.
6.520.	2372.
6.560.	2247.
6.600.	2126.
6.640.	2009.

[illegible]	*	.	.	.	.	.	.	.	.	.	1878.
6.720.	*	.	.	.	.	.	.	.	.	.	1786.
6.760.	*	.	.	.	.	.	.	.	.	.	1681.
6.800.	*	.	.	.	.	.	.	.	.	.	1579.
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7.040.	*	.	.	.	.	.	.	.	.	.	1049.
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7.120.	*	.	.	.	.	.	.	.	.	.	911.
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7.200.	*	.	.	.	.	.	.	.	.	.	789.
7.240.	*	.	.	.	.	.	.	.	.	.	732.
7.280.	*	.	.	.	.	.	.	.	.	.	678.
7.320.	*	.	.	.	.	.	.	.	.	.	626.
7.360.	*	.	.	.	.	.	.	.	.	.	577.
7.400.	*	.	.	.	.	.	.	.	.	.	531.
7.440	*	.	.	.	.	.	.	.	.	.	487.
7.480	*	.	.	.	.	.	.	.	.	.	445.
7.520	*	.	.	.	.	.	.	.	.	.	406.

BREACH MODEL, MICRO-VERSION: 1/87

ING FAILURE AT STA 256+00 OF SBFRS FILL: SB72TOP.NTH 23OCT90

HI= 1192.00 HU= 1193.33 HL= 1182.50 HPI= 1183.50 HSP= 1182.50

(QIN(I),I=1,8)
2555.00 1488.00 1127.00 965.00 953.00 949.00 542.00 488.00

(TIN(I),I=1,8)
.00 2.00 4.00 6.00 8.00 12.00 16.00 20.00

(RSA(I),I=1,8)
1317.00 967.00 723.00 500.00 350.00 250.00 133.00 .00

(HSA(I),I=1,8)
1193.50 1191.50 1189.50 1187.50 1185.50 1183.50 1181.50 1175.00

ZU= 3.00 ZD= 2.00 ZC= .00 PORW= .00 GL= .00 GS= .00 VMP= .00

D50C= .00 PORC= .00 UWC= .00 CNC= .0000 AFRC= .00 COHC= .0 UNFCC= .00

D50S= .18 PORS= .33 UWS=125.60 CNS= .0000 AFRS= 39.00 COHS= 100.0 UNFCS= 10.00

BR= 1.00 WC= 12.0 CRL= 5280.0 SM= 21.00 WV= 5280.0 CNV= .0450 D50DF= .00 UNFCDF= .00

DTH= .020 DBG= .001 H= .1000 TEH= 20.0 ERR= .10 FPT= 2.0 TPR= 1.0

(SPQ(I),I=1,8)
470.00 700.00 900.00 1080.00 1210.00 1350.00 .00 .00

(SPH(I),I=1,8)
.00 2.00 4.00 6.00 8.00 10.00 .00 .00

CRL= 5280. BM= 20. AFR= 39.00 BO= 9.8 Z= .48

V

1

AFR= 39.0 TH1= 64.50 H1= 6.68 TH2= 51.75 H2= 22.93 TH3= 45.38 H3= 78.83

1

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
PIPE FLOW TO WEIR FLOW TRANSITION																			
1183.		4.		11.	1112.	2351.	3463.		.017	1.017		88.		98.		2.		56.	
.05103	.05108	.32573	2.76880		.0098	3.0	16.6	1.9	5.0	111.6									
				1	8.7	6.7	6.4	1291.3	.0065	1	1.0200	1.0265	25.5	66.1	55.6				
[illegible]	1.020	.020	3	0	3708.	1314.	2394.45	1.000	20.9	1192.0	1182.5	10.6	.0	5.9	.0098	.000	.000	0	25.5
52	1.040	.020	3	0	3728.	1313.	2414.77	1.000	21.2	1192.0	1182.5	10.9	.2	6.3	.0098	.124	.124	2	25.5
53	1.060	.020	3	0	3749.	1313.	2435.44	1.000	21.4	1192.0	1182.5	11.1	.3	6.3	.0098	.127	.127	1	25.5
54	1.080	.020	3	0	3770.	1313.	2456.67	1.000	21.7	1192.0	1182.5	11.4	.3	6.3	.0098	.130	.130	1	25.5
55	1.100	.020	3	0	3791.	1313.	2478.28	1.000	22.0	1192.0	1182.5	11.6	.3	6.3	.0098	.133	.133	1	25.5
56	1.120	.020	3	0	3813.	1313.	2500.49	1.000	22.2	1192.0	1182.5	11.9	.3	6.3	.0098	.136	.136	1	25.5
57	1.140	.020	3	0	3836.	1312.	2523.16	1.000	22.5	1192.0	1182.5	12.2	.3	6.3	.0098	.139	.139	1	25.5

59	1.180	.020	3	0	3882.	1312.	2570.09	1.000	23.1	1192.0	1182.5	12.8	.3	6.3	.0098	.146	.146	1	25.5
60	1.200	.020	3	0	3906.	1312.	2594.31	1.000	23.4	1192.0	1182.5	13.1	.3	6.3	.0098	.149	.149	1	25.5
61	1.220	.020	3	0	3931.	1312.	2619.19	1.000	23.7	1192.0	1182.5	13.4	.3	6.3	.0098	.153	.153	1	25.5

	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
62	1.240	.020	3	0	3956.	1311.	2644.54	1.000	24.0	1191.9	1182.5	13.7	.3	6.3	.0098	.156	.157	1	25.5
63	1.260	.020	3	0	3982.	1311.	2670.57	1.000	24.3	1191.9	1182.5	14.0	.3	6.3	.0098	.160	.160	1	25.5
64	1.280	.020	3	0	4008.	1311.	2697.10	1.000	24.7	1191.9	1182.5	14.3	.3	6.3	.0098	.164	.164	1	25.5
65	1.300	.020	3	0	4035.	1311.	2724.34	1.000	25.0	1191.9	1182.5	14.7	.3	6.3	.0098	.168	.168	1	25.5
66	1.320	.020	3	0	4063.	1310.	2752.18	1.000	25.3	1191.9	1182.5	15.0	.3	6.3	.0098	.172	.172	1	25.5
67	1.340	.020	3	0	4091.	1310.	2780.63	1.000	25.7	1191.9	1182.5	15.4	.4	6.3	.0098	.176	.176	1	25.5
68	1.360	.020	3	0	4120.	1310.	2809.62	1.000	26.0	1191.9	1182.5	15.7	.4	6.3	.0098	.179	.179	1	25.5
69	1.380	.020	3	0	4149.	1310.	2838.91	1.000	26.4	1191.9	1182.5	16.1	.4	6.2	.0098	.182	.182	1	25.5
70	1.400	.020	3	0	4178.	1309.	2868.41	1.000	26.8	1191.9	1182.5	16.4	.4	6.2	.0098	.183	.183	1	25.5
71	1.420	.020	3	0	4207.	1309.	2898.18	1.000	27.2	1191.9	1182.5	16.8	.4	6.1	.0098	.185	.185	1	25.5
72	1.440	.020	3	0	4237.	1309.	2928.22	1.000	27.5	1191.9	1182.5	17.2	.4	6.1	.0098	.188	.187	2	25.5
73	1.460	.020	3	0	4267.	1309.	2958.44	1.000	27.9	1191.9	1182.5	17.6	.4	6.0	.0098	.189	.189	1	25.5
74	1.480	.020	3	0	4297.	1308.	2988.99	1.000	28.3	1191.9	1182.5	18.0	.4	6.0	.0098	.191	.191	1	25.5
75	1.500	.020	3	0	4328.	1308.	3019.81	1.000	28.7	1191.9	1182.5	18.3	.4	5.9	.0098	.193	.193	1	25.5
76	1.520	.020	3	0	4359.	1308.	3050.88	1.000	29.1	1191.9	1182.5	18.7	.4	5.9	.0098	.195	.195	1	25.5
77	1.540	.020	3	0	4390.	1307.	3082.26	1.000	29.5	1191.9	1182.5	19.1	.4	5.9	.0098	.197	.197	2	25.5
78	1.560	.020	3	0	4421.	1307.	3113.86	1.000	29.9	1191.9	1182.5	19.5	.4	5.8	.0098	.199	.199	2	25.5
79	1.580	.020	3	0	4453.	1307.	3145.76	1.000	30.3	1191.9	1182.5	19.9	.4	5.8	.0098	.202	.201	1	25.5
80	1.600	.020	3	0	4484.	1307.	3177.88	1.000	30.7	1191.9	1182.5	20.3	.4	5.7	.0098	.204	.203	2	25.5
81	1.620	.020	3	0	4517.	1306.	3210.30	1.000	31.1	1191.9	1182.5	20.7	.4	5.7	.0098	.206	.205	1	25.5
82	1.640	.020	3	0	4549.	1306.	3242.95	1.000	31.5	1191.9	1182.5	21.2	.4	5.6	.0098	.208	.208	1	25.5
83	1.660	.020	3	0	4581.	1306.	3275.81	1.000	31.9	1191.9	1182.5	21.6	.4	5.6	.0098	.210	.210	1	25.5
84	1.680	.020	3	0	4614.	1305.	3308.96	1.000	32.3	1191.9	1182.5	22.0	.4	5.6	.0098	.212	.212	1	25.5
[illegible]	1.700	.020	3	0	4647.	1305.	3342.32	1.000	32.8	1191.9	1182.5	22.4	.4	5.5	.0098	.214	.214	1	25.5
[illegible]	1.720	.020	3	0	4681.	1305.	3375.87	1.000	33.2	1191.9	1182.5	22.9	.4	5.5	.0098	.216	.216	1	25.5
87	1.740	.020	3	0	4714.	1304.	3409.85	1.000	33.6	1191.8	1182.5	23.3	.4	5.5	.0098	.218	.218	2	25.5
88	1.760	.020	3	0	4748.	1304.	3444.10	1.000	34.1	1191.8	1182.5	23.7	.4	5.4	.0098	.220	.220	1	25.5
89	1.780	.020	3	0	4782.	1304.	3478.44	1.000	34.5	1191.8	1182.5	24.2	.4	5.4	.0098	.222	.222	1	25.5
90	1.800	.020	3	0	4816.	1303.	3513.21	1.000	35.0	1191.8	1182.5	24.6	.5	5.4	.0098	.225	.225	2	25.5
91	1.820	.020	3	0	4851.	1303.	3548.23	1.000	35.4	1191.8	1182.5	25.1	.5	5.3	.0098	.227	.227	1	25.5
92	1.840	.020	3	0	4886.	1303.	3583.41	1.000	35.9	1191.8	1182.5	25.5	.5	5.3	.0098	.229	.229	1	25.5
93	1.860	.020	3	0	4921.	1302.	3618.93	1.000	36.3	1191.8	1182.5	26.0	.5	5.3	.0098	.232	.232	1	25.5
94	1.880	.020	3	0	4956.	1302.	3654.61	1.000	36.8	1191.8	1182.5	26.5	.5	5.2	.0098	.234	.233	1	25.5
95	1.900	.020	3	0	4992.	1301.	3690.68	1.000	37.3	1191.8	1182.5	27.0	.5	5.2	.0098	.236	.236	2	25.5
96	1.920	.020	3	0	5028.	1301.	3726.90	1.000	37.8	1191.8	1182.5	27.4	.5	5.2	.0098	.238	.238	1	25.5
97	1.940	.020	3	0	5064.	1301.	3763.53	1.000	38.2	1191.8	1182.5	27.9	.5	5.2	.0098	.241	.241	1	25.5
98	1.960	.020	3	0	5100.	1300.	3800.29	1.000	38.7	1191.8	1182.5	28.4	.5	5.1	.0098	.243	.243	1	25.5
99	1.980	.020	3	0	5137.	1300.	3837.37	1.000	39.2	1191.8	1182.5	28.9	.5	5.1	.0098	.246	.246	1	25.5
100	2.000	.020	3	0	5174.	1299.	3874.57	1.000	39.7	1191.8	1182.5	29.4	.5	5.1	.0098	.247	.247	1	25.5
101	2.020	.020	3	0	5211.	1299.	3912.18	1.000	40.2	1191.8	1182.5	29.9	.5	5.1	.0098	.250	.250	1	25.5
102	2.040	.020	3	0	5249.	1299.	3950.06	1.000	40.7	1191.8	1182.5	30.4	.5	5.0	.0098	.253	.253	2	25.5
103	2.060	.020	3	0	5286.	1298.	3988.13	1.000	41.2	1191.8	1182.5	30.9	.5	5.0	.0098	.255	.254	1	25.5
104	2.080	.020	3	0	5324.	1298.	4026.50	1.000	41.7	1191.8	1182.5	31.4	.5	5.0	.0098	.257	.257	1	25.5
105	2.100	.020	3	0	5362.	1297.	4065.17	1.000	42.3	1191.7	1182.5	31.9	.5	5.0	.0098	.260	.260	1	25.5
106	2.120	.020	3	0	5401.	1297.	4104.02	1.000	42.8	1191.7	1182.5	32.5	.5	4.9	.0098	.262	.262	1	25.5
107	2.140	.020	3	0	5439.	1296.	4143.15	1.000	43.3	1191.7	1182.5	33.0	.5	4.9	.0098	.265	.265	1	25.5
108	2.160	.020	3	0	5479.	1296.	4182.67	1.000	43.9	1191.7	1182.5	33.5	.5	4.9	.0098	.268	.267	1	25.5
109	2.180	.020	3	0	5518.	1295.	4222.46	1.000	44.4	1191.7	1182.5	34.1	.5	4.9	.0098	.270	.270	1	25.5
110	2.200	.020	3	0	5557.	1295.	4262.50	1.000	44.9	1191.7	1182.5	34.6	.5	4.8	.0098	.273	.273	2	25.5
[illegible]	2.220	.020	3	0	5597.	1294.	4302.88	1.000	45.5	1191.7	1182.5	35.2	.6	4.8	.0098	.276	.276	2	25.5
[illegible]	2.240	.020	3	0	5637.	1294.	4343.49	1.000	46.0	1191.7	1182.5	35.7	.6	4.8	.0098	.278	.278	2	25.5
113	2.260	.020	3	0	5678.	1293.	4384.32	1.000	46.6	1191.7	1182.5	36.3	.6	4.8	.0098	.281	.281	2	25.5
114	2.280	.020	3	0	5718.	1293.	4425.47	1.000	47.2	1191.7	1182.5	36.8	.6	4.8	.0098	.284	.283	2	25.5
115	2.300	.020	3	0	5759.	1293.	4466.85	1.000	47.7	1191.7	1182.5	37.4	.6	4.7	.0098	.286	.286	2	25.5
116	2.320	.020	3	0	5800.	1292.	4508.46	1.000	48.3	1191.7	1182.5	38.0	.6	4.7	.0098	.289	.289	1	25.5
117	2.340	.020	3	0	5842.	1291.	4550.29	1.000	48.9	1191.7	1182.5	38.6	.6	4.7	.0098	.291	.291	2	25.5
118	2.360	.020	3	0	5883.	1291.	4592.46	1.000	49.5	1191.7	1182.5	39.2	.6	4.7	.0098	.294	.294	1	25.5

120	2.400	.020	3	0	5967.	1290.	4677.55	1.000	50.7	1191.6	1182.5	40.4	.6	4.6	.0098	.300	.299	1	25.5
121	2.420	.020	3	0	6010.	1289.	4720.49	1.000	51.3	1191.6	1182.5	41.0	.6	4.6	.0098	.302	.302	1	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
[illegible]	2.440	.020	3	0	6053.	1289.	4763.65	1.000	51.9	1191.6	1182.5	41.6	.6	4.6	.0098	.305	.305	1	25.5
123	2.460	.020	3	0	6095.	1288.	4807.02	1.000	52.5	1191.6	1182.5	42.2	.6	4.6	.0098	.308	.308	1	25.5
124	2.480	.020	3	0	6138.	1288.	4850.73	1.000	53.1	1191.6	1182.5	42.8	.6	4.6	.0098	.311	.311	1	25.5
125	2.500	.020	3	0	6182.	1287.	4894.65	1.000	53.8	1191.6	1182.5	43.4	.6	4.6	.0098	.314	.313	1	25.5
126	2.520	.020	3	0	6225.	1287.	4938.76	1.000	54.4	1191.6	1182.5	44.1	.6	4.5	.0098	.316	.316	1	25.5
127	2.540	.020	3	0	6269.	1286.	4983.19	1.000	55.0	1191.6	1182.5	44.7	.6	4.5	.0098	.319	.319	1	25.5
128	2.560	.020	3	0	6313.	1286.	5027.70	1.000	55.7	1191.6	1182.5	45.4	.6	4.5	.0098	.322	.322	1	25.5
129	2.580	.020	3	0	6357.	1285.	5072.51	1.000	56.3	1191.6	1182.5	46.0	.6	4.5	.0098	.325	.324	1	25.5
130	2.600	.020	3	0	6402.	1284.	5117.62	1.000	57.0	1191.6	1182.5	46.7	.7	4.5	.0098	.327	.327	1	25.5
131	2.620	.020	3	0	6447.	1284.	5162.79	1.000	57.6	1191.6	1182.5	47.3	.7	4.4	.0098	.330	.330	1	25.5
132	2.640	.020	3	0	6491.	1283.	5208.25	1.000	58.3	1191.5	1182.5	48.0	.7	4.4	.0098	.333	.332	1	25.5
133	2.660	.020	3	0	6536.	1283.	5253.75	1.000	59.0	1191.5	1182.5	48.7	.7	4.4	.0098	.335	.335	1	25.5
134	2.680	.020	3	0	6582.	1282.	5299.75	1.000	59.7	1191.5	1182.5	49.3	.7	4.4	.0098	.340	.339	2	25.5
135	2.700	.020	3	0	6627.	1281.	5346.04	1.000	60.3	1191.5	1182.5	50.0	.7	4.4	.0098	.342	.342	1	25.5
136	2.720	.020	3	0	6673.	1281.	5392.35	1.000	61.0	1191.5	1182.5	50.7	.7	4.4	.0098	.345	.345	1	25.5
137	2.740	.020	3	0	6719.	1280.	5438.93	1.000	61.7	1191.5	1182.5	51.4	.7	4.4	.0098	.348	.347	1	25.5
138	2.760	.020	3	0	6765.	1279.	5485.65	1.000	62.4	1191.5	1182.5	52.1	.7	4.3	.0098	.350	.350	1	25.5
139	2.780	.020	3	0	6811.	1279.	5532.73	1.000	63.1	1191.5	1182.5	52.8	.7	4.3	.0098	.354	.354	2	25.5
140	2.800	.020	3	0	6858.	1278.	5579.93	1.000	63.9	1191.5	1182.5	53.5	.7	4.3	.0098	.357	.357	1	25.5
141	2.820	.020	3	0	6905.	1277.	5627.25	1.000	64.6	1191.5	1182.5	54.2	.7	4.3	.0098	.360	.360	1	25.5
142	2.840	.020	3	0	6952.	1277.	5674.83	1.000	65.3	1191.5	1182.5	55.0	.7	4.3	.0098	.363	.362	1	25.5
143	2.860	.020	3	0	6999.	1276.	5722.75	1.000	66.0	1191.4	1182.5	55.7	.7	4.3	.0098	.367	.366	2	25.5
144	2.880	.020	3	0	7046.	1275.	5770.77	1.000	66.8	1191.4	1182.5	56.4	.7	4.3	.0098	.369	.369	1	25.5
145	2.900	.020	3	0	7094.	1275.	5818.90	1.000	67.5	1191.4	1182.5	57.2	.7	4.2	.0098	.372	.372	1	25.5
[illegible]	2.920	.020	3	0	7141.	1274.	5867.25	1.000	68.3	1191.4	1182.5	57.9	.7	4.2	.0098	.375	.374	1	25.5
[illegible]	2.940	.020	3	0	7189.	1273.	5915.79	1.000	69.0	1191.4	1182.5	58.7	.8	4.2	.0098	.379	.379	2	25.5
148	2.960	.020	3	0	7237.	1273.	5964.55	1.000	69.8	1191.4	1182.5	59.5	.8	4.2	.0098	.382	.381	1	25.5
149	2.980	.020	3	0	7285.	1272.	6013.38	1.000	70.6	1191.4	1182.5	60.2	.8	4.2	.0098	.384	.384	1	25.5
150	3.000	.020	3	0	7334.	1271.	6062.53	1.000	71.3	1191.4	1182.5	61.0	.8	4.2	.0098	.388	.388	2	25.5
151	3.020	.020	3	0	7382.	1270.	6111.73	1.000	72.1	1191.4	1182.5	61.8	.8	4.2	.0098	.391	.391	1	25.5
152	3.040	.020	3	0	7431.	1270.	6160.99	1.000	72.9	1191.4	1182.5	62.6	.8	4.1	.0098	.394	.393	1	25.5
153	3.060	.020	3	0	7480.	1269.	6210.70	1.000	73.7	1191.3	1182.5	63.4	.8	4.1	.0098	.398	.398	2	25.5
154	3.080	.020	3	0	7529.	1268.	6260.45	1.000	74.5	1191.3	1182.5	64.2	.8	4.1	.0098	.400	.400	1	25.5
155	3.100	.020	3	0	7577.	1267.	6310.08	1.000	75.3	1191.3	1182.5	65.0	.8	4.1	.0098	.403	.403	1	25.5
156	3.120	.020	3	0	7627.	1267.	6360.14	1.000	76.1	1191.3	1182.5	65.8	.8	4.1	.0098	.407	.407	2	25.5
157	3.140	.020	3	0	7676.	1266.	6410.23	1.000	76.9	1191.3	1182.5	66.6	.8	4.1	.0098	.410	.410	1	25.5
158	3.160	.020	3	0	7725.	1265.	6460.33	1.000	77.8	1191.3	1182.5	67.4	.8	4.1	.0098	.413	.412	1	25.5
159	3.180	.020	3	0	7775.	1264.	6510.74	1.000	78.6	1191.3	1182.5	68.3	.8	4.1	.0098	.417	.417	1	25.5
160	3.200	.020	3	0	7825.	1263.	6561.33	1.000	79.4	1191.3	1182.5	69.1	.8	4.1	.0098	.420	.419	1	25.5
161	3.220	.020	3	0	7874.	1263.	6611.74	1.000	80.3	1191.3	1182.5	70.0	.8	4.0	.0098	.422	.422	1	25.5
162	3.240	.020	3	0	7924.	1262.	6662.40	1.000	81.1	1191.2	1182.5	70.8	.9	4.0	.0098	.427	.426	2	25.5
163	3.260	.020	3	0	7974.	1261.	6713.20	1.000	82.0	1191.2	1182.5	71.7	.9	4.0	.0098	.429	.429	1	25.5
164	3.280	.020	3	0	8024.	1260.	6763.81	1.000	82.9	1191.2	1182.5	72.5	.9	4.0	.0098	.432	.431	1	25.5
165	3.300	.020	3	0	8074.	1259.	6814.86	1.000	83.7	1191.2	1182.5	73.4	.9	4.0	.0098	.436	.436	1	25.5
166	3.320	.020	3	0	8124.	1259.	6865.88	1.000	84.6	1191.2	1182.5	74.3	.9	4.0	.0098	.439	.439	1	25.5
167	3.340	.020	3	0	8175.	1258.	6916.85	1.000	85.5	1191.2	1182.5	75.2	.9	4.0	.0098	.441	.441	1	25.5
168	3.360	.020	3	0	8225.	1257.	6967.91	1.000	86.4	1191.2	1182.5	76.1	.9	4.0	.0098	.446	.446	1	25.5
169	3.380	.020	3	0	8275.	1256.	7019.07	1.000	87.3	1191.2	1182.5	77.0	.9	3.9	.0098	.449	.448	1	25.5
170	3.400	.020	3	0	8325.	1255.	7070.45	1.000	88.2	1191.1	1182.5	77.9	.9	3.9	.0098	.453	.453	2	25.5
171	3.420	.020	3	0	8376.	1254.	7121.74	1.000	89.1	1191.1	1182.5	78.8	.9	3.9	.0098	.456	.455	1	25.5
[illegible]	3.440	.020	3	0	8426.	1253.	7172.93	1.000	90.0	1191.1	1182.5	79.7	.9	3.9	.0098	.458	.458	1	25.5
[illegible]	3.460	.020	3	0	8477.	1252.	7224.37	1.000	90.9	1191.1	1182.5	80.6	.9	3.9	.0098	.463	.462	1	25.5
174	3.480	.020	3	0	8527.	1251.	7275.70	1.000	91.9	1191.1	1182.5	81.5	.9	3.9	.0098	.465	.465	1	25.5
175	3.500	.020	3	0	8577.	1251.	7326.91	1.000	92.8	1191.1	1182.5	82.5	.9	3.9	.0098	.468	.467	1	25.5
176	3.520	.020	3	0	8628.	1250.	7378.34	1.000	93.8	1191.1	1182.5	83.4	.9	3.9	.0098	.472	.472	1	25.5
177	3.540	.020	3	0	8678.	1249.	7429.65	1.000	94.7	1191.1	1182.5	84.4	.9	3.9	.0098	.475	.475	1	25.5
178	3.560	.020	3	0	8729.	1248.	7481.10	1.000	95.7	1191.0	1182.5	85.3	1.0	3.8	.0098	.479	.479	2	25.5
179	3.580	.020	3	0	8779.	1247.	7532.59	1.000	96.6	1191.0	1182.5	86.3	1.0	3.8	.0098	.482	.481	1	25.5

181	3.620	.020	3	0	8880.	1245.	7635.07	1.000	98.6	1191.0	1182.5	88.2	1.0	3.8	.0098	.489	.489	1 25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
182	3.640	.020	3	0	8930.	1244.	7686.23	1.000	99.6	1191.0	1182.5	89.2	1.0	3.8	.0098	.491	.491	1	25.5
183	3.660	.020	3	0	8980.	1243.	7737.50	1.000	100.5	1191.0	1182.5	90.2	1.0	3.8	.0098	.496	.495	2	25.5
184	3.680	.020	3	0	9030.	1242.	7788.59	1.000	101.5	1191.0	1182.5	91.2	1.0	3.8	.0098	.498	.498	1	25.5
185	3.700	.020	3	0	9080.	1241.	7839.27	1.000	102.5	1190.9	1182.5	92.2	1.0	3.8	.0098	.500	.500	1	25.5
186	3.720	.020	3	0	9130.	1240.	7890.29	1.000	103.6	1190.9	1182.5	93.2	1.0	3.8	.0098	.505	.505	1	25.5
187	3.740	.020	3	0	9180.	1239.	7941.10	1.000	104.6	1190.9	1182.5	94.2	1.0	3.7	.0098	.508	.507	1	25.5
188	3.760	.020	3	0	9230.	1238.	7991.98	1.000	105.6	1190.9	1182.5	95.3	1.0	3.7	.0098	.512	.512	2	25.5
189	3.780	.020	3	0	9279.	1237.	8042.63	1.000	106.6	1190.9	1182.5	96.3	1.0	3.7	.0098	.514	.514	1	25.5
190	3.800	.020	3	0	9328.	1236.	8092.83	1.000	107.7	1190.9	1182.5	97.3	1.0	3.7	.0098	.517	.516	1	25.5
191	3.820	.020	3	0	9378.	1235.	8143.34	1.000	108.7	1190.9	1182.5	98.4	1.0	3.7	.0098	.521	.521	1	25.5
192	3.840	.020	3	0	9427.	1233.	8193.38	1.000	109.7	1190.8	1182.5	99.4	1.0	3.7	.0098	.524	.523	1	25.5
193	3.860	.020	3	0	9476.	1232.	8243.35	1.000	110.8	1190.8	1182.5	100.5	1.1	3.7	.0098	.526	.526	1	25.5
194	3.880	.020	3	0	9525.	1231.	8293.19	1.000	111.9	1190.8	1182.5	101.5	1.1	3.7	.0098	.531	.530	1	25.5
195	3.900	.020	3	0	9573.	1230.	8342.95	1.000	112.9	1190.8	1182.5	102.6	1.1	3.7	.0098	.533	.533	1	25.5
196	3.920	.020	3	0	9622.	1229.	8392.51	1.000	114.0	1190.8	1182.5	103.7	1.1	3.7	.0098	.538	.537	2	25.5
197	3.940	.020	3	0	9670.	1228.	8441.76	1.000	115.1	1190.8	1182.5	104.7	1.1	3.6	.0098	.540	.539	1	25.5
198	3.960	.020	3	0	9718.	1227.	8490.68	1.000	116.2	1190.7	1182.5	105.8	1.1	3.6	.0098	.542	.542	1	25.5
199	3.980	.020	3	0	9765.	1226.	8539.64	1.000	117.3	1190.7	1182.5	106.9	1.1	3.6	.0098	.547	.546	1	25.5
200	4.000	.020	3	0	9813.	1225.	8588.26	1.000	118.4	1190.7	1182.5	108.0	1.1	3.6	.0098	.549	.549	1	25.5
201	4.020	.020	3	0	9860.	1223.	8636.31	1.000	119.5	1190.7	1182.5	109.1	1.1	3.6	.0098	.551	.551	1	25.5
202	4.040	.020	3	0	9907.	1222.	8684.59	1.000	120.6	1190.7	1182.5	110.2	1.1	3.6	.0098	.556	.555	1	25.5
203	4.060	.020	3	0	9954.	1221.	8732.50	1.000	121.7	1190.7	1182.5	111.4	1.1	3.6	.0098	.558	.558	1	25.5
204	4.080	.020	3	0	10000.	1220.	8780.12	1.000	122.8	1190.6	1182.5	112.5	1.1	3.6	.0098	.562	.562	2	25.5
205	4.100	.020	3	0	10046.	1219.	8827.57	1.000	123.9	1190.6	1182.5	113.6	1.1	3.6	.0098	.565	.564	1	25.5
206	4.120	.020	3	0	10092.	1218.	8874.40	1.000	125.1	1190.6	1182.5	114.7	1.1	3.5	.0098	.567	.566	1	25.5
207	4.140	.020	3	0	10137.	1216.	8921.19	1.000	126.2	1190.6	1182.5	115.9	1.1	3.5	.0098	.571	.571	1	25.5
[illegible]	4.160	.020	3	0	10183.	1215.	8967.56	1.000	127.4	1190.6	1182.5	117.0	1.1	3.5	.0098	.573	.573	1	25.5
209	4.180	.020	3	0	10227.	1214.	9013.50	1.000	128.5	1190.6	1182.5	118.2	1.2	3.5	.0098	.575	.575	1	25.5
210	4.200	.020	3	0	10272.	1213.	9059.37	1.000	129.7	1190.5	1182.5	119.3	1.2	3.5	.0098	.580	.580	1	25.5
211	4.220	.020	3	0	10316.	1211.	9104.80	1.000	130.8	1190.5	1182.5	120.5	1.2	3.5	.0098	.582	.582	1	25.5
212	4.240	.020	3	0	10360.	1210.	9149.76	1.000	132.0	1190.5	1182.5	121.7	1.2	3.5	.0098	.584	.584	1	25.5
213	4.260	.020	3	0	10403.	1209.	9194.33	1.000	133.2	1190.5	1182.5	122.9	1.2	3.5	.0098	.589	.588	2	25.5
214	4.280	.020	3	0	10446.	1208.	9238.65	1.000	134.4	1190.5	1182.5	124.0	1.2	3.5	.0098	.590	.590	1	25.5
215	4.300	.020	3	0	10489.	1207.	9282.24	1.000	135.5	1190.4	1182.5	125.2	1.2	3.4	.0098	.592	.592	1	25.5
216	4.320	.020	3	0	10531.	1205.	9325.71	1.000	136.7	1190.4	1182.5	126.4	1.2	3.4	.0098	.597	.597	1	25.5
217	4.340	.020	3	0	10573.	1204.	9368.67	1.000	137.9	1190.4	1182.5	127.6	1.2	3.4	.0098	.599	.599	1	25.5
218	4.360	.020	3	0	10614.	1203.	9411.10	1.000	139.1	1190.4	1182.5	128.8	1.2	3.4	.0098	.601	.600	1	25.5
219	4.380	.020	3	0	10655.	1202.	9453.38	1.000	140.4	1190.4	1182.5	130.0	1.2	3.4	.0098	.606	.605	4	25.5
220	4.400	.020	3	0	10695.	1200.	9494.85	1.000	141.6	1190.4	1182.5	131.2	1.2	3.4	.0098	.605	.606	5	25.5
221	4.420	.020	3	0	10735.	1199.	9536.04	1.000	142.8	1190.3	1182.5	132.5	1.2	3.4	.0098	.611	.612	5	25.5
222	4.440	.020	3	0	10775.	1198.	9576.64	1.000	144.0	1190.3	1182.5	133.7	1.2	3.4	.0098	.611	.612	5	25.5
223	4.460	.020	3	0	10814.	1197.	9616.94	1.000	145.2	1190.3	1182.5	134.9	1.2	3.4	.0098	.617	.612	5	25.5
224	4.480	.020	3	0	10852.	1195.	9656.38	1.000	146.5	1190.3	1182.5	136.1	1.2	3.4	.0098	.616	.617	5	25.5
225	4.500	.020	3	0	10890.	1194.	9695.74	1.000	147.7	1190.3	1182.5	137.4	1.2	3.4	.0098	.622	.617	5	25.5
226	4.520	.020	3	0	10927.	1193.	9734.23	1.000	149.0	1190.2	1182.5	138.6	1.2	3.3	.0098	.622	.623	5	25.5
227	4.540	.020	3	0	10964.	1191.	9772.62	1.000	150.2	1190.2	1182.5	139.9	1.3	3.3	.0098	.627	.622	5	25.5
228	4.560	.020	3	0	11000.	1190.	9810.12	1.000	151.5	1190.2	1182.5	141.1	1.3	3.3	.0098	.627	.628	5	25.5
229	4.580	.020	3	0	11035.	1189.	9846.46	1.000	152.7	1190.2	1182.5	142.4	1.3	3.3	.0098	.626	.627	5	25.5
230	4.600	.020	3	0	11070.	1188.	9882.92	1.000	154.0	1190.2	1182.5	143.7	1.3	3.3	.0098	.632	.633	5	25.5
231	4.620	.020	3	0	11104.	1186.	9918.21	1.000	155.2	1190.1	1182.5	144.9	1.3	3.3	.0098	.632	.633	5	25.5
232	4.640	.020	3	0	11138.	1185.	9953.33	1.000	156.5	1190.1	1182.5	146.2	1.3	3.3	.0098	.637	.638	5	25.5
233	4.660	.020	3	0	11171.	1183.	9987.50	1.000	157.8	1190.1	1182.5	147.5	1.3	3.3	.0098	.637	.638	5	25.5
[illegible]	4.680	.020	3	0	11204.	1182.	10021.51	1.000	159.1	1190.1	1182.5	148.8	1.3	3.3	.0098	.642	.643	5	25.5
235	4.700	.020	3	0	11235.	1181.	10054.28	1.000	160.4	1190.0	1182.5	150.0	1.3	3.2	.0098	.641	.643	5	25.5
236	4.720	.020	3	0	11266.	1179.	10087.13	1.000	161.7	1190.0	1182.5	151.3	1.3	3.2	.0098	.647	.642	5	25.5
237	4.740	.020	3	0	11297.	1178.	10118.71	1.000	163.0	1190.0	1182.5	152.6	1.3	3.2	.0098	.646	.647	5	25.5
238	4.760	.020	3	0	11326.	1177.	10149.32	1.000	164.2	1190.0	1182.5	153.9	1.3	3.2	.0098	.646	.647	5	25.5
239	4.780	.020	3	0	11355.	1175.	10179.68	1.000	165.5	1190.0	1182.5	155.2	1.3	3.2	.0098	.651	.652	5	25.5
240	4.800	.020	3	0	11383.	1174.	10209.04	1.000	166.8	1189.9	1182.5	156.5	1.3	3.2	.0098	.650	.651	5	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
242	4.840	.020	3	0	11437.	1171.	10266.23	1.000	169.5	1189.9	1182.5	159.1	1.3	3.2	.0098	.655	.656	5	25.5
[illegible]	4.860	.020	3	0	11463.	1169.	10293.77	1.000	170.8	1189.9	1182.5	160.5	1.3	3.2	.0098	.660	.655	5	25.5
[illegible]	4.880	.020	3	0	11488.	1168.	10320.53	1.000	172.1	1189.9	1182.5	161.8	1.3	3.1	.0098	.659	.660	5	25.5
245	4.900	.020	3	0	11512.	1166.	10345.96	1.000	173.4	1189.8	1182.5	163.1	1.3	3.1	.0098	.658	.659	5	25.5
246	4.920	.020	3	0	11536.	1165.	10371.09	1.000	174.7	1189.8	1182.5	164.4	1.3	3.1	.0098	.664	.665	5	25.5
247	4.940	.020	3	0	11559.	1164.	10395.13	1.000	176.1	1189.8	1182.5	165.7	1.3	3.1	.0098	.663	.664	5	25.5
248	4.960	.020	3	0	11581.	1162.	10418.87	1.000	177.4	1189.8	1182.5	167.1	1.3	3.1	.0098	.668	.663	5	25.5
249	4.980	.020	3	0	11602.	1161.	10441.50	1.000	178.7	1189.7	1182.5	168.4	1.3	3.1	.0098	.667	.668	5	25.5
250	5.000	.020	3	0	11622.	1159.	10463.05	1.000	180.1	1189.7	1182.5	169.7	1.3	3.1	.0098	.666	.667	5	25.5
251	5.020	.020	3	0	11641.	1158.	10483.95	1.000	181.4	1189.7	1182.5	171.1	1.3	3.1	.0098	.671	.672	5	25.5
252	5.040	.020	3	0	11660.	1156.	10503.73	1.000	182.8	1189.7	1182.5	172.4	1.3	3.1	.0098	.670	.671	5	25.5
253	5.060	.020	3	0	11678.	1154.	10523.44	1.000	184.1	1189.6	1182.5	173.8	1.4	3.1	.0098	.675	.670	5	25.5
254	5.080	.020	3	0	11695.	1153.	10541.72	1.000	185.5	1189.6	1182.5	175.1	1.3	3.0	.0098	.674	.675	5	25.5
255	5.100	.020	3	0	11710.	1151.	10558.87	1.000	186.8	1189.6	1182.5	176.5	1.3	3.0	.0098	.672	.673	5	25.5
256	5.120	.020	3	0	11725.	1150.	10575.61	1.000	188.2	1189.6	1182.5	177.8	1.4	3.0	.0098	.678	.679	5	25.5
257	5.140	.020	3	0	11739.	1148.	10591.20	1.000	189.5	1189.5	1182.5	179.2	1.4	3.0	.0098	.676	.677	5	25.5
258	5.160	.020	3	0	11752.	1147.	10605.63	1.000	190.9	1189.5	1182.5	180.5	1.3	3.0	.0098	.675	.676	5	25.5
259	5.180	.020	3	0	11764.	1145.	10618.76	1.000	192.2	1189.5	1182.5	181.9	1.3	3.0	.0098	.675	.675	0	25.5
260	5.200	.020	3	0	11775.	1143.	10631.72	1.000	193.6	1189.5	1182.5	183.2	1.4	3.0	.0098	.679	.680	5	25.5
261	5.220	.020	3	0	11785.	1142.	10643.67	1.000	194.9	1189.5	1182.5	184.6	1.4	3.0	.0098	.679	.680	0	25.5
262	5.240	.020	3	0	11795.	1140.	10654.61	1.000	196.3	1189.4	1182.5	186.0	1.4	3.0	.0098	.679	.680	0	25.5
263	5.260	.020	3	0	11803.	1139.	10664.23	1.000	197.6	1189.4	1182.5	187.3	1.4	2.9	.0098	.679	.679	0	25.5
264	5.280	.020	3	0	11811.	1137.	10673.53	1.000	199.0	1189.4	1182.5	188.7	1.4	2.9	.0098	.683	.684	5	25.5
265	5.300	.020	3	0	11817.	1135.	10681.81	1.000	200.4	1189.4	1182.5	190.0	1.4	2.9	.0098	.683	.683	0	25.5
266	5.320	.020	3	0	11822.	1134.	10688.76	1.000	201.7	1189.3	1182.5	191.4	1.4	2.9	.0098	.683	.683	0	25.5
267	5.340	.020	3	0	11827.	1132.	10694.69	1.000	203.1	1189.3	1182.5	192.8	1.4	2.9	.0098	.680	.681	5	25.5
[illegible]	5.360	.020	3	0	11830.	1130.	10699.61	1.000	204.5	1189.3	1182.5	194.1	1.4	2.9	.0098	.680	.680	0	25.5
[illegible]	5.380	.020	3	0	11833.	1129.	10703.93	1.000	205.8	1189.2	1182.5	195.5	1.4	2.9	.0098	.684	.685	5	25.5
270	5.400	.020	3	0	11834.	1127.	10706.90	1.000	207.2	1189.2	1182.5	196.9	1.4	2.9	.0098	.684	.684	0	25.5
271	5.420	.020	3	0	11835.	1125.	10709.16	1.000	208.6	1189.2	1182.5	198.2	1.4	2.9	.0098	.684	.684	0	25.5
272	5.440	.020	3	0	11834.	1124.	10710.73	1.000	209.9	1189.2	1182.5	199.6	1.4	2.8	.0098	.687	.682	5	25.5
273	5.460	.020	3	0	11833.	1122.	10711.06	1.000	211.3	1189.1	1182.5	201.0	1.4	2.8	.0098	.685	.686	5	25.5
274	5.480	.020	3	0	11831.	1120.	10710.35	1.000	212.7	1189.1	1182.5	202.3	1.4	2.8	.0098	.685	.686	0	25.5
275	5.500	.020	3	0	11827.	1119.	10708.94	1.000	214.0	1189.1	1182.5	203.7	1.4	2.8	.0098	.685	.685	0	25.5
276	5.520	.020	3	0	11823.	1117.	10705.78	1.000	215.4	1189.1	1182.5	205.1	1.4	2.8	.0098	.681	.683	5	25.5
277	5.540	.020	3	0	11817.	1115.	10701.59	1.000	216.8	1189.0	1182.5	206.4	1.4	2.8	.0098	.681	.682	0	25.5
278	5.560	.020	3	0	11810.	1113.	10697.04	1.000	218.1	1189.0	1182.5	207.8	1.4	2.8	.0098	.685	.686	5	25.5
279	5.580	.020	3	0	11803.	1112.	10691.12	1.000	219.5	1189.0	1182.5	209.2	1.4	2.8	.0098	.685	.685	0	25.5
280	5.600	.020	3	0	11794.	1110.	10684.18	1.000	220.9	1189.0	1182.5	210.5	1.4	2.7	.0098	.682	.683	5	25.5
281	5.620	.020	3	0	11784.	1108.	10676.20	1.000	222.2	1188.9	1182.5	211.9	1.4	2.7	.0098	.682	.682	0	25.5
282	5.640	.020	3	0	11773.	1106.	10666.86	1.000	223.6	1188.9	1182.5	213.3	1.4	2.7	.0098	.678	.679	5	25.5
283	5.660	.020	3	0	11761.	1105.	10656.48	1.000	225.0	1188.9	1182.5	214.6	1.4	2.7	.0098	.678	.678	0	25.5
284	5.680	.020	3	0	11749.	1103.	10645.71	1.000	226.3	1188.9	1182.5	216.0	1.4	2.7	.0098	.682	.683	5	25.5
285	5.700	.020	3	0	11735.	1101.	10633.57	1.000	227.7	1188.8	1182.5	217.4	1.4	2.7	.0098	.682	.681	0	25.5
286	5.720	.020	3	0	11720.	1099.	10620.38	1.000	229.0	1188.8	1182.5	218.7	1.4	2.7	.0098	.678	.679	5	25.5
287	5.740	.020	3	0	11704.	1097.	10606.17	1.000	230.4	1188.8	1182.5	220.1	1.4	2.7	.0098	.678	.678	0	25.5
288	5.760	.020	3	0	11686.	1096.	10590.57	1.000	231.7	1188.7	1182.5	221.4	1.3	2.6	.0098	.674	.675	5	25.5
289	5.780	.020	3	0	11668.	1094.	10573.94	1.000	233.1	1188.7	1182.5	222.8	1.3	2.6	.0098	.674	.674	0	25.5
290	5.800	.020	3	0	11649.	1092.	10556.88	1.000	234.4	1188.7	1182.5	224.1	1.4	2.6	.0098	.677	.671	5	25.5
291	5.820	.020	3	0	11629.	1090.	10538.56	1.000	235.8	1188.7	1182.5	225.5	1.3	2.6	.0098	.674	.675	5	25.5
292	5.840	.020	3	0	11608.	1088.	10519.22	1.000	237.1	1188.6	1182.5	226.8	1.3	2.6	.0098	.674	.674	0	25.5
293	5.860	.020	3	0	11585.	1087.	10498.48	1.000	238.5	1188.6	1182.5	228.2	1.3	2.6	.0098	.670	.671	5	25.5
[illegible]	5.880	.020	3	0	11562.	1085.	10477.08	1.000	239.8	1188.6	1182.5	229.5	1.3	2.6	.0098	.670	.670	0	25.5
[illegible]	5.900	.020	3	0	11537.	1083.	10454.28	1.000	241.2	1188.5	1182.5	230.8	1.3	2.6	.0098	.666	.667	5	25.5
296	5.920	.020	3	0	11512.	1081.	10430.47	1.000	242.5	1188.5	1182.5	232.2	1.3	2.6	.0098	.666	.666	0	25.5
297	5.940	.020	3	0	11485.	1079.	10405.63	1.000	243.8	1188.5	1182.5	233.5	1.3	2.5	.0098	.662	.663	5	25.5
298	5.960	.020	3	0	11456.	1076.	10379.79	1.000	245.1	1188.5	1182.5	234.8	1.3	2.5	.0098	.662	.661	0	25.5
299	5.980	.020	3	0	11427.	1074.	10353.11	1.000	246.5	1188.4	1182.5	236.1	1.3	2.5	.0098	.664	.659	5	25.5
300	6.000	.020	3	0	11397.	1071.	10325.56	1.000	247.8	1188.4	1182.5	237.5	1.3	2.5	.0098	.661	.662	5	25.5
301	6.020	.020	3	0	11365.	1069.	10296.74	1.000	249.1	1188.4	1182.5	238.8	1.3	2.5	.0098	.659	.660	5	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
302	6.040	.020	3	0	11335.	1066.	10268.65	1.000	250.4	1188.3	1182.5	240.1	1.3	2.5	.0098	.659	.658	0	25.5
303	6.060	.020	3	0	11311.	1063.	10247.20	1.000	251.7	1188.3	1182.5	241.4	1.3	2.5	.0098	.654	.655	5	25.5
[illegible]4	6.080	.020	3	0	11285.	1061.	10224.55	1.000	253.0	1188.3	1182.5	242.7	1.3	2.4	.0098	.651	.652	5	25.5
[illegible]5	6.100	.020	3	0	11259.	1058.	10201.05	1.000	254.3	1188.3	1182.5	244.0	1.3	2.4	.0098	.648	.649	5	25.5
306	6.120	.020	3	0	11232.	1055.	10176.89	1.000	255.6	1188.2	1182.5	245.3	1.3	2.4	.0098	.652	.653	5	25.5
307	6.140	.020	3	0	11204.	1053.	10151.55	1.000	256.9	1188.2	1182.5	246.6	1.3	2.4	.0098	.649	.650	5	25.5
308	6.160	.020	3	0	11175.	1050.	10125.04	1.000	258.2	1188.2	1182.5	247.9	1.3	2.4	.0098	.646	.647	5	25.5
309	6.180	.020	3	0	11145.	1048.	10097.68	1.000	259.5	1188.1	1182.5	249.2	1.3	2.4	.0098	.643	.644	5	25.5
310	6.200	.020	3	0	11114.	1045.	10069.16	1.000	260.8	1188.1	1182.5	250.5	1.3	2.4	.0098	.640	.641	5	25.5
311	6.220	.020	3	0	11082.	1042.	10039.97	1.000	262.1	1188.1	1182.5	251.7	1.3	2.4	.0098	.643	.638	5	25.5
312	6.240	.020	3	0	11050.	1040.	10009.96	1.000	263.4	1188.1	1182.5	253.0	1.3	2.4	.0098	.640	.641	5	25.5
313	6.260	.020	3	0	11016.	1037.	9978.79	1.000	264.6	1188.0	1182.5	254.3	1.3	2.3	.0098	.637	.638	5	25.5
314	6.280	.020	3	0	10981.	1034.	9946.48	1.000	265.9	1188.0	1182.5	255.6	1.3	2.3	.0098	.634	.635	5	25.5
315	6.300	.020	3	0	10945.	1031.	9913.35	1.000	267.2	1188.0	1182.5	256.8	1.3	2.3	.0098	.631	.632	5	25.5
316	6.320	.020	3	0	10908.	1029.	9879.10	1.000	268.4	1187.9	1182.5	258.1	1.3	2.3	.0098	.628	.629	5	25.5
317	6.340	.020	3	0	10871.	1026.	9844.52	1.000	269.7	1187.9	1182.5	259.3	1.3	2.3	.0098	.631	.626	5	25.5
318	6.360	.020	3	0	10832.	1023.	9808.80	1.000	270.9	1187.9	1182.5	260.6	1.3	2.3	.0098	.628	.629	5	25.5
319	6.380	.020	3	0	10793.	1021.	9771.97	1.000	272.2	1187.8	1182.5	261.8	1.2	2.3	.0098	.625	.626	5	25.5
320	6.400	.020	3	0	10752.	1018.	9734.36	1.000	273.4	1187.8	1182.5	263.1	1.2	2.3	.0098	.622	.623	5	25.5
321	6.420	.020	3	0	10711.	1015.	9695.64	1.000	274.7	1187.8	1182.5	264.3	1.2	2.2	.0098	.618	.619	5	25.5
322	6.440	.020	3	0	10669.	1012.	9656.17	1.000	275.9	1187.7	1182.5	265.6	1.2	2.2	.0098	.615	.616	5	25.5
323	6.460	.020	3	0	10625.	1010.	9615.60	1.000	277.1	1187.7	1182.5	266.8	1.2	2.2	.0098	.612	.613	5	25.5
324	6.480	.020	3	0	10581.	1007.	9574.30	1.000	278.3	1187.7	1182.5	268.0	1.2	2.2	.0098	.609	.610	5	25.5
325	6.500	.020	3	0	10536.	1004.	9531.92	1.000	279.5	1187.7	1182.5	269.2	1.2	2.2	.0098	.606	.607	5	25.5
326	6.520	.020	3	0	10491.	1001.	9489.23	1.000	280.8	1187.6	1182.5	270.4	1.2	2.2	.0098	.608	.604	5	25.5
327	6.540	.020	3	0	10444.	999.	9445.47	1.000	282.0	1187.6	1182.5	271.6	1.2	2.2	.0098	.605	.600	5	25.5
328	6.560	.020	3	0	10397.	996.	9401.00	1.000	283.2	1187.6	1182.5	272.8	1.2	2.2	.0098	.602	.597	5	25.5
[illegible]	6.580	.020	3	0	10349.	993.	9355.49	1.000	284.4	1187.5	1182.5	274.0	1.2	2.2	.0098	.599	.600	5	25.5
[illegible]	6.600	.020	3	0	10300.	990.	9309.27	1.000	285.6	1187.5	1182.5	275.2	1.2	2.1	.0098	.596	.596	5	25.5
331	6.620	.020	3	0	10250.	988.	9262.03	1.000	286.7	1187.5	1182.5	276.4	1.2	2.1	.0098	.592	.593	5	25.5
332	6.640	.020	3	0	10199.	985.	9214.45	1.000	287.9	1187.4	1182.5	277.6	1.2	2.1	.0098	.589	.590	5	25.5
333	6.660	.020	3	0	10148.	982.	9166.20	1.000	289.1	1187.4	1182.5	278.8	1.2	2.1	.0098	.586	.587	5	25.5
334	6.680	.020	3	0	10097.	979.	9117.64	1.000	290.3	1187.4	1182.5	279.9	1.2	2.1	.0098	.582	.583	5	25.5
335	6.700	.020	3	0	10045.	976.	9068.08	1.000	291.4	1187.3	1182.5	281.1	1.2	2.1	.0098	.579	.580	5	25.5
336	6.720	.020	3	0	9992.	974.	9018.24	1.000	292.6	1187.3	1182.5	282.2	1.2	2.1	.0098	.576	.577	5	25.5
337	6.740	.020	3	0	9939.	971.	8967.77	1.000	293.7	1187.3	1182.5	283.4	1.1	2.1	.0098	.572	.573	5	25.5
338	6.760	.020	3	0	9885.	968.	8916.68	1.000	294.9	1187.3	1182.5	284.5	1.1	2.0	.0098	.569	.570	5	25.5
339	6.780	.020	3	0	9831.	965.	8865.33	1.000	296.0	1187.2	1182.5	285.7	1.1	2.0	.0098	.566	.567	5	25.5
340	6.800	.020	3	0	9776.	963.	8813.39	1.000	297.1	1187.2	1182.5	286.8	1.1	2.0	.0098	.563	.564	5	25.5
341	6.820	.020	3	0	9721.	960.	8760.86	1.000	298.2	1187.2	1182.5	287.9	1.1	2.0	.0098	.559	.560	5	25.5
342	6.840	.020	3	0	9665.	957.	8707.75	1.000	299.3	1187.1	1182.5	289.0	1.1	2.0	.0098	.556	.557	5	25.5
343	6.860	.020	3	0	9609.	954.	8654.42	1.000	300.4	1187.1	1182.5	290.1	1.1	2.0	.0098	.553	.554	5	25.5
344	6.880	.020	3	0	9553.	952.	8600.88	1.000	301.5	1187.1	1182.5	291.2	1.1	2.0	.0098	.549	.550	5	25.5
345	6.900	.020	3	0	9496.	949.	8546.79	1.000	302.6	1187.0	1182.5	292.3	1.1	2.0	.0098	.546	.547	5	25.5
346	6.920	.020	3	0	9438.	946.	8492.17	1.000	303.7	1187.0	1182.5	293.4	1.1	2.0	.0098	.543	.544	5	25.5
347	6.940	.020	3	0	9381.	943.	8437.36	1.000	304.8	1187.0	1182.5	294.5	1.1	1.9	.0098	.539	.540	5	25.5
348	6.960	.020	3	0	9323.	941.	8382.03	1.000	305.9	1187.0	1182.5	295.5	1.1	1.9	.0098	.536	.537	5	25.5
349	6.980	.020	3	0	9264.	938.	8326.20	1.000	306.9	1186.9	1182.5	296.6	1.1	1.9	.0098	.533	.533	5	25.5
350	7.000	.020	3	0	9205.	935.	8270.22	1.000	308.0	1186.9	1182.5	297.7	1.1	1.9	.0098	.529	.525	5	25.5
351	7.020	.020	3	0	9147.	933.	8214.09	1.000	309.1	1186.9	1182.5	298.7	1.1	1.9	.0098	.526	.522	5	25.5
352	7.040	.020	3	0	9087.	930.	8157.49	1.000	310.1	1186.8	1182.5	299.8	1.0	1.9	.0098	.523	.518	5	25.5
353	7.060	.020	3	0	9028.	927.	8100.50	1.000	311.1	1186.8	1182.5	300.8	1.0	1.9	.0098	.514	.515	5	25.5
354	7.080	.020	3	0	8968.	924.	8043.05	1.000	312.1	1186.8	1182.5	301.8	1.0	1.8	.0098	.511	.512	5	25.5
[illegible]	7.100	.020	3	0	8907.	922.	7985.51	1.000	313.2	1186.7	1182.5	302.8	1.0	1.8	.0098	.508	.509	5	25.5
[illegible]	7.120	.020	3	0	8847.	919.	7927.88	1.000	314.2	1186.7	1182.5	303.8	1.0	1.8	.0098	.504	.505	5	25.5
357	7.140	.020	3	0	8786.	916.	7869.84	1.000	315.2	1186.7	1182.5	304.8	1.0	1.8	.0098	.501	.502	5	25.5
358	7.160	.020	3	0	8726.	914.	7811.72	1.000	316.2	1186.7	1182.5	305.8	1.0	1.8	.0098	.498	.499	5	25.5
359	7.180	.020	3	0	8664.	911.	7753.20	1.000	317.2	1186.6	1182.5	306.8	1.0	1.8	.0098	.495	.495	5	25.5
360	7.200	.020	3	0	8603.	909.	7694.63	1.000	318.1	1186.6	1182.5	307.8	1.0	1.8	.0098	.491	.492	5	25.5
361	7.220	.020	3	0	8542.	906.	7636.02	1.000	319.1	1186.6	1182.5	308.8	1.0	1.8	.0098	.488	.489	5	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
362	7.240	.020	3	0	8481.	903.	7577.38	1.000	320.1	1186.5	1182.5	309.8	1.0	1.8	.0098	.485	.481	5	25.5
363	7.260	.020	3	0	8419.	901.	7518.37	1.000	321.1	1186.5	1182.5	310.7	1.0	1.8	.0098	.482	.478	5	25.5
364	7.280	.020	3	0	8357.	898.	7459.13	1.000	322.0	1186.5	1182.5	311.7	.9	1.7	.0098	.474	.474	5	25.5
365	7.300	.020	3	0	8295.	895.	7399.89	1.000	322.9	1186.4	1182.5	312.6	.9	1.7	.0098	.470	.471	5	25.5
366	7.320	.020	3	0	8232.	892.	7340.31	1.000	323.9	1186.4	1182.5	313.5	.9	1.7	.0098	.467	.468	5	25.5
367	7.340	.020	3	0	8170.	889.	7280.96	1.000	324.8	1186.4	1182.5	314.5	.9	1.7	.0098	.469	.465	5	25.5
368	7.360	.020	3	0	8108.	886.	7221.32	1.000	325.7	1186.4	1182.5	315.4	.9	1.7	.0098	.459	.457	5	25.5
369	7.380	.020	3	0	8045.	883.	7161.92	1.000	326.6	1186.3	1182.5	316.3	.9	1.7	.0098	.460	.458	5	25.5
370	7.400	.020	3	0	7983.	881.	7102.35	1.000	327.6	1186.3	1182.5	317.2	.9	1.7	.0098	.452	.451	5	25.5
371	7.420	.020	3	0	7920.	878.	7042.65	1.000	328.4	1186.3	1182.5	318.1	.9	1.6	.0098	.445	.452	5	25.5
372	7.440	.020	3	0	7858.	875.	6982.85	1.000	329.3	1186.2	1182.5	319.0	.9	1.6	.0098	.446	.444	5	25.5
373	7.460	.020	3	0	7795.	872.	6922.94	1.000	330.2	1186.2	1182.5	319.9	.9	1.6	.0098	.438	.437	5	25.5
374	7.480	.020	3	0	7733.	869.	6863.63	1.000	331.1	1186.2	1182.5	320.8	.9	1.6	.0098	.439	.438	5	25.5
375	7.500	.020	3	0	7670.	866.	6803.89	1.000	332.0	1186.2	1182.5	321.6	.9	1.6	.0098	.432	.431	5	25.5
376	7.520	.020	3	0	7608.	864.	6744.41	1.000	332.8	1186.1	1182.5	322.5	.9	1.6	.0098	.433	.432	5	25.5
377	7.540	.020	3	0	7546.	861.	6684.85	1.000	333.7	1186.1	1182.5	323.3	.9	1.6	.0098	.426	.424	5	25.5
378	7.560	.020	3	0	7483.	858.	6625.24	1.000	334.5	1186.1	1182.5	324.2	.8	1.6	.0098	.419	.425	5	25.5
379	7.580	.020	3	0	7421.	855.	6565.57	1.000	335.3	1186.1	1182.5	325.0	.8	1.6	.0098	.420	.418	5	25.5
380	7.600	.020	3	0	7359.	853.	6506.20	1.000	336.2	1186.0	1182.5	325.8	.8	1.6	.0098	.412	.411	5	25.5
381	7.620	.020	3	0	7297.	850.	6447.13	1.000	337.0	1186.0	1182.5	326.7	.8	1.6	.0098	.413	.412	5	25.5
382	7.640	.020	3	0	7235.	847.	6388.03	1.000	337.8	1186.0	1182.5	327.5	.8	1.5	.0098	.406	.405	5	25.5
383	7.660	.020	3	0	7173.	845.	6328.93	1.000	338.6	1185.9	1182.5	328.3	.8	1.5	.0098	.399	.406	5	25.5
384	7.680	.020	3	0	7112.	842.	6269.80	1.000	339.4	1185.9	1182.5	329.1	.8	1.5	.0098	.400	.399	5	25.5
385	7.700	.020	3	0	7050.	839.	6211.02	1.000	340.2	1185.9	1182.5	329.9	.8	1.5	.0098	.394	.392	5	25.5
386	7.720	.020	3	0	6989.	836.	6152.55	1.000	341.0	1185.9	1182.5	330.7	.8	1.5	.0098	.394	.393	5	25.5
387	7.740	.020	3	0	6928.	834.	6094.11	1.000	341.8	1185.8	1182.5	331.4	.8	1.5	.0098	.388	.386	5	25.5
388	7.760	.020	3	0	6867.	831.	6035.72	1.000	342.5	1185.8	1182.5	332.2	.8	1.5	.0098	.381	.387	5	25.5
389	7.780	.020	3	0	6806.	829.	5977.65	1.000	343.3	1185.8	1182.5	333.0	.8	1.5	.0098	.382	.380	5	25.5
390	7.800	.020	3	0	6746.	826.	5919.65	1.000	344.0	1185.8	1182.5	333.7	.8	1.4	.0098	.375	.374	5	25.5
391	7.820	.020	3	0	6685.	823.	5861.97	1.000	344.8	1185.7	1182.5	334.5	.8	1.4	.0098	.376	.375	5	25.5
392	7.840	.020	3	0	6626.	821.	5804.70	1.000	345.5	1185.7	1182.5	335.2	.7	1.4	.0098	.369	.368	5	25.5
393	7.860	.020	3	0	6565.	818.	5747.19	1.000	346.3	1185.7	1182.5	335.9	.7	1.4	.0098	.363	.369	5	25.5
394	7.880	.020	3	0	6506.	816.	5690.35	1.000	347.0	1185.7	1182.5	336.6	.7	1.4	.0098	.364	.362	5	25.5
395	7.900	.020	3	0	6446.	813.	5633.28	1.000	347.7	1185.6	1182.5	337.4	.7	1.4	.0098	.357	.356	5	25.5
396	7.920	.020	3	0	6387.	811.	5576.89	1.000	348.4	1185.6	1182.5	338.1	.7	1.4	.0098	.358	.357	5	25.5
397	7.940	.020	3	0	6329.	808.	5520.61	1.000	349.1	1185.6	1182.5	338.8	.7	1.4	.0098	.352	.351	5	25.5
398	7.960	.020	3	0	6270.	806.	5464.47	1.000	349.8	1185.6	1182.5	339.5	.7	1.4	.0098	.346	.345	5	25.5
399	7.980	.020	3	0	6212.	803.	5408.68	1.000	350.5	1185.5	1182.5	340.2	.7	1.4	.0098	.346	.345	5	25.5
400	8.000	.020	3	0	6154.	801.	5353.03	1.000	351.2	1185.5	1182.5	340.8	.7	1.3	.0098	.340	.339	5	25.5
401	8.020	.020	3	0	6096.	798.	5297.86	1.000	351.8	1185.5	1182.5	341.5	.7	1.3	.0098	.334	.340	5	25.5
402	8.040	.020	3	0	6039.	796.	5243.05	1.000	352.5	1185.5	1182.5	342.2	.7	1.3	.0098	.335	.334	5	25.5
403	8.060	.020	3	0	5982.	793.	5188.72	1.000	353.2	1185.4	1182.5	342.8	.7	1.3	.0098	.329	.328	5	25.5
404	8.080	.020	3	0	5926.	791.	5134.76	1.000	353.8	1185.4	1182.5	343.5	.7	1.3	.0098	.330	.328	5	25.5
405	8.100	.020	3	0	5870.	789.	5081.30	1.000	354.5	1185.4	1182.5	344.2	.6	1.3	.0098	.324	.323	5	25.5
406	8.120	.020	3	0	5814.	786.	5028.02	1.000	355.1	1185.4	1182.5	344.8	.6	1.3	.0098	.318	.317	5	25.5
407	8.140	.020	3	0	5759.	784.	4975.43	1.000	355.8	1185.3	1182.5	345.4	.6	1.3	.0098	.319	.318	5	25.5
408	8.160	.020	3	0	5704.	781.	4923.02	1.000	356.4	1185.3	1182.5	346.0	.6	1.3	.0098	.313	.312	5	25.5
409	8.180	.020	3	0	5650.	779.	4871.14	1.000	357.0	1185.3	1182.5	346.7	.6	1.3	.0098	.307	.312	5	25.5
410	8.200	.020	3	0	5597.	777.	4819.95	1.000	357.6	1185.3	1182.5	347.3	.6	1.3	.0098	.308	.307	5	25.5
411	8.220	.020	3	0	5543.	775.	4768.64	1.000	358.2	1185.2	1182.5	347.9	.6	1.2	.0098	.302	.301	5	25.5
412	8.240	.020	3	0	5491.	772.	4718.35	1.000	358.8	1185.2	1182.5	348.5	.6	1.2	.0098	.303	.302	5	25.5
413	8.260	.020	3	0	5438.	770.	4668.26	1.000	359.4	1185.2	1182.5	349.1	.6	1.2	.0098	.297	.296	5	25.5
414	8.280	.020	3	0	5386.	768.	4618.40	1.000	360.0	1185.2	1182.5	349.7	.6	1.2	.0098	.292	.291	5	25.5
415	8.300	.020	3	0	5335.	766.	4569.23	1.000	360.6	1185.2	1182.5	350.3	.6	1.2	.0098	.292	.292	5	25.5
416	8.320	.020	3	0	5284.	764.	4520.60	1.000	361.2	1185.1	1182.5	350.8	.6	1.2	.0098	.287	.286	5	25.5
417	8.340	.020	3	0	5233.	761.	4471.89	1.000	361.7	1185.1	1182.5	351.4	.6	1.2	.0098	.282	.287	5	25.5
418	8.360	.020	3	0	5183.	759.	4424.18	1.000	362.3	1185.1	1182.5	352.0	.6	1.2	.0098	.282	.282	5	25.5
419	8.380	.020	3	0	5134.	757.	4376.71	1.000	362.8	1185.1	1182.5	352.5	.6	1.2	.0098	.277	.276	5	25.5
420	8.400	.020	3	0	5085.	755.	4329.62	1.000	363.4	1185.0	1182.5	353.1	.6	1.2	.0098	.278	.277	5	25.5
421	8.420	.020	3	0	5036.	753.	4283.08	1.000	363.9	1185.0	1182.5	353.6	.5	1.2	.0098	.273	.272	5	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
422	8.440	.020	3	0	4988.	751.	4236.79	1.000	364.5	1185.0	1182.5	354.1	.5	1.1	.0098	.268	.267	5	25.5
423	8.460	.020	3	0	4940.	749.	4191.19	1.000	365.0	1185.0	1182.5	354.7	.5	1.1	.0098	.268	.267	5	25.5
424	8.480	.020	3	0	4893.	747.	4146.15	1.000	365.5	1185.0	1182.5	355.2	.5	1.1	.0098	.263	.262	5	25.5
425	8.500	.020	3	0	4846.	745.	4101.06	1.000	366.1	1184.9	1182.5	355.7	.5	1.1	.0098	.259	.263	5	25.5
426	8.520	.020	3	0	4800.	743.	4056.97	1.000	366.6	1184.9	1182.5	356.2	.5	1.1	.0098	.259	.258	5	25.5
427	8.540	.020	3	0	4754.	741.	4012.83	1.000	367.1	1184.9	1182.5	356.8	.5	1.1	.0098	.254	.253	5	25.5
428	8.560	.020	3	0	4708.	739.	3969.37	1.000	367.6	1184.9	1182.5	357.3	.5	1.1	.0098	.254	.254	5	25.5
429	8.580	.020	3	0	4663.	737.	3926.48	1.000	368.1	1184.9	1182.5	357.8	.5	1.1	.0098	.250	.249	5	25.5
430	8.600	.020	3	0	4619.	735.	3883.86	1.000	368.6	1184.8	1182.5	358.3	.5	1.1	.0098	.245	.244	5	25.5
431	8.620	.020	3	0	4575.	733.	3841.62	1.000	369.1	1184.8	1182.5	358.7	.5	1.1	.0098	.246	.245	5	25.5
432	8.640	.020	3	0	4531.	731.	3799.95	1.000	369.6	1184.8	1182.5	359.2	.5	1.1	.0098	.241	.240	5	25.5
433	8.660	.020	3	0	4488.	729.	3758.56	1.000	370.0	1184.8	1182.5	359.7	.5	1.1	.0098	.237	.241	5	25.5
434	8.680	.020	3	0	4445.	727.	3717.84	1.000	370.5	1184.8	1182.5	360.2	.5	1.1	.0098	.237	.236	5	25.5
435	8.700	.020	3	0	4403.	726.	3677.40	1.000	371.0	1184.8	1182.5	360.6	.5	1.0	.0098	.233	.232	5	25.5
436	8.720	.020	3	0	4361.	724.	3637.34	1.000	371.4	1184.7	1182.5	361.1	.5	1.0	.0098	.233	.232	5	25.5
437	8.740	.020	3	0	4320.	722.	3597.85	1.000	371.9	1184.7	1182.5	361.6	.5	1.0	.0098	.229	.228	5	25.5
438	8.760	.020	3	0	4279.	720.	3558.65	1.000	372.3	1184.7	1182.5	362.0	.4	1.0	.0098	.224	.224	5	25.5
439	8.780	.020	3	0	4238.	718.	3520.11	1.000	372.8	1184.7	1182.5	362.5	.4	1.0	.0098	.225	.224	5	25.5
440	8.800	.020	3	0	4198.	717.	3481.56	1.000	373.2	1184.7	1182.5	362.9	.4	1.0	.0098	.221	.220	5	25.5
441	8.820	.020	3	0	4159.	715.	3443.89	1.000	373.7	1184.6	1182.5	363.3	.4	1.0	.0098	.217	.220	5	25.5
442	8.840	.020	3	0	4119.	713.	3406.30	1.000	374.1	1184.6	1182.5	363.8	.4	1.0	.0098	.217	.216	5	25.5
443	8.860	.020	3	0	4081.	711.	3369.28	1.000	374.5	1184.6	1182.5	364.2	.4	1.0	.0098	.213	.212	5	25.5
444	8.880	.020	3	0	4042.	710.	3332.64	1.000	375.0	1184.6	1182.5	364.6	.4	1.0	.0098	.213	.212	5	25.5
445	8.900	.020	3	0	4005.	708.	3296.57	1.000	375.4	1184.6	1182.5	365.0	.4	1.0	.0098	.209	.208	5	25.5
446	8.920	.020	3	0	3967.	706.	3260.79	1.000	375.8	1184.6	1182.5	365.4	.4	1.0	.0098	.205	.209	5	25.5
447	8.940	.020	3	0	3930.	705.	3225.38	1.000	376.2	1184.5	1182.5	365.9	.4	1.0	.0098	.205	.205	5	25.5
448	8.960	.020	3	0	3893.	703.	3190.26	1.000	376.6	1184.5	1182.5	366.3	.4	.9	.0098	.202	.201	5	25.5
449	8.980	.020	3	0	3857.	701.	3155.79	1.000	377.0	1184.5	1182.5	366.7	.4	.9	.0098	.202	.201	5	25.5
450	9.000	.020	3	0	3821.	700.	3121.61	1.000	377.4	1184.5	1182.5	367.1	.4	.9	.0098	.198	.197	5	25.5
[illegible]	9.020	.020	3	0	3786.	698.	3087.73	1.000	377.8	1184.5	1182.5	367.5	.4	.9	.0098	.194	.198	5	25.5
[illegible]	9.040	.020	3	0	3751.	696.	3054.49	1.000	378.2	1184.5	1182.5	367.8	.4	.9	.0098	.195	.194	5	25.5
453	9.060	.020	3	0	3716.	694.	3021.54	1.000	378.6	1184.5	1182.5	368.2	.4	.9	.0098	.191	.190	5	25.5
454	9.080	.020	3	0	3682.	693.	2988.95	1.000	378.9	1184.4	1182.5	368.6	.4	.9	.0098	.191	.191	5	25.5
455	9.100	.020	3	0	3648.	691.	2956.65	1.000	379.3	1184.4	1182.5	369.0	.4	.9	.0098	.188	.187	5	25.5
456	9.120	.020	3	0	3614.	689.	2924.92	1.000	379.7	1184.4	1182.5	369.3	.4	.9	.0098	.184	.187	5	25.5
457	9.140	.020	3	0	3581.	687.	2893.27	1.000	380.0	1184.4	1182.5	369.7	.4	.9	.0098	.184	.184	5	25.5
458	9.160	.020	3	0	3548.	686.	2862.20	1.000	380.4	1184.4	1182.5	370.1	.4	.9	.0098	.181	.180	5	25.5
459	9.180	.020	3	0	3516.	684.	2831.75	1.000	380.8	1184.4	1182.5	370.4	.4	.9	.0098	.181	.180	5	25.5
460	9.200	.020	3	0	3484.	682.	2801.31	1.000	381.1	1184.3	1182.5	370.8	.4	.9	.0098	.178	.177	5	25.5
461	9.220	.020	3	0	3452.	681.	2771.17	1.000	381.5	1184.3	1182.5	371.1	.3	.9	.0098	.174	.177	5	25.5
462	9.240	.020	3	0	3421.	679.	2741.63	1.000	381.8	1184.3	1182.5	371.5	.3	.9	.0098	.173	.172	5	25.5
463	9.260	.020	3	0	3390.	677.	2712.43	1.000	382.2	1184.3	1182.5	371.8	.3	.9	.0098	.173	.172	5	25.5
464	9.280	.020	3	0	3359.	676.	2683.55	1.000	382.5	1184.3	1182.5	372.2	.3	.8	.0098	.171	.172	5	25.5
465	9.300	.020	3	0	3330.	674.	2655.28	1.000	382.9	1184.3	1182.5	372.5	.3	.8	.0098	.171	.166	5	25.5
466	9.320	.020	3	0	3300.	673.	2626.99	1.000	383.2	1184.3	1182.5	372.8	.3	.8	.0098	.165	.166	5	25.5
467	9.340	.020	3	0	3270.	671.	2599.03	1.000	383.5	1184.2	1182.5	373.2	.3	.8	.0098	.165	.166	5	25.5
468	9.360	.020	3	0	3241.	670.	2571.67	1.000	383.8	1184.2	1182.5	373.5	.3	.8	.0098	.165	.166	5	25.5
469	9.380	.020	3	0	3213.	668.	2544.57	1.000	384.2	1184.2	1182.5	373.8	.3	.8	.0098	.159	.160	5	25.5
470	9.400	.020	3	0	3184.	667.	2517.80	1.000	384.5	1184.2	1182.5	374.1	.3	.8	.0098	.159	.160	5	25.5
471	9.420	.020	3	0	3157.	665.	2491.36	1.000	384.8	1184.2	1182.5	374.5	.3	.8	.0098	.159	.160	5	25.5
472	9.440	.020	3	0	3129.	664.	2465.25	1.000	385.1	1184.2	1182.5	374.8	.3	.8	.0098	.159	.154	5	25.5
473	9.460	.020	3	0	3102.	662.	2439.39	1.000	385.4	1184.2	1182.5	375.1	.3	.8	.0098	.153	.154	5	25.5
474	9.480	.020	3	0	3075.	661.	2413.86	1.000	385.7	1184.2	1182.5	375.4	.3	.8	.0098	.153	.154	5	25.5
475	9.500	.020	3	0	3048.	659.	2388.65	1.000	386.0	1184.1	1182.5	375.7	.3	.8	.0098	.153	.154	5	25.5
476	9.520	.020	3	0	3022.	658.	2363.96	1.000	386.3	1184.1	1182.5	376.0	.3	.8	.0098	.147	.148	5	25.5
[illegible]	9.540	.020	3	0	2996.	657.	2339.33	1.000	386.6	1184.1	1182.5	376.3	.3	.8	.0098	.147	.148	5	25.5
[illegible]	9.560	.020	3	0	2970.	655.	2315.28	1.000	386.9	1184.1	1182.5	376.6	.3	.8	.0098	.147	.148	5	25.5
479	9.580	.020	3	0	2945.	654.	2291.29	1.000	387.2	1184.1	1182.5	376.9	.3	.8	.0098	.147	.142	5	25.5
480	9.600	.020	3	0	2920.	652.	2267.82	1.000	387.5	1184.1	1182.5	377.2	.3	.8	.0098	.141	.142	5	25.5
481	9.620	.020	3	0	2895.	651.	2244.40	1.000	387.8	1184.1	1182.5	377.4	.3	.8	.0098	.142	.142	5	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
482	9.640	.020	3	0	2871.	650.	2221.29	1.000	388.1	1184.1	1182.5	377.7	.3	.8	.0098	.142	.142	5	25.5
483	9.660	.020	3	0	2847.	648.	2198.77	1.000	388.3	1184.1	1182.5	378.0	.3	.8	.0098	.142	.137	5	25.5
484	9.680	.020	3	0	2823.	647.	2176.23	1.000	388.6	1184.0	1182.5	378.3	.3	.7	.0098	.136	.137	5	25.5
485	9.700	.020	3	0	2800.	646.	2154.26	1.000	388.9	1184.0	1182.5	378.5	.3	.7	.0098	.136	.137	5	25.5
486	9.720	.020	3	0	2777.	645.	2132.35	1.000	389.2	1184.0	1182.5	378.8	.3	.7	.0098	.136	.137	5	25.5
[illegible]	9.740	.020	3	0	2754.	643.	2110.68	1.000	389.4	1184.0	1182.5	379.1	.3	.7	.0098	.131	.132	5	25.5
[illegible]	9.760	.020	3	0	2732.	642.	2089.58	1.000	389.7	1184.0	1182.5	379.3	.3	.7	.0098	.131	.132	5	25.5
489	9.780	.020	3	0	2709.	641.	2068.53	1.000	389.9	1184.0	1182.5	379.6	.3	.7	.0098	.131	.132	5	25.5
490	9.800	.020	3	0	2687.	640.	2047.79	1.000	390.2	1184.0	1182.5	379.9	.3	.7	.0098	.131	.132	5	25.5
491	9.820	.020	3	0	2666.	638.	2027.29	1.000	390.5	1184.0	1182.5	380.1	.3	.7	.0098	.126	.127	5	25.5
492	9.840	.020	3	0	2644.	637.	2007.10	1.000	390.7	1184.0	1182.5	380.4	.3	.7	.0098	.126	.127	5	25.5
493	9.860	.020	3	0	2623.	636.	1987.21	1.000	391.0	1183.9	1182.5	380.6	.3	.7	.0098	.126	.127	5	25.5
494	9.880	.020	3	0	2602.	635.	1967.37	1.000	391.2	1183.9	1182.5	380.9	.3	.7	.0098	.126	.122	5	25.5
495	9.900	.020	3	0	2582.	634.	1948.03	1.000	391.5	1183.9	1182.5	381.1	.2	.7	.0098	.121	.122	5	25.5
496	9.920	.020	3	0	2562.	633.	1928.98	1.000	391.7	1183.9	1182.5	381.4	.2	.7	.0098	.121	.122	5	25.5
497	9.940	.020	3	0	2541.	631.	1909.98	1.000	391.9	1183.9	1182.5	381.6	.2	.7	.0098	.121	.122	5	25.5
498	9.960	.020	3	0	2522.	630.	1891.27	1.000	392.2	1183.9	1182.5	381.8	.2	.7	.0098	.121	.117	5	25.5
499	9.980	.020	3	0	2502.	629.	1872.81	1.000	392.4	1183.9	1182.5	382.1	.2	.7	.0098	.117	.117	5	25.5
500	10.000	.020	3	0	2483.	628.	1854.65	1.000	392.6	1183.9	1182.5	382.3	.2	.7	.0098	.117	.117	5	25.5
501	10.020	.020	3	0	2464.	627.	1836.77	1.000	392.9	1183.9	1182.5	382.5	.2	.7	.0098	.117	.117	5	25.5
502	10.040	.020	3	0	2445.	626.	1819.18	1.000	393.1	1183.9	1182.5	382.8	.2	.7	.0098	.117	.113	5	25.5
503	10.060	.020	3	0	2426.	625.	1801.59	1.000	393.3	1183.8	1182.5	383.0	.2	.6	.0098	.112	.113	5	25.5
504	10.080	.020	3	0	2408.	624.	1784.28	1.000	393.6	1183.8	1182.5	383.2	.2	.6	.0098	.112	.113	5	25.5
505	10.100	.020	3	0	2390.	623.	1767.27	1.000	393.8	1183.8	1182.5	383.5	.2	.6	.0098	.112	.113	5	25.5
506	10.120	.020	3	0	2372.	622.	1750.53	1.000	394.0	1183.8	1182.5	383.7	.2	.6	.0098	.112	.109	5	25.5
507	10.140	.020	3	0	2355.	621.	1734.04	1.000	394.2	1183.8	1182.5	383.9	.2	.6	.0098	.108	.109	5	25.5
508	10.160	.020	3	0	2337.	620.	1717.59	1.000	394.4	1183.8	1182.5	384.1	.2	.6	.0098	.108	.109	5	25.5
509	10.180	.020	3	0	2320.	619.	1701.42	1.000	394.7	1183.8	1182.5	384.3	.2	.6	.0098	.108	.109	5	25.5
510	10.200	.020	3	0	2303.	618.	1685.52	1.000	394.9	1183.8	1182.5	384.5	.2	.6	.0098	.108	.104	5	25.5
511	10.220	.020	3	0	2287.	617.	1669.87	1.000	395.1	1183.8	1182.5	384.8	.2	.6	.0098	.104	.104	5	25.5
[illegible]	10.240	.020	3	0	2270.	616.	1654.25	1.000	395.3	1183.8	1182.5	385.0	.2	.6	.0098	.104	.104	5	25.5
[illegible]	10.260	.020	3	0	2254.	615.	1638.91	1.000	395.5	1183.8	1182.5	385.2	.2	.6	.0098	.104	.104	5	25.5
514	10.280	.020	3	0	2238.	614.	1623.85	1.000	395.7	1183.8	1182.5	385.4	.2	.6	.0098	.104	.100	5	25.5
515	10.300	.020	3	0	2222.	613.	1608.78	1.000	395.9	1183.7	1182.5	385.6	.2	.6	.0098	.100	.100	5	25.5
516	10.320	.020	3	0	2206.	612.	1594.22	1.000	396.1	1183.7	1182.5	385.8	.2	.6	.0098	.100	.100	5	25.5
517	10.340	.020	3	0	2191.	611.	1579.70	1.000	396.3	1183.7	1182.5	386.0	.2	.6	.0098	.100	.100	5	25.5
518	10.360	.020	3	0	2175.	610.	1565.21	1.000	396.5	1183.7	1182.5	386.2	.2	.6	.0098	.100	.100	5	25.5
519	10.380	.020	3	0	2161.	609.	1551.20	1.000	396.7	1183.7	1182.5	386.4	.2	.6	.0098	.096	.097	5	25.5
520	10.400	.020	3	0	2146.	609.	1537.21	1.000	396.9	1183.7	1182.5	386.6	.2	.6	.0098	.096	.097	5	25.5
521	10.420	.020	3	0	2131.	608.	1523.49	1.000	397.1	1183.7	1182.5	386.7	.2	.6	.0098	.096	.097	5	25.5
522	10.440	.020	3	0	2117.	607.	1509.81	1.000	397.3	1183.7	1182.5	386.9	.2	.6	.0098	.096	.097	5	25.5
523	10.460	.020	3	0	2102.	606.	1496.38	1.000	397.5	1183.7	1182.5	387.1	.2	.6	.0098	.096	.093	5	25.5
524	10.480	.020	3	0	2088.	605.	1483.19	1.000	397.6	1183.7	1182.5	387.3	.2	.6	.0098	.092	.093	5	25.5
525	10.500	.020	3	0	2074.	604.	1470.03	1.000	397.8	1183.7	1182.5	387.5	.2	.6	.0098	.092	.093	5	25.5
526	10.520	.020	3	0	2061.	603.	1457.37	1.000	398.0	1183.7	1182.5	387.7	.2	.6	.0098	.092	.093	5	25.5
527	10.540	.020	3	0	2047.	603.	1444.50	1.000	398.2	1183.7	1182.5	387.9	.2	.6	.0098	.092	.089	5	25.5
528	10.560	.020	3	0	2034.	602.	1432.09	1.000	398.4	1183.6	1182.5	388.0	.2	.6	.0098	.089	.089	5	25.5
529	10.580	.020	3	0	2020.	601.	1419.48	1.000	398.6	1183.6	1182.5	388.2	.2	.6	.0098	.089	.089	5	25.5
530	10.600	.020	3	0	2008.	600.	1407.35	1.000	398.7	1183.6	1182.5	388.4	.2	.6	.0098	.089	.089	5	25.5
531	10.620	.020	3	0	1995.	599.	1395.25	1.000	398.9	1183.6	1182.5	388.6	.2	.6	.0098	.089	.089	5	25.5
532	10.640	.020	3	0	1982.	599.	1383.41	1.000	399.1	1183.6	1182.5	388.8	.2	.6	.0098	.089	.086	5	25.5
533	10.660	.020	3	0	1969.	598.	1371.57	1.000	399.3	1183.6	1182.5	388.9	.2	.5	.0098	.085	.086	5	25.5
534	10.680	.020	3	0	1957.	597.	1359.98	1.000	399.4	1183.6	1182.5	389.1	.2	.5	.0098	.085	.086	5	25.5
535	10.700	.020	3	0	1945.	596.	1348.64	1.000	399.6	1183.6	1182.5	389.3	.2	.5	.0098	.085	.086	5	25.5
536	10.720	.020	3	0	1933.	596.	1337.32	1.000	399.8	1183.6	1182.5	389.4	.2	.5	.0098	.085	.086	5	25.5
537	10.740	.020	3	0	1921.	595.	1326.23	1.000	399.9	1183.6	1182.5	389.6	.2	.5	.0098	.082	.082	5	25.5
[illegible]	10.760	.020	3	0	1909.	594.	1315.17	1.000	400.1	1183.6	1182.5	389.8	.2	.5	.0098	.082	.082	5	25.5
[illegible]	10.780	.020	3	0	1898.	593.	1304.35	1.000	400.3	1183.6	1182.5	389.9	.2	.5	.0098	.082	.082	5	25.5
540	10.800	.020	3	0	1886.	593.	1293.56	1.000	400.4	1183.6	1182.5	390.1	.2	.5	.0098	.082	.082	5	25.5
541	10.820	.020	3	0	1875.	592.	1283.01	1.000	400.6	1183.6	1182.5	390.3	.2	.5	.0098	.082	.079	5	25.5

I	T	DTH	KO	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
542	10.840	.020	3	0	1864.	591.	1272.68	1.000	400.7	1183.6	1182.5	390.4	.2	.5	.0098	.079	.079	5	25.5
543	10.860	.020	3	0	1853.	591.	1262.38	1.000	400.9	1183.5	1182.5	390.6	.2	.5	.0098	.079	.079	5	25.5
544	10.880	.020	3	0	1842.	590.	1252.10	1.000	401.1	1183.5	1182.5	390.7	.2	.5	.0098	.079	.079	5	25.5
545	10.900	.020	3	0	1831.	589.	1242.06	1.000	401.2	1183.5	1182.5	390.9	.2	.5	.0098	.079	.079	5	25.5
546	10.920	.020	3	0	1821.	589.	1232.26	1.000	401.4	1183.5	1182.5	391.0	.2	.5	.0098	.079	.076	5	25.5
547	10.940	.020	3	0	1810.	588.	1222.46	1.000	401.5	1183.5	1182.5	391.2	.2	.5	.0098	.076	.076	5	25.5
[illegible]	10.960	.020	3	0	1800.	587.	1212.90	1.000	401.7	1183.5	1182.5	391.3	.2	.5	.0098	.076	.076	5	25.5
[illegible]	10.980	.020	3	0	1790.	587.	1203.36	1.000	401.8	1183.5	1182.5	391.5	.2	.5	.0098	.076	.076	5	25.5
550	11.000	.020	3	0	1780.	586.	1193.84	1.000	402.0	1183.5	1182.5	391.7	.2	.5	.0098	.076	.076	5	25.5
551	11.020	.020	3	0	1770.	585.	1184.55	1.000	402.1	1183.5	1182.5	391.8	.2	.5	.0098	.076	.073	5	25.5

KTT= 0 I= 552 T= 11.04

TF= .10 QTF= 1348. TP= 5.00 QP= 11622. TRS= 4.98 TB= .02
BRD= 10.8 BRW= 402.3 HU=1193.3 HY=1183.5 HC=1182.5 ALG=25.500 QO= 32.9442
Z= .48 TFH= 4.50 BO= 392.0 TFI= .50

1

```
OTIME*****  3555.0    5555.0    7555.0    9555.0   11555.0   13555.0   15555.0   17555.0   19555.0   21555.0     DISCHARGE
   .100*        .         .         .         .         .         .         .         .         .         .        1555.
   .140.*       .         .         .         .         .         .         .         .         .         .        1670.
   .180.*       .         .         .         .         .         .         .         .         .         .        1786.
   .220. *      .         .         .         .         .         .         .         .         .         .        1900.
   .260. *      .         .         .         .         .         .         .         .         .         .        2011.
   .300.  *     .         .         .         .         .         .         .         .         .         .        2120.
   .340.  *     .         .         .         .         .         .         .         .         .         .        2225.
   .380.   *    .         .         .         .         .         .         .         .         .         .        2327.
   .420.   *    .         .         .         .         .         .         .         .         .         .        2426.
   .460.    *   .         .         .         .         .         .         .         .         .         .        2523.
   .500.    *   .         .         .         .         .         .         .         .         .         .        2616.
   .540.     *  .         .         .         .         .         .         .         .         .         .        2707.
   .580.     *  .         .         .         .         .         .         .         .         .         .        2795.
   .620.      * .         .         .         .         .         .         .         .         .         .        2881.
   .660.      * .         .         .         .         .         .         .         .         .         .        2964.
   .700.      * .         .         .         .         .         .         .         .         .         .        3045.
   .740.       *.         .         .         .         .         .         .         .         .         .        3124.
   .780.       *.         .         .         .         .         .         .         .         .         .        3201.
   .820.        *.        .         .         .         .         .         .         .         .         .        3276.
   .860.        *.        .         .         .         .         .         .         .         .         .        3349.
   .900.        *.        .         .         .         .         .         .         .         .         .        3420.
   .940.         *        .         .         .         .         .         .         .         .         .        3489.
   .980.         *        .         .         .         .         .         .         .         .         .        3556.
  1.020.         .*       .         .         .         .         .         .         .         .         .        3708.
  1.060.         .*       .         .         .         .         .         .         .         .         .        3749.
  1.100.         .*       .         .         .         .         .         .         .         .         .        3791.
  1.140.         .*       .         .         .         .         .         .         .         .         .        3836.
  1.180.         . *      .         .         .         .         .         .         .         .         .        3882.
  1.220.         . *      .         .         .         .         .         .         .         .         .        3931.
  1.260.         . *      .         .         .         .         .         .         .         .         .        3982.
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  1.340.         .  *     .         .         .         .         .         .         .         .         .        4091.
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  1.500.         .   *    .         .         .         .         .         .         .         .         .        4328.
  1.540.         .   *    .         .         .         .         .         .         .         .         .        4390.
  1.580.         .   *    .         .         .         .         .         .         .         .         .        4453.
  1.620.         .    *   .         .         .         .         .         .         .         .         .        4517.
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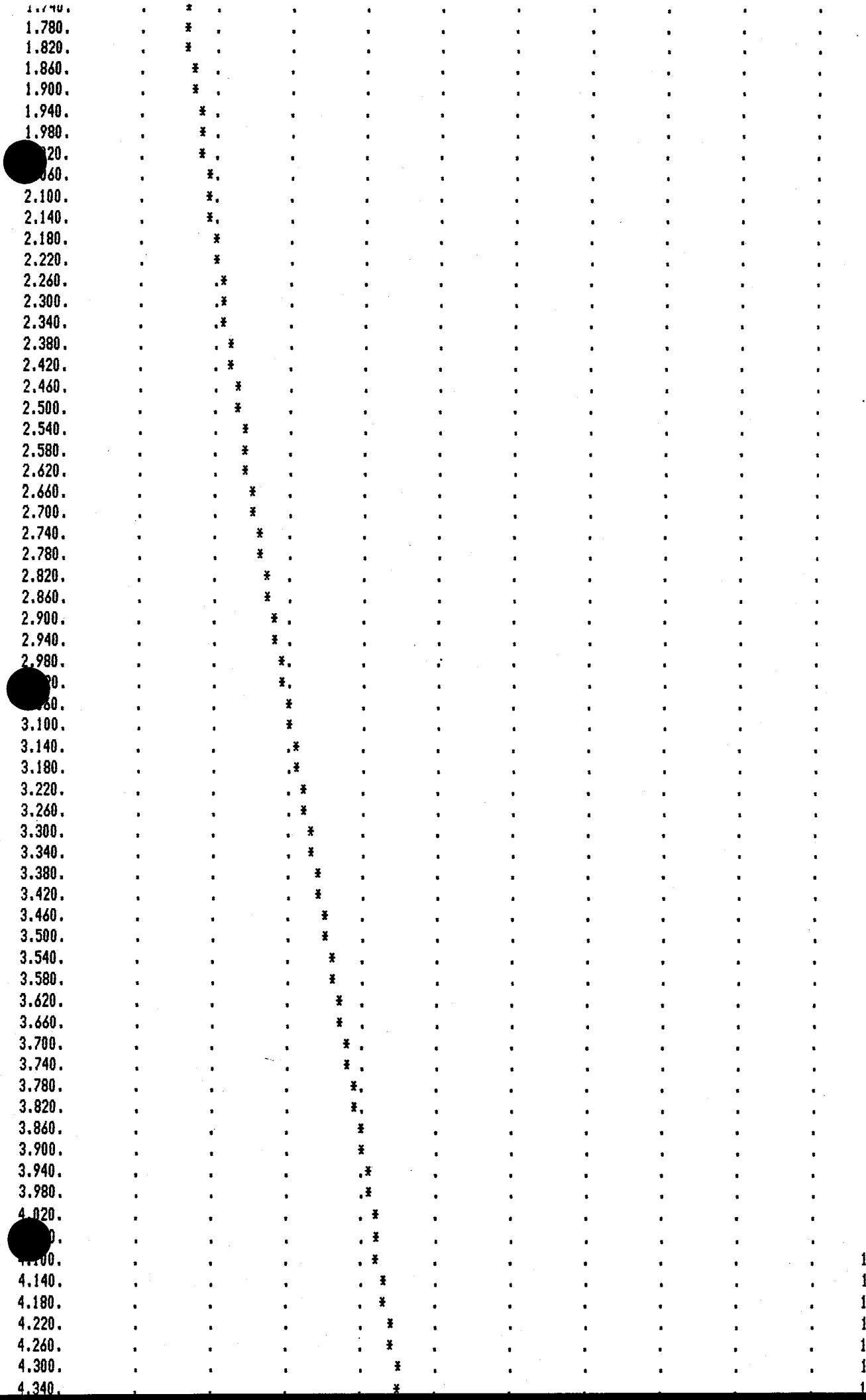
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9954.
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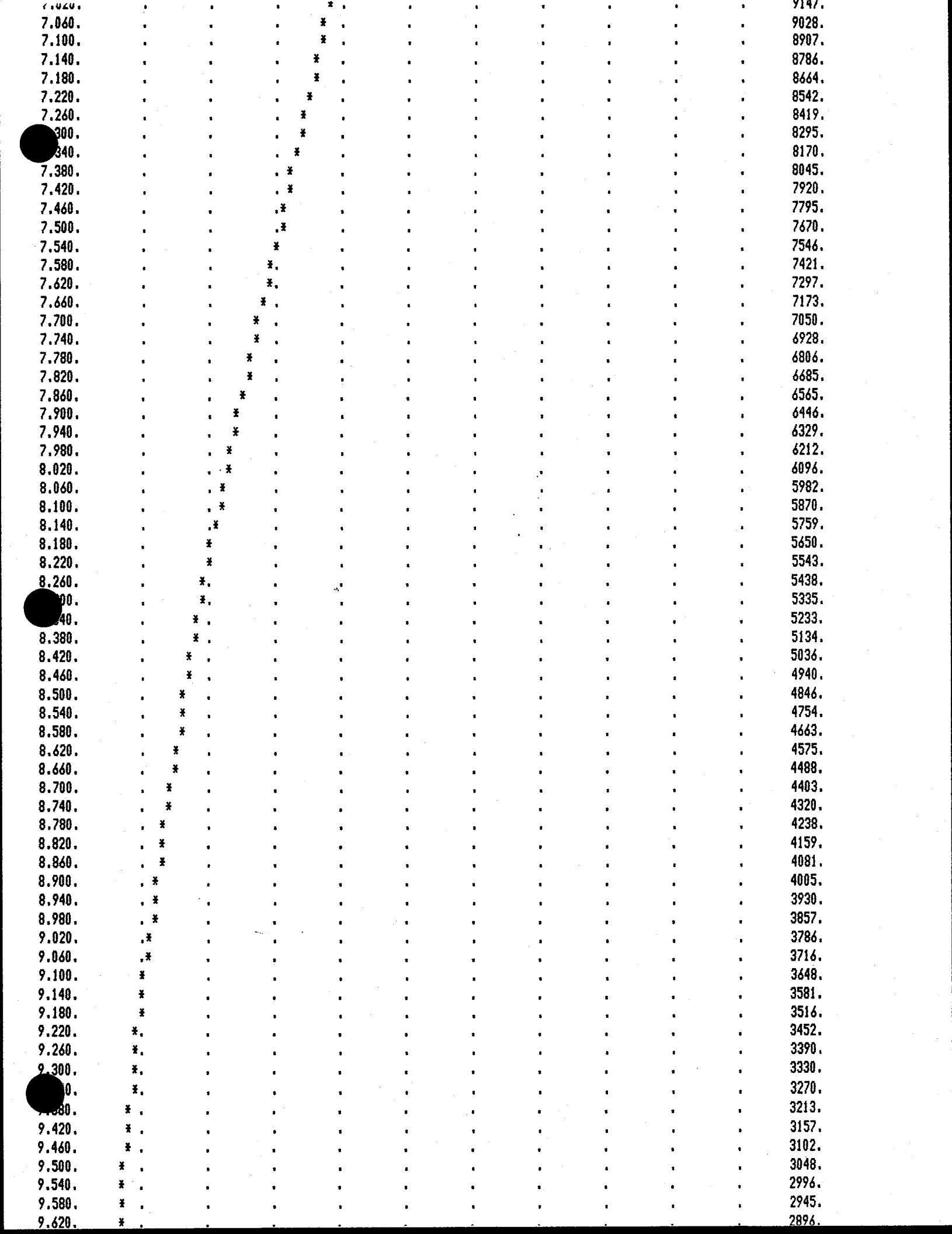
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        BREACH MODEL, MICRO-VERSION: 1/87

 PIPING FAILURE AT STA 256+00 OF SBFRS          FILL: SB6TOP.NTH    23OCT90

 HI=   1190.80  HU=   1193.33  HL=   1182.50  HPI=   1183.50  HSP=  1182.50

        (QIN(I),I=1,8)
  3309.00   1607.00    886.00    533.00    258.00    234.00    220.00       .00

        (TIN(I),I=1,8)
     .00       .50      1.00      1.50      3.50      5.50      9.50       .00

        (RSA(I),I=1,8)
  1317.00    967.00    723.00    500.00    350.00    250.00    133.00       .00

        (HSA(I),I=1,8)
  1193.50   1191.50   1189.50   1187.50   1185.50   1183.50   1181.50   1175.00

 ZU=  3.00  ZD=  2.00  ZC=   .00  PORW=   .00  GL=   .00  GS=   .00  VMP=   .00

 D50C=   .00  PORC=   .00  UWC=   .00  CNC= .0000  AFRC=   .00  COHC=    .0  UNFCC=   .00

 D50S=   .18  PORS=   .33  UWS=125.60  CNS= .0000  AFRS= 39.00  COHS= 100.0  UNFCS= 10.00

 BR=  1.00  WC=  12.0  CRL= 5280.0  SM= 21.00  WV= 5280.0  CNV= .0450  D50DF=   .00  UNFCDF=   .00

      .020  DBG=  .001   H=   .1000   TEH=    9.5  ERR=   .10  FPT=   2.0  TPR=   1.0

        (SPQ(I),I=1,8)
   470.00    700.00    900.00   1080.00   1210.00   1350.00       .00       .00

        (SPH(I),I=1,8)
     .00      2.00      4.00      6.00      8.00     10.00       .00       .00

                 CRL= 5280.   BM=   20.   AFR= 39.00   BO=   9.8   Z=   .48


1


        AFR=  39.0   TH1= 64.50   H1=  6.68   TH2= 51.75   H2= 22.93   TH3= 45.38   H3= 78.83


1
   I      T  DTH KG KC     QTOT       QTS            QB   SUB     BT     HY     HC    BO    PPP     HP  CNN     DH    DHH   KIT ALG
 PIPE FLOW TO WEIR FLOW TRANSITION
    1183.       5.       9.     1210.     1913.     3123.      .022     1.002      84.      94.       1.      40.
    18  .05323  .32573 2.76665  .0098      2.5     14.2      1.6      5.0    107.7
                  1       9.0       6.7       6.4    1291.3     .0090    1    1.0000    1.0090      25.5      66.1      40.0
   51  1.020  .020 3 0     2871.     1230.      1640.88 1.000   19.5 1190.8 1182.5   9.2     .2    5.5  .0098   .084   .084   2 25.5
   52  1.040  .020 3 0     2881.     1229.      1651.49 1.000   19.7 1190.8 1182.5   9.4     .2    5.5  .0098   .085   .085   1 25.5
   53  1.060  .020 3 0     2891.     1229.      1662.31 1.000   19.9 1190.8 1182.5   9.5     .2    5.5  .0098   .087   .087   1 25.5
   54  1.080  .020 3 0     2902.     1229.      1673.28 1.000   20.1 1190.8 1182.5   9.7     .2    5.5  .0098   .089   .089   1 25.5
   55  1.100  .020 3 0     2913.     1229.      1684.46 1.000   20.2 1190.8 1182.5   9.9     .2    5.5  .0098   .090   .090   1 25.5
   56  1.120  .020 3 0     2924.     1228.      1695.86 1.000   20.4 1190.8 1182.5  10.1     .2    5.5  .0098   .092   .092   1 25.5
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I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
58	1.160	.020	3	0	2947.	1228.	1719.21	1.000	20.8	1190.8	1182.5	10.5	.2	5.5	.0098	.095	.095	1	25.5
59	1.180	.020	3	0	2959.	1228.	1731.22	1.000	21.0	1190.8	1182.5	10.7	.2	5.5	.0098	.097	.097	1	25.5
60	1.200	.020	3	0	2971.	1227.	1743.35	1.000	21.2	1190.7	1182.5	10.9	.2	5.5	.0098	.099	.099	1	25.5
61	1.220	.020	3	0	2983.	1227.	1755.77	1.000	21.4	1190.7	1182.5	11.1	.2	5.5	.0098	.100	.100	1	25.5
62	1.240	.020	3	0	2995.	1227.	1768.38	1.000	21.6	1190.7	1182.5	11.3	.2	5.5	.0098	.102	.102	1	25.5
63	1.260	.020	3	0	3008.	1226.	1781.23	1.000	21.8	1190.7	1182.5	11.5	.2	5.5	.0098	.104	.104	1	25.5
64	1.280	.020	3	0	3020.	1226.	1794.27	1.000	22.0	1190.7	1182.5	11.7	.2	5.5	.0098	.106	.106	1	25.5
65	1.300	.020	3	0	3033.	1226.	1807.56	1.000	22.2	1190.7	1182.5	11.9	.2	5.5	.0098	.108	.108	1	25.5
66	1.320	.020	3	0	3046.	1225.	1821.05	1.000	22.4	1190.7	1182.5	12.1	.2	5.5	.0098	.110	.110	1	25.5
67	1.340	.020	3	0	3060.	1225.	1834.80	1.000	22.7	1190.7	1182.5	12.3	.2	5.5	.0098	.112	.112	1	25.5
68	1.360	.020	3	0	3074.	1225.	1848.81	1.000	22.9	1190.7	1182.5	12.6	.2	5.5	.0098	.114	.114	1	25.5
69	1.380	.020	3	0	3087.	1224.	1863.03	1.000	23.1	1190.7	1182.5	12.8	.2	5.5	.0098	.116	.116	1	25.5
70	1.400	.020	3	0	3102.	1224.	1877.47	1.000	23.4	1190.7	1182.5	13.0	.2	5.5	.0098	.118	.118	1	25.5
71	1.420	.020	3	0	3116.	1224.	1892.19	1.000	23.6	1190.7	1182.5	13.3	.2	5.5	.0098	.120	.120	1	25.5
72	1.440	.020	3	0	3131.	1223.	1907.11	1.000	23.9	1190.7	1182.5	13.5	.2	5.4	.0098	.122	.122	1	25.5
73	1.460	.020	3	0	3145.	1223.	1922.08	1.000	24.1	1190.7	1182.5	13.8	.2	5.4	.0098	.123	.123	1	25.5
74	1.480	.020	3	0	3160.	1223.	1937.14	1.000	24.3	1190.7	1182.5	14.0	.2	5.4	.0098	.124	.124	1	25.5
75	1.500	.020	3	0	3175.	1222.	1952.25	1.000	24.6	1190.7	1182.5	14.3	.2	5.3	.0098	.125	.125	1	25.5
76	1.520	.020	3	0	3190.	1222.	1967.46	1.000	24.8	1190.7	1182.5	14.5	.3	5.3	.0098	.126	.126	1	25.5
77	1.540	.020	3	0	3204.	1222.	1982.70	1.000	25.1	1190.7	1182.5	14.8	.3	5.3	.0098	.127	.127	1	25.5
78	1.560	.020	3	0	3219.	1221.	1998.03	1.000	25.4	1190.7	1182.5	15.0	.3	5.2	.0098	.128	.128	1	25.5
79	1.580	.020	3	0	3234.	1221.	2013.52	1.000	25.6	1190.7	1182.5	15.3	.3	5.2	.0098	.129	.129	2	25.5
80	1.600	.020	3	0	3250.	1221.	2029.10	1.000	25.9	1190.7	1182.5	15.5	.3	5.2	.0098	.130	.130	1	25.5
81	1.620	.020	3	0	3265.	1220.	2044.70	1.000	26.1	1190.6	1182.5	15.8	.3	5.1	.0098	.131	.131	1	25.5
82	1.640	.020	3	0	3280.	1220.	2060.38	1.000	26.4	1190.6	1182.5	16.1	.3	5.1	.0098	.132	.131	1	25.5
83	1.660	.020	3	0	3296.	1220.	2076.17	1.000	26.7	1190.6	1182.5	16.3	.3	5.1	.0098	.133	.133	1	25.5
[illegible]	1.680	.020	3	0	3311.	1219.	2092.04	1.000	26.9	1190.6	1182.5	16.6	.3	5.0	.0098	.134	.134	1	25.5
[illegible]	1.700	.020	3	0	3327.	1219.	2107.99	1.000	27.2	1190.6	1182.5	16.9	.3	5.0	.0098	.135	.135	1	25.5
86	1.720	.020	3	0	3342.	1218.	2124.09	1.000	27.5	1190.6	1182.5	17.1	.3	5.0	.0098	.136	.136	1	25.5
87	1.740	.020	3	0	3358.	1218.	2140.21	1.000	27.7	1190.6	1182.5	17.4	.3	5.0	.0098	.137	.137	1	25.5
88	1.760	.020	3	0	3374.	1218.	2156.39	1.000	28.0	1190.6	1182.5	17.7	.3	4.9	.0098	.138	.138	1	25.5
89	1.780	.020	3	0	3390.	1217.	2172.73	1.000	28.3	1190.6	1182.5	18.0	.3	4.9	.0098	.139	.139	1	25.5
90	1.800	.020	3	0	3406.	1217.	2189.08	1.000	28.6	1190.6	1182.5	18.3	.3	4.9	.0098	.140	.140	1	25.5
91	1.820	.020	3	0	3422.	1216.	2205.57	1.000	28.9	1190.6	1182.5	18.5	.3	4.8	.0098	.141	.141	1	25.5
92	1.840	.020	3	0	3438.	1216.	2222.06	1.000	29.1	1190.6	1182.5	18.8	.3	4.8	.0098	.142	.142	1	25.5
93	1.860	.020	3	0	3454.	1216.	2238.76	1.000	29.4	1190.6	1182.5	19.1	.3	4.8	.0098	.143	.143	1	25.5
94	1.880	.020	3	0	3471.	1215.	2255.46	1.000	29.7	1190.6	1182.5	19.4	.3	4.8	.0098	.144	.144	1	25.5
95	1.900	.020	3	0	3487.	1215.	2272.23	1.000	30.0	1190.6	1182.5	19.7	.3	4.7	.0098	.145	.145	1	25.5
96	1.920	.020	3	0	3504.	1214.	2289.13	1.000	30.3	1190.6	1182.5	20.0	.3	4.7	.0098	.147	.147	2	25.5
97	1.940	.020	3	0	3520.	1214.	2306.09	1.000	30.6	1190.6	1182.5	20.3	.3	4.7	.0098	.147	.147	1	25.5
98	1.960	.020	3	0	3537.	1214.	2323.18	1.000	30.9	1190.6	1182.5	20.6	.3	4.7	.0098	.149	.149	1	25.5
99	1.980	.020	3	0	3554.	1213.	2340.33	1.000	31.2	1190.5	1182.5	20.9	.3	4.7	.0098	.150	.150	2	25.5
100	2.000	.020	3	0	3570.	1213.	2357.52	1.000	31.5	1190.5	1182.5	21.2	.3	4.6	.0098	.150	.150	1	25.5
101	2.020	.020	3	0	3587.	1212.	2374.78	1.000	31.8	1190.5	1182.5	21.5	.3	4.6	.0098	.152	.152	1	25.5
102	2.040	.020	3	0	3604.	1212.	2392.17	1.000	32.1	1190.5	1182.5	21.8	.3	4.6	.0098	.153	.153	1	25.5
103	2.060	.020	3	0	3621.	1211.	2409.68	1.000	32.4	1190.5	1182.5	22.1	.3	4.6	.0098	.154	.154	2	25.5
104	2.080	.020	3	0	3638.	1211.	2427.22	1.000	32.7	1190.5	1182.5	22.4	.3	4.5	.0098	.155	.155	1	25.5
105	2.100	.020	3	0	3655.	1211.	2444.82	1.000	33.0	1190.5	1182.5	22.7	.3	4.5	.0098	.156	.156	1	25.5
106	2.120	.020	3	0	3673.	1210.	2462.48	1.000	33.4	1190.5	1182.5	23.0	.3	4.5	.0098	.158	.157	1	25.5
107	2.140	.020	3	0	3690.	1210.	2480.34	1.000	33.7	1190.5	1182.5	23.3	.3	4.5	.0098	.159	.159	1	25.5
108	2.160	.020	3	0	3708.	1209.	2498.23	1.000	34.0	1190.5	1182.5	23.7	.3	4.5	.0098	.160	.160	2	25.5
109	2.180	.020	3	0	3725.	1209.	2516.15	1.000	34.3	1190.5	1182.5	24.0	.3	4.4	.0098	.161	.161	2	25.5
[illegible]	2.200	.020	3	0	3743.	1209.	2534.18	1.000	34.6	1190.5	1182.5	24.3	.3	4.4	.0098	.162	.162	2	25.5
[illegible]	2.220	.020	3	0	3760.	1208.	2552.31	1.000	35.0	1190.5	1182.5	24.6	.3	4.4	.0098	.163	.163	2	25.5
112	2.240	.020	3	0	3778.	1208.	2570.55	1.000	35.3	1190.5	1182.5	25.0	.3	4.4	.0098	.165	.164	2	25.5
113	2.260	.020	3	0	3796.	1207.	2588.80	1.000	35.6	1190.5	1182.5	25.3	.3	4.4	.0098	.166	.166	2	25.5
114	2.280	.020	3	0	3814.	1207.	2607.10	1.000	36.0	1190.5	1182.5	25.6	.3	4.3	.0098	.167	.167	1	25.5
115	2.300	.020	3	0	3832.	1206.	2625.57	1.000	36.3	1190.4	1182.5	26.0	.3	4.3	.0098	.168	.168	2	25.5
116	2.320	.020	3	0	3850.	1206.	2644.07	1.000	36.6	1190.4	1182.5	26.3	.3	4.3	.0098	.169	.169	1	25.5
117	2.340	.020	3	0	3868.	1205.	2662.58	1.000	37.0	1190.4	1182.5	26.6	.3	4.3	.0098	.170	.170	2	25.5

118	2.360	.020	3	0	3886.	1205.	2681.21	1.000	37.3	1190.4	1182.5	27.0	.3	4.3	.0098	.172	.172	1	25.5
119	2.380	.020	3	0	3905.	1205.	2699.94	1.000	37.7	1190.4	1182.5	27.3	.3	4.3	.0098	.173	.173	1	25.5
120	2.400	.020	3	0	3923.	1204.	2718.69	1.000	38.0	1190.4	1182.5	27.7	.3	4.2	.0098	.174	.174	1	25.5
121	2.420	.020	3	0	3941.	1204.	2737.55	1.000	38.4	1190.4	1182.5	28.0	.4	4.2	.0098	.175	.175	1	25.5

	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
122	2.440	.020	3	0	3960.	1203.	2756.51	1.000	38.7	1190.4	1182.5	28.4	.4	4.2	.0098	.177	.176	1	25.5
123	2.460	.020	3	0	3978.	1203.	2775.49	1.000	39.1	1190.4	1182.5	28.7	.4	4.2	.0098	.178	.178	1	25.5
124	2.480	.020	3	0	3997.	1202.	2794.57	1.000	39.4	1190.4	1182.5	29.1	.4	4.2	.0098	.179	.179	1	25.5
125	2.500	.020	3	0	4016.	1202.	2813.66	1.000	39.8	1190.4	1182.5	29.5	.4	4.2	.0098	.180	.180	1	25.5
126	2.520	.020	3	0	4034.	1201.	2832.84	1.000	40.2	1190.4	1182.5	29.8	.4	4.1	.0098	.181	.181	1	25.5
127	2.540	.020	3	0	4053.	1201.	2852.04	1.000	40.5	1190.4	1182.5	30.2	.4	4.1	.0098	.183	.182	1	25.5
128	2.560	.020	3	0	4072.	1200.	2871.32	1.000	40.9	1190.4	1182.5	30.6	.4	4.1	.0098	.184	.184	1	25.5
129	2.580	.020	3	0	4091.	1200.	2890.70	1.000	41.3	1190.3	1182.5	30.9	.4	4.1	.0098	.185	.185	1	25.5
130	2.600	.020	3	0	4110.	1199.	2910.07	1.000	41.6	1190.3	1182.5	31.3	.4	4.1	.0098	.186	.186	1	25.5
131	2.620	.020	3	0	4129.	1199.	2929.53	1.000	42.0	1190.3	1182.5	31.7	.4	4.1	.0098	.187	.187	1	25.5
132	2.640	.020	3	0	4147.	1198.	2948.99	1.000	42.4	1190.3	1182.5	32.0	.4	4.0	.0098	.188	.188	1	25.5
133	2.660	.020	3	0	4167.	1198.	2968.52	1.000	42.8	1190.3	1182.5	32.4	.4	4.0	.0098	.189	.189	1	25.5
134	2.680	.020	3	0	4186.	1198.	2988.23	1.000	43.1	1190.3	1182.5	32.8	.4	4.0	.0098	.191	.191	2	25.5
135	2.700	.020	3	0	4205.	1197.	3007.94	1.000	43.5	1190.3	1182.5	33.2	.4	4.0	.0098	.193	.192	1	25.5
136	2.720	.020	3	0	4224.	1197.	3027.72	1.000	43.9	1190.3	1182.5	33.6	.4	4.0	.0098	.194	.194	1	25.5
137	2.740	.020	3	0	4243.	1196.	3047.48	1.000	44.3	1190.3	1182.5	34.0	.4	4.0	.0098	.195	.195	1	25.5
138	2.760	.020	3	0	4263.	1195.	3067.32	1.000	44.7	1190.3	1182.5	34.4	.4	4.0	.0098	.196	.196	1	25.5
139	2.780	.020	3	0	4282.	1195.	3087.13	1.000	45.1	1190.3	1182.5	34.8	.4	3.9	.0098	.197	.197	1	25.5
140	2.800	.020	3	0	4302.	1194.	3107.12	1.000	45.5	1190.3	1182.5	35.2	.4	3.9	.0098	.199	.199	2	25.5
141	2.820	.020	3	0	4321.	1194.	3127.08	1.000	45.9	1190.3	1182.5	35.6	.4	3.9	.0098	.200	.200	1	25.5
142	2.840	.020	3	0	4341.	1193.	3147.10	1.000	46.3	1190.2	1182.5	36.0	.4	3.9	.0098	.201	.201	1	25.5
143	2.860	.020	3	0	4360.	1193.	3167.18	1.000	46.7	1190.2	1182.5	36.4	.4	3.9	.0098	.202	.202	1	25.5
144	2.880	.020	3	0	4380.	1192.	3187.34	1.000	47.1	1190.2	1182.5	36.8	.4	3.9	.0098	.204	.204	2	25.5
145	2.900	.020	3	0	4399.	1192.	3207.55	1.000	47.5	1190.2	1182.5	37.2	.4	3.9	.0098	.205	.205	1	25.5
146	2.920	.020	3	0	4419.	1191.	3227.73	1.000	47.9	1190.2	1182.5	37.6	.4	3.9	.0098	.206	.206	1	25.5
147	2.940	.020	3	0	4439.	1191.	3247.86	1.000	48.3	1190.2	1182.5	38.0	.4	3.8	.0098	.207	.207	1	25.5
148	2.960	.020	3	0	4458.	1190.	3268.27	1.000	48.8	1190.2	1182.5	38.4	.4	3.8	.0098	.209	.209	1	25.5
149	2.980	.020	3	0	4478.	1190.	3288.64	1.000	49.2	1190.2	1182.5	38.8	.4	3.8	.0098	.210	.210	1	25.5
150	3.000	.020	3	0	4498.	1189.	3308.95	1.000	49.6	1190.2	1182.5	39.3	.4	3.8	.0098	.211	.211	1	25.5
151	3.020	.020	3	0	4518.	1189.	3329.31	1.000	50.0	1190.2	1182.5	39.7	.4	3.8	.0098	.212	.212	1	25.5
152	3.040	.020	3	0	4538.	1188.	3349.75	1.000	50.5	1190.2	1182.5	40.1	.4	3.8	.0098	.214	.214	1	25.5
153	3.060	.020	3	0	4558.	1187.	3370.23	1.000	50.9	1190.2	1182.5	40.6	.4	3.8	.0098	.216	.215	1	25.5
154	3.080	.020	3	0	4578.	1187.	3390.65	1.000	51.3	1190.1	1182.5	41.0	.4	3.8	.0098	.217	.216	1	25.5
155	3.100	.020	3	0	4597.	1186.	3411.22	1.000	51.8	1190.1	1182.5	41.4	.4	3.8	.0098	.218	.218	2	25.5
156	3.120	.020	3	0	4618.	1186.	3431.83	1.000	52.2	1190.1	1182.5	41.9	.4	3.7	.0098	.219	.219	1	25.5
157	3.140	.020	3	0	4637.	1185.	3452.37	1.000	52.6	1190.1	1182.5	42.3	.4	3.7	.0098	.220	.220	1	25.5
158	3.160	.020	3	0	4657.	1185.	3472.95	1.000	53.1	1190.1	1182.5	42.7	.4	3.7	.0098	.222	.222	2	25.5
159	3.180	.020	3	0	4678.	1184.	3493.56	1.000	53.5	1190.1	1182.5	43.2	.4	3.7	.0098	.223	.223	1	25.5
160	3.200	.020	3	0	4698.	1183.	3514.19	1.000	54.0	1190.1	1182.5	43.6	.4	3.7	.0098	.224	.224	1	25.5
161	3.220	.020	3	0	4718.	1183.	3534.89	1.000	54.4	1190.1	1182.5	44.1	.5	3.7	.0098	.226	.226	1	25.5
162	3.240	.020	3	0	4738.	1182.	3555.50	1.000	54.9	1190.1	1182.5	44.6	.5	3.7	.0098	.227	.227	1	25.5
163	3.260	.020	3	0	4758.	1182.	3576.24	1.000	55.3	1190.1	1182.5	45.0	.5	3.7	.0098	.228	.228	1	25.5
164	3.280	.020	3	0	4778.	1181.	3596.93	1.000	55.8	1190.1	1182.5	45.5	.5	3.7	.0098	.230	.230	1	25.5
165	3.300	.020	3	0	4798.	1180.	3617.63	1.000	56.3	1190.0	1182.5	45.9	.5	3.6	.0098	.231	.231	1	25.5
166	3.320	.020	3	0	4818.	1180.	3638.35	1.000	56.7	1190.0	1182.5	46.4	.5	3.6	.0098	.232	.232	1	25.5
167	3.340	.020	3	0	4838.	1179.	3659.11	1.000	57.2	1190.0	1182.5	46.9	.5	3.6	.0098	.234	.234	1	25.5
168	3.360	.020	3	0	4858.	1178.	3679.78	1.000	57.7	1190.0	1182.5	47.3	.5	3.6	.0098	.235	.235	1	25.5
169	3.380	.020	3	0	4878.	1178.	3700.45	1.000	58.1	1190.0	1182.5	47.8	.5	3.6	.0098	.236	.236	1	25.5
170	3.400	.020	3	0	4899.	1177.	3721.27	1.000	58.6	1190.0	1182.5	48.3	.5	3.6	.0098	.238	.238	1	25.5
171	3.420	.020	3	0	4919.	1177.	3741.99	1.000	59.1	1190.0	1182.5	48.8	.5	3.6	.0098	.239	.239	1	25.5
172	3.440	.020	3	0	4939.	1176.	3762.59	1.000	59.6	1190.0	1182.5	49.2	.5	3.6	.0098	.240	.240	1	25.5
173	3.460	.020	3	0	4959.	1175.	3783.34	1.000	60.1	1190.0	1182.5	49.7	.5	3.6	.0098	.242	.242	1	25.5
174	3.480	.020	3	0	4979.	1175.	3804.08	1.000	60.5	1190.0	1182.5	50.2	.5	3.5	.0098	.243	.243	1	25.5
175	3.500	.020	3	0	4999.	1174.	3824.71	1.000	61.0	1189.9	1182.5	50.7	.5	3.5	.0098	.245	.245	2	25.5
176	3.520	.020	3	0	5019.	1173.	3845.45	1.000	61.5	1189.9	1182.5	51.2	.5	3.5	.0098	.246	.246	1	25.5
177	3.540	.020	3	0	5039.	1173.	3866.07	1.000	62.0	1189.9	1182.5	51.7	.5	3.5	.0098	.247	.246	1	25.5
178	3.560	.020	3	0	5059.	1172.	3886.70	1.000	62.5	1189.9	1182.5	52.2	.5	3.5	.0098	.249	.249	1	25.5

179	3.580	.020	3	0	5079.	1171.	3907.32	1.000	63.0	1189.9	1182.5	52.7	.5	3.5	.0098	.250	.249	1	25.5
180	3.600	.020	3	0	5099.	1171.	3927.93	1.000	63.5	1189.9	1182.5	53.2	.5	3.5	.0098	.251	.251	2	25.5
181	3.620	.020	3	0	5119.	1170.	3948.51	1.000	64.0	1189.9	1182.5	53.7	.5	3.5	.0098	.252	.252	1	25.5

	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
[illegible]	3.640	.020	3	0	5139.	1169.	3969.20	1.000	64.5	1189.9	1182.5	54.2	.5	3.5	.0098	.254	.254	2	25.5
183	3.660	.020	3	0	5158.	1169.	3989.75	1.000	65.0	1189.9	1182.5	54.7	.5	3.5	.0098	.255	.255	1	25.5
184	3.680	.020	3	0	5178.	1168.	4010.28	1.000	65.6	1189.9	1182.5	55.2	.5	3.5	.0098	.257	.257	2	25.5
185	3.700	.020	3	0	5198.	1167.	4030.78	1.000	66.1	1189.8	1182.5	55.7	.5	3.4	.0098	.258	.257	1	25.5
186	3.720	.020	3	0	5218.	1167.	4051.13	1.000	66.6	1189.8	1182.5	56.3	.5	3.4	.0098	.258	.258	1	25.5
187	3.740	.020	3	0	5237.	1166.	4071.60	1.000	67.1	1189.8	1182.5	56.8	.5	3.4	.0098	.261	.260	1	25.5
188	3.760	.020	3	0	5257.	1165.	4092.08	1.000	67.6	1189.8	1182.5	57.3	.5	3.4	.0098	.262	.262	2	25.5
189	3.780	.020	3	0	5277.	1164.	4112.30	1.000	68.2	1189.8	1182.5	57.8	.5	3.4	.0098	.262	.262	5	25.5
190	3.800	.020	3	0	5296.	1164.	4132.56	1.000	68.7	1189.8	1182.5	58.4	.5	3.4	.0098	.264	.265	5	25.5
191	3.820	.020	3	0	5316.	1163.	4152.98	1.000	69.2	1189.8	1182.5	58.9	.5	3.4	.0098	.267	.265	5	25.5
192	3.840	.020	3	0	5335.	1162.	4173.13	1.000	69.8	1189.8	1182.5	59.4	.5	3.4	.0098	.267	.267	5	25.5
193	3.860	.020	3	0	5355.	1162.	4193.43	1.000	70.3	1189.8	1182.5	60.0	.5	3.4	.0098	.269	.267	5	25.5
194	3.880	.020	3	0	5374.	1161.	4213.58	1.000	70.8	1189.7	1182.5	60.5	.5	3.4	.0098	.269	.269	5	25.5
195	3.900	.020	3	0	5394.	1160.	4233.63	1.000	71.4	1189.7	1182.5	61.0	.5	3.4	.0098	.271	.272	5	25.5
196	3.920	.020	3	0	5413.	1159.	4253.66	1.000	71.9	1189.7	1182.5	61.6	.5	3.3	.0098	.271	.272	5	25.5
197	3.940	.020	3	0	5432.	1159.	4273.57	1.000	72.5	1189.7	1182.5	62.1	.5	3.3	.0098	.274	.274	5	25.5
198	3.960	.020	3	0	5451.	1158.	4293.45	1.000	73.0	1189.7	1182.5	62.7	.5	3.3	.0098	.274	.274	5	25.5
199	3.980	.020	3	0	5470.	1157.	4313.21	1.000	73.6	1189.7	1182.5	63.2	.6	3.3	.0098	.276	.276	5	25.5
200	4.000	.020	3	0	5489.	1156.	4332.94	1.000	74.1	1189.7	1182.5	63.8	.6	3.3	.0098	.276	.276	5	25.5
201	4.020	.020	3	0	5508.	1156.	4352.55	1.000	74.7	1189.7	1182.5	64.3	.6	3.3	.0098	.278	.279	5	25.5
202	4.040	.020	3	0	5527.	1155.	4371.99	1.000	75.2	1189.7	1182.5	64.9	.6	3.3	.0098	.278	.279	5	25.5
203	4.060	.020	3	0	5546.	1154.	4391.55	1.000	75.8	1189.6	1182.5	65.5	.6	3.3	.0098	.281	.281	5	25.5
204	4.080	.020	3	0	5565.	1153.	4411.12	1.000	76.4	1189.6	1182.5	66.0	.6	3.3	.0098	.283	.281	5	25.5
205	4.100	.020	3	0	5583.	1153.	4430.38	1.000	76.9	1189.6	1182.5	66.6	.6	3.3	.0098	.283	.283	5	25.5
[illegible]	4.120	.020	3	0	5602.	1152.	4449.77	1.000	77.5	1189.6	1182.5	67.2	.6	3.3	.0098	.285	.283	5	25.5
[illegible]	4.140	.020	3	0	5620.	1151.	4468.96	1.000	78.1	1189.6	1182.5	67.7	.6	3.2	.0098	.285	.285	5	25.5
208	4.160	.020	3	0	5638.	1150.	4488.16	1.000	78.6	1189.6	1182.5	68.3	.6	3.2	.0098	.287	.288	5	25.5
209	4.180	.020	3	0	5656.	1149.	4507.02	1.000	79.2	1189.6	1182.5	68.9	.6	3.2	.0098	.287	.288	5	25.5
210	4.200	.020	3	0	5675.	1149.	4526.00	1.000	79.8	1189.6	1182.5	69.5	.6	3.2	.0098	.290	.290	5	25.5
211	4.220	.020	3	0	5693.	1148.	4544.66	1.000	80.4	1189.5	1182.5	70.0	.6	3.2	.0098	.289	.290	5	25.5
212	4.240	.020	3	0	5711.	1147.	4563.43	1.000	80.9	1189.5	1182.5	70.6	.6	3.2	.0098	.292	.292	5	25.5
213	4.260	.020	3	0	5728.	1146.	4581.86	1.000	81.5	1189.5	1182.5	71.2	.6	3.2	.0098	.291	.292	5	25.5
214	4.280	.020	3	0	5746.	1145.	4600.39	1.000	82.1	1189.5	1182.5	71.8	.6	3.2	.0098	.294	.294	5	25.5
215	4.300	.020	3	0	5764.	1145.	4618.90	1.000	82.7	1189.5	1182.5	72.4	.6	3.2	.0098	.296	.294	5	25.5
216	4.320	.020	3	0	5781.	1144.	4637.06	1.000	83.3	1189.5	1182.5	73.0	.6	3.2	.0098	.296	.296	5	25.5
217	4.340	.020	3	0	5798.	1143.	4655.33	1.000	83.9	1189.5	1182.5	73.6	.6	3.2	.0098	.298	.296	5	25.5
218	4.360	.020	3	0	5816.	1142.	4673.38	1.000	84.5	1189.5	1182.5	74.2	.6	3.1	.0098	.298	.298	5	25.5
219	4.380	.020	3	0	5833.	1141.	4691.39	1.000	85.1	1189.4	1182.5	74.8	.6	3.1	.0098	.300	.301	5	25.5
220	4.400	.020	3	0	5850.	1140.	4709.04	1.000	85.7	1189.4	1182.5	75.4	.6	3.1	.0098	.300	.300	5	25.5
221	4.420	.020	3	0	5866.	1140.	4726.78	1.000	86.3	1189.4	1182.5	76.0	.6	3.1	.0098	.302	.303	5	25.5
222	4.440	.020	3	0	5883.	1139.	4744.16	1.000	86.9	1189.4	1182.5	76.6	.6	3.1	.0098	.302	.302	5	25.5
223	4.460	.020	3	0	5900.	1138.	4761.63	1.000	87.5	1189.4	1182.5	77.2	.6	3.1	.0098	.304	.305	5	25.5
224	4.480	.020	3	0	5916.	1137.	4778.72	1.000	88.1	1189.4	1182.5	77.8	.6	3.1	.0098	.304	.304	5	25.5
225	4.500	.020	3	0	5932.	1136.	4795.89	1.000	88.7	1189.4	1182.5	78.4	.6	3.1	.0098	.306	.307	5	25.5
226	4.520	.020	3	0	5948.	1135.	4813.01	1.000	89.4	1189.4	1182.5	79.0	.6	3.1	.0098	.309	.306	5	25.5
227	4.540	.020	3	0	5964.	1135.	4829.74	1.000	90.0	1189.3	1182.5	79.6	.6	3.1	.0098	.308	.309	5	25.5
228	4.560	.020	3	0	5980.	1134.	4846.70	1.000	90.6	1189.3	1182.5	80.3	.6	3.1	.0098	.311	.308	5	25.5
229	4.580	.020	3	0	5996.	1133.	4863.12	1.000	91.2	1189.3	1182.5	80.9	.6	3.1	.0098	.310	.311	5	25.5
230	4.600	.020	3	0	6011.	1132.	4879.62	1.000	91.8	1189.3	1182.5	81.5	.6	3.1	.0098	.313	.313	5	25.5
231	4.620	.020	3	0	6027.	1131.	4895.71	1.000	92.5	1189.3	1182.5	82.1	.6	3.0	.0098	.312	.313	5	25.5
[illegible]	4.640	.020	3	0	6042.	1130.	4911.88	1.000	93.1	1189.3	1182.5	82.8	.6	3.0	.0098	.314	.315	5	25.5
[illegible]	4.660	.020	3	0	6057.	1129.	4927.80	1.000	93.7	1189.3	1182.5	83.4	.6	3.0	.0098	.314	.314	5	25.5
234	4.680	.020	3	0	6072.	1128.	4943.48	1.000	94.3	1189.2	1182.5	84.0	.6	3.0	.0098	.316	.317	5	25.5
235	4.700	.020	3	0	6086.	1127.	4959.05	1.000	95.0	1189.2	1182.5	84.6	.6	3.0	.0098	.316	.316	5	25.5
236	4.720	.020	3	0	6101.	1126.	4974.38	1.000	95.6	1189.2	1182.5	85.3	.6	3.0	.0098	.318	.319	5	25.5
237	4.740	.020	3	0	6115.	1126.	4989.45	1.000	96.2	1189.2	1182.5	85.9	.6	3.0	.0098	.317	.318	5	25.5
238	4.760	.020	3	0	6129.	1125.	5004.57	1.000	96.9	1189.2	1182.5	86.6	.6	3.0	.0098	.320	.320	5	25.5
239	4.780	.020	3	0	6143.	1124.	5019.40	1.000	97.5	1189.2	1182.5	87.2	.6	3.0	.0098	.322	.320	5	25.5

240	4.800	.020	3	0	6157.	1123.	5034.19	1.000	98.2	1189.2	1182.5	87.8	.6	3.0	.0098	.321	.322	5	25.5
241	4.820	.020	3	0	6171.	1122.	5048.75	1.000	98.8	1189.1	1182.5	88.5	.6	3.0	.0098	.321	.322	0	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
[illegible]	4.840	.020	3	0	6184.	1121.	5063.02	1.000	99.5	1189.1	1182.5	89.1	.6	2.9	.0098	.324	.324	5	25.5
[illegible]	4.860	.020	3	0	6197.	1120.	5077.09	1.000	100.1	1189.1	1182.5	89.8	.6	3.0	.0098	.324	.324	0	25.5
244	4.880	.020	3	0	6210.	1119.	5090.80	1.000	100.8	1189.1	1182.5	90.4	.6	2.9	.0098	.324	.324	0	25.5
245	4.900	.020	3	0	6223.	1118.	5104.51	1.000	101.4	1189.1	1182.5	91.1	.7	2.9	.0098	.326	.326	5	25.5
246	4.920	.020	3	0	6235.	1117.	5117.85	1.000	102.1	1189.1	1182.5	91.7	.7	2.9	.0098	.326	.326	0	25.5
247	4.940	.020	3	0	6247.	1116.	5131.20	1.000	102.7	1189.1	1182.5	92.4	.7	2.9	.0098	.328	.328	5	25.5
248	4.960	.020	3	0	6259.	1115.	5144.19	1.000	103.4	1189.0	1182.5	93.0	.7	2.9	.0098	.328	.328	0	25.5
249	4.980	.020	3	0	6271.	1114.	5157.17	1.000	104.0	1189.0	1182.5	93.7	.7	2.9	.0098	.330	.330	5	25.5
250	5.000	.020	3	0	6283.	1113.	5169.79	1.000	104.7	1189.0	1182.5	94.4	.7	2.9	.0098	.330	.330	0	25.5
251	5.020	.020	3	0	6295.	1112.	5182.21	1.000	105.4	1189.0	1182.5	95.0	.7	2.9	.0098	.330	.330	0	25.5
252	5.040	.020	3	0	6306.	1111.	5194.41	1.000	106.0	1189.0	1182.5	95.7	.7	2.9	.0098	.331	.332	5	25.5
253	5.060	.020	3	0	6317.	1110.	5206.25	1.000	106.7	1189.0	1182.5	96.3	.7	2.9	.0098	.331	.332	0	25.5
254	5.080	.020	3	0	6328.	1109.	5218.06	1.000	107.3	1189.0	1182.5	97.0	.7	2.9	.0098	.333	.334	5	25.5
255	5.100	.020	3	0	6338.	1108.	5229.50	1.000	108.0	1188.9	1182.5	97.7	.7	2.9	.0098	.333	.334	0	25.5
256	5.120	.020	3	0	6348.	1107.	5240.73	1.000	108.7	1188.9	1182.5	98.3	.7	2.8	.0098	.333	.333	0	25.5
257	5.140	.020	3	0	6358.	1106.	5251.90	1.000	109.3	1188.9	1182.5	99.0	.7	2.8	.0098	.335	.335	5	25.5
258	5.160	.020	3	0	6368.	1105.	5262.52	1.000	110.0	1188.9	1182.5	99.7	.7	2.8	.0098	.335	.335	0	25.5
259	5.180	.020	3	0	6378.	1104.	5273.27	1.000	110.7	1188.9	1182.5	100.4	.7	2.8	.0098	.337	.337	5	25.5
260	5.200	.020	3	0	6387.	1103.	5283.47	1.000	111.4	1188.9	1182.5	101.0	.7	2.8	.0098	.337	.337	0	25.5
261	5.220	.020	3	0	6396.	1102.	5293.63	1.000	112.0	1188.8	1182.5	101.7	.7	2.8	.0098	.339	.339	5	25.5
262	5.240	.020	3	0	6405.	1101.	5303.57	1.000	112.7	1188.8	1182.5	102.4	.7	2.8	.0098	.339	.339	0	25.5
263	5.260	.020	3	0	6414.	1100.	5313.30	1.000	113.4	1188.8	1182.5	103.1	.7	2.8	.0098	.340	.341	5	25.5
264	5.280	.020	3	0	6422.	1099.	5322.63	1.000	114.1	1188.8	1182.5	103.7	.7	2.8	.0098	.340	.341	0	25.5
265	5.300	.020	3	0	6430.	1098.	5331.60	1.000	114.8	1188.8	1182.5	104.4	.7	2.8	.0098	.339	.339	5	25.5
266	5.320	.020	3	0	6438.	1097.	5340.56	1.000	115.4	1188.8	1182.5	105.1	.7	2.8	.0098	.341	.342	5	25.5
[illegible]	5.340	.020	3	0	6445.	1096.	5349.13	1.000	116.1	1188.8	1182.5	105.8	.7	2.8	.0098	.341	.341	0	25.5
[illegible]	5.360	.020	3	0	6453.	1095.	5357.45	1.000	116.8	1188.7	1182.5	106.5	.7	2.7	.0098	.343	.343	5	25.5
269	5.380	.020	3	0	6460.	1094.	5365.56	1.000	117.5	1188.7	1182.5	107.2	.7	2.7	.0098	.343	.343	0	25.5
270	5.400	.020	3	0	6467.	1093.	5373.42	1.000	118.2	1188.7	1182.5	107.9	.7	2.7	.0098	.345	.342	5	25.5
271	5.420	.020	3	0	6473.	1092.	5381.06	1.000	118.9	1188.7	1182.5	108.5	.7	2.7	.0098	.345	.345	0	25.5
272	5.440	.020	3	0	6479.	1091.	5388.14	1.000	119.6	1188.7	1182.5	109.2	.7	2.7	.0098	.343	.343	5	25.5
273	5.460	.020	3	0	6485.	1090.	5395.19	1.000	120.2	1188.7	1182.5	109.9	.7	2.7	.0098	.345	.346	5	25.5
274	5.480	.020	3	0	6491.	1089.	5401.84	1.000	120.9	1188.6	1182.5	110.6	.7	2.7	.0098	.345	.345	0	25.5
275	5.500	.020	3	0	6496.	1088.	5408.41	1.000	121.6	1188.6	1182.5	111.3	.7	2.7	.0098	.347	.344	5	25.5
276	5.520	.020	3	0	6501.	1087.	5414.56	1.000	122.3	1188.6	1182.5	112.0	.7	2.7	.0098	.347	.347	0	25.5
277	5.540	.020	3	0	6506.	1086.	5420.14	1.000	123.0	1188.6	1182.5	112.7	.7	2.7	.0098	.345	.345	5	25.5
278	5.560	.020	3	0	6510.	1085.	5425.69	1.000	123.7	1188.6	1182.5	113.4	.7	2.7	.0098	.347	.347	5	25.5
279	5.580	.020	3	0	6514.	1083.	5431.01	1.000	124.4	1188.6	1182.5	114.1	.7	2.7	.0098	.347	.347	0	25.5
280	5.600	.020	3	0	6518.	1082.	5436.05	1.000	125.1	1188.5	1182.5	114.8	.7	2.6	.0098	.348	.346	5	25.5
281	5.620	.020	3	0	6522.	1081.	5440.86	1.000	125.8	1188.5	1182.5	115.5	.7	2.6	.0098	.348	.348	0	25.5
282	5.640	.020	3	0	6525.	1080.	5445.09	1.000	126.5	1188.5	1182.5	116.2	.7	2.6	.0098	.346	.347	5	25.5
283	5.660	.020	3	0	6528.	1079.	5448.90	1.000	127.2	1188.5	1182.5	116.8	.7	2.6	.0098	.346	.346	0	25.5
284	5.680	.020	3	0	6530.	1077.	5452.59	1.000	127.9	1188.5	1182.5	117.5	.7	2.6	.0098	.348	.348	5	25.5
285	5.700	.020	3	0	6532.	1076.	5456.06	1.000	128.6	1188.5	1182.5	118.2	.7	2.6	.0098	.348	.348	0	25.5
286	5.720	.020	3	0	6533.	1074.	5459.23	1.000	129.3	1188.4	1182.5	118.9	.7	2.6	.0098	.349	.350	5	25.5
287	5.740	.020	3	0	6535.	1072.	5462.17	1.000	130.0	1188.4	1182.5	119.6	.7	2.6	.0098	.349	.349	0	25.5
288	5.760	.020	3	0	6536.	1071.	5464.80	1.000	130.7	1188.4	1182.5	120.3	.7	2.6	.0098	.350	.348	5	25.5
289	5.780	.020	3	0	6536.	1069.	5467.00	1.000	131.4	1188.4	1182.5	121.0	.7	2.6	.0098	.350	.350	0	25.5
290	5.800	.020	3	0	6537.	1068.	5468.79	1.000	132.1	1188.4	1182.5	121.7	.7	2.5	.0098	.348	.349	5	25.5
291	5.820	.020	3	0	6537.	1066.	5470.36	1.000	132.8	1188.3	1182.5	122.4	.7	2.5	.0098	.348	.348	0	25.5
292	5.840	.020	3	0	6536.	1065.	5471.60	1.000	133.5	1188.3	1182.5	123.1	.7	2.5	.0098	.349	.350	5	25.5
[illegible]	5.860	.020	3	0	6536.	1063.	5472.61	1.000	134.2	1188.3	1182.5	123.8	.7	2.5	.0098	.349	.349	0	25.5
[illegible]	5.880	.020	3	0	6535.	1061.	5473.29	1.000	134.9	1188.3	1182.5	124.5	.7	2.5	.0098	.351	.348	5	25.5
295	5.900	.020	3	0	6534.	1060.	5473.74	1.000	135.6	1188.3	1182.5	125.2	.7	2.5	.0098	.351	.350	0	25.5
296	5.920	.020	3	0	6532.	1058.	5473.58	1.000	136.3	1188.3	1182.5	125.9	.7	2.5	.0098	.348	.349	5	25.5
297	5.940	.020	3	0	6530.	1057.	5473.18	1.000	137.0	1188.2	1182.5	126.6	.7	2.5	.0098	.348	.348	0	25.5
298	5.960	.020	3	0	6527.	1055.	5472.45	1.000	137.7	1188.2	1182.5	127.3	.7	2.5	.0098	.349	.350	5	25.5
299	5.980	.020	3	0	6525.	1053.	5471.48	1.000	138.4	1188.2	1182.5	128.0	.7	2.5	.0098	.349	.349	0	25.5
300	6.000	.020	3	0	6522.	1052.	5470.38	1.000	139.1	1188.2	1182.5	128.7	.7	2.5	.0098	.350	.348	5	25.5

301	6.020	.020	3	0	6519.	1050.	5468.84	1.000	139.8	1188.2	1182.5	129.4	.7	2.5	.0098	.350	.350	0	25.5	

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
302	6.040	.020	3	0	6515.	1049.	5466.67	1.000	140.5	1188.2	1182.5	130.1	.7	2.4	.0098	.348	.349	5	25.5
[illegible]	6.060	.020	3	0	6512.	1047.	5464.63	1.000	141.2	1188.1	1182.5	130.8	.7	2.4	.0098	.350	.350	5	25.5
[illegible]	6.080	.020	3	0	6507.	1045.	5461.84	1.000	141.8	1188.1	1182.5	131.5	.7	2.4	.0098	.348	.349	5	25.5
305	6.100	.020	3	0	6503.	1044.	5459.17	1.000	142.5	1188.1	1182.5	132.2	.7	2.4	.0098	.350	.347	5	25.5
306	6.120	.020	3	0	6498.	1042.	5455.73	1.000	143.2	1188.1	1182.5	132.9	.7	2.4	.0098	.349	.349	5	25.5
307	6.140	.020	3	0	6492.	1040.	5452.16	1.000	143.9	1188.1	1182.5	133.6	.7	2.4	.0098	.347	.348	5	25.5
308	6.160	.020	3	0	6487.	1039.	5448.30	1.000	144.6	1188.0	1182.5	134.3	.7	2.4	.0098	.349	.349	5	25.5
309	6.180	.020	3	0	6481.	1037.	5443.88	1.000	145.3	1188.0	1182.5	135.0	.7	2.4	.0098	.347	.348	5	25.5
310	6.200	.020	3	0	6474.	1035.	5439.11	1.000	146.0	1188.0	1182.5	135.7	.7	2.4	.0098	.346	.346	5	25.5
311	6.220	.020	3	0	6468.	1034.	5434.26	1.000	146.7	1188.0	1182.5	136.4	.7	2.4	.0098	.347	.348	5	25.5
312	6.240	.020	3	0	6461.	1032.	5428.85	1.000	147.4	1188.0	1182.5	137.1	.7	2.4	.0098	.346	.346	5	25.5
313	6.260	.020	3	0	6454.	1030.	5423.35	1.000	148.1	1187.9	1182.5	137.8	.7	2.4	.0098	.348	.345	5	25.5
314	6.280	.020	3	0	6446.	1029.	5417.50	1.000	148.8	1187.9	1182.5	138.5	.7	2.3	.0098	.346	.347	5	25.5
315	6.300	.020	3	0	6438.	1027.	5411.10	1.000	149.5	1187.9	1182.5	139.2	.7	2.3	.0098	.344	.345	5	25.5
316	6.320	.020	3	0	6430.	1025.	5404.61	1.000	150.2	1187.9	1182.5	139.8	.7	2.3	.0098	.346	.343	5	25.5
317	6.340	.020	3	0	6421.	1024.	5397.56	1.000	150.9	1187.9	1182.5	140.5	.7	2.3	.0098	.344	.345	5	25.5
318	6.360	.020	3	0	6412.	1022.	5390.17	1.000	151.6	1187.9	1182.5	141.2	.7	2.3	.0098	.343	.343	5	25.5
319	6.380	.020	3	0	6403.	1020.	5382.47	1.000	152.2	1187.8	1182.5	141.9	.7	2.3	.0098	.344	.345	5	25.5
320	6.400	.020	3	0	6393.	1018.	5374.64	1.000	152.9	1187.8	1182.5	142.6	.7	2.3	.0098	.343	.343	5	25.5
321	6.420	.020	3	0	6383.	1017.	5366.04	1.000	153.6	1187.8	1182.5	143.3	.7	2.3	.0098	.341	.342	5	25.5
322	6.440	.020	3	0	6373.	1015.	5357.56	1.000	154.3	1187.8	1182.5	144.0	.7	2.3	.0098	.343	.343	5	25.5
323	6.460	.020	3	0	6362.	1013.	5348.52	1.000	155.0	1187.8	1182.5	144.6	.7	2.3	.0098	.341	.342	5	25.5
324	6.480	.020	3	0	6351.	1012.	5339.15	1.000	155.7	1187.7	1182.5	145.3	.7	2.2	.0098	.339	.340	5	25.5
325	6.500	.020	3	0	6339.	1010.	5329.47	1.000	156.3	1187.7	1182.5	146.0	.7	2.2	.0098	.341	.341	5	25.5
326	6.520	.020	3	0	6327.	1008.	5319.44	1.000	157.0	1187.7	1182.5	146.7	.7	2.2	.0098	.339	.340	5	25.5
327	6.540	.020	3	0	6315.	1006.	5309.08	1.000	157.7	1187.7	1182.5	147.4	.7	2.2	.0098	.337	.338	5	25.5
[illegible]	6.560	.020	3	0	6303.	1005.	5298.41	1.000	158.4	1187.7	1182.5	148.0	.7	2.2	.0098	.339	.340	5	25.5
[illegible]	6.580	.020	3	0	6290.	1003.	5287.40	1.000	159.0	1187.6	1182.5	148.7	.7	2.2	.0098	.337	.338	5	25.5
330	6.600	.020	3	0	6277.	1001.	5275.84	1.000	159.7	1187.6	1182.5	149.4	.7	2.2	.0098	.335	.336	5	25.5
331	6.620	.020	3	0	6264.	999.	5264.40	1.000	160.4	1187.6	1182.5	150.1	.7	2.2	.0098	.337	.338	5	25.5
332	6.640	.020	3	0	6250.	998.	5252.41	1.000	161.1	1187.6	1182.5	150.7	.7	2.2	.0098	.335	.336	5	25.5
333	6.660	.020	3	0	6236.	996.	5239.88	1.000	161.7	1187.6	1182.5	151.4	.7	2.2	.0098	.333	.334	5	25.5
334	6.680	.020	3	0	6224.	994.	5230.26	1.000	162.4	1187.5	1182.5	152.1	.7	2.2	.0098	.335	.332	5	25.5
335	6.700	.020	3	0	6214.	992.	5222.03	1.000	163.1	1187.5	1182.5	152.7	.7	2.2	.0098	.333	.334	5	25.5
336	6.720	.020	3	0	6204.	990.	5213.47	1.000	163.7	1187.5	1182.5	153.4	.7	2.1	.0098	.331	.332	5	25.5
337	6.740	.020	3	0	6193.	989.	5204.62	1.000	164.4	1187.5	1182.5	154.1	.7	2.1	.0098	.333	.333	5	25.5
338	6.760	.020	3	0	6182.	987.	5195.44	1.000	165.1	1187.5	1182.5	154.7	.7	2.1	.0098	.331	.331	5	25.5
339	6.780	.020	3	0	6171.	985.	5186.17	1.000	165.7	1187.4	1182.5	155.4	.7	2.1	.0098	.332	.330	5	25.5
340	6.800	.020	3	0	6160.	983.	5176.38	1.000	166.4	1187.4	1182.5	156.0	.7	2.1	.0098	.331	.331	5	25.5
341	6.820	.020	3	0	6148.	982.	5166.47	1.000	167.0	1187.4	1182.5	156.7	.7	2.1	.0098	.329	.329	5	25.5
342	6.840	.020	3	0	6136.	980.	5156.26	1.000	167.7	1187.4	1182.5	157.4	.7	2.1	.0098	.330	.327	5	25.5
343	6.860	.020	3	0	6124.	978.	5145.74	1.000	168.4	1187.4	1182.5	158.0	.7	2.1	.0098	.328	.329	5	25.5
344	6.880	.020	3	0	6111.	976.	5134.90	1.000	169.0	1187.3	1182.5	158.7	.7	2.1	.0098	.326	.327	5	25.5
345	6.900	.020	3	0	6098.	974.	5123.77	1.000	169.7	1187.3	1182.5	159.3	.7	2.1	.0098	.328	.328	5	25.5
346	6.920	.020	3	0	6085.	973.	5112.53	1.000	170.3	1187.3	1182.5	160.0	.7	2.1	.0098	.326	.326	5	25.5
347	6.940	.020	3	0	6072.	971.	5100.79	1.000	171.0	1187.3	1182.5	160.6	.6	2.1	.0098	.324	.325	5	25.5
348	6.960	.020	3	0	6058.	969.	5089.13	1.000	171.6	1187.3	1182.5	161.3	.7	2.1	.0098	.325	.326	5	25.5
349	6.980	.020	3	0	6044.	967.	5076.98	1.000	172.3	1187.2	1182.5	161.9	.6	2.0	.0098	.324	.324	5	25.5
350	7.000	.020	3	0	6030.	965.	5064.54	1.000	172.9	1187.2	1182.5	162.6	.6	2.0	.0098	.322	.322	5	25.5
351	7.020	.020	3	0	6016.	964.	5051.99	1.000	173.5	1187.2	1182.5	163.2	.6	2.0	.0098	.323	.323	5	25.5
352	7.040	.020	3	0	6001.	962.	5039.14	1.000	174.2	1187.2	1182.5	163.9	.6	2.0	.0098	.321	.322	5	25.5
353	7.060	.020	3	0	5986.	960.	5025.80	1.000	174.8	1187.2	1182.5	164.5	.6	2.0	.0098	.319	.320	5	25.5
[illegible]	7.080	.020	3	0	5971.	958.	5012.56	1.000	175.5	1187.1	1182.5	165.1	.6	2.0	.0098	.320	.321	5	25.5
[illegible]	7.100	.020	3	0	5955.	956.	4998.83	1.000	176.1	1187.1	1182.5	165.8	.6	2.0	.0098	.319	.319	5	25.5
356	7.120	.020	3	0	5940.	955.	4985.02	1.000	176.7	1187.1	1182.5	166.4	.6	2.0	.0098	.317	.317	5	25.5
357	7.140	.020	3	0	5924.	953.	4970.90	1.000	177.4	1187.1	1182.5	167.0	.6	2.0	.0098	.318	.318	5	25.5
358	7.160	.020	3	0	5908.	951.	4956.70	1.000	178.0	1187.1	1182.5	167.7	.6	2.0	.0098	.316	.316	5	25.5
359	7.180	.020	3	0	5891.	949.	4942.02	1.000	178.6	1187.0	1182.5	168.3	.6	2.0	.0098	.314	.315	5	25.5
360	7.200	.020	3	0	5875.	947.	4927.24	1.000	179.3	1187.0	1182.5	168.9	.6	2.0	.0098	.315	.316	5	25.5
361	7.220	.020	3	0	5858.	946.	4912.18	1.000	179.9	1187.0	1182.5	169.6	.6	2.0	.0098	.313	.314	5	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
362	7.240	.020	3	0	5841.	944.	4896.85	1.000	180.5	1187.0	1182.5	170.2	.6	1.9	.0098	.311	.312	5	25.5
363	7.260	.020	3	0	5823.	942.	4881.42	1.000	181.1	1187.0	1182.5	170.8	.6	1.9	.0098	.313	.310	5	25.5
364	7.280	.020	3	0	5806.	940.	4865.73	1.000	181.8	1186.9	1182.5	171.4	.6	1.9	.0098	.311	.311	5	25.5
365	7.300	.020	3	0	5788.	938.	4849.76	1.000	182.4	1186.9	1182.5	172.0	.6	1.9	.0098	.309	.309	5	25.5
366	7.320	.020	3	0	5770.	936.	4833.53	1.000	183.0	1186.9	1182.5	172.7	.6	1.9	.0098	.307	.307	5	25.5
367	7.340	.020	3	0	5752.	935.	4817.21	1.000	183.6	1186.9	1182.5	173.3	.6	1.9	.0098	.308	.308	5	25.5
368	7.360	.020	3	0	5733.	933.	4800.63	1.000	184.2	1186.9	1182.5	173.9	.6	1.9	.0098	.306	.307	5	25.5
369	7.380	.020	3	0	5715.	931.	4783.79	1.000	184.8	1186.8	1182.5	174.5	.6	1.9	.0098	.304	.305	5	25.5
370	7.400	.020	3	0	5696.	929.	4766.85	1.000	185.4	1186.8	1182.5	175.1	.6	1.9	.0098	.305	.303	5	25.5
371	7.420	.020	3	0	5677.	927.	4749.67	1.000	186.0	1186.8	1182.5	175.7	.6	1.9	.0098	.303	.304	5	25.5
372	7.440	.020	3	0	5658.	926.	4732.23	1.000	186.6	1186.8	1182.5	176.3	.6	1.9	.0098	.301	.302	5	25.5
373	7.460	.020	3	0	5638.	924.	4714.55	1.000	187.2	1186.8	1182.5	176.9	.6	1.9	.0098	.299	.300	5	25.5
374	7.480	.020	3	0	5619.	922.	4696.78	1.000	187.8	1186.7	1182.5	177.5	.6	1.9	.0098	.300	.301	5	25.5
375	7.500	.020	3	0	5599.	920.	4678.77	1.000	188.4	1186.7	1182.5	178.1	.6	1.8	.0098	.299	.299	5	25.5
376	7.520	.020	3	0	5579.	918.	4660.51	1.000	189.0	1186.7	1182.5	178.7	.6	1.8	.0098	.297	.297	5	25.5
377	7.540	.020	3	0	5559.	917.	4642.02	1.000	189.6	1186.7	1182.5	179.3	.6	1.8	.0098	.295	.295	5	25.5
378	7.560	.020	3	0	5538.	915.	4623.45	1.000	190.2	1186.7	1182.5	179.9	.6	1.8	.0098	.296	.296	5	25.5
379	7.580	.020	3	0	5518.	913.	4604.64	1.000	190.8	1186.6	1182.5	180.5	.6	1.8	.0098	.294	.294	5	25.5
380	7.600	.020	3	0	5497.	911.	4585.81	1.000	191.4	1186.6	1182.5	181.1	.6	1.8	.0098	.292	.292	5	25.5
381	7.620	.020	3	0	5476.	909.	4566.54	1.000	192.0	1186.6	1182.5	181.6	.6	1.8	.0098	.290	.290	5	25.5
382	7.640	.020	3	0	5455.	907.	4547.20	1.000	192.6	1186.6	1182.5	182.2	.6	1.8	.0098	.291	.291	5	25.5
383	7.660	.020	3	0	5434.	906.	4527.84	1.000	193.1	1186.6	1182.5	182.8	.6	1.8	.0098	.289	.289	5	25.5
384	7.680	.020	3	0	5412.	904.	4508.25	1.000	193.7	1186.5	1182.5	183.4	.6	1.8	.0098	.287	.287	5	25.5
385	7.700	.020	3	0	5390.	902.	4488.25	1.000	194.3	1186.5	1182.5	183.9	.6	1.8	.0098	.285	.286	5	25.5
386	7.720	.020	3	0	5369.	900.	4468.38	1.000	194.8	1186.5	1182.5	184.5	.6	1.8	.0098	.286	.284	5	25.5
387	7.740	.020	3	0	5347.	898.	4448.30	1.000	195.4	1186.5	1182.5	185.1	.6	1.7	.0098	.284	.285	5	25.5
388	7.760	.020	3	0	5324.	896.	4428.00	1.000	196.0	1186.5	1182.5	185.6	.6	1.7	.0098	.282	.283	5	25.5
[illegible]	7.780	.020	3	0	5302.	894.	4407.50	1.000	196.5	1186.4	1182.5	186.2	.6	1.7	.0098	.280	.281	5	25.5
[illegible]	7.800	.020	3	0	5279.	892.	4387.01	1.000	197.1	1186.4	1182.5	186.8	.6	1.7	.0098	.278	.279	5	25.5
391	7.820	.020	3	0	5257.	890.	4366.24	1.000	197.7	1186.4	1182.5	187.3	.6	1.7	.0098	.279	.280	5	25.5
392	7.840	.020	3	0	5234.	888.	4345.48	1.000	198.2	1186.4	1182.5	187.9	.6	1.7	.0098	.277	.276	5	25.5
393	7.860	.020	3	0	5211.	886.	4324.64	1.000	198.8	1186.4	1182.5	188.4	.6	1.7	.0098	.278	.277	5	25.5
394	7.880	.020	3	0	5188.	884.	4303.49	1.000	199.3	1186.3	1182.5	189.0	.5	1.7	.0098	.273	.273	5	25.5
395	7.900	.020	3	0	5165.	882.	4282.27	1.000	199.9	1186.3	1182.5	189.5	.5	1.7	.0098	.274	.273	5	25.5
396	7.920	.020	3	0	5141.	880.	4260.74	1.000	200.4	1186.3	1182.5	190.1	.5	1.7	.0098	.270	.274	5	25.5
397	7.940	.020	3	0	5117.	878.	4239.14	1.000	200.9	1186.3	1182.5	190.6	.5	1.7	.0098	.270	.269	5	25.5
398	7.960	.020	3	0	5094.	876.	4217.69	1.000	201.5	1186.3	1182.5	191.1	.5	1.7	.0098	.271	.270	5	25.5
399	7.980	.020	3	0	5070.	874.	4195.94	1.000	202.0	1186.2	1182.5	191.7	.5	1.6	.0098	.266	.266	5	25.5
400	8.000	.020	3	0	5047.	872.	4174.13	1.000	202.5	1186.2	1182.5	192.2	.5	1.6	.0098	.267	.266	5	25.5
401	8.020	.020	3	0	5022.	870.	4152.03	1.000	203.1	1186.2	1182.5	192.7	.5	1.6	.0098	.263	.267	5	25.5
402	8.040	.020	3	0	4999.	868.	4130.08	1.000	203.6	1186.2	1182.5	193.3	.5	1.6	.0098	.263	.263	5	25.5
403	8.060	.020	3	0	4974.	866.	4107.86	1.000	204.1	1186.2	1182.5	193.8	.5	1.6	.0098	.264	.263	5	25.5
404	8.080	.020	3	0	4950.	865.	4085.57	1.000	204.6	1186.1	1182.5	194.3	.5	1.6	.0098	.260	.259	5	25.5
405	8.100	.020	3	0	4926.	863.	4063.23	1.000	205.2	1186.1	1182.5	194.8	.5	1.6	.0098	.260	.259	5	25.5
406	8.120	.020	3	0	4901.	861.	4040.83	1.000	205.7	1186.1	1182.5	195.3	.5	1.6	.0098	.256	.255	5	25.5
407	8.140	.020	3	0	4877.	859.	4018.17	1.000	206.2	1186.1	1182.5	195.9	.5	1.6	.0098	.257	.256	5	25.5
408	8.160	.020	3	0	4852.	857.	3995.46	1.000	206.7	1186.1	1182.5	196.4	.5	1.6	.0098	.252	.256	5	25.5
409	8.180	.020	3	0	4827.	855.	3972.70	1.000	207.2	1186.0	1182.5	196.9	.5	1.6	.0098	.253	.252	5	25.5
410	8.200	.020	3	0	4803.	853.	3950.09	1.000	207.7	1186.0	1182.5	197.4	.5	1.6	.0098	.253	.253	5	25.5
411	8.220	.020	3	0	4778.	851.	3927.04	1.000	208.2	1186.0	1182.5	197.9	.5	1.6	.0098	.249	.248	5	25.5
412	8.240	.020	3	0	4753.	849.	3904.15	1.000	208.7	1186.0	1182.5	198.4	.5	1.6	.0098	.250	.249	5	25.5
413	8.260	.020	3	0	4728.	847.	3881.02	1.000	209.2	1186.0	1182.5	198.9	.5	1.5	.0098	.246	.250	5	25.5
414	8.280	.020	3	0	4703.	845.	3857.84	1.000	209.7	1186.0	1182.5	199.4	.5	1.5	.0098	.246	.245	5	25.5
[illegible]	8.300	.020	3	0	4678.	843.	3834.65	1.000	210.2	1185.9	1182.5	199.8	.5	1.5	.0098	.242	.246	5	25.5
[illegible]	8.320	.020	3	0	4653.	841.	3811.41	1.000	210.7	1185.9	1182.5	200.3	.5	1.5	.0098	.242	.242	5	25.5
417	8.340	.020	3	0	4627.	839.	3788.13	1.000	211.1	1185.9	1182.5	200.8	.5	1.5	.0098	.243	.242	5	25.5
418	8.360	.020	3	0	4602.	837.	3764.84	1.000	211.6	1185.9	1182.5	201.3	.5	1.5	.0098	.239	.238	5	25.5
419	8.380	.020	3	0	4577.	835.	3741.51	1.000	212.1	1185.9	1182.5	201.8	.5	1.5	.0098	.239	.239	5	25.5
420	8.400	.020	3	0	4551.	833.	3717.97	1.000	212.6	1185.8	1182.5	202.2	.5	1.5	.0098	.235	.235	5	25.5
421	8.420	.020	3	0	4526.	832.	3694.40	1.000	213.0	1185.8	1182.5	202.7	.5	1.5	.0098	.236	.235	5	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
422	8.440	.020	3	0	4501.	830.	3670.84	1.000	213.5	1185.8	1182.5	203.2	.5	1.5	.0098	.232	.236	5	25.5
423	8.460	.020	3	0	4475.	828.	3647.24	1.000	214.0	1185.8	1182.5	203.6	.5	1.5	.0098	.232	.232	5	25.5
424	8.480	.020	3	0	4450.	826.	3623.81	1.000	214.4	1185.8	1182.5	204.1	.5	1.5	.0098	.233	.232	5	25.5
[illegible]	8.500	.020	3	0	4424.	824.	3600.19	1.000	214.9	1185.7	1182.5	204.6	.5	1.4	.0098	.229	.228	5	25.5
[illegible]	8.520	.020	3	0	4399.	822.	3576.55	1.000	215.4	1185.7	1182.5	205.0	.5	1.4	.0098	.229	.228	5	25.5
427	8.540	.020	3	0	4373.	820.	3552.72	1.000	215.8	1185.7	1182.5	205.5	.5	1.4	.0098	.225	.225	5	25.5
428	8.560	.020	3	0	4347.	818.	3529.07	1.000	216.3	1185.7	1182.5	205.9	.5	1.4	.0098	.226	.225	5	25.5
429	8.580	.020	3	0	4322.	816.	3505.24	1.000	216.7	1185.7	1182.5	206.4	.4	1.4	.0098	.222	.221	5	25.5
430	8.600	.020	3	0	4296.	815.	3481.60	1.000	217.1	1185.6	1182.5	206.8	.4	1.4	.0098	.222	.222	5	25.5
431	8.620	.020	3	0	4270.	813.	3457.79	1.000	217.6	1185.6	1182.5	207.3	.4	1.4	.0098	.218	.222	5	25.5
432	8.640	.020	3	0	4245.	811.	3433.95	1.000	218.0	1185.6	1182.5	207.7	.4	1.4	.0098	.219	.218	5	25.5
433	8.660	.020	3	0	4219.	809.	3410.16	1.000	218.4	1185.6	1182.5	208.1	.4	1.4	.0098	.215	.219	5	25.5
434	8.680	.020	3	0	4193.	807.	3386.35	1.000	218.9	1185.6	1182.5	208.5	.4	1.4	.0098	.215	.215	5	25.5
435	8.700	.020	3	0	4168.	805.	3362.53	1.000	219.3	1185.6	1182.5	209.0	.4	1.4	.0098	.216	.215	5	25.5
436	8.720	.020	3	0	4142.	803.	3338.75	1.000	219.7	1185.5	1182.5	209.4	.4	1.4	.0098	.212	.211	5	25.5
437	8.740	.020	3	0	4117.	802.	3314.95	1.000	220.2	1185.5	1182.5	209.8	.4	1.4	.0098	.212	.212	5	25.5
438	8.760	.020	3	0	4091.	800.	3291.22	1.000	220.6	1185.5	1182.5	210.2	.4	1.3	.0098	.209	.208	5	25.5
439	8.780	.020	3	0	4065.	798.	3267.47	1.000	221.0	1185.5	1182.5	210.7	.4	1.3	.0098	.209	.208	5	25.5
440	8.800	.020	3	0	4040.	796.	3243.59	1.000	221.4	1185.5	1182.5	211.1	.4	1.3	.0098	.206	.205	5	25.5
441	8.820	.020	3	0	4014.	794.	3220.09	1.000	221.8	1185.4	1182.5	211.5	.4	1.3	.0098	.206	.205	5	25.5
442	8.840	.020	3	0	3989.	792.	3196.47	1.000	222.2	1185.4	1182.5	211.9	.4	1.3	.0098	.202	.202	5	25.5
443	8.860	.020	3	0	3964.	791.	3172.84	1.000	222.6	1185.4	1182.5	212.3	.4	1.3	.0098	.203	.202	5	25.5
444	8.880	.020	3	0	3938.	789.	3149.28	1.000	223.0	1185.4	1182.5	212.7	.4	1.3	.0098	.199	.198	5	25.5
445	8.900	.020	3	0	3913.	787.	3125.92	1.000	223.4	1185.4	1182.5	213.1	.4	1.3	.0098	.199	.199	5	25.5
446	8.920	.020	3	0	3888.	785.	3102.44	1.000	223.8	1185.4	1182.5	213.5	.4	1.3	.0098	.196	.199	5	25.5
447	8.940	.020	3	0	3863.	784.	3079.16	1.000	224.2	1185.3	1182.5	213.9	.4	1.3	.0098	.196	.196	5	25.5
448	8.960	.020	3	0	3838.	782.	3055.96	1.000	224.6	1185.3	1182.5	214.3	.4	1.3	.0098	.193	.196	5	25.5
449	8.980	.020	3	0	3813.	780.	3032.76	1.000	225.0	1185.3	1182.5	214.7	.4	1.3	.0098	.193	.192	5	25.5
[illegible]	9.000	.020	3	0	3788.	778.	3009.65	1.000	225.4	1185.3	1182.5	215.0	.4	1.3	.0098	.190	.193	5	25.5
[illegible]	9.020	.020	3	0	3763.	777.	2986.54	1.000	225.7	1185.3	1182.5	215.4	.4	1.3	.0098	.190	.189	5	25.5
452	9.040	.020	3	0	3738.	775.	2963.62	1.000	226.1	1185.2	1182.5	215.8	.4	1.3	.0098	.190	.190	5	25.5
453	9.060	.020	3	0	3714.	773.	2940.81	1.000	226.5	1185.2	1182.5	216.2	.4	1.2	.0098	.187	.186	5	25.5
454	9.080	.020	3	0	3689.	771.	2917.99	1.000	226.9	1185.2	1182.5	216.5	.4	1.2	.0098	.187	.187	5	25.5
455	9.100	.020	3	0	3665.	770.	2895.28	1.000	227.2	1185.2	1182.5	216.9	.4	1.2	.0098	.184	.183	5	25.5
456	9.120	.020	3	0	3641.	768.	2872.77	1.000	227.6	1185.2	1182.5	217.3	.4	1.2	.0098	.184	.183	5	25.5
457	9.140	.020	3	0	3616.	766.	2850.17	1.000	228.0	1185.2	1182.5	217.6	.4	1.2	.0098	.181	.180	5	25.5
458	9.160	.020	3	0	3592.	765.	2827.77	1.000	228.3	1185.1	1182.5	218.0	.4	1.2	.0098	.181	.180	5	25.5
459	9.180	.020	3	0	3568.	763.	2805.28	1.000	228.7	1185.1	1182.5	218.4	.4	1.2	.0098	.178	.177	5	25.5
460	9.200	.020	3	0	3544.	761.	2783.00	1.000	229.0	1185.1	1182.5	218.7	.4	1.2	.0098	.178	.177	5	25.5
461	9.220	.020	3	0	3520.	760.	2760.83	1.000	229.4	1185.1	1182.5	219.1	.3	1.2	.0098	.175	.174	5	25.5
462	9.240	.020	3	0	3497.	758.	2738.67	1.000	229.7	1185.1	1182.5	219.4	.4	1.2	.0098	.175	.175	5	25.5
463	9.260	.020	3	0	3473.	756.	2716.63	1.000	230.1	1185.1	1182.5	219.8	.3	1.2	.0098	.172	.171	5	25.5
464	9.280	.020	3	0	3449.	755.	2694.79	1.000	230.4	1185.0	1182.5	220.1	.3	1.2	.0098	.172	.172	5	25.5
465	9.300	.020	3	0	3426.	753.	2672.89	1.000	230.8	1185.0	1182.5	220.4	.3	1.2	.0098	.169	.169	5	25.5
466	9.320	.020	3	0	3403.	751.	2651.18	1.000	231.1	1185.0	1182.5	220.8	.3	1.2	.0098	.169	.169	5	25.5
467	9.340	.020	3	0	3379.	750.	2629.61	1.000	231.4	1185.0	1182.5	221.1	.3	1.1	.0098	.166	.166	5	25.5
468	9.360	.020	3	0	3356.	748.	2608.05	1.000	231.8	1185.0	1182.5	221.4	.3	1.1	.0098	.167	.166	5	25.5
469	9.380	.020	3	0	3333.	747.	2586.62	1.000	232.1	1185.0	1182.5	221.8	.3	1.1	.0098	.164	.163	5	25.5
470	9.400	.020	3	0	3310.	745.	2565.20	1.000	232.4	1184.9	1182.5	222.1	.3	1.1	.0098	.164	.163	5	25.5
471	9.420	.020	3	0	3287.	743.	2543.92	1.000	232.8	1184.9	1182.5	222.4	.3	1.1	.0098	.161	.160	5	25.5
472	9.440	.020	3	0	3265.	742.	2522.84	1.000	233.1	1184.9	1182.5	222.7	.3	1.1	.0098	.161	.161	5	25.5
473	9.460	.020	3	0	3242.	740.	2501.71	1.000	233.4	1184.9	1182.5	223.1	.3	1.1	.0098	.158	.158	5	25.5
474	9.480	.020	3	0	3219.	739.	2480.79	1.000	233.7	1184.9	1182.5	223.4	.3	1.1	.0098	.158	.158	5	25.5

KTT= 0 I= 475 T= 9.50

TF= .12 QTF= 1246. TP= 4.64 QP= 6042. TRS= 4.62 TB= .02
BRD= 10.8 BRW= 233.7 HU=1193.3 HY=1184.9 HC=1182.5 ALG=25.500 QO= 15.3149
Z= .48 TFH= 4.10 BO= 223.4 TFI= .54

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0TIME*****  2011.0    2611.0    3211.0    3811.0    4411.0    5011.0    5611.0    6211.0    6811.0    7411.0    DISCHARGE
   .120*        .         .         .         .         .         .         .         .         .         .        1411.
   .160.*       .         .         .         .         .         .         .         .         .         .        1490.
   .200.  *     .         .         .         .         .         .         .         .         .         .        1569.
   .240.   *    .         .         .         .         .         .         .         .         .         .        1648.
   .280.    *   .         .         .         .         .         .         .         .         .         .        1724.
   .320.     *  .         .         .         .         .         .         .         .         .         .        1799.
   .360.      * .         .         .         .         .         .         .         .         .         .        1872.
   .400.       *.         .         .         .         .         .         .         .         .         .        1943.
   .440.        *         .         .         .         .         .         .         .         .         .        2012.
   .480.        .*        .         .         .         .         .         .         .         .         .        2078.
   .520.        . *       .         .         .         .         .         .         .         .         .        2143.
   .560.        .  *      .         .         .         .         .         .         .         .         .        2206.
   .600.        .   *     .         .         .         .         .         .         .         .         .        2267.
   .640.        .    *    .         .         .         .         .         .         .         .         .        2326.
   .680.        .     *   .         .         .         .         .         .         .         .         .        2384.
   .720.        .      *  .         .         .         .         .         .         .         .         .        2440.
   .760.        .       * .         .         .         .         .         .         .         .         .        2495.
   .800.        .        *.         .         .         .         .         .         .         .         .        2548.
   .840.        .         *         .         .         .         .         .         .         .         .        2599.
   .880.        .         .*        .         .         .         .         .         .         .         .        2649.
   .920.        .         .*        .         .         .         .         .         .         .         .        2698.
   .960.        .         . *       .         .         .         .         .         .         .         .        2745.
  1.000.        .         .  *      .         .         .         .         .         .         .         .        2860.
  1.040.        .         .  *      .         .         .         .         .         .         .         .        2881.
  1.080.        .         .   *     .         .         .         .         .         .         .         .        2902.
  1.120.        .         .   *     .         .         .         .         .         .         .         .        2924.
  1.160.        .         .    *    .         .         .         .         .         .         .         .        2947.
  1.200.        .         .    *    .         .         .         .         .         .         .         .        2971.
  1.240.        .         .    *    .         .         .         .         .         .         .         .        2995.
  1.280.        .         .     *   .         .         .         .         .         .         .         .        3020.
  1.320.        .         .     *   .         .         .         .         .         .         .         .        3046.
  1.360.        .         .      * .         .         .         .         .         .         .         .        3074.
  1.400.        .         .      * .         .         .         .         .         .         .         .        3102.
  1.440.        .         .       *.         .         .         .         .         .         .         .        3131.
  1.480.        .         .       *.         .         .         .         .         .         .         .        3160.
  1.520.        .         .        *         .         .         .         .         .         .         .        3190.
  1.560.        .         .        *         .         .         .         .         .         .         .        3219.
  1.600.        .         .        .*        .         .         .         .         .         .         .        3250.
  1.640.        .         .        .*        .         .         .         .         .         .         .        3280.
  1.680.        .         .        . *       .         .         .         .         .         .         .        3311.
  1.720.        .         .        . *       .         .         .         .         .         .         .        3342.
  1.760.        .         .        .  *      .         .         .         .         .         .         .        3374.
  1.800.        .         .        .  *      .         .         .         .         .         .         .        3406.
  1.840.        .         .        .   *     .         .         .         .         .         .         .        3438.
  1.880.        .         .        .   *     .         .         .         .         .         .         .        3471.
  1.920.        .         .        .    *    .         .         .         .         .         .         .        3504.
  1.960.        .         .        .    *    .         .         .         .         .         .         .        3537.
  2.000.        .         .        .     *   .         .         .         .         .         .         .        3570.
  2.040.        .         .        .      *  .         .         .         .         .         .         .        3604.
  2.080.        .         .        .      *  .         .         .         .         .         .         .        3638.
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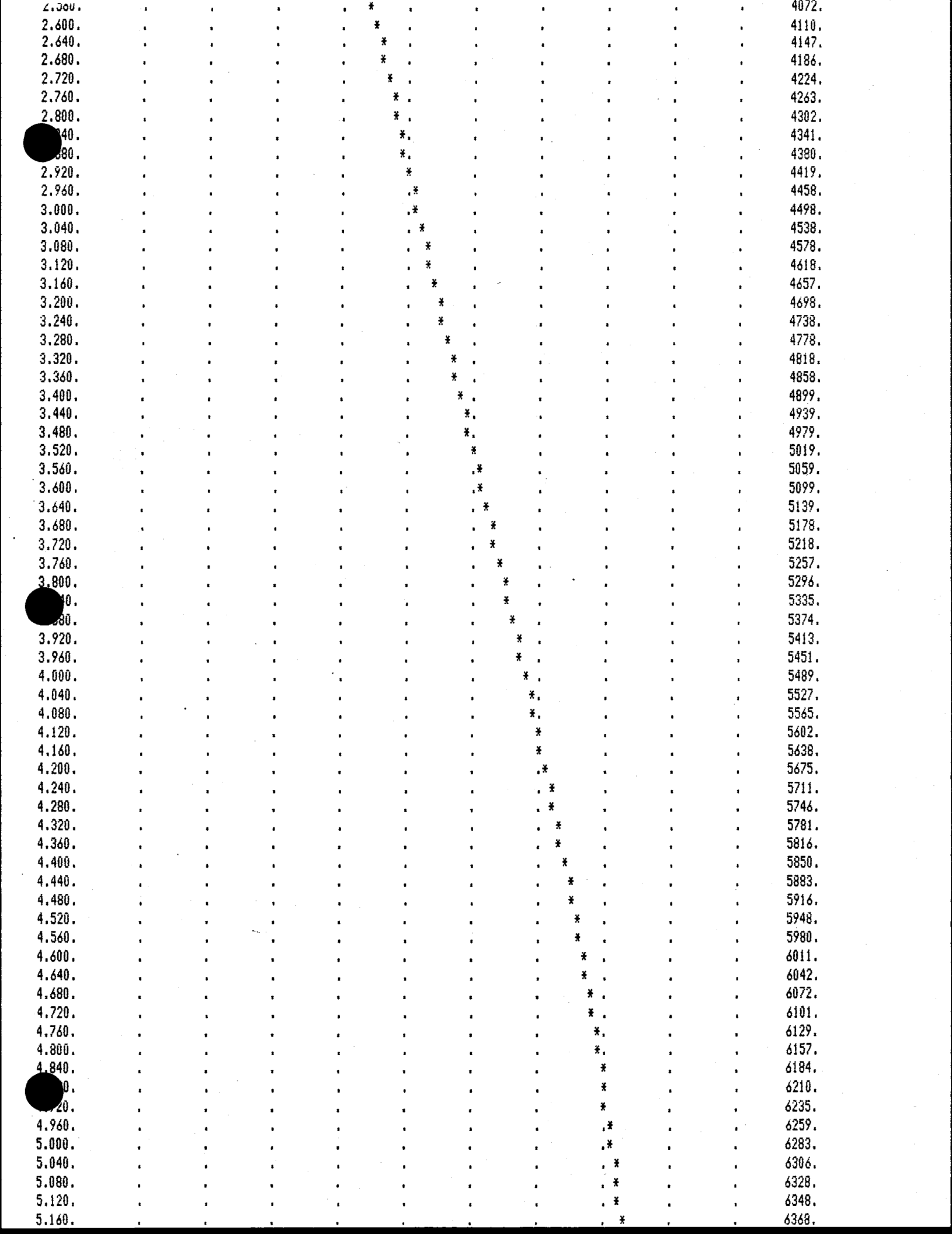
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5.880.	6535.
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5.960.	6527.
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6.760.	6182.
6.800.	6160.
6.840.	6136.
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7.280.	5806.
7.320.	5770.
7.360.	5733.
7.400.	5696.
7.440.	5658.
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7.520.	5579.
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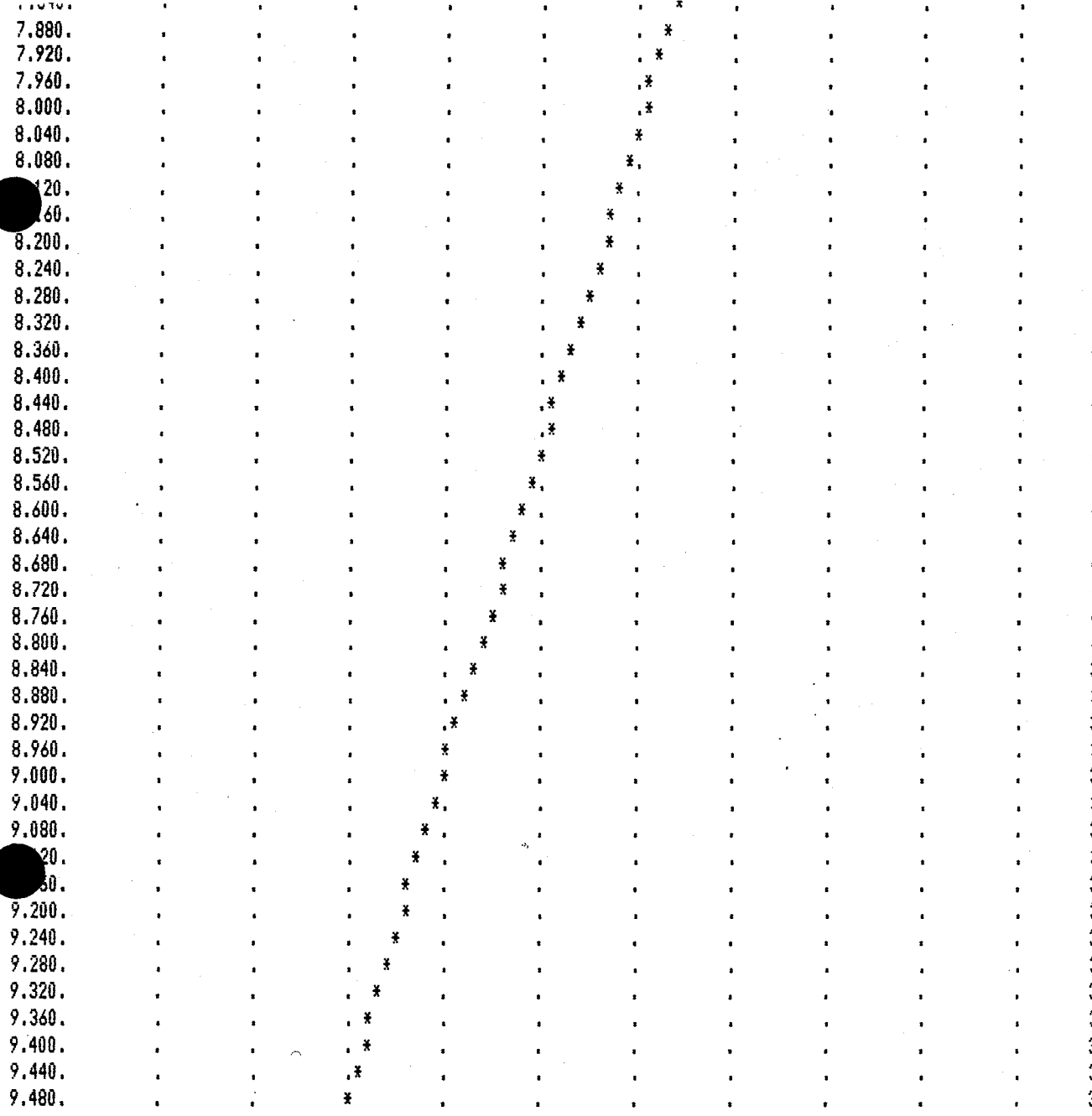
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9.440. 3265.
9.480. 3219.

APPENDIX K

Dambreak Output - HQFRS (EAST, MIDDLE AND WEST)

K

B O S S D A M B R K (tm)

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Version : 2.00
Serial Number : 0010419.200

Licensed to Carter & Associates

PROGRAM ORIGIN :

Boss DamBrk (tm) is an enhanced version of Professor D. L. Fread's 1988 NWS DAMBRK program.

DISCLAIMER :

Boss DamBrk (tm) is a complex program which requires engineering expertise to use correctly. Boss Corporation assumes absolutely no responsibility for the correct use of this program. All results obtained should be carefully examined by an experienced professional engineer to determine if they are reasonable and accurate.

Although Boss Corporation has endeavored to make Boss DamBrk error free, the program is not and cannot be certified as infallible. Therefore, Boss Corporation makes no warranty, either implicit or explicit, as to the correct performance or accuracy of this software.

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PROJECT DESCRIPTION :

PROJECT TITLE : HQFRS--EAST BREACH (13-88)
PROJECT NUMBER : FILE: HQEST4.DBK
DESCRIPTION : EAST BREACH PIPING STARTS NEAR MIDDLE
ENGINEER : CARTER ASSOCIATES
DATE OF RUN : 2/20/1991
TIME OF RUN : 10:39 am

INPUT DATA SUMMARY :

INPUT CONTROL PARAMETERS :

Number of Dynamic Routing Reaches (KKN)	1	
Type of Reservoir Routing (KUI)	1	(dynamic routing)
Number of multiple dams/bridges (MULDAM)	1	
No. of Reservoir Inflow Hydrograph Points (ITEH)	20	
No. of Informational Cross-Sections (NPRT)	0	
Flood-Plain Routing (KFLP)	0	(no)

CROSS-SECTION NUMBERS COINCIDENT
WITH UPSTREAM DAM FACE (IDAM) :

1

RESERVOIR VOLUME DESCRIPTION :

Elevation vs. Surface Area Table

Elevation HSA(K) (ft MSL)	Surface Area SA(K) (acres)
1428.30	2975.000
1419.70	2240.300
1408.40	1221.700
1396.10	114.800
1394.30	76.800
1392.60	44.400
1389.10	18.850
1375.90	.000

DAM NUMBER : 1

RESERVOIR AND BREACH PARAMETERS :

Initial Elevation of Water Surface (YO, ft MSL)		1406.70
Breach Side Slope (Z)	1:	.79
Breach Bottom Elevation (YBMIN, ft MSL)		1376.00
Breach Base Width (BB, ft)		420.00
Time of Breach Formation (TFH, hr)		3.10

RESERVOIR DESCRIPTION :

Water Surface Elevation at Time of Breach (HF, ft MSL)	1417.00
Top of Dam Elevation (HD, ft MSL)	1419.70
Uncontrolled Spillway Crest Elevation (HSP, ft MSL)	1408.40
Spillway Gate Center Elevation (HGT, ft MSL)	.00
Uncontrolled Spillway Discharge Coefficient (CS)	.00
Spillway Gate Discharge Coefficient (CG)	.00
Piping Centerline Elevation (CDO, ft MSL)	1397.80
Turbine Discharge (QT, cfs)	1000.00

SPILLWAY/GATE RATING CURVE :

Head HEAD(1) (ft)	Flow QSPILL(1) (cfs)
.00	.0
1.30	1049.3
2.66	2325.3
5.05	5551.8
8.05	10718.6
11.30	15377.7
11.60	15980.0
12.10	17000.0

Hydrograph Time Intervals (DHF, hr)	.00
Routing Period (TEH, hr)	16.00
Breach Development Exponent (BREX)	1.00
Mud/Debris Flow Parameter (MUD)	0
Dry Bed Routing Parameter (IWF)	0
Hydraulic Radius Computation Parameter (KPRES)	1

Time Elapsed TI(K) (hr)	Upstream Inflow QI(K) (cfs)
.00	9033.0
1.00	11917.0
2.00	13640.0
4.00	22252.0
6.00	33805.0
8.00	51760.0
9.00	42405.0
10.00	26254.0
10.25	23000.0
10.50	20292.0
10.75	18220.0
11.00	16658.0
11.25	15348.0
11.50	14113.0
12.00	11964.0
13.00	10000.0
15.00	10000.0
17.00	10000.0
21.00	10000.0
29.00	10000.0

SUMMARY OF PROGRAM CONTROL PARAMETERS :

Number of Cross-Sections Entered (NS)	27	
Number of Top Widths Entered (NCS)	7	
Number of Cross-Sectional Hydrographs to Plot (NTT)	6	
Cross-Sectional Smoothing Parameter (KSA)	0	
Downstream Supercritical Parameter (KSUPC)	0	(subcritical)
Landslide Simulation (KSL)	0	(no)
Number of Lateral Inflow Hydrographs (LQ)	0	
Number of Points in Gate Control Curve (KCG)	0	

CROSS-SECTIONS WHERE HYDROGRAPH REQUESTED :
(maximum allowed = 6)

1 7 10 15 21 26

CHANNEL-VALLEY BOUNDARY CONDITIONS :

Max Discharge at Downstream End (QMAXD, cfs)	.0
Max Lateral Outflow due to Flood Wave (QLL, cfs/ft)	.0000
Initial Time-Step Size (DTHM, hr)	.2000
Time at which Dam Starts to Fail (TFI, hr)	.0000
Theta Weighting Factor (FII)	.000
Stage Convergence Criterion (EPSY, ft)	.000
Initial Downstream Water Surface Elevation (YDN, ft MSL)	.00
Slope of Channel Downstream of Dam (SOM, ft/mi)	.0000

CROSS-SECTION NUMBER : 1 EAST DAMBREAK LOCATION

Cross-Section Location (XS(I), mi) 10.000

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 1

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .030

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1376.00	2.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1376.90	500.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1380.00	900.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1384.00	1450.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1388.00	1750.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1419.70	2200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1428.30	2500.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 2

Cross-Section Location (XS(I), mi) 10.030

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 2

Reach Contraction-Expansion Coefficient (FKC) -.300

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .030

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1375.00	2.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1375.90	500.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1380.00	900.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1384.00	1450.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1388.00	1750.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1419.70	2200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1420.00	2500.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 3

Cross-Section Location (XS(I), mi) 10.300

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 3

Reach Contraction-Expansion Coefficient (FKC) -.300

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1359.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1360.00	400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1364.00	1100.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1368.00	1500.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1372.00	2300.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1376.00	2500.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1380.00	2800.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 4

Cross-Section Location (XS(I), mi) 10.800

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 4

Reach Contraction-Expansion Coefficient (FKC) -.300

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1323.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1324.00	900.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1326.00	1550.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1328.00	2200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1330.00	2950.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1332.00	3700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1336.00	3950.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 5

Cross-Section Location (XS(I), mi) 11.920

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 5

Reach Contraction-Expansion Coefficient (FKC) -.300

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1251.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1252.00	2950.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1254.00	3625.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1256.00	4300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1258.00	5725.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1260.00	7150.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1272.00	7500.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 6

Cross-Section Location (XS(I), mi) 12.550

Flooding Elevation (FSTG(I), ft MSL) 1222.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 6

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1219.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1220.00	2800.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1222.00	4000.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1224.00	5200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1226.00	7150.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1228.00	9100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1232.00	10900.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 7

Cross-Section Location (XS(I), mi) 13.160

Flooding Elevation (FSTG(I), ft MSL) 1202.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 7

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1199.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1200.00	5700.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1202.00	7150.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1204.00	8600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1206.00	9600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1208.00	10600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1212.00	13400.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 8 HOUSE FOUNDATIONS

Cross-Section Location (XS(I), mi) 14.180

Flooding Elevation (FSTG(I), ft MSL) 1174.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 8

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .173

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1171.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1172.00	3750.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1174.00	6850.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1176.00	9950.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1178.00	13575.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1180.00	17200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1182.00	20000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 9 CORRALS AND SHEDS=1160(+)

Cross-Section Location (XS(I), mi) 14.700

Flooding Elevation (FSTG(I), ft MSL) 1162.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 9

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1159.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1160.00	8950.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1162.00	11825.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1164.00	14700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1166.00	16950.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1168.00	19200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1170.00	21000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 10 HOUSE ELE.= 1152(+or-)

Cross-Section Location (XS(I), mi) 15.210

Flooding Elevation (FSTG(I), ft MSL) 1154.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 10

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1151.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1152.00	9400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1154.00	11700.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1156.00	14000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1158.00	16200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1160.00	18400.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1164.00	21300.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 11 HOUSE ELE.= 1140(+or-)

Cross-Section Location (XS(I), mi) 16.500

Flooding Elevation (FSTG(I), ft MSL) 1130.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 11

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1127.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1128.00	5730.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1130.00	8400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1132.00	11080.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1134.00	12455.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1136.00	13830.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1140.00	16830.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 12

Cross-Section Location (XS(I), mi) 17.750

Flooding Elevation (FSTG(I), ft MSL) 1114.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 12

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1111.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1112.00	6880.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1114.00	8185.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1116.00	9490.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1118.00	10725.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1120.00	11960.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1124.00	13920.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 13 HOUSE ELE.= 1110(+or-)

Cross-Section Location (XS(I), mi) 18.550

Flooding Elevation (FSTG(I), ft MSL) 1106.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 13

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1103.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1104.00	3920.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1106.00	5145.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1108.00	6370.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1112.00	8690.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1116.00	11280.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1120.00	13160.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 14 HOUSE ELE.= 1111(+or-)

Cross-Section Location (XS(I), mi) 19.040

Flooding Elevation (FSTG(I), ft MSL) 1102.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 14

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1099.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1100.00	3360.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1102.00	4820.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1104.00	6280.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1106.00	7580.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1108.00	8880.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1112.00	11060.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 15 HOUSE ELE.= 1104-06(+or-)

Cross-Section Location (XS(I), mi) 19.520

Flooding Elevation (FSTG(I), ft MSL) 1095.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 15

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1091.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1092.00	1870.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1094.00	2345.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1096.00	2820.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1098.00	4110.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1100.00	5400.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1104.00	7350.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 16

Cross-Section Location (XS(I), mi) 20.050

Flooding Elevation (FSTG(I), ft MSL) 1090.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 16

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .170

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1087.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1088.00	1750.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1090.00	2535.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1092.00	3320.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1096.00	4200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1100.00	6100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1104.00	12650.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 17

Cross-Section Location (XS(I), mi) 20.730

Flooding Elevation (FSTG(I), ft MSL) 1082.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 17

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1079.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1080.00	1300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1082.00	1765.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1084.00	2230.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1086.00	2465.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1088.00	2700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1092.00	4200.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 18

Cross-Section Location (XS(I), mi) 21.390

Flooding Elevation (FSTG(I), ft MSL) 1074.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 18

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1071.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1072.00	830.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1074.00	1040.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1076.00	1250.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1080.00	1820.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1084.00	2720.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1088.00	6720.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 19

Cross-Section Location (XS(I), mi) 22.710

Flooding Elevation (FSTG(I), ft MSL) 1062.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 19

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1059.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1060.00	690.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1062.00	1140.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1064.00	4760.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1066.00	5225.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1068.00	5690.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1072.00	7540.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 20

Cross-Section Location (XS(I), mi) 23.690

Flooding Elevation (FSTG(I), ft MSL) 1052.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 20

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1049.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1050.00	200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1052.00	925.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1054.00	1275.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1058.00	3650.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1062.00	5960.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1066.00	7520.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 21 HOUSE ELE.=1051-58(+or-)

Cross-Section Location (XS(I), mi) 24.160

Flooding Elevation (FSTG(I), ft MSL) 1047.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 21

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1044.00	40.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1046.00	500.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1048.00	980.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1050.00	1235.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1052.00	1490.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1056.00	4860.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1060.00	6290.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 22

Cross-Section Location (XS(I), mi) 25.540

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 22

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1026.00	20.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1028.00	60.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1030.00	260.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1032.00	915.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1034.00	1570.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1038.00	2110.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1044.00	3020.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 23

Cross-Section Location (XS(I), mi) 26.690

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 23

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1004.00	50.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1008.00	280.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1012.00	960.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1014.00	1030.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1016.00	1100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1020.00	2000.0	.0400	600.0	.0	.0000	.0	.0000	1.0000
1024.00	2100.0	.0400	1700.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 24

Cross-Section Location (XS(I), mi) 27.570

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 24

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
992.00	270.0	.0500	.0	.0	.0000	.0	.0000	1.0000
994.00	370.0	.0500	.0	.0	.0000	.0	.0000	1.0000
998.00	755.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1000.00	1040.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1004.00	1300.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1008.00	1900.0	.0400	1600.0	.0	.0000	.0	.0000	1.0000
1012.00	2000.0	.0400	3050.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 25

Cross-Section Location (XS(I), mi) 28.750

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 25

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
972.00	120.0	.0500	.0	.0	.0000	.0	.0000	1.0000
974.00	300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
976.00	475.0	.0500	.0	.0	.0000	.0	.0000	1.0000
978.00	940.0	.0500	.0	.0	.0000	.0	.0000	1.0000
980.00	1400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
984.00	2600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
988.00	2700.0	.0400	7100.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 26 MULLEN WELL,(FOUNDATIONS)

Cross-Section Location (XS(I), mi) 29.620

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 26

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
956.00	210.0	.0500	.0	.0	.0000	.0	.0000	1.0000
960.00	1200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
964.00	2000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
968.00	2400.0	.0400	4490.0	.0	.0000	.0	.0000	1.0000
972.00	2500.0	.0400	5620.0	.0	.0000	.0	.0000	1.0000
976.00	2600.0	.0400	5940.0	.0	.0000	.0	.0000	1.0000
980.00	2700.0	.0400	6190.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 27

Cross-Section Location (XS(I), mi) 30.100

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

CROSS-SECTION DESCRIPTION :

Elevation HS(K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Right Top Width BSR(K,I) (ft)
950.00	100.0	.0	.0	.0
952.00	150.0	.0	.0	.0
956.00	2575.0	.0	.0	.0
960.00	2700.0	.0	.0	.0
964.00	2800.0	.0	.0	.0
968.00	3000.0	.0	.0	.0
972.00	3200.0	.0	.0	.0

WARNING: At cross-section reach 20 the distance between interpolated cross-sections (DXM) should be changed to .052 due to expansion/contraction criteria

WARNING: At cross-section reach 22 the distance between interpolated cross-sections (DXM) should be changed to .077 due to expansion/contraction criteria

WARNING: At cross-section reach 25 the distance between interpolated cross-sections (DXM) should be changed to .062 due to expansion/contraction criteria

WARNING: At cross-section reach 26 the distance between interpolated cross-sections (DXM) should be changed to .023 due to expansion/contraction criteria

DISTANCE BETWEEN INTERPOLATED CROSS-SECTIONS
(DXM) THAT WILL BE USED IN COMPUTATIONS :

Down Stream Reach Number I=1,NS1	Interp. Cross Section Distance DXM(I) (mi)
1	101.0000
2	.0300
3	.1000
4	.1000
5	.1000
6	.1000
7	.1000
8	.1730
9	.3000
10	.3000
11	.3000
12	.3000
13	.2000
14	.1000
15	.2000
16	.1700
17	.1000
18	.1000
19	.1000
20	.1000
21	.1000
22	.1000
23	.1000
24	.2000
25	.1000
26	.1000

Total number of cross-sections (original+interpolated) 156

Maximum number of cross-sections allowed 300

OUTPUT DATA SUMMARY :

CROSS-SECTION and REACH SUMMARY :

Cross Section Number	Cross Section Location (mi)	Bottom Elevation (ft MSL)	Reach Number	Reach Length (mi)	Reach Slope (ft/mi)
1	10.000	1376.000			
2	10.030	1375.000	1	.030	33.334
3	10.300	1359.000	2	.270	59.259

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

4	10.800	1323.000	3	.500	72.000

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

5	11.920	1251.000	4	1.120	64.286

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

6	12.550	1219.000	5	.630	50.794

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

7	13.160	1199.000	6	.610	32.787
8	14.180	1171.000	7	1.020	27.451
9	14.700	1159.000	8	.520	23.077
10	15.210	1151.000	9	.510	15.686
11	16.500	1127.000	10	1.290	18.605
12	17.750	1111.000	11	1.250	12.800
13	18.550	1103.000	12	.800	10.000
14	19.040	1099.000	13	.490	8.163
15	19.520	1091.000	14	.480	16.667
16	20.050	1087.000	15	.530	7.547
17	20.730	1079.000	16	.680	11.765
18	21.390	1071.000	17	.660	12.121
19	22.710	1059.000	18	1.320	9.091
20	23.690	1049.000	19	.980	10.204
21	24.160	1044.000	20	.470	10.638
22	25.540	1026.000	21	1.380	13.043
23	26.690	1004.000	22	1.150	19.130
24	27.570	992.000	23	.880	13.636
25	28.750	972.000	24	1.180	16.949
26	29.620	956.000	25	.870	18.391
27	30.100	950.000	26	.480	12.500

RE-NUMBERED DAM/BRIDGE CROSS-SECTIONS :

Dam/ Bridge	Revised Cross Section Number
1	1

Number of Intermediate Cross-Sections (NN(NS)) 156

Number of Time Steps (NNU) 20

INITIAL CONDITIONS TABLE :

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
1	10.000	1377.39	1.39	1376.95	.95	0	12	12
2	10.030	1376.12	1.12	1375.95	.95	0	12	12
3	10.060	1374.35	1.13	1374.19	.97	0	12	12
4	10.090	1372.60	1.15	1372.42	.98	0	11	11
5	10.120	1370.83	1.17	1370.65	.98	0	11	11
6	10.150	1369.07	1.18	1368.89	1.00	0	11	11
7	10.180	1367.31	1.20	1367.12	1.01	0	11	11
8	10.210	1365.56	1.22	1365.36	1.03	0	11	11
9	10.240	1363.80	1.24	1363.60	1.05	0	11	11
10	10.270	1362.03	1.25	1361.85	1.07	0	11	11
11	10.300	1360.24	1.24	1360.08	1.08	0	11	11
12	10.400	1353.02	1.22	1352.79	.99	0	10	10
13	10.500	1345.76	1.16	1345.53	.93	0	10	10
14	10.600	1338.48	1.08	1338.28	.88	0	10	10
15	10.700	1331.25	1.05	1331.02	.82	0	10	10
16	10.800	1324.02	1.02	1323.79	.79	0	10	10
17	10.902	1317.41	.96	1317.19	.73	0	10	10
18	11.004	1310.81	.90	1310.59	.68	0	10	10
19	11.105	1304.22	.85	1304.01	.64	0	10	10
20	11.207	1297.63	.82	1297.43	.61	0	10	10
21	11.309	1291.06	.79	1290.87	.59	0	10	10
22	11.411	1284.48	.75	1284.30	.57	0	10	10
23	11.513	1277.92	.73	1277.74	.56	0	10	10
24	11.615	1271.34	.71	1271.18	.54	0	10	10
25	11.716	1264.79	.70	1264.62	.52	0	10	10
26	11.818	1258.23	.68	1258.05	.50	0	10	10
27	11.920	1251.69	.69	1251.49	.49	0	11	11
28	12.025	1246.35	.68	1246.16	.49	0	10	10
29	12.130	1241.02	.69	1240.83	.49	0	10	10
30	12.235	1235.69	.69	1235.49	.49	0	10	10
31	12.340	1230.36	.70	1230.16	.50	0	10	10
32	12.445	1225.03	.69	1224.83	.50	0	10	10
33	12.550	1219.76	.76	1219.50	.50	0	10	10
34	12.652	1216.38	.72	1216.14	.48	0	10	10
35	12.753	1213.01	.68	1212.78	.45	0	10	10
36	12.855	1209.65	.65	1209.43	.43	0	10	10
37	12.957	1206.30	.63	1206.07	.40	0	10	10
38	13.058	1202.94	.60	1202.72	.39	0	10	10
39	13.160	1199.60	.60	1199.37	.37	0	10	10
40	13.262	1196.81	.61	1196.58	.38	0	10	10
41	13.364	1194.02	.62	1193.79	.39	0	10	10
42	13.466	1191.22	.62	1190.99	.39	0	10	10
43	13.568	1188.44	.64	1188.20	.40	0	10	10
44	13.670	1185.65	.65	1185.40	.40	0	10	10
45	13.772	1182.85	.65	1182.61	.41	0	10	10
46	13.874	1180.06	.66	1179.82	.42	0	10	10
47	13.976	1177.28	.68	1177.03	.43	0	10	10
48	14.078	1174.49	.69	1174.23	.43	0	10	10
49	14.180	1171.73	.73	1171.45	.45	0	10	10

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
50	14.353	1167.63	.63	1167.38	.38	0	10	10
51	14.527	1163.57	.57	1163.34	.34	0	10	10
52	14.700	1159.56	.56	1159.32	.32	0	10	10
53	15.210	1151.54	.54	1151.31	.31	0	10	10
54	15.532	1145.55	.55	1145.32	.32	0	10	10
55	15.855	1139.58	.58	1139.34	.34	0	10	10
56	16.177	1133.62	.62	1133.35	.35	0	10	10
57	16.500	1127.69	.69	1127.37	.37	0	10	10
58	16.812	1123.68	.68	1123.37	.37	0	10	10
59	17.125	1119.67	.67	1119.36	.36	0	10	10
60	17.437	1115.65	.65	1115.36	.36	0	10	10
61	17.750	1111.68	.68	1111.35	.35	0	10	10
62	18.150	1107.74	.74	1107.39	.39	0	10	10
63	18.550	1103.87	.87	1103.44	.44	0	10	10
64	18.795	1101.90	.90	1101.45	.45	0	10	10
65	19.040	1099.81	.81	1099.46	.46	0	10	10
66	19.160	1097.84	.84	1097.49	.49	0	10	10
67	19.280	1095.88	.88	1095.51	.51	0	10	10
68	19.400	1093.93	.93	1093.55	.55	0	10	10
69	19.520	1092.14	1.14	1091.59	.59	0	10	10
70	19.785	1090.15	1.15	1089.59	.59	0	10	10
71	20.050	1088.09	1.09	1087.61	.61	0	10	10
72	20.220	1086.12	1.12	1085.62	.62	0	10	10
73	20.390	1084.14	1.14	1083.64	.64	0	10	10
74	20.560	1082.17	1.17	1081.66	.66	0	10	10
75	20.730	1080.20	1.20	1079.68	.68	0	10	10
76	20.840	1078.89	1.22	1078.37	.70	0	10	10
77	20.950	1077.59	1.25	1077.05	.72	0	10	10
78	21.060	1076.28	1.28	1075.74	.74	0	10	10
79	21.170	1074.99	1.32	1074.42	.76	0	10	10
80	21.280	1073.70	1.36	1073.12	.79	0	10	10
81	21.390	1072.49	1.49	1071.82	.82	0	10	10
82	21.492	1071.58	1.51	1070.90	.82	0	10	10
83	21.593	1070.67	1.51	1069.98	.82	0	10	10
84	21.695	1069.75	1.52	1069.05	.82	0	10	10
85	21.796	1068.84	1.53	1068.13	.82	0	10	10
86	21.898	1067.92	1.53	1067.22	.84	0	10	10
87	21.999	1067.01	1.55	1066.30	.84	0	10	10
88	22.101	1066.10	1.56	1065.39	.85	0	10	10
89	22.202	1065.18	1.57	1064.46	.84	0	10	10
90	22.304	1064.27	1.58	1063.55	.85	0	10	10
91	22.405	1063.35	1.58	1062.63	.86	0	10	10
92	22.507	1062.45	1.60	1061.72	.87	0	10	10
93	22.608	1061.53	1.60	1060.80	.88	0	10	10
94	22.710	1060.58	1.58	1059.88	.88	0	10	10
95	22.819	1059.52	1.63	1058.79	.90	0	10	10
96	22.928	1058.48	1.70	1057.72	.94	0	10	10
97	23.037	1057.44	1.77	1056.64	.97	0	10	10
98	23.146	1056.41	1.85	1055.57	1.02	0	10	10
99	23.254	1055.38	1.94	1054.51	1.06	0	10	10

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
100	23.363	1054.38	2.04	1053.46	1.12	0	10	10
101	23.472	1053.39	2.16	1052.43	1.20	0	10	10
102	23.581	1052.38	2.27	1051.43	1.32	0	10	10
103	23.690	1051.40	2.40	1050.44	1.44	0	10	10
104	23.807	1050.15	2.40	1049.12	1.37	0	10	10
105	23.925	1048.86	2.36	1047.80	1.30	0	10	10
106	24.042	1047.54	2.29	1046.50	1.25	0	10	10
107	24.160	1046.15	2.15	1045.20	1.20	0	10	10
108	24.266	1044.82	2.20	1043.85	1.24	0	10	10
109	24.372	1043.50	2.27	1042.51	1.28	0	10	10
110	24.478	1042.19	2.34	1041.16	1.31	0	10	10
111	24.585	1040.89	2.43	1039.83	1.37	0	10	10
112	24.691	1039.61	2.53	1038.49	1.42	0	10	10
113	24.797	1038.33	2.64	1037.17	1.48	0	10	10
114	24.903	1037.07	2.76	1035.87	1.56	0	10	10
115	25.009	1035.84	2.92	1034.56	1.64	0	10	10
116	25.115	1034.64	3.10	1033.30	1.76	0	10	10
117	25.222	1033.45	3.30	1032.05	1.89	0	10	10
118	25.328	1032.34	3.57	1030.85	2.08	0	10	10
119	25.434	1031.28	3.90	1029.80	2.41	0	10	10
120	25.540	1030.14	4.14	1028.84	2.84	0	10	10
121	25.645	1027.92	3.92	1026.64	2.64	0	10	10
122	25.749	1025.81	3.81	1024.34	2.34	0	10	10
123	25.854	1023.72	3.72	1022.20	2.20	0	10	10
124	25.958	1021.61	3.61	1020.09	2.09	0	10	10
125	26.063	1019.50	3.50	1018.00	2.00	0	10	10
126	26.167	1017.33	3.33	1015.93	1.93	0	10	10
127	26.272	1015.13	3.13	1013.87	1.87	0	10	10
128	26.376	1013.07	3.07	1011.81	1.81	0	10	10
129	26.481	1011.00	3.00	1009.77	1.77	0	10	10
130	26.585	1008.93	2.93	1007.73	1.73	0	10	10
131	26.690	1007.10	3.10	1005.69	1.69	0	10	10
132	26.800	1005.28	2.78	1003.94	1.44	0	10	10
133	26.910	1003.53	2.53	1002.26	1.26	0	10	10
134	27.020	1001.81	2.31	1000.62	1.12	0	10	10
135	27.130	1000.14	2.14	999.01	1.01	0	10	10
136	27.240	998.48	1.98	997.41	.91	0	10	10
137	27.350	996.85	1.85	995.85	.85	0	10	10
138	27.460	995.25	1.75	994.29	.79	0	10	10
139	27.570	993.55	1.55	992.73	.73	0	10	10
140	27.806	989.64	1.64	988.80	.80	0	10	10
141	28.042	985.73	1.73	984.85	.85	0	10	10
142	28.278	981.85	1.85	980.92	.92	0	10	10
143	28.514	977.98	1.98	977.01	1.01	0	10	10
144	28.750	974.09	2.09	973.12	1.12	0	10	10
145	28.859	971.92	1.92	971.02	1.02	0	10	10
146	28.967	969.80	1.80	968.96	.96	0	10	10
147	29.076	967.72	1.72	966.92	.92	0	10	10
148	29.185	965.65	1.65	964.87	.87	0	10	10
149	29.294	963.58	1.58	962.84	.84	0	11	11

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
150	29.402	961.54	1.54	960.81	.81	0	11	11
151	29.511	959.50	1.50	958.78	.78	0	11	11
152	29.620	957.60	1.60	956.76	.76	0	11	11
153	29.740	956.22	1.72	955.32	.82	0	11	11
154	29.860	954.88	1.88	953.92	.92	0	11	11
155	29.980	953.66	2.16	952.55	1.05	0	11	11
156	30.100	953.02	3.02	951.37	1.37	0	11	11

SUMMARY OF INITIAL DOWNSTREAM BOUNDARY CONDITIONS :

Cross-section Number at Downstream End of Model (IN)	156
Initial Water Surface Elev. at Downstream End (YNN, ft MSL)	953.024
Initial Flow Depth at Downstream End (DEP, ft)	3.024

COMPUTED STEP BACKWATER TABLE :

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
155	29.980	1000.0	954.092	2.592	5
154	29.860	1000.0	955.019	2.019	5
153	29.740	1000.0	956.257	1.757	4
152	29.620	1000.0	957.638	1.638	4
151	29.511	1000.0	959.392	1.392	4

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
150	29.402	1000.0	961.584	1.584	3
149	29.294	1000.0	963.550	1.550	4
148	29.185	1000.0	965.646	1.646	4
147	29.076	1000.0	967.689	1.689	4
146	28.967	1000.0	969.781	1.781	4
145	28.859	1000.0	971.882	1.882	4
144	28.750	1000.0	974.037	2.037	4
143	28.514	1000.0	978.068	2.068	3
142	28.278	1000.0	981.838	1.838	4
141	28.042	1000.0	985.780	1.780	4
140	27.806	1000.0	989.641	1.641	4
139	27.570	1000.0	993.571	1.571	4
138	27.460	1000.0	995.235	1.735	4
137	27.350	1000.0	996.814	1.815	4
136	27.240	1000.0	998.442	1.942	4
135	27.130	1000.0	1000.080	2.080	4
134	27.020	1000.0	1001.747	2.247	4
133	26.910	1000.0	1003.445	2.446	4
132	26.800	1000.0	1005.185	2.685	4
131	26.690	1000.0	1006.973	2.973	4
130	26.585	1000.0	1008.883	2.883	4
129	26.481	1000.0	1010.984	2.984	4
128	26.376	1000.0	1013.039	3.039	4
127	26.272	1000.0	1015.118	3.118	4
126	26.167	1000.0	1017.244	3.244	5
125	26.063	1000.0	1019.436	3.436	5
124	25.958	1000.0	1021.588	3.588	4
123	25.854	1000.0	1023.692	3.692	4
122	25.749	1000.0	1025.789	3.789	4
121	25.645	1000.0	1027.891	3.891	4
120	25.540	1000.0	1030.027	4.027	6
119	25.434	1000.0	1031.534	4.149	5
118	25.328	1000.0	1032.548	3.779	5
117	25.222	1000.0	1033.598	3.444	4
116	25.115	1000.0	1034.736	3.198	4
115	25.009	1000.0	1035.921	2.998	4
114	24.903	1000.0	1037.140	2.832	4
113	24.797	1000.0	1038.385	2.693	4
112	24.691	1000.0	1039.650	2.573	4
111	24.585	1000.0	1040.932	2.470	4
110	24.478	1000.0	1042.226	2.380	4
109	24.372	1000.0	1043.532	2.301	4
108	24.266	1000.0	1044.846	2.230	4
107	24.160	1000.0	1046.167	2.167	4
106	24.042	1000.0	1047.541	2.291	4
105	23.925	1000.0	1048.838	2.338	4
104	23.807	1000.0	1050.134	2.384	4
103	23.690	1000.0	1051.396	2.396	4
102	23.581	1000.0	1052.451	2.340	4
101	23.472	1000.0	1053.426	2.203	5

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
100	23.363	1000.0	1054.422	2.089	5
99	23.254	1000.0	1055.427	1.983	5
98	23.146	1000.0	1056.443	1.887	5
97	23.037	1000.0	1057.471	1.804	4
96	22.928	1000.0	1058.506	1.728	4
95	22.819	1000.0	1059.550	1.661	4
94	22.710	1000.0	1060.601	1.601	4
93	22.608	1000.0	1061.543	1.620	4
92	22.507	1000.0	1062.450	1.603	4
91	22.405	1000.0	1063.362	1.593	4
90	22.304	1000.0	1064.275	1.582	4
89	22.202	1000.0	1065.187	1.572	4
88	22.101	1000.0	1066.100	1.562	4
87	21.999	1000.0	1067.013	1.552	4
86	21.898	1000.0	1067.927	1.542	4
85	21.796	1000.0	1068.840	1.533	4
84	21.695	1000.0	1069.754	1.523	4
83	21.593	1000.0	1070.668	1.514	4
82	21.492	1000.0	1071.582	1.505	4
81	21.390	1000.0	1072.497	1.497	4
80	21.280	1000.0	1073.680	1.346	4
79	21.170	1000.0	1075.008	1.342	4
78	21.060	1000.0	1076.286	1.286	3
77	20.950	1000.0	1077.595	1.261	4
76	20.840	1000.0	1078.894	1.227	4
75	20.730	1000.0	1080.202	1.202	4
74	20.560	1000.0	1082.175	1.175	4
73	20.390	1000.0	1084.139	1.139	4
72	20.220	1000.0	1086.114	1.114	4
71	20.050	1000.0	1088.088	1.088	4
70	19.785	1000.0	1090.215	1.215	4
69	19.520	1000.0	1092.108	1.108	4
68	19.400	1000.0	1093.868	.868	3
67	19.280	1000.0	1095.938	.938	4
66	19.160	1000.0	1097.814	.814	4
65	19.040	1000.0	1099.832	.832	4
64	18.795	1000.0	1101.955	.955	5
63	18.550	1000.0	1103.831	.831	4
62	18.150	1000.0	1107.756	.756	3
61	17.750	1000.0	1111.674	.674	4
60	17.437	1000.0	1115.633	.633	3
59	17.125	1000.0	1119.692	.692	4
58	16.812	1000.0	1123.660	.660	4
57	16.500	1000.0	1127.712	.712	4
56	16.177	1000.0	1133.551	.551	2
55	15.855	1000.0	1139.632	.632	4
54	15.532	1000.0	1145.513	.513	4
53	15.210	1000.0	1151.576	.576	4
52	14.700	1000.0	1159.544	.544	5
51	14.527	1000.0	1163.548	.548	3

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
50	14.353	1000.0	1167.651	.651	4
49	14.180	1000.0	1171.702	.702	4
48	14.078	1000.0	1174.496	.696	4
47	13.976	1000.0	1177.278	.678	4
46	13.874	1000.0	1180.071	.671	4
45	13.772	1000.0	1182.856	.656	4
44	13.670	1000.0	1185.649	.649	4
43	13.568	1000.0	1188.436	.636	4
42	13.466	1000.0	1191.229	.630	4
41	13.364	1000.0	1194.019	.619	4
40	13.262	1000.0	1196.812	.612	4
39	13.160	1000.0	1199.603	.603	4
38	13.058	1000.0	1202.917	.583	4
37	12.957	1000.0	1206.309	.642	4
36	12.855	1000.0	1209.634	.633	4
35	12.753	1000.0	1213.028	.695	4
34	12.652	1000.0	1216.368	.701	4
33	12.550	1000.0	1219.772	.772	4
32	12.445	1000.0	1224.959	.625	2
31	12.340	1000.0	1230.422	.756	3
30	12.235	1000.0	1235.634	.634	4
29	12.130	1000.0	1241.076	.742	4
28	12.025	1000.0	1246.306	.640	4
27	11.920	1000.0	1251.730	.730	4
26	11.818	1000.0	1258.138	.592	3
25	11.716	1000.0	1264.852	.761	4
24	11.615	1000.0	1271.268	.632	3
23	11.513	1000.0	1277.984	.802	4
22	11.411	1000.0	1284.409	.682	4
21	11.309	1000.0	1291.125	.853	4
20	11.207	1000.0	1297.563	.745	4
19	11.105	1000.0	1304.285	.921	4
18	11.004	1000.0	1310.737	.828	4
17	10.902	1000.0	1317.473	1.019	5
16	10.800	1000.0	1323.950	.950	4
15	10.700	1000.0	1331.288	1.088	4
14	10.600	1000.0	1338.442	1.042	5
13	10.500	1000.0	1345.801	1.201	4
12	10.400	1000.0	1352.972	1.172	4
11	10.300	1000.0	1360.396	1.396	4
10	10.270	1000.0	1361.955	1.177	4
9	10.240	1000.0	1363.857	1.302	4
8	10.210	1000.0	1365.513	1.180	4
7	10.180	1000.0	1367.348	1.237	4
6	10.150	1000.0	1369.054	1.165	4
5	10.120	1000.0	1370.854	1.188	4
4	10.090	1000.0	1372.587	1.142	4
3	10.060	1000.0	1374.370	1.147	4
2	10.030	1000.0	1376.116	1.116	4
1	10.000	1000.0	1406.700	30.700	0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
1	1406.70	1000.0
2	1376.12	1000.0
3	1374.37	1000.0
4	1372.59	1000.0
5	1370.85	1000.0
6	1369.05	1000.0
7	1367.35	1000.0
8	1365.51	1000.0
9	1363.86	1000.0
10	1361.96	1000.0
11	1360.40	1000.0
12	1352.97	1000.0
13	1345.80	1000.0
14	1338.44	1000.0
15	1331.29	1000.0
16	1323.95	1000.0
17	1317.47	1000.0
18	1310.74	1000.0
19	1304.28	1000.0
20	1297.56	1000.0
21	1291.13	1000.0
22	1284.41	1000.0
23	1277.98	1000.0
24	1271.27	1000.0
25	1264.85	1000.0
26	1258.14	1000.0
27	1251.73	1000.0
28	1246.31	1000.0
29	1241.08	1000.0
30	1235.63	1000.0
31	1230.42	1000.0
32	1224.96	1000.0
33	1219.77	1000.0
34	1216.37	1000.0
35	1213.03	1000.0
36	1209.63	1000.0
37	1206.31	1000.0
38	1202.92	1000.0
39	1199.60	1000.0
40	1196.81	1000.0
41	1194.02	1000.0
42	1191.23	1000.0
43	1188.44	1000.0
44	1185.65	1000.0
45	1182.86	1000.0
46	1180.07	1000.0
47	1177.28	1000.0
48	1174.50	1000.0
49	1171.70	1000.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
50	1167.65	1000.0
51	1163.55	1000.0
52	1159.54	1000.0
53	1151.58	1000.0
54	1145.51	1000.0
55	1139.63	1000.0
56	1133.55	1000.0
57	1127.71	1000.0
58	1123.66	1000.0
59	1119.69	1000.0
60	1115.63	1000.0
61	1111.67	1000.0
62	1107.76	1000.0
63	1103.83	1000.0
64	1101.96	1000.0
65	1099.83	1000.0
66	1097.81	1000.0
67	1095.94	1000.0
68	1093.87	1000.0
69	1092.11	1000.0
70	1090.22	1000.0
71	1088.09	1000.0
72	1086.11	1000.0
73	1084.14	1000.0
74	1082.18	1000.0
75	1080.20	1000.0
76	1078.89	1000.0
77	1077.59	1000.0
78	1076.29	1000.0
79	1075.01	1000.0
80	1073.68	1000.0
81	1072.50	1000.0
82	1071.58	1000.0
83	1070.67	1000.0
84	1069.75	1000.0
85	1068.84	1000.0
86	1067.93	1000.0
87	1067.01	1000.0
88	1066.10	1000.0
89	1065.19	1000.0
90	1064.27	1000.0
91	1063.36	1000.0
92	1062.45	1000.0
93	1061.54	1000.0
94	1060.60	1000.0
95	1059.55	1000.0
96	1058.51	1000.0
97	1057.47	1000.0
98	1056.44	1000.0
99	1055.43	1000.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
100	1054.42	1000.0
101	1053.43	1000.0
102	1052.45	1000.0
103	1051.40	1000.0
104	1050.13	1000.0
105	1048.84	1000.0
106	1047.54	1000.0
107	1046.17	1000.0
108	1044.85	1000.0
109	1043.53	1000.0
110	1042.23	1000.0
111	1040.93	1000.0
112	1039.65	1000.0
113	1038.39	1000.0
114	1037.14	1000.0
115	1035.92	1000.0
116	1034.74	1000.0
117	1033.60	1000.0
118	1032.55	1000.0
119	1031.53	1000.0
120	1030.03	1000.0
121	1027.89	1000.0
122	1025.79	1000.0
123	1023.69	1000.0
124	1021.59	1000.0
125	1019.44	1000.0
126	1017.24	1000.0
127	1015.12	1000.0
128	1013.04	1000.0
129	1010.98	1000.0
130	1008.88	1000.0
131	1006.97	1000.0
132	1005.18	1000.0
133	1003.45	1000.0
134	1001.75	1000.0
135	1000.08	1000.0
136	998.44	1000.0
137	996.81	1000.0
138	995.23	1000.0
139	993.57	1000.0
140	989.64	1000.0
141	985.78	1000.0
142	981.84	1000.0
143	978.07	1000.0
144	974.04	1000.0
145	971.88	1000.0
146	969.78	1000.0
147	967.69	1000.0
148	965.65	1000.0
149	963.55	1000.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
150	961.58	1000.0
151	959.39	1000.0
152	957.64	1000.0
153	956.26	1000.0
154	955.02	1000.0
155	954.09	1000.0
156	953.02	1000.0

DAM OUTFLOW HYDROGRAPH TIME PARAMETERS :

Time to Failure (TFH, hr)	3.100
Time to Start of Rising Limb of Hydrograph (TFO, hr)	.000
Time to Peak (TP, hr)	8.000
Time Step Size (DTHI, hr)	.200

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Time (TT)	10.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	141641.80
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1415.02
Flow at Downstream End of Model (QU(N), cfs)	1015.28
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.19

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1415.02	2.15	65964.	2134.	2134.	141.642	.0400	.00	8.07	2219.1	.1	39.0
10.240	1372.95	13.30	10505.	1728.	1728.	139.739	.0400	-.30	9.09	.0	1.0	10.4
10.902	1323.39	10.56	12899.	3178.	3178.	136.237	.0410	-.30	5.92	.0	.9	6.9
11.716	1269.61	8.10	16413.	4258.	4258.	132.977	.0487	-.30	4.76	.0	.7	5.5
12.550	1224.48	6.07	20006.	5668.	5668.	121.413	.0484	.00	4.71	.0	.6	5.5
13.364	1197.25	4.57	21373.	7843.	7843.	97.625	.0458	.00	3.23	.0	.5	3.8
14.180	1174.59	4.02	16800.	7767.	7767.	67.588	.0480	.00	2.89	.0	.5	3.6
16.500	1128.67	1.48	6984.	6620.	6620.	10.359	.0500	.00	.95	.0	.3	1.7
19.040	1099.87	.89	1271.	2922.	2922.	1.133	.0500	.00	.04	.0	.2	.9
20.390	1084.14	1.02	983.	1569.	1569.	1.007	.0500	.00	.00	.0	.2	1.1
21.390	1072.50	1.19	845.	883.	883.	1.007	.0500	.00	.00	.0	.2	1.5
22.202	1065.19	1.21	831.	847.	847.	1.007	.0500	.00	.00	.0	.2	1.6
23.037	1057.47	1.29	778.	745.	745.	1.007	.0500	.00	.00	.0	.2	1.8
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.00	.0	.2	2.3
24.797	1038.39	1.74	578.	420.	420.	1.007	.0500	.00	.01	.0	.3	2.7
25.645	1027.90	2.43	414.	272.	272.	1.007	.0500	.00	.01	.0	.3	3.9
26.481	1010.99	2.69	374.	205.	205.	1.007	.0500	.00	.01	.0	.4	3.0
27.350	996.82	2.10	479.	312.	312.	1.007	.0500	.00	.01	.0	.3	1.8
28.859	971.89	2.14	471.	367.	367.	1.007	.0500	.00	.01	.0	.3	1.9
29.740	956.26	1.53	657.	563.	563.	1.007	.0500	.00	.01	.0	.2	1.8

Maximum Froude Number (FRDM)	1.11
Cross-Section of Maximum Froude Number (IFR)	11
Minimum Froude Number (FRM)	.07
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	10.400	141642.	1415.02	1385.14	1385.58	1.00	243.87	141642.	133385.	0.	8256.

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Time (TT)	10.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	166970.30
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1412.39
Flow at Downstream End of Model (QU(N), cfs)	1015.28
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.19

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1412.39	2.76	60406.	2096.	2096.	166.970	.0400	.00	5.45	2661.8	.1	36.4
10.240	1373.79	13.80	12025.	1874.	1874.	165.896	.0400	-.30	9.93	.0	1.0	11.2
10.902	1323.94	11.09	14705.	3401.	3401.	163.061	.0400	-.30	6.47	.0	.9	7.5
11.716	1270.02	8.70	18224.	4526.	4526.	158.472	.0466	-.30	5.17	.0	.8	5.9
12.550	1224.98	6.60	22956.	6154.	6154.	151.607	.0459	.00	5.20	.0	.6	6.0
13.364	1197.91	5.43	26789.	8435.	8435.	145.347	.0424	.00	3.89	.0	.5	4.5
14.180	1175.61	5.22	25506.	9344.	9344.	133.027	.0426	.00	3.91	.0	.6	4.6
16.500	1128.95	1.71	8886.	6993.	6993.	15.187	.0500	.00	1.23	.0	.3	1.9
19.040	1099.84	.85	1183.	2819.	2819.	1.002	.0500	.00	.01	.0	.2	.8
20.390	1084.14	1.02	983.	1569.	1569.	1.007	.0500	.00	.00	.0	.2	1.1
21.390	1072.50	1.19	845.	883.	883.	1.007	.0500	.00	.00	.0	.2	1.5
22.202	1065.19	1.21	831.	847.	847.	1.007	.0500	.00	.00	.0	.2	1.6
23.037	1057.47	1.29	778.	745.	745.	1.007	.0500	.00	.00	.0	.2	1.8
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.797	1038.39	1.74	578.	420.	420.	1.007	.0500	.00	.01	.0	.3	2.7
25.645	1027.90	2.43	414.	272.	272.	1.007	.0500	.00	.01	.0	.3	3.9
26.481	1010.99	2.69	374.	205.	205.	1.007	.0500	.00	.01	.0	.4	3.0
27.350	996.82	2.10	479.	312.	312.	1.007	.0500	.00	.01	.0	.3	1.8
28.859	971.89	2.14	471.	367.	367.	1.007	.0500	.00	.01	.0	.3	1.9
29.740	956.26	1.53	657.	563.	563.	1.007	.0500	.00	.01	.0	.2	1.8

Maximum Froude Number (FRDM)	1.13
Cross-Section of Maximum Froude Number (IFR)	11
Minimum Froude Number (FRM)	.09
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	10.800	166970.	1412.39	1382.33	1386.34	1.00	298.06	166970.	162846.	0.	4124.

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Time (TT)	11.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	182785.30
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1408.68
Flow at Downstream End of Model (QU(N), cfs)	1015.28
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.19

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1408.68	3.47	52715.	2044.	2044.	182.785	.0400	.00	1.73	2968.5	.1	32.7
10.240	1374.27	14.09	12941.	1956.	1956.	182.334	.0400	-.30	10.41	.0	1.0	11.7
10.902	1324.25	11.47	15762.	3524.	3524.	180.845	.0400	-.30	6.78	.0	1.0	7.8
11.716	1270.31	9.13	19535.	4711.	4711.	178.285	.0453	-.30	5.45	.0	.8	6.2
12.550	1225.30	7.01	24977.	6466.	6466.	175.114	.0443	.00	5.52	.0	.6	6.3
13.364	1198.18	5.82	29122.	8678.	8678.	169.374	.0410	.00	4.17	.0	.6	4.8
14.180	1175.93	5.66	28617.	9847.	9847.	161.986	.0409	.00	4.23	.0	.6	4.9
16.500	1131.08	3.43	26818.	9843.	9843.	91.853	.0464	.00	3.36	.0	.4	4.1
19.040	1100.33	1.41	2840.	3603.	3603.	4.006	.0500	.00	.50	.0	.3	1.3
20.390	1084.14	1.03	988.	1570.	1570.	1.015	.0500	.00	.01	.0	.2	1.1
21.390	1072.50	1.19	845.	883.	883.	1.007	.0500	.00	.00	.0	.2	1.5
22.202	1065.19	1.21	831.	847.	847.	1.007	.0500	.00	.00	.0	.2	1.6
23.037	1057.47	1.29	778.	745.	745.	1.007	.0500	.00	.00	.0	.2	1.8
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.797	1038.39	1.74	578.	420.	420.	1.007	.0500	.00	.01	.0	.3	2.7
25.645	1027.90	2.43	414.	272.	272.	1.007	.0500	.00	.01	.0	.3	3.9
26.481	1010.99	2.69	374.	205.	205.	1.007	.0500	.00	.01	.0	.4	3.0
27.350	996.82	2.10	479.	312.	312.	1.007	.0500	.00	.01	.0	.3	1.8
28.859	971.89	2.14	471.	367.	367.	1.007	.0500	.00	.01	.0	.3	1.9
29.740	956.26	1.53	657.	563.	563.	1.007	.0500	.00	.01	.0	.2	1.8

Maximum Froude Number (FRDM)	1.15
Cross-Section of Maximum Froude Number (IFR)	11
Minimum Froude Number (FRM)	.12
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	11.200	182785.	1408.68	1379.52	1386.78	1.00	352.26	182785.	182562.	0.	224.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	11.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	180292.10
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1403.06
Flow at Downstream End of Model (QU(N), cfs)	1015.28
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.19

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1403.06	4.35	41455.	1964.	1964.	180.292	.0400	.00	-3.89	3024.0	.2	27.1
10.240	1374.24	14.05	12879.	1951.	1951.	180.970	.0400	-.30	10.38	.0	1.0	11.7
10.902	1324.30	11.47	15932.	3544.	3544.	182.806	.0400	-.30	6.82	.0	1.0	7.8
11.716	1270.39	9.25	19905.	4762.	4762.	184.026	.0449	-.30	5.53	.0	.8	6.3
12.550	1225.42	7.16	25737.	6580.	6580.	184.393	.0437	.00	5.64	.0	.6	6.4
13.364	1198.33	6.02	30395.	8807.	8807.	183.118	.0403	.00	4.31	.0	.6	4.9
14.180	1176.12	5.90	30530.	10176.	10176.	180.138	.0400	.00	4.42	.0	.6	5.1
16.500	1132.17	4.18	38384.	11198.	11198.	160.312	.0400	.00	4.46	.0	.4	5.2
19.040	1100.85	1.88	4817.	3983.	3983.	9.076	.0500	.00	1.02	.0	.3	1.9
20.390	1084.17	1.06	1034.	1579.	1579.	1.096	.0500	.00	.04	.0	.2	1.2
21.390	1072.50	1.19	845.	883.	883.	1.008	.0500	.00	.00	.0	.2	1.5
22.202	1065.19	1.21	831.	847.	847.	1.007	.0500	.00	.00	.0	.2	1.6
23.037	1057.47	1.29	778.	745.	745.	1.007	.0500	.00	.00	.0	.2	1.8
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.797	1038.39	1.74	578.	420.	420.	1.007	.0500	.00	.01	.0	.3	2.7
25.645	1027.90	2.43	414.	272.	272.	1.007	.0500	.00	.01	.0	.3	3.9
26.481	1010.99	2.69	374.	205.	205.	1.007	.0500	.00	.01	.0	.4	3.0
27.350	996.82	2.10	479.	312.	312.	1.007	.0500	.00	.01	.0	.3	1.8
28.859	971.89	2.14	471.	367.	367.	1.007	.0500	.00	.01	.0	.3	1.9
29.740	956.26	1.53	657.	563.	563.	1.007	.0500	.00	.01	.0	.2	1.8

Maximum Froude Number (FRDM)	1.15
Cross-Section of Maximum Froude Number (IFR)	11
Minimum Froude Number (FRM)	.17
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	11.600	180292.	1403.06	1376.70	1386.72	1.00	406.45	180292.	180292.	0.	0.

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Time (TT)	12.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	66744.80
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1389.35
Flow at Downstream End of Model (QU(N), cfs)	1015.28
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.19

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1389.35	4.21	15873.	1769.	1769.	66.745	.0400	.00	-17.60	1754.8	.2	13.4
10.240	1370.44	11.32	6673.	1368.	1368.	75.526	.0400	-.30	6.58	.0	.9	7.9
10.902	1322.72	9.20	10860.	2906.	2906.	99.868	.0442	-.30	5.25	.0	.8	6.3
11.716	1269.49	7.89	15907.	4180.	4180.	125.549	.0491	-.30	4.64	.0	.7	5.4
12.550	1224.94	6.52	22737.	6119.	6119.	148.255	.0460	.00	5.17	.0	.6	5.9
13.364	1198.15	5.74	28794.	8644.	8644.	165.221	.0411	.00	4.13	.0	.6	4.7
14.180	1176.09	5.85	30137.	10106.	10106.	176.333	.0400	.00	4.38	.0	.6	5.1
16.500	1132.41	4.33	41078.	11362.	11362.	177.973	.0400	.00	4.70	.0	.4	5.4
19.040	1104.39	4.76	23476.	6535.	6535.	111.653	.0400	.00	4.56	.0	.4	5.4
20.390	1085.64	2.34	3676.	2036.	2036.	8.596	.0500	.00	1.50	.0	.3	2.6
21.390	1072.53	1.23	874.	886.	886.	1.073	.0500	.00	.04	.0	.2	1.5
22.202	1065.19	1.21	832.	847.	847.	1.008	.0500	.00	.01	.0	.2	1.6
23.037	1057.47	1.29	778.	745.	745.	1.007	.0500	.00	.00	.0	.2	1.8
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.797	1038.39	1.74	578.	420.	420.	1.007	.0500	.00	.01	.0	.3	2.7
25.645	1027.90	2.43	414.	272.	272.	1.007	.0500	.00	.01	.0	.3	3.9
26.481	1010.99	2.69	374.	205.	205.	1.007	.0500	.00	.01	.0	.4	3.0
27.350	996.82	2.10	479.	312.	312.	1.007	.0500	.00	.01	.0	.3	1.8
28.859	971.89	2.14	471.	367.	367.	1.007	.0500	.00	.01	.0	.3	1.9
29.740	956.26	1.53	657.	563.	563.	1.007	.0500	.00	.01	.0	.2	1.8

Maximum Froude Number (FRDM)	1.10
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.20
Cross-Section of Minimum Froude Number (IFM)	155

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	12.000	66745.	1389.35	1376.00	1382.70	1.00	420.00	66745.	66745.	0.	0.

NONCONVERGENCE OCCURRED AT CROSS-SECTION NO. 1 2 3 4 5 6 7 8 9
TT= 12.0000 DTH= .2000 ITERR= 9

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NONCONVERGENCE OCCURRED AT CROSS-SECTION NO.     1    2    3    4    5    6    7    8    9
                TT=   12.0000     DTH=     .1000     ITERR= 9

NONCONVERGENCE OCCURRED AT CROSS-SECTION NO.     1    2    3    4    5    6    7    8    9
                TT=   12.0250     DTH=     .1750     ITERR= 9
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Time (TT)	12.1125
Time Step (DTH)	.0875
Number of Iterations Required after Time Step Reduction (ITERR)	8
Flow at Upstream End of Model (QU(1), cfs)	3497.96
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1377.28
Flow at Downstream End of Model (QU(N), cfs)	1020.05
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.19

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1377.28	8.24	425.	549.	549.	3.498	.0400	.00	-29.67	137.1	1.7	1.3
10.240	1365.90	5.98	1650.	795.	795.	9.874	.0400	-.30	2.05	.0	.7	3.3
10.902	1321.25	6.88	7011.	2323.	2323.	48.235	.0500	-.30	3.77	.0	.7	4.8
11.716	1268.75	7.00	12970.	3804.	3804.	90.829	.0500	-.30	3.90	.0	.7	4.7
12.550	1224.54	6.02	20346.	5726.	5726.	122.521	.0479	.00	4.76	.0	.6	5.5
13.364	1197.96	5.47	27241.	8483.	8483.	148.968	.0420	.00	3.95	.0	.5	4.6
14.180	1175.99	5.72	29151.	9931.	9931.	166.610	.0405	.00	4.28	.0	.6	5.0
16.500	1132.44	4.34	41443.	11384.	11384.	179.963	.0400	.00	4.73	.0	.4	5.4
19.040	1105.13	4.88	28480.	7015.	7015.	139.075	.0400	.00	5.30	.0	.4	6.1
20.390	1087.35	3.42	7613.	2570.	2570.	26.022	.0500	.00	3.21	.0	.3	4.3
21.390	1072.59	1.28	922.	892.	892.	1.183	.0500	.00	.09	.0	.2	1.6
22.202	1065.19	1.21	833.	847.	847.	1.010	.0500	.00	.01	.0	.2	1.6
23.037	1057.47	1.29	778.	745.	745.	1.007	.0500	.00	.00	.0	.2	1.8
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.797	1038.39	1.74	578.	420.	420.	1.007	.0500	.00	.01	.0	.3	2.7
25.645	1027.90	2.43	414.	272.	272.	1.007	.0500	.00	.01	.0	.3	3.9
26.481	1010.99	2.69	374.	205.	205.	1.007	.0500	.00	.01	.0	.4	3.0
27.350	996.82	2.10	479.	312.	312.	1.007	.0500	.00	.01	.0	.3	1.8
28.859	971.89	2.14	471.	367.	367.	1.007	.0500	.00	.01	.0	.3	1.9
29.740	956.26	1.53	658.	563.	563.	1.005	.0500	.00	.01	.0	.2	1.8

Maximum Froude Number (FRDM)	1.65
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.20
Cross-Section of Minimum Froude Number (IFM)	155

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	8	12.112	3498.	1377.28	1376.00	1377.03	.93	420.00	3498.	3498.	0.	0.

NONCONVERGENCE OCCURRED AT CROSS-SECTION NO. 1 2 3 4 5 6 7 8 9
TT= 12.1125 DTH= .0875 ITERR= 9

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Time (TT)	12.2000
Time Step (DTH)	.0437
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	11588.67
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1380.34
Flow at Downstream End of Model (QU(N), cfs)	1023.36
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.20

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1380.34	4.28	2710.	947.	947.	11.589	.0400	.00	-26.61	43.1	.4	4.3
10.240	1365.88	6.47	1634.	792.	792.	10.572	.0400	-.30	2.03	.0	.8	3.3
10.902	1319.64	5.20	3690.	1798.	1798.	19.199	.0500	-.30	2.16	.0	.6	3.2
11.716	1267.96	6.10	10063.	3539.	3539.	61.353	.0500	-.30	3.11	.0	.6	3.9
12.550	1224.15	5.58	18208.	5349.	5349.	101.614	.0498	.00	4.38	.0	.5	5.2
13.364	1197.77	5.18	25583.	8307.	8307.	132.635	.0430	.00	3.75	.0	.5	4.4
14.180	1175.86	5.53	27870.	9728.	9728.	154.050	.0411	.00	4.15	.0	.6	4.9
16.500	1132.45	4.34	41573.	11392.	11392.	180.585	.0400	.00	4.74	.0	.4	5.5
19.040	1105.45	4.89	30719.	7220.	7220.	150.067	.0400	.00	5.61	.0	.4	6.4
20.390	1089.45	4.75	13574.	3044.	3044.	64.516	.0460	.00	5.31	.0	.4	6.4
21.390	1072.71	1.42	1030.	904.	904.	1.461	.0500	.00	.21	.0	.2	1.7
22.202	1065.20	1.21	834.	848.	848.	1.013	.0500	.00	.01	.0	.2	1.6
23.037	1057.47	1.29	778.	745.	745.	1.007	.0500	.00	.00	.0	.2	1.8
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.797	1038.39	1.74	578.	420.	420.	1.007	.0500	.00	.01	.0	.3	2.7
25.645	1027.90	2.43	414.	272.	272.	1.007	.0500	.00	.01	.0	.3	3.9
26.481	1010.99	2.69	374.	205.	205.	1.007	.0500	.00	.01	.0	.4	3.0
27.350	996.82	2.10	479.	312.	312.	1.007	.0500	.00	.01	.0	.3	1.8
28.859	971.89	2.14	471.	367.	367.	1.006	.0500	.00	.01	.0	.3	1.9
29.740	956.26	1.53	657.	563.	563.	1.006	.0500	.00	.00	.0	.2	1.8

Maximum Froude Number (FRDM)	.83
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.20
Cross-Section of Minimum Froude Number (IFM)	155

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	12.200	11589.	1380.34	1376.00	1378.34	.89	420.00	11589.	11589.	0.	0.

NONCONVERGENCE OCCURRED AT CROSS-SECTION NO. 9 10 11 12 13 14 15 16 17
TT= 12.4000 DTH= .2000 ITERR= 9

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	12.5000
Time Step (DTH)	.1000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	11014.70
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1380.18
Flow at Downstream End of Model (QU(N), cfs)	1020.17
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.19

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1380.18	4.30	2562.	925.	925.	11.015	.0400	.00	-26.76	91.9	.5	4.2
10.240	1365.91	6.33	1657.	797.	797.	10.487	.0400	-.30	2.05	.0	.8	3.4
10.902	1318.94	4.35	2521.	1572.	1572.	10.961	.0500	-.30	1.47	.0	.6	2.5
11.716	1265.82	3.02	3261.	2822.	2822.	9.858	.0500	-.30	.97	.0	.5	1.7
12.550	1222.05	3.85	8414.	4032.	4032.	32.435	.0500	.00	2.28	.0	.5	3.1
13.364	1196.79	3.92	17923.	7441.	7441.	70.279	.0477	.00	2.78	.0	.4	3.4
14.180	1175.19	4.67	21734.	8696.	8696.	101.398	.0443	.00	3.49	.0	.5	4.2
16.500	1132.29	4.21	39750.	11281.	11281.	167.160	.0400	.00	4.58	.0	.4	5.3
19.040	1105.99	4.89	34767.	7575.	7575.	169.952	.0400	.00	6.16	.0	.4	7.0
20.390	1092.73	5.61	24833.	3949.	3949.	139.371	.0400	.00	8.59	.0	.4	9.7
21.390	1080.95	7.28	12548.	2034.	2034.	91.323	.0400	.00	8.45	.0	.5	10.0
22.202	1068.31	2.94	5756.	3063.	3063.	16.932	.0431	.00	3.13	.0	.4	4.7
23.037	1057.56	1.37	843.	769.	769.	1.156	.0500	.00	.09	.0	.2	1.9
23.925	1048.84	1.48	681.	604.	604.	1.008	.0500	.00	.01	.0	.2	2.3
24.797	1038.39	1.74	578.	420.	420.	1.007	.0500	.00	.01	.0	.3	2.7
25.645	1027.90	2.43	414.	272.	272.	1.007	.0500	.00	.01	.0	.3	3.9
26.481	1010.99	2.69	374.	205.	205.	1.007	.0500	.00	.01	.0	.4	3.0
27.350	996.82	2.10	479.	312.	312.	1.007	.0500	.00	.01	.0	.3	1.8
28.859	971.89	2.14	471.	367.	367.	1.007	.0500	.00	.01	.0	.3	1.9
29.740	956.26	1.53	657.	563.	563.	1.007	.0500	.00	.00	.0	.3	1.8

Maximum Froude Number (FRDM)	.80
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.20
Cross-Section of Minimum Froude Number (IFM)	155

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	12.500	11015.	1380.18	1376.00	1378.22	.89	420.00	11015.	11015.	0.	0.

NONCONVERGENCE OCCURRED AT CROSS-SECTION NO. 89 90 91 92 93 94 95 96 97
TT= 12.6000 DTH= .2000 ITERR= 9

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	12.7000
Time Step (DTH)	.1000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	10627.16
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1380.08
Flow at Downstream End of Model (QU(N), cfs)	1019.53
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.19

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1380.08	4.31	2465.	910.	910.	10.627	.0400	.00	-26.87	88.7	.5	4.1
10.240	1365.93	6.30	1670.	799.	799.	10.526	.0400	-.30	2.07	.0	.8	3.4
10.902	1318.90	4.31	2460.	1559.	1559.	10.613	.0500	-.30	1.43	.0	.6	2.4
11.716	1265.76	2.99	3085.	2801.	2801.	9.231	.0500	-.30	.90	.0	.5	1.7
12.550	1221.03	2.82	4602.	3418.	3418.	12.987	.0500	.00	1.26	.0	.4	2.0
13.364	1196.00	3.10	12302.	6735.	6735.	38.090	.0500	.00	1.98	.0	.4	2.6
14.180	1174.60	4.01	16871.	7781.	7781.	67.630	.0470	.00	2.90	.0	.5	3.6
16.500	1132.00	3.99	36481.	11080.	11080.	145.649	.0400	.00	4.29	.0	.4	5.0
19.040	1106.14	4.87	35856.	7668.	7668.	174.690	.0400	.00	6.30	.0	.4	7.1
20.390	1093.72	5.40	28920.	4302.	4302.	156.265	.0400	.00	9.58	.0	.4	10.7
21.390	1082.91	7.46	16962.	2474.	2474.	126.452	.0400	.00	10.41	.0	.5	11.9
22.202	1071.97	5.26	19189.	4048.	4048.	100.933	.0400	.00	6.78	.0	.4	8.4
23.037	1058.82	2.23	2043.	1267.	1267.	4.551	.0500	.00	1.35	.0	.3	3.2
23.925	1048.85	1.48	683.	606.	606.	1.013	.0500	.00	.01	.0	.2	2.3
24.797	1038.39	1.74	578.	420.	420.	1.007	.0500	.00	.01	.0	.3	2.7
25.645	1027.90	2.43	414.	272.	272.	1.007	.0500	.00	.01	.0	.3	3.9
26.481	1010.99	2.69	374.	205.	205.	1.007	.0500	.00	.01	.0	.4	3.0
27.350	996.82	2.10	479.	312.	312.	1.007	.0500	.00	.01	.0	.3	1.8
28.859	971.89	2.14	471.	367.	367.	1.007	.0500	.00	.01	.0	.3	1.9
29.740	956.26	1.53	657.	563.	563.	1.007	.0500	.00	.00	.0	.2	1.8

Maximum Froude Number (FRDM)	.80
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.20
Cross-Section of Minimum Froude Number (IFM)	155

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	12.700	10627.	1380.08	1376.00	1378.16	.89	420.00	10627.	10627.	0.	0.

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Time (TT)	13.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	5
Flow at Upstream End of Model (QU(1), cfs)	10037.99
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1379.91
Flow at Downstream End of Model (QU(N), cfs)	1015.18
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.19

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1379.91	4.33	2317.	889.	889.	10.038	.0400	.00	-27.03	169.2	.5	3.9
10.240	1365.86	6.22	1618.	789.	789.	10.069	.0400	-.30	2.01	.0	.8	3.3
10.902	1318.90	4.30	2452.	1557.	1557.	10.550	.0500	-.30	1.42	.0	.6	2.4
11.716	1265.88	3.22	3422.	2841.	2841.	11.010	.0500	-.30	1.02	.0	.5	1.8
12.550	1220.74	2.51	3628.	3242.	3242.	9.114	.0500	.00	.96	.0	.4	1.7
13.364	1195.08	2.23	6470.	5915.	5915.	14.412	.0500	.00	1.06	.0	.4	1.7
14.180	1173.74	3.22	10776.	6454.	6454.	34.723	.0500	.00	2.04	.0	.4	2.7
16.500	1131.49	3.48	30977.	10394.	10394.	107.721	.0425	.00	3.78	.0	.4	4.5
19.040	1106.04	4.76	35132.	7607.	7607.	167.222	.0400	.00	6.21	.0	.4	7.0
20.390	1094.46	5.19	32242.	4860.	4860.	167.341	.0400	.00	10.32	.0	.4	11.5
21.390	1083.96	7.76	19692.	2711.	2711.	152.834	.0400	.00	11.47	.0	.5	13.0
22.202	1073.39	5.66	25173.	4373.	4373.	142.496	.0400	.00	8.20	.0	.4	9.8
23.037	1064.93	4.75	25606.	5346.	5346.	121.643	.0400	.00	7.46	.0	.4	9.3
23.925	1052.45	4.35	4393.	1451.	1451.	19.129	.0400	.00	3.61	.0	.4	5.9
24.797	1038.99	2.11	860.	524.	524.	1.816	.0500	.00	.60	.0	.3	3.3
25.645	1027.91	2.44	418.	273.	273.	1.020	.0500	.00	.02	.0	.3	3.9
26.481	1010.99	2.69	374.	205.	205.	1.007	.0500	.00	.01	.0	.4	3.0
27.350	996.82	2.10	479.	312.	312.	1.007	.0500	.00	.01	.0	.3	1.8
28.859	971.89	2.14	471.	367.	367.	1.007	.0500	.00	.01	.0	.3	1.9
29.740	956.26	1.53	657.	563.	563.	1.007	.0500	.00	.01	.0	.2	1.8

Maximum Froude Number (FRDM)	.80
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.20
Cross-Section of Minimum-Froude Number (IFM)	155

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	5	13.000	10038.	1379.91	1376.00	1378.07	.89	420.00	10038.	10038.	0.	0.

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Time (TT)	13.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	5
Flow at Upstream End of Model (QU(1), cfs)	10017.22
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1379.91
Flow at Downstream End of Model (QU(N), cfs)	1015.40
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.19

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1379.91	4.33	2312.	888.	888.	10.017	.0400	.00	-27.04	165.2	.5	3.9
10.240	1365.85	6.21	1610.	787.	787.	10.005	.0400	-.30	2.00	.0	.8	3.3
10.902	1318.85	4.23	2373.	1541.	1541.	10.045	.0500	-.30	1.37	.0	.6	2.4
11.716	1265.83	3.13	3282.	2825.	2825.	10.275	.0500	-.30	.97	.0	.5	1.7
12.550	1220.87	2.67	4054.	3320.	3320.	10.842	.0500	.00	1.09	.0	.4	1.9
13.364	1194.80	1.94	4832.	5663.	5663.	9.365	.0500	.00	.78	.0	.4	1.4
14.180	1172.78	2.59	5273.	4959.	4959.	13.675	.0500	.00	1.08	.0	.4	1.8
16.500	1130.75	2.86	23679.	9406.	9406.	67.653	.0461	.00	3.04	.0	.3	3.8
19.040	1105.32	4.46	29838.	7140.	7140.	133.069	.0400	.00	5.49	.0	.4	6.3
20.390	1094.37	4.96	31801.	4768.	4768.	157.736	.0400	.00	10.23	.0	.3	11.4
21.390	1084.51	7.61	21328.	3235.	3235.	162.241	.0400	.00	12.02	.0	.5	13.5
22.202	1073.93	5.84	27591.	4497.	4497.	161.107	.0400	.00	8.75	.0	.4	10.3
23.037	1066.48	4.46	34379.	5990.	5990.	153.253	.0400	.00	9.01	.0	.3	10.8
23.925	1059.32	4.75	27242.	5530.	5530.	129.488	.0400	.00	10.48	.0	.4	12.8
24.797	1046.59	5.13	12203.	3020.	3020.	62.659	.0400	.00	8.20	.0	.5	10.9
25.645	1032.42	3.95	4342.	1535.	1536.	17.150	.0500	.00	4.53	.0	.4	8.4
26.481	1012.36	3.23	732.	357.	357.	2.367	.0500	.00	1.37	.0	.4	4.4
27.350	996.91	2.18	507.	316.	316.	1.106	.0500	.00	.10	.0	.3	1.9
28.859	971.89	2.14	471.	367.	367.	1.007	.0500	.00	.01	.0	.3	1.9
29.740	956.26	1.53	657.	563.	563.	1.007	.0500	.00	.01	.0	.2	1.8

Maximum Froude Number (FRDM)	.80
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.20
Cross-Section of Minimum Froude Number (IFM)	155

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	5	13.400	10017.	1379.91	1376.00	1378.06	.89	420.00	10017.	10017.	0.	0.

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Time (TT)	13.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	5
Flow at Upstream End of Model (QU(1), cfs)	10007.85
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1379.90
Flow at Downstream End of Model (QU(N), cfs)	1018.40
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.19

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1379.90	4.33	2309.	888.	888.	10.008	.0400	.00	-27.04	165.3	.5	3.9
10.240	1365.85	6.21	1609.	787.	787.	9.999	.0400	-.30	1.99	.0	.8	3.3
10.902	1318.84	4.23	2369.	1540.	1540.	10.025	.0500	-.30	1.37	.0	.6	2.4
11.716	1265.81	3.09	3221.	2817.	2817.	9.965	.0500	-.30	.95	.0	.5	1.7
12.550	1220.81	2.61	3861.	3285.	3285.	10.059	.0500	.00	1.03	.0	.4	1.8
13.364	1194.88	2.04	5330.	5741.	5741.	10.855	.0500	.00	.86	.0	.4	1.5
14.180	1172.55	2.29	4187.	4607.	4607.	9.596	.0500	.00	.85	.0	.4	1.6
16.500	1130.15	2.38	18298.	8605.	8605.	43.539	.0491	.00	2.44	.0	.3	3.2
19.040	1104.30	4.14	22868.	6474.	6474.	94.611	.0400	.00	4.47	.0	.4	5.3
20.390	1093.29	4.69	27085.	4147.	4147.	127.148	.0400	.00	9.15	.0	.3	10.3
21.390	1083.87	7.55	19444.	2691.	2691.	146.844	.0400	.00	11.37	.0	.5	12.9
22.202	1073.80	5.68	26983.	4466.	4466.	153.384	.0400	.00	8.61	.0	.4	10.2
23.037	1066.78	4.34	36186.	6121.	6121.	157.175	.0400	.00	9.31	.0	.3	11.1
23.925	1060.23	4.80	32420.	5870.	5870.	155.507	.0400	.00	11.39	.0	.4	13.7
24.797	1050.11	5.84	25256.	4176.	4176.	147.419	.0400	.00	11.73	.0	.4	14.4
25.645	1038.38	7.64	16044.	2390.	2480.	122.568	.0400	.00	10.49	.0	.5	14.4
26.481	1022.38	7.43	11194.	1834.	2215.	83.147	.0430	.00	11.39	.0	.5	14.4
27.350	1004.11	6.80	5501.	1075.	1075.	37.414	.0400	.00	7.30	.0	.5	9.1
28.859	972.54	2.66	736.	445.	445.	1.959	.0500	.00	.66	.0	.4	2.5
29.740	956.28	1.54	666.	566.	566.	1.029	.0500	.00	.02	.0	.3	1.8

Maximum Froude Number (FRDM)	.80
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.20
Cross-Section of Minimum Froude Number (IFM)	155

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	5	13.800	10008.	1379.90	1376.00	1378.06	.89	420.00	10008.	10008.	0.	0.

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Time (TT)	14.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	10003.60
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1379.90
Flow at Downstream End of Model (QU(N), cfs)	5726.52
Water Elevation at Downstream End of Model (YU(N), ft MSL)	954.82

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1379.90	4.33	2308.	887.	887.	10.004	.0400	.00	-27.04	165.3	.5	3.9
10.240	1365.85	6.21	1609.	787.	787.	9.999	.0400	-.30	1.99	.0	.8	3.3
10.902	1318.84	4.23	2366.	1539.	1539.	10.001	.0500	-.30	1.37	.0	.6	2.4
11.716	1265.81	3.10	3224.	2818.	2818.	9.979	.0500	-.30	.95	.0	.5	1.7
12.550	1220.80	2.59	3831.	3280.	3280.	9.936	.0500	.00	1.03	.0	.4	1.8
13.364	1194.83	1.97	5020.	5692.	5692.	9.876	.0500	.00	.81	.0	.4	1.4
14.180	1172.67	2.24	4749.	4793.	4793.	10.645	.0500	.00	.97	.0	.4	1.7
16.500	1129.51	1.99	13074.	7752.	7752.	25.971	.0500	.00	1.80	.0	.3	2.5
19.040	1103.40	3.69	17337.	5844.	5844.	64.040	.0420	.00	3.57	.0	.4	4.4
20.390	1091.56	4.50	20435.	3531.	3531.	91.933	.0400	.00	7.42	.0	.3	8.6
21.390	1082.68	7.03	16409.	2424.	2424.	115.416	.0400	.00	10.19	.0	.5	11.7
22.202	1073.10	5.27	23919.	4307.	4307.	126.003	.0400	.00	7.91	.0	.4	9.5
23.037	1066.37	4.11	33746.	5943.	5943.	138.587	.0400	.00	8.90	.0	.3	10.7
23.925	1060.13	4.67	31846.	5833.	5833.	148.622	.0400	.00	11.29	.0	.4	13.6
24.797	1050.44	5.75	26642.	4255.	4255.	153.136	.0400	.00	12.06	.0	.4	14.7
25.645	1039.69	7.89	19297.	2579.	2690.	152.331	.0400	.00	11.80	.0	.5	15.7
26.481	1025.37	8.58	17267.	2139.	3061.	148.203	.0400	.00	14.38	.0	.5	17.4
27.350	1010.74	8.64	14712.	1881.	3143.	127.082	.0400	.00	13.93	.0	.5	15.7
28.859	980.71	6.65	9852.	1993.	2712.	65.508	.0483	.00	8.83	.0	.5	10.7
29.740	960.02	3.60	4477.	1548.	1548.	16.107	.0447	.00	3.77	.0	.4	5.5

Maximum Froude Number (FRDM)	.80
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.25
Cross-Section of Minimum Froude Number (IFM)	61

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	14.200	10004.	1379.90	1376.00	1378.06	.89	420.00	10004.	10004.	0.	0.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	14.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	10001.63
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1379.90
Flow at Downstream End of Model (QU(N), cfs)	77821.52
Water Elevation at Downstream End of Model (YU(N), ft MSL)	959.04

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1379.90	4.33	2308.	887.	887.	10.002	.0400	.00	-27.04	165.3	.5	3.9
10.240	1365.85	6.21	1609.	787.	787.	10.000	.0400	-.30	1.99	.0	.8	3.3
10.902	1318.84	4.23	2366.	1539.	1539.	9.997	.0500	-.30	1.37	.0	.6	2.4
11.716	1265.81	3.10	3228.	2818.	2818.	9.999	.0500	-.30	.96	.0	.5	1.7
12.550	1220.80	2.60	3848.	3283.	3283.	10.003	.0500	.00	1.03	.0	.4	1.8
13.364	1194.84	1.98	5063.	5699.	5699.	10.008	.0500	.00	.82	.0	.4	1.4
14.180	1172.62	2.20	4510.	4715.	4715.	9.943	.0500	.00	.92	.0	.4	1.6
16.500	1129.05	1.67	9583.	7125.	7125.	16.024	.0500	.00	1.33	.0	.3	2.0
19.040	1102.87	3.26	14323.	5454.	5454.	46.659	.0450	.00	3.04	.0	.4	3.9
20.390	1089.91	4.15	15002.	3130.	3130.	62.266	.0423	.00	5.77	.0	.3	6.9
21.390	1080.94	6.29	12536.	2033.	2033.	78.813	.0400	.00	8.45	.0	.4	9.9
22.202	1072.06	4.66	19582.	4070.	4070.	91.339	.0400	.00	6.88	.0	.4	8.4
23.037	1065.49	3.76	28683.	5574.	5574.	107.952	.0400	.00	8.02	.0	.3	9.8
23.925	1059.54	4.38	28454.	5611.	5611.	124.701	.0400	.00	10.70	.0	.3	13.0
24.797	1049.97	5.52	24661.	4141.	4141.	136.075	.0400	.00	11.58	.0	.4	14.3
25.645	1039.41	7.71	18580.	2538.	2645.	143.326	.0400	.00	11.52	.0	.5	15.4
26.481	1025.46	8.46	17459.	2144.	3085.	147.738	.0400	.00	14.47	.0	.5	17.5
27.350	1012.07	8.64	17288.	1952.	3667.	149.285	.0400	.00	15.26	.0	.5	17.1
28.859	983.71	7.82	16965.	2618.	4474.	132.620	.0400	.00	11.83	.0	.5	13.7
29.740	964.48	6.60	13703.	2349.	4441.	90.394	.0400	.00	8.23	.0	.5	10.0

Maximum Froude Number (FRDM)	.80
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.23
Cross-Section of Minimum Froude Number (IFM)	61

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	14.600	10002.	1379.90	1376.00	1378.06	.89	420.00	10002.	10002.	0.	0.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	15.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	10000.77
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1379.90
Flow at Downstream End of Model (QU(N), cfs)	132286.30
Water Elevation at Downstream End of Model (YU(N), ft MSL)	960.79

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1379.90	4.33	2308.	887.	887.	10.001	.0400	.00	-27.04	165.3	.5	3.9
10.240	1365.85	6.21	1609.	787.	787.	10.000	.0400	-.30	1.99	.0	.8	3.3
10.902	1318.84	4.23	2366.	1539.	1539.	9.998	.0500	-.30	1.37	.0	.6	2.4
11.716	1265.81	3.10	3229.	2818.	2818.	10.002	.0500	-.30	.96	.0	.5	1.7
12.550	1220.81	2.60	3850.	3283.	3283.	10.009	.0500	.00	1.03	.0	.4	1.8
13.364	1194.84	1.98	5062.	5699.	5699.	10.012	.0500	.00	.82	.0	.4	1.4
14.180	1172.62	2.22	4513.	4716.	4716.	10.020	.0500	.00	.92	.0	.4	1.6
16.500	1128.77	1.49	7676.	6758.	6758.	11.440	.0500	.00	1.06	.0	.2	1.8
19.040	1102.43	2.90	12024.	5137.	5137.	34.877	.0473	.00	2.60	.0	.3	3.4
20.390	1089.08	3.67	12472.	2976.	2976.	45.740	.0456	.00	4.94	.0	.3	6.1
21.390	1079.40	5.59	9650.	1735.	1735.	53.947	.0400	.00	6.90	.0	.4	8.4
22.202	1071.02	4.06	15450.	3849.	3849.	62.683	.0400	.00	5.83	.0	.4	7.4
23.037	1064.38	3.41	22707.	5122.	5122.	77.420	.0400	.00	6.90	.0	.3	8.7
23.925	1058.68	4.01	23811.	5186.	5186.	95.564	.0400	.00	9.85	.0	.3	12.2
24.797	1049.08	5.19	21065.	3926.	3926.	109.234	.0400	.00	10.69	.0	.4	13.4
25.645	1038.53	7.31	16384.	2411.	2502.	119.779	.0400	.00	10.63	.0	.5	14.5
26.481	1024.76	8.01	15990.	2105.	2903.	128.108	.0400	.00	13.78	.0	.5	16.8
27.350	1011.67	8.29	16501.	1942.	3520.	136.713	.0400	.00	14.85	.0	.5	16.7
28.859	984.24	7.95	18337.	2631.	5303.	145.802	.0400	.00	12.35	.0	.5	14.2
29.740	966.34	7.57	18192.	2483.	5922.	137.795	.0400	.00	10.08	.0	.5	11.8

Maximum Froude Number (FRDM)	.80
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.23
Cross-Section of Minimum Froude Number (IFM)	61

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	15.000	10001.	1379.90	1376.00	1378.06	.89	420.00	10001.	10001.	0.	0.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	15.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	10000.36
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1379.90
Flow at Downstream End of Model (QU(N), cfs)	141188.80
Water Elevation at Downstream End of Model (YU(N), ft MSL)	961.02

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1379.90	4.33	2307.	887.	887.	10.000	.0400	.00	-27.04	165.3	.5	3.9
10.240	1365.85	6.21	1609.	787.	787.	10.000	.0400	-.30	1.99	.0	.8	3.3
10.902	1318.84	4.23	2366.	1539.	1539.	9.999	.0500	-.30	1.37	.0	.6	2.4
11.716	1265.81	3.10	3228.	2818.	2818.	10.001	.0500	-.30	.96	.0	.5	1.7
12.550	1220.80	2.60	3847.	3283.	3283.	10.000	.0500	.00	1.03	.0	.4	1.8
13.364	1194.84	1.98	5057.	5698.	5698.	9.995	.0500	.00	.82	.0	.4	1.4
14.180	1172.62	2.22	4494.	4709.	4709.	9.992	.0500	.00	.92	.0	.4	1.6
16.500	1128.70	1.45	7185.	6661.	6661.	10.432	.0500	.00	.98	.0	.2	1.7
19.040	1102.03	2.58	10019.	4844.	4844.	25.840	.0493	.00	2.20	.0	.3	3.0
20.390	1088.48	3.27	10708.	2864.	2864.	34.978	.0478	.00	4.34	.0	.3	5.5
21.390	1078.40	5.04	7982.	1592.	1592.	40.235	.0400	.00	5.90	.0	.4	7.4
22.202	1070.27	3.60	12605.	3711.	3711.	45.362	.0400	.00	5.08	.0	.3	6.7
23.037	1063.33	3.13	17577.	4699.	4699.	54.996	.0400	.00	5.86	.0	.3	7.7
23.925	1057.70	3.70	19034.	4484.	4484.	70.387	.0400	.00	8.86	.0	.3	11.2
24.797	1048.07	4.81	17238.	3683.	3683.	83.003	.0400	.00	9.69	.0	.4	12.4
25.645	1037.38	6.80	13708.	2246.	2317.	93.196	.0400	.00	9.48	.0	.5	13.4
26.481	1023.71	7.39	13807.	2045.	2626.	102.053	.0400	.00	12.73	.0	.5	15.7
27.350	1010.62	7.80	14492.	1861.	3084.	113.058	.0400	.00	13.81	.0	.5	15.6
28.859	983.82	7.61	17244.	2620.	4643.	131.189	.0400	.00	11.94	.0	.5	13.8
29.740	966.53	7.49	18683.	2488.	5969.	140.021	.0400	.00	10.27	.0	.5	12.0

Maximum Froude Number (FRDM)	.80
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.22
Cross-Section of Minimum Froude Number (IFM)	64

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	15.400	10000.	1379.90	1376.00	1378.06	.89	420.00	10000.	10000.	0.	0.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	15.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	10000.19
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1379.90
Flow at Downstream End of Model (QU(N), cfs)	126073.40
Water Elevation at Downstream End of Model (YU(N), ft MSL)	960.57

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
10.000	1379.90	4.33	2307.	887.	887.	10.000	.0400	.00	-27.04	165.3	.5	3.9
10.240	1365.85	6.21	1609.	787.	787.	10.000	.0400	-.30	1.99	.0	.8	3.3
10.902	1318.84	4.23	2366.	1539.	1539.	10.000	.0500	-.30	1.37	.0	.6	2.4
11.716	1265.81	3.10	3228.	2818.	2818.	10.000	.0500	-.30	.96	.0	.5	1.7
12.550	1220.80	2.60	3847.	3283.	3283.	9.999	.0500	.00	1.03	.0	.4	1.8
13.364	1194.84	1.98	5058.	5698.	5698.	9.999	.0500	.00	.82	.0	.4	1.4
14.180	1172.62	2.23	4493.	4709.	4709.	10.002	.0500	.00	.92	.0	.4	1.6
16.500	1128.68	1.44	7090.	6642.	6642.	10.243	.0500	.00	.97	.0	.2	1.7
19.040	1101.66	2.35	8284.	4575.	4575.	19.505	.0500	.00	1.83	.0	.3	2.7
20.390	1087.96	2.94	9264.	2764.	2764.	27.263	.0497	.00	3.83	.0	.3	5.0
21.390	1077.67	4.60	6857.	1487.	1487.	31.550	.0400	.00	5.17	.0	.4	6.7
22.202	1069.78	3.28	10807.	3622.	3622.	35.438	.0400	.00	4.59	.0	.3	6.2
23.037	1062.62	2.87	14348.	4406.	4406.	41.201	.0424	.00	5.15	.0	.3	7.0
23.925	1056.68	3.50	14857.	3765.	3765.	51.944	.0400	.00	7.84	.0	.3	10.2
24.797	1047.15	4.52	14001.	3313.	3313.	63.247	.0400	.00	8.77	.0	.4	11.5
25.645	1036.30	6.28	11368.	2090.	2144.	71.352	.0402	.00	8.41	.0	.5	12.3
26.481	1022.60	6.74	11595.	1879.	2287.	78.174	.0418	.00	11.61	.0	.5	14.6
27.350	1009.16	7.51	11957.	1615.	2345.	89.827	.0400	.00	12.35	.0	.5	14.2
28.859	983.04	7.04	15217.	2601.	3411.	107.169	.0412	.00	11.16	.0	.5	13.0
29.740	966.00	7.05	17363.	2475.	5843.	122.332	.0400	.00	9.74	.0	.5	11.5

Maximum Froude Number (FRUM)	.80
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.20
Cross-Section of Minimum Froude Number (IFM)	64

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	15.800	10000.	1379.90	1376.00	1378.06	.89	420.00	10000.	10000.	0.	0.

Normalized conservation of mass as percent of maximum flow

Normalized conservation of mass as percent of maximum flow
in reach = -.38

ROUTING COMPLETED :

Number of Time Steps Used (KTIME)	85
Maximum Number of Time Steps Allowed	1199
Total Time of Flood Routing (TT, hr)	16.2

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
10.000	1417.76	185613	9.400	8.24	.00	.00
10.030	1386.86	185613	11.400	15.15	.00	.00
10.060	1385.08	185614	11.400	14.99	.00	.00
10.090	1383.30	185609	11.400	14.83	.00	.00
10.120	1381.51	185599	11.400	14.68	.00	.00
10.150	1379.73	185584	11.400	14.53	.00	.00
10.180	1377.94	185565	11.400	14.39	.00	.00
10.210	1376.15	185543	11.400	14.26	.00	.00
10.240	1374.36	185518	11.400	14.15	.00	.00
10.270	1372.83	185489	11.400	13.47	.00	.00
10.300	1369.82	185462	11.400	16.17	.00	.00
10.400	1362.34	185371	11.400	14.46	.00	.00
10.500	1354.09	185275	11.400	14.88	.00	.00
10.600	1346.73	185182	11.400	13.12	.00	.00
10.700	1338.51	185097	11.400	13.70	.00	.00
10.800	1331.23	185008	11.400	11.76	.00	.00
10.902	1324.34	184889	11.400	11.50	.00	.00
11.004	1317.43	184790	11.400	11.38	.00	.00
11.105	1310.61	184612	11.400	11.13	.00	.00
11.207	1303.74	184436	11.400	11.08	.00	.00
11.309	1297.10	184341	11.400	10.50	.00	.00
11.411	1290.26	184231	11.400	10.52	.00	.00
11.513	1283.71	184095	11.400	9.86	.00	.00
11.615	1276.79	183947	11.400	10.14	.00	.00
11.716	1270.39	184026	11.600	9.25	.00	.00
11.818	1263.30	184113	11.600	9.98	.00	.00
11.920	1257.18	184191	11.600	8.56	.00	.00
12.025	1251.78	184272	11.600	8.53	203.67	.00
12.130	1246.51	184341	11.600	8.23	407.33	.00
12.235	1241.02	184389	11.600	8.39	611.00	.00
12.340	1235.89	184420	11.600	7.82	814.66	.00
12.445	1230.17	184417	11.600	8.50	1018.33	.00
12.550	1225.42	184393	11.600	7.16	1221.99	9.80
12.652	1221.78	184320	11.600	6.90	1218.66	9.80
12.753	1218.16	184224	11.600	6.68	1215.33	10.00
12.855	1214.61	184097	11.600	6.39	1212.00	10.00
12.957	1211.01	183931	11.600	6.26	1208.66	10.00
13.058	1207.63	183757	11.600	5.84	1205.33	10.20
13.160	1203.85	183542	11.600	6.08	1202.00	10.20
13.262	1201.09	183330	11.600	6.06	1199.20	10.20
13.364	1198.33	183118	11.600	6.02	1196.40	10.20
13.466	1195.57	182907	11.600	6.00	1193.60	10.20
13.568	1192.81	182680	11.600	5.96	1190.80	10.20
13.670	1190.06	182347	11.800	5.91	1188.00	10.20
13.772	1187.31	182412	11.800	5.85	1185.20	10.20
13.874	1184.56	182529	11.800	5.79	1182.40	10.20
13.976	1181.80	182577	11.800	5.77	1179.60	10.20
14.078	1179.10	182590	11.800	5.62	1176.80	10.40

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
14.180	1176.16	182548	11.800	5.91	1174.00	10.40
14.353	1171.94	182379	11.800	5.06	1170.00	10.40
14.527	1167.14	182198	11.800	5.44	1166.00	10.60
14.700	1163.52	181858	11.800	4.05	1162.00	10.60
15.210	1155.34	181130	12.000	4.25	1154.00	10.80
15.532	1149.38	181170	12.025	4.56	1148.00	11.00
15.855	1143.78	180822	12.112	4.38	1142.00	11.00
16.177	1137.61	180770	12.156	5.06	1136.00	11.20
16.500	1132.45	180585	12.200	4.34	1130.00	11.20
16.812	1128.39	179971	12.200	4.43	1126.00	11.20
17.125	1124.39	178711	12.400	4.43	1122.00	11.40
17.437	1120.15	178756	12.400	4.73	1118.00	11.40
17.750	1116.87	178064	12.500	3.99	1114.00	11.60
18.150	1113.70	176952	12.600	4.13	1110.00	11.60
18.550	1110.58	175937	12.700	4.31	1106.00	11.80
18.795	1108.60	175388	12.700	4.37	1104.00	11.80
19.040	1106.15	174689	12.800	4.89	1102.00	11.80
19.160	1104.87	174298	12.800	4.93	1100.25	12.00
19.280	1103.73	173974	12.800	4.89	1098.50	12.00
19.400	1102.72	173429	12.800	4.80	1096.75	12.00
19.520	1101.78	172703	13.000	4.79	1095.00	12.00
19.785	1099.62	170658	13.000	5.14	1092.50	12.00
20.050	1097.28	170036	13.000	5.53	1090.00	12.00
20.220	1095.89	168946	13.200	5.54	1088.00	12.00
20.390	1094.55	167340	13.200	5.61	1086.00	12.11
20.560	1093.19	165993	13.200	5.82	1084.00	12.11
20.730	1091.76	165558	13.200	6.28	1082.00	12.16
20.840	1090.90	165159	13.200	6.31	1080.67	12.20
20.950	1090.00	164626	13.400	6.31	1079.33	12.20
21.060	1089.04	163962	13.400	6.25	1078.00	12.40
21.170	1087.94	163093	13.400	6.27	1076.67	12.40
21.280	1086.53	162221	13.400	6.55	1075.33	12.40
21.390	1084.51	162240	13.400	7.76	1074.00	12.40
21.492	1082.86	162132	13.400	7.49	1073.08	12.40
21.593	1081.42	162053	13.400	7.18	1072.15	12.40
21.695	1080.06	162006	13.400	6.91	1071.23	12.40
21.796	1078.76	161935	13.400	6.66	1070.31	12.40
21.898	1077.50	161831	13.400	6.43	1069.38	12.40
21.999	1076.28	161672	13.400	6.22	1068.46	12.40
22.101	1075.09	161443	13.400	6.03	1067.54	12.40
22.202	1073.95	161107	13.600	5.84	1066.62	12.50
22.304	1072.84	160633	13.600	5.65	1065.69	12.50
22.405	1071.79	160553	13.600	5.45	1064.77	12.50
22.507	1070.79	160555	13.600	5.22	1063.85	12.60
22.608	1069.88	160188	13.600	4.94	1062.92	12.60
22.710	1069.09	159777	13.600	4.57	1062.00	12.60
22.819	1068.28	159448	13.800	4.56	1060.89	12.70
22.928	1067.52	158916	13.800	4.59	1059.78	12.70

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
23.037	1066.78	158456	13.800	4.75	1058.67	12.70
23.146	1066.05	158085	13.800	4.85	1057.56	12.80
23.254	1065.33	157480	13.800	4.81	1056.44	12.80
23.363	1064.61	156856	13.800	4.62	1055.33	12.80
23.472	1063.88	157071	13.800	4.60	1054.22	13.00
23.581	1063.11	157130	13.800	4.69	1053.11	13.00
23.690	1062.26	156957	13.800	4.85	1052.00	13.00
23.807	1061.28	156427	14.000	4.80	1050.75	13.00
23.925	1060.26	155506	14.000	4.80	1049.50	13.00
24.042	1059.15	155171	14.000	4.98	1048.25	13.00
24.160	1057.83	155360	14.000	5.35	1047.00	13.00
24.266	1056.57	155298	14.000	5.41	966.46	.00
24.372	1055.31	154979	14.000	5.48	885.92	.00
24.478	1054.07	154512	14.000	5.57	805.39	.00
24.585	1052.83	153961	14.000	5.65	724.85	.00
24.691	1051.63	153392	14.200	5.74	644.31	.00
24.797	1050.44	153135	14.200	5.84	563.77	.00
24.903	1049.27	153152	14.200	5.94	483.23	.00
25.009	1048.10	153076	14.200	6.05	402.69	.00
25.115	1046.94	152952	14.200	6.17	322.16	.00
25.222	1045.75	152812	14.200	6.32	241.62	.00
25.328	1044.51	152672	14.200	6.55	161.08	.00
25.434	1043.13	152594	14.200	6.97	80.54	.00
25.540	1041.41	152482	14.200	7.83	.00	.00
25.645	1039.69	152331	14.200	7.91	.00	.00
25.749	1037.97	152236	14.200	7.99	.00	.00
25.854	1036.22	152092	14.200	8.06	.00	.00
25.958	1034.46	151806	14.400	8.15	.00	.00
26.063	1032.71	151362	14.400	8.24	.00	.00
26.167	1030.94	151553	14.400	8.34	.00	.00
26.272	1029.15	151677	14.400	8.44	.00	.00
26.376	1027.36	151715	14.400	8.52	.00	.00
26.481	1025.57	151650	14.400	8.58	.00	.00
26.585	1023.80	151622	14.400	8.60	.00	.00
26.690	1022.17	151362	14.400	8.47	.00	.00
26.800	1020.50	150791	14.600	8.49	.00	.00
26.910	1018.83	150352	14.600	8.55	.00	.00
27.020	1017.15	150003	14.600	8.59	.00	.00
27.130	1015.47	149537	14.600	8.60	.00	.00
27.240	1013.79	149227	14.600	8.67	.00	.00
27.350	1012.07	149285	14.600	8.75	.00	.00
27.460	1010.28	149451	14.600	8.85	.00	.00
27.570	1008.26	149542	14.600	9.20	.00	.00
27.806	1003.90	148971	14.600	8.98	.00	.00
28.042	999.51	147506	14.800	8.76	.00	.00
28.278	995.06	147838	14.800	8.49	.00	.00
28.514	990.42	147309	14.800	8.43	.00	.00
28.750	986.20	145528	15.000	7.84	.00	.00

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
28.859	984.24	145801	15.000	7.97	.00	.00
28.967	982.15	145927	15.000	8.14	.00	.00
29.076	979.97	145894	15.000	8.26	.00	.00
29.185	977.68	145478	15.000	8.25	.00	.00
29.294	975.36	144593	15.200	8.10	.00	.00
29.402	972.99	143370	15.200	7.95	.00	.00
29.511	970.68	143400	15.200	7.75	.00	.00
29.620	968.32	143093	15.200	7.66	.00	.00
29.740	966.57	142597	15.200	7.60	.00	.00
29.860	964.76	142072	15.200	7.56	.00	.00
29.980	962.90	141716	15.200	7.52	.00	.00
30.100	961.03	141400	15.200	7.42	.00	.00

COMPUTED WATER SURFACE ELEVATIONS AT REQUESTED
STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Water Surface Elevation YC(K,1) (ft MSL)	Station 2 Water Surface Elevation YC(K,2) (ft MSL)	Station 3 Water Surface Elevation YC(K,3) (ft MSL)	Station 4 Water Surface Elevation YC(K,4) (ft MSL)	Station 5 Water Surface Elevation YC(K,5) (ft MSL)	Station 6 Water Surface Elevation YC(K,6) (ft MSL)
1	.000	1406.95	1199.60	1151.58	1092.11	1046.17	957.64
2	.200	1407.07	1199.60	1151.58	1092.11	1046.17	957.64
3	.400	1407.20	1199.60	1151.58	1092.11	1046.17	957.64
4	.600	1407.34	1199.60	1151.58	1092.11	1046.17	957.64
5	.800	1407.49	1199.60	1151.58	1092.11	1046.17	957.64
6	1.000	1407.64	1199.60	1151.58	1092.11	1046.17	957.64
7	1.200	1407.80	1199.60	1151.58	1092.11	1046.17	957.64
8	1.400	1407.96	1199.60	1151.58	1092.11	1046.17	957.64
9	1.600	1408.13	1199.60	1151.58	1092.11	1046.17	957.64
10	1.800	1408.29	1199.60	1151.58	1092.11	1046.17	957.64
11	2.000	1408.46	1199.61	1151.58	1092.11	1046.17	957.64
12	2.200	1408.63	1199.61	1151.58	1092.11	1046.17	957.64
13	2.400	1408.82	1199.61	1151.58	1092.11	1046.17	957.64
14	2.600	1409.00	1199.61	1151.58	1092.11	1046.17	957.64
15	2.800	1409.20	1199.61	1151.58	1092.11	1046.17	957.64
16	3.000	1409.40	1199.61	1151.58	1092.11	1046.17	957.64
17	3.200	1409.60	1199.61	1151.58	1092.11	1046.17	957.64
18	3.400	1409.82	1199.61	1151.58	1092.11	1046.17	957.64
19	3.600	1410.03	1199.61	1151.58	1092.11	1046.17	957.64
20	3.800	1410.25	1199.62	1151.58	1092.11	1046.17	957.64
21	4.000	1410.48	1199.63	1151.58	1092.11	1046.17	957.64
22	4.200	1410.71	1199.66	1151.58	1092.11	1046.17	957.64
23	4.400	1410.95	1199.69	1151.58	1092.11	1046.17	957.64
24	4.600	1411.20	1199.73	1151.58	1092.11	1046.17	957.64
25	4.800	1411.45	1199.77	1151.58	1092.11	1046.17	957.64
26	5.000	1411.71	1199.80	1151.58	1092.11	1046.17	957.64
27	5.200	1411.97	1199.84	1151.58	1092.11	1046.17	957.64
28	5.400	1412.23	1199.88	1151.58	1092.11	1046.17	957.64
29	5.600	1412.50	1199.92	1151.58	1092.11	1046.17	957.64
30	5.800	1412.78	1199.95	1151.58	1092.11	1046.17	957.64
31	6.000	1413.06	1200.00	1151.58	1092.11	1046.17	957.64
32	6.200	1413.34	1200.03	1151.59	1092.11	1046.17	957.64
33	6.400	1413.63	1200.06	1151.61	1092.11	1046.17	957.64
34	6.600	1413.94	1200.10	1151.64	1092.11	1046.17	957.64
35	6.800	1414.25	1200.12	1151.68	1092.11	1046.17	957.64
36	7.000	1414.56	1200.15	1151.72	1092.11	1046.17	957.64
37	7.200	1414.88	1200.18	1151.78	1092.11	1046.17	957.64
38	7.400	1415.21	1200.22	1151.83	1092.11	1046.17	957.64
39	7.600	1415.55	1200.25	1151.89	1092.11	1046.17	957.64
40	7.800	1415.89	1200.29	1151.95	1092.11	1046.17	957.64
41	8.000	1416.23	1200.32	1151.99	1092.11	1046.17	957.64
42	8.200	1416.56	1200.36	1152.03	1092.11	1046.17	957.64
43	8.400	1416.87	1200.39	1152.07	1092.11	1046.17	957.64
44	8.600	1417.16	1200.43	1152.11	1092.11	1046.17	957.64
45	8.800	1417.41	1200.46	1152.15	1092.11	1046.17	957.64
46	9.000	1417.62	1200.49	1152.19	1092.11	1046.17	957.64
47	9.200	1417.75	1200.53	1152.22	1092.11	1046.17	957.64
48	9.400	1417.76	1200.60	1152.26	1092.11	1046.17	957.64
49	9.600	1417.64	1200.80	1152.29	1092.11	1046.17	957.64

Time Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Water Surface Elevation YC(K,1) (ft MSL)	Station 2 Water Surface Elevation YC(K,2) (ft MSL)	Station 3 Water Surface Elevation YC(K,3) (ft MSL)	Station 4 Water Surface Elevation YC(K,4) (ft MSL)	Station 5 Water Surface Elevation YC(K,5) (ft MSL)	Station 6 Water Surface Elevation YC(K,6) (ft MSL)
50	9.800	1417.35	1201.20	1152.32	1092.11	1046.17	957.64
51	10.000	1416.81	1201.76	1152.36	1092.11	1046.17	957.64
52	10.200	1416.01	1202.33	1152.43	1092.11	1046.17	957.64
53	10.400	1415.02	1202.85	1152.67	1092.11	1046.17	957.64
54	10.600	1413.82	1203.24	1153.27	1092.12	1046.17	957.64
55	10.800	1412.39	1203.45	1154.16	1092.14	1046.17	957.64
56	11.000	1410.70	1203.58	1154.75	1092.16	1046.17	957.64
57	11.200	1408.68	1203.72	1155.00	1092.21	1046.17	957.64
58	11.400	1406.22	1203.81	1155.14	1092.53	1046.17	957.64
59	11.600	1403.06	1203.85	1155.25	1093.12	1046.17	957.64
60	11.800	1398.40	1203.82	1155.32	1094.31	1046.17	957.64
61	12.000	1389.35	1203.62	1155.34	1097.54	1046.17	957.64
62	12.025	1384.51	1203.59	1155.34	1097.94	1046.17	957.65
63	12.112	1377.28	1203.42	1155.32	1099.08	1046.17	957.64
64	12.156	1380.51	1203.31	1155.31	1099.56	1046.17	957.64
65	12.200	1380.34	1203.20	1155.28	1099.97	1046.17	957.64
66	12.400	1380.24	1202.53	1155.07	1101.04	1046.17	957.64
67	12.500	1380.18	1202.13	1154.91	1101.32	1046.17	957.64
68	12.600	1380.13	1201.68	1154.73	1101.52	1046.17	957.64
69	12.700	1380.08	1201.24	1154.53	1101.67	1046.17	957.64
70	12.800	1380.02	1200.90	1154.33	1101.76	1046.18	957.64
71	13.000	1379.91	1200.47	1153.94	1101.78	1049.04	957.64
72	13.200	1379.89	1200.34	1153.54	1101.58	1053.76	957.64
73	13.400	1379.91	1200.40	1153.19	1101.18	1056.43	957.64
74	13.600	1379.90	1200.45	1152.89	1100.63	1057.46	957.64
75	13.800	1379.90	1200.42	1152.65	1099.99	1057.73	957.67
76	14.000	1379.90	1200.39	1152.47	1099.30	1057.83	958.66
77	14.200	1379.90	1200.40	1152.36	1098.62	1057.73	961.81
78	14.400	1379.90	1200.40	1152.32	1098.05	1057.51	964.58
79	14.600	1379.90	1200.39	1152.32	1097.61	1057.19	966.28
80	14.800	1379.90	1200.40	1152.33	1097.23	1056.80	967.49
81	15.000	1379.90	1200.40	1152.32	1096.88	1056.38	968.12
82	15.200	1379.90	1200.40	1152.30	1096.54	1055.95	968.32
83	15.400	1379.90	1200.40	1152.30	1096.20	1055.48	968.25
84	15.600	1379.90	1200.40	1152.30	1095.88	1054.99	968.02
85	15.800	1379.90	1200.40	1152.30	1095.57	1054.50	967.67

COMPUTED DISCHARGES AT REQUESTED
STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Discharge QC(K,1) (cfs E3)	Station 2 Discharge QC(K,2) (cfs E3)	Station 3 Discharge QC(K,3) (cfs E3)	Station 4 Discharge QC(K,4) (cfs E3)	Station 5 Discharge QC(K,5) (cfs E3)	Station 6 Discharge QC(K,6) (cfs E3)
1	.000	1.00	1.00	1.00	1.01	1.00	1.00
2	.200	1.00	1.00	1.00	1.00	1.00	1.00
3	.400	1.00	1.00	1.00	1.01	1.00	1.00
4	.600	1.00	1.00	1.00	1.01	1.00	1.00
5	.800	1.00	1.00	1.00	1.01	1.00	1.00
6	1.000	1.00	1.01	1.00	1.01	1.00	1.00
7	1.200	1.00	1.01	1.00	1.01	1.00	1.00
8	1.400	1.00	1.01	1.00	1.01	1.00	1.00
9	1.600	1.00	1.01	1.00	1.01	1.00	1.00
10	1.800	1.00	1.01	1.00	1.01	1.00	1.00
11	2.000	1.05	1.01	1.00	1.01	1.00	1.00
12	2.200	1.19	1.01	1.00	1.01	1.00	1.00
13	2.400	1.34	1.01	1.00	1.01	1.00	1.00
14	2.600	1.49	1.01	1.00	1.01	1.00	1.00
15	2.800	1.64	1.01	1.00	1.01	1.00	1.00
16	3.000	1.80	1.01	1.00	1.01	1.00	1.00
17	3.200	1.97	1.01	1.00	1.01	1.00	1.00
18	3.400	2.16	1.02	1.00	1.01	1.00	1.00
19	3.600	2.36	1.03	1.01	1.01	1.00	1.00
20	3.800	2.57	1.06	1.01	1.01	1.00	1.00
21	4.000	2.78	1.13	1.01	1.01	1.00	1.00
22	4.200	3.00	1.26	1.01	1.01	1.00	1.00
23	4.400	3.22	1.44	1.01	1.01	1.01	1.00
24	4.600	3.51	1.66	1.01	1.01	1.01	1.00
25	4.800	3.85	1.90	1.01	1.01	1.01	1.00
26	5.000	4.20	2.16	1.01	1.01	1.01	1.00
27	5.200	4.55	2.44	1.00	1.01	1.01	1.00
28	5.400	4.91	2.74	1.00	1.01	1.01	1.00
29	5.600	5.27	3.05	1.00	1.01	1.01	1.00
30	5.800	5.64	3.40	1.00	1.01	1.01	1.00
31	6.000	6.02	3.81	1.01	1.01	1.01	1.00
32	6.200	6.40	4.26	1.07	1.01	1.01	1.00
33	6.400	6.87	4.70	1.20	1.01	1.01	1.00
34	6.600	7.39	5.12	1.41	1.01	1.01	1.00
35	6.800	7.92	5.54	1.67	1.01	1.01	1.00
36	7.000	8.47	5.97	2.00	1.01	1.01	1.00
37	7.200	9.02	6.43	2.45	1.01	1.01	1.00
38	7.400	9.59	6.94	3.01	1.01	1.01	1.00
39	7.600	10.16	7.50	3.65	1.01	1.01	1.01
40	7.800	10.75	8.10	4.30	1.01	1.01	1.01
41	8.000	11.34	8.72	4.89	1.01	1.01	1.01
42	8.200	11.88	9.33	5.55	1.01	1.01	1.01
43	8.400	12.32	9.95	6.17	1.01	1.01	1.01
44	8.600	12.73	10.58	6.80	1.01	1.01	1.01
45	8.800	14.86	11.19	7.46	1.01	1.01	1.01
46	9.000	20.47	11.80	8.15	1.01	1.01	1.01
47	9.200	29.53	12.56	8.86	1.01	1.01	1.01
48	9.400	41.94	14.20	9.56	1.01	1.01	1.01
49	9.600	57.33	18.77	10.26	1.01	1.01	1.01

Time Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Discharge QC(K,1) (cfs E3)	Station 2 Discharge QC(K,2) (cfs E3)	Station 3 Discharge QC(K,3) (cfs E3)	Station 4 Discharge QC(K,4) (cfs E3)	Station 5 Discharge QC(K,5) (cfs E3)	Station 6 Discharge QC(K,6) (cfs E3)
50	9.800	75.64	29.54	10.95	1.01	1.01	1.01
51	10.000	111.45	47.98	11.77	1.01	1.01	1.01
52	10.200	126.87	73.13	13.56	1.01	1.01	1.01
53	10.400	141.64	103.52	20.30	1.01	1.01	1.01
54	10.600	155.10	131.01	42.41	1.03	1.01	1.01
55	10.800	166.97	147.10	86.78	1.08	1.01	1.01
56	11.000	176.40	158.70	128.89	1.13	1.01	1.01
57	11.200	182.79	171.15	149.61	1.30	1.01	1.01
58	11.400	185.61	179.41	162.29	2.47	1.01	1.01
59	11.600	180.29	183.54	172.43	5.24	1.01	1.01
60	11.800	145.58	180.70	179.66	14.10	1.01	1.01
61	12.000	66.74	161.83	181.13	63.65	1.01	1.01
62	12.025	34.42	158.42	180.89	73.55	1.01	1.01
63	12.112	3.50	143.89	178.84	104.98	1.01	1.01
64	12.156	12.25	135.26	177.04	116.99	1.01	1.01
65	12.200	11.59	126.16	174.54	126.33	1.01	1.01
66	12.400	11.24	82.43	152.95	153.83	1.01	1.01
67	12.500	11.01	61.41	138.49	161.64	1.01	1.01
68	12.600	10.83	43.32	123.26	167.18	1.01	1.01
69	12.700	10.63	29.61	107.96	170.82	1.01	1.01
70	12.800	10.43	20.46	93.11	172.70	1.01	1.01
71	13.000	10.04	11.34	68.92	170.36	10.48	1.01
72	13.200	9.97	9.01	51.08	160.33	55.11	1.01
73	13.400	10.02	10.14	36.44	144.39	114.29	1.01
74	13.600	9.99	11.10	25.94	125.77	143.44	1.01
75	13.800	10.01	10.39	18.54	107.19	153.15	1.05
76	14.000	9.99	9.86	13.72	90.37	155.36	3.10
77	14.200	10.00	10.01	11.12	74.79	150.16	20.86
78	14.400	10.00	10.03	10.24	61.29	140.87	58.58
79	14.600	10.00	9.97	10.33	51.90	128.14	96.32
80	14.800	10.00	10.01	10.48	44.72	114.04	126.20
81	15.000	10.00	10.01	10.30	38.73	99.55	140.13
82	15.200	10.00	9.99	10.05	33.65	86.03	143.09
83	15.400	10.00	10.00	9.98	29.06	74.32	139.20
84	15.600	10.00	10.00	10.01	25.21	63.93	130.81
85	15.800	10.00	10.00	10.00	22.01	55.14	120.30

END OF OUTPUT

==========
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Version : 2.00
Serial Number : 0010419.200

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PROGRAM ORIGIN :

Boss DamBrk (tm) is an enhanced version of Professor D. L. Fread's 1988 NWS DAMBRK program.

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PROJECT DESCRIPTION :

PROJECT TITLE : HQFRS--MIDDLE BREACH (13-88)
PROJECT NUMBER : FILE: HQMID4.DBK
DESCRIPTION : MIDDLE BREACH-PIPING STARTS @ MIDDLE
ENGINEER : CARTER ASSOCIATES
DATE OF RUN : 2/13/1991
TIME OF RUN : 3:05 pm

INPUT DATA SUMMARY :

INPUT CONTROL PARAMETERS :

Number of Dynamic Routing Reaches (KKN)	1	
Type of Reservoir Routing (KUI)	1	(dynamic routing)
Number of multiple dams/bridges (MULDAM)	1	
No. of Reservoir Inflow Hydrograph Points (ITEM)	18	
No. of Informational Cross-Sections (NPRT)	0	
Flood-Plain Routing (KFLP)	0	(no)

CROSS-SECTION NUMBERS COINCIDENT
WITH UPSTREAM DAM FACE (IDAM) :

1

RESERVOIR VOLUME DESCRIPTION :

Elevation vs. Surface Area Table

Elevation HSA(K) (ft MSL)	Surface Area SA(K) (acres)
1428.30	2975.000
1419.70	2240.300
1408.40	1221.700
1396.10	114.800
1394.30	76.800
1392.60	44.400
1389.10	18.850
1375.90	.000

DAM NUMBER : 1

RESERVOIR AND BREACH PARAMETERS :

Initial Elevation of Water Surface (YO, ft MSL)		1406.70
Breach Side Slope (Z)	1:	.51
Breach Bottom Elevation (YBMIN, ft MSL)		1390.00
Breach Base Width (BB, ft)		788.00
Time of Breach Formation (TFH, hr)		3.10

RESERVOIR DESCRIPTION :

Water Surface Elevation at Time of Breach (HF, ft MSL)	1417.00
Top of Dam Elevation (HD, ft MSL)	1419.70
Uncontrolled Spillway Crest Elevation (HSP, ft MSL)	1408.40
Spillway Gate Center Elevation (HGT, ft MSL)	.00
Uncontrolled Spillway Discharge Coefficient (CS)	.00
Spillway Gate Discharge Coefficient (CG)	.00
Piping Centerline Elevation (CDO, ft MSL)	1404.90
Turbine Discharge (QT, cfs)	1000.00

SPILLWAY/GATE RATING CURVE :

Head HEAD(1) (ft)	Flow QSPILL(1) (cfs)
.00	.0
1.30	1049.3
2.66	2325.3
5.05	5551.8
8.05	10718.6
11.30	15377.7
11.60	15980.0
12.10	17000.0

Hydrograph Time Intervals (DHF, hr) .00

Routing Period (TEH, hr) 17.00

Breach Development Exponent (BREX) 1.00

Mud/Debris Flow Parameter (MUD) 0

Dry Bed Routing Parameter (IWF) 0

Hydraulic Radius Computation Parameter (KPRES) 1

Time Elapsed TI(K) (hr)	Upstream Inflow QI(K) (cfs)
.00	9033.0
1.00	11917.0
2.00	13640.0
4.00	22252.0
6.00	33805.0
8.00	51760.0
9.00	42405.0
10.00	26254.0
10.25	23000.0
10.50	20292.0
10.75	18220.0
11.00	16658.0
11.25	15348.0
11.50	14113.0
12.00	11964.0
12.50	10235.0
13.00	10000.0
20.00	10000.0

SUMMARY OF PROGRAM CONTROL PARAMETERS :

Number of Cross-Sections Entered (NS)	28	
Number of Top Widths Entered (NCS)	7	
Number of Cross-Sectional Hydrographs to Plot (NTT)	6	
Cross-Sectional Smoothing Parameter (KSA)	0	
Downstream Supercritical Parameter (KSUPC)	0	(subcritical)
Landslide Simulation (KSL)	0	(no)
Number of Lateral Inflow Hydrographs (LQ)	0	
Number of Points in Gate Control Curve (KCG)	0	

CROSS-SECTIONS WHERE HYDROGRAPH REQUESTED :
(maximum allowed = 6)

1 8 11 16 22 27

CHANNEL-VALLEY BOUNDARY CONDITIONS :

Max Discharge at Downstream End (QMAXD, cfs)	.0
Max Lateral Outflow due to Flood Wave (QLL, cfs/ft)	.0000
Initial Time-Step Size (DTHM, hr)	.2000
Time at which Dam Starts to Fail (TFI, hr)	.0000
Theta Weighting Factor (FII)	.000
Stage Convergence Criterion (EPSY, ft)	.000
Initial Downstream Water Surface Elevation (YDN, ft MSL)	.00
Slope of Channel Downstream of Dam (SOM, ft/mi)	.0000

CROSS-SECTION NUMBER : 1 MIDDLE DAMBREAK LOCATION

Cross-Section Location (XS(I), mi) 8.620

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YO, ft MSL) .000

DOWNSTREAM REACH NUMBER : 1

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .030

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1390.00	2.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1392.00	800.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1394.00	2500.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1396.00	3350.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1398.00	4200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1409.00	4250.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1420.00	4300.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 2

Cross-Section Location (XS(I), mi) 8.650

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 2

Reach Contraction-Expansion Coefficient (FKC) -.500

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .030

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1386.00	2.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1388.00	800.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1390.00	2500.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1392.00	3350.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1394.00	4200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1407.00	8100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1416.00	12000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 3

Cross-Section Location (XS(I), mi) 8.920

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YO, ft MSL) .000

DOWNSTREAM REACH NUMBER : 3

Reach Contraction-Expansion Coefficient (FKC) -.500

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .050

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1359.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1360.00	900.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1362.00	1700.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1364.00	2500.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1366.00	5100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1368.00	7700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1372.00	13000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 4

Cross-Section Location (XS(I), mi) 9.640

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YO, ft MSL) .000

DOWNSTREAM REACH NUMBER : 4

Reach Contraction-Expansion Coefficient (FKC) -.500

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .050

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1319.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1320.00	1400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1322.00	2475.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1324.00	3550.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1326.00	4925.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1328.00	6300.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1332.00	10000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 5

Cross-Section Location (XS(I), mi) 10.530

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 5

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1279.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1280.00	1000.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1282.00	3450.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1284.00	5900.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1286.00	7325.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1288.00	8750.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1292.00	9850.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 6

Cross-Section Location (XS(I), mi) 11.670

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 6

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (,I) MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1239.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1240.00	1000.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1242.00	2050.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1244.00	3100.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1246.00	4950.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1248.00	6800.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1252.00	10600.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 7

Cross-Section Location (XS(I), mi) 12.520

Flooding Elevation (FSTG(I), ft MSL) 1222.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 7

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (Y(K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1219.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1220.00	1100.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1222.00	2975.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1224.00	4850.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1226.00	5900.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1228.00	6950.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1232.00	9300.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 8 INTERSTATE 10

Cross-Section Location (XS(I), mi) 13.160

Flooding Elevation (FSTG(I), ft MSL) 1202.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 8

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1199.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1200.00	5700.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1202.00	7150.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1204.00	8600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1206.00	9600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1208.00	10600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1212.00	13400.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 9 HOUSE FOUNDATIONS

Cross-Section Location (XS(I), mi) 14.180

Flooding Elevation (FSTG(I), ft MSL) 1174.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 9

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .170

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1171.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1172.00	3750.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1174.00	6850.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1176.00	9950.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1178.00	13575.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1180.00	17200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1182.00	20000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 10 CORRAL AND SHEDS=1160 (+)

Cross-Section Location (XS(I), mi) 14.700

Flooding Elevation (FSTG(I), ft MSL) 1162.000

Initial Water Surface Elevation (YO, ft MSL) .000

DOWNSTREAM REACH NUMBER : 10

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1159.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1160.00	8950.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1162.00	11825.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1164.00	14700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1166.00	16950.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1168.00	19200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1170.00	21000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 11 HOUSE ELE.=1152(+or-)

Cross-Section Location (XS(I), mi) 15.210

Flooding Elevation (FSTG(I), ft MSL) 1154.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 11

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1151.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1152.00	9400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1154.00	11700.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1156.00	14000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1158.00	16200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1160.00	18400.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1164.00	21300.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 12 HOUSE ELE.=1140(+or-)

Cross-Section Location (XS(I), mi) 16.500

Flooding Elevation (FSTG(I), ft MSL) 1130.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 12

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1127.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1128.00	5730.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1130.00	8400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1132.00	11080.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1134.00	12455.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1136.00	13830.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1140.00	16830.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 13

Cross-Section Location (XS(I), mi) 17.750

Flooding Elevation (FSTG(I), ft MSL) 1114.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 13

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1111.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1112.00	6880.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1114.00	8185.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1116.00	9490.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1118.00	10725.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1120.00	11960.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1124.00	13920.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 14 HOUSE ELE.=1110(+or-)

Cross-Section Location (XS(I), mi) 18.550

Flooding Elevation (FSTG(I), ft MSL) 1106.000

Initial Water Surface Elevation (YO, ft MSL) .000

DOWNSTREAM REACH NUMBER : 14

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1103.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1104.00	3930.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1106.00	5145.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1108.00	6370.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1112.00	8690.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1116.00	11280.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1120.00	13160.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 15 HOUSE ELE.=1111(+or-)

Cross-Section Location (XS(I), mi) 19.040

Flooding Elevation (FSTG(I), ft MSL) 1102.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 15

Reach Contraction-Expansion Coefficient (PKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation ,I) MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1099.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1100.00	3360.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1102.00	4820.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1104.00	6280.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1106.00	7580.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1108.00	8880.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1112.00	11060.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 16 HOUSE ELE.=1104-06(+or-)

Cross-Section Location (XS(I), mi) 19.520

Flooding Elevation (FSTG(I), ft MSL) 1095.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 16

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1091.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1092.00	1870.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1094.00	2345.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1096.00	2820.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1098.00	4110.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1100.00	5400.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1104.00	7350.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 17

Cross-Section Location (XS(I), mi) 20.050

Flooding Elevation (FSTG(I), ft MSL) 1090.000

Initial Water Surface Elevation (Y0, ft MSL) .000

DOWNSTREAM REACH NUMBER : 17

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .170

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1087.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1088.00	1750.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1090.00	2535.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1092.00	3320.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1096.00	4200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1100.00	6100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1104.00	12650.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 18

Cross-Section Location (XS(I), mi) 20.730

Flooding Elevation (FSTG(I), ft MSL) 1082.000

Initial Water Surface Elevation (YO, ft MSL) .000

DOWNSTREAM REACH NUMBER : 18

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1079.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1080.00	1300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1082.00	1765.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1084.00	2230.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1086.00	2465.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1088.00	2700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1092.00	4200.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 19

Cross-Section Location (XS(I), mi) 21.390

Flooding Elevation (FSTG(I), ft MSL) 1074.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 19

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1071.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1072.00	830.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1074.00	1165.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1076.00	1250.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1080.00	1820.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1084.00	2720.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1088.00	6720.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 20

Cross-Section Location (XS(I), mi) 22.710

Flooding Elevation (FSTG(I), ft MSL) 1062.000

Initial Water Surface Elevation (YO, ft MSL) .000

DOWNSTREAM REACH NUMBER : 20

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1059.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1060.00	690.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1062.00	1140.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1064.00	4760.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1066.00	5225.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1068.00	5690.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1072.00	7540.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 21

Cross-Section Location (XS(I), mi) 23.690

Flooding Elevation (FSTG(I), ft MSL) 1052.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 21

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1049.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1050.00	200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1052.00	925.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1054.00	1275.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1058.00	3650.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1062.00	5960.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1066.00	7520.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 22 HOUSE ELE.=1051-58(+or-)

Cross-Section Location (XS(I), mi) 24.160

Flooding Elevation (FSTG(I), ft MSL) 1047.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 22

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1044.00	40.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1046.00	500.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1048.00	980.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1050.00	1235.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1052.00	1490.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1056.00	4860.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1060.00	6290.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 23

Cross-Section Location (XS(I), mi) 25.540

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 23

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1026.00	20.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1028.00	60.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1030.00	260.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1032.00	915.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1034.00	1570.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1038.00	2110.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1044.00	3020.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 24

Cross-Section Location (XS(I), mi) 26.690

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YO, ft MSL) .000

DOWNSTREAM REACH NUMBER : 24

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1004.00	50.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1008.00	280.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1012.00	960.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1014.00	1030.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1016.00	1100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1020.00	2000.0	.0400	600.0	.0	.0000	.0	.0000	1.0000
1024.00	2100.0	.0400	1700.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 25

Cross-Section Location (XS(I), mi) 27.570

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 25

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
992.00	270.0	.0500	.0	.0	.0000	.0	.0000	1.0000
994.00	370.0	.0500	.0	.0	.0000	.0	.0000	1.0000
998.00	755.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1000.00	1040.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1004.00	1300.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1008.00	1900.0	.0400	1600.0	.0	.0000	.0	.0000	1.0000
1012.00	3050.0	.0400	3050.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 26

Cross-Section Location (XS(I), mi) 28.750

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 26

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .060

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
972.00	120.0	.0500	.0	.0	.0000	.0	.0000	1.0000
974.00	300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
976.00	475.0	.0500	.0	.0	.0000	.0	.0000	1.0000
978.00	940.0	.0500	.0	.0	.0000	.0	.0000	1.0000
980.00	1400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
984.00	2600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
988.00	2700.0	.0400	7100.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 27 MULLEN WELL (FOUNDATIONS)

Cross-Section Location (XS(I), mi) 29.620

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YO, ft MSL) .000

DOWNSTREAM REACH NUMBER : 27

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .050

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
956.00	210.0	.0500	.0	.0	.0000	.0	.0000	1.0000
960.00	1200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
964.00	2000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
968.00	2400.0	.0400	4490.0	.0	.0000	.0	.0000	1.0000
972.00	2500.0	.0400	5620.0	.0	.0000	.0	.0000	1.0000
976.00	2600.0	.0400	5940.0	.0	.0000	.0	.0000	1.0000
980.00	2700.0	.0400	6190.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 28

Cross-Section Location (XS(I), mi) 30.100

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

CROSS-SECTION DESCRIPTION :

Elevation HS(K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Right Top Width BSR(K,I) (ft)
948.00	100.0	.0	.0	.0
952.00	150.0	.0	.0	.0
956.00	2575.0	.0	.0	.0
960.00	2700.0	.0	.0	.0
964.00	2800.0	.0	.0	.0
968.00	3000.0	.0	.0	.0
972.00	3200.0	.0	.0	.0

WARNING: At cross-section reach 7 the distance between interpolated cross-sections (DXM) should be changed to .071 due to expansion/contraction criteria

WARNING: At cross-section reach 21 the distance between interpolated cross-sections (DXM) should be changed to .052 due to expansion/contraction criteria

WARNING: At cross-section reach 23 the distance between interpolated cross-sections (DXM) should be changed to .077 due to expansion/contraction criteria

WARNING: At cross-section reach 27 the distance between interpolated cross-sections (DXM) should be changed to .048 due to expansion/contraction criteria

DISTANCE BETWEEN INTERPOLATED CROSS-SECTIONS
(DXM) THAT WILL BE USED IN COMPUTATIONS :

Down Stream Reach Number I=1,NS1	Interp. Cross Section Distance DXM(I) (mi)
1	101.0000
2	.0300
3	.0500
4	.0500
5	.1000
6	.1000
7	.1000
8	.3000
9	.1700
10	.3000
11	.3000
12	.3000
13	.3000
14	.1000
15	.1000
16	.2000
17	.1700
18	.2000
19	.2000
20	.1000
21	.1000
22	.1000
23	.2000
24	.2000
25	.2000
26	.0600
27	.0500

Total number of cross-sections (original+interpolated) 170

Maximum number of cross-sections allowed 300

INPUT DATA SUMMARY :

CROSS-SECTION and REACH SUMMARY :

Cross Section Number	Cross Section Location (mi)	Bottom Elevation (ft MSL)	Reach Number	Reach Length (mi)	Reach Slope (ft/mi)
1	8.620	1390.000			
2	8.650	1386.000	1	.030	133.335

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

3	8.920	1359.000	2	.270	100.000

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

4	9.640	1319.000	3	.720	55.556

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

5	10.530	1279.000	4	.890	44.944
6	11.670	1239.000	5	1.140	35.088
7	12.520	1219.000	6	.850	23.529
8	13.160	1199.000	7	.640	31.250
9	14.180	1171.000	8	1.020	27.451
10	14.700	1159.000	9	.520	23.077
11	15.210	1151.000	10	.510	15.686
12	16.500	1127.000	11	1.290	18.605
13	17.750	1111.000	12	1.250	12.800
14	18.550	1103.000	13	.800	10.000
15	19.040	1099.000	14	.490	8.163
16	19.520	1091.000	15	.480	16.667
17	20.050	1087.000	16	.530	7.547
18	20.730	1079.000	17	.680	11.765
19	21.390	1071.000	18	.660	12.121
20	22.710	1059.000	19	1.320	9.091
21	23.690	1049.000	20	.980	10.204
22	24.160	1044.000	21	.470	10.638
23	25.540	1026.000	22	1.380	13.043
24	26.690	1004.000	23	1.150	19.130
25	27.570	992.000	24	.880	13.636
26	28.750	972.000	25	1.180	16.949
27	29.620	956.000	26	.870	18.391
28	30.100	948.000	27	.480	16.667

E-NUMBERED DAM/BRIDGE CROSS-SECTIONS :

Dam/ Bridge	Revised Cross Section Number
1	1

Number of Intermediate Cross-Sections (NN(NS)) 170

Number of Time Steps (NNU) 18

INITIAL CONDITIONS TABLE :

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
1	8.620	1391.59	1.59	1391.09	1.09	0	11	11
2	8.650	1387.18	1.18	1387.09	1.09	0	11	11
3	8.680	1384.15	1.15	1384.06	1.06	0	11	11
4	8.710	1381.11	1.11	1381.03	1.03	0	11	11
5	8.740	1378.08	1.08	1377.99	.99	0	11	11
6	8.770	1375.05	1.05	1374.96	.96	0	11	11
7	8.800	1372.02	1.02	1371.93	.93	0	11	11
8	8.830	1368.98	.98	1368.90	.90	0	10	10
9	8.860	1365.94	.94	1365.86	.86	0	10	10
10	8.890	1362.91	.91	1362.82	.82	0	10	10
11	8.920	1359.97	.97	1359.79	.79	0	10	10
12	8.971	1357.18	1.03	1356.92	.78	0	10	10
13	9.023	1354.31	1.02	1354.05	.77	0	10	10
14	9.074	1351.44	1.01	1351.18	.76	0	10	10
15	9.126	1348.57	1.00	1348.31	.74	0	10	10
16	9.177	1345.70	.98	1345.44	.73	0	10	10
17	9.229	1342.83	.97	1342.57	.72	0	10	10
18	9.280	1339.96	.96	1339.72	.72	0	10	10
19	9.331	1337.09	.95	1336.85	.70	0	10	10
20	9.383	1334.23	.95	1333.98	.69	0	10	10
21	9.434	1331.36	.93	1331.12	.69	0	10	10
22	9.486	1328.49	.92	1328.25	.68	0	10	10
23	9.537	1325.62	.91	1325.39	.68	0	10	10
24	9.589	1322.76	.91	1322.52	.67	0	10	10
25	9.640	1319.93	.93	1319.67	.67	0	10	10
26	9.692	1317.58	.93	1317.31	.67	0	10	10
27	9.745	1315.24	.95	1314.96	.67	0	10	10
28	9.797	1312.89	.95	1312.62	.68	0	10	10
29	9.849	1310.55	.96	1310.27	.68	0	10	10
30	9.902	1308.19	.96	1307.91	.68	0	10	10
31	9.954	1305.85	.97	1305.57	.69	0	10	10
32	10.006	1303.50	.97	1303.22	.69	0	10	10
33	10.059	1301.16	.98	1300.88	.70	0	10	10
34	10.111	1298.81	.98	1298.53	.70	0	10	10
35	10.164	1296.47	1.00	1296.18	.70	0	10	10
36	10.216	1294.13	1.01	1293.83	.72	0	10	10
37	10.268	1291.77	1.01	1291.48	.72	0	10	10
38	10.321	1289.43	1.02	1289.14	.73	0	10	10
39	10.373	1287.08	1.02	1286.79	.73	0	10	10
40	10.425	1284.74	1.03	1284.45	.74	0	10	10
41	10.478	1282.40	1.05	1282.10	.74	0	10	10
42	10.530	1280.11	1.11	1279.76	.76	0	10	10
43	10.634	1276.47	1.11	1276.12	.76	0	10	10
44	10.737	1272.84	1.11	1272.48	.76	0	10	10
45	10.841	1269.20	1.11	1268.85	.76	0	10	10
46	10.945	1265.55	1.10	1265.21	.76	0	10	10
47	11.048	1261.92	1.10	1261.57	.76	0	10	10
48	11.152	1258.28	1.10	1257.94	.76	0	10	10
49	11.255	1254.64	1.10	1254.29	.76	0	10	10

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
50	11.359	1251.01	1.10	1250.66	.76	0	10	10
51	11.463	1247.37	1.10	1247.03	.76	0	10	10
52	11.566	1243.73	1.10	1243.39	.76	0	10	10
53	11.670	1240.17	1.17	1239.76	.76	0	10	10
54	11.776	1237.67	1.17	1237.26	.76	0	10	10
55	11.883	1235.17	1.17	1234.74	.74	0	10	10
56	11.989	1232.66	1.16	1232.24	.74	0	10	10
57	12.095	1230.16	1.16	1229.74	.74	0	10	10
58	12.201	1227.66	1.16	1227.24	.74	0	10	10
59	12.308	1225.15	1.15	1224.73	.73	0	10	10
60	12.414	1222.65	1.15	1222.23	.73	0	10	10
61	12.520	1220.09	1.09	1219.73	.73	0	10	10
62	12.627	1216.56	.90	1216.26	.59	0	10	10
63	12.733	1213.11	.78	1212.85	.51	0	10	10
64	12.840	1209.72	.72	1209.46	.46	0	10	10
65	12.947	1206.33	.67	1206.09	.43	0	10	10
66	13.053	1202.95	.62	1202.73	.40	0	10	10
67	13.160	1199.60	.60	1199.37	.37	0	10	10
68	13.500	1190.30	.63	1190.06	.39	0	10	10
69	13.840	1181.00	.67	1180.75	.42	0	10	10
70	14.180	1171.73	.73	1171.45	.45	0	10	10
71	14.353	1167.63	.63	1167.38	.38	0	10	10
72	14.527	1163.57	.57	1163.34	.34	0	10	10
73	14.700	1159.56	.56	1159.32	.32	0	10	10
74	15.210	1151.54	.54	1151.31	.31	0	10	10
75	15.533	1145.55	.55	1145.32	.32	0	10	10
76	15.855	1139.58	.58	1139.34	.34	0	10	10
77	16.178	1133.62	.62	1133.35	.35	0	10	10
78	16.500	1127.69	.69	1127.37	.37	0	10	10
79	16.813	1123.68	.68	1123.37	.37	0	10	10
80	17.125	1119.67	.67	1119.36	.36	0	10	10
81	17.438	1115.65	.65	1115.36	.36	0	10	10
82	17.750	1111.68	.68	1111.35	.35	0	10	10
83	18.150	1107.74	.74	1107.39	.39	0	10	10
84	18.550	1103.87	.87	1103.44	.44	0	10	10
85	18.673	1102.88	.88	1102.45	.45	0	10	10
86	18.795	1101.90	.90	1101.45	.45	0	10	10
87	18.918	1100.91	.91	1100.46	.46	0	10	10
88	19.040	1099.81	.81	1099.46	.46	0	10	10
89	19.160	1097.84	.84	1097.49	.49	0	10	10
90	19.280	1095.88	.88	1095.51	.51	0	10	10
91	19.400	1093.93	.93	1093.55	.55	0	10	10
92	19.520	1092.14	1.14	1091.59	.59	0	10	10
93	19.785	1090.15	1.15	1089.59	.59	0	10	10
94	20.050	1088.09	1.09	1087.61	.61	0	10	10
95	20.220	1086.12	1.12	1085.62	.62	0	10	10
96	20.390	1084.14	1.14	1083.64	.64	0	10	10
97	20.560	1082.17	1.17	1081.66	.66	0	10	10
98	20.730	1080.20	1.20	1079.68	.68	0	10	10
99	20.950	1077.59	1.25	1077.05	.72	0	10	10

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
100	21.170	1074.99	1.32	1074.42	.76	0	10	10
101	21.390	1072.50	1.50	1071.82	.82	0	10	10
102	21.610	1070.51	1.51	1069.82	.82	0	10	10
103	21.830	1068.54	1.54	1067.83	.83	0	10	10
104	22.050	1066.56	1.56	1065.84	.84	0	10	10
105	22.270	1064.57	1.57	1063.85	.85	0	10	10
106	22.490	1062.59	1.59	1061.86	.86	0	10	10
107	22.710	1060.58	1.58	1059.88	.88	0	10	10
108	22.819	1059.52	1.63	1058.79	.90	0	10	10
109	22.928	1058.48	1.70	1057.72	.94	0	10	10
110	23.037	1057.44	1.77	1056.64	.97	0	10	10
111	23.146	1056.41	1.85	1055.57	1.02	0	10	10
112	23.254	1055.38	1.94	1054.51	1.06	0	10	10
113	23.363	1054.38	2.04	1053.46	1.12	0	10	10
114	23.472	1053.39	2.16	1052.43	1.20	0	10	10
115	23.581	1052.38	2.27	1051.43	1.32	0	10	10
116	23.690	1051.40	2.40	1050.44	1.44	0	10	10
117	23.807	1050.15	2.40	1049.12	1.37	0	10	10
118	23.925	1048.86	2.36	1047.80	1.30	0	10	10
119	24.042	1047.54	2.29	1046.50	1.25	0	10	10
120	24.160	1046.15	2.15	1045.20	1.20	0	10	10
121	24.266	1044.82	2.20	1043.85	1.24	0	10	10
122	24.372	1043.50	2.27	1042.51	1.28	0	10	10
123	24.478	1042.19	2.34	1041.16	1.31	0	10	10
124	24.585	1040.89	2.43	1039.83	1.37	0	10	10
125	24.691	1039.61	2.53	1038.49	1.42	0	10	10
126	24.797	1038.33	2.64	1037.17	1.48	0	10	10
127	24.903	1037.07	2.76	1035.87	1.56	0	10	10
128	25.009	1035.84	2.92	1034.56	1.64	0	10	10
129	25.115	1034.64	3.10	1033.30	1.76	0	10	10
130	25.222	1033.45	3.30	1032.05	1.89	0	10	10
131	25.328	1032.34	3.57	1030.85	2.08	0	10	10
132	25.434	1031.28	3.90	1029.80	2.41	0	10	10
133	25.540	1030.14	4.14	1028.84	2.84	0	10	10
134	25.770	1025.40	3.80	1023.91	2.31	0	10	10
135	26.000	1020.77	3.57	1019.27	2.07	0	10	10
136	26.230	1015.98	3.18	1014.70	1.90	0	10	10
137	26.460	1011.41	3.01	1010.17	1.77	0	10	10
138	26.690	1007.10	3.10	1005.69	1.69	0	10	10
139	26.910	1003.53	2.53	1002.26	1.26	0	10	10
140	27.130	1000.14	2.14	999.01	1.01	0	10	10
141	27.350	996.85	1.85	995.85	.85	0	10	10
142	27.570	993.55	1.55	992.73	.73	0	10	10
143	27.806	989.64	1.64	988.80	.80	0	10	10
144	28.042	985.73	1.73	984.85	.85	0	10	10
145	28.278	981.85	1.85	980.92	.92	0	10	10
146	28.514	977.98	1.98	977.01	1.01	0	10	10
147	28.750	974.09	2.09	973.12	1.12	0	10	10
148	28.812	972.82	1.97	971.92	1.06	0	10	10
149	28.874	971.60	1.88	970.73	1.01	0	10	10

Cross Section Number I	Cross Section Location X1 (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
150	28.936	970.40	1.83	969.55	.98	0	10	10
151	28.999	969.21	1.78	968.38	.96	0	10	10
152	29.061	968.01	1.72	967.20	.91	0	10	10
153	29.123	966.82	1.68	966.04	.90	0	10	10
154	29.185	965.65	1.65	964.87	.87	0	10	10
155	29.247	964.47	1.61	963.71	.85	0	11	11
156	29.309	963.29	1.57	962.55	.83	0	11	11
157	29.371	962.12	1.55	961.39	.82	0	11	11
158	29.434	960.96	1.53	960.23	.80	0	11	11
159	29.496	959.79	1.50	959.07	.79	0	11	11
160	29.558	958.62	1.48	957.91	.77	0	11	11
161	29.620	957.49	1.49	956.76	.76	0	11	11
162	29.673	956.66	1.55	955.90	.79	0	11	11
163	29.727	955.85	1.62	955.05	.83	0	11	11
164	29.780	955.03	1.69	954.21	.87	0	11	11
165	29.833	954.23	1.79	953.36	.92	0	11	11
166	29.887	953.46	1.90	952.53	.98	0	11	11
167	29.940	952.70	2.03	951.72	1.05	0	11	11
168	29.993	951.99	2.21	950.91	1.13	0	11	11
169	30.047	951.34	2.46	950.14	1.25	0	11	11
170	30.100	950.81	2.81	949.41	1.41	0	11	11

SUMMARY OF INITIAL DOWNSTREAM BOUNDARY CONDITIONS :

Cross-section Number at Downstream End of Model (IN)	170
Initial Water Surface Elev. at Downstream End (YNN, ft MSL)	950.807
Initial Flow Depth at Downstream End (DEP, ft)	2.807

COMPUTED STEP BACKWATER TABLE :

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
169	30.047	1000.0	951.607	2.718	4
168	29.993	1000.0	952.229	2.452	5
167	29.940	1000.0	952.867	2.200	4
166	29.887	1000.0	953.561	2.005	4
165	29.833	1000.0	954.307	1.863	4
164	29.780	1000.0	955.087	1.753	4
163	29.727	1000.0	955.887	1.665	4
162	29.673	1000.0	956.701	1.590	4
161	29.620	1000.0	957.525	1.525	4
160	29.558	1000.0	958.598	1.456	4
159	29.496	1000.0	959.787	1.502	4
158	29.434	1000.0	960.947	1.518	4
157	29.371	1000.0	962.116	1.545	4
156	29.309	1000.0	963.285	1.571	4
155	29.247	1000.0	964.457	1.600	4
154	29.185	1000.0	965.632	1.632	4
153	29.123	1000.0	966.810	1.667	4
152	29.061	1000.0	967.993	1.707	4
151	28.999	1000.0	969.181	1.752	4

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
150	28.936	1000.0	970.376	1.804	4
149	28.874	1000.0	971.580	1.866	4
148	28.812	1000.0	972.798	1.941	4
147	28.750	1000.0	974.035	2.035	4
146	28.514	1000.0	978.070	2.070	3
145	28.278	1000.0	981.836	1.836	4
144	28.042	1000.0	985.781	1.781	4
143	27.806	1000.0	989.641	1.641	4
142	27.570	1000.0	993.571	1.571	4
141	27.350	1000.0	996.857	1.857	4
140	27.130	1000.0	1000.057	2.057	3
139	26.910	1000.0	1003.462	2.462	3
138	26.690	1000.0	1006.965	2.965	4
137	26.460	1000.0	1011.322	2.922	3
136	26.230	1000.0	1015.988	3.188	4
135	26.000	1000.0	1020.689	3.489	4
134	25.770	1000.0	1025.394	3.794	4
133	25.540	1000.0	1030.007	4.007	6
132	25.434	1000.0	1031.527	4.142	5
131	25.328	1000.0	1032.546	3.777	5
130	25.222	1000.0	1033.598	3.444	4
129	25.115	1000.0	1034.736	3.198	4
128	25.009	1000.0	1035.921	2.998	4
127	24.903	1000.0	1037.140	2.832	4
126	24.797	1000.0	1038.385	2.693	4
125	24.691	1000.0	1039.650	2.573	4
124	24.585	1000.0	1040.932	2.470	4
123	24.478	1000.0	1042.226	2.380	4
122	24.372	1000.0	1043.532	2.301	4
121	24.266	1000.0	1044.846	2.230	4
120	24.160	1000.0	1046.167	2.167	4
119	24.042	1000.0	1047.541	2.291	4
118	23.925	1000.0	1048.838	2.338	4
117	23.807	1000.0	1050.134	2.384	4
116	23.690	1000.0	1051.396	2.396	4
115	23.581	1000.0	1052.451	2.340	4
114	23.472	1000.0	1053.426	2.203	5
113	23.363	1000.0	1054.422	2.089	5
112	23.254	1000.0	1055.427	1.983	5
111	23.146	1000.0	1056.443	1.887	5
110	23.037	1000.0	1057.471	1.804	4
109	22.928	1000.0	1058.505	1.728	4
108	22.819	1000.0	1059.549	1.661	4
107	22.710	1000.0	1060.601	1.601	4
106	22.490	1000.0	1062.615	1.615	4
105	22.270	1000.0	1064.574	1.574	4
104	22.050	1000.0	1066.562	1.562	4
103	21.830	1000.0	1068.537	1.537	4
102	21.610	1000.0	1070.521	1.521	4
101	21.390	1000.0	1072.501	1.501	4

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
100	21.170	1000.0	1074.958	1.292	4
99	20.950	1000.0	1077.618	1.285	4
98	20.730	1000.0	1080.184	1.184	4
97	20.560	1000.0	1082.186	1.186	4
96	20.390	1000.0	1084.132	1.132	4
95	20.220	1000.0	1086.119	1.119	4
94	20.050	1000.0	1088.085	1.085	4
93	19.785	1000.0	1090.217	1.217	4
92	19.520	1000.0	1092.106	1.106	4
91	19.400	1000.0	1093.869	.869	3
90	19.280	1000.0	1095.937	.937	4
89	19.160	1000.0	1097.814	.814	4
88	19.040	1000.0	1099.832	.832	4
87	18.918	1000.0	1100.954	.954	5
86	18.795	1000.0	1101.876	.876	5
85	18.673	1000.0	1102.895	.895	4
84	18.550	1000.0	1103.868	.868	4
83	18.150	1000.0	1107.727	.727	3
82	17.750	1000.0	1111.696	.696	4
81	17.438	1000.0	1115.610	.610	3
80	17.125	1000.0	1119.710	.710	4
79	16.813	1000.0	1123.642	.642	4
78	16.500	1000.0	1127.728	.728	4
77	16.178	1000.0	1133.534	.534	3
76	15.855	1000.0	1139.643	.643	4
75	15.533	1000.0	1145.500	.500	4
74	15.210	1000.0	1151.585	.585	4
73	14.700	1000.0	1159.535	.535	5
72	14.527	1000.0	1163.559	.559	3
71	14.353	1000.0	1167.641	.641	4
70	14.180	1000.0	1171.714	.714	4
69	13.840	1000.0	1180.990	.657	3
68	13.500	1000.0	1190.305	.638	4
67	13.160	1000.0	1199.597	.597	4
66	13.053	1000.0	1202.943	.609	3
65	12.947	1000.0	1206.337	.671	4
64	12.840	1000.0	1209.702	.702	4
63	12.733	1000.0	1213.126	.792	4
62	12.627	1000.0	1216.545	.878	4
61	12.520	1000.0	1220.087	1.087	3
60	12.414	1000.0	1222.691	1.191	5
59	12.308	1000.0	1225.121	1.121	4
58	12.201	1000.0	1227.681	1.181	4
57	12.095	1000.0	1230.144	1.144	4
56	11.989	1000.0	1232.678	1.178	4
55	11.883	1000.0	1235.160	1.160	4
54	11.776	1000.0	1237.680	1.181	4
53	11.670	1000.0	1240.172	1.172	4
52	11.566	1000.0	1243.667	1.031	3
51	11.463	1000.0	1247.425	1.152	4

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
50	11.359	1000.0	1250.962	1.053	4
49	11.255	1000.0	1254.684	1.139	4
48	11.152	1000.0	1258.251	1.070	4
47	11.048	1000.0	1261.948	1.130	4
46	10.945	1000.0	1265.537	1.082	4
45	10.841	1000.0	1269.215	1.125	4
44	10.737	1000.0	1272.819	1.092	4
43	10.634	1000.0	1276.485	1.121	4
42	10.530	1000.0	1280.100	1.100	4
41	10.478	1000.0	1282.370	1.018	4
40	10.425	1000.0	1284.767	1.061	4
39	10.373	1000.0	1287.072	1.014	4
38	10.321	1000.0	1289.444	1.032	4
37	10.268	1000.0	1291.768	1.003	4
36	10.216	1000.0	1294.128	1.011	4
35	10.164	1000.0	1296.462	.991	4
34	10.111	1000.0	1298.817	.994	4
33	10.059	1000.0	1301.156	.980	4
32	10.006	1000.0	1303.508	.979	4
31	9.954	1000.0	1305.849	.966	5
30	9.902	1000.0	1308.199	.964	4
29	9.849	1000.0	1310.542	.954	4
28	9.797	1000.0	1312.891	.950	4
27	9.745	1000.0	1315.236	.942	4
26	9.692	1000.0	1317.584	.937	4
25	9.640	1000.0	1319.930	.930	4
24	9.589	1000.0	1322.727	.870	4
23	9.537	1000.0	1325.651	.937	4
22	9.486	1000.0	1328.469	.898	4
21	9.434	1000.0	1331.377	.948	4
20	9.383	1000.0	1334.210	.925	4
19	9.331	1000.0	1337.106	.963	4
18	9.280	1000.0	1339.951	.951	4
17	9.229	1000.0	1342.839	.982	4
16	9.177	1000.0	1345.692	.978	4
15	9.126	1000.0	1348.575	1.003	4
14	9.074	1000.0	1351.434	1.005	4
13	9.023	1000.0	1354.311	1.025	5
12	8.971	1000.0	1357.173	1.030	4
11	8.920	1000.0	1360.051	1.051	4
10	8.890	1000.0	1362.634	.634	4
9	8.860	1000.0	1366.142	1.142	4
8	8.830	1000.0	1368.702	.701	6
7	8.800	1000.0	1372.218	1.218	4
6	8.770	1000.0	1374.771	.771	6
5	8.740	1000.0	1378.285	1.285	4
4	8.710	1000.0	1380.844	.843	6
3	8.680	1000.0	1384.345	1.345	4
2	8.650	1000.0	1386.918	.918	6
1	8.620	1000.0	1406.700	16.700	0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
1	1406.70	1000.0
2	1386.92	1000.0
3	1384.35	1000.0
4	1380.84	1000.0
5	1378.29	1000.0
6	1374.77	1000.0
7	1372.22	1000.0
8	1368.70	1000.0
9	1366.14	1000.0
10	1362.63	1000.0
11	1360.05	1000.0
12	1357.17	1000.0
13	1354.31	1000.0
14	1351.43	1000.0
15	1348.57	1000.0
16	1345.69	1000.0
17	1342.84	1000.0
18	1339.95	1000.0
19	1337.11	1000.0
20	1334.21	1000.0
21	1331.38	1000.0
22	1328.47	1000.0
23	1325.65	1000.0
24	1322.73	1000.0
25	1319.93	1000.0
26	1317.58	1000.0
27	1315.24	1000.0
28	1312.89	1000.0
29	1310.54	1000.0
30	1308.20	1000.0
31	1305.85	1000.0
32	1303.51	1000.0
33	1301.16	1000.0
34	1298.82	1000.0
35	1296.46	1000.0
36	1294.13	1000.0
37	1291.77	1000.0
38	1289.44	1000.0
39	1287.07	1000.0
40	1284.77	1000.0
41	1282.37	1000.0
42	1280.10	1000.0
43	1276.49	1000.0
44	1272.82	1000.0
45	1269.22	1000.0
46	1265.54	1000.0
47	1261.95	1000.0
48	1258.25	1000.0
49	1254.68	1000.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
50	1250.96	1000.0
51	1247.43	1000.0
52	1243.67	1000.0
53	1240.17	1000.0
54	1237.68	1000.0
55	1235.16	1000.0
56	1232.68	1000.0
57	1230.14	1000.0
58	1227.68	1000.0
59	1225.12	1000.0
60	1222.69	1000.0
61	1220.09	1000.0
62	1216.55	1000.0
63	1213.13	1000.0
64	1209.70	1000.0
65	1206.34	1000.0
66	1202.94	1000.0
67	1199.60	1000.0
68	1190.31	1000.0
69	1180.99	1000.0
70	1171.71	1000.0
71	1167.64	1000.0
72	1163.56	1000.0
73	1159.53	1000.0
74	1151.58	1000.0
75	1145.50	1000.0
76	1139.64	1000.0
77	1133.53	1000.0
78	1127.73	1000.0
79	1123.64	1000.0
80	1119.71	1000.0
81	1115.61	1000.0
82	1111.70	1000.0
83	1107.73	1000.0
84	1103.87	1000.0
85	1102.90	1000.0
86	1101.88	1000.0
87	1100.95	1000.0
88	1099.83	1000.0
89	1097.81	1000.0
90	1095.94	1000.0
91	1093.87	1000.0
92	1092.11	1000.0
93	1090.22	1000.0
94	1088.08	1000.0
95	1086.12	1000.0
96	1084.13	1000.0
97	1082.19	1000.0
98	1080.18	1000.0
99	1077.62	1000.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
100	1074.96	1000.0
101	1072.50	1000.0
102	1070.52	1000.0
103	1068.54	1000.0
104	1066.56	1000.0
105	1064.57	1000.0
106	1062.61	1000.0
107	1060.60	1000.0
108	1059.55	1000.0
109	1058.51	1000.0
110	1057.47	1000.0
111	1056.44	1000.0
112	1055.43	1000.0
113	1054.42	1000.0
114	1053.43	1000.0
115	1052.45	1000.0
116	1051.40	1000.0
117	1050.13	1000.0
118	1048.84	1000.0
119	1047.54	1000.0
120	1046.17	1000.0
121	1044.85	1000.0
122	1043.53	1000.0
123	1042.23	1000.0
124	1040.93	1000.0
125	1039.65	1000.0
126	1038.39	1000.0
127	1037.14	1000.0
128	1035.92	1000.0
129	1034.74	1000.0
130	1033.60	1000.0
131	1032.55	1000.0
132	1031.53	1000.0
133	1030.01	1000.0
134	1025.39	1000.0
135	1020.69	1000.0
136	1015.99	1000.0
137	1011.32	1000.0
138	1006.96	1000.0
139	1003.46	1000.0
140	1000.06	1000.0
141	996.86	1000.0
142	993.57	1000.0
143	989.64	1000.0
144	985.78	1000.0
145	981.84	1000.0
146	978.07	1000.0
147	974.03	1000.0
148	972.80	1000.0
149	971.58	1000.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
150	970.38	1000.0
151	969.18	1000.0
152	967.99	1000.0
153	966.81	1000.0
154	965.63	1000.0
155	964.46	1000.0
156	963.29	1000.0
157	962.12	1000.0
158	960.95	1000.0
159	959.79	1000.0
160	958.60	1000.0
161	957.53	1000.0
162	956.70	1000.0
163	955.89	1000.0
164	955.09	1000.0
165	954.31	1000.0
166	953.56	1000.0
167	952.87	1000.0
168	952.23	1000.0
169	951.61	1000.0
170	950.81	1000.0

DAM OUTFLOW HYDROGRAPH TIME PARAMETERS :

Time to Failure (TFH, hr)	3.100
Time to Start of Rising Limb of Hydrograph (TFO, hr)	.000
Time to Peak (TP, hr)	8.000
Time Step Size (DTHI, hr)	.200

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TI)	9.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	29055.49
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1417.75
Flow at Downstream End of Model (QU(N), cfs)	1006.81
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.54

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1417.75	.29	101353.	4290.	4290.	29.055	.0400	.00	10.81	407.4	.0	27.8
8.890	1364.77	10.53	2592.	1636.	1636.	27.304	.0400	-.50	2.07	.0	1.5	2.8
9.331	1339.48	4.94	4682.	2306.	2306.	23.151	.0500	-.50	2.37	.0	.6	3.3
9.797	1314.97	4.03	4731.	2669.	2669.	19.086	.0500	-.50	2.08	.0	.5	3.0
10.268	1293.64	3.56	4453.	3035.	3035.	15.846	.0500	-.50	1.87	.0	.5	2.9
10.945	1267.38	3.15	4225.	2869.	2869.	13.301	.0500	.00	1.84	.0	.5	2.9
11.883	1237.12	2.90	4106.	2359.	2359.	11.921	.0500	.00	1.96	.0	.4	3.1
12.840	1210.66	2.59	4143.	3952.	3952.	10.748	.0500	.00	.96	.0	.4	1.7
14.700	1160.19	1.23	6229.	9227.	9227.	7.665	.0500	.00	.66	.0	.3	1.2
17.750	1111.71	.61	1741.	4894.	4894.	1.068	.0500	.00	.02	.0	.2	.7
19.400	1093.87	1.19	847.	1948.	1948.	1.008	.0500	.00	.00	.0	.3	.9
21.170	1074.96	1.27	794.	1043.	1043.	1.008	.0500	.00	.00	.0	.3	1.3
22.928	1058.51	1.28	786.	768.	768.	1.008	.0500	.00	.00	.0	.2	1.7
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.903	1037.15	1.76	571.	401.	401.	1.007	.0500	.00	.01	.0	.3	2.8
26.230	1016.00	2.73	368.	192.	192.	1.007	.0500	.00	.01	.0	.3	3.2
28.278	981.84	2.20	458.	316.	316.	1.007	.0500	.00	.01	.0	.3	1.8
29.185	965.64	1.87	532.	484.	484.	1.007	.0500	.00	.01	.0	.3	1.6
29.727	955.89	1.73	582.	512.	512.	1.007	.0500	.00	.00	.0	.3	1.7

Maximum Froude Number (FRDM)	1.47
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.01
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	9.200	29055.	1417.75	1402.02	1389.96	1.00	152.52	29055.	15469.	0.	13587.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	9.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	55972.37
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1417.66
Flow at Downstream End of Model (QU(N), cfs)	1007.05
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.54

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1417.66	.55	100949.	4289.	4289.	55.972	.0400	.00	10.71	802.3	.0	27.7
8.890	1365.94	11.20	4799.	2124.	2124.	53.770	.0400	-.50	3.24	.0	1.3	3.9
9.331	1340.73	6.04	7917.	2901.	2901.	47.823	.0500	-.50	3.61	.0	.6	4.6
9.797	1316.14	4.98	8280.	3435.	3435.	41.196	.0500	-.50	3.25	.0	.6	4.2
10.268	1294.58	4.31	7746.	3994.	3994.	33.354	.0500	-.50	2.81	.0	.5	3.8
10.945	1268.01	3.60	6223.	3479.	3479.	22.386	.0500	.00	2.47	.0	.5	3.6
11.883	1237.42	3.10	4823.	2542.	2542.	14.930	.0500	.00	2.26	.0	.4	3.4
12.840	1210.76	2.70	4524.	4032.	4032.	12.222	.0500	.00	1.06	.0	.4	1.8
14.700	1160.26	1.32	6872.	9327.	9327.	9.060	.0500	.00	.73	.0	.3	1.3
17.750	1111.71	.61	1719.	4863.	4863.	1.046	.0500	.00	.01	.0	.2	.7
19.400	1093.87	1.19	847.	1948.	1948.	1.007	.0500	.00	.00	.0	.3	.9
21.170	1074.96	1.27	794.	1043.	1043.	1.008	.0500	.00	.00	.0	.3	1.3
22.928	1058.51	1.28	786.	768.	768.	1.008	.0500	.00	.00	.0	.2	1.7
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.903	1037.15	1.76	571.	401.	401.	1.007	.0500	.00	.01	.0	.3	2.8
26.230	1016.00	2.73	368.	192.	192.	1.007	.0500	.00	.01	.0	.3	3.2
28.278	981.84	2.20	458.	316.	316.	1.007	.0500	.00	.01	.0	.3	1.8
29.185	965.64	1.82	532.	484.	484.	1.007	.0500	.00	.01	.0	.3	1.6
29.727	955.89	1.73	582.	512.	512.	1.007	.0500	.00	.00	.0	.3	1.7

Maximum Froude Number (FRDM)	1.31
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.02
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	9.600	55972.	1417.66	1400.09	1390.83	1.00	254.19	55972.	42811.	0.	13162.

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Time (T)	10.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	102917.00
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1416.89
Flow at Downstream End of Model (QU(N), cfs)	1007.14
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.54

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1416.89	1.05	97655.	4286.	4286.	102.917	.0400	.00	9.95	1458.0	.0	26.9
8.890	1367.37	11.88	8263.	2904.	2904.	98.151	.0400	-.50	4.67	.0	1.2	5.4
9.331	1342.02	7.24	12267.	3938.	3938.	88.830	.0458	-.50	4.91	.0	.7	5.9
9.797	1317.38	6.12	13074.	4271.	4271.	79.949	.0479	-.50	4.49	.0	.6	5.4
10.268	1295.80	5.19	13373.	5231.	5231.	69.401	.0500	-.50	4.03	.0	.6	5.0
10.945	1269.34	4.43	11732.	4775.	4775.	51.918	.0500	.00	3.81	.0	.5	4.9
11.883	1238.58	3.31	8210.	3274.	3274.	31.242	.0500	.00	3.42	.0	.4	4.6
12.840	1211.06	3.03	5767.	4280.	4280.	17.496	.0500	.00	1.36	.0	.5	2.1
14.700	1160.33	1.39	7522.	9427.	9427.	10.490	.0500	.00	.80	.0	.3	1.3
17.750	1111.70	.62	1669.	4792.	4792.	1.035	.0500	.00	.00	.0	.2	.7
19.400	1093.87	1.19	847.	1948.	1948.	1.007	.0500	.00	.00	.0	.3	.9
21.170	1074.96	1.27	794.	1043.	1043.	1.008	.0500	.00	.00	.0	.3	1.3
22.928	1058.51	1.28	786.	768.	768.	1.008	.0500	.00	.00	.0	.2	1.7
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.903	1037.15	1.76	571.	401.	401.	1.007	.0500	.00	.01	.0	.3	2.8
26.239	1016.00	2.73	368.	192.	192.	1.007	.0500	.00	.01	.0	.3	3.2
28.276	981.84	2.20	458.	316.	316.	1.007	.0500	.00	.01	.0	.3	1.8
29.155	965.64	1.89	532.	484.	484.	1.007	.0500	.00	.01	.0	.3	1.6
29.727	955.89	1.73	582.	512.	512.	1.007	.0500	.00	.00	.0	.3	1.7

Maximum Froude Number (FRDM)	1.24
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.04
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	10.000	102917.	1416.89	1398.17	1391.94	1.00	355.87	102917.	91373.	0.	11544.

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Time (TT)	10.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	128897.40
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1415.29
Flow at Downstream End of Model (QU(N), cfs)	1007.24
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.54

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity U (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1415.29	1.42	90819.	4279.	4279.	128.897	.0400	.00	8.35	2028.3	.1	25.3
8.890	1368.09	11.88	10667.	3770.	3770.	126.748	.0400	-.50	5.39	.0	1.2	6.1
9.331	1342.72	8.14	15256.	4602.	4602.	124.256	.0423	-.50	5.61	.0	.8	6.6
9.797	1318.20	7.27	16795.	4836.	4836.	122.173	.0438	-.50	5.31	.0	.7	6.3
10.268	1296.67	6.49	18231.	5849.	5849.	118.363	.0455	-.50	4.90	.0	.6	5.9
10.945	1270.62	5.89	18499.	5803.	5803.	108.874	.0440	.00	5.08	.0	.6	6.2
11.883	1240.51	5.41	15914.	4782.	4782.	86.046	.0429	.00	5.35	.0	.5	6.5
12.840	1212.33	4.23	11891.	5339.	5339.	50.350	.0500	.00	2.63	.0	.5	3.3
14.700	1160.43	1.50	8473.	9570.	9570.	12.702	.0500	.00	.90	.0	.3	1.4
17.750	1111.71	.61	1739.	4891.	4891.	1.053	.0500	.00	.01	.0	.2	.7
19.400	1093.87	1.19	851.	1952.	1952.	1.013	.0500	.00	.00	.0	.3	.9
21.170	1074.96	1.27	794.	1043.	1043.	1.008	.0500	.00	.00	.0	.3	1.3
22.929	1058.51	1.28	786.	768.	768.	1.008	.0500	.00	.00	.0	.2	1.7
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.903	1037.15	1.76	571.	401.	401.	1.007	.0500	.00	.01	.0	.3	2.8
26.230	1016.00	2.73	368.	192.	192.	1.007	.0500	.00	.01	.0	.3	3.2
28.278	981.84	2.20	458.	316.	316.	1.007	.0500	.00	.01	.0	.3	1.8
29.185	965.64	1.89	532.	484.	484.	1.007	.0500	.00	.01	.0	.3	1.6
29.727	955.87	1.73	582.	512.	512.	1.007	.0500	.00	.00	.0	.3	1.7

Maximum Froude Number (FRDM)	1.24
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.05
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	10.400	128897.	1415.29	1396.25	1392.44	1.00	457.55	128897.	120169.	0.	8729.

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Time (TT)	10.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	147681.70
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1413.03
Flow at Downstream End of Model (QU(N), cfs)	1007.23
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.54

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1413.03	1.82	81139.	4268.	4268.	147.682	.0400	.00	6.08	2372.7	.1	23.0
8.890	1368.45	12.10	12114.	4207.	4207.	146.638	.0400	-.50	5.75	.0	1.3	6.5
9.331	1343.04	8.63	16752.	4902.	4902.	144.575	.0407	-.50	5.93	.0	.8	6.9
9.797	1318.51	7.77	18318.	5049.	5049.	142.337	.0423	-.50	5.62	.0	.7	6.6
10.268	1296.77	6.97	19993.	6058.	6058.	139.399	.0441	-.50	5.20	.0	.7	6.2
10.745	1271.04	6.44	20977.	6131.	6131.	135.175	.0419	.00	5.50	.0	.6	6.6
11.883	1241.45	6.19	20756.	5555.	5555.	128.546	.0400	.00	6.29	.0	.6	7.4
12.840	1214.04	5.41	22221.	6746.	6746.	120.121	.0500	.00	4.34	.0	.5	5.0
14.700	1161.11	2.10	15341.	10552.	10552.	32.143	.0500	.00	1.58	.0	.3	2.1
17.750	1112.08	.89	3960.	6929.	6929.	3.522	.0500	.00	.38	.0	.2	1.1
19.400	1093.88	1.20	863.	1967.	1967.	1.032	.0500	.00	.01	.0	.3	.9
21.170	1074.96	1.27	794.	1043.	1043.	1.008	.0500	.00	.00	.0	.3	1.3
22.928	1058.51	1.28	786.	768.	768.	1.008	.0500	.00	.00	.0	.2	1.7
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.903	1037.15	1.76	571.	401.	401.	1.007	.0500	.00	.01	.0	.3	2.8
26.230	1016.00	2.73	368.	192.	192.	1.007	.0500	.00	.01	.0	.3	3.2
28.270	981.84	2.20	458.	316.	316.	1.007	.0500	.00	.01	.0	.3	1.8
29.185	965.64	1.89	532.	484.	484.	1.007	.0500	.00	.01	.0	.3	1.6
29.727	955.89	1.73	582.	512.	512.	1.007	.0500	.00	.00	.0	.3	1.7

Maximum Froude Number (FRDM)	1.26
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.07
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	10.800	147682.	1413.03	1394.33	1392.76	1.00	559.23	147682.	142698.	0.	4984.

1	3	10.300	147682.	1413.03	1394.33	1392.76	1.00	559.23	147682.	142698.	0.	4984.

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Time (TT)	11.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	155853.70
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1410.04
Flow at Downstream End of Model (QU(N), cfs)	1007.25
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.54

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n UMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1410.04	2.28	68419.	4255.	4255.	155.854	.0400	.00	3.10	2555.2	.1	20.0
8.890	1368.60	12.21	12749.	4385.	4385.	155.670	.0400	-.50	5.90	.0	1.3	6.6
9.331	1343.19	8.86	17496.	5044.	5044.	155.016	.0400	-.50	6.08	.0	.8	7.0
9.797	1318.67	8.05	19160.	5163.	5163.	154.176	.0415	-.50	5.78	.0	.7	6.7
10.268	1297.15	[illegible]	21077.	6182.	6182.	153.261	.0432	-.50	5.38	.0	.7	6.4
10.945	1271.26	6.77	22386.	6310.	6310.	151.530	.0407	.00	5.73	.0	.6	6.8
11.883	1241.83	6.37	22958.	5873.	5873.	146.217	.0400	.00	6.67	.0	.6	7.8
12.840	1214.35	5.76	24322.	6903.	6903.	140.187	.0491	.00	4.64	.0	.5	5.3
14.700	1162.85	3.43	35812.	13046.	13046.	122.751	.0476	.00	3.31	.0	.4	3.8
17.750	1112.36	1.15	5973.	7116.	7116.	6.874	.0500	.00	.67	.0	.2	1.4
19.400	1093.88	1.20	879.	1985.	1985.	1.057	.0500	.00	.02	.0	.3	.9
21.170	1074.96	1.27	794.	1043.	1043.	1.008	.0500	.00	.00	.0	.3	1.3
22.928	1058.51	1.28	786.	768.	768.	1.008	.0500	.00	.00	.0	.2	1.7
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.903	1037.15	1.76	571.	401.	401.	1.007	.0500	.00	.01	.0	.3	2.8
26.230	1016.00	2.73	368.	192.	192.	1.007	.0500	.00	.01	.0	.3	3.2
28.278	981.84	2.20	458.	316.	316.	1.007	.0500	.00	.01	.0	.3	1.8
29.185	965.64	1.89	532.	484.	484.	1.007	.0500	.00	.01	.0	.3	1.6
29.727	955.87	1.73	582.	512.	512.	1.007	.0500	.00	.00	.0	.3	1.7

Maximum Froude Number (FRDM)	1.26
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.10
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	11.200	155854.	1410.04	1392.40	1392.90	1.00	660.90	155854.	154481.	0.	1373.

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Time (TT)	11.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	150306.10
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1406.20
Flow at Downstream End of Model (QU(N), cfs)	1007.31
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.54

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1406.20	2.89	52077.	4237.	4237.	150.306	.0400	.00	-.75	2521.6	.1	16.2
8.890	1368.53	12.15	12427.	4295.	4295.	151.010	.0400	-.50	5.83	.0	1.3	6.5
9.331	1343.15	8.81	17310.	5008.	5008.	152.506	.0401	-.50	6.04	.0	.8	7.0
9.797	1310.66	8.03	19110.	5157.	5157.	153.414	.0415	-.50	5.77	.0	.7	6.7
10.268	1297.16	7.29	21156.	6191.	6191.	154.271	.0431	-.50	5.39	.0	.7	6.4
10.945	1271.31	6.83	22698.	6349.	6349.	155.012	.0405	.00	5.78	.0	.6	6.9
11.883	1242.01	6.44	24046.	6024.	6024.	154.885	.0400	.00	6.85	.0	.6	8.0
12.940	1214.51	6.02	25448.	6986.	6986.	153.110	.0482	.00	4.81	.0	.6	5.5
14.700	1163.12	3.63	39400.	13435.	13435.	143.026	.0450	.00	3.59	.0	.4	4.1
17.750	1112.57	1.30	7455.	7251.	7251.	9.689	.0500	.00	.87	.0	.2	1.6
19.400	1093.90	1.21	905.	2014.	2014.	1.098	.0500	.00	.03	.0	.3	.9
21.170	1074.96	1.27	794.	1043.	1043.	1.009	.0500	.00	.00	.0	.3	1.3
22.928	1058.51	1.28	786.	768.	768.	1.008	.0500	.00	.00	.0	.2	1.7
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.903	1037.15	1.76	571.	401.	401.	1.007	.0500	.00	.01	.0	.3	2.8
26.230	1016.00	2.73	368.	192.	192.	1.007	.0500	.00	.01	.0	.3	3.2
28.278	981.84	2.20	458.	316.	316.	1.007	.0500	.00	.01	.0	.3	1.8
29.105	965.64	1.89	532.	484.	484.	1.007	.0500	.00	.01	.0	.3	1.6
29.727	955.89	1.73	582.	512.	512.	1.007	.0500	.00	.00	.0	.3	1.7

Maximum Froude Number (FRDM)	1.26
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.15
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	11.600	150306.	1406.20	1390.48	1392.81	1.00	762.58	150306.	150306.	0.	0.

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Time (TI)	12.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	98365.35
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1401.56
Flow at Downstream End of Model (QU(N), cfs)	1007.29
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.54

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1401.56	3.03	32491.	4216.	4216.	98.365	.0400	.00	-5.38	1885.2	.2	11.6
8.890	1367.53	11.76	8758.	3102.	3102.	103.012	.0400	-.50	4.83	.0	1.2	5.5
9.331	1342.51	7.83	14312.	4403.	4403.	112.003	.0433	-.50	5.40	.0	.8	6.4
9.797	1318.17	7.21	16662.	4817.	4817.	120.197	.0439	-.50	5.28	.0	.7	6.2
10.269	1296.81	6.70	19048.	5947.	5947.	127.589	.0448	-.50	5.04	.0	.7	6.0
10.945	1271.06	6.46	21140.	6152.	6152.	136.558	.0417	.00	5.53	.0	.6	6.6
11.883	1241.86	6.34	23103.	5893.	5893.	146.459	.0400	.00	6.70	.0	.6	7.9
12.840	1214.49	5.98	25311.	6976.	6976.	151.439	.0483	.00	4.79	.0	.6	5.5
14.700	1163.24	3.75	40987.	13604.	13604.	153.627	.0443	.00	3.70	.0	.4	4.2
17.750	1115.01	3.22	27111.	8844.	8844.	87.426	.0472	.00	3.31	.0	.3	4.0
19.400	1094.07	1.38	1291.	2269.	2269.	1.787	.0500	.00	.21	.0	.3	1.1
21.170	1074.97	1.27	798.	1043.	1043.	1.016	.0500	.00	.01	.0	.3	1.3
22.928	1058.51	1.29	786.	768.	768.	1.008	.0500	.00	.00	.0	.2	1.7
23.925	1048.84	1.48	681.	604.	604.	1.007	.0500	.00	.01	.0	.2	2.3
24.903	1037.15	1.76	571.	401.	401.	1.007	.0500	.00	.01	.0	.3	2.8
26.230	1016.00	2.73	368.	192.	192.	1.007	.0500	.00	.01	.0	.3	3.2
28.270	981.84	2.20	458.	316.	316.	1.007	.0500	.00	.01	.0	.3	1.8
29.185	965.64	1.89	532.	484.	484.	1.007	.0500	.00	.01	.0	.3	1.6
29.727	955.89	1.73	582.	512.	512.	1.007	.0500	.00	.00	.0	.3	1.7

Maximum Froude Number (FRDM)	1.23
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.17
Cross-Section of Minimum Froude Number (IFM)	93

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TI (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	12.000	98365.	1401.56	1390.00	1391.85	1.00	788.00	98365.	98365.	0.	0.

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Time (TT)	12.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	41384.40
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1396.38
Flow at Downstream End of Model (QU(N), cfs)	1007.28
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.54

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1396.38	3.68	11241.	3510.	3510.	41.384	.0400	.00	-10.57	918.0	.4	6.4
8.890	1365.57	11.24	4037.	1974.	1974.	45.358	.0400	-.50	2.87	.0	1.4	3.6
9.331	1341.07	6.25	8942.	3065.	3065.	55.912	.0500	-.50	3.96	.0	.6	4.9
9.797	1317.02	5.60	11583.	4022.	4022.	64.880	.0496	-.50	4.13	.0	.6	5.1
10.269	1295.90	5.30	13934.	5306.	5306.	73.867	.0493	-.50	4.13	.0	.6	5.1
10.945	1270.25	5.35	16403.	5511.	5511.	87.807	.0457	.00	4.71	.0	.5	5.8
11.883	1240.99	5.84	18304.	5178.	5178.	106.870	.0402	.00	5.83	.0	.5	7.0
12.840	1214.12	5.42	22791.	6789.	6789.	123.424	.0500	.00	4.42	.0	.5	5.1
14.700	1163.16	3.66	39909.	13490.	13490.	145.960	.0446	.00	3.62	.0	.4	4.2
17.750	1116.31	3.81	39179.	9683.	9683.	149.361	.0400	.00	4.62	.0	.3	5.3
19.400	1097.84	4.43	12397.	3628.	3628.	54.971	.0400	.00	3.97	.0	.4	4.8
21.170	1074.98	1.28	809.	1045.	1045.	1.038	.0500	.00	.02	.0	.3	1.3
22.928	1058.51	1.28	786.	768.	768.	1.008	.0500	.00	.00	.0	.2	1.7
23.925	1048.84	1.48	681.	604.	604.	1.008	.0500	.00	.01	.0	.2	2.3
24.903	1037.15	1.76	571.	401.	401.	1.007	.0500	.00	.01	.0	.3	2.8
26.230	1016.00	2.73	368.	192.	192.	1.007	.0500	.00	.01	.0	.3	3.2
28.270	981.04	2.20	458.	316.	316.	1.007	.0500	.00	.01	.0	.3	1.8
29.185	965.64	1.89	532.	484.	484.	1.007	.0500	.00	.01	.0	.3	1.6
29.727	955.89	1.73	582.	512.	512.	1.007	.0500	.00	.00	.0	.3	1.7

Maximum Froude Number (FRDM)	1.38
Cross-Section of Maximum Froude Number (IFR)	10
Minimum Froude Number (FRM)	.21
Cross-Section of Minimum Froude Number (IFM)	106

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	12.400	41384.	1396.38	1390.00	1390.40	1.00	788.00	41384.	41384.	0.	0.

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Time (TI)	12.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	5
Flow at Upstream End of Model (QU(1), cfs)	6252.00
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1391.18
Flow at Downstream End of Model (QU(N), cfs)	1007.28
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.55

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1391.18	22.38	279.	472.	472.	6.252	.0400	.00	-15.77	226.0	5.1	1.2
8.899	1363.68	8.72	1077.	1146.	1146.	9.392	.0400	-.50	.98	.0	1.6	1.7
9.331	1339.00	4.40	3619.	2074.	2074.	15.921	.0500	-.50	1.89	.0	.6	2.9
9.797	1315.31	4.24	5668.	2891.	2891.	24.035	.0500	-.50	2.42	.0	.5	3.4
10.268	1294.66	4.29	8075.	4077.	4077.	34.642	.0500	-.50	2.89	.0	.5	3.9
10.945	1269.31	4.31	11550.	4738.	4738.	49.800	.0500	.00	3.77	.0	.5	4.9
11.883	1239.98	4.25	13501.	4346.	4346.	64.077	.0452	.00	4.82	.0	.5	6.0
12.840	1213.18	4.76	16707.	6042.	6042.	79.494	.0500	.00	3.48	.0	.5	4.2
14.700	1162.81	3.30	35300.	12989.	12989.	116.521	.0461	.00	3.28	.0	.4	3.8
17.750	1116.37	3.79	39701.	9716.	9716.	150.516	.0400	.00	4.67	.0	.3	5.4
19.400	1101.60	4.62	30442.	6013.	6013.	140.661	.0400	.00	7.73	.0	.4	8.6
21.170	1079.92	4.64	7868.	1749.	1749.	36.486	.0481	.00	4.96	.0	.4	6.3
22.928	1058.52	1.29	792.	770.	770.	1.021	.0500	.00	.01	.0	.2	1.7
23.925	1048.84	1.48	681.	604.	604.	1.008	.0500	.00	.01	.0	.2	2.3
24.903	1037.15	1.76	572.	401.	401.	1.008	.0500	.00	.01	.0	.3	2.8
26.230	1016.00	2.73	368.	192.	192.	1.007	.0500	.00	.01	.0	.3	3.2
28.270	981.84	2.20	458.	316.	316.	1.007	.0500	.00	.01	.0	.3	1.8
29.105	965.64	1.89	532.	484.	484.	1.007	.0500	.00	.01	.0	.3	1.6
29.727	955.89	1.73	582.	512.	512.	1.007	.0500	.00	.00	.0	.3	1.7

Maximum Froude Number (FRDM)	5.13
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.22
Cross-Section of Minimum Froude Number (IFM)	115

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TI (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	5	12.800	6252.	1391.18	1390.00	1388.34	1.00	788.00	6252.	6252.	0.	0.

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Time (TT)	13.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	5
Flow at Upstream End of Model (QU(1), cfs)	9531.13
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1391.56
Flow at Downstream End of Model (QU(N), cfs)	1007.28
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.55

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1391.56	19.50	489.	625.	625.	9.531	.0400	.00	-15.39	172.5	3.9	1.6
8.890	1363.82	8.90	1239.	1208.	1208.	11.028	.0400	-.50	1.12	.0	1.5	1.8
9.331	1338.37	3.75	2406.	1772.	1772.	9.032	.0500	-.50	1.26	.0	.6	2.2
9.797	1314.12	3.21	2682.	2103.	2103.	8.601	.0500	-.50	1.22	.0	.5	2.2
10.268	1293.32	3.26	3542.	2711.	2711.	11.531	.0500	-.50	1.55	.0	.5	2.6
10.945	1267.98	3.48	6107.	3447.	3447.	21.223	.0500	.00	2.44	.0	.5	3.5
11.883	1238.99	3.88	9604.	3531.	3531.	37.226	.0500	.00	3.83	.0	.4	5.0
12.840	1212.37	4.19	12089.	5369.	5369.	50.629	.0500	.00	2.67	.0	.5	3.4
14.700	1162.29	2.82	28683.	12235.	12235.	80.836	.0485	.00	2.75	.0	.3	3.3
17.750	1116.10	3.62	37120.	9551.	9551.	134.193	.0400	.00	4.40	.0	.3	5.1
19.400	1102.00	4.46	32897.	6271.	6271.	146.717	.0400	.00	8.13	.0	.3	9.0
21.170	1085.75	6.00	20921.	3043.	3043.	125.546	.0400	.00	10.79	.0	.4	12.1
22.928	1061.88	2.41	7438.	4021.	4021.	17.913	.0500	.00	3.37	.0	.3	5.1
23.925	1048.93	1.54	736.	631.	631.	1.134	.0500	.00	.09	.0	.3	2.4
24.903	1037.15	1.76	572.	402.	402.	1.009	.0500	.00	.01	.0	.3	2.8
26.230	1016.00	2.73	368.	192.	192.	1.007	.0500	.00	.01	.0	.3	3.2
28.270	981.84	2.20	458.	316.	316.	1.007	.0500	.00	.01	.0	.3	1.8
29.105	965.64	1.87	532.	484.	484.	1.007	.0500	.00	.01	.0	.3	1.6
29.727	955.89	1.73	582.	512.	512.	1.007	.0500	.00	.00	.0	.3	1.7

Maximum Froude Number (FRDM)	3.88
Cross Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.22
Cross-Section of Minimum Froude Number (IFM)	169

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submergence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	5	13.200	9531.	1391.56	1390.00	1388.74	1.00	788.00	9531.	9531.	0.	0.

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Time (TT)	13.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	5
Flow at Upstream End of Model (QU(1), cfs)	9943.20
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1391.61
Flow at Downstream End of Model (QU(N), cfs)	1007.30
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.55

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1391.61	19.23	517.	642.	642.	9.943	.0400	.00	-15.34	166.2	3.8	1.6
8.890	1363.75	8.73	1159.	1178.	1178.	10.115	.0400	-.50	1.05	.0	1.6	1.8
9.331	1338.46	3.84	2571.	1816.	1816.	9.878	.0500	-.50	1.35	.0	.6	2.3
9.797	1314.30	3.40	3083.	2225.	2225.	10.493	.0500	-.50	1.41	.0	.5	2.4
10.268	1293.11	3.11	2995.	2496.	2496.	9.323	.0500	-.50	1.34	.0	.5	2.3
10.745	1267.05	2.89	3333.	2549.	2549.	9.632	.0500	.00	1.51	.0	.4	2.6
11.893	1237.67	3.14	5501.	2705.	2705.	17.280	.0500	.00	2.51	.0	.4	3.7
12.840	1211.67	3.60	8542.	4789.	4789.	30.763	.0500	.00	1.97	.0	.5	2.7
14.700	1161.80	2.45	22920.	11538.	11538.	56.209	.0500	.00	2.27	.0	.3	2.8
17.750	1115.57	3.36	32158.	9209.	9209.	108.117	.0400	.00	3.87	.0	.3	4.6
19.400	1101.73	4.29	31197.	6093.	6093.	133.933	.0400	.00	7.86	.0	.3	8.7
21.170	1086.63	5.84	23916.	3742.	3742.	139.643	.0400	.00	11.67	.0	.4	13.0
22.928	1066.25	4.44	28504.	5602.	5602.	126.586	.0400	.00	7.75	.0	.3	9.5
23.925	1055.30	4.68	10329.	2783.	2783.	48.355	.0400	.00	6.46	.0	.4	8.8
24.903	1039.57	2.90	2086.	890.	890.	6.057	.0500	.00	2.43	.0	.3	5.3
26.230	1016.02	2.73	372.	195.	195.	1.018	.0500	.00	.03	.0	.3	3.2
28.278	981.84	2.20	458.	316.	316.	1.007	.0500	.00	.01	.0	.3	1.8
29.185	965.64	1.89	532.	484.	484.	1.007	.0500	.00	.01	.0	.3	1.6
29.727	955.89	1.73	582.	512.	512.	1.007	.0500	.00	.00	.0	.3	1.7

Maximum Froude Number (FRDM)	3.78
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.22
Cross-Section of Minimum Froude Number (IFM)	169

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	5	13.600	9943.	1391.61	1390.00	1388.78	1.00	788.00	9943.	9943.	0.	0.

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Time (T)	14.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	5
Flow at Upstream End of Model (QU(1), cfs)	9992.95
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1391.61
Flow at Downstream End of Model (QU(N), cfs)	1007.29
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.55

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity U (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1391.61	19.19	521.	645.	645.	9.993	.0400	.00	-15.34	165.4	3.8	1.6
8.890	1363.74	8.71	1141.	1171.	1171.	9.937	.0400	-.50	1.04	.0	1.6	1.7
9.231	1339.48	3.88	2616.	1828.	1828.	10.141	.0500	-.50	1.37	.0	.6	2.3
9.797	1314.24	3.34	2944.	2184.	2184.	9.831	.0500	-.50	1.35	.0	.5	2.3
10.268	1293.19	3.17	3198.	2578.	2578.	10.135	.0500	-.50	1.42	.0	.5	2.4
10.945	1267.06	2.92	3350.	2555.	2555.	9.798	.0500	.00	1.52	.0	.5	2.6
11.883	1236.88	2.72	3551.	2206.	2206.	9.671	.0500	.00	1.72	.0	.4	2.9
12.840	1210.97	2.96	5396.	4207.	4207.	15.945	.0500	.00	1.27	.0	.5	2.0
14.700	1161.37	2.17	18101.	10921.	10921.	39.364	.0500	.00	1.84	.0	.3	2.4
17.750	1115.13	2.93	28208.	8925.	8925.	82.703	.0428	.00	3.44	.0	.3	4.1
19.400	1101.04	4.09	27174.	5651.	5651.	111.186	.0400	.00	7.17	.0	.3	8.0
21.170	1088.40	5.76	23062.	3557.	3557.	132.897	.0400	.00	11.44	.0	.4	12.7
22.928	1066.86	4.28	31958.	5834.	5834.	136.827	.0400	.00	8.35	.0	.3	10.1
23.925	1059.35	4.52	27391.	5540.	5540.	123.701	.0400	.00	10.51	.0	.4	12.8
24.903	1046.13	5.32	14616.	3295.	3295.	77.768	.0400	.00	8.99	.0	.4	11.8
26.230	1020.81	4.42	3050.	924.	924.	13.641	.0500	.00	4.81	.0	.4	8.0
28.278	981.86	2.22	464.	318.	318.	1.028	.0500	.00	.03	.0	.3	1.9
29.185	965.64	1.90	532.	484.	484.	1.008	.0500	.00	.01	.0	.3	1.6
29.727	955.89	1.73	582.	512.	512.	1.007	.0500	.00	.01	.0	.3	1.7

Maximum Froude Number (FRDM)	3.76
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.22
Cross-Section of Minimum Froude Number (IFM)	169

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	5	14.000	9993.	1391.61	1390.00	1388.78	1.00	788.00	9993.	9993.	0.	0.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	14.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	5
Flow at Upstream End of Model (QU(1), cfs)	9999.04
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1391.61
Flow at Downstream End of Model (QU(N), cfs)	1035.55
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.60

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BI (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1391.61	19.19	521.	645.	645.	9.999	.0400	.00	-15.33	165.3	3.8	1.6
8.890	1363.74	8.72	1142.	1171.	1171.	9.958	.0400	-.50	1.04	.0	1.6	1.7
9.331	1338.47	3.86	2594.	1822.	1822.	10.024	.0500	-.50	1.36	.0	.6	2.3
9.797	1314.25	3.35	2980.	2195.	2195.	9.990	.0500	-.50	1.36	.0	.5	2.3
10.268	1293.18	3.16	3168.	2566.	2566.	10.023	.0500	-.50	1.41	.0	.5	2.4
10.945	1267.09	2.93	3425.	2584.	2584.	10.042	.0500	.00	1.55	.0	.4	2.6
11.883	1236.87	2.75	3538.	2202.	2202.	9.740	.0500	.00	1.71	.0	.4	2.9
12.840	1210.59	2.58	3851.	3890.	3890.	9.937	.0500	.00	.89	.0	.5	1.6
14.700	1160.97	1.87	13791.	10338.	10338.	25.781	.0500	.00	1.43	.0	.3	2.0
17.750	1114.73	2.61	24622.	8659.	8659.	64.324	.0451	.00	3.03	.0	.3	3.7
19.400	1100.15	3.91	22402.	5075.	5075.	87.567	.0400	.00	6.28	.0	.3	7.2
21.170	1085.43	5.75	19977.	2787.	2787.	114.785	.0400	.00	10.47	.0	.4	11.8
22.928	1066.75	4.11	31360.	5789.	5789.	128.907	.0400	.00	8.25	.0	.3	10.0
23.925	1059.69	4.53	29291.	5667.	5667.	132.737	.0400	.00	10.85	.0	.4	13.2
24.903	1048.43	5.68	22909.	3860.	3860.	130.196	.0400	.00	11.29	.0	.4	14.1
26.230	1028.00	7.72	14028.	2115.	2585.	108.278	.0400	.00	12.01	.0	.5	15.2
28.278	987.20	4.63	3759.	1034.	1034.	17.408	.0498	.00	5.36	.0	.4	7.2
27.185	966.39	2.49	948.	630.	630.	2.354	.0500	.00	.75	.0	.4	2.4
29.727	955.99	1.81	635.	532.	532.	1.149	.0500	.00	.11	.0	.3	1.8

Maximum Froude Number (FRDM)	3.76
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.22
Cross-Section of Minimum Froude Number (IFM)	169

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam QU(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submergence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	5	14.400	9999.	1391.61	1390.00	1388.78	1.00	788.00	9999.	9999.	0.	0.

- - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - -

Time (TT)	14.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	9999.82
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1391.61
Flow at Downstream End of Model (QU(N), cfs)	12140.70
Water Elevation at Downstream End of Model (YU(N), ft MSL)	955.83

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1391.61	19.19	521.	645.	645.	10.000	.0400	.00	-15.33	165.3	3.8	1.6
8.899	1363.74	8.73	1144.	1172.	1172.	9.985	.0400	-.50	1.04	.0	1.6	1.7
9.831	1338.47	3.86	2588.	1821.	1821.	9.987	.0500	-.50	1.36	.0	.6	2.3
9.997	1314.26	3.36	2986.	2197.	2197.	10.024	.0500	-.50	1.37	.0	.5	2.3
10.258	1293.18	3.16	3156.	2561.	2561.	9.969	.0500	-.50	1.41	.0	.5	2.4
10.945	1267.08	2.93	3413.	2579.	2579.	10.013	.0500	.00	1.54	.0	.4	2.6
11.883	1236.92	2.77	3643.	2232.	2232.	10.089	.0500	.00	1.76	.0	.4	2.9
12.840	1210.59	2.54	3801.	3880.	3880.	9.650	.0500	.00	.87	.0	.5	1.6
14.700	1160.57	1.61	10031.	9802.	9802.	16.146	.0500	.00	1.06	.0	.3	1.6
17.750	1114.36	2.35	21536.	8423.	8423.	50.610	.0470	.00	2.67	.0	.3	3.4
19.400	1099.26	3.71	18129.	4499.	4499.	67.346	.0400	.00	5.39	.0	.3	6.3
21.170	1084.11	5.39	16565.	2465.	2465.	89.290	.0400	.00	9.16	.0	.4	10.4
22.920	1066.23	3.88	28407.	5595.	5595.	110.125	.0400	.00	7.73	.0	.3	9.5
23.935	1059.42	4.38	27804.	5568.	5568.	121.691	.0400	.00	10.58	.0	.3	12.9
24.903	1048.45	5.57	22983.	3865.	3865.	127.988	.0400	.00	11.31	.0	.4	14.1
26.230	1029.05	7.99	16293.	2207.	2822.	130.167	.0400	.00	13.06	.0	.5	16.2
28.270	993.29	7.47	13286.	2246.	2836.	99.292	.0400	.00	11.45	.0	.5	13.3
29.185	972.98	6.38	8684.	1667.	3899.	55.396	.0500	.00	7.35	.0	.5	9.0
29.727	961.17	4.45	6407.	1821.	1821.	28.525	.0426	.00	5.28	.0	.4	6.9

Maximum Froude Number (FRDM)	3.76
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.26
Cross-Section of Minimum Froude Number (IFM)	82

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	14.800	10000.	1391.61	1390.00	1388.78	1.00	788.00	10000.	10000.	0.	0.

- - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - -

Time (TT)	15.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	9999.92
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1391.61
Flow at Downstream End of Model (QU(N), cfs)	83984.55
Water Elevation at Downstream End of Model (YU(N), ft MSL)	959.81

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1391.61	19.19	521.	645.	645.	10.000	.0400	.00	-15.33	165.3	3.8	1.6
8.890	1363.74	8.73	1145.	1173.	1173.	9.997	.0400	-.50	1.04	.0	1.6	1.7
9.331	1338.4.	3.86	2589.	1821.	1821.	9.993	.0500	-.50	1.36	.0	.6	2.3
9.777	1314.26	3.35	2982.	2195.	2195.	10.002	.0500	-.50	1.36	.0	.5	2.3
10.268	1293.18	3.16	3165.	2565.	2565.	10.006	.0500	-.50	1.41	.0	.5	2.4
10.945	1267.08	2.93	3407.	2577.	2577.	9.984	.0500	.00	1.54	.0	.4	2.6
11.883	1236.91	2.76	3610.	2223.	2223.	9.978	.0500	.00	1.75	.0	.4	2.9
12.840	1210.62	2.54	3973.	3916.	3916.	10.106	.0500	.00	.92	.0	.4	1.6
14.700	1160.35	1.43	7739.	9460.	9460.	11.103	.0500	.00	.82	.0	.3	1.4
17.750	1114.05	2.13	18901.	8216.	8216.	40.220	.0487	.00	2.35	.0	.2	3.0
19.400	1093.57	3.52	15191.	4055.	4055.	53.497	.0400	.00	4.70	.0	.3	5.6
21.170	1082.80	5.08	13496.	2197.	2197.	68.512	.0400	.00	7.84	.0	.4	9.1
22.928	1065.47	3.61	24243.	5322.	5322.	87.456	.0400	.00	6.97	.0	.3	8.7
23.925	1058.87	4.12	24800.	5319.	5319.	102.265	.0400	.00	10.03	.0	.3	12.4
24.903	1047.94	5.35	21031.	3748.	3748.	112.571	.0400	.00	10.80	.0	.4	13.6
26.239	1028.75	7.77	15645.	2181.	2755.	121.489	.0400	.00	12.76	.0	.5	16.0
28.278	994.38	7.88	15837.	2421.	4003.	124.735	.0400	.00	12.54	.0	.5	14.4
29.185	976.42	7.67	14979.	2018.	4845.	114.954	.0500	.00	10.79	.0	.5	12.4
29.727	964.70	6.70	14035.	2338.	4505.	93.972	.0400	.00	8.82	.0	.5	10.5

Maximum Froude Number (FRUM)	3.76
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.25
Cross-Section of Minimum Froude Number (IFM)	82

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TI (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	15.200	10000.	1391.61	1390.00	1388.78	1.00	788.00	10000.	10000.	0.	0.

- - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - -

Time (TT)	15.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	9999.97
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1391.61
Flow at Downstream End of Model (QU(N), cfs)	118236.00
Water Elevation at Downstream End of Model (YU(N), ft MSL)	960.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1391.61	19.19	521.	645.	645.	10.000	.0400	.00	-15.33	165.3	3.8	1.6
8.899	1363.74	8.73	1146.	1173.	1173.	10.000	.0400	-.50	1.04	.0	1.6	1.7
9.321	1338.47	3.86	2590.	1821.	1821.	9.999	.0500	-.50	1.36	.0	.6	2.3
9.797	1314.25	3.35	2981.	2195.	2195.	9.997	.0500	-.50	1.36	.0	.5	2.3
10.268	1293.18	3.16	3164.	2565.	2565.	10.003	.0500	-.50	1.41	.0	.5	2.4
10.945	1267.08	2.93	3413.	2579.	2579.	10.006	.0500	.00	1.54	.0	.4	2.6
11.883	1236.91	2.76	3618.	2225.	2225.	10.003	.0500	.00	1.75	.0	.4	2.9
12.840	1210.62	2.51	3965.	3915.	3915.	9.968	.0500	.00	.92	.0	.4	1.6
14.700	1160.27	1.39	6942.	9338.	9338.	9.665	.0500	.00	.73	.0	.3	1.3
17.750	1113.72	1.90	16222.	8001.	8001.	30.845	.0500	.00	2.02	.0	.2	2.7
19.400	1097.99	3.35	12940.	3681.	3681.	43.375	.0400	.00	4.12	.0	.3	5.0
21.170	1081.79	4.72	11390.	2007.	2007.	53.710	.0412	.00	6.84	.0	.3	8.1
22.928	1064.71	3.38	20274.	5048.	5048.	68.502	.0400	.00	6.20	.0	.3	7.9
23.925	1058.18	3.87	21290.	4828.	4828.	82.322	.0400	.00	9.34	.0	.3	11.7
24.903	1047.20	5.08	18312.	3580.	3580.	93.016	.0400	.00	10.06	.0	.4	12.9
26.230	1028.05	7.37	14139.	2119.	2597.	104.160	.0400	.00	12.06	.0	.5	15.3
28.278	994.30	7.72	15644.	2411.	3896.	120.748	.0400	.00	12.46	.0	.5	14.3
29.105	976.92	7.73	15998.	2099.	4945.	123.719	.0487	.00	11.28	.0	.5	12.9
29.727	965.87	7.17	16827.	2437.	5625.	120.669	.0400	.00	9.99	.0	.5	11.7

Maximum Froude Number (FRUM)	3.76
Cross-Section of Maximum Froude Number (IIR)	1
Minimum Froude Number (FRM)	.24
Cross-Section of Minimum Froude Number (IFM)	82

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	15.600	10000.	1391.61	1390.00	1388.78	1.00	788.00	10000.	10000.	0.	0.

- - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TI)	16.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	9999.99
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1391.61
Flow at Downstream End of Model (QU(N), cfs)	120122.70
Water Elevation at Downstream End of Model (YU(N), ft MSL)	960.75

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1391.61	19.19	521.	645.	645.	10.000	.0400	.00	-15.33	165.3	3.8	1.6
8.870	1363.74	8.73	1146.	1173.	1173.	10.000	.0400	-.50	1.04	.0	1.6	1.7
9.331	1338.47	3.86	2590.	1821.	1821.	10.001	.0500	-.50	1.36	.0	.6	2.3
9.797	1314.26	3.35	2981.	2195.	2195.	9.999	.0500	-.50	1.36	.0	.5	2.3
10.268	1293.18	3.16	3163.	2564.	2564.	9.999	.0500	-.50	1.41	.0	.5	2.4
10.945	1267.08	2.93	3411.	2578.	2578.	10.000	.0500	.00	1.54	.0	.4	2.6
11.883	1236.91	2.77	3617.	2225.	2225.	10.003	.0500	.00	1.75	.0	.4	2.9
12.940	1210.62	2.52	3974.	3917.	3917.	10.010	.0500	.00	.92	.0	.4	1.6
14.700	1160.28	1.41	7079.	9359.	9359.	9.966	.0500	.00	.75	.0	.3	1.3
17.750	1113.35	1.73	13316.	7760.	7760.	23.043	.0500	.00	1.65	.0	.2	2.3
19.400	1097.45	3.19	11020.	3488.	3488.	35.162	.0400	.00	3.59	.0	.3	4.5
21.170	1081.14	4.35	10112.	1917.	1917.	44.027	.0431	.00	6.18	.0	.3	7.5
22.928	1064.05	3.17	17058.	4814.	4814.	54.104	.0404	.00	5.55	.0	.3	7.3
23.925	1057.44	3.68	17892.	4299.	4299.	65.859	.0400	.00	8.60	.0	.3	10.9
24.903	1046.47	4.82	15768.	3416.	3416.	75.923	.0400	.00	9.33	.0	.4	12.2
26.230	1027.23	6.91	12420.	2046.	2410.	85.823	.0402	.00	11.23	.0	.5	14.4
28.270	993.74	7.35	14317.	2338.	3147.	105.210	.0400	.00	11.90	.0	.5	13.7
29.105	976.56	7.40	15270.	2042.	4874.	113.035	.0495	.00	10.93	.0	.5	12.6
29.727	965.87	7.04	16817.	2437.	5621.	118.306	.0400	.00	9.98	.0	.5	11.6

Maximum Froude Number (FRDM)	3.76
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.23
Cross Section of Minimum Froude Number (IFM)	82

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TI (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	16.000	10000.	1391.61	1390.00	1388.78	1.00	788.00	10000.	10000.	0.	0.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TI)	16.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	10000.00
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1391.61
Flow at Downstream End of Model (QU(N), cfs)	107369.10
Water Elevation at Downstream End of Model (YU(N), ft MSL)	960.18

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1391.61	19.19	521.	645.	645.	10.000	.0400	.00	-15.33	165.3	3.8	1.6
8.890	1363.74	8.73	1146.	1173.	1173.	10.000	.0400	-.50	1.04	.0	1.6	1.7
9.331	1338.47	3.86	2590.	1821.	1821.	10.000	.0500	-.50	1.36	.0	.6	2.3
9.797	1314.26	3.35	2982.	2195.	2195.	10.000	.0500	-.50	1.36	.0	.5	2.3
10.268	1293.18	3.16	3164.	2564.	2564.	9.999	.0500	-.50	1.41	.0	.5	2.4
10.745	1267.08	2.93	3411.	2578.	2578.	9.999	.0500	.00	1.54	.0	.4	2.6
11.883	1236.91	2.76	3617.	2225.	2225.	9.999	.0500	.00	1.75	.0	.4	2.9
12.840	1210.62	2.52	3965.	3915.	3915.	9.997	.0500	.00	.92	.0	.4	1.6
14.700	1160.29	1.40	7143.	9369.	9369.	10.018	.0500	.00	.76	.0	.3	1.3
17.750	1113.05	1.57	11015.	7564.	7564.	17.253	.0500	.00	1.35	.0	.2	2.0
19.400	1096.97	2.99	9382.	3315.	3315.	28.038	.0422	.00	3.10	.0	.3	4.0
21.170	1080.56	4.03	9023.	1837.	1837.	36.377	.0447	.00	5.60	.0	.3	6.9
22.928	1063.63	2.96	15034.	4658.	4658.	44.467	.0422	.00	5.12	.0	.3	6.8
23.925	1056.71	3.55	14948.	3782.	3782.	53.015	.0400	.00	7.87	.0	.3	10.2
24.903	1045.77	4.60	13480.	3132.	3132.	61.989	.0400	.00	8.63	.0	.4	11.5
26.230	1026.48	6.40	10939.	1908.	2203.	70.051	.0422	.00	10.49	.0	.5	13.7
28.278	992.97	6.98	12576.	2169.	2708.	87.745	.0400	.00	11.13	.0	.5	13.0
29.185	975.00	6.98	13755.	1931.	4703.	95.942	.0500	.00	10.17	.0	.5	11.8
29.727	965.36	6.67	15582.	2393.	5131.	103.947	.0400	.00	9.47	.0	.5	11.1

Maximum Froude Number (FRDM)	3.76
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.23
Cross-Section of Minimum Froude Number (IFM)	82

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TI (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	16.400	10000.	1391.61	1390.00	1388.78	1.00	788.00	10000.	10000.	0.	0.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (T)	16.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	10000.01
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1391.61
Flow at Downstream End of Model (QU(N), cfs)	90608.12
Water Elevation at Downstream End of Model (YU(N), ft MSL)	959.49

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n UMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
8.620	1391.61	19.19	521.	645.	645.	10.000	.0400	.00	-15.33	165.3	3.8	1.6
8.890	1363.74	8.73	1146.	1173.	1173.	10.000	.0400	-.50	1.04	.0	1.6	1.7
9.331	1338.47	3.86	2590.	1821.	1821.	10.000	.0500	-.50	1.36	.0	.6	2.3
9.797	1314.26	3.35	2981.	2195.	2195.	10.000	.0500	-.50	1.36	.0	.5	2.3
10.268	1293.18	3.16	3164.	2564.	2564.	10.000	.0500	-.50	1.41	.0	.5	2.4
10.945	1267.08	2.93	3411.	2578.	2578.	10.000	.0500	.00	1.54	.0	.4	2.6
11.583	1236.91	2.76	3617.	2225.	2225.	10.000	.0500	.00	1.75	.0	.4	2.9
12.840	1210.62	2.52	3963.	3914.	3914.	10.000	.0500	.00	.92	.0	.4	1.6
14.700	1160.29	1.40	7149.	9370.	9370.	9.996	.0500	.00	.76	.0	.3	1.3
17.750	1112.83	1.42	9405.	7424.	7424.	13.385	.0500	.00	1.14	.0	.2	1.8
19.400	1096.54	2.80	7986.	3159.	3159.	22.367	.0445	.00	2.67	.0	.3	3.5
21.170	1080.01	3.74	8028.	1761.	1761.	30.006	.0462	.00	5.05	.0	.3	6.3
22.928	1063.29	2.76	13500.	4537.	4537.	37.239	.0436	.00	4.79	.0	.3	6.5
23.925	1056.04	3.47	12579.	3308.	3308.	43.713	.0400	.00	7.20	.0	.3	9.5
24.903	1045.08	4.44	11417.	2812.	2812.	50.744	.0400	.00	7.94	.0	.4	10.8
26.230	1025.78	5.98	9648.	1775.	2007.	57.716	.0440	.00	9.79	.0	.5	13.0
28.278	992.07	6.66	10719.	1952.	2347.	71.364	.0400	.00	10.23	.0	.5	12.1
29.185	974.94	6.54	12135.	1851.	4462.	79.350	.0500	.00	9.31	.0	.5	10.9
29.727	964.68	6.24	13971.	2336.	4479.	87.142	.0400	.00	8.79	.0	.4	10.5

Maximum Froude Number (FRDM)	3.76
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.22
Cross-Section of Minimum Froude Number (IFM)	84

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time T (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	16.800	10000.	1391.61	1390.00	1388.78	1.00	788.00	10000.	10000.	0.	0.

Normalized conservation of mass as percent of maximum flow
in reach = -.31

ROUTING COMPLETED :

Number of Time Steps Used (KTIME)	85
Maximum Number of Time Steps Allowed	1199
Total Time of Flood Routing (TT, hr)	17.2

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
8.620	1417.77	155853	9.400	22.38	.00	.00
8.650	1392.90	155853	11.200	11.87	.00	.00
8.680	1389.91	155814	11.200	11.77	.00	.00
8.710	1386.89	155783	11.200	11.74	.00	.00
8.740	1383.94	155758	11.200	11.50	.00	.00
8.770	1380.89	155737	11.200	11.56	.00	.00
8.800	1378.02	155719	11.200	11.02	.00	.00
8.830	1374.84	155703	11.200	11.52	.00	.00
8.860	1372.20	155684	11.200	10.14	.00	.00
8.890	1368.60	155670	11.200	12.21	.00	.00
8.920	1366.72	155652	11.200	8.24	.00	.00
8.971	1363.79	155606	11.200	8.32	.00	.00
9.023	1360.85	155555	11.200	8.40	.00	.00
9.074	1357.91	155488	11.200	8.48	.00	.00
9.126	1354.97	155394	11.400	8.56	.00	.00
9.177	1352.03	155408	11.400	8.63	.00	.00
9.229	1349.09	155444	11.400	8.71	.00	.00
9.280	1346.15	155484	11.400	8.78	.00	.00
9.331	1343.20	155527	11.400	8.86	.00	.00
9.383	1340.27	155553	11.400	8.90	.00	.00
9.434	1337.35	155579	11.400	8.89	.00	.00
9.486	1334.42	155603	11.400	8.93	.00	.00
9.537	1331.54	155626	11.400	8.83	.00	.00
9.589	1328.51	155646	11.400	9.09	.00	.00
9.640	1325.89	155661	11.400	8.39	.00	.00
9.692	1323.49	155673	11.400	8.28	.00	.00
9.745	1321.09	155683	11.400	8.18	.00	.00
9.797	1318.69	155687	11.400	8.08	.00	.00
9.849	1316.30	155686	11.400	7.99	.00	.00
9.902	1313.90	155680	11.400	7.89	.00	.00
9.954	1311.51	155668	11.400	7.80	.00	.00
10.006	1309.12	155650	11.400	7.72	.00	.00
10.059	1306.73	155627	11.400	7.63	.00	.00
10.111	1304.34	155599	11.400	7.55	.00	.00
10.164	1301.95	155566	11.400	7.47	.00	.00
10.216	1299.56	155530	11.400	7.39	.00	.00
10.268	1297.17	155490	11.400	7.32	.00	.00
10.321	1294.79	155446	11.400	7.24	.00	.00
10.373	1292.40	155399	11.400	7.18	.00	.00
10.425	1290.04	155350	11.400	7.06	.00	.00
10.478	1287.57	155300	11.400	7.18	.00	.00
10.530	1285.52	155252	11.400	6.44	.00	.00
10.634	1281.96	155151	11.400	6.54	.00	.00
10.737	1278.41	155037	11.400	6.63	.00	.00
10.841	1274.85	154944	11.600	6.74	.00	.00
10.945	1271.31	155012	11.600	6.83	.00	.00
11.048	1267.76	155051	11.600	6.96	.00	.00
11.152	1264.26	155083	11.600	7.01	.00	.00

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
11.255	1260.78	155113	11.600	7.03	.00	.00
11.359	1257.28	155120	11.600	7.10	.00	.00
11.463	1253.89	155130	11.600	7.00	.00	.00
11.566	1250.25	155105	11.600	7.36	.00	.00
11.670	1247.36	155057	11.600	6.37	.00	.00
11.776	1244.68	154988	11.600	6.41	152.75	.00
11.883	1242.01	154885	11.600	6.44	305.50	.00
11.989	1239.35	154759	11.600	6.46	458.25	.00
12.095	1236.69	154621	11.600	6.47	611.00	.00
12.201	1234.04	154443	11.600	6.47	763.75	.00
12.308	1231.38	154319	11.800	6.49	916.50	.00
12.414	1228.87	154409	11.800	6.29	1069.25	.00
12.520	1225.70	154457	11.800	7.20	1222.00	10.00
12.627	1221.92	154481	11.800	6.75	1218.66	10.20
12.733	1218.20	154502	11.800	6.37	1215.33	10.40
12.840	1214.53	154570	11.800	6.04	1212.00	10.40
12.947	1210.90	154567	11.800	5.76	1208.67	10.40
13.053	1207.31	154489	11.800	5.49	1205.33	10.60
13.160	1203.58	154427	11.800	5.54	1202.00	10.60
13.500	1194.29	154135	11.800	5.63	1192.67	10.60
13.840	1185.20	153712	12.000	5.34	1183.33	10.80
14.180	1175.85	153984	12.000	5.54	1174.00	10.80
14.353	1171.65	153986	12.000	4.69	1170.00	10.80
14.527	1166.87	153901	12.000	5.07	1166.00	11.00
14.700	1163.24	153627	12.000	3.75	1162.00	11.00
15.210	1155.05	153271	12.200	3.96	1154.00	11.20
15.533	1149.11	153227	12.200	4.20	1148.00	11.40
15.855	1143.45	152741	12.400	4.10	1142.00	11.40
16.178	1137.36	152677	12.400	4.64	1136.00	11.60
16.500	1132.07	152846	12.400	4.10	1130.00	11.60
16.813	1127.97	151917	12.600	4.22	1126.00	11.60
17.125	1124.05	152101	12.600	4.13	1122.00	11.80
17.438	1119.76	151741	12.200	4.52	1118.00	12.00
17.750	1116.37	150515	12.800	3.93	1114.00	12.00
18.150	1113.13	150438	12.800	4.03	1110.00	12.00
18.550	1109.98	148521	13.000	4.22	1106.00	12.20
18.673	1109.01	148766	13.000	4.20	1105.00	12.20
18.795	1108.00	148827	13.000	4.21	1104.00	12.20
18.918	1106.90	148586	13.000	4.35	1103.00	12.20
19.040	1105.54	148095	13.000	4.83	1102.00	12.40
19.160	1104.20	147461	13.200	4.89	1100.25	12.40
19.280	1103.04	146578	13.200	4.87	1098.50	12.40
19.400	1102.00	146716	13.200	4.75	1096.75	12.40
19.520	1101.02	146462	13.200	4.74	1095.00	12.40
19.785	1098.74	145351	13.400	5.00	1092.50	12.40
20.050	1096.36	143820	13.400	5.39	1090.00	12.60
20.220	1094.88	143782	13.400	5.48	1088.00	12.60
20.390	1093.50	143188	13.600	5.64	1086.00	12.60

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
20.560	1092.14	141897	13.600	5.70	1084.00	12.60
20.730	1090.71	140478	13.600	5.97	1082.00	12.60
20.950	1088.87	140247	13.600	6.07	1079.33	12.80
21.170	1086.63	139643	13.600	6.19	1076.67	12.80
21.390	1083.42	138927	13.800	7.53	1074.00	12.80
21.610	1080.39	138624	13.800	6.81	1072.00	12.80
21.830	1077.63	138941	13.800	6.24	1070.00	12.80
22.050	1075.05	138945	13.800	5.80	1068.00	13.00
22.270	1072.58	138519	13.800	5.44	1066.00	13.00
22.490	1070.29	137362	14.000	5.05	1064.00	13.00
22.710	1068.46	137600	14.000	4.48	1062.00	13.20
22.819	1067.65	137350	14.000	4.49	1060.89	13.20
22.928	1066.87	136827	14.200	4.46	1059.78	13.20
23.037	1066.13	135976	14.200	4.45	1058.67	13.20
23.146	1065.41	134856	14.200	4.48	1057.56	13.20
23.254	1064.69	134829	14.200	4.50	1056.44	13.20
23.363	1063.98	134795	14.200	4.50	1055.33	13.20
23.472	1063.25	134525	14.200	4.49	1054.22	13.40
23.581	1062.49	133965	14.200	4.49	1053.11	13.40
23.690	1061.65	133313	14.400	4.62	1052.00	13.40
23.807	1060.70	132567	14.400	4.64	1050.75	13.40
23.925	1059.69	132737	14.400	4.68	1049.50	13.40
24.042	1058.57	132768	14.400	5.01	1048.25	13.40
24.160	1057.24	132562	14.400	5.26	1047.00	13.40
24.266	1055.95	132159	14.400	5.18	966.46	.00
24.372	1054.68	131776	14.400	5.26	885.92	.00
24.478	1053.42	131489	14.600	5.35	805.39	.00
24.585	1052.18	131266	14.600	5.44	724.85	.00
24.691	1050.95	131022	14.600	5.53	644.31	.00
24.797	1049.73	130861	14.600	5.62	563.77	.00
24.903	1048.53	130778	14.600	5.71	483.23	.00
25.009	1047.33	130695	14.600	5.80	402.69	.00
25.115	1046.14	130628	14.600	5.92	322.16	.00
25.222	1044.93	130567	14.600	6.08	241.62	.00
25.328	1043.67	130483	14.600	6.32	161.08	.00
25.434	1042.29	130336	14.600	6.71	80.54	.00
25.540	1040.58	130178	14.600	7.52	.00	.00
25.770	1036.79	129714	14.800	7.66	.00	.00
26.000	1032.96	130025	14.800	7.83	.00	.00
26.230	1029.05	130166	14.800	7.99	.00	.00
26.460	1025.03	129567	14.800	8.19	.00	.00
26.690	1021.41	128541	15.000	7.99	.00	.00
26.910	1018.12	128541	15.000	8.11	.00	.00
27.130	1014.70	128183	15.000	8.22	.00	.00
27.350	1011.20	127072	15.200	8.32	.00	.00
27.570	1007.36	126178	15.200	8.76	.00	.00
27.806	1003.19	126249	15.200	8.36	.00	.00
28.042	998.85	125804	15.200	8.09	.00	.00

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
28.278	994.43	124735	15.400	7.88	.00	.00
28.514	989.81	124962	15.400	7.83	.00	.00
28.750	985.53	124669	15.400	7.35	.00	.00
28.812	984.42	124483	15.400	7.44	.00	.00
28.874	983.25	124326	15.400	7.55	.00	.00
28.936	982.07	124139	15.600	7.64	.00	.00
28.999	980.83	123904	15.600	7.74	.00	.00
29.061	979.55	123551	15.600	7.79	.00	.00
29.123	978.24	123693	15.600	7.80	.00	.00
29.185	976.92	123719	15.600	7.77	.00	.00
29.247	975.57	123646	15.600	7.71	.00	.00
29.309	974.20	123535	15.600	7.63	.00	.00
29.371	972.85	123312	15.600	7.53	.00	.00
29.434	971.52	122951	15.600	7.42	.00	.00
29.496	970.21	122546	15.800	7.32	.00	.00
29.558	968.89	122115	15.800	7.27	.00	.00
29.620	967.50	121788	15.800	7.30	.00	.00
29.673	966.73	121797	15.800	7.24	.00	.00
29.727	965.96	121776	15.800	7.17	.00	.00
29.780	965.19	121738	15.800	7.11	.00	.00
29.833	964.42	121696	15.800	7.04	.00	.00
29.887	963.66	121665	15.800	6.97	.00	.00
29.940	962.91	121661	15.800	6.89	.00	.00
29.993	962.19	121689	15.800	6.79	.00	.00
30.047	961.51	121723	15.800	6.65	.00	.00
30.100	960.89	121745	15.800	6.49	.00	.00

COMPUTED WATER SURFACE ELEVATIONS AT REQUESTED
STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count. K	Elapsed Time TTP(K) (hr)	Station 1 Water Surface Elevation YC(K,1) (ft MSL)	Station 2 Water Surface Elevation YC(K,2) (ft MSL)	Station 3 Water Surface Elevation YC(K,3) (ft MSL)	Station 4 Water Surface Elevation YC(K,4) (ft MSL)	Station 5 Water Surface Elevation YC(K,5) (ft MSL)	Station 6 Water Surface Elevation YC(K,6) (ft MSL)
1	.000	1406.95	1199.60	1151.58	1092.11	1046.17	957.53
2	.200	1407.07	1199.60	1151.58	1092.11	1046.17	957.53
3	.400	1407.20	1199.60	1151.58	1092.11	1046.17	957.53
4	.600	1407.34	1199.60	1151.58	1092.11	1046.17	957.53
5	.800	1407.49	1199.60	1151.58	1092.11	1046.17	957.53
6	1.000	1407.64	1199.60	1151.58	1092.11	1046.17	957.53
7	1.200	1407.80	1199.60	1151.58	1092.11	1046.17	957.53
8	1.400	1407.96	1199.60	1151.59	1092.11	1046.17	957.53
9	1.600	1408.13	1199.60	1151.59	1092.11	1046.17	957.53
10	1.800	1408.29	1199.60	1151.59	1092.11	1046.17	957.53
11	2.000	1408.46	1199.60	1151.59	1092.11	1046.17	957.53
12	2.200	1408.63	1199.60	1151.59	1092.11	1046.17	957.53
13	2.400	1408.82	1199.60	1151.59	1092.11	1046.17	957.53
14	2.600	1409.00	1199.60	1151.59	1092.11	1046.17	957.53
15	2.800	1409.20	1199.61	1151.59	1092.11	1046.17	957.53
16	3.000	1409.40	1199.61	1151.59	1092.11	1046.17	957.53
17	3.200	1409.60	1199.62	1151.59	1092.11	1046.17	957.53
18	3.400	1409.82	1199.62	1151.59	1092.11	1046.17	957.53
19	3.600	1410.03	1199.62	1151.59	1092.11	1046.17	957.53
20	3.800	1410.25	1199.62	1151.59	1092.11	1046.17	957.53
21	4.000	1410.48	1199.62	1151.58	1092.11	1046.17	957.53
22	4.200	1410.71	1199.62	1151.58	1092.11	1046.17	957.53
23	4.400	1410.95	1199.62	1151.59	1092.11	1046.17	957.53
24	4.600	1411.20	1199.63	1151.59	1092.11	1046.17	957.53
25	4.800	1411.45	1199.64	1151.59	1092.11	1046.17	957.53
26	5.000	1411.71	1199.66	1151.59	1092.11	1046.17	957.53
27	5.200	1411.97	1199.69	1151.59	1092.11	1046.17	957.53
28	5.400	1412.23	1199.73	1151.60	1092.11	1046.17	957.53
29	5.600	1412.50	1199.77	1151.60	1092.11	1046.17	957.53
30	5.800	1412.78	1199.81	1151.60	1092.11	1046.17	957.53
31	6.000	1413.06	1199.84	1151.60	1092.11	1046.17	957.53
32	6.200	1413.34	1199.88	1151.60	1092.11	1046.17	957.53
33	6.400	1413.63	1199.92	1151.60	1092.11	1046.17	957.53
34	6.600	1413.94	1199.95	1151.60	1092.11	1046.17	957.53
35	6.800	1414.25	1199.99	1151.60	1092.11	1046.17	957.53
36	7.000	1414.56	1200.03	1151.61	1092.11	1046.17	957.53
37	7.200	1414.88	1200.07	1151.63	1092.11	1046.17	957.53
38	7.400	1415.21	1200.10	1151.66	1092.11	1046.17	957.53
39	7.600	1415.55	1200.14	1151.69	1092.11	1046.17	957.53
40	7.800	1415.89	1200.18	1151.74	1092.11	1046.17	957.53
41	8.000	1416.23	1200.21	1151.79	1092.11	1046.17	957.53
42	8.200	1416.56	1200.25	1151.84	1092.11	1046.17	957.53
43	8.400	1416.87	1200.30	1151.90	1092.11	1046.17	957.53
44	8.600	1417.16	1200.34	1151.95	1092.11	1046.17	957.53
45	8.800	1417.41	1200.37	1152.00	1092.11	1046.17	957.53
46	9.000	1417.62	1200.41	1152.05	1092.11	1046.17	957.53
47	9.200	1417.75	1200.45	1152.09	1092.11	1046.17	957.53
48	9.400	1417.77	1200.48	1152.12	1092.11	1046.17	957.53

49	9.600	1417.66	1200.52	1152.17	1092.11	1046.17	957.53

Count K	Elapsed Time TTP(K) (hr)	Station 1 Water Surface Elevation YC(K,1) (ft MSL)	Station 2 Water Surface Elevation YC(K,2) (ft MSL)	Station 3 Water Surface Elevation YC(K,3) (ft MSL)	Station 4 Water Surface Elevation YC(K,4) (ft MSL)	Station 5 Water Surface Elevation YC(K,5) (ft MSL)	Station 6 Water Surface Elevation YC(K,6) (ft MSL)
50	9.800	1417.39	1200.57	1152.21	1092.11	1046.17	957.53
51	10.000	1416.89	1200.68	1152.24	1092.11	1046.17	957.53
52	10.200	1416.17	1200.95	1152.28	1092.11	1046.17	957.53
53	10.400	1415.29	1201.52	1152.31	1092.11	1046.17	957.53
54	10.600	1414.25	1202.35	1152.36	1092.11	1046.17	957.53
55	10.800	1413.03	1202.99	1152.49	1092.12	1046.17	957.53
56	11.000	1411.63	1203.26	1153.04	1092.12	1046.17	957.53
57	11.200	1410.04	1203.37	1154.10	1092.13	1046.17	957.53
58	11.400	1408.25	1203.47	1154.77	1092.13	1046.17	957.53
59	11.600	1406.20	1203.55	1154.90	1092.14	1046.17	957.53
60	11.800	1403.92	1203.58	1154.97	1092.15	1046.17	957.53
61	12.000	1401.56	1203.56	1155.04	1092.25	1046.17	957.53
62	12.200	1399.16	1203.46	1155.05	1093.11	1046.17	957.53
63	12.400	1396.38	1203.27	1155.02	1096.53	1046.17	957.53
64	12.600	1392.65	1202.98	1154.92	1099.17	1046.17	957.53
65	12.800	1391.18	1202.64	1154.76	1100.50	1046.17	957.53
66	13.000	1391.75	1202.31	1154.55	1100.91	1046.17	957.53
67	13.200	1391.56	1202.03	1154.31	1101.02	1046.20	957.53
68	13.400	1391.63	1201.73	1154.07	1100.97	1047.60	957.53
69	13.600	1391.61	1201.44	1153.86	1100.78	1051.65	957.53
70	13.800	1391.61	1201.17	1153.64	1100.49	1055.17	957.53
71	14.000	1391.61	1200.90	1153.45	1100.10	1056.71	957.53
72	14.200	1391.61	1200.67	1153.27	1099.66	1057.14	957.53
73	14.400	1391.61	1200.52	1153.09	1099.20	1057.24	957.68
74	14.600	1391.61	1200.44	1152.92	1098.74	1057.19	959.58
75	14.800	1391.61	1200.42	1152.76	1098.32	1057.03	962.84
76	15.000	1391.61	1200.43	1152.62	1097.98	1056.80	965.06
77	15.200	1391.61	1200.43	1152.50	1097.70	1056.52	966.30
78	15.400	1391.61	1200.43	1152.41	1097.43	1056.21	967.09
79	15.600	1391.61	1200.42	1152.35	1097.18	1055.90	967.43
80	15.800	1391.61	1200.42	1152.31	1096.93	1055.56	967.50
81	16.000	1391.61	1200.42	1152.30	1096.68	1055.20	967.38
82	16.200	1391.61	1200.42	1152.30	1096.42	1054.83	967.14
83	16.400	1391.61	1200.42	1152.30	1096.16	1054.48	966.83
84	16.600	1391.61	1200.42	1152.30	1095.90	1054.13	966.48
85	16.800	1391.61	1200.42	1152.30	1095.65	1053.80	966.11

COMPUTED DISCHARGES AT REQUESTED
STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Discharge QC(K,1) (cfs E3)	Station 2 Discharge QC(K,2) (cfs E3)	Station 3 Discharge QC(K,3) (cfs E3)	Station 4 Discharge QC(K,4) (cfs E3)	Station 5 Discharge QC(K,5) (cfs E3)	Station 6 Discharge QC(K,6) (cfs E3)
1	.000	1.00	1.00	1.00	1.01	1.00	1.00
2	.200	1.00	1.00	1.00	1.01	1.00	1.00
3	.400	1.00	1.00	1.00	1.01	1.00	1.00
4	.600	1.00	1.00	1.00	1.01	1.00	1.00
5	.800	1.00	1.00	1.00	1.01	1.00	1.00
6	1.000	1.00	1.00	1.00	1.01	1.00	1.00
7	1.200	1.00	1.00	1.00	1.01	1.00	1.00
8	1.400	1.00	1.00	1.00	1.01	1.00	1.00
9	1.600	1.00	1.00	1.00	1.01	1.00	1.00
10	1.800	1.00	1.00	1.00	1.01	1.00	1.00
11	2.000	1.05	1.00	1.00	1.01	1.00	1.00
12	2.200	1.19	1.01	1.00	1.01	1.00	1.00
13	2.400	1.34	1.02	1.00	1.01	1.00	1.00
14	2.600	1.49	1.03	1.00	1.01	1.00	1.00
15	2.800	1.64	1.05	1.00	1.01	1.00	1.00
16	3.000	1.80	1.07	1.00	1.01	1.00	1.00
17	3.200	1.97	1.09	1.00	1.01	1.00	1.00
18	3.400	2.16	1.10	1.00	1.01	1.00	1.00
19	3.600	2.36	1.10	1.00	1.01	1.00	1.00
20	3.800	2.57	1.10	1.00	1.01	1.00	1.00
21	4.000	2.78	1.10	1.00	1.01	1.00	1.00
22	4.200	3.00	1.10	1.00	1.01	1.01	1.00
23	4.400	3.22	1.12	1.00	1.01	1.01	1.00
24	4.600	3.51	1.15	1.01	1.01	1.01	1.00
25	4.800	3.85	1.20	1.02	1.01	1.01	1.00
26	5.000	4.20	1.30	1.03	1.01	1.01	1.00
27	5.200	4.55	1.46	1.05	1.01	1.01	1.00
28	5.400	4.91	1.67	1.06	1.01	1.01	1.00
29	5.600	5.27	1.92	1.07	1.01	1.01	1.00
30	5.800	5.64	2.18	1.08	1.01	1.01	1.00
31	6.000	6.02	2.46	1.08	1.01	1.01	1.00
32	6.200	6.40	2.76	1.08	1.01	1.01	1.00
33	6.400	6.87	3.08	1.07	1.01	1.01	1.00
34	6.600	7.39	3.43	1.06	1.01	1.01	1.00
35	6.800	7.92	3.82	1.07	1.01	1.01	1.00
36	7.000	8.47	4.28	1.13	1.01	1.01	1.00
37	7.200	9.02	4.72	1.26	1.01	1.01	1.00
38	7.400	9.59	5.17	1.46	1.01	1.01	1.01
39	7.600	10.16	5.63	1.71	1.01	1.01	1.01
40	7.800	10.75	6.10	2.04	1.01	1.01	1.01
41	8.000	11.34	6.60	2.50	1.01	1.01	1.01
42	8.200	11.88	7.15	3.05	1.01	1.01	1.01
43	8.400	12.32	7.75	3.69	1.01	1.01	1.01
44	8.600	12.73	8.38	4.34	1.01	1.01	1.01
45	8.800	14.80	9.02	4.98	1.01	1.01	1.01
46	9.000	20.24	9.67	5.70	1.01	1.01	1.01
47	9.200	29.06	10.32	6.36	1.01	1.01	1.01
48	9.400	41.10	10.97	7.04	1.01	1.01	1.01
49	9.600	55.97	11.69	7.74	1.01	1.01	1.01

Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Discharge QC(K,1) (cfs E3)	Station 2 Discharge QC(K,2) (cfs E3)	Station 3 Discharge QC(K,3) (cfs E3)	Station 4 Discharge QC(K,4) (cfs E3)	Station 5 Discharge QC(K,5) (cfs E3)	Station 6 Discharge QC(K,6) (cfs E3)
50	9.800	73.50	12.77	8.48	1.01	1.01	1.01
51	10.000	102.92	15.18	9.22	1.01	1.01	1.01
52	10.200	116.52	21.65	9.95	1.01	1.01	1.01
53	10.400	128.90	38.93	10.72	1.01	1.01	1.01
54	10.600	139.42	73.69	11.72	1.02	1.01	1.01
55	10.800	147.68	111.30	15.01	1.03	1.01	1.01
56	11.000	153.32	129.87	33.26	1.04	1.01	1.01
57	11.200	155.85	137.74	83.87	1.05	1.01	1.01
58	11.400	154.80	146.02	129.71	1.06	1.01	1.01
59	11.600	150.31	152.17	140.26	1.08	1.01	1.01
60	11.800	129.75	154.43	146.13	1.12	1.01	1.01
61	12.000	98.37	152.50	152.09	1.43	1.01	1.01
62	12.200	69.69	144.65	153.27	5.43	1.01	1.01
63	12.400	41.38	129.18	149.73	43.79	1.01	1.01
64	12.600	21.09	107.86	140.76	106.76	1.01	1.01
65	12.800	6.25	86.29	126.73	137.15	1.01	1.01
66	13.000	11.34	68.77	109.64	144.49	1.01	1.01
67	13.200	9.53	55.30	92.46	146.46	1.05	1.01
68	13.400	10.16	44.28	77.35	142.54	4.09	1.01
69	13.600	9.94	34.79	65.87	135.18	33.88	1.01
70	13.800	10.02	26.43	56.08	124.99	79.38	1.01
71	14.000	9.99	19.37	47.38	113.21	118.78	1.01
72	14.200	10.00	14.20	39.99	101.13	129.72	1.01
73	14.400	10.00	11.14	33.29	89.60	132.56	1.24
74	14.600	10.00	9.72	27.18	78.70	129.80	6.80
75	14.800	10.00	9.44	22.00	68.91	123.42	33.43
76	15.000	10.00	9.75	17.84	60.79	114.99	69.44
77	15.200	10.00	10.06	14.62	54.50	104.97	98.04
78	15.400	10.00	10.09	12.32	49.09	94.80	115.30
79	15.600	10.00	10.00	10.81	44.23	85.18	121.61
80	15.800	10.00	9.97	10.04	39.89	76.53	121.79
81	16.000	10.00	10.00	9.83	35.94	68.58	117.49
82	16.200	10.00	10.01	9.91	32.14	61.50	110.67
83	16.400	10.00	10.00	10.01	28.72	55.30	102.57
84	16.600	10.00	10.00	10.02	25.62	50.01	94.14
85	16.800	10.00	10.00	10.00	22.95	45.52	85.84

END OF OUTPUT

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PROJECT DESCRIPTION :

PROJECT TITLE : HQFRS--WEST BREACH (13-88)
PROJECT NUMBER : FILE: HQWST4.DBK
DESCRIPTION : WEST BREACH PIPING STARTS NEAR MIDDLE
ENGINEER : CARTER ASSOCIATES
DATE OF RUN : 2/13/1991
TIME OF RUN : 3:56 pm

INPUT DATA SUMMARY :

INPUT CONTROL PARAMETERS :

Number of Dynamic Routing Reaches (KKN)	1	
Type of Reservoir Routing (KUI)	1	(dynamic routing)
Number of multiple dams/bridges (MULDAM)	1	
No. of Reservoir Inflow Hydrograph Points (ITEH)	17	
No. of Informational Cross-Sections (NPRT)	0	
Flood-Plain Routing (KFLP)	0	(no)

CROSS-SECTION NUMBERS COINCIDENT
WITH UPSTREAM DAM FACE (IDAM) :

1

RESERVOIR VOLUME DESCRIPTION :

Elevation vs. Surface Area Table

Elevation HSA(K) (ft MSL)	Surface Area SA(K) (acres)
1428.30	2975.000
1419.70	2240.300
1408.40	1221.700
1396.10	114.800
1394.30	76.800
1392.60	44.400
1389.10	18.850
1375.90	.000

DAM NUMBER : 1

RESERVOIR AND BREACH PARAMETERS :

Initial Elevation of Water Surface (YO, ft MSL)		1408.10
Breach Side Slope (Z)	1:	.79
Breach Bottom Elevation (YBMIN, ft MSL)		1396.00
Breach Base Width (BB, ft)		793.00
Time of Breach Formation (TFH, hr)		3.50

RESERVOIR DESCRIPTION :

Water Surface Elevation at Time of Breach (HF, ft MSL)	1417.00
Top of Dam Elevation (HD, ft MSL)	1419.70
Uncontrolled Spillway Crest Elevation (HSP, ft MSL)	1408.40
Spillway Gate Center Elevation (HGT, ft MSL)	.00
Uncontrolled Spillway Discharge Coefficient (CS)	.00
Spillway Gate Discharge Coefficient (CG)	.00
Piping Centerline Elevation (CDO, ft MSL)	1407.90
Turbine Discharge (QT, cfs)	1000.00

SPILLWAY/GATE RATING CURVE :

Head HEAD(1) (ft)	Flow QSPILL(1) (cfs)
.00	.0
1.30	1049.3
2.66	2325.3
5.05	5551.8
8.05	10718.6
11.30	15377.7
11.60	15980.0
12.10	17000.0

Hydrograph Time Intervals (DHF, hr)	.00
Routing Period (TEH, hr)	16.00
Breach Development Exponent (BREX)	1.00
Mud/Debris Flow Parameter (MUD)	0
Dry Bed Routing Parameter (IWF)	0
Hydraulic Radius Computation Parameter (KPRES)	1

Time Elapsed TI(K) (hr)	Upstream Inflow QI(K) (cfs)
.00	13357.0
.25	13640.0
2.25	22252.0
4.25	33805.0
6.25	51760.0
7.25	42405.0
8.25	26254.0
8.50	23000.0
8.75	20292.0
9.00	18220.0
9.25	16658.0
9.50	15348.0
9.75	14113.0
10.25	11964.0
10.75	10235.0
11.25	10000.0
18.25	10000.0

SUMMARY OF PROGRAM CONTROL PARAMETERS :

Number of Cross-Sections Entered (NS)	29	
Number of Top Widths Entered (NCS)	6	
Number of Cross-Sectional Hydrographs to Plot (NTT)	6	
Cross-Sectional Smoothing Parameter (KSA)	0	
Downstream Supercritical Parameter (KSUPC)	0	(subcritical)
Landslide Simulation (KSL)	0	(no)
Number of Lateral Inflow Hydrographs (LQ)	0	
Number of Points in Gate Control Curve (KCG)	0	

CROSS-SECTIONS WHERE HYDROGRAPH REQUESTED :
(maximum allowed = 6)

1 10 13 17 23 28

CHANNEL-VALLEY BOUNDARY CONDITIONS :

Max Discharge at Downstream End (QMAXD, cfs)	.0
Max Lateral Outflow due to Flood Wave (QLL, cfs/ft)	.0000
Initial Time-Step Size (DTHM, hr)	.2000
Time at which Dam Starts to Fail (TFI, hr)	.0000
Theta Weighting Factor (FII)	.000
Stage Convergence Criterion (EPSY, ft)	.000
Initial Downstream Water Surface Elevation (YDN, ft MSL)	.00
Slope of Channel Downstream of Dam (SOM, ft/mi)	.0000

CROSS-SECTION NUMBER : 1 WEST DAMBREAK LOCATION

Cross-Section Location (XS(I), mi) 5.970

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 1

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .030

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1396.00	2.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1398.00	800.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1400.00	2000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1420.00	2500.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1425.00	2750.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1430.00	3000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 2

Cross-Section Location (XS(I), mi) 6.000

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 2

Reach Contraction-Expansion Coefficient (FKC) -1.000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .030

CROSS-SECTION and REACH DESCRIPTION :

Elevation (I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1395.20	2.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1396.00	800.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1400.00	2000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1415.00	2350.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1420.00	2500.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1425.00	2750.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 3

Cross-Section Location (XS(I), mi) 6.300

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 3

Reach Contraction-Expansion Coefficient (FKC) -1.000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1380.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1382.00	1000.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1384.00	2500.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1388.00	2750.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1392.00	3000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1400.00	4000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 4

Cross-Section Location (XS(I), mi) 6.950

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 4

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1359.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1360.00	5200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1362.00	7225.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1364.00	9250.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1366.00	12125.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1368.00	15000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 5

Cross-Section Location (XS(I), mi) 7.560

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 5

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1339.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1340.00	3500.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1342.00	5800.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1344.00	8100.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1346.00	12400.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1348.00	16700.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 6

Cross-Section Location (XS(I), mi) 8.170

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 6

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1319.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1320.00	4000.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1322.00	6425.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1324.00	8850.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1326.00	13200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1328.00	17550.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 7

Cross-Section Location (XS(I), mi) 9.540

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 7

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1279.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1280.00	8300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1282.00	9950.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1284.00	11600.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1286.00	14700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1288.00	17800.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 8

Cross-Section Location (XS(I), mi) 11.060

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 8

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1239.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1240.00	9529.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1242.00	12714.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1244.00	15898.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1246.00	16668.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1248.00	17585.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 9

Cross-Section Location (XS(I), mi) 12.700

Flooding Elevation (FSTG(I), ft MSL) 1202.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 9

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1199.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1200.00	8716.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1202.00	11538.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1204.00	14342.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1206.00	15750.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1208.00	17215.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 10 HOUSE ELE.=1192(+or-)

Cross-Section Location (XS(I), mi) 13.640

Flooding Elevation (FSTG(I), ft MSL) 1182.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 10

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1179.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1180.00	8250.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1182.00	10850.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1184.00	13450.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1186.00	15225.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1188.00	17000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 11

Cross-Section Location (XS(I), mi) 14.730

Flooding Elevation (FSTG(I), ft MSL) 1162.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 11

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1158.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1160.00	7360.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1162.00	9660.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1164.00	11960.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1166.00	13660.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1168.00	15360.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 12 HOUSE ELE.=1152(+or-)

Cross-Section Location (XS(I), mi) 15.210

Flooding Elevation (FSTG(I), ft MSL) 1154.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 12

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1150.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1152.00	9400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1154.00	11700.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1156.00	14000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1158.00	16200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1160.00	18400.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 13 HOUSE ELE.=1140(+or-)

Cross-Section Location (XS(I), mi) 16.500

Flooding Elevation (FSTG(I), ft MSL) 1130.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 13

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1127.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1128.00	5730.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1130.00	8400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1132.00	11080.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1134.00	12455.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1140.00	16830.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 14

Cross-Section Location (XS(I), mi) 17.750

Flooding Elevation (FSTG(I), ft MSL) 1114.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 14

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1111.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1112.00	6880.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1114.00	8185.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1116.00	9490.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1120.00	11960.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1124.00	13920.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 15 HOUSE ELE.=1110(+or-)

Cross-Section Location (XS(I), mi) 18.550

Flooding Elevation (FSTG(I), ft MSL) 1106.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 15

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HC(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1103.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1104.00	3920.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1106.00	5145.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1108.00	6370.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1112.00	8690.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1116.00	11280.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 16 HOUSE ELE.=1111(+or-)

Cross-Section Location (XS(I), mi) 19.040

Flooding Elevation (FSTG(I), ft MSL) 1102.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 16

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1099.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1100.00	3360.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1102.00	4820.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1104.00	6280.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1106.00	7580.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1108.00	8880.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 17 HOUSE ELE.=1104-06(+or-)

Cross-Section Location (XS(I), mi) 19.520

Flooding Elevation (FSTG(I), ft MSL) 1095.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 17

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1091.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1092.00	1870.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1094.00	2345.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1096.00	2820.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1100.00	5400.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1114.00	7350.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 18

Cross-Section Location (XS(I), mi) 20.050

Flooding Elevation (FSTG(I), ft MSL) 1090.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 18

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation YC(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1087.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1088.00	1750.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1090.00	2535.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1192.00	3320.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1096.00	6100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1104.00	12650.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 19

Cross-Section Location (XS(I), mi) 20.730

Flooding Elevation (FSTG(I), ft MSL) 1082.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 19

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1079.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1080.00	1300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1082.00	1765.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1084.00	2230.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1088.00	2700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1092.00	4200.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 20

Cross-Section Location (XS(I), mi) 21.390

Flooding Elevation (FSTG(I), ft MSL) 1074.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 20

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1071.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1072.00	830.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1074.00	1040.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1076.00	1250.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1084.00	2720.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1088.00	6720.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 21

Cross-Section Location (XS(I), mi) 22.710

Flooding Elevation (FSTG(I), ft MSL) 1062.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 21

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1059.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1060.00	690.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1062.00	1140.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1064.00	4760.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1068.00	5690.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1072.00	7540.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 22

Cross-Section Location (XS(I), mi) 23.690

Flooding Elevation (FSTG(I), ft MSL) 1052.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 22

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1049.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1050.00	200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1052.00	925.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1054.00	1275.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1058.00	3650.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1066.00	7520.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 23 HOUSE ELE.=1051-58(+or-)

Cross-Section Location (XS(I), mi) 24.160

Flooding Elevation (FSTG(I), ft MSL) 1047.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 23

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation ,I) MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1044.00	40.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1046.00	500.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1048.00	980.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1052.00	1235.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1056.00	4860.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1060.00	6290.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 24

Cross-Section Location (XS(I), mi) 25.540

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 24

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1026.00	20.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1028.00	60.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1030.00	260.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1034.00	1570.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1038.00	2110.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1044.00	3020.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 25

Cross-Section Location (XS(I), mi) 26.690

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 25

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1004.00	50.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1008.00	280.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1012.00	960.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1016.00	1100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1020.00	2000.0	.0400	600.0	.0	.0000	.0	.0000	1.0000
1024.00	2100.0	.0400	1700.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 26

Cross-Section Location (XS(I), mi) 27.570

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 26

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
992.00	270.0	.0500	.0	.0	.0000	.0	.0000	1.0000
994.00	370.0	.0500	.0	.0	.0000	.0	.0000	1.0000
996.00	755.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1000.00	1040.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1004.00	1300.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1008.00	1900.0	.0400	1600.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 27

Cross-Section Location (XS(I), mi) 28.750

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 27

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
972.00	120.0	.0500	.0	.0	.0000	.0	.0000	1.0000
974.00	300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
976.00	475.0	.0500	.0	.0	.0000	.0	.0000	1.0000
980.00	1400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
984.00	2600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
988.00	2700.0	.0400	7100.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 28 MULLEN WELL(FOUNDATION)

Cross-Section Location (XS(I), mi) 29.620

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 28

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
956.00	210.0	.0500	.0	.0	.0000	.0	.0000	1.0000
958.00	750.0	.0500	.0	.0	.0000	.0	.0000	1.0000
960.00	1200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
964.00	2000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
968.00	2400.0	.0400	4490.0	.0	.0000	.0	.0000	1.0000
972.00	2500.0	.0400	5620.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 29

Cross-Section Location (XS(I), mi) 30.100

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

CROSS-SECTION DESCRIPTION :

Elevation HS(K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Right Top Width BSR(K,I) (ft)
948.00	100.0	.0	.0	.0
952.00	150.0	.0	.0	.0
956.00	2575.0	.0	.0	.0
960.00	2700.0	.0	.0	.0
964.00	2800.0	.0	.0	.0
968.00	3000.0	.0	.0	.0

```
WARNING: At cross-section reach  17 the distance between
         interpolated cross-sections (DXM) should be changed
         to   .009 due to expansion/contraction criteria

WARNING: At cross-section reach  18 the distance between
         interpolated cross-sections (DXM) should be changed
         to   .009 due to expansion/contraction criteria

WARNING: At cross-section reach  22 the distance between
         interpolated cross-sections (DXM) should be changed
         to   .052 due to expansion/contraction criteria

WARNING: At cross-section reach  24 the distance between
         interpolated cross-sections (DXM) should be changed
         to   .077 due to expansion/contraction criteria
```

DISTANCE BETWEEN INTERPOLATED CROSS-SECTIONS
(DXM) THAT WILL BE USED IN COMPUTATIONS :

Down Stream Reach Number I=1,NS1	Interp. Cross Section Distance DXM(I) (mi)
1	101.0000
2	.0300
3	.1000
4	.2000
5	.3000
6	.3000
7	.2000
8	.2000
9	.2000
10	.2000
11	.2000
12	.1000
13	.1000
14	.1000
15	.1000
16	.1000
17	.2000
18	.2000
19	.2000
20	.2000
21	.1000
22	.1000
23	.1000
24	.2000
25	.2000
26	.2000
27	.1000
28	.1000

Total number of cross-sections (original+interpolated) 159

Maximum number of cross-sections allowed 300

INPUT DATA SUMMARY :

CROSS-SECTION and REACH SUMMARY :

Cross Section Number	Cross Section Location (mi)	Bottom Elevation (ft MSL)	Reach Number	Reach Length (mi)	Reach Slope (ft/mi)
1	5.970	1396.000			
2	6.000	1395.200	1	.030	26.668
3	6.300	1380.000	2	.300	50.666

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

4	6.950	1359.000	3	.650	32.308
5	7.560	1339.000	4	.610	32.787
6	8.170	1319.000	5	.610	32.787
7	9.540	1279.000	6	1.370	29.197
8	11.060	1239.000	7	1.520	26.316
9	12.700	1199.000	8	1.640	24.390
10	13.640	1179.000	9	.940	21.277
11	14.730	1158.000	10	1.090	19.266
12	15.210	1150.000	11	.480	16.667
13	16.500	1127.000	12	1.290	17.829
14	17.750	1111.000	13	1.250	12.800
15	18.550	1103.000	14	.800	10.000
16	19.040	1099.000	15	.490	8.163
17	19.520	1091.000	16	.480	16.667
18	20.050	1087.000	17	.530	7.547
19	20.730	1079.000	18	.680	11.765
20	21.390	1071.000	19	.660	12.121
21	22.710	1059.000	20	1.320	9.091
22	23.690	1049.000	21	.980	10.204
23	24.160	1044.000	22	.470	10.638
24	25.540	1026.000	23	1.380	13.043
25	26.690	1004.000	24	1.150	19.130
26	27.570	992.000	25	.880	13.636
27	28.750	972.000	26	1.180	16.949
28	29.620	956.000	27	.870	18.391
29	30.100	948.000	28	.480	16.667

RE-NUMBERED DAM/BRIDGE CROSS-SECTIONS :

Dam/ Bridge	Revised Cross Section Number
1	1

Number of Intermediate Cross-Sections (NN(NS)) 159

Number of Time Steps (NNU) 17

INITIAL CONDITIONS TABLE :

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
1	5.970	1397.59	1.59	1397.09	1.09	0	11	11
2	6.000	1396.14	.94	1395.95	.75	0	11	11
3	6.030	1394.66	.98	1394.48	.80	0	11	11
4	6.060	1393.19	1.03	1392.98	.82	0	11	11
5	6.090	1391.70	1.06	1391.49	.85	0	11	11
6	6.120	1390.21	1.09	1390.00	.88	0	11	11
7	6.150	1388.71	1.11	1388.51	.91	0	11	11
8	6.180	1387.22	1.14	1387.01	.93	0	11	11
9	6.210	1385.73	1.17	1385.51	.95	0	11	11
10	6.240	1384.22	1.18	1384.00	.96	0	11	11
11	6.270	1382.73	1.21	1382.50	.98	0	11	11
12	6.300	1381.34	1.34	1380.99	.99	0	10	10
13	6.408	1377.66	1.16	1377.27	.77	0	10	10
14	6.517	1373.98	.98	1373.65	.65	0	10	10
15	6.625	1370.36	.86	1370.06	.56	0	10	10
16	6.733	1366.76	.76	1366.50	.50	0	10	10
17	6.842	1363.17	.67	1362.94	.44	0	10	10
18	6.950	1359.61	.61	1359.40	.40	0	9	9
19	7.153	1352.96	.62	1352.75	.41	0	9	9
20	7.357	1346.33	.66	1346.10	.43	0	9	9
21	7.560	1339.69	.69	1339.47	.47	0	9	9
22	7.865	1329.68	.68	1329.45	.45	0	9	9
23	8.170	1319.68	.68	1319.43	.43	0	9	9
24	8.513	1309.62	.62	1309.40	.40	0	9	9
25	8.855	1299.57	.57	1299.36	.36	0	9	9
26	9.198	1289.54	.54	1289.34	.34	0	9	9
27	9.540	1279.54	.54	1279.33	.33	0	9	9
28	9.757	1273.80	.52	1273.61	.33	0	9	9
29	9.974	1268.09	.52	1267.90	.33	0	9	9
30	10.191	1262.38	.52	1262.18	.33	0	9	9
31	10.409	1256.66	.52	1256.45	.31	0	9	9
32	10.626	1250.93	.50	1250.74	.31	0	9	9
33	10.843	1245.22	.50	1245.02	.31	0	9	9
34	11.060	1239.50	.50	1239.31	.31	0	9	9
35	11.265	1234.52	.52	1234.31	.31	0	9	9
36	11.470	1229.52	.52	1229.31	.31	0	9	9
37	11.675	1224.52	.52	1224.31	.31	0	9	9
38	11.880	1219.52	.52	1219.31	.31	0	9	9
39	12.085	1214.52	.52	1214.31	.31	0	9	9
40	12.290	1209.52	.52	1209.31	.31	0	9	9
41	12.495	1204.52	.52	1204.33	.33	0	9	9
42	12.700	1199.54	.54	1199.33	.33	0	9	9
43	12.935	1194.54	.54	1194.33	.33	0	9	9
44	13.170	1189.54	.54	1189.33	.33	0	9	9
45	13.405	1184.55	.55	1184.33	.33	0	9	9
46	13.640	1179.55	.55	1179.33	.33	0	9	9
47	13.858	1175.40	.60	1175.15	.35	0	9	9
48	14.076	1171.25	.65	1170.98	.38	0	9	9
49	14.294	1167.08	.68	1166.80	.40	0	9	9

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
50	14.512	1162.92	.72	1162.63	.43	0	9	9
51	14.730	1158.77	.77	1158.44	.44	0	9	9
52	14.970	1154.75	.75	1154.42	.42	0	9	9
53	15.210	1150.69	.69	1150.40	.40	0	9	9
54	15.318	1148.78	.70	1148.49	.41	0	10	10
55	15.425	1146.86	.69	1146.57	.41	0	10	10
56	15.533	1144.95	.70	1144.65	.40	0	10	10
57	15.640	1143.03	.69	1142.74	.40	0	10	10
58	15.748	1141.10	.69	1140.82	.40	0	10	10
59	15.855	1139.18	.68	1138.90	.40	0	10	10
60	15.963	1137.27	.68	1136.98	.40	0	10	10
61	16.070	1135.34	.67	1135.06	.39	0	10	10
62	16.178	1133.43	.68	1133.14	.39	0	10	10
63	16.285	1131.50	.67	1131.22	.38	0	10	10
64	16.393	1129.57	.65	1129.30	.38	0	10	10
65	16.500	1127.69	.69	1127.37	.37	0	10	10
66	16.604	1126.36	.69	1126.04	.37	0	10	10
67	16.708	1125.01	.68	1124.71	.37	0	10	10
68	16.813	1123.68	.68	1123.37	.37	0	10	10
69	16.917	1122.35	.68	1122.03	.36	0	10	10
70	17.021	1121.01	.68	1120.70	.36	0	10	10
71	17.125	1119.67	.67	1119.36	.36	0	10	10
72	17.229	1118.33	.67	1118.03	.36	0	10	10
73	17.333	1117.00	.67	1116.70	.36	0	10	10
74	17.437	1115.65	.65	1115.36	.36	0	10	10
75	17.542	1114.32	.65	1114.02	.35	0	10	10
76	17.646	1112.99	.65	1112.68	.35	0	10	10
77	17.750	1111.68	.68	1111.35	.35	0	10	10
78	17.850	1110.69	.69	1110.36	.36	0	10	10
79	17.950	1109.70	.70	1109.36	.36	0	10	10
80	18.050	1108.73	.73	1108.37	.37	0	10	10
81	18.150	1107.74	.74	1107.39	.39	0	10	10
82	18.250	1106.77	.77	1106.40	.40	0	10	10
83	18.350	1105.78	.78	1105.41	.41	0	10	10
84	18.450	1104.81	.81	1104.43	.43	0	10	10
85	18.550	1103.87	.87	1103.44	.44	0	10	10
86	18.672	1102.88	.88	1102.44	.44	0	10	10
87	18.795	1101.90	.90	1101.45	.45	0	10	10
88	18.917	1100.91	.91	1100.46	.46	0	9	9
89	19.040	1099.80	.80	1099.47	.47	0	9	9
90	19.160	1097.85	.85	1097.48	.48	0	10	10
91	19.280	1095.88	.88	1095.51	.51	0	10	10
92	19.400	1093.94	.94	1093.54	.54	0	10	10
93	19.520	1092.14	1.14	1091.59	.59	0	11	11
94	19.785	1090.16	1.16	1089.60	.60	0	10	10
95	20.050	1088.09	1.09	1087.61	.61	0	10	10
96	20.277	1085.46	1.12	1084.95	.62	0	10	10
97	20.503	1082.82	1.15	1082.32	.65	0	10	10
98	20.730	1080.20	1.20	1079.68	.68	0	10	10
99	20.950	1077.59	1.25	1077.05	.72	0	10	10

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
100	21.170	1074.99	1.32	1074.42	.76	0	10	10
101	21.390	1072.49	1.49	1071.82	.82	0	10	10
102	21.610	1070.51	1.51	1069.82	.82	0	10	10
103	21.830	1068.54	1.54	1067.83	.83	0	10	10
104	22.050	1066.55	1.55	1065.84	.84	0	10	10
105	22.270	1064.57	1.57	1063.85	.85	0	10	10
106	22.490	1062.59	1.59	1061.86	.86	0	10	10
107	22.710	1060.58	1.58	1059.88	.88	0	10	10
108	22.819	1059.52	1.63	1058.79	.90	0	10	10
109	22.928	1058.48	1.70	1057.72	.94	0	10	10
110	23.037	1057.44	1.77	1056.64	.97	0	10	10
111	23.146	1056.41	1.85	1055.57	1.02	0	10	10
112	23.254	1055.38	1.94	1054.51	1.06	0	10	10
113	23.363	1054.38	2.04	1053.46	1.12	0	10	10
114	23.472	1053.39	2.16	1052.43	1.20	0	10	10
115	23.581	1052.38	2.27	1051.43	1.32	0	10	10
116	23.690	1051.40	2.40	1050.44	1.44	0	10	10
117	23.807	1050.15	2.40	1049.12	1.37	0	10	10
118	23.925	1048.86	2.36	1047.80	1.30	0	10	10
119	24.042	1047.54	2.29	1046.50	1.25	0	10	10
120	24.160	1046.15	2.15	1045.20	1.20	0	10	10
121	24.266	1044.82	2.20	1043.85	1.24	0	10	10
122	24.372	1043.50	2.27	1042.51	1.28	0	10	10
123	24.478	1042.19	2.34	1041.16	1.31	0	10	10
124	24.585	1040.89	2.43	1039.83	1.37	0	10	10
125	24.691	1039.61	2.53	1038.49	1.42	0	10	10
126	24.797	1038.33	2.64	1037.17	1.48	0	10	10
127	24.903	1037.07	2.76	1035.87	1.56	0	10	10
128	25.009	1035.84	2.92	1034.56	1.64	0	10	10
129	25.115	1034.64	3.10	1033.30	1.76	0	10	10
130	25.222	1033.45	3.30	1032.05	1.89	0	10	10
131	25.328	1032.34	3.57	1030.85	2.08	0	10	10
132	25.434	1031.28	3.90	1029.80	2.41	0	10	10
133	25.540	1029.96	3.96	1028.84	2.84	0	10	10
134	25.770	1025.40	3.80	1023.91	2.31	0	10	10
135	26.000	1020.77	3.57	1019.27	2.07	0	10	10
136	26.230	1015.98	3.18	1014.70	1.90	0	10	10
137	26.460	1011.41	3.01	1010.17	1.77	0	10	10
138	26.690	1007.10	3.10	1005.69	1.69	0	10	10
139	26.910	1003.53	2.53	1002.25	1.25	0	10	10
140	27.130	1000.14	2.14	999.01	1.01	0	10	10
141	27.350	996.85	1.85	995.84	.84	0	10	10
142	27.570	993.55	1.55	992.74	.74	0	10	10
143	27.806	989.63	1.63	988.79	.79	0	10	10
144	28.042	985.74	1.74	984.85	.85	0	10	10
145	28.278	981.85	1.85	980.93	.93	0	10	10
146	28.514	977.98	1.98	977.01	1.01	0	10	10
147	28.750	974.09	2.09	973.12	1.12	0	10	10
148	28.859	971.95	1.95	971.04	1.04	0	10	10
149	28.967	969.84	1.84	968.98	.98	0	10	10

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
150	29.076	967.74	1.74	966.93	.93	0	10	10
151	29.185	965.66	1.66	964.88	.88	0	10	10
152	29.294	963.60	1.60	962.85	.85	0	10	10
153	29.402	961.54	1.54	960.80	.80	0	10	10
154	29.511	959.48	1.48	958.77	.77	0	10	10
155	29.620	957.48	1.48	956.76	.76	0	10	10
156	29.740	955.67	1.67	954.86	.85	0	10	10
157	29.860	953.92	1.92	952.98	.98	0	10	10
158	29.980	952.25	2.25	951.14	1.14	0	10	10
159	30.100	950.80	2.80	949.42	1.42	0	10	10

SUMMARY OF INITIAL DOWNSTREAM BOUNDARY CONDITIONS :

Cross-section Number at Downstream End of Model (IN)	159
Initial Water Surface Elev. at Downstream End (YNN, ft MSL)	950.803
Initial Flow Depth at Downstream End (DEP, ft)	2.803

COMPUTED STEP BACKWATER TABLE :

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
158	29.980	1000.0	952.524	2.524	4
157	29.860	1000.0	954.029	2.029	4
156	29.740	1000.0	955.736	1.735	4
155	29.620	1000.0	957.516	1.516	4
154	29.511	1000.0	959.430	1.429	4
153	29.402	1000.0	961.555	1.555	4
152	29.294	1000.0	963.574	1.574	4
151	29.185	1000.0	965.661	1.660	4

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
150	29.076	1000.0	967.725	1.725	4
149	28.967	1000.0	969.819	1.819	4
148	28.859	1000.0	971.920	1.920	4
147	28.750	1000.0	974.047	2.047	4
146	28.514	1000.0	978.065	2.065	4
145	28.278	1000.0	981.842	1.842	4
144	28.042	1000.0	985.778	1.778	4
143	27.806	1000.0	989.642	1.642	4
142	27.570	1000.0	993.570	1.570	5
141	27.350	1000.0	996.857	1.857	4
140	27.130	1000.0	1000.058	2.058	3
139	26.910	1000.0	1003.462	2.462	3
138	26.690	1000.0	1006.965	2.965	4
137	26.460	1000.0	1011.322	2.922	3
136	26.230	1000.0	1015.988	3.188	4
135	26.000	1000.0	1020.689	3.489	4
134	25.770	1000.0	1025.394	3.794	4
133	25.540	1000.0	1030.007	4.007	6
132	25.434	1000.0	1031.520	4.135	5
131	25.328	1000.0	1032.544	3.774	5
130	25.222	1000.0	1033.598	3.444	4
129	25.115	1000.0	1034.736	3.198	4
128	25.009	1000.0	1035.921	2.998	4
127	24.903	1000.0	1037.140	2.832	4
126	24.797	1000.0	1038.385	2.693	4
125	24.691	1000.0	1039.650	2.573	4
124	24.585	1000.0	1040.932	2.470	4
123	24.478	1000.0	1042.226	2.380	4
122	24.372	1000.0	1043.532	2.301	4
121	24.266	1000.0	1044.846	2.230	4
120	24.160	1000.0	1046.167	2.167	4
119	24.042	1000.0	1047.540	2.290	4
118	23.925	1000.0	1048.838	2.338	4
117	23.807	1000.0	1050.134	2.384	4
116	23.690	1000.0	1051.396	2.396	4
115	23.581	1000.0	1052.451	2.340	4
114	23.472	1000.0	1053.426	2.203	5
113	23.363	1000.0	1054.422	2.089	5
112	23.254	1000.0	1055.427	1.983	5
111	23.146	1000.0	1056.443	1.887	5
110	23.037	1000.0	1057.471	1.804	4
109	22.928	1000.0	1058.505	1.728	4
108	22.819	1000.0	1059.549	1.661	4
107	22.710	1000.0	1060.601	1.601	4
106	22.490	1000.0	1062.614	1.614	4
105	22.270	1000.0	1064.572	1.572	4
104	22.050	1000.0	1066.560	1.560	4
103	21.830	1000.0	1068.534	1.534	4
102	21.610	1000.0	1070.517	1.517	4
101	21.390	1000.0	1072.496	1.496	4

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
100	21.170	1000.0	1074.956	1.290	4
99	20.950	1000.0	1077.617	1.284	4
98	20.730	1000.0	1080.184	1.184	4
97	20.503	1000.0	1082.843	1.176	4
96	20.277	1000.0	1085.445	1.111	4
95	20.050	1000.0	1088.095	1.095	4
94	19.785	1000.0	1090.210	1.210	4
93	19.520	1000.0	1092.111	1.111	4
92	19.400	1000.0	1093.863	.863	4
91	19.280	1000.0	1095.940	.940	4
90	19.160	1000.0	1097.812	.812	4
89	19.040	1000.0	1099.833	.833	4
88	18.917	1000.0	1100.954	.954	5
87	18.795	1000.0	1101.877	.877	5
86	18.672	1000.0	1102.896	.896	4
85	18.550	1000.0	1103.869	.869	4
84	18.450	1000.0	1104.803	.803	4
83	18.350	1000.0	1105.796	.796	4
82	18.250	1000.0	1106.765	.765	4
81	18.150	1000.0	1107.749	.749	4
80	18.050	1000.0	1108.728	.728	4
79	17.950	1000.0	1109.712	.712	4
78	17.850	1000.0	1110.696	.696	4
77	17.750	1000.0	1111.682	.682	4
76	17.646	1000.0	1112.960	.627	4
75	17.542	1000.0	1114.338	.672	4
74	17.437	1000.0	1115.647	.647	4
73	17.333	1000.0	1117.003	.670	4
72	17.229	1000.0	1118.327	.660	4
71	17.125	1000.0	1119.673	.673	4
70	17.021	1000.0	1121.004	.671	4
69	16.917	1000.0	1122.346	.679	4
68	16.813	1000.0	1123.680	.680	4
67	16.708	1000.0	1125.020	.686	4
66	16.604	1000.0	1126.356	.689	4
65	16.500	1000.0	1127.694	.694	4
64	16.393	1000.0	1129.540	.623	4
63	16.285	1000.0	1131.525	.691	4
62	16.178	1000.0	1133.399	.649	4
61	16.070	1000.0	1135.359	.692	5
60	15.963	1000.0	1137.250	.666	4
59	15.855	1000.0	1139.195	.695	5
58	15.748	1000.0	1141.095	.679	4
57	15.640	1000.0	1143.032	.699	5
56	15.533	1000.0	1144.938	.688	4
55	15.425	1000.0	1146.867	.701	4
54	15.318	1000.0	1148.780	.696	4
53	15.210	1000.0	1150.704	.704	4
52	14.970	1000.0	1154.749	.749	5
51	14.730	1000.0	1158.772	.772	4

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
50	14.512	1000.0	1162.916	.715	3
49	14.294	1000.0	1167.094	.694	4
48	14.076	1000.0	1171.242	.642	4
47	13.858	1000.0	1175.412	.612	4
46	13.640	1000.0	1179.558	.558	4
45	13.405	1000.0	1184.541	.541	4
44	13.170	1000.0	1189.551	.551	4
43	12.935	1000.0	1194.536	.536	4
42	12.700	1000.0	1199.545	.545	4
41	12.495	1000.0	1204.505	.505	4
40	12.290	1000.0	1209.537	.537	4
39	12.085	1000.0	1214.503	.503	4
38	11.880	1000.0	1219.531	.531	4
37	11.675	1000.0	1224.501	.501	4
36	11.470	1000.0	1229.524	.524	4
35	11.265	1000.0	1234.499	.499	4
34	11.060	1000.0	1239.519	.519	4
33	10.843	1000.0	1245.202	.488	4
32	10.626	1000.0	1250.953	.524	4
31	10.409	1000.0	1256.639	.496	4
30	10.191	1000.0	1262.388	.530	4
29	9.974	1000.0	1268.077	.505	4
28	9.757	1000.0	1273.825	.539	3
27	9.540	1000.0	1279.513	.513	4
26	9.198	1000.0	1289.549	.549	2
25	8.855	1000.0	1299.575	.575	4
24	8.513	1000.0	1309.626	.626	4
23	8.170	1000.0	1319.676	.676	4
22	7.865	1000.0	1329.672	.672	3
21	7.560	1000.0	1339.709	.709	4
20	7.357	1000.0	1346.322	.655	4
19	7.153	1000.0	1352.971	.637	4
18	6.950	1000.0	1359.599	.599	4
17	6.842	1000.0	1363.180	.680	4
16	6.733	1000.0	1366.750	.750	4
15	6.625	1000.0	1370.357	.857	4
14	6.517	1000.0	1373.967	.967	4
13	6.408	1000.0	1377.650	1.150	4
12	6.300	1000.0	1381.422	1.422	3
11	6.270	1000.0	1382.596	1.076	5
10	6.240	1000.0	1384.317	1.277	4
9	6.210	1000.0	1385.675	1.115	5
8	6.180	1000.0	1387.265	1.185	4
7	6.150	1000.0	1388.699	1.099	5
6	6.120	1000.0	1390.232	1.112	4
5	6.090	1000.0	1391.696	1.056	4
4	6.060	1000.0	1393.198	1.038	4
3	6.030	1000.0	1394.663	.984	4
2	6.000	1000.0	1396.141	.941	4
1	5.970	1000.0	1408.100	12.100	0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
1	1408.10	1000.0
2	1396.14	1000.0
3	1394.66	1000.0
4	1393.20	1000.0
5	1391.70	1000.0
6	1390.23	1000.0
7	1388.70	1000.0
8	1387.26	1000.0
9	1385.67	1000.0
10	1384.32	1000.0
11	1382.60	1000.0
12	1381.42	1000.0
13	1377.65	1000.0
14	1373.97	1000.0
15	1370.36	1000.0
16	1366.75	1000.0
17	1363.18	1000.0
18	1359.60	1000.0
19	1352.97	1000.0
20	1346.32	1000.0
21	1339.71	1000.0
22	1329.67	1000.0
23	1319.68	1000.0
24	1309.63	1000.0
25	1299.58	1000.0
26	1289.55	1000.0
27	1279.51	1000.0
28	1273.82	1000.0
29	1268.08	1000.0
30	1262.39	1000.0
31	1256.64	1000.0
32	1250.95	1000.0
33	1245.20	1000.0
34	1239.52	1000.0
35	1234.50	1000.0
36	1229.52	1000.0
37	1224.50	1000.0
38	1219.53	1000.0
39	1214.50	1000.0
40	1209.54	1000.0
41	1204.51	1000.0
42	1199.54	1000.0
43	1194.54	1000.0
44	1189.55	1000.0
45	1184.54	1000.0
46	1179.56	1000.0
47	1175.41	1000.0
48	1171.24	1000.0
49	1167.09	1000.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
50	1162.92	1000.0
51	1158.77	1000.0
52	1154.75	1000.0
53	1150.70	1000.0
54	1148.78	1000.0
55	1146.87	1000.0
56	1144.94	1000.0
57	1143.03	1000.0
58	1141.10	1000.0
59	1139.20	1000.0
60	1137.25	1000.0
61	1135.36	1000.0
62	1133.40	1000.0
63	1131.52	1000.0
64	1129.54	1000.0
65	1127.69	1000.0
66	1126.36	1000.0
67	1125.02	1000.0
68	1123.68	1000.0
69	1122.35	1000.0
70	1121.00	1000.0
71	1119.67	1000.0
72	1118.33	1000.0
73	1117.00	1000.0
74	1115.65	1000.0
75	1114.34	1000.0
76	1112.96	1000.0
77	1111.68	1000.0
78	1110.70	1000.0
79	1109.71	1000.0
80	1108.73	1000.0
81	1107.75	1000.0
82	1106.76	1000.0
83	1105.80	1000.0
84	1104.80	1000.0
85	1103.87	1000.0
86	1102.90	1000.0
87	1101.88	1000.0
88	1100.95	1000.0
89	1099.83	1000.0
90	1097.81	1000.0
91	1095.94	1000.0
92	1093.86	1000.0
93	1092.11	1000.0
94	1090.21	1000.0
95	1088.10	1000.0
96	1085.44	1000.0
97	1082.84	1000.0
98	1080.18	1000.0
99	1077.62	1000.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
100	1074.96	1000.0
101	1072.50	1000.0
102	1070.52	1000.0
103	1068.53	1000.0
104	1066.56	1000.0
105	1064.57	1000.0
106	1062.61	1000.0
107	1060.60	1000.0
108	1059.55	1000.0
109	1058.51	1000.0
110	1057.47	1000.0
111	1056.44	1000.0
112	1055.43	1000.0
113	1054.42	1000.0
114	1053.43	1000.0
115	1052.45	1000.0
116	1051.40	1000.0
117	1050.13	1000.0
118	1048.84	1000.0
119	1047.54	1000.0
120	1046.17	1000.0
121	1044.85	1000.0
122	1043.53	1000.0
123	1042.23	1000.0
124	1040.93	1000.0
125	1039.65	1000.0
126	1038.38	1000.0
127	1037.14	1000.0
128	1035.92	1000.0
129	1034.74	1000.0
130	1033.60	1000.0
131	1032.54	1000.0
132	1031.52	1000.0
133	1030.01	1000.0
134	1025.39	1000.0
135	1020.69	1000.0
136	1015.99	1000.0
137	1011.32	1000.0
138	1006.97	1000.0
139	1003.46	1000.0
140	1000.06	1000.0
141	996.86	1000.0
142	993.57	1000.0
143	989.64	1000.0
144	985.78	1000.0
145	981.84	1000.0
146	978.06	1000.0
147	974.05	1000.0
148	971.92	1000.0
149	969.82	1000.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
150	967.73	1000.0
151	965.66	1000.0
152	963.57	1000.0
153	961.55	1000.0
154	959.43	1000.0
155	957.52	1000.0
156	955.74	1000.0
157	954.03	1000.0
158	952.52	1000.0
159	950.80	1000.0

DAM OUTFLOW HYDROGRAPH TIME PARAMETERS :

Time to Failure (TFH, hr)	3.500
Time to Start of Rising Limb of Hydrograph (TFO, hr)	.000
Time to Peak (TP, hr)	6.250
Time Step Size (DTHI, hr)	.200

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Time (TT)	10.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	107812.50
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1407.93
Flow at Downstream End of Model (QU(N), cfs)	1003.05
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.14

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1407.93	5.33	20245.	2198.	2198.	107.813	.0400	.00	-.51	1867.5	.3	11.9
6.210	1391.28	9.94	10984.	2445.	2445.	109.158	.0400	-1.00	5.55	.0	.8	6.7
6.842	1366.61	5.67	19957.	7136.	7136.	113.224	.0451	-1.00	3.43	.0	.6	4.1
8.855	1303.08	4.41	26896.	9293.	9293.	118.507	.0500	.00	3.51	.0	.5	4.1
10.843	1247.96	3.80	29418.	12683.	12683.	111.840	.0500	.00	2.76	.0	.4	3.2
12.495	1207.14	3.62	26554.	11884.	11884.	96.092	.0500	.00	2.63	.0	.4	3.1
14.294	1168.59	2.13	10903.	8425.	8425.	23.248	.0500	.00	1.49	.0	.3	2.2
15.640	1143.13	.94	1563.	3916.	3916.	1.464	.0500	.00	.10	.0	.3	.8
16.500	1127.70	.73	1394.	3997.	3997.	1.011	.0500	.00	.00	.0	.2	.7
17.333	1117.01	.69	1471.	4371.	4371.	1.009	.0500	.00	.00	.0	.2	.7
18.150	1107.75	.66	1520.	4051.	4051.	1.006	.0500	.00	.00	.0	.2	.8
19.040	1099.84	.86	1176.	2810.	2810.	1.006	.0500	.00	.00	.0	.2	.8
20.503	1082.85	1.02	990.	1501.	1501.	1.006	.0500	.00	.00	.0	.2	1.2
22.270	1064.58	1.22	824.	843.	843.	1.005	.0500	.00	.00	.0	.2	1.6
23.363	1054.43	1.31	769.	709.	709.	1.005	.0500	.00	.00	.0	.2	2.1
24.266	1044.85	1.62	620.	520.	520.	1.004	.0500	.00	.00	.0	.3	2.2
25.115	1034.74	1.79	560.	367.	367.	1.004	.0500	.00	.00	.0	.3	3.2
26.460	1011.32	2.81	357.	200.	200.	1.003	.0500	.00	.00	.0	.4	2.9
28.278	981.84	2.19	458.	316.	316.	1.003	.0500	.00	.00	.0	.3	1.8
29.402	961.56	1.78	565.	538.	538.	1.003	.0500	.00	.00	.0	.3	1.6

Maximum Froude Number (FRDM)	.85
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.16
Cross-Section of Minimum Froude Number (IFM)	88

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	10.400	107813.	1407.93	1396.00	1402.07	1.00	793.00	107813.	107813.	0.	0.

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Time (TT)	10.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	76319.07
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1405.43
Flow at Downstream End of Model (QU(N), cfs)	1003.04
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.14

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1405.43	5.15	14825.	2136.	2136.	76.319	.0400	.00	-3.01	1382.4	.3	9.4
6.210	1390.42	8.71	8917.	2412.	2412.	77.655	.0400	-1.00	4.70	.0	.8	5.9
6.842	1366.19	4.92	17032.	6825.	6825.	83.883	.0473	-1.00	3.01	.0	.5	3.7
8.855	1302.99	4.33	26053.	9200.	9200.	112.719	.0500	.00	3.42	.0	.5	4.0
10.843	1248.04	3.86	30438.	12802.	12802.	117.504	.0500	.00	2.84	.0	.4	3.3
12.495	1207.36	3.77	29198.	12197.	12197.	110.181	.0500	.00	2.85	.0	.4	3.4
14.294	1170.05	3.23	24515.	10194.	10194.	79.162	.0500	.00	2.95	.0	.4	3.6
15.640	1143.90	1.54	5991.	7666.	7666.	9.219	.0500	.00	.86	.0	.3	1.6
16.500	1127.70	.73	1407.	4014.	4014.	1.024	.0500	.00	.01	.0	.2	.7
17.333	1117.01	.69	1472.	4373.	4373.	1.009	.0500	.00	.00	.0	.2	.7
18.150	1107.75	.66	1521.	4052.	4052.	1.007	.0500	.00	.00	.0	.2	.8
19.040	1099.84	.86	1176.	2810.	2810.	1.006	.0500	.00	.00	.0	.2	.8
20.503	1082.85	1.02	990.	1501.	1501.	1.006	.0500	.00	.00	.0	.2	1.2
22.270	1064.58	1.22	824.	843.	843.	1.006	.0500	.00	.00	.0	.2	1.6
23.363	1054.43	1.31	769.	709.	709.	1.005	.0500	.00	.00	.0	.2	2.1
24.266	1044.85	1.62	620.	520.	520.	1.005	.0500	.00	.00	.0	.3	2.2
25.115	1034.74	1.79	560.	367.	367.	1.004	.0500	.00	.00	.0	.3	3.2
26.460	1011.32	2.81	357.	200.	200.	1.003	.0500	.00	.00	.0	.4	2.9
28.278	981.84	2.19	458.	316.	316.	1.003	.0500	.00	.00	.0	.3	1.8
29.402	961.56	1.78	565.	538.	538.	1.003	.0500	.00	.00	.0	.3	1.6

Maximum Froude Number (FRDM)	.82
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.16
Cross-Section of Minimum Froude Number (IFM)	88

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	10.800	76319.	1405.43	1396.00	1401.13	1.00	793.00	76319.	76319.	0.	0.

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Time (TT)	11.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	53242.80
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1403.35
Flow at Downstream End of Model (QU(N), cfs)	1003.04
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.14

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1403.35	5.10	10434.	2084.	2084.	53.243	.0400	.00	-5.09	967.3	.4	7.3
6.210	1389.70	7.58	7175.	2384.	2384.	54.389	.0400	-1.00	3.98	.0	.8	5.1
6.842	1365.77	4.20	14215.	6512.	6512.	59.738	.0495	-1.00	2.59	.0	.5	3.3
8.855	1302.60	4.01	22501.	8798.	8798.	90.258	.0500	.00	3.02	.0	.4	3.6
10.843	1247.99	3.81	29790.	12726.	12726.	113.643	.0500	.00	2.79	.0	.4	3.3
12.495	1207.45	3.84	30358.	12332.	12332.	116.465	.0500	.00	2.95	.0	.4	3.5
14.294	1170.61	3.50	30430.	10874.	10874.	106.469	.0500	.00	3.51	.0	.4	4.2
15.640	1145.65	3.00	21968.	10177.	10177.	65.822	.0500	.00	2.62	.0	.4	3.3
16.500	1128.30	1.31	4624.	6126.	6126.	6.059	.0500	.00	.60	.0	.3	1.3
17.333	1117.01	.69	1474.	4375.	4375.	1.011	.0500	.00	.00	.0	.2	.7
18.150	1107.75	.66	1521.	4052.	4052.	1.007	.0500	.00	.00	.0	.2	.8
19.040	1099.84	.86	1176.	2810.	2810.	1.006	.0500	.00	.00	.0	.2	.8
20.503	1082.85	1.02	990.	1501.	1501.	1.006	.0500	.00	.00	.0	.2	1.2
22.270	1064.58	1.22	824.	843.	843.	1.006	.0500	.00	.00	.0	.2	1.6
23.363	1054.43	1.31	769.	709.	709.	1.005	.0500	.00	.00	.0	.2	2.1
24.266	1044.85	1.62	620.	520.	520.	1.005	.0500	.00	.00	.0	.3	2.2
25.115	1034.74	1.79	560.	367.	367.	1.005	.0500	.00	.00	.0	.3	3.2
26.460	1011.33	2.81	357.	200.	200.	1.004	.0500	.00	.00	.0	.4	2.9
28.278	981.84	2.19	458.	316.	316.	1.003	.0500	.00	.00	.0	.3	1.8
29.402	961.56	1.78	565.	538.	538.	1.003	.0500	.00	.00	.0	.3	1.6

Maximum Froude Number (FRDM)	.78
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.16
Cross-Section of Minimum Froude Number (IFM)	88

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	11.200	53243.	1403.35	1396.00	1400.34	1.00	793.00	53243.	53243.	0.	0.

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Time (TT)	11.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	37275.48
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1401.68
Flow at Downstream End of Model (QU(N), cfs)	1003.07
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.14

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1401.68	5.33	7000.	2042.	2042.	37.275	.0400	.00	-6.76	675.5	.5	5.7
6.210	1389.11	6.60	5792.	2362.	2362.	38.218	.0400	-1.00	3.39	.0	.7	4.6
6.842	1365.34	3.72	11482.	6116.	6116.	42.712	.0500	-1.00	2.15	.0	.5	2.8
8.855	1302.11	3.62	18287.	8295.	8295.	66.149	.0500	.00	2.53	.0	.4	3.1
10.843	1247.75	3.62	26775.	12370.	12370.	96.811	.0500	.00	2.55	.0	.4	3.0
12.495	1207.42	3.80	29892.	12278.	12278.	113.678	.0500	.00	2.91	.0	.4	3.4
14.294	1170.76	3.58	32063.	11054.	11054.	114.639	.0500	.00	3.66	.0	.4	4.4
15.640	1146.44	3.53	30385.	11135.	11135.	107.279	.0476	.00	3.41	.0	.4	4.1
16.500	1131.01	3.32	26159.	9753.	9753.	86.872	.0454	.00	3.31	.0	.4	4.0
17.333	1117.61	1.30	5096.	6742.	6742.	6.623	.0500	.00	.61	.0	.3	1.3
18.150	1107.75	.66	1522.	4054.	4054.	1.008	.0500	.00	.00	.0	.2	.8
19.040	1099.84	.86	1176.	2810.	2810.	1.006	.0500	.00	.00	.0	.2	.8
20.503	1082.85	1.02	990.	1501.	1501.	1.006	.0500	.00	.00	.0	.2	1.2
22.270	1064.58	1.22	824.	843.	843.	1.006	.0500	.00	.00	.0	.2	1.6
23.363	1054.43	1.31	769.	709.	709.	1.005	.0500	.00	.00	.0	.2	2.1
24.266	1044.85	1.62	620.	520.	520.	1.005	.0500	.00	.00	.0	.3	2.2
25.115	1034.74	1.79	560.	368.	368.	1.005	.0500	.00	.01	.0	.3	3.2
26.460	1011.33	2.81	357.	200.	200.	1.004	.0500	.00	.00	.0	.4	2.9
28.278	981.84	2.19	458.	317.	317.	1.003	.0500	.00	.00	.0	.3	1.8
29.402	961.56	1.78	565.	538.	538.	1.003	.0500	.00	.00	.0	.3	1.6

Maximum Froude Number (FRDM)	.75
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.16
Cross-Section of Minimum Froude Number (IFM)	88

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(I) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	11.600	37275.	1401.68	1396.00	1399.65	1.00	793.00	37275.	37275.	0.	0.

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Time (TT)	12.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	27230.24
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1400.39
Flow at Downstream End of Model (QU(N), cfs)	1003.16
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.14

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1400.39	6.23	4374.	2010.	2010.	27.230	.0400	.00	-8.05	485.8	.7	4.4
6.210	1388.68	5.87	4760.	2282.	2282.	27.938	.0400	-1.00	2.95	.0	.7	4.1
6.842	1364.98	3.34	9345.	5768.	5768.	31.252	.0500	-1.00	1.79	.0	.5	2.5
8.855	1301.70	3.27	15003.	7882.	7882.	49.106	.0500	.00	2.12	.0	.4	2.7
10.843	1247.40	3.32	22515.	11849.	11849.	74.689	.0500	.00	2.19	.0	.4	2.7
12.495	1207.21	3.65	27378.	11982.	11982.	99.842	.0500	.00	2.70	.0	.4	3.2
14.294	1170.76	3.57	32064.	11054.	11054.	114.318	.0500	.00	3.66	.0	.4	4.4
15.640	1146.54	3.63	31547.	11261.	11261.	114.362	.0471	.00	3.51	.0	.4	4.2
16.500	1131.50	3.59	31091.	10408.	10408.	111.665	.0426	.00	3.80	.0	.4	4.5
17.333	1120.61	3.70	29297.	9386.	9386.	108.466	.0439	.00	3.61	.0	.4	4.3
18.150	1108.95	1.84	8106.	6000.	6000.	14.954	.0500	.00	1.20	.0	.3	1.9
19.040	1099.84	.86	1176.	2811.	2811.	1.007	.0500	.00	.00	.0	.2	.8
20.503	1082.85	1.02	990.	1501.	1501.	1.006	.0500	.00	.00	.0	.2	1.2
22.270	1064.58	1.22	824.	843.	843.	1.006	.0500	.00	.00	.0	.2	1.6
23.363	1054.43	1.31	769.	709.	709.	1.006	.0500	.00	.00	.0	.2	2.1
24.266	1044.85	1.62	621.	520.	520.	1.006	.0500	.00	.00	.0	.3	2.2
25.115	1034.74	1.79	560.	368.	368.	1.005	.0500	.00	.01	.0	.3	3.2
26.460	1011.33	2.81	357.	200.	200.	1.005	.0500	.00	.00	.0	.4	2.9
28.278	981.85	2.19	458.	317.	317.	1.004	.0500	.00	.00	.0	.3	1.8
29.402	961.56	1.78	565.	538.	538.	1.003	.0500	.00	.00	.0	.3	1.6

Maximum Froude Number (FRDM)	.74
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.16
Cross-Section of Minimum Froude Number (IFM)	88

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	12.000	27230.	1400.39	1396.00	1399.06	1.00	793.00	27230.	27230.	0.	0.

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Time (TT)	12.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	21774.74
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1399.34
Flow at Downstream End of Model (QU(N), cfs)	1003.32
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.14

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1399.34	9.05	2407.	1602.	1602.	21.775	.0400	.00	-9.10	380.4	1.3	3.3
6.210	1388.34	5.53	4020.	2099.	2099.	22.239	.0400	-1.00	2.62	.0	.7	3.8
6.842	1364.73	3.06	7939.	5527.	5527.	24.326	.0500	-1.00	1.55	.0	.5	2.2
8.855	1301.37	2.97	12423.	7541.	7541.	36.880	.0500	.00	1.79	.0	.4	2.4
10.843	1247.08	3.03	18815.	11376.	11376.	57.025	.0500	.00	1.88	.0	.4	2.4
12.495	1206.89	3.40	23585.	11521.	11521.	80.211	.0500	.00	2.38	.0	.4	2.9
14.294	1170.58	3.45	30156.	10843.	10843.	104.163	.0500	.00	3.49	.0	.4	4.2
15.640	1146.53	3.60	31362.	11241.	11241.	112.958	.0471	.00	3.50	.0	.4	4.2
16.500	1131.54	3.63	31558.	10468.	10468.	114.478	.0423	.00	3.85	.0	.4	4.5
17.333	1120.73	3.72	30411.	9490.	9490.	113.157	.0431	.00	3.73	.0	.4	4.4
18.150	1112.25	3.73	31400.	8082.	8082.	117.239	.0400	.00	4.51	.0	.3	5.3
19.040	1102.37	3.25	11681.	5088.	5088.	37.915	.0491	.00	2.53	.0	.4	3.4
20.503	1082.85	1.02	990.	1501.	1501.	1.006	.0500	.00	.00	.0	.2	1.2
22.270	1064.58	1.22	824.	843.	843.	1.006	.0500	.00	.00	.0	.2	1.6
23.363	1054.43	1.31	769.	710.	710.	1.006	.0500	.00	.00	.0	.2	2.1
24.266	1044.85	1.62	621.	520.	520.	1.006	.0500	.00	.00	.0	.3	2.2
25.115	1034.74	1.79	560.	368.	368.	1.005	.0500	.00	.01	.0	.3	3.2
26.460	1011.33	2.81	357.	200.	200.	1.005	.0500	.00	.00	.0	.4	2.9
28.278	981.85	2.19	458.	317.	317.	1.004	.0500	.00	.00	.0	.3	1.8
29.402	961.56	1.78	565.	538.	538.	1.004	.0500	.00	.00	.0	.3	1.6

Maximum Froude Number (FRDM)	1.30
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.19
Cross-Section of Minimum Froude Number (IFM)	94

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	12.400	21775.	1399.34	1396.00	1398.69	.93	793.00	21775.	21775.	0.	0.

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Time (TT)	12.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	6
Flow at Upstream End of Model (QU(1), cfs)	14310.59
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1398.58
Flow at Downstream End of Model (QU(N), cfs)	1003.61
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.14

River Location X(1) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1398.58	10.48	1366.	1147.	1147.	14.311	.0400	.00	-9.86	275.3	1.7	2.6
6.210	1387.85	5.03	3070.	1837.	1837.	15.431	.0400	-1.00	2.13	.0	.7	3.3
6.842	1364.51	2.81	6785.	5320.	5320.	19.052	.0500	-1.00	1.33	.0	.4	2.0
8.855	1301.10	2.72	10493.	7276.	7276.	28.521	.0500	.00	1.53	.0	.4	2.1
10.843	1246.82	2.78	15897.	10989.	10989.	44.173	.0500	.00	1.62	.0	.4	2.1
12.495	1206.56	3.14	19958.	11060.	11060.	62.739	.0500	.00	2.06	.0	.4	2.6
14.294	1170.27	3.26	26826.	10465.	10465.	87.477	.0500	.00	3.18	.0	.4	3.9
15.640	1146.38	3.45	29724.	11063.	11063.	102.625	.0478	.00	3.35	.0	.4	4.0
16.500	1131.46	3.54	30641.	10350.	10350.	108.379	.0427	.00	3.76	.0	.4	4.5
17.333	1120.72	3.69	30270.	9476.	9476.	111.844	.0431	.00	3.71	.0	.4	4.4
18.150	1112.27	3.60	31532.	8092.	8092.	113.550	.0400	.00	4.52	.0	.3	5.3
19.040	1104.64	4.49	25145.	6699.	6699.	112.897	.0400	.00	4.81	.0	.4	5.6
20.503	1086.57	4.00	8065.	2052.	2052.	32.259	.0500	.00	3.72	.0	.4	4.9
22.270	1064.58	1.22	827.	844.	844.	1.011	.0500	.00	.01	.0	.2	1.6
23.363	1054.43	1.31	769.	710.	710.	1.006	.0500	.00	.00	.0	.2	2.1
24.266	1044.85	1.62	621.	520.	520.	1.006	.0500	.00	.00	.0	.3	2.2
25.115	1034.74	1.79	560.	368.	368.	1.006	.0500	.00	.01	.0	.3	3.2
26.460	1011.33	2.81	357.	200.	200.	1.005	.0500	.00	.01	.0	.4	2.9
28.278	981.85	2.19	458.	317.	317.	1.005	.0500	.00	.00	.0	.3	1.8
29.402	961.56	1.78	565.	538.	538.	1.004	.0500	.00	.00	.0	.3	1.6

Maximum Froude Number (FRDM)	1.69
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.21
Cross-Section of Minimum Froude Number (IFM)	106

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	6	12.800	14311.	1398.58	1396.00	1398.09	.70	793.00	14311.	14311.	0.	0.

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Time (TT)	13.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	5
Flow at Upstream End of Model (QU(1), cfs)	11838.30
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1398.28
Flow at Downstream End of Model (QU(N), cfs)	1003.98
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.14

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1398.28	11.26	1051.	969.	969.	11.838	.0400	.00	-10.16	203.3	1.9	2.3
6.210	1387.56	4.73	2553.	1678.	1678.	12.085	.0400	-1.00	1.84	.0	.7	3.0
6.842	1364.24	2.45	5360.	5054.	5054.	13.138	.0500	-1.00	1.06	.0	.4	1.7
8.855	1300.91	2.52	9094.	7077.	7077.	22.920	.0500	.00	1.33	.0	.4	1.9
10.843	1246.60	2.56	13570.	10670.	10670.	34.712	.0500	.00	1.40	.0	.4	1.9
12.495	1206.29	2.91	17023.	10673.	10673.	49.572	.0500	.00	1.79	.0	.4	2.3
14.294	1169.92	3.04	23190.	10036.	10036.	70.502	.0500	.00	2.82	.0	.4	3.5
15.640	1146.14	3.22	27128.	10774.	10774.	87.450	.0490	.00	3.11	.0	.4	3.8
16.500	1131.25	3.35	28543.	10075.	10075.	95.535	.0437	.00	3.56	.0	.4	4.3
17.333	1120.56	3.54	28838.	9342.	9342.	102.155	.0439	.00	3.56	.0	.4	4.2
18.150	1112.15	3.51	30569.	8021.	8021.	107.352	.0400	.00	4.40	.0	.3	5.2
19.040	1104.69	4.38	25451.	6729.	6729.	111.517	.0400	.00	4.86	.0	.4	5.7
20.503	1091.38	5.81	18139.	2130.	2130.	105.346	.0500	.00	8.54	.0	.4	9.7
22.270	1068.05	2.90	7104.	3601.	3601.	20.593	.0424	.00	3.48	.0	.4	5.1
23.363	1054.49	1.36	818.	731.	731.	1.112	.0500	.00	.07	.0	.2	2.2
24.266	1044.85	1.62	621.	520.	520.	1.007	.0500	.00	.01	.0	.3	2.2
25.115	1034.74	1.79	560.	368.	368.	1.006	.0500	.00	.01	.0	.3	3.2
26.460	1011.33	2.81	357.	200.	200.	1.005	.0500	.00	.01	.0	.4	2.9
28.278	981.85	2.19	458.	317.	317.	1.005	.0500	.00	.00	.0	.3	1.8
29.402	961.56	1.78	565.	538.	538.	1.004	.0500	.00	.00	.0	.3	1.6

Maximum Froude Number (FRDM)	1.90
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.22
Cross-Section of Minimum Froude Number (IFM)	115

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	5	13.200	11838.	1398.28	1396.00	1397.85	.70	793.00	11838.	11838.	0.	0.

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Time (TT)	13.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	10790.73
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1398.15
Flow at Downstream End of Model (QU(N), cfs)	1004.37
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.14

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1398.15	11.67	925.	887.	887.	10.791	.0400	.00	-10.29	181.8	2.0	2.1
6.210	1387.44	4.61	2358.	1613.	1613.	10.868	.0400	-1.00	1.72	.0	.7	2.9
6.842	1364.15	2.33	4916.	4969.	4969.	11.452	.0500	-1.00	.97	.0	.4	1.7
8.855	1300.73	2.32	7809.	6890.	6890.	18.101	.0500	.00	1.15	.0	.4	1.7
10.843	1246.43	2.37	11772.	10418.	10418.	27.926	.0500	.00	1.23	.0	.4	1.7
12.495	1206.07	2.71	14665.	10352.	10352.	39.672	.0500	.00	1.56	.0	.4	2.1
14.294	1169.60	2.83	20021.	9646.	9646.	56.664	.0500	.00	2.50	.0	.3	3.2
15.640	1145.86	2.99	24158.	10435.	10435.	72.230	.0500	.00	2.83	.0	.3	3.5
16.500	1130.98	3.12	25912.	9719.	9719.	80.749	.0451	.00	3.29	.0	.3	4.0
17.333	1120.33	3.32	26659.	9134.	9134.	88.482	.0450	.00	3.32	.0	.3	4.0
18.150	1111.86	3.37	28293.	7844.	7844.	95.415	.0402	.00	4.12	.0	.3	4.9
19.040	1104.50	4.26	24153.	6602.	6602.	102.963	.0400	.00	4.66	.0	.4	5.5
20.503	1091.67	5.77	18762.	2135.	2135.	108.287	.0500	.00	8.83	.0	.3	10.0
22.270	1071.64	4.97	21363.	4348.	4348.	106.251	.0400	.00	7.07	.0	.4	8.6
23.363	1058.80	3.31	9060.	3131.	3131.	29.995	.0468	.00	4.38	.0	.3	6.5
24.266	1045.60	2.11	1078.	693.	693.	2.275	.0500	.00	.76	.0	.3	3.0
25.115	1034.77	1.81	571.	372.	372.	1.034	.0500	.00	.03	.0	.3	3.2
26.460	1011.33	2.81	357.	200.	200.	1.006	.0500	.00	.01	.0	.4	2.9
28.278	981.85	2.19	459.	317.	317.	1.005	.0500	.00	.01	.0	.3	1.8
29.402	961.56	1.78	565.	538.	538.	1.005	.0500	.00	.00	.0	.3	1.6

Maximum Froude Number (FRDM)	2.01
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.24
Cross-Section of Minimum Froude Number (IFM)	131

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	13.600	10791.	1398.15	1396.00	1397.74	.70	793.00	10791.	10791.	0.	0.

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Time (TT)	14.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	10338.30
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1398.08
Flow at Downstream End of Model (QU(N), cfs)	1004.76
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.14

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1398.08	11.86	872.	851.	851.	10.338	.0400	.00	-10.35	172.4	2.1	2.1
6.210	1387.39	4.56	2276.	1586.	1586.	10.368	.0400	-1.00	1.67	.0	.7	2.8
6.842	1364.10	2.27	4671.	4921.	4921.	10.591	.0500	-1.00	.92	.0	.4	1.6
8.855	1300.54	2.10	6546.	6700.	6700.	13.760	.0500	.00	.96	.0	.4	1.5
10.843	1246.30	2.22	10365.	10215.	10215.	22.966	.0500	.00	1.09	.0	.4	1.6
12.495	1205.88	2.52	12771.	10086.	10086.	32.219	.0500	.00	1.38	.0	.4	1.9
14.294	1169.32	2.64	17430.	9315.	9315.	46.030	.0500	.00	2.22	.0	.3	2.9
15.640	1145.56	2.80	21055.	10068.	10068.	58.909	.0500	.00	2.53	.0	.3	3.2
16.500	1130.71	2.89	23263.	9346.	9346.	67.150	.0465	.00	3.01	.0	.3	3.7
17.333	1120.06	3.08	24270.	8901.	8901.	74.742	.0463	.00	3.06	.0	.3	3.7
18.150	1111.55	3.16	25889.	7648.	7648.	81.898	.0418	.00	3.80	.0	.3	4.6
19.040	1104.14	4.14	21868.	6373.	6373.	90.459	.0400	.00	4.31	.0	.4	5.1
20.503	1091.34	5.59	18046.	2130.	2130.	100.814	.0500	.00	8.50	.0	.3	9.7
22.270	1071.71	4.91	21663.	4362.	4362.	106.329	.0400	.00	7.14	.0	.4	8.7
23.363	1062.73	4.10	25005.	4998.	4998.	102.638	.0400	.00	8.30	.0	.3	10.4
24.266	1052.95	4.78	11520.	3239.	3239.	55.118	.0400	.00	8.10	.0	.4	10.3
25.115	1039.25	4.26	4386.	1396.	1396.	18.682	.0410	.00	4.52	.0	.4	7.7
26.460	1011.55	2.97	404.	212.	212.	1.198	.0500	.00	.23	.0	.4	3.2
28.278	981.85	2.19	459.	317.	317.	1.006	.0500	.00	.01	.0	.3	1.8
29.402	961.56	1.78	566.	538.	538.	1.005	.0500	.00	.00	.0	.3	1.6

Maximum Froude Number (FRDM)	2.06
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.25
Cross-Section of Minimum Froude Number (IFM)	93

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	14.000	10338.	1398.08	1396.00	1397.69	.70	793.00	10338.	10338.	0.	0.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	14.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	5
Flow at Upstream End of Model (QU(1), cfs)	10144.16
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1398.06
Flow at Downstream End of Model (QU(N), cfs)	1005.17
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.14

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1398.06	11.94	850.	835.	835.	10.144	.0400	.00	-10.38	168.3	2.1	2.1
6.210	1387.37	4.53	2241.	1574.	1574.	10.158	.0400	-1.00	1.65	.0	.7	2.8
6.842	1364.08	2.25	4569.	4900.	4900.	10.262	.0500	-1.00	.90	.0	.4	1.6
8.855	1300.43	1.98	5840.	6592.	6592.	11.583	.0500	.00	.86	.0	.4	1.4
10.843	1246.17	2.07	9112.	10032.	10032.	18.821	.0500	.00	.97	.0	.4	1.5
12.495	1205.73	2.37	11271.	9870.	9870.	26.662	.0500	.00	1.23	.0	.4	1.7
14.294	1169.09	2.47	15307.	9035.	9035.	37.822	.0500	.00	1.99	.0	.3	2.7
15.640	1145.30	2.62	18466.	9751.	9751.	48.440	.0500	.00	2.27	.0	.3	3.0
16.500	1130.44	2.68	20852.	8994.	8994.	55.832	.0478	.00	2.75	.0	.3	3.4
17.333	1119.80	2.85	21978.	8671.	8671.	62.692	.0476	.00	2.80	.0	.3	3.5
18.150	1111.25	2.94	23617.	7458.	7458.	69.442	.0434	.00	3.50	.0	.3	4.3
19.040	1103.73	4.00	19288.	6082.	6082.	77.226	.0400	.00	3.89	.0	.4	4.7
20.503	1090.71	5.34	16718.	2119.	2119.	89.260	.0500	.00	7.87	.0	.3	9.0
22.270	1071.49	4.74	20691.	4316.	4316.	98.130	.0400	.00	6.91	.0	.4	8.5
23.363	1062.97	3.92	26257.	5117.	5117.	102.930	.0400	.00	8.55	.0	.3	10.6
24.266	1055.27	4.79	21178.	4866.	4866.	101.513	.0400	.00	10.42	.0	.4	12.7
25.115	1043.97	5.48	14949.	3043.	3043.	81.931	.0400	.00	9.24	.0	.4	12.4
26.460	1018.26	5.59	4919.	1069.	1069.	27.492	.0500	.00	6.94	.0	.5	9.9
28.278	982.01	2.32	510.	329.	329.	1.180	.0500	.00	.16	.0	.3	2.0
29.402	961.56	1.78	567.	539.	539.	1.008	.0500	.00	.01	.0	.3	1.6

Maximum Froude Number (FRDM)	2.09
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.25
Cross-Section of Minimum Froude Number (IFM)	93

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	5	14.400	10144.	1398.06	1396.00	1397.67	.70	793.00	10144.	10144.	0.	0.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	14.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	10061.07
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1398.05
Flow at Downstream End of Model (QU(N), cfs)	1196.66
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.48

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1398.05	11.97	841.	828.	828.	10.061	.0400	.00	-10.39	166.6	2.1	2.0
6.210	1387.36	4.52	2226.	1569.	1569.	10.067	.0400	-1.00	1.64	.0	.7	2.8
6.842	1364.07	2.24	4519.	4891.	4891.	10.114	.0500	-1.00	.89	.0	.4	1.6
8.855	1300.39	1.94	5558.	6548.	6548.	10.778	.0500	.00	.81	.0	.4	1.4
10.843	1246.05	1.91	7929.	9855.	9855.	15.177	.0500	.00	.85	.0	.4	1.3
12.495	1205.61	2.23	10042.	9690.	9690.	22.356	.0500	.00	1.10	.0	.4	1.6
14.294	1168.90	2.32	13566.	8799.	8799.	31.476	.0500	.00	1.80	.0	.3	2.5
15.640	1145.08	2.47	16323.	9482.	9482.	40.248	.0500	.00	2.04	.0	.3	2.7
16.500	1130.20	2.49	18725.	8671.	8671.	46.648	.0490	.00	2.51	.0	.3	3.2
17.333	1119.56	2.65	19911.	8458.	8458.	52.731	.0489	.00	2.56	.0	.3	3.2
18.150	1110.97	2.73	21525.	7278.	7278.	58.810	.0448	.00	3.22	.0	.3	4.0
19.040	1103.40	3.74	17345.	5845.	5845.	64.828	.0420	.00	3.57	.0	.4	4.4
20.503	1090.07	5.00	15349.	2109.	2109.	76.789	.0500	.00	7.22	.0	.3	8.4
22.270	1071.12	4.51	19143.	4240.	4240.	86.410	.0400	.00	6.55	.0	.4	8.1
23.363	1062.72	3.77	24966.	4994.	4994.	94.216	.0400	.00	8.30	.0	.3	10.4
24.266	1055.22	4.72	20952.	4850.	4850.	98.966	.0400	.00	10.37	.0	.4	12.6
25.115	1045.06	5.46	18361.	3258.	3258.	100.277	.0400	.00	10.32	.0	.4	13.5
26.460	1024.26	6.50	14203.	2061.	2672.	92.301	.0500	.00	12.93	.0	.4	15.9
28.278	989.13	5.44	6659.	1489.	1489.	36.225	.0483	.00	7.29	.0	.5	9.1
29.402	962.76	2.74	1363.	782.	782.	3.734	.0500	.00	1.20	.0	.4	2.8

Maximum Froude Number (FRDM)	2.09
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.25
Cross-Section of Minimum Froude Number (IFM)	93

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	14.800	10061.	1398.05	1396.00	1397.66	.70	793.00	10061.	10061.	0.	0.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	15.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	10026.58
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1398.04
Flow at Downstream End of Model (QU(N), cfs)	30302.88
Water Elevation at Downstream End of Model (YU(N), ft MSL)	957.23

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1398.04	11.98	837.	826.	826.	10.027	.0400	.00	-10.39	165.8	2.1	2.0
6.210	1387.35	4.52	2220.	1566.	1566.	10.029	.0400	-1.00	1.63	.0	.7	2.8
6.842	1364.07	2.23	4498.	4886.	4886.	10.048	.0500	-1.00	.88	.0	.4	1.6
8.855	1300.37	1.91	5404.	6524.	6524.	10.334	.0500	.00	.79	.0	.4	1.4
10.843	1245.96	1.79	7023.	9718.	9718.	12.586	.0500	.00	.76	.0	.4	1.2
12.495	1205.49	2.09	8945.	9527.	9527.	18.717	.0500	.00	.99	.0	.4	1.5
14.294	1168.73	2.19	12142.	8601.	8601.	26.563	.0500	.00	1.63	.0	.3	2.3
15.640	1144.89	2.32	14542.	9251.	9251.	33.794	.0500	.00	1.85	.0	.3	2.6
16.500	1129.98	2.33	16851.	8377.	8377.	39.221	.0500	.00	2.29	.0	.3	3.0
17.333	1119.34	2.47	18075.	8264.	8264.	44.570	.0500	.00	2.34	.0	.3	3.0
18.150	1110.71	2.55	19638.	7112.	7112.	49.999	.0461	.00	2.96	.0	.3	3.7
19.040	1103.14	3.50	15809.	5649.	5649.	55.392	.0437	.00	3.30	.0	.4	4.1
20.503	1089.42	4.66	13997.	2099.	2099.	65.248	.0500	.00	6.58	.0	.3	7.8
22.270	1070.73	4.27	17476.	4158.	4158.	74.608	.0400	.00	6.16	.0	.4	7.7
23.363	1062.29	3.62	22855.	4787.	4787.	82.791	.0400	.00	7.86	.0	.3	10.0
24.266	1054.92	4.57	19533.	4752.	4752.	89.225	.0400	.00	10.08	.0	.4	12.3
25.115	1044.80	5.34	17544.	3208.	3208.	93.722	.0400	.00	10.07	.0	.4	13.3
26.460	1024.75	6.42	15224.	2090.	2800.	97.686	.0488	.00	13.43	.0	.4	16.3
28.278	992.49	7.19	12803.	2117.	2713.	92.069	.0400	.00	10.65	.0	.5	12.5
29.402	969.29	6.37	10732.	2044.	3130.	68.369	.0473	.00	7.74	.0	.5	9.3

Maximum Froude Number (FROM)	2.10
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.26
Cross-Section of Minimum Froude Number (IFM)	93

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	15.200	10027.	1398.04	1396.00	1397.66	.70	793.00	10027.	10027.	0.	0.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	15.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	10010.41
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1398.04
Flow at Downstream End of Model (QU(N), cfs)	93109.50
Water Elevation at Downstream End of Model (YU(N), ft MSL)	959.71

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1398.04	11.99	835.	824.	824.	10.010	.0400	.00	-10.40	165.5	2.1	2.0
6.210	1387.35	4.52	2217.	1565.	1565.	10.012	.0400	-1.00	1.63	.0	.7	2.8
6.842	1364.06	2.23	4488.	4884.	4884.	10.020	.0500	-1.00	.88	.0	.4	1.6
8.855	1300.36	1.90	5338.	6514.	6514.	10.146	.0500	.00	.78	.0	.4	1.4
10.843	1245.91	1.72	6530.	9643.	9643.	11.253	.0500	.00	.71	.0	.4	1.2
12.495	1205.39	1.96	7943.	9375.	9375.	15.585	.0500	.00	.88	.0	.4	1.4
14.294	1168.59	2.07	10946.	8431.	8431.	22.641	.0500	.00	1.49	.0	.3	2.2
15.640	1144.73	2.20	13065.	9056.	9056.	28.711	.0500	.00	1.69	.0	.3	2.4
16.500	1129.76	2.21	15047.	8084.	8084.	33.244	.0500	.00	2.07	.0	.3	2.8
17.333	1119.14	2.34	16411.	8085.	8085.	38.444	.0500	.00	2.13	.0	.3	2.8
18.150	1110.48	2.39	18020.	6967.	6967.	43.064	.0473	.00	2.73	.0	.3	3.5
19.040	1102.89	3.29	14461.	5473.	5473.	47.649	.0449	.00	3.06	.0	.4	3.9
20.503	1088.84	4.36	12785.	2089.	2089.	55.784	.0500	.00	6.00	.0	.3	7.2
22.270	1070.34	4.03	15893.	4078.	4078.	64.029	.0400	.00	5.77	.0	.4	7.3
23.363	1061.81	3.47	20606.	4556.	4556.	71.603	.0400	.00	7.38	.0	.3	9.5
24.266	1054.56	4.39	17824.	4601.	4601.	78.296	.0400	.00	9.71	.0	.4	11.9
25.115	1044.35	5.17	16099.	3117.	3117.	83.299	.0400	.00	9.61	.0	.4	12.8
26.460	1024.40	6.16	14493.	2069.	2709.	89.242	.0497	.00	13.07	.0	.4	16.0
28.278	992.69	7.27	13238.	2132.	2979.	96.228	.0400	.00	10.85	.0	.5	12.7
29.402	970.57	7.11	13466.	2235.	4398.	95.752	.0439	.00	9.01	.0	.5	10.6

Maximum Froude Number (FRDM)	2.10
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.25
Cross-Section of Minimum Froude Number (IFM)	77

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	15.600	10010.	1398.04	1396.00	1397.65	.70	793.00	10010.	10010.	0.	0.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	16.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	10004.92
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1398.04
Flow at Downstream End of Model (QU(N), cfs)	94468.85
Water Elevation at Downstream End of Model (YU(N), ft MSL)	959.79

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1398.04	11.99	834.	824.	824.	10.005	.0400	.00	-10.40	165.4	2.1	2.0
6.210	1387.35	4.51	2216.	1565.	1565.	10.005	.0400	-1.00	1.63	.0	.7	2.8
6.842	1364.06	2.23	4484.	4884.	4884.	10.008	.0500	-1.00	.88	.0	.4	1.6
8.855	1300.35	1.90	5308.	6509.	6509.	10.062	.0500	.00	.78	.0	.4	1.4
10.843	1245.88	1.69	6292.	9606.	9606.	10.617	.0500	.00	.68	.0	.4	1.2
12.495	1205.30	1.85	7129.	9249.	9249.	13.180	.0500	.00	.80	.0	.4	1.3
14.294	1168.46	1.96	9887.	8278.	8278.	19.332	.0500	.00	1.37	.0	.3	2.1
15.640	1144.59	2.08	11826.	8888.	8888.	24.648	.0500	.00	1.56	.0	.3	2.3
16.500	1129.57	2.10	13526.	7829.	7829.	28.453	.0500	.00	1.88	.0	.3	2.6
17.333	1118.94	2.22	14820.	7910.	7910.	32.907	.0500	.00	1.94	.0	.3	2.6
18.150	1110.27	2.25	16622.	6839.	6839.	37.434	.0483	.00	2.53	.0	.3	3.3
19.040	1102.68	3.12	13312.	5317.	5317.	41.499	.0460	.00	2.85	.0	.3	3.7
20.503	1088.34	4.11	11729.	2081.	2081.	48.149	.0500	.00	5.50	.0	.3	6.7
22.270	1070.00	3.81	14502.	4006.	4006.	55.241	.0400	.00	5.43	.0	.4	7.0
23.363	1061.33	3.34	18500.	4329.	4329.	61.772	.0400	.00	6.91	.0	.3	9.0
24.266	1054.13	4.29	15915.	4235.	4235.	68.205	.0400	.00	9.28	.0	.4	11.5
25.115	1043.87	5.01	14630.	3022.	3022.	73.226	.0400	.00	9.13	.0	.4	12.3
26.460	1023.84	5.93	13345.	2036.	2563.	79.201	.0500	.00	12.51	.0	.4	15.4
28.278	992.34	7.00	12491.	2105.	2521.	87.446	.0400	.00	10.50	.0	.5	12.3
29.402	970.46	6.97	13233.	2220.	4294.	92.274	.0441	.00	8.91	.0	.5	10.5

Maximum Froude Number (FRDM)	2.10
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.25
Cross-Section of Minimum Froude Number (IFM)	77

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number 1	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	16.000	10005.	1398.04	1396.00	1397.65	.70	793.00	10005.	10005.	0.	0.

1	2	16.000	10005.	1398.04	1396.00	1397.65	.70	793.00	10005.	10005.	0.	0.

Normalized conservation of mass as percent of maximum flow
in reach = -.44

ROUTING COMPLETED :

Number of Time Steps Used (KTIME)	80
Maximum Number of Time Steps Allowed	1199
Total Time of Flood Routing (TT, hr)	16.2

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
5.970	1417.94	119249	7.800	11.99	.00	.00
6.000	1402.37	119249	10.000	11.11	.00	.00
6.030	1400.81	119245	10.000	10.99	.00	.00
6.060	1399.26	119243	10.000	10.87	.00	.00
6.090	1397.70	119244	10.000	10.76	.00	.00
6.120	1396.15	119246	10.000	10.64	.00	.00
6.150	1394.60	119249	10.000	10.53	.00	.00
6.180	1393.06	119253	10.000	10.42	.00	.00
6.210	1391.52	119258	10.000	10.29	.00	.00
6.240	1390.01	119262	10.000	10.11	.00	.00
6.270	1388.56	119267	10.000	9.79	.00	.00
6.300	1387.30	119270	10.000	9.11	.00	.00
6.408	1382.87	119278	10.000	7.76	.00	.00
6.517	1378.70	119273	10.000	6.90	.00	.00
6.625	1374.62	119250	10.000	6.38	.00	.00
6.733	1370.76	119212	10.000	5.80	.00	.00
6.842	1366.68	119168	10.000	5.81	.00	.00
6.950	1363.28	119106	10.000	4.75	.00	.00
7.153	1356.82	118989	10.200	4.77	.00	.00
7.357	1350.37	119062	10.200	4.83	.00	.00
7.560	1343.97	119071	10.200	4.81	.00	.00
7.865	1333.67	118936	10.200	5.05	.00	.00
8.170	1323.77	118583	10.400	4.61	.00	.00
8.513	1313.29	118661	10.400	4.69	.00	.00
8.855	1303.08	118506	10.400	4.41	.00	.00
9.198	1292.65	118104	10.600	4.54	.00	.00
9.540	1282.61	118224	10.600	4.13	.00	.00
9.757	1276.86	118144	10.600	4.05	.00	.00
9.974	1271.09	117932	10.600	4.01	.00	.00
10.191	1265.35	117712	10.800	3.92	.00	.00
10.409	1259.57	117810	10.800	3.92	.00	.00
10.626	1253.87	117740	10.800	3.79	.00	.00
10.843	1248.04	117504	10.800	3.86	.00	.00
11.060	1242.41	117347	11.000	3.63	.00	.00
11.265	1237.42	117414	11.000	3.65	150.25	.00
11.470	1232.45	117294	11.000	3.65	300.50	.00
11.675	1227.45	116989	11.000	3.68	450.75	.00
11.880	1222.49	116978	11.200	3.67	601.00	.00
12.085	1217.47	116988	11.200	3.73	751.25	.00
12.290	1212.55	116807	11.200	3.66	901.50	.00
12.495	1207.45	116464	11.400	3.84	1051.75	.00
12.700	1202.68	116584	11.400	3.56	1202.00	10.40
12.935	1197.67	116507	11.400	3.61	1197.00	10.40
13.170	1192.74	116180	11.400	3.56	1192.00	10.40
13.405	1187.67	116148	11.600	3.71	1187.00	10.60
13.640	1182.89	116102	11.600	3.48	1182.00	10.60
13.858	1178.85	115821	11.600	3.51	1178.00	10.60
14.076	1174.81	115680	11.800	3.55	1174.00	10.80

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
14.294	1170.78	115693	11.800	3.58	1170.00	10.80
14.512	1166.73	115481	11.800	3.64	1166.00	11.00
14.730	1162.73	115186	12.000	3.63	1162.00	11.00
14.970	1158.52	115254	12.000	3.48	1158.00	11.20
15.210	1154.22	115091	12.000	3.48	1154.00	11.40
15.318	1152.30	114971	12.000	3.52	1152.00	11.40
15.425	1150.38	114804	12.200	3.55	1150.00	11.40
15.533	1148.47	114805	12.200	3.59	1148.00	11.40
15.640	1146.55	114867	12.200	3.63	1146.00	11.40
15.748	1144.64	114891	12.200	3.67	1144.00	11.40
15.855	1142.73	114886	12.200	3.71	1142.00	11.40
15.963	1140.82	114846	12.200	3.75	1140.00	11.40
16.070	1138.91	114767	12.200	3.79	1138.00	11.40
16.178	1137.00	114642	12.200	3.84	1136.00	11.40
16.285	1135.10	114474	12.200	3.87	1134.00	11.40
16.393	1133.15	114418	12.400	3.97	1132.00	11.60
16.500	1131.54	114477	12.400	3.63	1130.00	11.60
16.604	1130.20	114504	12.400	3.64	1128.67	11.60
16.708	1128.85	114528	12.400	3.66	1127.33	11.60
16.813	1127.50	114527	12.400	3.67	1126.00	11.60
16.917	1126.15	114490	12.400	3.69	1124.67	11.80
17.021	1124.80	114396	12.400	3.70	1123.33	11.80
17.125	1123.44	114139	12.600	3.71	1122.00	11.80
17.229	1122.10	114108	12.600	3.72	1120.67	11.80
17.333	1120.75	114319	12.600	3.74	1119.33	11.80
17.437	1119.41	114451	12.200	3.76	1118.00	12.00
17.542	1118.08	115712	12.200	3.78	1116.67	12.00
17.646	1116.76	116561	12.200	3.79	1115.33	12.00
17.750	1115.68	115693	12.600	3.52	1114.00	12.00
17.850	1114.80	113942	12.400	3.59	1113.00	12.00
17.950	1113.95	115394	12.400	3.63	1112.00	12.20
18.050	1113.12	116736	12.400	3.64	1111.00	12.20
18.150	1112.27	117238	12.800	3.73	1110.00	12.20
18.250	1111.46	116217	12.800	3.83	1109.00	12.20
18.350	1110.67	113066	12.800	3.91	1108.00	12.20
18.450	1109.89	113588	13.000	3.98	1107.00	12.20
18.550	1109.11	113884	13.000	4.01	1106.00	12.20
18.672	1108.15	113516	13.000	3.89	1105.00	12.40
18.795	1107.15	112520	13.000	3.92	1104.00	12.40
18.917	1106.06	112205	13.000	4.04	1103.00	12.40
19.040	1104.69	112896	13.200	4.59	1102.00	12.40
19.160	1103.36	113021	13.200	4.71	1100.25	12.60
19.280	1102.32	111404	13.200	4.77	1098.50	12.60
19.400	1101.55	110830	13.400	4.62	1096.75	12.60
19.520	1100.98	109851	13.400	3.99	1095.00	12.60
19.785	1098.69	109549	13.400	5.08	1092.50	12.60
20.050	1096.30	109274	13.400	5.18	1090.00	12.80
20.277	1094.07	108853	13.400	5.38	1087.33	12.80

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
20.503	1091.67	108286	13.600	5.81	1084.67	12.80
20.730	1088.92	108386	13.600	5.57	1082.00	12.80
20.950	1086.97	108000	13.600	5.59	1079.33	12.80
21.170	1085.00	107171	13.800	5.64	1076.67	13.00
21.390	1082.12	107447	13.800	6.89	1074.00	13.00
21.610	1079.24	107317	13.800	6.23	1072.00	13.00
21.830	1076.60	106880	13.800	5.67	1070.00	13.00
22.050	1074.11	106759	13.800	5.27	1068.00	13.20
22.270	1071.71	106328	13.800	4.97	1066.00	13.20
22.490	1069.43	106415	14.000	4.72	1064.00	13.20
22.710	1067.57	106548	14.000	4.06	1062.00	13.40
22.819	1066.73	106402	14.200	4.13	1060.89	13.40
22.928	1065.95	105907	14.200	4.21	1059.78	13.40
23.037	1065.18	104497	14.200	4.28	1058.67	13.40
23.146	1064.42	103986	14.200	4.35	1057.56	13.40
23.254	1063.69	103342	14.400	4.39	1056.44	13.40
23.363	1062.97	102930	14.400	4.40	1055.33	13.40
23.472	1062.25	102934	14.400	4.37	1054.22	13.60
23.581	1061.50	102684	14.400	4.32	1053.11	13.60
23.690	1060.69	102400	14.400	4.41	1052.00	13.60
23.807	1059.78	102104	14.400	4.42	1050.75	13.60
23.925	1058.87	101595	14.600	4.47	1049.50	13.60
24.042	1057.87	101313	14.600	5.18	1048.25	13.60
24.160	1056.58	101195	14.600	5.12	1047.00	13.60
24.266	1055.27	101512	14.600	4.84	966.46	.00
24.372	1053.97	101383	14.600	4.90	885.92	.00
24.478	1052.67	101062	14.600	5.00	805.39	.00
24.585	1051.39	101364	14.600	5.09	724.85	.00
24.691	1050.10	101611	14.600	5.17	644.31	.00
24.797	1048.81	101672	14.600	5.25	563.77	.00
24.903	1047.54	101444	14.800	5.33	483.23	.00
25.009	1046.29	100871	14.800	5.45	402.69	.00
25.115	1045.06	100276	14.800	5.57	322.16	.00
25.222	1043.83	100463	14.800	5.70	241.62	.00
25.328	1042.61	100624	14.800	5.83	161.08	.00
25.434	1041.36	100708	14.800	5.97	80.54	.00
25.540	1040.06	100685	14.800	6.26	.00	.00
25.770	1036.26	100219	14.800	6.36	.00	.00
26.000	1032.44	99767	15.000	6.45	.00	.00
26.230	1028.58	100046	15.000	6.57	.00	.00
26.460	1024.83	100351	15.000	6.51	.00	.00
26.690	1019.88	99332	15.200	7.82	.00	.00
26.910	1016.15	99227	15.200	7.78	.00	.00
27.130	1012.46	99409	15.200	7.92	.00	.00
27.350	1008.84	98547	15.400	8.09	.00	.00
27.570	1005.00	97480	15.400	8.63	.00	.00
27.806	1000.93	97779	15.400	8.07	.00	.00
28.042	996.83	97508	15.400	7.65	.00	.00

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
28.278	992.69	96604	15.600	7.30	.00	.00
28.514	988.74	96687	15.600	6.85	.00	.00
28.750	984.29	96611	15.600	7.06	.00	.00
28.859	982.00	96391	15.600	7.10	.00	.00
28.967	979.70	96069	15.600	7.12	.00	.00
29.076	977.41	95805	15.600	7.14	.00	.00
29.185	975.12	95692	15.600	7.16	.00	.00
29.294	972.85	95686	15.600	7.15	.00	.00
29.402	970.57	95751	15.600	7.11	.00	.00
29.511	968.32	95590	15.800	7.06	.00	.00
29.620	966.23	95532	15.800	6.84	.00	.00
29.740	964.51	95543	15.800	6.63	.00	.00
29.860	962.88	95633	15.800	6.39	.00	.00
29.980	961.33	95496	15.800	6.15	.00	.00
30.100	959.82	95302	15.800	5.95	.00	.00

COMPUTED WATER SURFACE ELEVATIONS AT REQUESTED
STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Water Surface Elevation YC(K,1) (ft MSL)	Station 2 Water Surface Elevation YC(K,2) (ft MSL)	Station 3 Water Surface Elevation YC(K,3) (ft MSL)	Station 4 Water Surface Elevation YC(K,4) (ft MSL)	Station 5 Water Surface Elevation YC(K,5) (ft MSL)	Station 6 Water Surface Elevation YC(K,6) (ft MSL)
1	.000	1408.44	1179.56	1127.69	1092.11	1046.17	957.52
2	.200	1408.60	1179.56	1127.70	1092.11	1046.17	957.52
3	.400	1408.77	1179.56	1127.70	1092.11	1046.17	957.52
4	.600	1408.95	1179.56	1127.70	1092.11	1046.17	957.52
5	.800	1409.13	1179.56	1127.70	1092.11	1046.17	957.52
6	1.000	1409.32	1179.56	1127.70	1092.11	1046.17	957.52
7	1.200	1409.51	1179.56	1127.70	1092.11	1046.17	957.52
8	1.400	1409.71	1179.56	1127.70	1092.11	1046.17	957.52
9	1.600	1409.92	1179.56	1127.70	1092.11	1046.17	957.52
10	1.800	1410.13	1179.56	1127.70	1092.11	1046.17	957.52
11	2.000	1410.35	1179.56	1127.70	1092.11	1046.17	957.52
12	2.200	1410.57	1179.56	1127.70	1092.11	1046.17	957.52
13	2.400	1410.80	1179.56	1127.70	1092.11	1046.17	957.52
14	2.600	1411.03	1179.56	1127.70	1092.11	1046.17	957.52
15	2.800	1411.27	1179.56	1127.70	1092.11	1046.17	957.52
16	3.000	1411.52	1179.56	1127.70	1092.11	1046.17	957.52
17	3.200	1411.77	1179.56	1127.70	1092.11	1046.17	957.52
18	3.400	1412.03	1179.56	1127.70	1092.11	1046.17	957.52
19	3.600	1412.29	1179.56	1127.70	1092.11	1046.17	957.52
20	3.800	1412.55	1179.56	1127.70	1092.11	1046.17	957.52
21	4.000	1412.82	1179.56	1127.70	1092.11	1046.17	957.52
22	4.200	1413.10	1179.56	1127.70	1092.11	1046.17	957.52
23	4.400	1413.38	1179.56	1127.70	1092.11	1046.17	957.52
24	4.600	1413.66	1179.56	1127.70	1092.11	1046.17	957.52
25	4.800	1413.96	1179.56	1127.70	1092.11	1046.17	957.52
26	5.000	1414.26	1179.56	1127.70	1092.11	1046.17	957.52
27	5.200	1414.58	1179.56	1127.70	1092.11	1046.17	957.52
28	5.400	1414.89	1179.56	1127.70	1092.11	1046.17	957.52
29	5.600	1415.22	1179.56	1127.70	1092.11	1046.17	957.52
30	5.800	1415.55	1179.56	1127.70	1092.11	1046.17	957.52
31	6.000	1415.88	1179.56	1127.70	1092.11	1046.17	957.52
32	6.200	1416.22	1179.56	1127.70	1092.11	1046.17	957.52
33	6.400	1416.56	1179.56	1127.70	1092.11	1046.17	957.52
34	6.600	1416.87	1179.56	1127.70	1092.11	1046.17	957.52
35	6.800	1417.16	1179.56	1127.70	1092.11	1046.17	957.52
36	7.000	1417.42	1179.56	1127.70	1092.11	1046.17	957.52
37	7.200	1417.65	1179.56	1127.70	1092.11	1046.17	957.52
38	7.400	1417.82	1179.56	1127.70	1092.11	1046.17	957.52
39	7.600	1417.93	1179.56	1127.70	1092.11	1046.17	957.52
40	7.800	1417.94	1179.56	1127.70	1092.11	1046.17	957.52
41	8.000	1417.85	1179.56	1127.70	1092.11	1046.17	957.52
42	8.200	1417.65	1179.58	1127.70	1092.11	1046.17	957.52
43	8.400	1417.30	1179.63	1127.70	1092.11	1046.17	957.52
44	8.600	1416.81	1179.71	1127.70	1092.11	1046.17	957.52
45	8.800	1416.22	1179.81	1127.70	1092.11	1046.17	957.52
46	9.000	1415.52	1179.97	1127.70	1092.11	1046.17	957.52
47	9.200	1414.72	1180.14	1127.70	1092.11	1046.17	957.52
48	9.400	1413.83	1180.24	1127.70	1092.11	1046.17	957.52

47 7.000 1412.09 1160.27 1127.70 1072.11 1046.17 937.32

Count K	Elapsed Time TTP(K) (hr)	Station 1 Water Surface Elevation YC(K,1) (ft MSL)	Station 2 Water Surface Elevation YC(K,2) (ft MSL)	Station 3 Water Surface Elevation YC(K,3) (ft MSL)	Station 4 Water Surface Elevation YC(K,4) (ft MSL)	Station 5 Water Surface Elevation YC(K,5) (ft MSL)	Station 6 Water Surface Elevation YC(K,6) (ft MSL)
50	9.800	1411.75	1180.36	1127.70	1092.11	1046.17	957.52
51	10.000	1410.57	1180.53	1127.70	1092.11	1046.17	957.52
52	10.200	1409.28	1180.98	1127.70	1092.11	1046.17	957.52
53	10.400	1407.93	1181.68	1127.70	1092.11	1046.17	957.52
54	10.600	1406.63	1182.27	1127.70	1092.11	1046.17	957.52
55	10.800	1405.43	1182.57	1127.70	1092.11	1046.17	957.52
56	11.000	1404.33	1182.72	1127.74	1092.11	1046.17	957.52
57	11.200	1403.35	1182.81	1128.30	1092.11	1046.17	957.52
58	11.400	1402.46	1182.86	1129.77	1092.11	1046.17	957.52
59	11.600	1401.68	1182.89	1131.01	1092.11	1046.17	957.52
60	11.800	1400.99	1182.87	1131.43	1092.11	1046.17	957.52
61	12.000	1400.39	1182.81	1131.50	1092.11	1046.17	957.52
62	12.200	1399.84	1182.71	1131.53	1092.12	1046.17	957.52
63	12.400	1399.34	1182.56	1131.54	1093.31	1046.17	957.52
64	12.600	1398.89	1182.40	1131.52	1097.31	1046.17	957.52
65	12.800	1398.58	1182.22	1131.46	1099.95	1046.17	957.52
66	13.000	1398.40	1182.05	1131.36	1100.73	1046.17	957.52
67	13.200	1398.28	1181.88	1131.25	1100.94	1046.17	957.52
68	13.400	1398.20	1181.73	1131.12	1100.98	1046.20	957.52
69	13.600	1398.15	1181.60	1130.98	1100.88	1047.21	957.52
70	13.800	1398.11	1181.47	1130.84	1100.70	1050.91	957.52
71	14.000	1398.08	1181.36	1130.71	1100.45	1054.65	957.52
72	14.200	1398.07	1181.25	1130.57	1100.17	1056.24	957.52
73	14.400	1398.06	1181.15	1130.44	1099.87	1056.58	957.52
74	14.600	1398.05	1181.07	1130.32	1099.53	1056.58	957.55
75	14.800	1398.05	1180.99	1130.20	1099.17	1056.52	958.17
76	15.000	1398.04	1180.91	1130.09	1098.83	1056.38	961.16
77	15.200	1398.04	1180.84	1129.98	1098.51	1056.22	964.23
78	15.400	1398.04	1180.78	1129.87	1098.21	1056.04	965.73
79	15.600	1398.04	1180.72	1129.76	1097.93	1055.85	966.19
80	15.800	1398.04	1180.66	1129.66	1097.66	1055.64	966.23

COMPUTED DISCHARGES AT REQUESTED
STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Discharge QC(K,1) (cfs E3)	Station 2 Discharge QC(K,2) (cfs E3)	Station 3 Discharge QC(K,3) (cfs E3)	Station 4 Discharge QC(K,4) (cfs E3)	Station 5 Discharge QC(K,5) (cfs E3)	Station 6 Discharge QC(K,6) (cfs E3)
1	.000	1.03	1.01	1.00	1.00	1.00	1.00
2	.200	1.16	1.00	1.00	1.00	1.00	1.00
3	.400	1.30	1.00	1.00	1.00	1.00	1.00
4	.600	1.44	1.00	1.00	1.00	1.00	1.00
5	.800	1.59	1.00	1.00	1.00	1.00	1.00
6	1.000	1.74	1.00	1.00	1.00	1.00	1.00
7	1.200	1.90	1.00	1.00	1.00	1.00	1.00
8	1.400	2.06	1.00	1.00	1.00	1.00	1.00
9	1.600	2.25	1.00	1.00	1.00	1.00	1.00
10	1.800	2.45	1.00	1.00	1.00	1.00	1.00
11	2.000	2.66	1.00	1.00	1.00	1.00	1.00
12	2.200	2.86	1.00	1.00	1.00	1.00	1.00
13	2.400	3.08	1.00	1.01	1.00	1.00	1.00
14	2.600	3.30	1.00	1.01	1.00	1.00	1.00
15	2.800	3.61	1.00	1.01	1.00	1.00	1.00
16	3.000	3.94	1.00	1.01	1.00	1.00	1.00
17	3.200	4.28	1.00	1.01	1.00	1.00	1.00
18	3.400	4.63	1.00	1.01	1.00	1.00	1.00
19	3.600	4.98	1.00	1.01	1.00	1.00	1.00
20	3.800	5.34	1.00	1.01	1.00	1.00	1.00
21	4.000	5.70	1.00	1.01	1.00	1.00	1.00
22	4.200	6.07	1.00	1.01	1.00	1.00	1.00
23	4.400	6.45	1.01	1.01	1.00	1.00	1.00
24	4.600	6.92	1.01	1.01	1.00	1.00	1.00
25	4.800	7.43	1.01	1.01	1.00	1.00	1.00
26	5.000	7.95	1.01	1.01	1.00	1.00	1.00
27	5.200	8.49	1.01	1.01	1.00	1.00	1.00
28	5.400	9.04	1.01	1.01	1.00	1.00	1.00
29	5.600	9.60	1.01	1.01	1.00	1.00	1.00
30	5.800	10.16	1.01	1.01	1.00	1.00	1.00
31	6.000	10.74	1.01	1.01	1.00	1.00	1.00
32	6.200	11.33	1.01	1.01	1.00	1.00	1.00
33	6.400	11.87	1.01	1.01	1.00	1.00	1.00
34	6.600	12.32	1.01	1.01	1.00	1.00	1.00
35	6.800	12.74	1.01	1.01	1.00	1.00	1.00
36	7.000	14.05	1.01	1.01	1.01	1.00	1.00
37	7.200	17.23	1.01	1.01	1.01	1.00	1.00
38	7.400	22.30	1.01	1.01	1.01	1.00	1.00
39	7.600	29.21	1.01	1.01	1.01	1.00	1.00
40	7.800	37.76	1.01	1.01	1.01	1.00	1.00
41	8.000	47.83	1.03	1.01	1.01	1.00	1.00
42	8.200	59.30	1.14	1.01	1.01	1.00	1.00
43	8.400	78.38	1.39	1.01	1.01	1.00	1.00
44	8.600	87.13	1.89	1.01	1.01	1.00	1.00
45	8.800	95.34	2.74	1.01	1.01	1.00	1.00
46	9.000	102.53	4.43	1.01	1.01	1.00	1.00
47	9.200	108.60	7.01	1.01	1.01	1.00	1.00
48	9.400	113.35	8.78	1.01	1.01	1.00	1.00
49	9.600	116.84	9.88	1.01	1.01	1.00	1.00

Time Count K	Elapsed Time TTP(K) (hr)	Station 1 Discharge QC(K,1) (cfs E3)	Station 2 Discharge QC(K,2) (cfs E3)	Station 3 Discharge QC(K,3) (cfs E3)	Station 4 Discharge QC(K,4) (cfs E3)	Station 5 Discharge QC(K,5) (cfs E3)	Station 6 Discharge QC(K,6) (cfs E3)
50	9.800	118.84	11.35	1.01	1.01	1.00	1.00
51	10.000	119.25	15.35	1.01	1.01	1.00	1.00
52	10.200	118.15	28.52	1.01	1.01	1.00	1.00
53	10.400	107.81	55.48	1.01	1.01	1.00	1.00
54	10.600	90.95	82.90	1.01	1.01	1.00	1.00
55	10.800	76.32	98.59	1.02	1.01	1.00	1.00
56	11.000	63.80	106.47	1.19	1.01	1.01	1.00
57	11.200	53.24	111.55	6.06	1.01	1.01	1.00
58	11.400	44.46	114.85	37.87	1.01	1.01	1.00
59	11.600	37.28	116.10	86.87	1.01	1.01	1.00
60	11.800	31.56	114.92	108.09	1.01	1.01	1.00
61	12.000	27.23	111.08	111.66	1.01	1.01	1.00
62	12.200	24.25	104.74	114.05	1.02	1.01	1.00
63	12.400	21.77	96.52	114.48	6.70	1.01	1.00
64	12.600	19.01	87.38	112.54	58.09	1.01	1.00
65	12.800	14.31	78.24	108.38	99.72	1.01	1.00
66	13.000	12.76	69.76	102.53	107.50	1.01	1.00
67	13.200	11.84	62.22	95.53	109.85	1.01	1.00
68	13.400	11.21	55.64	88.13	109.21	1.04	1.00
69	13.600	10.79	49.91	80.75	105.79	3.00	1.00
70	13.800	10.52	44.90	73.70	101.15	26.30	1.00
71	14.000	10.34	40.52	67.15	95.28	61.78	1.00
72	14.200	10.22	36.67	61.20	88.97	95.22	1.01
73	14.400	10.14	33.32	55.83	82.57	101.08	1.01
74	14.600	10.09	30.38	51.03	76.14	101.20	1.05
75	14.800	10.06	27.82	46.65	69.87	98.40	2.24
76	15.000	10.04	25.55	42.76	64.26	93.65	16.75
77	15.200	10.03	23.53	39.22	59.20	88.57	58.11
78	15.400	10.02	21.68	36.08	54.72	82.89	87.71
79	15.600	10.01	19.98	33.24	50.73	77.60	95.21
80	15.800	10.01	18.38	30.72	47.08	72.37	95.53

END OF OUTPUT

APPENDIX L

Dambreak Output - SBFRS (NORTH AND SOUTH)

L

B O S S D A M B R K (tm)

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Version : 2.00
Serial Number : 0010419.200

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PROGRAM ORIGIN :

Boss DamBrk (tm) is an enhanced version of Professor D. L. Fread's 1988 NWS DAMBRK program.

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PROJECT DESCRIPTION :

PROJECT TITLE : SBFRS-NORTH BREACH (13-88)
PROJECT NUMBER : FILE: SBNTH4.DBK
DESCRIPTION : NORTH BREACH-PIPING STARTS NEAR BOTTOM
ENGINEER : CARTER ASSOCIATES
DATE OF RUN : 2/15/1991
TIME OF RUN : 3:23 pm

T DATA SUMMARY :

INPUT CONTROL PARAMETERS :

Number of Dynamic Routing Reaches (KKN)	1	
Type of Reservoir Routing (KUI)	1	(dynamic routing)
Number of multiple dams/bridges (MULDAM)	1	
No. of Reservoir Inflow Hydrograph Points (ITEH)	7	
No. of Informational Cross-Sections (NPRT)	0	
Flood-Plain Routing (KFLP)	0	(no)

CROSS-SECTION NUMBERS COINCIDENT
ITH UPSTREAM DAM FACE (IDAM) :

1

RESERVOIR VOLUME DESCRIPTION :

Elevation vs. Surface Area Table

Elevation HSA(K) (ft MSL)	Surface Area SA(K) (acres)
1193.50	1317.000
1191.50	967.000
1189.50	723.000
1187.50	500.000
1185.50	350.000
1183.50	250.000
1182.50	191.500
1182.50	.000

DAM NUMBER : 1

RESERVOIR AND BREACH PARAMETERS :

Initial Elevation of Water Surface (YO, ft MSL)		1192.00
Breach Side Slope (Z)	1:	.48
Breach Bottom Elevation (YBMIN, ft MSL)		1182.50
Breach Base Width (BB, ft)		198.00
Time of Breach Formation (TFH, hr)		5.40

RESERVOIR DESCRIPTION :

Water Surface Elevation at Time of Breach (HF, ft MSL)	1192.00
Top of Dam Elevation (HD, ft MSL)	1193.30
Uncontrolled Spillway Crest Elevation (HSP, ft MSL)	1182.50
Spillway Gate Center Elevation (HGT, ft MSL)	.00
Uncontrolled Spillway Discharge Coefficient (CS)	.00
Spillway Gate Discharge Coefficient (CG)	.00
Piping Centerline Elevation (CDO, ft MSL)	1183.50
Turbine Discharge (QT, cfs)	1000.00

SPILLWAY/GATE RATING CURVE :

Head HEAD(1) (ft)	Flow QSPILL(1) (cfs)
.00	.0
1.00	350.0
2.00	700.0
4.00	900.0
6.00	1080.0
8.00	1210.0
10.00	1350.0
12.00	1500.0

Hydrograph Time Intervals (DHF, hr)	.00
Routing Period (TEH, hr)	13.00
Breach Development Exponent (BREX)	1.00
Mud/Debris Flow Parameter (MUD)	0
Dry Bed Routing Parameter (IWF)	0
Hydraulic Radius Computation Parameter (KPRES)	1

Time Elapsed TI(K) (hr)	Upstream Inflow QI(K) (cfs)
.00	3555.0
2.00	2488.0
4.00	2127.0
6.00	1965.0
8.00	1953.0
12.00	1949.0
18.00	1900.0

SUMMARY OF PROGRAM CONTROL PARAMETERS :

Number of Cross-Sections Entered (NS)	24	
Number of Top Widths Entered (NCS)	7	
Number of Cross-Sectional Hydrographs to Plot (NTT)	6	
Cross-Sectional Smoothing Parameter (KSA)	0	
Downstream Supercritical Parameter (KSUPC)	0	(subcritical)
Landslide Simulation (KSL)	0	(no)
Number of Lateral Inflow Hydrographs (LQ)	0	
Number of Points in Gate Control Curve (KCG)	0	

CROSS-SECTIONS WHERE HYDROGRAPH REQUESTED :
(maximum allowed = 6)

1 4 6 12 18 23

CHANNEL-VALLEY BOUNDARY CONDITIONS :

Max Discharge at Downstream End (QMAXD, cfs)	.0
Max Lateral Outflow due to Flood Wave (QLL, cfs/ft)	.0000
Initial Time-Step Size (DTHM, hr)	.2000
Time at which Dam Starts to Fail (TFI, hr)	.0000
Theta Weighting Factor (FII)	.000
Stage Convergence Criterion (EPSY, ft)	.000
Initial Downstream Water Surface Elevation (YDN, ft MSL)	.00
Slope of Channel Downstream of Dam (SOM, ft/mi)	.0000

CROSS-SECTION NUMBER : 1 NORTH DAMBREAK LOCATION

Cross-Section Location (XS(I), mi) 13.530

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 1

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .030

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1182.50	2.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1183.00	600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1186.00	2250.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1188.00	2700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1190.00	4150.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1192.00	4850.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1200.00	7600.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 2

Cross-Section Location (XS(I), mi) 13.560

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 2

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation WS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1181.50	2.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1182.00	650.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1185.00	2250.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1187.00	2700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1189.00	4150.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1191.00	4850.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1199.00	7600.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 3

Cross-Section Location (XS(I), mi) 14.010

Flooding Elevation (FSTG(I), ft MSL) 1176.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 3

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1174.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1175.00	950.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1177.00	2250.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1179.00	2700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1181.00	4150.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1183.00	4850.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1191.00	7600.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 4 HOUSE ELE.=1164-70(+or-)

Cross-Section Location (XS(I), mi) 14.410

Flooding Elevation (FSTG(I), ft MSL) 1165.400

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 4

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1163.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1164.00	1000.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1166.00	2660.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1168.00	3880.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1170.00	5330.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1172.00	6500.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1174.00	8000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 5 SHED ELE.=1163(+or-)

Cross-Section Location (XS(I), mi) 14.870

Flooding Elevation (FSTG(I), ft MSL) 1154.300

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 5

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1152.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1153.00	1925.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1155.00	3608.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1157.00	5290.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1159.00	6645.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1161.00	8000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1163.00	8300.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 6 HOUSE ELE.=1143(+or-)

Cross-Section Location (XS(I), mi) 15.330

Flooding Elevation (FSTG(I), ft MSL) 1143.600

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 6

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation (I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1142.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1143.00	2415.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1145.00	4555.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1147.00	6695.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1149.00	9000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1151.00	10000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1153.00	12000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 7

Cross-Section Location (XS(I), mi) 15.790

Flooding Elevation (FSTG(I), ft MSL) 1133.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 7

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1131.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1132.00	2900.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1134.00	5500.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1136.00	8100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1138.00	9050.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1140.00	10000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1142.00	11000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 8

Cross-Section Location (XS(I), mi) 16.880

Flooding Elevation (FSTG(I), ft MSL) 1120.400

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 8

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation (I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1119.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1120.00	6950.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1122.00	8600.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1124.00	10250.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1126.00	11575.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1128.00	12900.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1130.00	14100.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 9

Cross-Section Location (XS(I), mi) 17.750

Flooding Elevation (FSTG(I), ft MSL) 1112.200

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 9

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .160

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1111.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1112.00	6880.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1114.00	8185.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1116.00	9490.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1118.00	10725.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1120.00	11960.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1124.00	13920.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 10 HOUSE ELE.= 1110(+or-)

Cross-Section Location (XS(I), mi) 18.550

Flooding Elevation (FSTG(I), ft MSL) 1105.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 10

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .245

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1103.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1104.00	3920.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1106.00	5145.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1108.00	6370.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1112.00	8690.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1116.00	11280.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1120.00	13160.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 11 HOUSE ELE.= 1111(+or-)

Cross-Section Location (XS(I), mi) 19.040

Flooding Elevation (FSTG(I), ft MSL) 1100.900

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 11

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HC(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1099.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1100.00	3360.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1102.00	4820.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1104.00	6280.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1106.00	7580.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1108.00	8880.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1112.00	11060.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 12 HOUSE ELE.= 1104-06(+or-)

Cross-Section Location (XS(I), mi) 19.520

Flooding Elevation (FSTG(I), ft MSL) 1094.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 12

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1091.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1092.00	1870.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1094.00	2345.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1096.00	2820.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1098.00	4110.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1100.00	5400.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1104.00	7350.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 13

Cross-Section Location (XS(I), mi) 20.050

Flooding Elevation (FSTG(I), ft MSL) 1089.800

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 13

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .170

CROSS-SECTION and REACH DESCRIPTION :

Elevation WS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1087.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1088.00	1750.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1090.00	2535.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1092.00	3320.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1096.00	4200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1100.00	6100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1104.00	12650.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 14

Cross-Section Location (XS(I), mi) 20.730

Flooding Elevation (FSTG(I), ft MSL) 1082.200

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 14

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1079.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1080.00	1300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1082.00	1765.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1084.00	2230.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1086.00	2465.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1088.00	2700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1092.00	4200.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 15

Cross-Section Location (XS(I), mi) 21.390

Flooding Elevation (FSTG(I), ft MSL) 1074.800

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 15

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation US(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1071.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1072.00	830.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1074.00	1040.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1076.00	1250.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1080.00	1820.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1084.00	2720.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1088.00	6720.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 16

Cross-Section Location (XS(I), mi) 22.710

Flooding Elevation (FSTG(I), ft MSL) 1063.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 16

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1059.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1060.00	690.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1062.00	1140.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1064.00	4760.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1066.00	5225.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1068.00	5690.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1072.00	7540.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 17

Cross-Section Location (XS(I), mi) 23.690

Flooding Elevation (FSTG(I), ft MSL) 1053.300

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 17

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HC(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1049.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1050.00	200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1052.00	925.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1054.00	1275.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1058.00	3650.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1062.00	5960.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1066.00	7520.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 18 HOUSE ELE.=1051-58(+or-)

Cross-Section Location (XS(I), mi) 24.160

Flooding Elevation (FSTG(I), ft MSL) 1048.200

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 18

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1044.00	40.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1046.00	500.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1048.00	980.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1050.00	1235.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1052.00	1490.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1056.00	4860.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1060.00	6290.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 19

Cross-Section Location (XS(I), mi) 25.540

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 19

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1026.00	20.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1028.00	60.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1030.00	260.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1032.00	915.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1034.00	1570.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1038.00	2110.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1044.00	3020.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 20

Cross-Section Location (XS(I), mi) 26.690

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YO, ft MSL) .000

DOWNSTREAM REACH NUMBER : 20

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1004.00	50.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1008.00	280.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1012.00	960.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1014.00	1030.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1016.00	1100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1020.00	2000.0	.0400	600.0	.0	.0000	.0	.0000	1.0000
1024.00	2100.0	.0400	1700.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 21

Cross-Section Location (XS(I), mi) 27.570

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 21

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
992.00	270.0	.0500	.0	.0	.0000	.0	.0000	1.0000
994.00	370.0	.0500	.0	.0	.0000	.0	.0000	1.0000
996.00	470.0	.0500	.0	.0	.0000	.0	.0000	1.0000
998.00	755.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1000.00	1040.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1004.00	1300.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1008.00	1900.0	.0400	1600.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 22

Cross-Section Location (XS(I), mi) 28.750

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 22

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
972.00	120.0	.0500	.0	.0	.0000	.0	.0000	1.0000
974.00	300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
976.00	475.0	.0500	.0	.0	.0000	.0	.0000	1.0000
978.00	940.0	.0500	.0	.0	.0000	.0	.0000	1.0000
980.00	1400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
984.00	2600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
988.00	2700.0	.0400	7100.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 23 MULLEN WELL(FOUNDATIONS)

Cross-Section Location (XS(I), mi) 29.620

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 23

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
956.00	210.0	.0500	.0	.0	.0000	.0	.0000	1.0000
958.00	750.0	.0500	.0	.0	.0000	.0	.0000	1.0000
960.00	1200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
964.00	2000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
966.00	2200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
968.00	2400.0	.0400	4490.0	.0	.0000	.0	.0000	1.0000
972.00	2500.0	.0400	5620.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 24

Cross-Section Location (XS(I), mi) 30.100

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

CROSS-SECTION DESCRIPTION :

Elevation HS(K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Right Top Width BSR(K,I) (ft)
948.00	100.0	.0	.0	.0
950.00	350.0	.0	.0	.0
952.00	600.0	.0	.0	.0
956.00	3870.0	.0	.0	.0
960.00	4100.0	.0	.0	.0
964.00	4200.0	.0	.0	.0
968.00	4350.0	.0	.0	.0

WARNING: At cross-section reach 17 the distance between
interpolated cross-sections (DXM) should be changed
to .052 due to expansion/contraction criteria

WARNING: At cross-section reach 19 the distance between
interpolated cross-sections (DXM) should be changed
to .077 due to expansion/contraction criteria

DISTANCE BETWEEN INTERPOLATED CROSS-SECTIONS
(DXM) THAT WILL BE USED IN COMPUTATIONS :

Down Stream Reach Number I=1,NS1	Interp. Cross Section Distance DXM(I) (mi)
1	101.0000
2	.1000
3	.1000
4	.1000
5	.3000
6	.3000
7	.3000
8	.3000
9	.1600
10	.2450
11	.1000
12	.2000
13	.1700
14	.3000
15	.2000
16	.1000
17	.1000
18	.1000
19	.1000
20	.2000
21	.2000
22	.1000
23	.1000

Total number of cross-sections (original+interpolated) 104

Maximum number of cross-sections allowed 300

PUT DATA SUMMARY :

CROSS-SECTION and REACH SUMMARY :

Cross Section Number	Cross Section Location (mi)	Bottom Elevation (ft MSL)	Reach Number	Reach Length (mi)	Reach Slope (ft/mi)
1	13.530	1182.500			
2	13.560	1181.500	1	.030	33.333
3	14.010	1174.000	2	.450	16.667
4	14.410	1163.000	3	.400	27.500
5	14.870	1152.000	4	.460	23.913
6	15.330	1142.000	5	.460	21.739
7	15.790	1131.000	6	.460	23.913
8	16.880	1119.000	7	1.090	11.009
9	17.750	1111.000	8	.870	9.195
10	18.550	1103.000	9	.800	10.000
11	19.040	1099.000	10	.490	8.163
12	19.520	1091.000	11	.480	16.667
13	20.050	1087.000	12	.530	7.547
14	20.730	1079.000	13	.680	11.765
15	21.390	1071.000	14	.660	12.121
16	22.710	1059.000	15	1.320	9.091
17	23.690	1049.000	16	.980	10.204
18	24.160	1044.000	17	.470	10.638
19	25.540	1026.000	18	1.380	13.043
20	26.690	1004.000	19	1.150	19.130
21	27.570	992.000	20	.880	13.636
22	28.750	972.000	21	1.180	16.949
23	29.620	956.000	22	.870	18.391
24	30.100	948.000	23	.480	16.667

RE-NUMBERED DAM/BRIDGE CROSS-SECTIONS :

Dam/ Bridge	Revised Cross Section Number
1	1

Number of Intermediate Cross-Sections (NN(NS)) 104

Number of Time Steps (NNU) 7

INITIAL CONDITIONS TABLE :

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
1	13.530	1184.05	1.55	1183.52	1.02	0	10	10
2	13.560	1183.06	1.56	1182.48	.98	0	10	10
3	13.673	1181.19	1.57	1180.62	.99	0	10	10
4	13.785	1179.34	1.59	1178.77	1.02	0	10	10
5	13.898	1177.49	1.61	1176.92	1.05	0	10	10
6	14.010	1175.47	1.47	1175.07	1.07	0	10	10
7	14.110	1172.85	1.60	1172.32	1.07	0	10	10
8	14.210	1170.09	1.59	1169.56	1.06	0	10	10
9	14.310	1167.34	1.59	1166.81	1.06	0	10	10
10	14.410	1164.63	1.63	1164.06	1.06	0	10	10
11	14.525	1161.75	1.50	1161.22	.97	0	10	10
12	14.640	1158.89	1.39	1158.41	.91	0	10	10
13	14.755	1156.07	1.32	1155.60	.85	0	10	10
14	14.870	1153.19	1.19	1152.81	.81	0	10	10
15	15.330	1143.15	1.15	1142.75	.75	0	10	10
16	15.790	1132.24	1.24	1131.69	.69	0	10	10
17	16.153	1128.08	1.08	1127.60	.60	0	10	10
18	16.517	1123.98	.98	1123.53	.53	0	10	10
19	16.880	1119.94	.94	1119.49	.49	0	10	10
20	17.315	1115.94	.94	1115.49	.49	0	10	10
21	17.750	1111.93	.93	1111.49	.49	0	10	10
22	17.910	1110.36	.96	1109.91	.51	0	10	10
23	18.070	1108.79	.99	1108.33	.53	0	10	10
24	18.230	1107.23	1.03	1106.75	.55	0	10	10
25	18.390	1105.67	1.07	1105.18	.58	0	10	10
26	18.550	1104.17	1.17	1103.61	.61	0	10	10
27	18.795	1102.19	1.19	1101.64	.64	0	10	10
28	19.040	1100.09	1.09	1099.65	.65	0	10	10
29	19.160	1098.14	1.14	1097.68	.68	0	10	10
30	19.280	1096.19	1.19	1095.72	.72	0	10	10
31	19.400	1094.25	1.25	1093.77	.77	0	10	10
32	19.520	1092.57	1.57	1091.82	.82	0	10	10
33	19.785	1090.59	1.59	1089.83	.83	0	10	10
34	20.050	1088.49	1.49	1087.84	.84	0	10	10
35	20.220	1086.52	1.52	1085.87	.87	0	10	10
36	20.390	1084.56	1.56	1083.90	.90	0	10	10
37	20.560	1082.61	1.61	1081.92	.92	0	10	10
38	20.730	1080.66	1.66	1079.96	.96	0	10	10
39	21.060	1076.79	1.79	1076.03	1.03	0	10	10
40	21.390	1073.13	2.13	1072.12	1.12	0	10	10
41	21.610	1071.16	2.16	1070.14	1.14	0	10	10
42	21.830	1069.20	2.20	1068.16	1.16	0	10	10
43	22.050	1067.22	2.22	1066.16	1.16	0	10	10
44	22.270	1065.26	2.26	1064.18	1.18	0	10	10
45	22.490	1063.29	2.29	1062.19	1.19	0	10	10
46	22.710	1061.25	2.25	1060.21	1.21	0	10	10
47	22.819	1060.22	2.33	1059.14	1.25	0	10	10
48	22.928	1059.20	2.42	1058.07	1.30	0	10	10
49	23.037	1058.18	2.51	1057.02	1.35	0	10	10

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
50	23.146	1057.16	2.60	1055.98	1.42	0	10	10
51	23.254	1056.16	2.71	1054.94	1.49	0	10	10
52	23.363	1055.16	2.82	1053.92	1.58	0	10	10
53	23.472	1054.16	2.93	1052.91	1.69	0	10	10
54	23.581	1053.17	3.06	1051.91	1.80	0	10	10
55	23.690	1052.15	3.15	1050.93	1.93	0	10	10
56	23.807	1050.95	3.20	1049.67	1.92	0	10	10
57	23.925	1049.70	3.20	1048.36	1.86	0	10	10
58	24.042	1048.42	3.17	1047.05	1.80	0	10	10
59	24.160	1046.99	2.99	1045.74	1.74	0	10	10
60	24.266	1045.70	3.08	1044.41	1.79	0	10	10
61	24.372	1044.41	3.18	1043.09	1.86	0	10	10
62	24.478	1043.12	3.27	1041.75	1.90	0	10	10
63	24.585	1041.84	3.38	1040.45	1.99	0	10	10
64	24.691	1040.59	3.51	1039.15	2.07	0	10	10
65	24.797	1039.34	3.64	1037.85	2.16	0	10	10
66	24.903	1038.12	3.81	1036.58	2.28	0	10	10
67	25.009	1036.92	4.00	1035.34	2.41	0	10	10
68	25.115	1035.76	4.22	1034.13	2.59	0	10	10
69	25.222	1034.63	4.48	1032.94	2.78	0	10	10
70	25.328	1033.53	4.76	1031.80	3.03	0	10	10
71	25.434	1032.43	5.05	1030.74	3.35	0	10	10
72	25.540	1031.09	5.09	1029.75	3.75	0	10	10
73	25.645	1029.21	5.21	1027.61	3.61	0	10	10
74	25.749	1027.07	5.07	1025.51	3.51	0	10	10
75	25.854	1024.90	4.90	1023.40	3.40	0	10	10
76	25.958	1022.84	4.84	1021.26	3.26	0	10	10
77	26.063	1020.77	4.77	1019.09	3.09	0	10	10
78	26.167	1018.73	4.73	1016.94	2.94	0	10	10
79	26.272	1016.66	4.66	1014.85	2.85	0	10	10
80	26.376	1014.61	4.61	1012.76	2.76	0	10	10
81	26.481	1012.54	4.54	1010.69	2.69	0	10	10
82	26.585	1010.42	4.42	1008.64	2.64	0	10	10
83	26.690	1008.68	4.68	1006.59	2.59	0	10	10
84	26.910	1004.96	3.96	1003.05	2.05	0	10	10
85	27.130	1001.42	3.42	999.68	1.68	0	10	10
86	27.350	998.01	3.01	996.44	1.44	0	10	10
87	27.570	994.51	2.51	993.26	1.26	0	10	10
88	27.806	990.63	2.63	989.35	1.35	0	10	10
89	28.042	986.76	2.76	985.45	1.45	0	10	10
90	28.278	982.90	2.90	981.54	1.54	0	10	10
91	28.514	979.04	3.04	977.66	1.66	0	10	10
92	28.750	975.13	3.13	973.79	1.79	0	10	10
93	28.859	972.91	2.91	971.66	1.66	0	10	10
94	28.967	970.74	2.74	969.57	1.57	0	10	10
95	29.076	968.60	2.60	967.48	1.48	0	10	10
96	29.185	966.48	2.48	965.41	1.41	0	10	10
97	29.294	964.38	2.38	963.35	1.35	0	10	10
98	29.402	962.29	2.29	961.29	1.29	0	10	10
99	29.511	960.21	2.21	959.24	1.24	0	10	10

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
100	29.620	958.20	2.20	957.20	1.20	0	10	10
101	29.740	956.33	2.33	955.29	1.29	0	10	10
102	29.860	954.52	2.52	953.42	1.42	0	10	10
103	29.980	952.77	2.77	951.57	1.57	0	10	10
104	30.100	951.10	3.10	949.79	1.79	0	10	10

SUMMARY OF INITIAL DOWNSTREAM BOUNDARY CONDITIONS :

Cross-section Number at Downstream End of Model (IN)	104
Initial Water Surface Elev. at Downstream End (YNN, ft MSL)	951.096
Initial Flow Depth at Downstream End (DEP, ft)	3.096

COMPUTED STEP BACKWATER TABLE :

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
103	29.980	2315.0	952.915	2.915	4
102	29.860	2315.0	954.600	2.600	4
101	29.740	2315.0	956.395	2.395	4

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
100	29.620	2315.0	958.232	2.232	4
99	29.511	2315.0	960.153	2.153	4
98	29.402	2315.0	962.291	2.291	4
97	29.294	2315.0	964.350	2.350	4
96	29.185	2315.0	966.458	2.458	4
95	29.076	2315.0	968.567	2.567	4
94	28.967	2315.0	970.702	2.702	4
93	28.859	2315.0	972.861	2.861	4
92	28.750	2315.0	975.058	3.058	4
91	28.514	2315.0	979.160	3.160	4
90	28.278	2315.0	982.891	2.891	4
89	28.042	2315.0	986.807	2.807	3
88	27.806	2315.0	990.646	2.646	3
87	27.570	2315.0	994.536	2.536	3
86	27.350	2315.0	997.948	2.948	4
85	27.130	2315.0	1001.280	3.280	4
84	26.910	2315.0	1004.779	3.779	4
83	26.690	2315.0	1008.429	4.430	4
82	26.585	2315.0	1010.365	4.365	4
81	26.481	2315.0	1012.489	4.489	4
80	26.376	2315.0	1014.578	4.578	4
79	26.272	2315.0	1016.647	4.647	4
78	26.167	2315.0	1018.706	4.706	4
77	26.063	2315.0	1020.759	4.759	4
76	25.958	2315.0	1022.812	4.812	4
75	25.854	2315.0	1024.871	4.871	4
74	25.749	2315.0	1026.991	4.991	5
73	25.645	2315.0	1029.171	5.171	4
72	25.540	2315.0	1031.272	5.272	4
71	25.434	2315.0	1032.582	5.197	5
70	25.328	2315.0	1033.676	4.906	4
69	25.222	2315.0	1034.785	4.631	4
68	25.115	2315.0	1035.907	4.369	4
67	25.009	2315.0	1037.052	4.129	4
66	24.903	2315.0	1038.233	3.925	4
65	24.797	2315.0	1039.435	3.743	4
64	24.691	2315.0	1040.665	3.588	4
63	24.585	2315.0	1041.914	3.452	4
62	24.478	2315.0	1043.178	3.332	4
61	24.372	2315.0	1044.455	3.224	4
60	24.266	2315.0	1045.742	3.127	4
59	24.160	2315.0	1047.039	3.039	4
58	24.042	2315.0	1048.408	3.158	4
57	23.925	2315.0	1049.694	3.194	4
56	23.807	2315.0	1050.956	3.206	4
55	23.690	2315.0	1052.165	3.165	4
54	23.581	2315.0	1053.230	3.119	4
53	23.472	2315.0	1054.230	3.007	5
52	23.363	2315.0	1055.223	2.890	5
51	23.254	2315.0	1056.220	2.776	5

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
50	23.146	2315.0	1057.223	2.667	5
49	23.037	2315.0	1058.232	2.565	5
48	22.928	2315.0	1059.247	2.469	5
47	22.819	2315.0	1060.269	2.380	5
46	22.710	2315.0	1061.298	2.298	5
45	22.490	2315.0	1063.305	2.305	4
44	22.270	2315.0	1065.260	2.260	4
43	22.050	2315.0	1067.235	2.235	4
42	21.830	2315.0	1069.203	2.203	4
41	21.610	2315.0	1071.173	2.173	3
40	21.390	2315.0	1073.146	2.146	4
39	21.060	2315.0	1076.767	1.767	3
38	20.730	2315.0	1080.698	1.698	3
37	20.560	2315.0	1082.611	1.611	4
36	20.390	2315.0	1084.575	1.575	4
35	20.220	2315.0	1086.523	1.523	4
34	20.050	2315.0	1088.486	1.486	4
33	19.785	2315.0	1090.667	1.667	4
32	19.520	2315.0	1092.538	1.538	4
31	19.400	2315.0	1094.177	1.177	4
30	19.280	2315.0	1096.246	1.246	4
29	19.160	2315.0	1098.111	1.111	4
28	19.040	2315.0	1100.113	1.113	4
27	18.795	2315.0	1102.281	1.281	5
26	18.550	2315.0	1104.125	1.125	4
25	18.390	2315.0	1105.688	1.088	4
24	18.230	2315.0	1107.234	1.034	4
23	18.070	2315.0	1108.806	1.006	4
22	17.910	2315.0	1110.365	.964	4
21	17.750	2315.0	1111.935	.935	4
20	17.315	2315.0	1115.951	.951	4
19	16.880	2315.0	1119.935	.935	4
18	16.517	2315.0	1123.957	.957	3
17	16.153	2315.0	1128.102	1.102	4
16	15.790	2315.0	1132.207	1.207	4
15	15.330	2315.0	1143.010	1.010	4
14	14.870	2315.0	1153.441	1.441	4
13	14.755	2315.0	1155.896	1.146	4
12	14.640	2315.0	1159.015	1.515	4
11	14.525	2315.0	1161.632	1.382	4
10	14.410	2315.0	1164.688	1.688	4
9	14.310	2315.0	1167.264	1.514	4
8	14.210	2315.0	1170.147	1.647	4
7	14.110	2315.0	1172.819	1.569	4
6	14.010	2315.0	1175.635	1.635	4
5	13.898	2315.0	1177.487	1.612	4
4	13.785	2315.0	1179.343	1.593	4
3	13.673	2315.0	1181.201	1.576	4
2	13.560	2315.0	1183.061	1.561	4
1	13.530	2315.0	1192.000	9.500	0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
1	1192.00	2315.0
2	1183.06	2315.0
3	1181.20	2315.0
4	1179.34	2315.0
5	1177.49	2315.0
6	1175.64	2315.0
7	1172.82	2315.0
8	1170.15	2315.0
9	1167.26	2315.0
10	1164.69	2315.0
11	1161.63	2315.0
12	1159.02	2315.0
13	1155.90	2315.0
14	1153.44	2315.0
15	1143.01	2315.0
16	1132.21	2315.0
17	1128.10	2315.0
18	1123.96	2315.0
19	1119.94	2315.0
20	1115.95	2315.0
21	1111.94	2315.0
22	1110.36	2315.0
23	1108.81	2315.0
24	1107.23	2315.0
25	1105.69	2315.0
26	1104.12	2315.0
27	1102.28	2315.0
28	1100.11	2315.0
29	1098.11	2315.0
30	1096.25	2315.0
31	1094.18	2315.0
32	1092.54	2315.0
33	1090.67	2315.0
34	1088.49	2315.0
35	1086.52	2315.0
36	1084.57	2315.0
37	1082.61	2315.0
38	1080.70	2315.0
39	1076.77	2315.0
40	1073.15	2315.0
41	1071.17	2315.0
42	1069.20	2315.0
43	1067.24	2315.0
44	1065.26	2315.0
45	1063.31	2315.0
46	1061.30	2315.0
47	1060.27	2315.0
48	1059.25	2315.0
49	1058.23	2315.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
50	1057.22	2315.0
51	1056.22	2315.0
52	1055.22	2315.0
53	1054.23	2315.0
54	1053.23	2315.0
55	1052.17	2315.0
56	1050.96	2315.0
57	1049.69	2315.0
58	1048.41	2315.0
59	1047.04	2315.0
60	1045.74	2315.0
61	1044.45	2315.0
62	1043.18	2315.0
63	1041.91	2315.0
64	1040.66	2315.0
65	1039.44	2315.0
66	1038.23	2315.0
67	1037.05	2315.0
68	1035.91	2315.0
69	1034.79	2315.0
70	1033.68	2315.0
71	1032.58	2315.0
72	1031.27	2315.0
73	1029.17	2315.0
74	1026.99	2315.0
75	1024.87	2315.0
76	1022.81	2315.0
77	1020.76	2315.0
78	1018.71	2315.0
79	1016.65	2315.0
80	1014.58	2315.0
81	1012.49	2315.0
82	1010.37	2315.0
83	1008.43	2315.0
84	1004.78	2315.0
85	1001.28	2315.0
86	997.95	2315.0
87	994.54	2315.0
88	990.65	2315.0
89	986.81	2315.0
90	982.89	2315.0
91	979.16	2315.0
92	975.06	2315.0
93	972.86	2315.0
94	970.70	2315.0
95	968.57	2315.0
96	966.46	2315.0
97	964.35	2315.0
98	962.29	2315.0
99	960.15	2315.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
100	958.23	2315.0
101	956.39	2315.0
102	954.60	2315.0
103	952.92	2315.0
104	951.10	2315.0

DAM OUTFLOW HYDROGRAPH TIME PARAMETERS :

Time to Failure (TFH, hr)	5.400
Time to Start of Rising Limb of Hydrograph (TFO, hr)	.000
Time to Peak (TP, hr)	.000
Time Step Size (DTHI, hr)	.200

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Time (TT)	3.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	11172.33
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1191.38
Flow at Downstream End of Model (QU(N), cfs)	2325.96
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.24

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1191.38	.50	22267.	4632.	4632.	11.172	.0400	.00	-.66	166.5	.0	8.9
14.110	1174.00	2.85	3241.	2182.	2182.	9.238	.0500	.00	1.19	.0	.4	2.8
14.755	1156.71	2.79	2861.	2499.	2499.	7.991	.0500	.00	.81	.0	.5	2.0
16.880	1120.11	.91	4270.	7044.	7044.	3.875	.0500	.00	.18	.0	.2	1.1
18.390	1105.69	.87	2669.	4568.	4568.	2.334	.0500	.00	.00	.0	.2	1.1
19.400	1094.18	1.52	1528.	2307.	2307.	2.324	.0500	.00	.00	.0	.3	1.2
20.560	1082.61	1.43	1625.	1580.	1580.	2.323	.0500	.00	.00	.0	.2	1.6
22.050	1067.24	1.60	1448.	964.	964.	2.321	.0500	.00	.00	.0	.2	2.2
23.037	1058.23	1.63	1422.	951.	951.	2.318	.0500	.00	.00	.0	.2	2.6
23.690	1052.17	1.68	1382.	954.	954.	2.317	.0497	.00	.00	.0	.2	3.2
24.372	1044.46	1.99	1163.	700.	700.	2.317	.0500	.00	.00	.0	.3	3.2
25.009	1037.05	2.12	1095.	569.	569.	2.316	.0488	.00	.00	.0	.3	4.1
25.645	1029.17	2.54	912.	567.	567.	2.317	.0500	.00	.00	.0	.4	5.2
26.272	1016.65	2.85	813.	412.	412.	2.317	.0500	.00	.00	.0	.4	4.6
27.130	1001.28	2.81	824.	362.	362.	2.317	.0500	.00	.00	.0	.3	3.3
28.514	979.16	2.62	883.	407.	407.	2.317	.0500	.00	.00	.0	.3	3.2
29.294	964.35	2.38	972.	642.	642.	2.317	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.321	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.49
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.04
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	3.200	11172.	1191.38	1182.50	1184.56	1.00	117.33	11172.	9901.	0.	1271.

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Time (TT)	3.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	11736.18
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1191.05
Flow at Downstream End of Model (QU(N), cfs)	2325.94
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.24

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1191.05	.57	20769.	4517.	4517.	11.736	.0400	.00	-.99	191.9	.0	8.5
14.110	1174.27	3.02	3843.	2359.	2359.	11.615	.0499	.00	1.45	.0	.4	3.0
14.755	1156.94	2.95	3456.	2691.	2691.	10.188	.0500	.00	1.04	.0	.5	2.2
16.880	1120.22	1.01	5026.	7132.	7132.	5.067	.0500	.00	.28	.0	.2	1.2
18.390	1105.69	.87	2668.	4568.	4568.	2.333	.0500	.00	.00	.0	.2	1.1
19.400	1094.18	1.52	1529.	2307.	2307.	2.325	.0500	.00	.00	.0	.3	1.2
20.560	1082.61	1.43	1625.	1580.	1580.	2.323	.0500	.00	.00	.0	.2	1.6
22.050	1067.24	1.60	1448.	964.	964.	2.322	.0500	.00	.00	.0	.2	2.2
23.037	1058.23	1.63	1423.	951.	951.	2.320	.0500	.00	.00	.0	.2	2.6
23.690	1052.17	1.68	1383.	954.	954.	2.318	.0497	.00	.00	.0	.2	3.2
24.372	1044.46	1.99	1163.	700.	700.	2.317	.0500	.00	.00	.0	.3	3.2
25.009	1037.05	2.12	1095.	569.	569.	2.317	.0488	.00	.00	.0	.3	4.1
25.645	1029.17	2.54	912.	567.	567.	2.317	.0500	.00	.00	.0	.4	5.2
26.272	1016.65	2.85	813.	412.	412.	2.317	.0500	.00	.00	.0	.4	4.6
27.130	1001.28	2.81	824.	362.	362.	2.317	.0500	.00	.00	.0	.3	3.3
28.514	979.16	2.62	883.	407.	407.	2.317	.0500	.00	.00	.0	.3	3.2
29.294	964.35	2.38	972.	642.	642.	2.317	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.321	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.50
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.05
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	3.600	11736.	1191.05	1182.50	1184.64	1.00	132.00	11736.	10488.	0.	1248.

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Time (TT)	4.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	12108.19
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1190.69
Flow at Downstream End of Model (QU(N), cfs)	2325.98
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.24

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1190.69	.63	19152.	4390.	4390.	12.108	.0400	.00	-1.35	198.8	.1	8.2
14.110	1174.29	3.06	3902.	2367.	2367.	11.941	.0498	.00	1.48	.0	.4	3.0
14.755	1157.09	3.05	3869.	2817.	2817.	11.806	.0500	.00	1.19	.0	.5	2.3
16.880	1120.33	1.10	5789.	7219.	7219.	6.364	.0500	.00	.39	.0	.2	1.3
18.390	1105.70	.89	2709.	4574.	4574.	2.399	.0500	.00	.01	.0	.2	1.1
19.400	1094.18	1.52	1531.	2307.	2307.	2.331	.0500	.00	.00	.0	.3	1.2
20.560	1082.61	1.43	1625.	1580.	1580.	2.324	.0500	.00	.00	.0	.2	1.6
22.050	1067.24	1.60	1449.	964.	964.	2.323	.0500	.00	.00	.0	.2	2.2
23.037	1058.23	1.63	1423.	951.	951.	2.322	.0500	.00	.00	.0	.2	2.6
23.690	1052.17	1.68	1383.	954.	954.	2.320	.0497	.00	.00	.0	.2	3.2
24.372	1044.46	1.99	1163.	700.	700.	2.319	.0500	.00	.00	.0	.3	3.2
25.009	1037.05	2.12	1095.	569.	569.	2.317	.0488	.00	.00	.0	.3	4.1
25.645	1029.17	2.54	912.	567.	567.	2.317	.0500	.00	.00	.0	.4	5.2
26.272	1016.65	2.85	813.	412.	412.	2.317	.0500	.00	.00	.0	.4	4.6
27.130	1001.28	2.81	824.	362.	362.	2.317	.0500	.00	.00	.0	.3	3.3
28.514	979.16	2.62	883.	407.	407.	2.317	.0500	.00	.00	.0	.3	3.2
29.294	964.35	2.38	972.	642.	642.	2.317	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.321	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.50
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.05
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submergence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	4.000	12108.	1190.69	1182.50	1184.69	1.00	146.67	12108.	10885.	0.	1223.

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Time (TT)	4.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	12285.19
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1190.29
Flow at Downstream End of Model (QU(N), cfs)	2326.05
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.24

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1190.29	.70	17442.	4251.	4251.	12.285	.0400	.00	-1.75	202.5	.1	7.8
14.110	1174.32	3.09	3955.	2374.	2374.	12.219	.0496	.00	1.50	.0	.4	3.1
14.755	1157.10	3.10	3893.	2824.	2824.	12.078	.0500	.00	1.20	.0	.5	2.3
16.880	1120.45	1.20	6708.	7324.	7324.	8.060	.0500	.00	.52	.0	.2	1.5
18.390	1105.79	.98	3111.	4628.	4628.	3.052	.0500	.00	.10	.0	.2	1.2
19.400	1094.18	1.52	1534.	2308.	2308.	2.338	.0500	.00	.00	.0	.3	1.2
20.560	1082.61	1.43	1626.	1580.	1580.	2.326	.0500	.00	.00	.0	.2	1.6
22.050	1067.24	1.60	1449.	964.	964.	2.323	.0500	.00	.00	.0	.2	2.2
23.037	1058.24	1.63	1424.	952.	952.	2.322	.0500	.00	.00	.0	.2	2.6
23.690	1052.17	1.68	1384.	954.	954.	2.321	.0497	.00	.00	.0	.2	3.2
24.372	1044.46	1.99	1164.	700.	700.	2.320	.0500	.00	.00	.0	.3	3.2
25.009	1037.05	2.12	1095.	570.	570.	2.319	.0487	.00	.00	.0	.3	4.1
25.645	1029.17	2.54	912.	567.	567.	2.318	.0500	.00	.00	.0	.4	5.2
26.272	1016.65	2.85	813.	413.	413.	2.317	.0500	.00	.00	.0	.4	4.6
27.130	1001.28	2.81	824.	362.	362.	2.317	.0500	.00	.00	.0	.3	3.3
28.514	979.16	2.62	883.	407.	407.	2.317	.0500	.00	.00	.0	.3	3.2
29.294	964.35	2.38	972.	642.	642.	2.317	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.321	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.52
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.06
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submergence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	4.400	12285.	1190.29	1182.50	1184.71	1.00	161.33	12285.	11089.	0.	1196.

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Time (TT)	4.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	12266.63
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1189.86
Flow at Downstream End of Model (QU(N), cfs)	2326.06
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.24

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1189.86	.78	15669.	4052.	4052.	12.267	.0400	.00	-2.17	203.0	.1	7.4
14.110	1174.32	3.10	3969.	2376.	2376.	12.292	.0496	.00	1.50	.0	.4	3.1
14.755	1157.11	3.12	3939.	2838.	2838.	12.271	.0500	.00	1.22	.0	.5	2.4
16.880	1120.61	1.32	7842.	7450.	7450.	10.321	.0500	.00	.67	.0	.2	1.6
18.390	1105.97	1.14	3951.	4739.	4739.	4.514	.0500	.00	.28	.0	.2	1.4
19.400	1094.20	1.54	1578.	2315.	2315.	2.437	.0500	.00	.02	.0	.3	1.2
20.560	1082.62	1.43	1628.	1580.	1580.	2.330	.0500	.00	.00	.0	.2	1.6
22.050	1067.24	1.60	1449.	964.	964.	2.324	.0500	.00	.00	.0	.2	2.2
23.037	1058.24	1.63	1424.	952.	952.	2.323	.0500	.00	.00	.0	.2	2.6
23.690	1052.17	1.68	1384.	954.	954.	2.322	.0497	.00	.00	.0	.2	3.2
24.372	1044.46	1.99	1164.	700.	700.	2.321	.0500	.00	.00	.0	.3	3.2
25.009	1037.05	2.12	1096.	570.	570.	2.320	.0487	.00	.00	.0	.3	4.1
25.645	1029.17	2.54	913.	567.	567.	2.319	.0500	.00	.00	.0	.4	5.2
26.272	1016.65	2.85	813.	413.	413.	2.318	.0500	.00	.00	.0	.4	4.6
27.130	1001.28	2.81	824.	362.	362.	2.317	.0500	.00	.00	.0	.3	3.3
28.514	979.16	2.62	883.	407.	407.	2.317	.0500	.00	.00	.0	.3	3.2
29.294	964.35	2.38	972.	642.	642.	2.317	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.321	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.52
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.07
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submergence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	4.800	12267.	1189.86	1182.50	1184.71	1.00	176.00	12267.	11098.	0.	1169.

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Time (TT)	5.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	12054.93
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1189.41
Flow at Downstream End of Model (QU(N), cfs)	2326.10
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.24

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1189.41	.87	13910.	3724.	3724.	12.055	.0400	.00	-2.63	200.3	.1	6.9
14.110	1174.31	3.08	3945.	2373.	2373.	12.164	.0497	.00	1.49	.0	.4	3.1
14.755	1157.11	3.11	3935.	2837.	2837.	12.254	.0500	.00	1.22	.0	.5	2.4
16.880	1120.70	1.37	8512.	7524.	7524.	11.646	.0500	.00	.76	.0	.2	1.7
18.390	1106.16	1.29	4894.	4861.	4861.	6.323	.0500	.00	.47	.0	.2	1.6
19.400	1094.32	1.67	1869.	2359.	2359.	3.123	.0500	.00	.15	.0	.3	1.3
20.560	1082.62	1.44	1637.	1582.	1582.	2.350	.0500	.00	.01	.0	.2	1.6
22.050	1067.24	1.60	1450.	965.	965.	2.326	.0500	.00	.00	.0	.2	2.2
23.037	1058.24	1.63	1424.	952.	952.	2.324	.0500	.00	.00	.0	.2	2.6
23.690	1052.17	1.68	1384.	955.	955.	2.323	.0497	.00	.00	.0	.2	3.2
24.372	1044.46	1.99	1165.	701.	701.	2.322	.0500	.00	.00	.0	.3	3.2
25.009	1037.06	2.12	1096.	570.	570.	2.321	.0487	.00	.00	.0	.3	4.1
25.645	1029.17	2.54	913.	567.	567.	2.320	.0500	.00	.00	.0	.4	5.2
26.272	1016.65	2.85	813.	413.	413.	2.319	.0500	.00	.00	.0	.4	4.7
27.130	1001.28	2.81	824.	362.	362.	2.318	.0500	.00	.00	.0	.3	3.3
28.514	979.16	2.62	883.	407.	407.	2.317	.0500	.00	.00	.0	.3	3.2
29.294	964.35	2.38	972.	642.	642.	2.317	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.322	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.52
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.08
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breach Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submergence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	5.200	12055.	1189.41	1182.50	1184.69	1.00	190.67	12055.	10916.	0.	1139.

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Time (TT)	5.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	11299.24
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1188.94
Flow at Downstream End of Model (QU(N), cfs)	2326.17
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.24

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1188.94	.92	12240.	3383.	3383.	11.299	.0400	.00	-3.10	191.6	.1	6.4
14.110	1174.28	3.04	3869.	2362.	2362.	11.760	.0498	.00	1.46	.0	.4	3.0
14.755	1157.09	3.10	3876.	2819.	2819.	12.028	.0500	.00	1.20	.0	.5	2.3
16.880	1120.73	1.38	8742.	7549.	7549.	12.097	.0500	.00	.79	.0	.2	1.7
18.390	1106.38	1.44	5987.	4999.	4999.	8.650	.0500	.00	.70	.0	.2	1.8
19.400	1094.60	1.91	2542.	2460.	2460.	4.853	.0500	.00	.43	.0	.3	1.6
20.560	1082.67	1.48	1710.	1594.	1594.	2.525	.0500	.00	.06	.0	.3	1.7
22.050	1067.24	1.61	1452.	965.	965.	2.331	.0500	.00	.01	.0	.2	2.2
23.037	1058.24	1.63	1425.	952.	952.	2.325	.0500	.00	.00	.0	.2	2.6
23.690	1052.17	1.68	1385.	955.	955.	2.323	.0497	.00	.00	.0	.2	3.2
24.372	1044.46	1.99	1165.	701.	701.	2.323	.0500	.00	.00	.0	.3	3.2
25.009	1037.06	2.12	1097.	570.	570.	2.322	.0487	.00	.00	.0	.3	4.1
25.645	1029.18	2.54	914.	568.	568.	2.322	.0500	.00	.00	.0	.4	5.2
26.272	1016.65	2.85	814.	413.	413.	2.321	.0500	.00	.00	.0	.4	4.7
27.130	1001.28	2.81	825.	362.	362.	2.319	.0500	.00	.00	.0	.3	3.3
28.514	979.16	2.62	883.	407.	407.	2.318	.0500	.00	.00	.0	.3	3.2
29.294	964.35	2.38	972.	642.	642.	2.317	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.322	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.52
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.09
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	5.600	11299.	1188.94	1182.50	1184.60	1.00	198.00	11299.	10191.	0.	1109.

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Time (TT)	6.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	10202.35
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1188.49
Flow at Downstream End of Model (QU(N), cfs)	2326.47
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.24

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1188.49	.95	10773.	3052.	3052.	10.202	.0400	.00	-3.55	173.1	.1	6.0
14.110	1174.18	2.95	3645.	2307.	2307.	10.737	.0500	.00	1.37	.0	.4	2.9
14.755	1157.03	3.07	3704.	2768.	2768.	11.378	.0500	.00	1.13	.0	.5	2.3
16.880	1120.74	1.39	8815.	7557.	7557.	12.235	.0500	.00	.80	.0	.2	1.7
18.390	1106.57	1.55	6919.	5113.	5113.	10.712	.0500	.00	.88	.0	.2	2.0
19.400	1094.94	2.13	3390.	2582.	2582.	7.213	.0500	.00	.76	.0	.3	1.9
20.560	1082.90	1.65	2081.	1657.	1657.	3.442	.0500	.00	.28	.0	.3	1.9
22.050	1067.25	1.62	1464.	967.	967.	2.365	.0500	.00	.02	.0	.2	2.3
23.037	1058.24	1.63	1426.	952.	952.	2.329	.0500	.00	.01	.0	.2	2.6
23.690	1052.17	1.68	1385.	955.	955.	2.325	.0497	.00	.00	.0	.2	3.2
24.372	1044.46	1.99	1165.	701.	701.	2.324	.0500	.00	.00	.0	.3	3.2
25.009	1037.06	2.12	1097.	570.	570.	2.323	.0487	.00	.00	.0	.3	4.1
25.645	1029.18	2.54	914.	568.	568.	2.322	.0500	.00	.00	.0	.4	5.2
26.272	1016.65	2.85	814.	413.	413.	2.322	.0500	.00	.00	.0	.4	4.7
27.130	1001.28	2.81	825.	362.	362.	2.321	.0500	.00	.00	.0	.3	3.3
28.514	979.16	2.63	883.	407.	407.	2.319	.0500	.00	.00	.0	.3	3.2
29.294	964.35	2.38	972.	642.	642.	2.318	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.322	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.52
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.09
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	6.000	10202.	1188.49	1182.50	1184.47	1.00	198.00	10202.	9124.	0.	1079.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	6.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	9181.71
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1188.05
Flow at Downstream End of Model (QU(N), cfs)	2326.96
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.25

River Location X(1) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1188.05	.97	9512.	2736.	2736.	9.182	.0400	.00	-3.99	155.9	.1	5.6
14.110	1174.07	2.87	3377.	2225.	2225.	9.696	.0500	.00	1.25	.0	.4	2.8
14.755	1156.93	3.02	3427.	2682.	2682.	10.350	.0500	.00	1.03	.0	.5	2.2
16.880	1120.73	1.38	8786.	7554.	7554.	12.157	.0500	.00	.80	.0	.2	1.7
18.390	1106.66	1.59	7384.	5169.	5169.	11.734	.0500	.00	.97	.0	.2	2.1
19.400	1095.26	2.28	4239.	2698.	2698.	9.675	.0500	.00	1.08	.0	.3	2.3
20.560	1083.37	1.95	2897.	1786.	1786.	5.656	.0500	.00	.76	.0	.3	2.4
22.050	1067.35	1.68	1555.	982.	982.	2.615	.0500	.00	.11	.0	.2	2.3
23.037	1058.25	1.64	1436.	955.	955.	2.353	.0500	.00	.02	.0	.2	2.6
23.690	1052.17	1.68	1387.	955.	955.	2.330	.0497	.00	.01	.0	.2	3.2
24.372	1044.46	1.99	1166.	701.	701.	2.325	.0500	.00	.01	.0	.3	3.2
25.009	1037.06	2.12	1097.	570.	570.	2.324	.0487	.00	.01	.0	.3	4.1
25.645	1029.18	2.54	915.	568.	568.	2.323	.0500	.00	.00	.0	.4	5.2
26.272	1016.65	2.85	814.	413.	413.	2.323	.0500	.00	.01	.0	.4	4.7
27.130	1001.29	2.81	826.	362.	362.	2.322	.0500	.00	.01	.0	.3	3.3
28.514	979.16	2.63	884.	407.	407.	2.320	.0500	.00	.00	.0	.3	3.2
29.294	964.35	2.38	973.	642.	642.	2.319	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.323	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.52
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.09
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	6.400	9182.	1188.05	1182.50	1184.34	1.00	198.00	9182.	8142.	0.	1039.

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Time (TT)	6.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	8247.07
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1187.64
Flow at Downstream End of Model (QU(N), cfs)	2327.65
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.25

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1187.64	.98	8407.	2618.	2618.	8.247	.0400	.00	-4.40	140.1	.1	5.1
14.110	1173.95	2.80	3122.	2144.	2144.	8.729	.0500	.00	1.13	.0	.4	2.7
14.755	1156.83	2.96	3160.	2597.	2597.	9.350	.0500	.00	.93	.0	.5	2.1
16.880	1120.71	1.37	8636.	7538.	7538.	11.810	.0500	.00	.78	.0	.2	1.7
18.390	1106.69	1.60	7558.	5190.	5190.	12.108	.0500	.00	1.00	.0	.2	2.1
19.400	1095.46	2.35	4793.	2771.	2771.	11.255	.0500	.00	1.29	.0	.3	2.5
20.560	1083.87	2.20	3824.	1922.	1922.	8.413	.0500	.00	1.26	.0	.3	2.9
22.050	1067.76	1.94	1975.	1050.	1050.	3.827	.0500	.00	.53	.0	.2	2.8
23.037	1058.32	1.68	1503.	974.	974.	2.527	.0500	.00	.09	.0	.2	2.7
23.690	1052.18	1.69	1399.	957.	957.	2.365	.0496	.00	.02	.0	.2	3.2
24.372	1044.46	2.00	1169.	702.	702.	2.333	.0500	.00	.01	.0	.3	3.2
25.009	1037.06	2.12	1098.	571.	571.	2.327	.0487	.00	.01	.0	.3	4.1
25.645	1029.18	2.54	915.	568.	568.	2.324	.0500	.00	.01	.0	.4	5.2
26.272	1016.65	2.85	815.	413.	413.	2.323	.0500	.00	.01	.0	.4	4.7
27.130	1001.29	2.81	826.	362.	362.	2.323	.0500	.00	.01	.0	.3	3.3
28.514	979.16	2.63	884.	407.	407.	2.321	.0500	.00	.00	.0	.3	3.2
29.294	964.35	2.38	973.	642.	642.	2.320	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.324	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.52
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.10
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	6.800	8247.	1187.64	1182.50	1184.21	1.00	198.00	8247.	7245.	0.	1002.

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Time (TT)	7.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	7401.57
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1187.25
Flow at Downstream End of Model (QU(N), cfs)	2328.43
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.25

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1187.25	1.00	7403.	2530.	2530.	7.402	.0400	.00	-4.79	125.7	.1	4.7
14.110	1173.84	2.72	2882.	2065.	2065.	7.848	.0500	.00	1.02	.0	.4	2.6
14.755	1156.73	2.89	2914.	2517.	2517.	8.429	.0500	.00	.84	.0	.5	2.0
16.880	1120.67	1.34	8317.	7503.	7503.	11.109	.0500	.00	.73	.0	.2	1.7
18.390	1106.70	1.60	7586.	5193.	5193.	12.152	.0500	.00	1.01	.0	.2	2.1
19.400	1095.55	2.37	5038.	2802.	2802.	11.930	.0500	.00	1.38	.0	.3	2.6
20.560	1084.22	2.34	4508.	2017.	2017.	10.543	.0500	.00	1.61	.0	.3	3.2
22.050	1068.55	2.07	2967.	1612.	1612.	6.140	.0479	.00	1.31	.0	.3	3.5
23.037	1058.63	1.84	1816.	1057.	1057.	3.345	.0500	.00	.39	.0	.2	3.0
23.690	1052.26	1.75	1469.	970.	970.	2.578	.0492	.00	.09	.0	.3	3.3
24.372	1044.49	2.01	1187.	707.	707.	2.385	.0500	.00	.03	.0	.3	3.3
25.009	1037.07	2.12	1103.	573.	573.	2.342	.0487	.00	.02	.0	.3	4.1
25.645	1029.18	2.54	917.	569.	569.	2.329	.0500	.00	.01	.0	.4	5.2
26.272	1016.65	2.85	815.	413.	413.	2.325	.0500	.00	.01	.0	.4	4.7
27.130	1001.29	2.81	826.	362.	362.	2.323	.0500	.00	.01	.0	.3	3.3
28.514	979.17	2.63	884.	407.	407.	2.322	.0500	.00	.00	.0	.3	3.2
29.294	964.35	2.39	973.	642.	642.	2.322	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.325	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.52
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.10
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	7.200	7402.	1187.25	1182.50	1184.09	1.00	198.00	7402.	6434.	0.	967.

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Time (TT)	7.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	6654.47
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1186.89
Flow at Downstream End of Model (QU(N), cfs)	2329.15
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.25

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1186.89	1.02	6511.	2450.	2450.	6.654	.0400	.00	-5.15	113.0	.1	4.4
14.110	1173.73	2.65	2662.	1989.	1989.	7.060	.0500	.00	.91	.0	.4	2.5
14.755	1156.64	2.83	2686.	2440.	2440.	7.593	.0500	.00	.74	.0	.5	1.9
16.880	1120.61	1.29	7888.	7455.	7455.	10.210	.0500	.00	.68	.0	.2	1.6
18.390	1106.68	1.59	7503.	5183.	5183.	11.930	.0500	.00	.99	.0	.2	2.1
19.400	1095.58	2.37	5112.	2812.	2812.	12.116	.0500	.00	1.40	.0	.3	2.6
20.560	1084.39	2.40	4853.	2063.	2063.	11.626	.0500	.00	1.77	.0	.3	3.4
22.050	1069.19	2.20	4209.	2231.	2231.	9.242	.0444	.00	1.96	.0	.3	4.2
23.037	1059.06	1.73	2376.	1565.	1565.	4.118	.0500	.00	.83	.0	.2	3.4
23.690	1052.44	1.91	1653.	1002.	1002.	3.149	.0483	.00	.28	.0	.3	3.4
24.372	1044.61	2.07	1273.	734.	734.	2.635	.0500	.00	.16	.0	.3	3.4
25.009	1037.12	2.15	1131.	585.	585.	2.429	.0485	.00	.06	.0	.3	4.2
25.645	1029.20	2.54	927.	575.	575.	2.357	.0500	.00	.03	.0	.4	5.2
26.272	1016.66	2.86	818.	414.	414.	2.335	.0500	.00	.01	.0	.4	4.7
27.130	1001.29	2.81	827.	363.	363.	2.326	.0500	.00	.01	.0	.3	3.3
28.514	979.17	2.63	885.	407.	407.	2.323	.0500	.00	.01	.0	.3	3.2
29.294	964.35	2.39	974.	642.	642.	2.323	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.326	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.51
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.11
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	7.600	6654.	1186.89	1182.50	1183.97	1.00	198.00	6654.	5720.	0.	935.

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Time (TT)	8.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	5998.84
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1186.56
Flow at Downstream End of Model (QU(N), cfs)	2329.81
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.25

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1186.56	1.05	5723.	2376.	2376.	5.999	.0400	.00	-5.48	101.8	.1	4.1
14.110	1173.62	2.58	2462.	1918.	1918.	6.364	.0500	.00	.81	.0	.4	2.4
14.755	1156.55	2.76	2478.	2367.	2367.	6.847	.0500	.00	.66	.0	.5	1.8
16.880	1120.55	1.25	7440.	7406.	7406.	9.311	.0500	.00	.62	.0	.2	1.6
18.390	1106.64	1.57	7299.	5159.	5159.	11.423	.0500	.00	.95	.0	.2	2.0
19.400	1095.57	2.36	5082.	2808.	2808.	12.000	.0500	.00	1.39	.0	.3	2.6
20.560	1084.45	2.41	4980.	2079.	2079.	12.016	.0500	.00	1.84	.0	.3	3.4
22.050	1069.46	2.29	4853.	2492.	2492.	11.089	.0428	.00	2.23	.0	.3	4.5
23.037	1059.73	1.80	3703.	2410.	2410.	6.683	.0500	.00	1.49	.0	.3	4.1
23.690	1052.73	2.13	1948.	1053.	1053.	4.146	.0469	.00	.56	.0	.3	3.7
24.372	1044.90	2.19	1494.	797.	797.	3.275	.0500	.00	.44	.0	.3	3.7
25.009	1037.29	2.23	1235.	628.	628.	2.759	.0477	.00	.24	.0	.3	4.4
25.645	1029.28	2.55	977.	600.	600.	2.493	.0500	.00	.11	.0	.4	5.3
26.272	1016.70	2.87	833.	420.	420.	2.390	.0500	.00	.05	.0	.4	4.7
27.130	1001.30	2.82	831.	364.	364.	2.339	.0500	.00	.02	.0	.3	3.3
28.514	979.17	2.63	885.	407.	407.	2.326	.0500	.00	.01	.0	.3	3.2
29.294	964.35	2.39	974.	643.	643.	2.324	.0500	.00	.00	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.326	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.51
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.12
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	8.000	5999.	1186.56	1182.50	1183.86	1.00	198.00	5999.	5093.	0.	905.

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Time (TT)	8.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	5423.60
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1186.26
Flow at Downstream End of Model (QU(N), cfs)	2330.86
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.25

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1186.26	1.08	5028.	2309.	2309.	5.424	.0400	.00	-5.77	91.9	.1	3.8
14.110	1173.53	2.52	2282.	1852.	1852.	5.753	.0500	.00	.71	.0	.4	2.3
14.755	1156.47	2.70	2291.	2300.	2300.	6.190	.0500	.00	.58	.0	.5	1.7
16.880	1120.49	1.21	7007.	7357.	7357.	8.472	.0500	.00	.56	.0	.2	1.5
18.390	1106.58	1.53	6994.	5122.	5122.	10.694	.0500	.00	.89	.0	.2	2.0
19.400	1095.53	2.34	4962.	2793.	2793.	11.613	.0500	.00	1.35	.0	.3	2.5
20.560	1084.45	2.41	4988.	2080.	2080.	12.015	.0500	.00	1.84	.0	.3	3.5
22.050	1069.56	2.32	5098.	2584.	2584.	11.828	.0422	.00	2.33	.0	.3	4.6
23.037	1060.31	1.85	5326.	3149.	3149.	9.874	.0500	.00	2.08	.0	.3	4.6
23.690	1053.30	2.59	2581.	1153.	1153.	6.687	.0441	.00	1.14	.0	.3	4.3
24.372	1045.44	2.48	1955.	902.	902.	4.853	.0488	.00	.98	.0	.3	4.2
25.009	1037.69	2.44	1505.	728.	728.	3.676	.0458	.00	.63	.0	.3	4.8
25.645	1029.54	2.60	1142.	678.	678.	2.966	.0500	.00	.37	.0	.4	5.5
26.272	1016.85	2.92	897.	443.	443.	2.615	.0500	.00	.20	.0	.4	4.8
27.130	1001.35	2.83	849.	370.	370.	2.406	.0500	.00	.07	.0	.3	3.3
28.514	979.17	2.63	888.	408.	408.	2.337	.0500	.00	.01	.0	.3	3.2
29.294	964.36	2.39	975.	643.	643.	2.328	.0500	.00	.01	.0	.3	2.4
29.980	952.92	2.21	1052.	587.	587.	2.328	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.50
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.13
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	8.400	5424.	1186.26	1182.50	1183.76	1.00	198.00	5424.	4547.	0.	876.

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Time (TT)	8.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	4922.88
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1186.00
Flow at Downstream End of Model (QU(N), cfs)	2334.94
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.25

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1186.00	1.11	4418.	2248.	2248.	4.923	.0400	.00	-6.04	83.4	.1	3.5
14.110	1173.44	2.46	2119.	1789.	1789.	5.217	.0500	.00	.62	.0	.4	2.2
14.755	1156.40	2.64	2123.	2238.	2238.	5.610	.0500	.00	.50	.0	.5	1.6
16.880	1120.44	1.17	6597.	7311.	7311.	7.707	.0500	.00	.50	.0	.2	1.4
18.390	1106.51	1.49	6640.	5079.	5079.	9.882	.0500	.00	.83	.0	.2	1.9
19.400	1095.45	2.31	4761.	2766.	2766.	10.995	.0500	.00	1.28	.0	.3	2.5
20.560	1084.41	2.39	4911.	2070.	2070.	11.730	.0500	.00	1.80	.0	.3	3.4
22.050	1069.58	2.33	5157.	2606.	2606.	11.993	.0420	.00	2.35	.0	.3	4.6
23.037	1060.55	1.86	6126.	3455.	3455.	11.382	.0500	.00	2.32	.0	.2	4.9
23.690	1053.86	3.00	3245.	1250.	1250.	9.738	.0412	.00	1.69	.0	.3	4.9
24.372	1046.21	3.03	2700.	1025.	1025.	8.195	.0449	.00	1.76	.0	.3	5.0
25.009	1038.47	2.93	2151.	924.	924.	6.303	.0420	.00	1.42	.0	.3	5.5
25.645	1030.15	2.78	1614.	862.	862.	4.481	.0500	.00	.98	.0	.4	6.2
26.272	1017.28	3.07	1102.	510.	510.	3.381	.0500	.00	.63	.0	.4	5.3
27.130	1001.55	2.90	925.	396.	396.	2.680	.0500	.00	.27	.0	.3	3.5
28.514	979.21	2.65	902.	411.	411.	2.391	.0500	.00	.05	.0	.3	3.2
29.294	964.36	2.39	981.	644.	644.	2.347	.0500	.00	.01	.0	.3	2.4
29.980	952.92	2.22	1052.	587.	587.	2.333	.0500	.00	.00	.0	.3	2.9

Maximum Froude Number (FRDM)	.50
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.14
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	8.800	4923.	1186.00	1182.50	1183.67	1.00	198.00	4923.	4073.	0.	850.

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Time (TT)	9.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	4488.93
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1185.76
Flow at Downstream End of Model (QU(N), cfs)	2354.91
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.27

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1185.76	1.15	3894.	2116.	2116.	4.489	.0400	.00	-6.28	75.9	.1	3.3
14.110	1173.36	2.41	1974.	1732.	1732.	4.750	.0500	.00	.54	.0	.4	2.1
14.755	1156.33	2.59	1973.	2181.	2181.	5.101	.0500	.00	.43	.0	.5	1.6
16.880	1120.39	1.13	6216.	7268.	7268.	7.015	.0500	.00	.45	.0	.2	1.4
18.390	1106.44	1.45	6282.	5035.	5035.	9.081	.0500	.00	.75	.0	.2	1.8
19.400	1095.36	2.27	4510.	2734.	2734.	10.247	.0500	.00	1.18	.0	.3	2.4
20.560	1084.34	2.35	4764.	2051.	2051.	11.211	.0500	.00	1.73	.0	.3	3.3
22.050	1069.57	2.31	5114.	2590.	2590.	11.823	.0421	.00	2.33	.0	.3	4.6
23.037	1060.63	1.86	6387.	3549.	3549.	11.873	.0500	.00	2.40	.0	.2	5.0
23.690	1054.13	3.15	3599.	1353.	1353.	11.337	.0400	.00	1.97	.0	.3	5.1
24.372	1046.68	3.36	3196.	1098.	1098.	10.740	.0425	.00	2.22	.0	.3	5.4
25.009	1039.23	3.31	2930.	1115.	1115.	9.691	.0400	.00	2.18	.0	.4	6.3
25.645	1031.07	3.06	2526.	1137.	1137.	7.725	.0500	.00	1.89	.0	.4	7.1
26.272	1018.23	3.42	1658.	657.	657.	5.671	.0500	.00	1.58	.0	.4	6.2
27.130	1002.17	3.10	1196.	477.	477.	3.709	.0500	.00	.89	.0	.3	4.2
28.514	979.35	2.73	962.	422.	422.	2.629	.0500	.00	.19	.0	.3	3.4
29.294	964.40	2.42	1007.	651.	651.	2.439	.0500	.00	.05	.0	.3	2.4
29.980	952.92	2.23	1057.	589.	589.	2.362	.0500	.00	.01	.0	.3	2.9

Maximum Froude Number (FRDM)	.50
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.15
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	9.200	4489.	1185.76	1182.50	1183.58	1.00	198.00	4489.	3663.	0.	826.

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Time (TT)	9.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	4114.23
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1185.54
Flow at Downstream End of Model (QU(N), cfs)	2475.30
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.34

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1185.54	1.19	3452.	1998.	1998.	4.114	.0400	.00	-6.50	69.5	.2	3.0
14.110	1173.28	2.35	1845.	1680.	1680.	4.345	.0500	.00	.46	.0	.4	2.0
14.755	1156.27	2.53	1840.	2129.	2129.	4.657	.0500	.00	.37	.0	.5	1.5
16.880	1120.34	1.09	5863.	7228.	7228.	6.398	.0500	.00	.40	.0	.2	1.3
18.390	1106.37	1.40	5938.	4993.	4993.	8.331	.0500	.00	.69	.0	.2	1.8
19.400	1095.26	2.23	4244.	2698.	2698.	9.472	.0500	.00	1.09	.0	.3	2.3
20.560	1084.25	2.31	4566.	2024.	2024.	10.537	.0500	.00	1.63	.0	.3	3.2
22.050	1069.52	2.28	4996.	2546.	2546.	11.406	.0423	.00	2.29	.0	.3	4.5
23.037	1060.63	1.85	6395.	3552.	3552.	11.857	.0500	.00	2.40	.0	.2	5.0
23.690	1054.24	3.15	3752.	1419.	1419.	11.822	.0400	.00	2.08	.0	.3	5.2
24.372	1046.83	3.47	3363.	1122.	1122.	11.660	.0417	.00	2.38	.0	.4	5.6
25.009	1039.59	3.38	3342.	1204.	1204.	11.306	.0400	.00	2.53	.0	.4	6.7
25.645	1031.66	3.21	3260.	1317.	1317.	10.477	.0500	.00	2.49	.0	.4	7.7
26.272	1019.25	3.80	2404.	805.	805.	9.124	.0500	.00	2.60	.0	.4	7.2
27.130	1003.39	3.48	1875.	636.	636.	6.534	.0500	.00	2.11	.0	.4	5.4
28.514	979.88	3.02	1197.	465.	465.	3.617	.0500	.00	.72	.0	.3	3.9
29.294	964.58	2.54	1121.	681.	681.	2.849	.0500	.00	.23	.0	.3	2.6
29.980	953.00	2.27	1103.	600.	600.	2.507	.0500	.00	.09	.0	.3	3.0

Maximum Froude Number (FRDM)	.49
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.16
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breach Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	9.600	4114.	1185.54	1182.50	1183.51	1.00	198.00	4114.	3310.	0.	804.

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Time (TT)	10.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	3793.15
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1185.35
Flow at Downstream End of Model (QU(N), cfs)	3005.58
Water Elevation at Downstream End of Model (YU(N), ft MSL)	951.64

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1185.35	1.23	3082.	1893.	1893.	3.793	.0400	.00	-6.69	64.0	.2	2.9
14.110	1173.21	2.31	1731.	1632.	1632.	3.995	.0500	.00	.39	.0	.4	2.0
14.755	1156.21	2.48	1722.	2082.	2082.	4.271	.0500	.00	.32	.0	.5	1.5
16.880	1120.29	1.06	5539.	7191.	7191.	5.846	.0500	.00	.36	.0	.2	1.3
18.390	1106.31	1.36	5615.	4952.	4952.	7.642	.0500	.00	.62	.0	.2	1.7
[illegible].400	1095.17	2.19	3984.	2663.	2663.	8.726	.0500	.00	.99	.0	.3	2.2
20.560	1084.13	2.26	4343.	1994.	1994.	9.801	.0500	.00	1.52	.0	.3	3.1
22.050	1069.45	2.24	4821.	2479.	2479.	10.817	.0426	.00	2.22	.0	.3	4.5
23.037	1060.60	1.84	6281.	3511.	3511.	11.550	.0500	.00	2.37	.0	.2	4.9
23.690	1054.24	3.14	3754.	1419.	1419.	11.786	.0400	.00	2.08	.0	.3	5.2
24.372	1046.86	3.48	3396.	1127.	1127.	11.832	.0415	.00	2.40	.0	.4	5.6
25.009	1039.69	3.40	3466.	1230.	1230.	11.781	.0400	.00	2.64	.0	.4	6.8
25.645	1031.88	3.26	3545.	1381.	1381.	11.560	.0500	.00	2.70	.0	.4	7.9
26.272	1019.73	3.96	2805.	873.	873.	11.110	.0500	.00	3.08	.0	.4	7.7
27.130	1004.39	3.89	2574.	750.	750.	10.005	.0473	.00	3.11	.0	.4	6.4
28.514	981.00	3.16	1830.	688.	688.	5.790	.0500	.00	1.83	.0	.3	5.0
29.294	965.06	2.85	1473.	766.	766.	4.196	.0500	.00	.71	.0	.4	3.1
29.980	953.31	2.42	1294.	646.	646.	3.131	.0500	.00	.39	.0	.3	3.3

Maximum Froude Number (FRDM)	.49
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.17
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submergence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	10.000	3793.	1185.35	1182.50	1183.44	1.00	198.00	3793.	3008.	0.	785.

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Time (TT)	10.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	3520.52
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1185.19
Flow at Downstream End of Model (QU(N), cfs)	4298.17
Water Elevation at Downstream End of Model (YU(N), ft MSL)	952.58

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1185.19	1.27	2775.	1802.	1802.	3.521	.0400	.00	-6.85	59.3	.2	2.7
14.110	1173.15	2.26	1632.	1589.	1589.	3.696	.0500	.00	.33	.0	.4	1.9
14.755	1156.16	2.43	1619.	2040.	2040.	3.938	.0500	.00	.27	.0	.5	1.4
16.880	1120.25	1.02	5241.	7156.	7156.	5.356	.0500	.00	.31	.0	.2	1.3
[illegible].390	1106.25	1.32	5313.	4914.	4914.	7.016	.0500	.00	.56	.0	.2	1.6
[illegible]9.400	1095.07	2.15	3738.	2630.	2630.	8.033	.0500	.00	.90	.0	.3	2.1
20.560	1084.02	2.20	4116.	1963.	1963.	9.069	.0500	.00	1.41	.0	.3	3.0
22.050	1069.37	2.20	4612.	2397.	2397.	10.138	.0430	.00	2.13	.0	.3	4.4
23.037	1060.54	1.82	6076.	3437.	3437.	11.052	.0500	.00	2.31	.0	.2	4.9
23.690	1054.18	3.13	3662.	1381.	1381.	11.465	.0400	.00	2.01	.0	.3	5.2
24.372	1046.83	3.46	3365.	1123.	1123.	11.633	.0416	.00	2.38	.0	.4	5.6
25.009	1039.69	3.39	3465.	1230.	1230.	11.746	.0400	.00	2.64	.0	.4	6.8
25.645	1031.92	3.27	3608.	1394.	1394.	11.786	.0500	.00	2.75	.0	.4	7.9
26.272	1019.87	4.00	2927.	892.	892.	11.716	.0500	.00	3.22	.0	.4	7.9
27.130	1004.70	4.09	2812.	777.	777.	11.492	.0456	.00	3.42	.0	.4	6.7
28.514	982.19	3.38	2804.	943.	943.	9.488	.0500	.00	3.03	.0	.3	6.2
29.294	965.83	3.28	2113.	899.	899.	6.941	.0500	.00	1.48	.0	.4	3.8
29.980	954.17	2.52	1918.	865.	865.	4.838	.0491	.00	1.26	.0	.3	4.2

Maximum Froude Number (FRDM)	.49
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.18
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]s [illegible]ion Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	10.400	3521.	1185.19	1182.50	1183.38	1.00	198.00	3521.	2752.	0.	768.

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Time (TT)	10.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	3289.35
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1185.04
Flow at Downstream End of Model (QU(N), cfs)	7560.79
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.48

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1185.04	1.31	2519.	1722.	1722.	3.289	.0400	.00	-7.00	55.3	.2	2.5
14.110	1173.10	2.23	1545.	1551.	1551.	3.441	.0500	.00	.28	.0	.4	1.8
14.755	1156.12	2.39	1530.	2003.	2003.	3.651	.0500	.00	.22	.0	.5	1.4
16.880	1120.21	.99	4970.	7125.	7125.	4.922	.0500	.00	.28	.0	.2	1.2
[illegible].390	1106.19	1.28	5035.	4879.	4879.	6.452	.0500	.00	.50	.0	.2	1.6
[illegible].400	1094.99	2.11	3509.	2598.	2598.	7.397	.0500	.00	.81	.0	.3	2.0
20.560	1083.91	2.15	3896.	1932.	1932.	8.377	.0500	.00	1.30	.0	.3	2.9
22.050	1069.27	2.15	4387.	2306.	2306.	9.438	.0435	.00	2.03	.0	.3	4.3
23.037	1060.46	1.80	5805.	3335.	3335.	10.438	.0500	.00	2.23	.0	.2	4.8
23.690	1054.08	3.11	3531.	1323.	1323.	10.968	.0400	.00	1.91	.0	.3	5.1
24.372	1046.77	3.40	3294.	1113.	1113.	11.205	.0419	.00	2.31	.0	.3	5.5
25.009	1039.63	3.36	3396.	1215.	1215.	11.418	.0400	.00	2.58	.0	.4	6.7
25.645	1031.89	3.25	3569.	1386.	1386.	11.611	.0500	.00	2.72	.0	.4	7.9
26.272	1019.87	4.00	2932.	893.	893.	11.722	.0500	.00	3.22	.0	.4	7.9
27.130	1004.76	4.12	2853.	782.	782.	11.755	.0453	.00	3.48	.0	.4	6.8
28.514	982.68	3.46	3290.	1047.	1047.	11.371	.0500	.00	3.52	.0	.3	6.7
29.294	966.60	3.62	2856.	1052.	1052.	10.343	.0500	.00	2.25	.0	.4	4.6
29.980	955.15	2.64	3077.	1512.	1512.	8.119	.0467	.00	2.23	.0	.3	5.1

Maximum Froude Number (FRDM)	.49
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.18
Cross-Section of Minimum Froude Number (IFM)	27

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]ion Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	10.800	3289.	1185.04	1182.50	1183.32	1.00	198.00	3289.	2535.	0.	754.

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Time (TT)	11.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	3093.13
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1184.91
Flow at Downstream End of Model (QU(N), cfs)	10747.08
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.95

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1184.91	1.34	2306.	1652.	1652.	3.093	.0400	.00	-7.13	51.9	.2	2.4
14.110	1173.05	2.19	1470.	1516.	1516.	3.224	.0500	.00	.23	.0	.4	1.8
14.755	1156.08	2.35	1452.	1970.	1970.	3.406	.0500	.00	.18	.0	.5	1.3
16.880	1120.18	.96	4723.	7096.	7096.	4.538	.0500	.00	.24	.0	.2	1.2
3.390	1106.14	1.24	4778.	4846.	4846.	5.943	.0500	.00	.45	.0	.2	1.5
19.400	1094.90	2.07	3299.	2569.	2569.	6.819	.0500	.00	.73	.0	.3	1.9
20.560	1083.80	2.10	3687.	1902.	1902.	7.735	.0500	.00	1.19	.0	.3	2.8
22.050	1069.17	2.11	4161.	2210.	2210.	8.759	.0440	.00	1.93	.0	.3	4.2
23.037	1060.37	1.78	5501.	3218.	3218.	9.778	.0500	.00	2.13	.0	.2	4.7
23.690	1053.98	3.05	3400.	1271.	1271.	10.361	.0405	.00	1.81	.0	.3	5.0
24.372	1046.68	3.33	3198.	1099.	1099.	10.644	.0424	.00	2.23	.0	.3	5.5
25.009	1039.54	3.32	3284.	1192.	1192.	10.918	.0400	.00	2.49	.0	.4	6.6
25.645	1031.82	3.23	3471.	1364.	1364.	11.201	.0500	.00	2.65	.0	.4	7.8
26.272	1019.81	3.97	2878.	884.	884.	11.422	.0500	.00	3.16	.0	.4	7.8
27.130	1004.73	4.09	2831.	780.	780.	11.591	.0455	.00	3.45	.0	.4	6.7
28.514	982.76	3.46	3381.	1065.	1065.	11.711	.0500	.00	3.60	.0	.3	6.8
29.294	966.84	3.70	3125.	1103.	1103.	11.563	.0500	.00	2.49	.0	.4	4.8
29.980	955.66	2.79	3932.	1849.	1849.	10.976	.0455	.00	2.74	.0	.3	5.7

Maximum Froude Number (FRDM)	.48
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.18
Cross-Section of Minimum Froude Number (IFM)	27

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	11.200	3093.	1184.91	1182.50	1183.27	1.00	198.00	3093.	2352.	0.	741.

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Time (TT)	11.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	2926.36
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1184.80
Flow at Downstream End of Model (QU(N), cfs)	11619.23
Water Elevation at Downstream End of Model (YU(N), ft MSL)	954.06

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1184.80	1.38	2127.	1592.	1592.	2.926	.0400	.00	-7.24	49.0	.2	2.3
14.110	1173.00	2.16	1405.	1486.	1486.	3.039	.0500	.00	.18	.0	.4	1.8
14.755	1156.05	2.31	1385.	1941.	1941.	3.197	.0500	.00	.15	.0	.5	1.3
16.880	1120.15	.93	4499.	7070.	7070.	4.200	.0500	.00	.21	.0	.2	1.1
18.390	1106.09	1.21	4541.	4816.	4816.	5.486	.0500	.00	.40	.0	.2	1.5
19.400	1094.83	2.03	3106.	2542.	2542.	6.296	.0500	.00	.65	.0	.3	1.8
20.560	1083.69	2.05	3491.	1874.	1874.	7.147	.0500	.00	1.08	.0	.3	2.7
22.050	1069.07	2.06	3939.	2112.	2112.	8.121	.0445	.00	1.83	.0	.3	4.1
23.037	1060.27	1.76	5188.	3092.	3092.	9.119	.0500	.00	2.03	.0	.2	4.6
23.690	1053.88	2.97	3276.	1254.	1254.	9.719	.0410	.00	1.72	.0	.3	4.9
24.372	1046.58	3.24	3087.	1083.	1083.	10.015	.0429	.00	2.12	.0	.3	5.3
25.009	1039.42	3.28	3146.	1163.	1163.	10.313	.0400	.00	2.37	.0	.4	6.5
25.645	1031.72	3.19	3338.	1335.	1335.	10.657	.0500	.00	2.55	.0	.4	7.7
26.272	1019.71	3.93	2788.	870.	870.	10.943	.0500	.00	3.06	.0	.4	7.7
27.130	1004.66	4.04	2775.	773.	773.	11.200	.0458	.00	3.38	.0	.4	6.7
28.514	982.74	3.45	3352.	1060.	1060.	11.560	.0500	.00	3.58	.0	.3	6.7
29.294	966.87	3.70	3151.	1108.	1108.	11.671	.0500	.00	2.52	.0	.4	4.9
29.980	955.76	2.82	4133.	1920.	1920.	11.648	.0452	.00	2.85	.0	.3	5.8

Maximum Froude Number (FRDM)	.48
Cross-Section of Maximum Froude Number (IFR)	13
Minimum Froude Number (FRM)	.18
Cross-Section of Minimum Froude Number (IFM)	27

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	11.600	2926.	1184.80	1182.50	1183.23	1.00	198.00	2926.	2196.	0.	730.

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Time (TT)	12.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	2784.58
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1184.71
Flow at Downstream End of Model (QU(N), cfs)	11599.40
Water Elevation at Downstream End of Model (YU(N), ft MSL)	954.06

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1184.71	1.41	1977.	1539.	1539.	2.785	.0400	.00	-7.33	46.6	.2	2.2
14.110	1172.97	2.14	1349.	1460.	1460.	2.882	.0500	.00	.15	.0	.4	1.7
14.755	1156.02	2.27	1327.	1916.	1916.	3.019	.0500	.00	.12	.0	.5	1.3
16.880	1120.12	.91	4297.	7047.	7047.	3.903	.0500	.00	.18	.0	.2	1.1
[illegible].390	1106.04	1.17	4324.	4788.	4788.	5.076	.0500	.00	.36	.0	.2	1.4
[illegible]9.400	1094.76	1.99	2929.	2516.	2516.	5.822	.0500	.00	.58	.0	.3	1.8
20.560	1083.60	2.00	3309.	1847.	1847.	6.612	.0500	.00	.98	.0	.3	2.6
22.050	1068.96	2.02	3725.	2012.	2012.	7.531	.0450	.00	1.73	.0	.3	4.0
23.037	1060.17	1.74	4882.	2964.	2964.	8.488	.0500	.00	1.93	.0	.2	4.5
23.690	1053.78	2.89	3154.	1237.	1237.	9.100	.0414	.00	1.62	.0	.3	4.8
24.372	1046.47	3.16	2974.	1066.	1066.	9.396	.0434	.00	2.02	.0	.3	5.2
25.009	1039.29	3.23	3000.	1131.	1131.	9.690	.0400	.00	2.24	.0	.3	6.4
25.645	1031.61	3.15	3185.	1300.	1300.	10.043	.0500	.00	2.44	.0	.4	7.6
26.272	1019.58	3.87	2677.	852.	852.	10.362	.0500	.00	2.93	.0	.4	7.6
27.130	1004.56	3.96	2699.	764.	764.	10.681	.0463	.00	3.28	.0	.4	6.6
28.514	982.66	3.42	3268.	1043.	1043.	11.179	.0500	.00	3.50	.0	.3	6.7
29.294	966.82	3.68	3102.	1099.	1099.	11.419	.0500	.00	2.47	.0	.4	4.8
29.980	955.76	2.81	4120.	1915.	1915.	11.577	.0452	.00	2.84	.0	.3	5.8

Maximum Froude Number (FRDM)	.48
Cross-Section of Maximum Froude Number (IFR)	13
Minimum Froude Number (FRM)	.18
Cross-Section of Minimum Froude Number (IFM)	27

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]ion Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	12.000	2785.	1184.71	1182.50	1183.19	1.00	198.00	2785.	2064.	0.	721.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	12.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	2663.84
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1184.62
Flow at Downstream End of Model (QU(N), cfs)	11287.13
Water Elevation at Downstream End of Model (YU(N), ft MSL)	954.02

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1184.62	1.44	1851.	1494.	1494.	2.664	.0400	.00	-7.41	44.5	.2	2.1
14.110	1172.93	2.11	1301.	1437.	1437.	2.748	.0500	.00	.11	.0	.4	1.7
14.755	1155.99	2.24	1277.	1894.	1894.	2.866	.0500	.00	.09	.0	.5	1.2
16.880	1120.09	.89	4117.	7026.	7026.	3.645	.0500	.00	.16	.0	.2	1.1
18.390	1106.00	1.14	4125.	4762.	4762.	4.709	.0500	.00	.31	.0	.2	1.4
[illegible].400	1094.70	1.95	2768.	2493.	2493.	5.395	.0500	.00	.52	.0	.3	1.7
20.560	1083.50	1.95	3139.	1822.	1822.	6.126	.0500	.00	.89	.0	.3	2.5
22.050	1068.86	1.99	3522.	1913.	1913.	6.990	.0455	.00	1.62	.0	.3	3.9
23.037	1060.06	1.72	4589.	2837.	2837.	7.899	.0500	.00	1.83	.0	.2	4.4
23.690	1053.68	2.80	3026.	1219.	1219.	8.477	.0420	.00	1.51	.0	.3	4.7
24.372	1046.36	3.07	2858.	1049.	1049.	8.782	.0440	.00	1.91	.0	.3	5.1
25.009	1039.16	3.18	2852.	1098.	1098.	9.072	.0400	.00	2.11	.0	.3	6.2
25.645	1031.49	3.11	3028.	1263.	1263.	9.429	.0500	.00	2.31	.0	.4	7.5
26.272	1019.44	3.81	2559.	832.	832.	9.750	.0500	.00	2.79	.0	.4	7.4
27.130	1004.44	3.87	2611.	754.	754.	10.104	.0468	.00	3.16	.0	.4	6.4
28.514	982.55	3.39	3153.	1019.	1019.	10.675	.0500	.00	3.38	.0	.3	6.5
29.294	966.74	3.64	3015.	1083.	1083.	10.985	.0500	.00	2.39	.0	.4	4.7
29.980	955.71	2.79	4035.	1886.	1886.	11.240	.0453	.00	2.80	.0	.3	5.7

Maximum Froude Number (FRDM)	.48
Cross-Section of Maximum Froude Number (IFR)	13
Minimum Froude Number (FRM)	.18
Cross-Section of Minimum Froude Number (IFM)	27

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	12.400	2664.	1184.62	1182.50	1183.16	1.00	198.00	2664.	1951.	0.	712.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	12.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	2560.52
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1184.55
Flow at Downstream End of Model (QU(N), cfs)	10827.50
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.97

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
13.530	1184.55	1.47	1744.	1454.	1454.	2.561	.0400	.00	-7.49	42.7	.2	2.1
14.110	1172.90	2.09	1259.	1416.	1416.	2.634	.0500	.00	.08	.0	.4	1.7
14.755	1155.97	2.22	1234.	1875.	1875.	2.735	.0500	.00	.07	.0	.5	1.2
16.880	1120.07	.86	3956.	7007.	7007.	3.420	.0500	.00	.13	.0	.2	1.1
18.390	1105.96	1.11	3943.	4738.	4738.	4.382	.0500	.00	.28	.0	.2	1.4
19.400	1094.64	1.91	2621.	2472.	2472.	5.011	.0500	.00	.46	.0	.3	1.6
20.560	1083.42	1.91	2982.	1799.	1799.	5.685	.0500	.00	.81	.0	.3	2.4
22.050	1068.76	1.95	3327.	1813.	1813.	6.497	.0460	.00	1.52	.0	.3	3.8
23.037	1059.97	1.71	4314.	2711.	2711.	7.355	.0500	.00	1.73	.0	.2	4.3
23.690	1053.58	2.72	2903.	1201.	1201.	7.899	.0425	.00	1.41	.0	.3	4.6
24.372	1046.25	2.99	2741.	1031.	1031.	8.191	.0445	.00	1.80	.0	.3	5.0
25.009	1039.03	3.13	2706.	1064.	1064.	8.472	.0400	.00	1.97	.0	.3	6.1
25.645	1031.36	3.07	2872.	1225.	1225.	8.825	.0500	.00	2.19	.0	.4	7.4
26.272	1019.29	3.75	2439.	811.	811.	9.145	.0500	.00	2.65	.0	.4	7.3
27.130	1004.32	3.78	2518.	743.	743.	9.513	.0474	.00	3.04	.0	.4	6.3
28.514	982.42	3.35	3023.	991.	991.	10.115	.0500	.00	3.26	.0	.3	6.4
29.294	966.64	3.60	2907.	1062.	1062.	10.461	.0500	.00	2.29	.0	.4	4.6
29.980	955.65	2.75	3912.	1842.	1842.	10.767	.0455	.00	2.73	.0	.3	5.6

Maximum Froude Number (FRDM)	.48
Cross-Section of Maximum Froude Number (IFR)	13
Minimum Froude Number (FRM)	.18
Cross-Section of Minimum Froude Number (IFM)	27

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submergence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	12.800	2561.	1184.55	1182.50	1183.13	1.00	198.00	2561.	1855.	0.	705.

Normalized conservation of mass as percent of maximum flow
in reach = -.56

ROUTING COMPLETED :

Number of Time Steps Used (KTIME)	65
Maximum Number of Time Steps Allowed	1199
Total Time of Flood Routing (TT, hr)	13.2

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
13.530	1192.08	12300	.800	1.48	.00	.00
13.560	1184.71	12300	4.600	3.17	.00	.00
13.673	1182.83	12301	4.600	3.13	294.00	.00
13.785	1180.93	12294	4.600	3.10	588.00	.00
13.898	1179.06	12293	4.600	3.05	882.00	.00
14.010	1177.12	12291	4.600	3.12	1176.00	1.40
14.110	1174.32	12291	4.800	3.10	1173.35	1.80
14.210	1171.59	12294	4.800	2.98	1170.70	2.00
14.310	1168.75	12295	4.800	3.05	1168.05	2.60
14.410	1166.09	12292	4.800	2.79	1165.40	2.60
14.525	1163.07	12283	5.000	2.90	1162.63	3.20
14.640	1160.33	12285	5.000	2.56	1159.85	3.20
14.755	1157.12	12285	5.000	3.12	1157.08	4.00
14.870	1154.83	12282	5.000	2.10	1154.30	3.20
15.330	1143.92	12276	5.200	3.16	1143.60	3.40
15.790	1133.36	12269	5.400	1.86	1133.00	3.80
16.153	1129.10	12256	5.600	1.63	1128.80	4.20
16.517	1124.77	12249	5.800	1.66	1124.60	4.60
16.880	1120.74	12235	6.000	1.39	1120.40	4.40
17.315	1116.76	12214	6.400	1.37	1116.30	4.40
17.750	1112.73	12193	6.600	1.41	1112.20	4.40
17.910	1111.20	12187	6.800	1.45	1110.76	5.00
18.070	1109.68	12178	6.800	1.50	1109.32	5.20
18.230	1108.19	12172	7.000	1.54	1107.88	5.60
18.390	1106.70	12161	7.000	1.60	1106.44	5.80
18.550	1105.29	12154	7.200	1.61	1105.00	6.00
18.795	1103.52	12132	7.400	1.50	1102.95	5.80
19.040	1101.13	12123	7.400	2.04	1100.90	6.20
19.160	1099.25	12118	7.600	2.13	1099.18	6.80
19.280	1097.40	12120	7.600	2.22	1097.45	.00
19.400	1095.58	12115	7.600	2.37	1095.73	.00
19.520	1094.33	12101	7.800	2.04	1094.00	6.60
19.785	1092.42	12089	7.800	1.94	1091.90	6.60
20.050	1090.09	12075	8.000	2.24	1089.80	7.00
20.220	1088.20	12068	8.000	2.29	1087.90	7.00
20.390	1086.32	12055	8.200	2.35	1086.00	7.00
20.560	1084.45	12054	8.200	2.41	1084.10	7.20
20.730	1082.57	12042	8.400	2.53	1082.20	7.20
21.060	1079.06	12029	8.400	2.63	1078.50	7.20
21.390	1075.45	12014	8.600	3.08	1074.80	7.20
21.610	1073.55	12012	8.600	2.75	1072.83	7.20
21.830	1071.58	11998	8.800	2.50	1070.87	7.40
22.050	1069.58	11993	8.800	2.33	1068.90	7.40
22.270	1067.60	11975	9.000	2.15	1066.93	7.60
22.490	1065.50	11971	9.000	2.14	1064.97	7.80
22.710	1063.74	11941	9.200	1.94	1063.00	8.00
22.819	1062.70	11933	9.200	1.91	1061.92	8.00
22.928	1061.66	11910	9.400	1.88	1060.84	8.00

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
23.037	1060.63	11911	9.400	1.86	1059.77	8.20
23.146	1059.60	11902	9.400	1.93	1058.69	8.20
23.254	1058.60	11883	9.600	2.01	1057.61	8.20
23.363	1057.62	11882	9.600	2.09	1056.53	8.20
23.472	1056.66	11872	9.600	2.20	1055.46	8.40
23.581	1055.65	11851	9.800	2.42	1054.38	8.40
23.690	1054.25	11849	9.800	3.16	1053.30	8.40
23.807	1053.04	11846	9.800	3.24	1052.03	8.40
23.925	1051.87	11842	9.800	3.26	1050.75	8.40
24.042	1050.68	11835	9.800	3.28	1049.47	8.40
24.160	1049.37	11827	10.000	3.40	1048.20	8.60
24.266	1048.11	11829	10.000	3.44	967.57	.00
24.372	1046.86	11831	10.000	3.48	886.94	.00
24.478	1045.62	11831	10.000	3.52	806.31	.00
24.585	1044.40	11828	10.000	3.54	725.68	.00
24.691	1043.21	11820	10.000	3.51	645.05	.00
24.797	1042.04	11811	10.200	3.48	564.42	.00
24.903	1040.87	11807	10.200	3.44	483.79	.00
5.009	1039.70	11808	10.200	3.40	403.16	.00
25.115	1038.52	11806	10.200	3.35	322.53	.00
25.222	1037.35	11800	10.200	3.31	241.90	.00
25.328	1036.17	11792	10.400	3.26	161.27	.00
25.434	1034.98	11783	10.400	3.21	80.63	.00
25.540	1033.79	11786	10.400	3.15	.00	.00
25.645	1031.92	11786	10.400	3.27	.00	.00
25.749	1030.01	11782	10.400	3.40	.00	.00
25.854	1028.05	11774	10.400	3.54	.00	.00
25.958	1026.04	11764	10.600	3.68	.00	.00
26.063	1024.00	11768	10.600	3.82	.00	.00
26.167	1021.94	11769	10.600	3.93	.00	.00
26.272	1019.88	11768	10.600	4.00	.00	.00
26.376	1017.84	11765	10.600	4.02	.00	.00
26.481	1015.83	11760	10.600	3.99	.00	.00
26.585	1013.86	11754	10.600	3.93	.00	.00
26.690	1012.02	11750	10.800	3.71	.00	.00
26.910	1008.31	11755	10.800	3.95	.00	.00
27.130	1004.76	11755	10.800	4.12	.00	.00
27.350	1001.11	11748	10.800	4.51	.00	.00
27.570	998.32	11734	11.000	3.97	.00	.00
27.806	994.42	11736	11.000	3.87	.00	.00
28.042	990.52	11725	11.000	3.75	.00	.00
28.278	986.56	11715	11.200	3.71	.00	.00
28.514	982.76	11710	11.200	3.46	.00	.00
28.750	978.38	11691	11.400	3.92	.00	.00
8.859	975.99	11695	11.400	3.92	.00	.00
28.967	973.65	11697	11.400	3.89	.00	.00
29.076	971.35	11695	11.400	3.84	.00	.00
29.185	969.09	11690	11.400	3.78	.00	.00

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
29.294	966.87	11683	11.400	3.71	.00	.00
29.402	964.68	11677	11.600	3.62	.00	.00
29.511	962.48	11681	11.600	3.59	.00	.00
29.620	960.66	11681	11.600	3.12	.00	.00
29.740	959.04	11677	11.600	3.05	.00	.00
29.860	957.43	11665	11.600	2.94	.00	.00
29.980	955.77	11658	11.800	2.82	.00	.00
30.100	954.06	11661	11.800	2.66	.00	.00

COMPUTED WATER SURFACE ELEVATIONS AT REQUESTED
STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Water Surface Elevation YC(K,1) (ft MSL)	Station 2 Water Surface Elevation YC(K,2) (ft MSL)	Station 3 Water Surface Elevation YC(K,3) (ft MSL)	Station 4 Water Surface Elevation YC(K,4) (ft MSL)	Station 5 Water Surface Elevation YC(K,5) (ft MSL)	Station 6 Water Surface Elevation YC(K,6) (ft MSL)
1	.000	1192.04	1164.69	1143.01	1092.54	1047.04	958.23
2	.200	1192.06	1164.69	1143.01	1092.54	1047.04	958.23
3	.400	1192.07	1164.69	1143.01	1092.54	1047.04	958.23
4	.600	1192.08	1164.71	1143.01	1092.54	1047.04	958.23
5	.800	1192.08	1164.75	1143.01	1092.54	1047.04	958.23
6	1.000	1192.07	1164.81	1143.02	1092.54	1047.04	958.23
7	1.200	1192.06	1164.89	1143.03	1092.54	1047.04	958.23
8	1.400	1192.04	1164.97	1143.07	1092.54	1047.04	958.23
9	1.600	1192.00	1165.06	1143.12	1092.54	1047.04	958.23
10	1.800	1191.96	1165.14	1143.18	1092.54	1047.04	958.23
11	2.000	1191.92	1165.22	1143.23	1092.54	1047.04	958.23
12	2.200	1191.86	1165.29	1143.29	1092.54	1047.04	958.23
13	2.400	1191.79	1165.37	1143.34	1092.54	1047.04	958.23
14	2.600	1191.71	1165.45	1143.38	1092.54	1047.04	958.23
15	2.800	1191.62	1165.52	1143.43	1092.54	1047.04	958.23
16	3.000	1191.51	1165.60	1143.48	1092.54	1047.04	958.23
17	3.200	1191.38	1165.70	1143.54	1092.54	1047.04	958.23
18	3.400	1191.22	1165.84	1143.60	1092.54	1047.04	958.23
19	3.600	1191.05	1165.97	1143.68	1092.54	1047.04	958.23
20	3.800	1190.87	1166.04	1143.77	1092.54	1047.04	958.23
21	4.000	1190.69	1166.05	1143.86	1092.54	1047.04	958.23
22	4.200	1190.49	1166.07	1143.89	1092.54	1047.04	958.23
23	4.400	1190.29	1166.08	1143.90	1092.54	1047.04	958.23
24	4.600	1190.08	1166.09	1143.90	1092.55	1047.04	958.23
25	4.800	1189.86	1166.09	1143.91	1092.56	1047.04	958.23
26	5.000	1189.64	1166.09	1143.92	1092.60	1047.04	958.23
27	5.200	1189.41	1166.09	1143.92	1092.68	1047.04	958.23
28	5.400	1189.18	1166.08	1143.92	1092.83	1047.04	958.23
29	5.600	1188.94	1166.06	1143.92	1093.03	1047.04	958.23
30	5.800	1188.71	1166.02	1143.91	1093.24	1047.04	958.23
31	6.000	1188.49	1165.98	1143.89	1093.46	1047.04	958.23
32	6.200	1188.27	1165.92	1143.86	1093.68	1047.04	958.23
33	6.400	1188.05	1165.87	1143.83	1093.88	1047.04	958.23
34	6.600	1187.84	1165.82	1143.79	1094.04	1047.05	958.23
35	6.800	1187.64	1165.76	1143.75	1094.16	1047.05	958.23
36	7.000	1187.44	1165.71	1143.72	1094.24	1047.06	958.23
37	7.200	1187.25	1165.66	1143.68	1094.29	1047.09	958.23
38	7.400	1187.06	1165.61	1143.65	1094.32	1047.15	958.24
39	7.600	1186.89	1165.56	1143.61	1094.33	1047.24	958.24
40	7.800	1186.72	1165.51	1143.58	1094.33	1047.38	958.24
41	8.000	1186.56	1165.46	1143.55	1094.33	1047.56	958.24
42	8.200	1186.41	1165.42	1143.52	1094.31	1047.81	958.24
43	8.400	1186.26	1165.37	1143.49	1094.28	1048.15	958.24
44	8.600	1186.13	1165.33	1143.46	1094.25	1048.52	958.24
45	8.800	1186.00	1165.29	1143.43	1094.21	1048.84	958.24
46	9.000	1185.87	1165.25	1143.40	1094.16	1049.08	958.25
47	9.200	1185.76	1165.21	1143.38	1094.10	1049.23	958.27
48	9.400	1185.65	1165.18	1143.35	1094.05	1049.31	958.30

49	9.600	1185.54	1165.14	1143.33	1093.99	1049.35	958.37

Time Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Water Surface Elevation YC(K,1) (ft MSL)	Station 2 Water Surface Elevation YC(K,2) (ft MSL)	Station 3 Water Surface Elevation YC(K,3) (ft MSL)	Station 4 Water Surface Elevation YC(K,4) (ft MSL)	Station 5 Water Surface Elevation YC(K,5) (ft MSL)	Station 6 Water Surface Elevation YC(K,6) (ft MSL)
50	9.800	1185.44	1165.11	1143.31	1093.93	1049.36	958.51
51	10.000	1185.35	1165.08	1143.29	1093.87	1049.37	958.73
52	10.200	1185.27	1165.05	1143.26	1093.82	1049.35	959.04
53	10.400	1185.19	1165.02	1143.24	1093.76	1049.33	959.42
54	10.600	1185.11	1164.99	1143.23	1093.70	1049.30	959.85
55	10.800	1185.04	1164.97	1143.21	1093.65	1049.27	960.24
56	11.000	1184.97	1164.94	1143.19	1093.60	1049.23	960.49
57	11.200	1184.91	1164.92	1143.18	1093.55	1049.18	960.61
58	11.400	1184.86	1164.90	1143.16	1093.50	1049.13	960.65
59	11.600	1184.80	1164.88	1143.15	1093.45	1049.08	960.66
60	11.800	1184.75	1164.86	1143.14	1093.41	1049.03	960.65
61	12.000	1184.71	1164.84	1143.12	1093.36	1048.98	960.64
62	12.200	1184.66	1164.82	1143.11	1093.32	1048.92	960.61
63	12.400	1184.62	1164.81	1143.10	1093.28	1048.87	960.57
64	12.600	1184.59	1164.79	1143.09	1093.24	1048.82	960.53
65	12.800	1184.55	1164.78	1143.08	1093.20	1048.76	960.49

COMPUTED DISCHARGES AT REQUESTED
STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Discharge QC(K,1) (cfs E3)	Station 2 Discharge QC(K,2) (cfs E3)	Station 3 Discharge QC(K,3) (cfs E3)	Station 4 Discharge QC(K,4) (cfs E3)	Station 5 Discharge QC(K,5) (cfs E3)	Station 6 Discharge QC(K,6) (cfs E3)
1	.000	2.32	2.32	2.33	2.32	2.32	2.32
2	.200	2.39	2.32	2.32	2.32	2.32	2.32
3	.400	2.59	2.34	2.33	2.32	2.32	2.32
4	.600	2.93	2.40	2.33	2.32	2.32	2.32
5	.800	3.28	2.57	2.33	2.32	2.32	2.32
6	1.000	3.67	2.86	2.36	2.32	2.32	2.32
7	1.200	4.12	3.24	2.46	2.32	2.32	2.32
8	1.400	4.58	3.66	2.66	2.32	2.32	2.32
9	1.600	4.97	4.11	2.99	2.32	2.32	2.32
10	1.800	5.42	4.58	3.41	2.32	2.32	2.32
11	2.000	5.90	5.03	3.88	2.32	2.32	2.32
12	2.200	6.42	5.50	4.37	2.32	2.32	2.32
13	2.400	6.97	6.00	4.86	2.32	2.32	2.32
14	2.600	7.55	6.55	5.36	2.32	2.32	2.32
15	2.800	8.22	7.13	5.88	2.32	2.32	2.32
16	3.000	8.98	7.77	6.45	2.32	2.32	2.32
17	3.200	11.17	8.60	7.06	2.32	2.32	2.32
18	3.400	11.48	9.82	7.77	2.32	2.32	2.32
19	3.600	11.74	11.10	8.67	2.32	2.32	2.32
20	3.800	11.95	11.74	9.85	2.33	2.32	2.32
21	4.000	12.11	11.86	10.99	2.33	2.32	2.32
22	4.200	12.22	12.03	11.67	2.33	2.32	2.32
23	4.400	12.29	12.19	11.91	2.34	2.32	2.32
24	4.600	12.30	12.25	12.04	2.35	2.32	2.32
25	4.800	12.27	12.29	12.18	2.40	2.32	2.32
26	5.000	12.18	12.27	12.26	2.56	2.32	2.32
27	5.200	12.05	12.21	12.28	2.92	2.32	2.32
28	5.400	11.88	12.10	12.25	3.57	2.32	2.32
29	5.600	11.30	11.90	12.18	4.49	2.32	2.32
30	5.800	10.74	11.54	12.04	5.58	2.32	2.32
31	6.000	10.20	11.04	11.81	6.80	2.32	2.32
32	6.200	9.68	10.51	11.45	8.09	2.32	2.32
33	6.400	9.18	9.99	10.98	9.32	2.33	2.32
34	6.600	8.70	9.49	10.47	10.33	2.33	2.32
35	6.800	8.25	9.01	9.97	11.07	2.34	2.32
36	7.000	7.81	8.55	9.48	11.55	2.36	2.32
37	7.200	7.40	8.11	9.02	11.86	2.42	2.32
38	7.400	7.02	7.69	8.57	12.03	2.54	2.32
39	7.600	6.65	7.30	8.14	12.10	2.76	2.32
40	7.800	6.32	6.93	7.73	12.10	3.08	2.32
41	8.000	6.00	6.58	7.35	12.03	3.52	2.32
42	8.200	5.70	6.25	6.99	11.89	4.21	2.32
43	8.400	5.42	5.95	6.64	11.68	5.39	2.33
44	8.600	5.16	5.66	6.32	11.41	7.04	2.33
45	8.800	4.92	5.39	6.02	11.09	8.74	2.34
46	9.000	4.70	5.14	5.74	10.74	10.08	2.36
47	9.200	4.49	4.91	5.47	10.36	10.96	2.39
48	9.400	4.29	4.69	5.22	9.98	11.46	2.48
49	9.600	4.11	4.48	4.99	9.59	11.72	2.65

Time Count K	Elapsed Time TTP(K) (hr)	Station 1 Discharge QC(K,1) (cfs E3)	Station 2 Discharge QC(K,2) (cfs E3)	Station 3 Discharge QC(K,3) (cfs E3)	Station 4 Discharge QC(K,4) (cfs E3)	Station 5 Discharge QC(K,5) (cfs E3)	Station 6 Discharge QC(K,6) (cfs E3)
50	9.800	3.95	4.29	4.77	9.21	11.83	3.01
51	10.000	3.79	4.12	4.57	8.84	11.83	3.65
52	10.200	3.65	3.95	4.38	8.48	11.74	4.61
53	10.400	3.52	3.80	4.20	8.14	11.59	5.98
54	10.600	3.40	3.66	4.04	7.81	11.38	7.75
55	10.800	3.29	3.53	3.88	7.50	11.14	9.53
56	11.000	3.19	3.41	3.74	7.20	10.86	10.79
57	11.200	3.09	3.30	3.61	6.91	10.56	11.40
58	11.400	3.01	3.20	3.49	6.64	10.24	11.63
59	11.600	2.93	3.11	3.37	6.38	9.93	11.68
60	11.800	2.85	3.02	3.27	6.14	9.61	11.62
61	12.000	2.78	2.94	3.17	5.90	9.31	11.50
62	12.200	2.72	2.87	3.08	5.68	9.00	11.32
63	12.400	2.66	2.80	3.00	5.47	8.69	11.10
64	12.600	2.61	2.74	2.92	5.27	8.39	10.86
65	12.800	2.56	2.68	2.85	5.08	8.10	10.60

END OF OUTPUT

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PROGRAM ORIGIN :

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PROJECT DESCRIPTION :

PROJECT TITLE : SBFRS-SOUTH BREACH (13-88)
PROJECT NUMBER : FILE: SBSTH4.DBK
DESCRIPTION : SOUTH BREACH-PIPING STARTS NEAR BOTTOM
ENGINEER : CARTER ASSOCIATES
DATE OF RUN : 2/15/1991
TIME OF RUN : 12:48 pm

INPUT DATA SUMMARY :

INPUT CONTROL PARAMETERS :

Number of Dynamic Routing Reaches (KKN)	1	
Type of Reservoir Routing (KUI)	1	(dynamic routing)
Number of multiple dams/bridges (MULDAM)	1	
No. of Reservoir Inflow Hydrograph Points (ITEH)	7	
No. of Informational Cross-Sections (NPRT)	0	
Flood-Plain Routing (KFLP)	0	(no)

CROSS-SECTION NUMBERS COINCIDENT
WITH UPSTREAM DAM FACE (IDAM) :

1

RESERVOIR VOLUME DESCRIPTION :

Elevation vs. Surface Area Table

Elevation HSA(K) (ft MSL)	Surface Area SA(K) (acres)
1193.50	1317.000
1191.50	967.000
1189.50	723.000
1187.50	500.000
1185.50	350.000
1183.50	250.000
1181.50	133.000
1175.00	.000

DAM NUMBER : 1

RESERVOIR AND BREACH PARAMETERS :

Initial Elevation of Water Surface (YO, ft MSL)		1192.00
Breach Side Slope (Z)	1:	.48
Breach Bottom Elevation (YBMIN, ft MSL)		1175.00
Breach Base Width (BB, ft)		100.00
Time of Breach Formation (TFH, hr)		3.70

RESERVOIR DESCRIPTION :

Water Surface Elevation at Time of Breach (HF, ft MSL)	1192.00
Top of Dam Elevation (HD, ft MSL)	1193.30
Uncontrolled Spillway Crest Elevation (HSP, ft MSL)	1176.90
Spillway Gate Center Elevation (HGT, ft MSL)	.00
Uncontrolled Spillway Discharge Coefficient (CS)	.00
Spillway Gate Discharge Coefficient (CG)	.00
Piping Centerline Elevation (CDO, ft MSL)	1176.90
Turbine Discharge (QT, cfs)	1000.00

SPILLWAY/GATE RATING CURVE :

Head HEAD(1) (ft)	Flow QSPILL(1) (cfs)
.00	.0
3.00	230.0
5.40	470.0
7.40	700.0
9.40	900.0
11.40	1080.0
13.40	1210.0
15.40	1350.0

Hydrograph Time Intervals (DHF, hr)	.00
Routing Period (TEH, hr)	11.00
Breach Development Exponent (BREX)	1.00
Mud/Debris Flow Parameter (MUD)	0
Dry Bed Routing Parameter (IWF)	0
Hydraulic Radius Computation Parameter (KPRES)	1

Time Elapsed TI(K) (hr)	Upstream Inflow QI(K) (cfs)
.00	3555.0
2.00	2488.0
4.00	2127.0
6.00	1965.0
8.00	1953.0
12.00	1949.0
18.00	1900.0

SUMMARY OF PROGRAM CONTROL PARAMETERS :

Number of Cross-Sections Entered (NS)	22	
Number of Top Widths Entered (NCS)	7	
Number of Cross-Sectional Hydrographs to Plot (NTT)	6	
Cross-Sectional Smoothing Parameter (KSA)	0	
Downstream Supercritical Parameter (KSUPC)	0	(subcritical)
Landslide Simulation (KSL)	0	(no)
Number of Lateral Inflow Hydrographs (LQ)	0	
Number of Points in Gate Control Curve (KCG)	0	

CROSS-SECTIONS WHERE HYDROGRAPH REQUESTED :
(maximum allowed = 6)

1 5 6 10 16 21

CHANNEL-VALLEY BOUNDARY CONDITIONS :

Max Discharge at Downstream End (QMAXD, cfs)	.0
Max Lateral Outflow due to Flood Wave (QLL, cfs/ft)	.0000
Initial Time-Step Size (DTHM, hr)	.2000
Time at which Dam Starts to Fail (TFI, hr)	.0000
Theta Weighting Factor (FII)	.000
Stage Convergence Criterion (EPSY, ft)	.000
Initial Downstream Water Surface Elevation (YDN, ft MSL)	.00
Slope of Channel Downstream of Dam (SOM, ft/mi)	.0000

CROSS-SECTION NUMBER : 1 SOUTH DAMBREAK LOCATION

Cross-Section Location (XS(I), mi) 14.170

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 1

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .030

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1174.50	2.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1175.00	300.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1176.00	1500.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1180.00	2600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1184.00	4000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1188.00	5200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1193.00	7000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 2

Cross-Section Location (XS(I), mi) 14.200

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 2

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .034

CROSS-SECTION and REACH DESCRIPTION :

Elevation WS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1173.00	2.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1174.00	300.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1176.00	1600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1178.00	2600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1182.00	4000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1186.00	5200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1190.00	7000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 3

Cross-Section Location (XS(I), mi) 14.610

Flooding Elevation (FSTG(I), ft MSL) 1169.900

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 3

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HC(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1167.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1168.00	988.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1170.00	3300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1172.00	4050.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1176.00	5367.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1180.00	7300.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1184.00	8100.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 4

Cross-Section Location (XS(I), mi) 15.060

Flooding Elevation (FSTG(I), ft MSL) 1157.700

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 4

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1155.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1156.00	1675.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1158.00	3588.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1160.00	5500.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1162.00	6733.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1166.00	7966.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1170.00	9200.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 5 HOUSE ELE.=1148(+or-)

Cross-Section Location (XS(I), mi) 15.540

Flooding Elevation (FSTG(I), ft MSL) 1147.300

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 5

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1145.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1146.00	2600.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1148.00	5150.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1150.00	7700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1152.00	9000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1156.00	10400.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1160.00	11800.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 6 HOUSE ELE.=1125-27(+or-)

Cross-Section Location (XS(I), mi) 16.660

Flooding Elevation (FSTG(I), ft MSL) 1124.900

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 6

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1123.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1124.00	4550.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1126.00	6525.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1128.00	8500.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1130.00	10650.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1132.00	12800.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1134.00	15000.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 7

Cross-Section Location (XS(I), mi) 17.250

Flooding Elevation (FSTG(I), ft MSL) 1117.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 7

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1115.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1116.00	5900.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1118.00	7850.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1120.00	9800.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1122.00	10838.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1124.00	11875.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1126.00	13920.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 8 HOUSE ELE.= 1110(+or-)

Cross-Section Location (XS(I), mi) 18.550

Flooding Elevation (FSTG(I), ft MSL) 1105.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 8

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1103.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1104.00	3920.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1106.00	5145.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1108.00	6370.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1112.00	8690.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1116.00	11280.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1120.00	13160.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 9 HOUSE ELE.= 1111(+or-)

Cross-Section Location (XS(I), mi) 19.040

Flooding Elevation (FSTG(I), ft MSL) 1100.800

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 9

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1099.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1100.00	3360.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1102.00	4820.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1104.00	6280.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1106.00	7580.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1108.00	8880.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1112.00	11060.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 10 HOUSE ELE.= 1104-06(+or-)

Cross-Section Location (XS(I), mi) 19.520

Flooding Elevation (FSTG(I), ft MSL) 1094.100

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 10

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1091.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1092.00	1870.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1094.00	2345.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1096.00	2820.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1098.00	4110.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1100.00	5400.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1104.00	7350.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 11

Cross-Section Location (XS(I), mi) 20.050

Flooding Elevation (FSTG(I), ft MSL) 1089.800

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 11

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .170

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1087.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1088.00	1750.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1090.00	2535.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1092.00	3320.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1096.00	4200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1100.00	6100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1104.00	12650.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 12

Cross-Section Location (XS(I), mi) 20.730

Flooding Elevation (FSTG(I), ft MSL) 1082.200

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 12

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .300

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1079.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1080.00	1300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1082.00	1765.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1084.00	2230.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1086.00	2465.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1088.00	2700.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1092.00	4200.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 13

Cross-Section Location (XS(I), mi) 21.390

Flooding Elevation (FSTG(I), ft MSL) 1074.800

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 13

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HC(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1071.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1072.00	830.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1074.00	1040.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1076.00	1250.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1080.00	1820.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1084.00	2720.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1088.00	6720.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 14

Cross-Section Location (XS(I), mi) 22.710

Flooding Elevation (FSTG(I), ft MSL) 1063.000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 14

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1059.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1060.00	690.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1062.00	1140.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1064.00	4760.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1066.00	5225.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1068.00	5690.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1072.00	7540.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 15

Cross-Section Location (XS(I), mi) 23.690

Flooding Elevation (FSTG(I), ft MSL) 1053.300

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 15

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1049.00	2.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1050.00	200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1052.00	925.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1054.00	1275.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1058.00	3650.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1062.00	5960.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1066.00	7520.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 16 HOUSE ELE.=1051-58(+or-)

Cross-Section Location (XS(I), mi) 24.160

Flooding Elevation (FSTG(I), ft MSL) 1048.200

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 16

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1044.00	40.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1046.00	500.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1048.00	980.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1050.00	1235.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1052.00	1490.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1056.00	4860.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1060.00	6290.0	.0400	.0	.0	.0000	.0	.0000	1.0000

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Time (TT)	10.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	107567.80
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1407.91
Flow at Downstream End of Model (QU(N), cfs)	94823.81
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1272.81

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1407.91	5.32	20204.	2198.	2198.	107.568	.0400	.00	-.43	1863.1	.3	11.9
6.030	1400.51	10.55	10210.	2102.	2102.	107.760	.0400	-1.00	5.84	.0	.8	6.8
6.090	1397.42	10.35	10451.	2211.	2211.	108.146	.0400	-1.00	5.71	.0	.8	6.8
6.150	1394.33	10.15	10695.	2324.	2324.	108.529	.0400	-1.00	5.61	.0	.8	6.7
6.210	1391.27	9.93	10968.	2445.	2445.	108.910	.0400	-1.00	5.55	.0	.8	6.7
6.270	1388.33	9.45	11565.	2589.	2589.	109.287	.0400	-1.00	5.67	.0	.8	6.8
6.408	1382.69	7.48	14724.	3639.	3639.	110.123	.0439	-1.00	5.02	.0	.7	6.2
6.625	1374.51	6.18	18045.	5434.	5434.	111.558	.0450	-1.00	4.13	.0	.6	5.0
6.842	1366.64	5.60	20173.	7158.	7158.	112.963	.0452	-1.00	3.44	.0	.6	4.1
7.153	1356.73	4.61	24974.	8233.	8233.	115.101	.0500	.00	4.01	.0	.5	4.7
7.560	1343.98	4.41	26523.	8075.	8075.	116.936	.0500	.00	5.03	.0	.4	6.0
8.170	1324.04	3.93	30085.	8944.	8944.	118.165	.0494	.00	5.13	.0	.4	6.0
8.832	1312.08	4.25	27763.	7585.	7585.	117.997	.0479	.00	5.39	.0	.4	6.3
9.494	1300.36	4.69	24926.	6076.	6076.	116.929	.0458	.00	5.89	.0	.4	6.8
10.157	1289.23	5.37	21446.	4489.	4489.	115.078	.0410	.00	6.95	.0	.4	7.9
10.819	1283.59	2.65	40412.	8430.	8430.	106.978	.0400	.00	13.41	.0	.2	14.5
11.358	1280.80	6.60	15385.	1200.	1200.	101.523	.0300	.00	15.29	.0	.3	18.1
11.774	1279.16	7.12	14029.	1200.	1200.	99.870	.0300	.00	14.27	.0	.4	17.0
12.190	1276.40	8.67	11334.	1200.	1200.	98.302	.0300	-1.00	12.42	.0	.5	14.8
12.740	1272.81	5.62	16869.	3000.	3000.	94.824	.0300	.00	10.40	.0	.4	12.2

Maximum Froude Number (FRDM)	.85
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.21
Cross-Section of Minimum Froude Number (IFM)	31

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	10.400	107568.	1407.91	1396.00	1402.06	1.00	793.00	107568.	107568.	0.	0.

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Time (TT)	10.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	76132.02
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1405.41
Flow at Downstream End of Model (QU(N), cfs)	107805.90
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1273.33

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1405.41	5.15	14792.	2135.	2135.	76.132	.0400	.00	-2.93	1379.1	.3	9.4
6.030	1399.59	9.21	8287.	2079.	2079.	76.314	.0400	-1.00	4.92	.0	.8	5.9
6.090	1396.52	9.04	8487.	2186.	2186.	76.687	.0400	-1.00	4.82	.0	.8	5.9
6.150	1393.47	8.87	8688.	2296.	2296.	77.071	.0400	-1.00	4.74	.0	.8	5.9
6.210	1390.42	8.70	8904.	2412.	2412.	77.467	.0400	-1.00	4.70	.0	.8	5.9
6.270	1387.49	8.27	9412.	2546.	2546.	77.884	.0400	-1.00	4.84	.0	.8	6.0
6.408	1382.02	6.42	12289.	3538.	3538.	78.928	.0458	-1.00	4.34	.0	.6	5.5
6.625	1373.96	5.36	15119.	5226.	5226.	81.054	.0470	-1.00	3.58	.0	.6	4.5
6.842	1366.23	4.83	17315.	6856.	6856.	83.690	.0474	-1.00	3.03	.0	.5	3.7
7.153	1356.26	4.22	21145.	7726.	7726.	89.146	.0500	.00	3.53	.0	.4	4.3
7.560	1343.60	4.10	23533.	7637.	7637.	96.593	.0500	.00	4.65	.0	.4	5.6
8.170	1323.81	3.77	28010.	8615.	8615.	105.669	.0500	.00	4.90	.0	.4	5.8
8.832	1311.97	4.17	26997.	7442.	7442.	112.633	.0482	.00	5.29	.0	.4	6.2
9.494	1300.35	4.66	24849.	6065.	6065.	115.822	.0458	.00	5.88	.0	.4	6.8
10.157	1289.33	5.34	21912.	4546.	4546.	117.014	.0404	.00	7.05	.0	.4	8.0
10.819	1284.16	2.50	45373.	9113.	9113.	113.641	.0400	.00	13.98	.0	.2	15.0
11.358	1281.46	6.85	16185.	1200.	1200.	110.807	.0300	.00	15.96	.0	.3	18.7
11.774	1279.79	7.44	14790.	1200.	1200.	109.974	.0300	.00	14.90	.0	.4	17.6
12.190	1276.93	9.13	11964.	1200.	1200.	109.216	.0300	-1.00	12.95	.0	.5	15.3
12.740	1273.33	5.85	18413.	3000.	3000.	107.806	.0300	.00	10.92	.0	.4	12.7

Maximum Froude Number (FRDM)	.82
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.20
Cross-Section of Minimum Froude Number (IFM)	31

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	10.800	76132.	1405.41	1396.00	1401.13	1.00	793.00	76132.	76132.	0.	0.

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Time (TT)	11.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	53108.02
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1403.33
Flow at Downstream End of Model (QU(N), cfs)	112600.30
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1273.47

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1403.33	5.10	10409.	2083.	2083.	53.108	.0400	.00	-5.01	964.9	.4	7.3
6.030	1398.81	7.99	6670.	2060.	2060.	53.263	.0400	-1.00	4.14	.0	.8	5.1
6.090	1395.76	7.84	6833.	2165.	2165.	53.583	.0400	-1.00	4.06	.0	.8	5.1
6.150	1392.73	7.71	6997.	2273.	2273.	53.913	.0400	-1.00	4.00	.0	.8	5.1
6.210	1389.69	7.57	7165.	2384.	2384.	54.253	.0400	-1.00	3.97	.0	.8	5.1
6.270	1386.74	7.25	7532.	2508.	2508.	54.616	.0400	-1.00	4.09	.0	.7	5.2
6.408	1381.40	5.49	10125.	3446.	3446.	55.554	.0475	-1.00	3.72	.0	.6	4.9
6.625	1373.44	4.60	12474.	5030.	5030.	57.407	.0488	-1.00	3.06	.0	.5	3.9
6.842	1365.82	4.10	14544.	6549.	6549.	59.592	.0496	-1.00	2.62	.0	.5	3.3
7.153	1355.68	3.77	16880.	7117.	7117.	63.614	.0500	.00	2.95	.0	.4	3.7
7.560	1342.93	3.71	18698.	6870.	6870.	69.291	.0500	.00	3.98	.0	.4	4.9
8.170	1323.15	3.48	22597.	7816.	7816.	78.627	.0500	.00	4.24	.0	.4	5.1
8.832	1311.51	3.87	23654.	6871.	6871.	91.580	.0498	.00	4.82	.0	.4	5.7
9.494	1299.99	4.43	22706.	5738.	5738.	100.488	.0468	.00	5.51	.0	.4	6.4
10.157	1289.05	5.17	20669.	4394.	4394.	106.815	.0408	.00	6.78	.0	.4	7.7
10.819	1284.24	2.41	46133.	9213.	9213.	111.136	.0400	.00	14.06	.0	.2	15.1
11.358	1281.63	6.86	16383.	1200.	1200.	112.349	.0300	.00	16.12	.0	.3	18.9
11.774	1279.97	7.50	15002.	1200.	1200.	112.490	.0300	.00	15.08	.0	.4	17.8
12.190	1277.09	9.26	12152.	1200.	1200.	112.567	.0300	-1.00	13.10	.0	.5	15.5
12.740	1273.47	5.98	18823.	3000.	3000.	112.600	.0300	.00	11.06	.0	.4	12.9

Maximum Froude Number (FRDM)	.78
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.19
Cross-Section of Minimum Froude Number (IFM)	31

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	11.200	53108.	1403.33	1396.00	1400.33	1.00	793.00	53108.	53108.	0.	0.

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Time (TT)	11.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	37176.10
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1401.67
Flow at Downstream End of Model (QU(N), cfs)	107317.10
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1273.29

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1401.67	5.33	6981.	2042.	2042.	37.176	.0400	.00	-6.67	673.7	.5	5.7
6.030	1398.15	7.02	5320.	1968.	1968.	37.325	.0400	-1.00	3.48	.0	.8	4.5
6.090	1395.15	6.83	5508.	2131.	2131.	37.598	.0400	-1.00	3.44	.0	.7	4.5
6.150	1392.13	6.70	5649.	2254.	2254.	37.855	.0400	-1.00	3.41	.0	.7	4.5
6.210	1389.11	6.59	5783.	2362.	2362.	38.119	.0400	-1.00	3.39	.0	.7	4.6
6.270	1386.13	6.40	5998.	2477.	2477.	38.398	.0400	-1.00	3.48	.0	.7	4.6
6.408	1380.86	4.71	8311.	3366.	3366.	39.148	.0490	-1.00	3.19	.0	.5	4.4
6.625	1372.98	3.99	10190.	4845.	4845.	40.619	.0500	-1.00	2.60	.0	.5	3.5
6.842	1365.39	3.61	11813.	6168.	6168.	42.619	.0500	-1.00	2.19	.0	.5	2.9
7.153	1355.20	3.37	13559.	6605.	6605.	45.756	.0500	.00	2.47	.0	.4	3.2
7.560	1342.35	3.38	14874.	6197.	6197.	50.205	.0500	.00	3.39	.0	.4	4.3
8.170	1322.51	3.21	17844.	7040.	7040.	57.234	.0500	.00	3.60	.0	.4	4.5
8.832	1310.78	3.57	18872.	6309.	6309.	67.295	.0500	.00	4.09	.0	.4	5.0
9.494	1299.31	4.08	19008.	5126.	5126.	77.577	.0489	.00	4.83	.0	.4	5.8
10.157	1288.29	4.92	17473.	3978.	3978.	86.043	.0427	.00	6.01	.0	.4	7.0
10.819	1283.69	2.37	41225.	8545.	8545.	97.612	.0400	.00	13.51	.0	.2	14.6
11.358	1281.15	6.54	15812.	1200.	1200.	103.368	.0300	.00	15.64	.0	.3	18.4
11.774	1279.57	7.21	14525.	1200.	1200.	104.693	.0300	.00	14.68	.0	.4	17.4
12.190	1276.81	8.95	11822.	1200.	1200.	105.767	.0300	-1.00	12.83	.0	.5	15.2
12.740	1273.29	5.87	18298.	3000.	3000.	107.317	.0300	.00	10.88	.0	.4	12.7

Maximum Froude Number (FRDM)	.75
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.19
Cross-Section of Minimum Froude Number (IFM)	31

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	11.600	37176.	1401.67	1396.00	1399.64	1.00	793.00	37176.	37176.	0.	0.

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Time (TT)	12.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	27172.59
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1400.38
Flow at Downstream End of Model (QU(N), cfs)	92663.24
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1272.86

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1400.38	6.23	4363.	2009.	2009.	27.173	.0400	.00	-7.96	484.6	.7	4.4
6.030	1397.57	6.42	4244.	1782.	1782.	27.265	.0400	-1.00	2.90	.0	.7	3.9
6.090	1394.60	6.25	4394.	1922.	1922.	27.447	.0400	-1.00	2.89	.0	.7	4.0
6.150	1391.63	6.06	4563.	2085.	2085.	27.650	.0400	-1.00	2.91	.0	.7	4.0
6.210	1388.67	5.87	4752.	2280.	2280.	27.872	.0400	-1.00	2.95	.0	.7	4.1
6.270	1385.67	5.76	4871.	2454.	2454.	28.066	.0400	-1.00	3.02	.0	.7	4.2
6.408	1380.46	4.11	6962.	3306.	3306.	28.593	.0500	-1.00	2.78	.0	.5	4.0
6.625	1372.56	3.61	8257.	4479.	4479.	29.788	.0500	-1.00	2.19	.0	.5	3.1
6.842	1365.03	3.22	9689.	5825.	5825.	31.178	.0500	-1.00	1.83	.0	.4	2.5
7.153	1354.80	3.03	11052.	6190.	6190.	33.482	.0500	.00	2.08	.0	.4	2.8
7.560	1341.85	3.08	11951.	5629.	5629.	36.784	.0500	.00	2.90	.0	.4	3.9
8.170	1321.97	2.95	14256.	6393.	6393.	42.086	.0500	.00	3.06	.0	.3	4.0
8.832	1310.18	3.27	15255.	5847.	5847.	49.899	.0500	.00	3.50	.0	.4	4.4
9.494	1298.59	3.74	15455.	4778.	4778.	57.769	.0500	.00	4.12	.0	.4	5.0
10.157	1287.40	4.60	14147.	3492.	3492.	65.097	.0453	.00	5.12	.0	.4	6.1
10.819	1282.52	2.42	32106.	7140.	7140.	77.590	.0400	.00	12.35	.0	.2	13.4
11.358	1280.06	5.92	14505.	1200.	1200.	85.830	.0300	.00	14.56	.0	.3	17.3
11.774	1278.62	6.58	13386.	1200.	1200.	88.082	.0300	.00	13.73	.0	.3	16.5
12.190	1276.12	8.18	10992.	1200.	1200.	89.945	.0300	-1.00	12.14	.0	.5	14.5
12.740	1272.86	5.45	16992.	3000.	3000.	92.663	.0300	.00	10.45	.0	.4	12.3

Maximum Froude Number (FRDM)	.74
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.20
Cross-Section of Minimum Froude Number (IFM)	31

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	12.000	27173.	1400.38	1396.00	1399.06	1.00	793.00	27173.	27173.	0.	0.

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Time (TT)	12.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	4
Flow at Upstream End of Model (QU(1), cfs)	21751.34
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1399.33
Flow at Downstream End of Model (QU(N), cfs)	75197.33
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1272.23

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1399.33	9.06	2401.	1599.	1599.	21.751	.0400	.00	-9.01	380.0	1.3	3.3
6.030	1397.21	6.03	3616.	1664.	1664.	21.816	.0400	-1.00	2.54	.0	.7	3.5
6.090	1394.24	5.87	3736.	1788.	1788.	21.943	.0400	-1.00	2.54	.0	.7	3.6
6.150	1391.29	5.71	3869.	1930.	1930.	22.078	.0400	-1.00	2.56	.0	.7	3.7
6.210	1388.34	5.53	4017.	2098.	2098.	22.218	.0400	-1.00	2.62	.0	.7	3.8
6.270	1385.36	5.41	4134.	2292.	2292.	22.355	.0400	-1.00	2.71	.0	.7	3.8
6.408	1380.15	3.82	5951.	3140.	3140.	22.740	.0500	-1.00	2.47	.0	.5	3.6
6.625	1372.29	3.33	7043.	4234.	4234.	23.471	.0500	-1.00	1.91	.0	.5	2.8
6.842	1364.79	2.93	8288.	5587.	5587.	24.296	.0500	-1.00	1.59	.0	.4	2.3
7.153	1354.52	2.76	9308.	5885.	5885.	25.729	.0500	.00	1.79	.0	.4	2.5
7.560	1341.46	2.84	9832.	5178.	5178.	27.876	.0500	.00	2.51	.0	.4	3.5
8.170	1321.54	2.73	11589.	5865.	5865.	31.604	.0500	.00	2.63	.0	.3	3.5
8.832	1309.69	3.00	12461.	5464.	5464.	37.379	.0500	.00	3.00	.0	.4	3.9
9.494	1297.98	3.43	12641.	4491.	4491.	43.384	.0500	.00	3.51	.0	.4	4.4
10.157	1286.71	4.16	11867.	3182.	3182.	49.350	.0478	.00	4.43	.0	.4	5.4
10.819	1281.09	2.60	23115.	5408.	5408.	60.023	.0400	.00	10.91	.0	.2	12.0
11.358	1278.72	5.22	12890.	1200.	1200.	67.262	.0300	.00	13.21	.0	.3	16.0
11.774	1277.42	5.83	11947.	1200.	1200.	69.604	.0300	.00	12.53	.0	.3	15.3
12.190	1275.21	7.23	9899.	1200.	1200.	71.604	.0300	-1.00	11.23	.0	.4	13.6
12.740	1272.23	4.97	15129.	2850.	2850.	75.197	.0300	.00	9.81	.0	.4	11.6

Maximum Froude Number (FRDM)	1.30
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.22
Cross-Section of Minimum Froude Number (IFM)	31

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	4	12.400	21751.	1399.33	1396.00	1398.69	.93	793.00	21751.	21751.	0.	0.

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Time (TT)	12.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	6
Flow at Upstream End of Model (QU(1), cfs)	14371.07
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1398.58
Flow at Downstream End of Model (QU(N), cfs)	59524.07
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1271.37

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
5.970	1398.58	10.55	1362.	1145.	1145.	14.371	.0400	.00	-9.76	275.5	1.7	2.6
6.030	1396.63	5.36	2710.	1477.	1477.	14.528	.0400	-1.00	1.96	.0	.7	3.0
6.090	1393.70	5.26	2822.	1582.	1582.	14.839	.0400	-1.00	2.00	.0	.7	3.1
6.150	1390.78	5.15	2942.	1700.	1700.	15.149	.0400	-1.00	2.05	.0	.7	3.2
6.210	1387.86	5.03	3074.	1838.	1838.	15.459	.0400	-1.00	2.14	.0	.7	3.3
6.270	1384.93	4.93	3197.	2000.	2000.	15.766	.0400	-1.00	2.27	.0	.7	3.4
6.408	1379.75	3.49	4762.	2824.	2824.	16.601	.0500	-1.00	2.07	.0	.5	3.2
6.625	1372.01	3.03	5894.	3987.	3987.	17.864	.0500	-1.00	1.63	.0	.4	2.5
6.842	1364.58	2.67	7128.	5383.	5383.	19.034	.0500	-1.00	1.38	.0	.4	2.1
7.153	1354.30	2.55	8053.	5654.	5654.	20.572	.0500	.00	1.57	.0	.4	2.3
7.560	1341.17	2.66	8391.	4847.	4847.	22.291	.0500	.00	2.22	.0	.4	3.2
8.170	1321.21	2.55	9737.	5469.	5469.	24.838	.0500	.00	2.30	.0	.3	3.2
8.832	1309.31	2.77	10444.	5170.	5170.	28.892	.0500	.00	2.62	.0	.3	3.5
9.494	1297.52	3.14	10592.	4270.	4270.	33.270	.0500	.00	3.04	.0	.4	4.0
10.157	1286.16	3.72	10149.	3044.	3044.	37.749	.0500	.00	3.88	.0	.4	4.8
10.819	1279.50	2.86	16038.	3484.	3484.	45.918	.0400	.00	9.32	.0	.2	10.4
11.358	1277.40	4.57	11310.	1200.	1200.	51.630	.0300	.00	11.89	.0	.3	14.7
11.774	1276.23	5.12	10520.	1200.	1200.	53.847	.0300	.00	11.34	.0	.3	14.1
12.190	1274.24	6.38	8744.	1200.	1200.	55.786	.0300	-1.00	10.26	.0	.4	12.6
12.740	1271.37	4.63	12850.	2510.	2510.	59.524	.0300	.00	8.96	.0	.4	10.8

Maximum Froude Number (FRDM)	1.71
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.24
Cross-Section of Minimum Froude Number (IFM)	31

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	6	12.800	14371.	1398.58	1396.00	1398.10	.70	793.00	14371.	14371.	0.	0.

Normalized conservation of mass as percent of maximum flow
in reach = -.23

ING COMPLETED :

Number of Time Steps Used (KTIME)	65
Maximum Number of Time Steps Allowed	1199
Total Time of Flood Routing (TT, hr)	13.2

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
5.970	1417.85	118930	7.800	10.90	.00	.00
6.000	1402.37	118930	10.000	11.10	.00	.00
6.030	1400.81	118926	10.000	10.98	.00	.00
6.060	1399.25	118924	10.000	10.86	.00	.00
6.090	1397.70	118924	10.000	10.75	.00	.00
6.120	1396.14	118926	10.000	10.63	.00	.00
6.150	1394.60	118928	10.000	10.52	.00	.00
6.180	1393.05	118931	10.000	10.41	.00	.00
6.210	1391.52	118935	10.000	10.28	.00	.00
6.240	1390.00	118939	10.000	10.10	.00	.00
6.270	1388.56	118942	10.000	9.78	.00	.00
6.300	1387.29	118945	10.000	9.10	.00	.00
6.408	1382.86	118950	10.000	7.75	.00	.00
6.517	1378.69	118942	10.000	6.90	.00	.00
6.625	1374.62	118917	10.000	6.36	.00	.00
6.733	1370.74	118875	10.000	5.81	.00	.00
6.842	1366.71	118832	10.000	5.74	.00	.00
6.950	1363.19	118759	10.000	4.87	.00	.00
7.153	1356.79	118671	10.200	4.66	.00	.00
7.357	1349.97	118740	10.200	5.20	.00	.00
7.560	1344.01	118721	10.200	4.43	.00	.00
7.865	1332.91	118571	10.200	6.02	.00	.00
8.170	1324.04	118165	10.400	3.93	.00	.00
8.501	1318.04	118244	10.400	4.08	.00	.00
8.832	1312.08	117996	10.400	4.25	.00	.00
9.163	1306.18	117629	10.600	4.45	.00	.00
9.494	1300.39	117725	10.600	4.69	.00	.00
9.826	1294.76	117587	10.600	4.97	.00	.00
10.157	1289.33	117182	10.800	5.37	.00	.00
10.488	1285.58	116415	11.000	5.09	.00	.00
10.819	1284.27	113802	11.000	4.03	.00	.00
11.150	1282.30	112950	11.200	6.69	.00	.00
11.358	1281.63	112767	11.200	6.89	.00	.00
11.566	1280.87	112579	11.200	7.15	.00	.00
11.774	1279.97	112490	11.200	7.51	.00	.00
11.982	1278.83	112536	11.200	8.08	.00	.00
12.190	1277.09	112567	11.200	9.26	.00	.00
12.465	1275.18	112585	11.200	6.58	.00	.00
12.740	1273.47	112600	11.200	5.98	.00	.00

WARNING: Maximum water surface elevation is greater than the highest top width elevation for the following following cross-sections.

Cross Section Number	Cross Section Location (mi)	Maximum Top Width Elevation (ft MSL)	Maximum Water Surface Elevation (ft MSL)
30	10.49	1285.22	1285.58
31	10.82	1279.11	1284.27
32	11.15	1273.00	1282.30
33	11.36	1272.80	1281.63
34	11.57	1272.60	1280.87
35	11.77	1272.40	1279.97
36	11.98	1272.20	1278.83
37	12.19	1272.00	1277.09
38	12.47	1272.50	1275.18
39	12.74	1273.00	1273.47

WARNING: The top width entries should be extended upward at the above cross-sections.

END OF OUTPUT

CROSS-SECTION NUMBER : 17

Cross-Section Location (XS(I), mi) 25.540

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 17

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1026.00	20.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1028.00	60.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1030.00	260.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1032.00	915.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1034.00	1570.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1038.00	2110.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1044.00	3020.0	.0400	.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 18

Cross-Section Location (XS(I), mi) 26.690

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 18

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
1004.00	50.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1008.00	280.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1012.00	960.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1014.00	1030.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1016.00	1100.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1020.00	2000.0	.0400	600.0	.0	.0000	.0	.0000	1.0000
1024.00	2100.0	.0400	1700.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 19

Cross-Section Location (XS(I), mi) 27.570

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 19

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .200

CROSS-SECTION and REACH DESCRIPTION :

Elevation (K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
992.00	270.0	.0500	.0	.0	.0000	.0	.0000	1.0000
994.00	370.0	.0500	.0	.0	.0000	.0	.0000	1.0000
996.00	470.0	.0500	.0	.0	.0000	.0	.0000	1.0000
998.00	755.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1000.00	1040.0	.0500	.0	.0	.0000	.0	.0000	1.0000
1004.00	1300.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1008.00	1900.0	.0400	1600.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 20

Cross-Section Location (XS(I), mi) 28.750

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 20

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation US(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
972.00	120.0	.0500	.0	.0	.0000	.0	.0000	1.0000
974.00	300.0	.0500	.0	.0	.0000	.0	.0000	1.0000
976.00	475.0	.0500	.0	.0	.0000	.0	.0000	1.0000
978.00	940.0	.0500	.0	.0	.0000	.0	.0000	1.0000
980.00	1400.0	.0500	.0	.0	.0000	.0	.0000	1.0000
984.00	2600.0	.0400	.0	.0	.0000	.0	.0000	1.0000
988.00	2700.0	.0400	7100.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 21 MULLEN WELL(FOUNDATIONS)

Cross-Section Location (XS(I), mi) 29.620

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

DOWNSTREAM REACH NUMBER : 21

Reach Contraction-Expansion Coefficient (FKC) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .100

CROSS-SECTION and REACH DESCRIPTION :

Elevation HS(K,I) (MSL)	Channel Top Width BS(K,I) (ft)	Channel Manning n CM(K,I)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Left Manning n CML(K,I)	Right Top Width BSR(K,I) (ft)	Right Manning n CMR(K,I)	Flow Path Sinuosity Coeff. SNC(K,I)
956.00	210.0	.0500	.0	.0	.0000	.0	.0000	1.0000
958.00	750.0	.0500	.0	.0	.0000	.0	.0000	1.0000
960.00	1200.0	.0500	.0	.0	.0000	.0	.0000	1.0000
964.00	2000.0	.0400	.0	.0	.0000	.0	.0000	1.0000
966.00	2200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
968.00	2400.0	.0400	4490.0	.0	.0000	.0	.0000	1.0000
972.00	2500.0	.0400	5620.0	.0	.0000	.0	.0000	1.0000

CROSS-SECTION NUMBER : 22

Cross-Section Location (XS(I), mi) 30.100

Flooding Elevation (FSTG(I), ft MSL) .000

Initial Water Surface Elevation (YD, ft MSL) .000

CROSS-SECTION DESCRIPTION :

Elevation HS(K,I) (ft MSL)	Channel Top Width BS(K,I) (ft)	Storage Top Width BSS(K,I) (ft)	Left Top Width BSL(K,I) (ft)	Right Top Width BSR(K,I) (ft)
950.00	100.0	.0	.0	.0
952.00	150.0	.0	.0	.0
956.00	2575.0	.0	.0	.0
960.00	2700.0	.0	.0	.0
964.00	2800.0	.0	.0	.0
968.00	3000.0	.0	.0	.0
972.00	3200.0	.0	.0	.0

```
WARNING: At cross-section reach  15 the distance between
         interpolated cross-sections (DXM) should be changed
         to   .052 due to expansion/contraction criteria

WARNING: At cross-section reach  17 the distance between
         interpolated cross-sections (DXM) should be changed
         to   .077 due to expansion/contraction criteria

WARNING: At cross-section reach  21 the distance between
         interpolated cross-sections (DXM) should be changed
         to   .080 due to expansion/contraction criteria
```

DISTANCE BETWEEN INTERPOLATED CROSS-SECTIONS
(DXM) THAT WILL BE USED IN COMPUTATIONS :

Down Stream Reach Number I=1,NS1	Interp. Cross Section Distance DXM(I) (mi)
1	101.0000
2	.0340
3	.2000
4	.1000
5	.2000
6	.2000
7	.2000
8	.2000
9	.1000
10	.2000
11	.1700
12	.3000
13	.2000
14	.1000
15	.1000
16	.1000
17	.1000
18	.2000
19	.2000
20	.1000
21	.1000

Total number of cross-sections (original+interpolated) 111

Maximum number of cross-sections allowed 300

OUTPUT DATA SUMMARY :

CROSS-SECTION and REACH SUMMARY :

Cross Section Number	Cross Section Location (mi)	Bottom Elevation (ft MSL)	Reach Number	Reach Length (mi)	Reach Slope (ft/mi)
1	14.170	1174.500			
2	14.200	1173.000	1	.030	50.000

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

3	14.610	1167.000	2	.410	14.634
4	15.060	1155.000	3	.450	26.667
5	15.540	1145.000	4	.480	20.833
6	16.660	1123.000	5	1.120	19.643
7	17.250	1115.000	6	.590	13.559
8	18.550	1103.000	7	1.300	9.231
9	19.040	1099.000	8	.490	8.163
10	19.520	1091.000	9	.480	16.667
11	20.050	1087.000	10	.530	7.547
12	20.730	1079.000	11	.680	11.765
13	21.390	1071.000	12	.660	12.121
14	22.710	1059.000	13	1.320	9.091
15	23.690	1049.000	14	.980	10.204
16	24.160	1044.000	15	.470	10.638
17	25.540	1026.000	16	1.380	13.043
18	26.690	1004.000	17	1.150	19.130
19	27.570	992.000	18	.880	13.636
20	28.750	972.000	19	1.180	16.949
21	29.620	956.000	20	.870	18.391
22	30.100	950.000	21	.480	12.500

RE-NUMBERED DAM/BRIDGE CROSS-SECTIONS :

Dam/ Bridge	Revised Cross Section Number
1	1

Number of Intermediate Cross-Sections (NN(NS)) 111

Number of Time Steps (NNU) 7

INITIAL CONDITIONS TABLE :

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
1	14.170	1176.15	1.65	1175.70	1.20	0	10	10
2	14.200	1175.38	2.38	1174.67	1.67	0	10	10
3	14.234	1174.78	2.28	1174.09	1.59	0	10	10
4	14.268	1174.20	2.20	1173.50	1.50	0	10	10
5	14.302	1173.62	2.12	1172.94	1.44	0	10	10
6	14.337	1173.05	2.05	1172.37	1.37	0	10	10
7	14.371	1172.48	1.98	1171.82	1.32	0	10	10
8	14.405	1171.92	1.92	1171.27	1.27	0	10	10
9	14.439	1171.37	1.87	1170.74	1.24	0	10	10
10	14.473	1170.82	1.82	1170.19	1.19	0	10	10
11	14.507	1170.27	1.77	1169.65	1.15	0	10	10
12	14.542	1169.73	1.73	1169.12	1.12	0	10	10
13	14.576	1169.19	1.69	1168.59	1.09	0	10	10
14	14.610	1168.49	1.49	1168.07	1.07	0	10	10
15	14.835	1162.43	1.43	1161.95	.95	0	10	10
16	15.060	1156.37	1.37	1155.86	.86	0	10	10
17	15.180	1153.80	1.30	1153.31	.81	0	10	10
18	15.300	1151.24	1.24	1150.78	.78	0	10	10
19	15.420	1148.69	1.19	1148.25	.75	0	10	10
20	15.540	1146.16	1.16	1145.73	.73	0	10	10
21	15.764	1141.70	1.10	1141.29	.69	0	10	10
22	15.988	1137.27	1.07	1136.85	.65	0	10	10
23	16.212	1132.83	1.03	1132.42	.62	0	10	10
24	16.436	1128.40	1.00	1128.01	.60	0	10	10
25	16.660	1124.03	1.03	1123.57	.57	0	10	10
26	16.955	1119.97	.97	1119.54	.54	0	10	10
27	17.250	1116.00	1.00	1115.52	.52	0	10	10
28	17.467	1114.03	1.03	1113.53	.53	0	10	10
29	17.683	1112.03	1.03	1111.55	.55	0	10	10
30	17.900	1110.06	1.06	1109.57	.57	0	10	10
31	18.117	1108.09	1.09	1107.58	.58	0	10	10
32	18.333	1106.12	1.12	1105.60	.60	0	10	10
33	18.550	1104.17	1.17	1103.61	.61	0	10	10
34	18.795	1102.21	1.21	1101.64	.64	0	10	10
35	19.040	1100.10	1.10	1099.65	.65	0	10	10
36	19.160	1098.14	1.14	1097.68	.68	0	10	10
37	19.280	1096.19	1.19	1095.72	.72	0	10	10
38	19.400	1094.26	1.26	1093.77	.77	0	10	10
39	19.520	1092.57	1.57	1091.83	.83	0	10	10
40	19.785	1090.59	1.59	1089.84	.84	0	10	10
41	20.050	1088.49	1.49	1087.85	.85	0	10	10
42	20.220	1086.52	1.52	1085.87	.87	0	10	10
43	20.390	1084.56	1.56	1083.90	.90	0	10	10
44	20.560	1082.62	1.62	1081.92	.92	0	10	10
45	20.730	1080.66	1.66	1079.96	.96	0	10	10
46	21.060	1076.81	1.81	1076.03	1.03	0	10	10
47	21.390	1073.15	2.15	1072.12	1.12	0	10	10
48	21.610	1071.18	2.18	1070.14	1.14	0	10	10
49	21.830	1069.20	2.20	1068.16	1.16	0	10	10

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
50	22.050	1067.23	2.23	1066.16	1.16	0	10	10
51	22.270	1065.26	2.26	1064.18	1.18	0	10	10
52	22.490	1063.29	2.29	1062.19	1.19	0	10	10
53	22.710	1061.27	2.27	1060.21	1.21	0	10	10
54	22.819	1060.23	2.34	1059.14	1.25	0	10	10
55	22.928	1059.20	2.42	1058.09	1.31	0	10	10
56	23.037	1058.18	2.51	1057.03	1.36	0	10	10
57	23.146	1057.17	2.62	1055.98	1.42	0	10	10
58	23.254	1056.17	2.73	1054.95	1.51	0	10	10
59	23.363	1055.17	2.84	1053.92	1.58	0	10	10
60	23.472	1054.17	2.95	1052.91	1.69	0	10	10
61	23.581	1053.17	3.06	1051.91	1.80	0	10	10
62	23.690	1052.15	3.15	1050.93	1.93	0	10	10
63	23.807	1050.95	3.20	1049.67	1.92	0	10	10
64	23.925	1049.71	3.21	1048.36	1.86	0	10	10
65	24.042	1048.43	3.18	1047.05	1.80	0	10	10
66	24.160	1047.01	3.01	1045.74	1.74	0	10	10
67	24.266	1045.70	3.08	1044.41	1.79	0	10	10
68	24.372	1044.41	3.18	1043.09	1.86	0	10	10
69	24.478	1043.13	3.29	1041.77	1.92	0	10	10
70	24.585	1041.86	3.40	1040.45	1.99	0	10	10
71	24.691	1040.59	3.51	1039.15	2.07	0	10	10
72	24.797	1039.35	3.66	1037.87	2.17	0	10	10
73	24.903	1038.12	3.81	1036.58	2.28	0	10	10
74	25.009	1036.92	4.00	1035.34	2.41	0	10	10
75	25.115	1035.81	4.27	1034.13	2.59	0	10	10
76	25.222	1034.72	4.56	1032.94	2.78	0	10	10
77	25.328	1033.65	4.88	1031.82	3.05	0	10	10
78	25.434	1032.59	5.20	1030.74	3.35	0	10	10
79	25.540	1031.28	5.28	1029.77	3.77	0	10	10
80	25.645	1029.23	5.23	1027.63	3.63	0	10	10
81	25.749	1027.07	5.07	1025.51	3.51	0	10	10
82	25.854	1024.90	4.90	1023.40	3.40	0	10	10
83	25.958	1022.84	4.84	1021.28	3.28	0	10	10
84	26.063	1020.79	4.79	1019.11	3.11	0	10	10
85	26.167	1018.73	4.73	1016.94	2.94	0	10	10
86	26.272	1016.68	4.68	1014.85	2.85	0	10	10
87	26.376	1014.61	4.61	1012.78	2.78	0	10	10
88	26.481	1012.54	4.54	1010.71	2.71	0	10	10
89	26.585	1010.44	4.44	1008.64	2.64	0	10	10
90	26.690	1008.70	4.70	1006.59	2.59	0	10	10
91	26.910	1004.98	3.98	1003.05	2.05	0	10	10
92	27.130	1001.44	3.44	999.70	1.70	0	10	10
93	27.350	998.01	3.01	996.45	1.45	0	10	10
94	27.570	994.51	2.51	993.27	1.27	0	10	10
95	27.806	990.63	2.63	989.35	1.35	0	10	10
96	28.042	986.77	2.77	985.45	1.45	0	10	10
97	28.278	982.91	2.91	981.55	1.55	0	10	10
98	28.514	979.05	3.05	977.66	1.66	0	10	10
99	28.750	975.15	3.15	973.80	1.80	0	10	10

Cross Section Number I	Cross Section Location XI (mi)	Normal Flow Water Elevation YN (ft MSL)	Normal Flow Depth DEPN (ft)	Critical Flow Water Elevation YC (ft MSL)	Critical Flow Depth DEPC (ft)	Froude Indicator (0 = sub) (1 = sup) IFR	Iteration Count for Computing Nrml Dpth ITN	Iteration Count for Computing Crtl Dpth ITC
100	28.859	972.93	2.93	971.68	1.68	0	10	10
101	28.967	970.76	2.76	969.57	1.57	0	10	10
102	29.076	968.62	2.62	967.49	1.49	0	10	10
103	29.185	966.49	2.49	965.41	1.41	0	10	10
104	29.294	964.38	2.38	963.35	1.35	0	10	10
105	29.402	962.30	2.30	961.29	1.29	0	10	10
106	29.511	960.21	2.21	959.24	1.24	0	10	10
107	29.620	958.35	2.35	957.21	1.21	0	10	10
108	29.740	957.14	2.64	955.82	1.32	0	10	10
109	29.860	956.00	3.00	954.49	1.49	0	10	10
110	29.980	954.87	3.37	953.28	1.78	0	11	11
111	30.100	953.74	3.74	952.58	2.58	0	11	11

SUMMARY OF INITIAL DOWNSTREAM BOUNDARY CONDITIONS :

Cross-section Number at Downstream End of Model (IN) 111
Initial Water Surface Elev. at Downstream End (YNN, ft MSL) 953.744
Initial Flow Depth at Downstream End (DEP, ft) 3.744

COMPUTED STEP BACKWATER TABLE :

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
110	29.980	2329.0	955.039	3.539	4
109	29.860	2329.0	956.160	3.160	4
108	29.740	2329.0	957.301	2.801	4
107	29.620	2329.0	958.471	2.471	4
106	29.511	2329.0	960.069	2.069	4
105	29.402	2329.0	962.336	2.336	3
104	29.294	2329.0	964.341	2.341	4
103	29.185	2329.0	966.471	2.471	4
102	29.076	2329.0	968.572	2.572	4
101	28.967	2329.0	970.710	2.710	4

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
100	28.859	2329.0	972.869	2.869	4
99	28.750	2329.0	975.067	3.067	4
98	28.514	2329.0	979.169	3.169	4
97	28.278	2329.0	982.900	2.900	4
96	28.042	2329.0	986.816	2.816	3
95	27.806	2329.0	990.655	2.655	3
94	27.570	2329.0	994.545	2.545	3
93	27.350	2329.0	997.958	2.958	4
92	27.130	2329.0	1001.292	3.292	4
91	26.910	2329.0	1004.792	3.792	4
90	26.690	2329.0	1008.444	4.444	4
89	26.585	2329.0	1010.379	4.379	4
88	26.481	2329.0	1012.501	4.501	4
87	26.376	2329.0	1014.589	4.589	4
86	26.272	2329.0	1016.658	4.658	4
85	26.167	2329.0	1018.715	4.715	4
84	26.063	2329.0	1020.768	4.768	4
83	25.958	2329.0	1022.822	4.822	4
82	25.854	2329.0	1024.880	4.880	4
81	25.749	2329.0	1027.001	5.001	5
80	25.645	2329.0	1029.181	5.181	4
79	25.540	2329.0	1031.279	5.279	4
78	25.434	2329.0	1032.769	5.384	5
77	25.328	2329.0	1033.846	5.077	5
76	25.222	2329.0	1034.926	4.772	4
75	25.115	2329.0	1036.011	4.473	4
74	25.009	2329.0	1037.115	4.192	4
73	24.903	2329.0	1038.254	3.946	5
72	24.797	2329.0	1039.444	3.752	4
71	24.691	2329.0	1040.673	3.596	4
70	24.585	2329.0	1041.922	3.460	4
69	24.478	2329.0	1043.186	3.339	4
68	24.372	2329.0	1044.462	3.232	4
67	24.266	2329.0	1045.750	3.135	4
66	24.160	2329.0	1047.047	3.047	4
65	24.042	2329.0	1048.415	3.165	4
64	23.925	2329.0	1049.701	3.201	4
63	23.807	2329.0	1050.962	3.212	4
62	23.690	2329.0	1052.171	3.171	4
61	23.581	2329.0	1053.236	3.125	4
60	23.472	2329.0	1054.237	3.015	5
59	23.363	2329.0	1055.230	2.897	5
58	23.254	2329.0	1056.227	2.782	5
57	23.146	2329.0	1057.230	2.674	5
56	23.037	2329.0	1058.239	2.572	5
55	22.928	2329.0	1059.254	2.476	5
54	22.819	2329.0	1060.276	2.387	5
53	22.710	2329.0	1061.304	2.304	5
52	22.490	2329.0	1063.311	2.311	4
51	22.270	2329.0	1065.266	2.266	4

Cross Section Number I	Cross Section Location X (mi)	Flow QIL (cfs)	Backwater Water Surface Elevation YIL (ft MSL)	Backwater Water Depth DEP (ft)	Iteration Count for Computing Backwater ITB
50	22.050	2329.0	1067.241	2.241	4
49	21.830	2329.0	1069.209	2.209	4
48	21.610	2329.0	1071.179	2.179	3
47	21.390	2329.0	1073.152	2.152	4
46	21.060	2329.0	1076.772	1.772	3
45	20.730	2329.0	1080.703	1.703	3
44	20.560	2329.0	1082.615	1.615	4
43	20.390	2329.0	1084.579	1.579	4
42	20.220	2329.0	1086.527	1.527	4
41	20.050	2329.0	1088.490	1.490	4
40	19.785	2329.0	1090.671	1.671	4
39	19.520	2329.0	1092.542	1.542	4
38	19.400	2329.0	1094.180	1.180	4
37	19.280	2329.0	1096.249	1.249	4
36	19.160	2329.0	1098.114	1.114	4
35	19.040	2329.0	1100.115	1.115	4
34	18.795	2329.0	1102.284	1.284	5
33	18.550	2329.0	1104.127	1.127	4
32	18.333	2329.0	1106.132	1.132	4
31	18.117	2329.0	1108.080	1.080	4
30	17.900	2329.0	1110.070	1.070	4
29	17.683	2329.0	1112.039	1.039	5
28	17.467	2329.0	1114.025	1.025	5
27	17.250	2329.0	1116.003	1.003	4
26	16.955	2329.0	1119.904	.904	3
25	16.660	2329.0	1124.074	1.074	4
24	16.436	2329.0	1128.256	.856	3
23	16.212	2329.0	1132.921	1.121	4
22	15.988	2329.0	1137.160	.960	4
21	15.764	2329.0	1141.796	1.196	4
20	15.540	2329.0	1146.079	1.079	4
19	15.420	2329.0	1148.751	1.251	4
18	15.300	2329.0	1151.192	1.192	4
17	15.180	2329.0	1153.829	1.329	4
16	15.060	2329.0	1156.330	1.330	4
15	14.835	2329.0	1162.392	1.392	3
14	14.610	2329.0	1168.627	1.627	4
13	14.576	2329.0	1169.168	1.668	5
12	14.542	2329.0	1169.705	1.705	5
11	14.507	2329.0	1170.245	1.745	5
10	14.473	2329.0	1170.788	1.788	5
9	14.439	2329.0	1171.334	1.834	5
8	14.405	2329.0	1171.885	1.885	5
7	14.371	2329.0	1172.441	1.941	5
6	14.337	2329.0	1173.001	2.001	5
5	14.302	2329.0	1173.569	2.069	5
4	14.268	2329.0	1174.143	2.143	5
3	14.234	2329.0	1174.727	2.227	5
2	14.200	2329.0	1175.320	2.320	5
1	14.170	2329.0	1192.000	17.500	0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
1	1192.00	2329.0
2	1175.32	2329.0
3	1174.73	2329.0
4	1174.14	2329.0
5	1173.57	2329.0
6	1173.00	2329.0
7	1172.44	2329.0
8	1171.89	2329.0
9	1171.33	2329.0
10	1170.79	2329.0
11	1170.24	2329.0
12	1169.70	2329.0
13	1169.17	2329.0
14	1168.63	2329.0
15	1162.39	2329.0
16	1156.33	2329.0
17	1153.83	2329.0
18	1151.19	2329.0
19	1148.75	2329.0
20	1146.08	2329.0
21	1141.80	2329.0
22	1137.16	2329.0
23	1132.92	2329.0
24	1128.26	2329.0
25	1124.07	2329.0
26	1119.90	2329.0
27	1116.00	2329.0
28	1114.02	2329.0
29	1112.04	2329.0
30	1110.07	2329.0
31	1108.08	2329.0
32	1106.13	2329.0
33	1104.13	2329.0
34	1102.28	2329.0
35	1100.12	2329.0
36	1098.11	2329.0
37	1096.25	2329.0
38	1094.18	2329.0
39	1092.54	2329.0
40	1090.67	2329.0
41	1088.49	2329.0
42	1086.53	2329.0
43	1084.58	2329.0
44	1082.62	2329.0
45	1080.70	2329.0
46	1076.77	2329.0
47	1073.15	2329.0
48	1071.18	2329.0
49	1069.21	2329.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
50	1067.24	2329.0
51	1065.27	2329.0
52	1063.31	2329.0
53	1061.30	2329.0
54	1060.28	2329.0
55	1059.25	2329.0
56	1058.24	2329.0
57	1057.23	2329.0
58	1056.23	2329.0
59	1055.23	2329.0
60	1054.24	2329.0
61	1053.24	2329.0
62	1052.17	2329.0
63	1050.96	2329.0
64	1049.70	2329.0
65	1048.41	2329.0
66	1047.05	2329.0
67	1045.75	2329.0
68	1044.46	2329.0
69	1043.19	2329.0
70	1041.92	2329.0
71	1040.67	2329.0
72	1039.44	2329.0
73	1038.25	2329.0
74	1037.12	2329.0
75	1036.01	2329.0
76	1034.93	2329.0
77	1033.85	2329.0
78	1032.77	2329.0
79	1031.28	2329.0
80	1029.18	2329.0
81	1027.00	2329.0
82	1024.88	2329.0
83	1022.82	2329.0
84	1020.77	2329.0
85	1018.72	2329.0
86	1016.66	2329.0
87	1014.59	2329.0
88	1012.50	2329.0
89	1010.38	2329.0
90	1008.44	2329.0
91	1004.79	2329.0
92	1001.29	2329.0
93	997.96	2329.0
94	994.54	2329.0
95	990.66	2329.0
96	986.82	2329.0
97	982.90	2329.0
98	979.17	2329.0
99	975.07	2329.0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
100	972.87	2329.0
101	970.71	2329.0
102	968.57	2329.0
103	966.47	2329.0
104	964.34	2329.0
105	962.34	2329.0
106	960.07	2329.0
107	958.47	2329.0
108	957.30	2329.0
109	956.16	2329.0
110	955.04	2329.0
111	953.74	2329.0

DAM OUTFLOW HYDROGRAPH TIME PARAMETERS :

Time to Failure (TFH, hr)	3.700
Time to Start of Rising Limb of Hydrograph (TFO, hr)	.000
Time to Peak (TP, hr)	.000
Time Step Size (DTHI, hr)	.200

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	2.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	10994.75
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1191.59
Flow at Downstream End of Model (QU(N), cfs)	2350.25
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1191.59	.18	61778.	6493.	6493.	10.995	.0400	.00	-.45	170.0	.0	17.1
14.371	1173.73	2.84	3729.	2411.	2411.	10.573	.0400	.00	1.29	.0	.4	3.2
14.576	1170.30	2.53	3959.	2940.	2940.	9.999	.0400	.00	1.14	.0	.4	2.8
15.420	1149.40	1.98	3817.	3450.	3450.	7.576	.0500	.00	.65	.0	.3	1.9
16.660	1124.21	1.05	3250.	4757.	4757.	3.413	.0500	.00	.13	.0	.2	1.2
18.117	1108.08	.87	2669.	4640.	4640.	2.334	.0500	.00	.00	.0	.2	1.1
19.280	1096.25	1.18	1978.	2736.	2736.	2.332	.0500	.00	.00	.0	.2	1.3
20.390	1084.58	1.37	1699.	1706.	1706.	2.330	.0500	.00	.00	.0	.2	1.6
21.830	1069.21	1.61	1447.	959.	959.	2.330	.0500	.00	.00	.0	.2	2.2
22.928	1059.25	1.63	1428.	958.	958.	2.330	.0500	.00	.00	.0	.2	2.5
23.581	1053.24	1.60	1453.	993.	993.	2.330	.0500	.00	.00	.0	.2	3.1
24.266	1045.75	1.97	1181.	726.	726.	2.330	.0500	.00	.00	.0	.3	3.1
24.903	1038.25	2.09	1116.	584.	584.	2.330	.0500	.00	.00	.0	.3	3.9
25.540	1031.28	2.33	1001.	679.	679.	2.331	.0500	.00	.00	.0	.3	5.3
26.167	1018.72	2.83	824.	423.	423.	2.331	.0500	.00	.00	.0	.4	4.7
26.910	1004.79	2.88	808.	347.	347.	2.331	.0500	.00	.00	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.331	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.43
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.01
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]s [illegible]ion [illegible]er I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	2.000	10995.	1191.59	1175.00	1176.77	1.00	54.05	10995.	9694.	0.	1300.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	2.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	15673.02
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1191.23
Flow at Downstream End of Model (QU(N), cfs)	2350.37
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1191.23	.26	59453.	6363.	6363.	15.673	.0400	.00	-.81	233.0	.0	16.7
14.371	1174.09	3.18	4628.	2572.	2572.	14.729	.0400	.00	1.65	.0	.4	3.6
14.576	1170.63	2.77	4960.	3207.	3207.	13.764	.0400	.00	1.46	.0	.4	3.1
15.420	1149.65	2.19	4708.	3746.	3746.	10.312	.0500	.00	.90	.0	.3	2.2
16.660	1124.46	1.30	4450.	5000.	5000.	5.780	.0500	.00	.38	.0	.2	1.5
8.117	1108.08	.88	2670.	4640.	4640.	2.336	.0500	.00	.00	.0	.2	1.1
9.280	1096.25	1.18	1978.	2736.	2736.	2.333	.0500	.00	.00	.0	.2	1.3
0.390	1084.58	1.37	1700.	1706.	1706.	2.331	.0500	.00	.00	.0	.2	1.6
21.830	1069.21	1.61	1447.	959.	959.	2.330	.0500	.00	.00	.0	.2	2.2
22.928	1059.25	1.63	1428.	958.	958.	2.330	.0500	.00	.00	.0	.2	2.5
23.581	1053.24	1.60	1453.	993.	993.	2.330	.0500	.00	.00	.0	.2	3.1
24.266	1045.75	1.97	1181.	726.	726.	2.330	.0500	.00	.00	.0	.3	3.1
24.903	1038.25	2.09	1116.	584.	584.	2.330	.0500	.00	.00	.0	.3	3.9
25.540	1031.28	2.33	1001.	679.	679.	2.331	.0500	.00	.00	.0	.3	5.3
26.167	1018.72	2.83	824.	423.	423.	2.331	.0500	.00	.00	.0	.4	4.7
26.910	1004.79	2.88	808.	347.	347.	2.331	.0500	.00	.00	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.331	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.45
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.02
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam s ion er I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	2.400	15673.	1191.23	1175.00	1177.23	1.00	64.86	15673.	14398.	0.	1275.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	2.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	17013.09
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1190.72
Flow at Downstream End of Model (QU(N), cfs)	2350.37
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1190.72	.30	56243.	6179.	6179.	17.013	.0400	.00	-1.32	276.0	.0	16.2
14.371	1174.27	3.30	5091.	2652.	2652.	16.813	.0400	.00	1.83	.0	.4	3.8
14.576	1170.84	2.96	5663.	3291.	3291.	16.773	.0400	.00	1.68	.0	.4	3.3
15.420	1149.96	2.42	5923.	4115.	4115.	14.350	.0500	.00	1.21	.0	.4	2.5
16.660	1124.71	1.49	5758.	5252.	5252.	8.591	.0500	.00	.64	.0	.3	1.7
[illegible].117	1108.09	.88	2700.	4645.	4645.	2.383	.0500	.00	.01	.0	.2	1.1
[illegible].280	1096.25	1.18	1978.	2736.	2736.	2.333	.0500	.00	.00	.0	.2	1.3
[illegible].390	1084.58	1.37	1700.	1706.	1706.	2.332	.0500	.00	.00	.0	.2	1.6
21.830	1069.21	1.61	1447.	959.	959.	2.331	.0500	.00	.00	.0	.2	2.2
22.928	1059.25	1.63	1428.	958.	958.	2.330	.0500	.00	.00	.0	.2	2.5
23.581	1053.24	1.60	1453.	993.	993.	2.330	.0500	.00	.00	.0	.2	3.1
24.266	1045.75	1.97	1181.	726.	726.	2.330	.0500	.00	.00	.0	.3	3.1
24.903	1038.25	2.09	1116.	584.	584.	2.330	.0500	.00	.00	.0	.3	3.9
25.540	1031.28	2.33	1001.	679.	679.	2.331	.0500	.00	.00	.0	.3	5.3
26.167	1018.72	2.83	824.	423.	423.	2.331	.0500	.00	.00	.0	.4	4.7
26.910	1004.79	2.88	808.	347.	347.	2.331	.0500	.00	.00	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.331	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.45
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.02
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]s [illegible]ion [illegible]er I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	2.800	17013.	1190.72	1175.00	1177.36	1.00	75.68	17013.	15774.	0.	1239.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	3.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	18002.12
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1190.12
Flow at Downstream End of Model (QU(N), cfs)	2350.41
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1190.12	.34	52584.	5962.	5962.	18.002	.0400	.00	-1.92	293.9	.0	15.6
14.371	1174.35	3.37	5307.	2688.	2688.	17.901	.0400	.00	1.91	.0	.4	3.8
14.576	1170.91	3.02	5877.	3316.	3316.	17.773	.0400	.00	1.74	.0	.4	3.4
15.420	1150.15	2.54	6701.	4336.	4336.	17.023	.0500	.00	1.39	.0	.4	2.6
16.660	1124.99	1.69	7291.	5532.	5532.	12.351	.0500	.00	.92	.0	.3	2.0
18.117	1108.21	1.01	3268.	4734.	4734.	3.294	.0500	.00	.13	.0	.2	1.2
19.280	1096.25	1.18	1979.	2736.	2736.	2.335	.0500	.00	.00	.0	.2	1.3
20.390	1084.58	1.37	1700.	1706.	1706.	2.333	.0500	.00	.00	.0	.2	1.6
21.830	1069.21	1.61	1447.	959.	959.	2.331	.0500	.00	.00	.0	.2	2.2
22.928	1059.25	1.63	1428.	958.	958.	2.330	.0500	.00	.00	.0	.2	2.5
23.581	1053.24	1.60	1453.	993.	993.	2.330	.0500	.00	.00	.0	.2	3.1
24.266	1045.75	1.97	1181.	726.	726.	2.330	.0500	.00	.00	.0	.3	3.1
24.903	1038.25	2.09	1116.	584.	584.	2.330	.0500	.00	.00	.0	.3	3.9
25.540	1031.28	2.33	1001.	679.	679.	2.331	.0500	.00	.00	.0	.3	5.3
26.167	1018.72	2.83	824.	423.	423.	2.331	.0500	.00	.00	.0	.4	4.7
26.910	1004.79	2.88	808.	347.	347.	2.331	.0500	.00	.00	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.331	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.45
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.02
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	3.200	18002.	1190.12	1175.00	1177.45	1.00	86.49	18002.	16804.	0.	1198.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	3.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	18585.95
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1189.41
Flow at Downstream End of Model (QU(N), cfs)	2350.40
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1189.41	.38	48476.	5708.	5708.	18.586	.0400	.00	-2.63	305.2	.0	14.9
14.371	1174.39	3.41	5434.	2709.	2709.	18.538	.0400	.00	1.95	.0	.4	3.9
14.576	1170.95	3.06	6024.	3333.	3333.	18.459	.0400	.00	1.78	.0	.4	3.5
15.420	1150.20	2.58	6956.	4405.	4405.	17.932	.0500	.00	1.45	.0	.4	2.7
16.660	1125.25	1.85	8710.	5780.	5780.	16.122	.0500	.00	1.17	.0	.3	2.2
18.117	1108.59	1.30	5116.	5012.	5012.	6.668	.0500	.00	.51	.0	.2	1.6
19.280	1096.26	1.19	1995.	2739.	2739.	2.369	.0500	.00	.01	.0	.2	1.3
20.390	1084.58	1.37	1701.	1706.	1706.	2.334	.0500	.00	.00	.0	.2	1.6
21.830	1069.21	1.61	1447.	959.	959.	2.332	.0500	.00	.00	.0	.2	2.2
22.928	1059.25	1.63	1428.	958.	958.	2.331	.0500	.00	.00	.0	.2	2.5
23.581	1053.24	1.60	1453.	994.	994.	2.330	.0500	.00	.00	.0	.2	3.1
24.266	1045.75	1.97	1181.	726.	726.	2.330	.0500	.00	.00	.0	.3	3.1
24.903	1038.25	2.09	1117.	584.	584.	2.330	.0500	.00	.00	.0	.3	3.9
25.540	1031.28	2.33	1001.	679.	679.	2.331	.0500	.00	.00	.0	.3	5.3
26.167	1018.72	2.83	824.	423.	423.	2.331	.0500	.00	.00	.0	.4	4.7
26.910	1004.79	2.88	809.	347.	347.	2.331	.0500	.00	.00	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.331	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.45
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.02
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]s [illegible]ion [illegible]er I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	3.600	18586.	1189.41	1175.00	1177.50	1.00	97.30	18586.	17434.	0.	1152.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	4.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	17495.46
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1188.62
Flow at Downstream End of Model (QU(N), cfs)	2350.36
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1188.62	.40	44077.	5424.	5424.	17.495	.0400	.00	-3.42	295.6	.0	14.1
14.371	1174.34	3.35	5282.	2684.	2684.	17.712	.0400	.00	1.90	.0	.4	3.8
14.576	1170.92	3.03	5925.	3321.	3321.	17.949	.0400	.00	1.75	.0	.4	3.4
15.420	1150.23	2.59	7094.	4443.	4443.	18.404	.0500	.00	1.48	.0	.4	2.7
16.660	1125.35	1.89	9314.	5882.	5882.	17.631	.0500	.00	1.27	.0	.3	2.3
18.117	1109.00	1.55	7248.	5315.	5315.	11.250	.0500	.00	.92	.0	.2	2.0
19.280	1096.36	1.32	2293.	2791.	2791.	3.037	.0500	.00	.11	.0	.3	1.4
20.390	1084.58	1.37	1704.	1707.	1707.	2.341	.0500	.00	.00	.0	.2	1.6
21.830	1069.21	1.61	1448.	959.	959.	2.333	.0500	.00	.00	.0	.2	2.2
22.928	1059.25	1.63	1429.	959.	959.	2.331	.0500	.00	.00	.0	.2	2.5
23.581	1053.24	1.60	1453.	994.	994.	2.331	.0500	.00	.00	.0	.2	3.1
24.266	1045.75	1.97	1182.	726.	726.	2.330	.0500	.00	.00	.0	.3	3.1
24.903	1038.25	2.09	1117.	584.	584.	2.330	.0500	.00	.00	.0	.3	3.9
25.540	1031.28	2.33	1001.	679.	679.	2.331	.0500	.00	.00	.0	.3	5.3
26.167	1018.72	2.83	824.	423.	423.	2.331	.0500	.00	.00	.0	.4	4.7
26.910	1004.79	2.88	809.	347.	347.	2.331	.0500	.00	.00	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.331	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FROM)	.44
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.02
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breach Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	4.000	17495.	1188.62	1175.00	1177.41	1.00	100.00	17495.	16395.	0.	1101.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	4.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	15902.08
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1187.79
Flow at Downstream End of Model (QU(N), cfs)	2350.37
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1187.79	.40	39679.	5136.	5136.	15.902	.0400	.00	-4.25	269.5	.0	13.3
14.371	1174.22	3.25	4958.	2629.	2629.	16.108	.0400	.00	1.78	.0	.4	3.7
14.576	1170.82	2.93	5588.	3282.	3282.	16.353	.0400	.00	1.65	.0	.4	3.3
15.420	1150.19	2.55	6879.	4384.	4384.	17.576	.0500	.00	1.43	.0	.4	2.7
16.660	1125.39	1.91	9552.	5922.	5922.	18.241	.0500	.00	1.31	.0	.3	2.4
8.117	1109.32	1.71	8983.	5549.	5549.	15.354	.0500	.00	1.24	.0	.2	2.3
9.280	1096.87	1.84	3779.	3038.	3038.	6.960	.0500	.00	.62	.0	.3	1.9
0.390	1084.62	1.41	1771.	1719.	1719.	2.500	.0500	.00	.04	.0	.2	1.6
21.830	1069.21	1.61	1448.	959.	959.	2.334	.0500	.00	.00	.0	.2	2.2
22.928	1059.26	1.63	1429.	959.	959.	2.332	.0500	.00	.00	.0	.2	2.5
23.581	1053.24	1.60	1453.	994.	994.	2.331	.0500	.00	.00	.0	.2	3.1
24.266	1045.75	1.97	1182.	726.	726.	2.331	.0500	.00	.00	.0	.3	3.1
24.903	1038.25	2.09	1117.	584.	584.	2.330	.0500	.00	.00	.0	.3	3.9
25.540	1031.28	2.33	1001.	679.	679.	2.331	.0500	.00	.00	.0	.3	5.3
26.167	1018.72	2.83	824.	423.	423.	2.331	.0500	.00	.00	.0	.4	4.7
26.910	1004.79	2.88	809.	347.	347.	2.331	.0500	.00	.00	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.331	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.44
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.03
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam s ion er I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	4.400	15902.	1187.79	1175.00	1177.27	1.00	100.00	15902.	14868.	0.	1034.

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Time (TT)	4.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	14280.97
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1186.91
Flow at Downstream End of Model (QU(N), cfs)	2350.41
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1186.91	.40	35298.	4874.	4874.	14.281	.0400	.00	-5.13	242.7	.0	12.4
14.371	1174.09	3.14	4622.	2571.	2571.	14.491	.0400	.00	1.65	.0	.4	3.6
14.576	1170.71	2.82	5232.	3240.	3240.	14.753	.0400	.00	1.54	.0	.4	3.2
15.420	1150.09	2.48	6456.	4267.	4267.	16.029	.0500	.00	1.34	.0	.4	2.6
16.660	1125.37	1.89	9464.	5907.	5907.	17.880	.0500	.00	1.30	.0	.3	2.4
18.117	1109.47	1.77	9840.	5661.	5661.	17.381	.0500	.00	1.39	.0	.2	2.5
19.280	1097.43	2.26	5539.	3306.	3306.	12.538	.0500	.00	1.18	.0	.3	2.4
20.390	1085.04	1.76	2523.	1851.	1851.	4.450	.0500	.00	.46	.0	.3	2.0
21.830	1069.22	1.62	1458.	960.	960.	2.362	.0500	.00	.01	.0	.2	2.2
22.928	1059.26	1.63	1429.	959.	959.	2.333	.0500	.00	.00	.0	.2	2.5
23.581	1053.24	1.60	1454.	994.	994.	2.332	.0500	.00	.00	.0	.2	3.1
24.266	1045.75	1.97	1182.	726.	726.	2.331	.0500	.00	.00	.0	.3	3.1
24.903	1038.26	2.09	1117.	584.	584.	2.331	.0500	.00	.00	.0	.3	3.9
25.540	1031.28	2.33	1001.	679.	679.	2.331	.0500	.00	.00	.0	.3	5.3
26.167	1018.72	2.83	824.	423.	423.	2.331	.0500	.00	.00	.0	.4	4.7
26.910	1004.79	2.88	809.	347.	347.	2.331	.0500	.00	.00	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.331	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.44
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.03
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breaches Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submergence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	4.800	14281.	1186.91	1175.00	1177.12	1.00	100.00	14281.	13326.	0.	955.

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Time (TT)	5.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	12686.13
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1186.02
Flow at Downstream End of Model (QU(N), cfs)	2350.42
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1186.02	.41	31055.	4605.	4605.	12.686	.0400	.00	-6.02	216.3	.0	11.5
14.371	1173.95	3.01	4279.	2511.	2511.	12.899	.0400	.00	1.51	.0	.4	3.5
14.576	1170.60	2.71	4866.	3196.	3196.	13.167	.0400	.00	1.43	.0	.4	3.1
15.420	1149.98	2.40	6017.	4143.	4143.	14.468	.0500	.00	1.23	.0	.4	2.5
16.660	1125.30	1.83	9046.	5837.	5837.	16.578	.0500	.00	1.23	.0	.3	2.3
[illegible]8.117	1109.52	1.78	10117.	5697.	5697.	18.006	.0500	.00	1.44	.0	.2	2.5
[illegible].280	1097.75	2.44	6616.	3460.	3460.	16.119	.0500	.00	1.50	.0	.3	2.7
[illegible].390	1086.02	2.32	4486.	2157.	2157.	10.419	.0500	.00	1.44	.0	.3	3.0
21.830	1069.40	1.75	1629.	986.	986.	2.859	.0500	.00	.19	.0	.2	2.4
22.928	1059.26	1.64	1436.	961.	961.	2.352	.0500	.00	.01	.0	.2	2.5
23.581	1053.24	1.60	1455.	994.	994.	2.335	.0500	.00	.00	.0	.2	3.1
24.266	1045.75	1.97	1182.	727.	727.	2.332	.0500	.00	.00	.0	.3	3.1
24.903	1038.26	2.09	1117.	584.	584.	2.331	.0500	.00	.00	.0	.3	3.9
25.540	1031.28	2.33	1001.	679.	679.	2.331	.0500	.00	.00	.0	.3	5.3
26.167	1018.72	2.83	824.	423.	423.	2.331	.0500	.00	.00	.0	.4	4.7
26.910	1004.79	2.88	809.	347.	347.	2.331	.0500	.00	.00	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.331	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FROM)	.44
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.03
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]on [illegible]r I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	5.200	12686.	1186.02	1175.00	1176.96	1.00	100.00	12686.	11814.	0.	872.

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Time (TT)	5.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	11118.88
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1185.10
Flow at Downstream End of Model (QU(N), cfs)	2350.42
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1185.10	.41	26965.	4331.	4331.	11.119	.0400	.00	-6.94	190.2	.0	10.6
14.371	1173.81	2.88	3930.	2448.	2448.	11.334	.0400	.00	1.37	.0	.4	3.3
14.576	1170.47	2.60	4475.	3130.	3130.	11.613	.0400	.00	1.31	.0	.4	3.0
15.420	1149.88	2.32	5572.	4012.	4012.	12.928	.0500	.00	1.12	.0	.3	2.4
16.660	1125.21	1.77	8525.	5748.	5748.	15.067	.0500	.00	1.14	.0	.3	2.2
18.117	1109.50	1.76	10014.	5684.	5684.	17.642	.0500	.00	1.42	.0	.2	2.5
19.280	1097.87	2.49	7053.	3521.	3521.	17.581	.0500	.00	1.62	.0	.3	2.9
20.390	1086.66	2.55	5933.	2357.	2357.	15.136	.0500	.00	2.08	.0	.3	3.7
21.830	1070.55	2.28	2942.	1444.	1444.	6.719	.0482	.00	1.34	.0	.3	3.6
22.928	1059.38	1.72	1551.	991.	991.	2.660	.0500	.00	.13	.0	.2	2.6
23.581	1053.25	1.62	1471.	1000.	1000.	2.375	.0500	.00	.02	.0	.2	3.1
24.266	1045.75	1.97	1184.	727.	727.	2.338	.0500	.00	.00	.0	.3	3.1
24.903	1038.26	2.09	1117.	584.	584.	2.333	.0500	.00	.00	.0	.3	3.9
25.540	1031.28	2.33	1001.	679.	679.	2.331	.0500	.00	.00	.0	.3	5.3
26.167	1018.72	2.83	825.	423.	423.	2.331	.0500	.00	.00	.0	.4	4.7
26.910	1004.79	2.88	809.	347.	347.	2.331	.0500	.00	.00	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.331	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.44
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.03
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]s [illegible]ion [illegible]er I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	5.600	11119.	1185.10	1175.00	1176.80	1.00	100.00	11119.	10339.	0.	780.

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Time (TT)	6.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	9644.25
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1184.20
Flow at Downstream End of Model (QU(N), cfs)	2350.42
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1184.20	.42	23180.	4060.	4060.	9.644	.0400	.00	-7.84	165.4	.0	9.7
14.371	1173.67	2.75	3584.	2384.	2384.	9.853	.0400	.00	1.23	.0	.4	3.2
14.576	1170.33	2.51	4047.	2974.	2974.	10.143	.0400	.00	1.17	.0	.4	2.8
15.420	1149.76	2.23	5134.	3879.	3879.	11.455	.0500	.00	1.01	.0	.3	2.3
16.660	1125.12	1.70	7987.	5655.	5655.	13.582	.0500	.00	1.04	.0	.3	2.1
[illegible]8.117	1109.43	1.72	9618.	5632.	5632.	16.545	.0500	.00	1.35	.0	.2	2.4
[illegible]9.280	1097.89	2.49	7113.	3529.	3529.	17.746	.0500	.00	1.64	.0	.3	2.9
[illegible].390	1086.92	2.62	6560.	2439.	2439.	17.178	.0500	.00	2.35	.0	.3	3.9
21.830	1071.70	2.67	5054.	2220.	2220.	13.477	.0420	.00	2.49	.0	.3	4.7
22.928	1059.93	1.84	2151.	1316.	1316.	3.968	.0500	.00	.68	.0	.3	3.2
23.581	1053.39	1.69	1611.	1049.	1049.	2.729	.0500	.00	.16	.0	.2	3.3
24.266	1045.79	1.99	1209.	735.	735.	2.412	.0500	.00	.04	.0	.3	3.2
24.903	1038.27	2.09	1123.	585.	585.	2.348	.0500	.00	.01	.0	.3	4.0
25.540	1031.28	2.33	1002.	680.	680.	2.335	.0500	.00	.00	.0	.3	5.3
26.167	1018.72	2.83	825.	423.	423.	2.332	.0500	.00	.00	.0	.4	4.7
26.910	1004.79	2.88	809.	347.	347.	2.331	.0500	.00	.00	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.331	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.43
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.03
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]s [illegible]ion [illegible]r I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	6.000	9644.	1184.20	1175.00	1176.63	1.00	100.00	9644.	8956.	0.	688.

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Time (TT)	6.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	8265.87
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1183.32
Flow at Downstream End of Model (QU(N), cfs)	2350.43
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.87

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1183.32	.42	19738.	3762.	3762.	8.266	.0400	.00	-8.72	142.2	.0	8.8
14.371	1173.52	2.62	3239.	2318.	2318.	8.471	.0400	.00	1.08	.0	.4	3.0
14.576	1170.19	2.41	3630.	2813.	2813.	8.766	.0400	.00	1.02	.0	.4	2.7
15.420	1149.65	2.14	4699.	3743.	3743.	10.039	.0500	.00	.90	.0	.3	2.1
16.660	1125.02	1.63	7446.	5560.	5560.	12.145	.0500	.00	.95	.0	.2	2.0
[illegible]8.117	1109.34	1.67	9092.	5563.	5563.	15.178	.0500	.00	1.26	.0	.2	2.3
[illegible]9.280	1097.84	2.46	6925.	3503.	3503.	17.051	.0500	.00	1.59	.0	.3	2.8
[illegible].390	1086.99	2.62	6712.	2458.	2458.	17.613	.0500	.00	2.41	.0	.3	4.0
21.830	1072.05	2.83	5876.	2429.	2429.	16.607	.0400	.00	2.85	.0	.3	5.1
22.928	1061.09	1.89	4636.	2987.	2987.	8.758	.0500	.00	1.83	.0	.3	4.3
23.581	1053.79	1.89	2056.	1190.	1190.	3.884	.0500	.00	.55	.0	.3	3.7
24.266	1045.99	2.09	1360.	781.	781.	2.848	.0500	.00	.24	.0	.3	3.4
24.903	1038.34	2.12	1169.	601.	601.	2.481	.0500	.00	.09	.0	.3	4.0
25.540	1031.30	2.33	1013.	685.	685.	2.365	.0500	.00	.02	.0	.3	5.3
26.167	1018.72	2.83	827.	424.	424.	2.341	.0500	.00	.01	.0	.4	4.7
26.910	1004.80	2.88	809.	348.	348.	2.333	.0500	.00	.00	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.331	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.43
Cross-Section of Maximum Froude Number (IFR)	15
Minimum Froude Number (FRM)	.03
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]s [illegible]ion [illegible]er I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	6.400	8266.	1183.32	1175.00	1176.45	1.00	100.00	8266.	7679.	0.	587.

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Time (TT)	6.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	6968.40
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1182.45
Flow at Downstream End of Model (QU(N), cfs)	2350.53
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.88

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1182.45	.42	16586.	3456.	3456.	6.968	.0400	.00	-9.59	120.5	.0	7.9
14.371	1173.36	2.50	2868.	2185.	2185.	7.183	.0400	.00	.92	.0	.4	2.9
14.576	1170.04	2.32	3223.	2647.	2647.	7.475	.0400	.00	.87	.0	.4	2.5
15.420	1149.53	2.04	4277.	3606.	3606.	8.714	.0500	.00	.78	.0	.3	2.0
16.660	1124.93	1.56	6909.	5464.	5464.	10.775	.0500	.00	.85	.0	.2	1.9
[illegible]8.117	1109.24	1.62	8537.	5490.	5490.	13.791	.0500	.00	1.16	.0	.2	2.2
[illegible]9.280	1097.74	2.41	6596.	3457.	3457.	15.890	.0500	.00	1.49	.0	.3	2.7
[illegible].390	1086.94	2.59	6594.	2443.	2443.	17.105	.0500	.00	2.36	.0	.3	3.9
21.830	1072.14	2.87	6084.	2443.	2443.	17.451	.0400	.00	2.93	.0	.3	5.1
22.928	1061.94	2.02	7711.	4046.	4046.	15.584	.0493	.00	2.69	.0	.3	5.2
23.581	1054.95	2.38	3679.	1605.	1605.	8.748	.0500	.00	1.71	.0	.3	4.8
24.266	1046.77	2.48	2039.	947.	947.	5.061	.0500	.00	1.02	.0	.3	4.2
24.903	1038.74	2.26	1428.	695.	695.	3.228	.0500	.00	.49	.0	.3	4.4
25.540	1031.40	2.37	1084.	718.	718.	2.572	.0500	.00	.12	.0	.3	5.4
26.167	1018.77	2.85	846.	430.	430.	2.408	.0500	.00	.05	.0	.4	4.8
26.910	1004.81	2.89	814.	350.	350.	2.350	.0500	.00	.02	.0	.3	3.8
28.278	982.90	2.80	833.	393.	393.	2.333	.0500	.00	.00	.0	.3	2.9
29.185	966.47	2.44	955.	599.	599.	2.331	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1452.	1007.	1007.	2.331	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.43
Cross-Section of Maximum Froude Number (IFR)	24
Minimum Froude Number (FRM)	.03
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]s [illegible]ion [illegible]er I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	6.800	6968.	1182.45	1175.00	1176.28	1.00	100.00	6968.	6481.	0.	487.

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Time (TT)	7.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	5728.45
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1181.55
Flow at Downstream End of Model (QU(N), cfs)	2350.81
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.88

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1181.55	.42	13636.	3144.	3144.	5.728	.0400	.00	-10.48	99.8	.0	7.1
14.371	1173.18	2.39	2495.	2033.	2033.	5.954	.0400	.00	.74	.0	.4	2.7
14.576	1169.88	2.22	2820.	2472.	2472.	6.246	.0400	.00	.72	.0	.4	2.4
15.420	1149.42	1.93	3868.	3468.	3468.	7.472	.0500	.00	.67	.0	.3	1.9
16.660	1124.83	1.49	6379.	5367.	5367.	9.478	.0500	.00	.75	.0	.2	1.8
18.117	1109.14	1.56	7981.	5415.	5415.	12.447	.0500	.00	1.06	.0	.2	2.1
19.280	1097.63	2.35	6215.	3404.	3404.	14.584	.0500	.00	1.38	.0	.3	2.6
20.390	1086.83	2.54	6321.	2408.	2408.	16.080	.0500	.00	2.25	.0	.3	3.8
21.830	1072.12	2.84	6032.	2439.	2439.	17.152	.0400	.00	2.91	.0	.3	5.1
22.928	1062.10	2.07	8359.	4104.	4104.	17.270	.0485	.00	2.85	.0	.3	5.3
23.581	1056.17	2.60	6017.	2267.	2267.	15.656	.0477	.00	2.93	.0	.3	6.1
24.266	1048.41	3.18	3785.	1181.	1181.	12.041	.0500	.00	2.66	.0	.3	5.8
24.903	1040.17	2.76	2661.	1031.	1031.	7.352	.0500	.00	1.92	.0	.3	5.9
25.540	1031.96	2.60	1539.	902.	902.	3.993	.0500	.00	.68	.0	.4	6.0
26.167	1019.05	2.96	972.	472.	472.	2.878	.0500	.00	.33	.0	.4	5.0
26.910	1004.91	2.91	851.	366.	366.	2.475	.0500	.00	.12	.0	.3	3.9
28.278	982.91	2.80	837.	394.	394.	2.347	.0500	.00	.01	.0	.3	2.9
29.185	966.47	2.44	956.	599.	599.	2.335	.0500	.00	.00	.0	.3	2.5
29.860	956.16	1.61	1453.	1007.	1007.	2.332	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.43
Cross-Section of Maximum Froude Number (IFR)	24
Minimum Froude Number (FRM)	.04
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Breach Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submergence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	7.200	5728.	1181.55	1175.00	1176.09	1.00	100.00	5728.	5333.	0.	395.

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Time (TT)	7.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	4637.19
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1180.71
Flow at Downstream End of Model (QU(N), cfs)	2353.06
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.88

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1180.71	.42	11114.	2849.	2849.	4.637	.0400	.00	-11.33	80.9	.0	6.2
14.371	1173.00	2.26	2136.	1875.	1875.	4.833	.0400	.00	.56	.0	.4	2.5
14.576	1169.72	2.11	2424.	2286.	2286.	5.103	.0400	.00	.55	.0	.4	2.2
15.420	1149.30	1.82	3465.	3326.	3326.	6.299	.0500	.00	.55	.0	.3	1.8
16.660	1124.73	1.41	5860.	5271.	5271.	8.266	.0500	.00	.65	.0	.2	1.7
18.117	1109.04	1.50	7433.	5340.	5340.	11.167	.0500	.00	.96	.0	.2	2.0
19.280	1097.51	2.28	5825.	3348.	3348.	13.280	.0500	.00	1.27	.0	.3	2.5
20.390	1086.68	2.48	5978.	2363.	2363.	14.853	.0500	.00	2.10	.0	.3	3.7
21.830	1072.05	2.78	5852.	2427.	2427.	16.285	.0400	.00	2.84	.0	.3	5.0
22.928	1062.10	2.05	8341.	4102.	4102.	17.125	.0485	.00	2.85	.0	.3	5.3
23.581	1056.45	2.57	6677.	2428.	2428.	17.135	.0467	.00	3.21	.0	.3	6.3
24.266	1049.11	3.50	4643.	1281.	1281.	16.231	.0472	.00	3.36	.0	.3	6.5
24.903	1041.53	3.48	4280.	1351.	1351.	14.911	.0436	.00	3.28	.0	.3	7.2
25.540	1033.63	3.23	3499.	1448.	1448.	11.310	.0500	.00	2.35	.0	.4	7.6
26.167	1020.47	3.56	1797.	690.	690.	6.406	.0500	.00	1.76	.0	.4	6.5
26.910	1005.63	3.09	1152.	475.	475.	3.564	.0500	.00	.84	.0	.4	4.6
28.278	982.98	2.85	865.	399.	399.	2.465	.0500	.00	.08	.0	.3	3.0
29.185	966.49	2.45	964.	601.	601.	2.362	.0500	.00	.01	.0	.3	2.5
29.860	956.17	1.61	1455.	1009.	1009.	2.338	.0500	.00	.00	.0	.2	3.2

Maximum Froude Number (FRDM)	.43
Cross-Section of Maximum Froude Number (IFR)	24
Minimum Froude Number (FRM)	.04
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]s [illegible]ion [illegible]er I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	7.600	4637.	1180.71	1175.00	1175.89	1.00	100.00	4637.	4326.	0.	311.

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Time (TT)	8.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	3813.28
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1180.03
Flow at Downstream End of Model (QU(N), cfs)	2374.04
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.89

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1180.03	.41	9262.	2612.	2612.	3.813	.0400	.00	-12.01	66.2	.0	5.5
14.371	1172.83	2.16	1841.	1734.	1734.	3.967	.0400	.00	.39	.0	.4	2.3
14.576	1169.56	2.00	2085.	2115.	2115.	4.180	.0400	.00	.40	.0	.4	2.1
15.420	1149.18	1.70	3076.	3183.	3183.	5.218	.0500	.00	.43	.0	.3	1.7
16.660	1124.63	1.33	5350.	5174.	5174.	7.134	.0500	.00	.56	.0	.2	1.6
[illegible].117	1108.94	1.44	6897.	5266.	5266.	9.959	.0500	.00	.85	.0	.2	1.9
[illegible].280	1097.40	2.21	5440.	3292.	3292.	12.025	.0500	.00	1.15	.0	.3	2.4
[illegible].390	1086.53	2.42	5617.	2315.	2315.	13.595	.0500	.00	1.95	.0	.3	3.5
21.830	1071.94	2.70	5592.	2378.	2378.	15.123	.0403	.00	2.73	.0	.3	4.9
22.928	1062.04	2.01	8114.	4082.	4082.	16.329	.0487	.00	2.79	.0	.3	5.3
23.581	1056.44	2.54	6653.	2422.	2422.	16.883	.0467	.00	3.20	.0	.3	6.3
24.266	1049.22	3.55	4791.	1297.	1297.	17.031	.0466	.00	3.47	.0	.3	6.6
24.903	1041.81	3.63	4658.	1415.	1415.	16.918	.0421	.00	3.55	.0	.4	7.5
25.540	1034.40	3.50	4694.	1624.	1624.	16.429	.0492	.00	3.12	.0	.4	8.4
26.167	1022.42	4.19	3462.	1018.	1018.	14.500	.0500	.00	3.70	.0	.4	8.4
26.910	1007.87	3.77	2604.	818.	818.	9.820	.0500	.00	3.08	.0	.4	6.9
28.278	983.62	3.23	1134.	445.	445.	3.667	.0500	.00	.72	.0	.4	3.6
29.185	966.60	2.54	1035.	619.	619.	2.627	.0500	.00	.13	.0	.3	2.6
29.860	956.19	1.62	1478.	1019.	1019.	2.395	.0500	.00	.03	.0	.2	3.2

Maximum Froude Number (FRDM)	.43
Cross-Section of Maximum Froude Number (IFR)	24
Minimum Froude Number (FRM)	.04
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]s [illegible]on [illegible]r I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	3	8.000	3813.	1180.03	1175.00	1175.71	1.00	100.00	3813.	3570.	0.	243.

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Time (TT)	8.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	3220.15
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1179.51
Flow at Downstream End of Model (QU(N), cfs)	2637.98
Water Elevation at Downstream End of Model (YU(N), ft MSL)	953.99

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1179.51	.41	7929.	2465.	2465.	3.220	.0400	.00	--12.53	55.5	.0	5.0
14.371	1172.70	2.07	1615.	1618.	1618.	3.335	.0400	.00	.26	.0	.4	2.2
14.576	1169.43	1.92	1822.	1971.	1971.	3.496	.0400	.00	.27	.0	.4	1.9
15.420	1149.07	1.58	2735.	3052.	3052.	4.317	.0500	.00	.32	.0	.3	1.6
[illegible].660	1124.53	1.25	4851.	5078.	5078.	6.081	.0500	.00	.46	.0	.2	1.5
[illegible]8.117	1108.84	1.38	6375.	5193.	5193.	8.826	.0500	.00	.75	.0	.2	1.8
[illegible].280	1097.29	2.13	5080.	3238.	3238.	10.833	.0500	.00	1.04	.0	.3	2.3
20.390	1086.37	2.35	5258.	2266.	2266.	12.379	.0500	.00	1.79	.0	.3	3.4
21.830	1071.82	2.62	5307.	2296.	2296.	13.926	.0409	.00	2.61	.0	.3	4.8
22.928	1061.96	1.96	7794.	4054.	4054.	15.273	.0491	.00	2.71	.0	.2	5.2
23.581	1056.34	2.50	6410.	2364.	2364.	16.051	.0470	.00	3.10	.0	.3	6.2
24.266	1049.17	3.51	4723.	1290.	1290.	16.561	.0469	.00	3.42	.0	.3	6.6
24.903	1041.80	3.61	4648.	1413.	1413.	16.792	.0422	.00	3.54	.0	.4	7.5
25.540	1034.46	3.53	4793.	1632.	1632.	16.936	.0491	.00	3.18	.0	.4	8.5
26.167	1022.89	4.26	3960.	1097.	1097.	16.860	.0500	.00	4.18	.0	.4	8.9
26.910	1009.00	4.61	3574.	899.	899.	16.473	.0439	.00	4.20	.0	.4	8.0
28.278	985.91	3.75	2567.	848.	848.	9.638	.0500	.00	3.01	.0	.4	5.9
29.185	967.33	3.03	1528.	733.	733.	4.636	.0500	.00	.86	.0	.4	3.3
29.860	956.40	1.73	1705.	1121.	1121.	2.952	.0500	.00	.24	.0	.2	3.4

Maximum Froude Number (FRDM)	.45
Cross-Section of Maximum Froude Number (IFR)	93
Minimum Froude Number (FRM)	.04
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

[illegible]s [illegible]ion Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	8.400	3220.	1179.51	1175.00	1175.57	1.00	100.00	3220.	3020.	0.	200.

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Time (TT)	8.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	2800.18
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1179.11
Flow at Downstream End of Model (QU(N), cfs)	4883.19
Water Elevation at Downstream End of Model (YU(N), ft MSL)	954.63

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1179.11	.40	6982.	2357.	2357.	2.800	.0400	.00	-12.92	47.9	.0	4.6
14.371	1172.59	1.99	1446.	1526.	1526.	2.884	.0400	.00	.15	.0	.4	2.1
14.576	1169.33	1.85	1624.	1856.	1856.	3.004	.0400	.00	.16	.0	.3	1.8
15.420	1148.98	1.48	2461.	2943.	2943.	3.632	.0500	.00	.23	.0	.3	1.5
16.660	1124.44	1.17	4371.	4984.	4984.	5.131	.0500	.00	.36	.0	.2	1.4
[illegible].117	1108.74	1.32	5870.	5121.	5121.	7.775	.0500	.00	.66	.0	.2	1.7
[illegible].280	1097.18	2.05	4734.	3186.	3186.	9.713	.0500	.00	.93	.0	.3	2.2
[illegible].390	1086.22	2.29	4908.	2217.	2217.	11.223	.0500	.00	1.64	.0	.3	3.2
21.830	1071.69	2.54	5014.	2208.	2208.	12.748	.0415	.00	2.48	.0	.3	4.7
22.928	1061.88	1.90	7445.	4022.	4022.	14.170	.0494	.00	2.62	.0	.2	5.1
23.581	1056.19	2.47	6080.	2283.	2283.	15.011	.0474	.00	2.96	.0	.3	6.1
24.266	1049.06	3.42	4579.	1273.	1273.	15.655	.0474	.00	3.31	.0	.3	6.4
24.903	1041.71	3.54	4525.	1393.	1393.	16.020	.0426	.00	3.46	.0	.3	7.4
25.540	1034.40	3.49	4697.	1624.	1624.	16.371	.0492	.00	3.12	.0	.4	8.4
26.167	1022.87	4.24	3935.	1093.	1093.	16.674	.0500	.00	4.15	.0	.4	8.9
26.910	1009.06	4.64	3628.	903.	903.	16.839	.0437	.00	4.26	.0	.4	8.1
28.278	987.43	4.01	4087.	1145.	1145.	16.377	.0500	.00	4.53	.0	.4	7.4
29.185	969.04	3.87	3032.	1056.	1056.	11.749	.0500	.00	2.56	.0	.4	5.0
29.860	957.39	2.18	3052.	1596.	1596.	6.652	.0500	.00	1.23	.0	.3	4.4

Maximum Froude Number (FRDM)	.44
Cross-Section of Maximum Froude Number (IFR)	93
Minimum Froude Number (FRM)	.04
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam [illegible]s [illegible]ion [illegible]er I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	8.800	2800.	1179.11	1175.00	1175.46	1.00	100.00	2800.	2630.	0.	170.

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Time (TT)	9.2000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	2
Flow at Upstream End of Model (QU(1), cfs)	2509.52
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1178.83
Flow at Downstream End of Model (QU(N), cfs)	12940.63
Water Elevation at Downstream End of Model (YU(N), ft MSL)	955.92

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1178.83	.40	6326.	2279.	2279.	2.510	.0400	.00	-13.21	42.6	.0	4.3
14.371	1172.51	1.94	1325.	1455.	1455.	2.569	.0400	.00	.07	.0	.4	2.0
14.576	1169.25	1.80	1478.	1767.	1767.	2.655	.0400	.00	.08	.0	.3	1.8
15.420	1148.91	1.39	2246.	2854.	2854.	3.124	.0500	.00	.15	.0	.3	1.4
16.660	1124.35	1.10	3940.	4898.	4898.	4.335	.0500	.00	.28	.0	.2	1.4
8.117	1108.64	1.26	5380.	5051.	5051.	6.800	.0500	.00	.56	.0	.2	1.6
9.280	1097.08	1.97	4402.	3135.	3135.	8.668	.0500	.00	.83	.0	.3	2.1
0.390	1086.06	2.22	4568.	2169.	2169.	10.124	.0500	.00	1.48	.0	.3	3.1
21.830	1071.55	2.46	4721.	2117.	2117.	11.624	.0422	.00	2.34	.0	.3	4.5
22.928	1061.79	1.85	7103.	3991.	3991.	13.120	.0498	.00	2.54	.0	.2	5.0
23.581	1056.04	2.44	5725.	2192.	2192.	13.955	.0478	.00	2.80	.0	.3	5.9
24.266	1048.92	3.32	4406.	1254.	1254.	14.623	.0481	.00	3.17	.0	.3	6.3
24.903	1041.59	3.45	4361.	1365.	1365.	15.033	.0432	.00	3.34	.0	.3	7.3
25.540	1034.30	3.41	4536.	1610.	1610.	15.455	.0494	.00	3.02	.0	.4	8.3
26.167	1022.74	4.19	3793.	1071.	1071.	15.888	.0500	.00	4.02	.0	.4	8.7
26.910	1008.98	4.56	3558.	898.	898.	16.233	.0440	.00	4.19	.0	.4	8.0
28.278	987.52	3.98	4195.	1163.	1163.	16.702	.0500	.00	4.62	.0	.4	7.5
29.185	969.91	4.12	4036.	1240.	1240.	16.618	.0500	.00	3.44	.0	.4	5.9
29.860	958.66	2.79	5379.	1964.	1964.	14.986	.0488	.00	2.50	.0	.3	5.7

Maximum Froude Number (FRDM)	.44
Cross-Section of Maximum Froude Number (IFR)	93
Minimum Froude Number (FRM)	.04
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam s ion er I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(1) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	2	9.200	2510.	1178.83	1175.00	1175.38	1.00	100.00	2510.	2361.	0.	148.

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Time (TT)	9.6000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	2401.47
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1178.64
Flow at Downstream End of Model (QU(N), cfs)	16634.90
Water Elevation at Downstream End of Model (YU(N), ft MSL)	956.30

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1178.64	.41	5883.	2225.	2225.	2.401	.0400	.00	-13.40	39.7	.0	4.1
14.371	1172.45	1.90	1239.	1404.	1404.	2.354	.0400	.00	.01	.0	.4	1.9
14.576	1169.19	1.75	1375.	1700.	1700.	2.414	.0400	.00	.02	.0	.3	1.7
16.420	1148.85	1.32	2079.	2783.	2783.	2.754	.0500	.00	.09	.0	.3	1.3
16.660	1124.28	1.04	3581.	4825.	4825.	3.717	.0500	.00	.20	.0	.2	1.3
18.117	1108.55	1.20	4910.	4982.	4982.	5.907	.0500	.00	.47	.0	.2	1.5
19.280	1096.97	1.88	4085.	3086.	3086.	7.697	.0500	.00	.72	.0	.3	2.0
20.390	1085.91	2.15	4240.	2121.	2121.	9.095	.0500	.00	1.33	.0	.3	2.9
21.830	1071.41	2.38	4429.	2022.	2022.	10.556	.0428	.00	2.20	.0	.3	4.4
22.928	1061.69	1.80	6713.	3864.	3864.	12.079	.0500	.00	2.44	.0	.2	4.9
23.581	1055.87	2.41	5366.	2096.	2096.	12.934	.0483	.00	2.63	.0	.3	5.8
24.266	1048.78	3.22	4227.	1233.	1233.	13.592	.0488	.00	3.03	.0	.3	6.2
24.903	1041.46	3.35	4184.	1334.	1334.	14.014	.0438	.00	3.21	.0	.3	7.2
25.540	1034.18	3.32	4352.	1595.	1595.	14.436	.0498	.00	2.90	.0	.4	8.2
26.167	1022.57	4.13	3613.	1042.	1042.	14.922	.0500	.00	3.85	.0	.4	8.6
26.910	1008.86	4.44	3448.	890.	890.	15.324	.0446	.00	4.06	.0	.4	7.9
28.278	987.42	3.94	4076.	1143.	1143.	16.066	.0500	.00	4.52	.0	.4	7.4
29.185	969.90	4.10	4026.	1238.	1238.	16.495	.0500	.00	3.43	.0	.4	5.9
29.860	958.87	2.87	5804.	1988.	1988.	16.675	.0482	.00	2.71	.0	.3	5.9

Maximum Froude Number (FRDM)	.44
Cross-Section of Maximum Froude Number (IFR)	93
Minimum Froude Number (FRM)	.04
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	9.600	2401.	1178.64	1175.00	1175.34	1.00	100.00	2401.	2263.	0.	138.

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Time (TT)	10.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	2401.47
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1178.48
Flow at Downstream End of Model (QU(N), cfs)	16234.62
Water Elevation at Downstream End of Model (YU(N), ft MSL)	956.30

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1178.48	.43	5535.	2181.	2181.	2.401	.0400	.00	-13.56	39.7	.0	4.0
14.371	1172.45	1.90	1239.	1404.	1404.	2.354	.0400	.00	.01	.0	.4	1.9
14.576	1169.17	1.74	1343.	1679.	1679.	2.337	.0400	.00	.00	.0	.3	1.7
[illegible].420	1148.80	1.28	1953.	2729.	2729.	2.495	.0500	.00	.05	.0	.3	1.3
[illegible]6.660	1124.22	.99	3293.	4766.	4766.	3.253	.0500	.00	.14	.0	.2	1.2
[illegible]8.117	1108.46	1.14	4470.	4917.	4917.	5.114	.0500	.00	.38	.0	.2	1.5
[illegible]9.280	1096.88	1.80	3784.	3039.	3039.	6.801	.0500	.00	.63	.0	.3	1.9
20.390	1085.76	2.07	3926.	2074.	2074.	8.137	.0500	.00	1.18	.0	.3	2.8
21.830	1071.26	2.31	4141.	1923.	1923.	9.552	.0435	.00	2.05	.0	.3	4.3
22.928	1061.57	1.77	6258.	3690.	3690.	11.058	.0500	.00	2.32	.0	.2	4.8
23.581	1055.69	2.39	5002.	1994.	1994.	11.945	.0488	.00	2.45	.0	.3	5.6
24.266	1048.62	3.11	4038.	1211.	1211.	12.548	.0496	.00	2.87	.0	.3	6.0
24.903	1041.32	3.25	3999.	1301.	1301.	12.986	.0445	.00	3.07	.0	.3	7.0
25.540	1034.06	3.24	4148.	1578.	1578.	13.427	.0500	.00	2.78	.0	.4	8.1
26.167	1022.38	4.07	3424.	1012.	1012.	13.931	.0500	.00	3.67	.0	.4	8.4
26.910	1008.72	4.32	3324.	882.	882.	14.342	.0453	.00	3.92	.0	.4	7.7
28.278	987.26	3.89	3898.	1112.	1112.	15.168	.0500	.00	4.36	.0	.4	7.3
29.185	969.79	4.05	3892.	1215.	1215.	15.758	.0500	.00	3.32	.0	.4	5.8
29.860	958.82	2.83	5703.	1983.	1983.	16.125	.0483	.00	2.66	.0	.3	5.8

Maximum Froude Number (FRDM)	.44
Cross-Section of Maximum Froude Number (IFR)	24
Minimum Froude Number (FRM)	.05
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

[illegible]s [illegible]ion Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	10.000	2401.	1178.48	1175.00	1175.34	1.00	100.00	2401.	2267.	0.	134.

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Time (TT)	10.4000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	2401.47
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1178.34
Flow at Downstream End of Model (QU(N), cfs)	15440.73
Water Elevation at Downstream End of Model (YU(N), ft MSL)	956.24

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1178.34	.46	5247.	2145.	2145.	2.401	.0400	.00	-13.69	39.7	.1	3.8
14.371	1172.45	1.90	1239.	1404.	1404.	2.354	.0400	.00	.01	.0	.4	1.9
[illegible].576	1169.17	1.74	1339.	1676.	1676.	2.329	.0400	.00	.00	.0	.3	1.7
[illegible].420	1148.78	1.27	1907.	2708.	2708.	2.424	.0500	.00	.03	.0	.3	1.3
[illegible]6.660	1124.17	.94	3052.	4715.	4715.	2.882	.0500	.00	.09	.0	.2	1.2
[illegible]8.117	1108.38	1.09	4074.	4857.	4857.	4.437	.0500	.00	.30	.0	.2	1.4
19.280	1096.78	1.71	3498.	2993.	2993.	5.984	.0500	.00	.53	.0	.3	1.8
20.390	1085.61	2.00	3627.	2029.	2029.	7.251	.0500	.00	1.03	.0	.3	2.6
21.830	1071.11	2.23	3857.	1821.	1821.	8.615	.0443	.00	1.90	.0	.3	4.1
22.928	1061.44	1.74	5796.	3504.	3504.	10.082	.0500	.00	2.19	.0	.2	4.7
23.581	1055.50	2.37	4640.	1887.	1887.	10.993	.0493	.00	2.27	.0	.3	5.4
24.266	1048.45	3.01	3835.	1187.	1187.	11.550	.0500	.00	2.70	.0	.3	5.8
24.903	1041.17	3.15	3812.	1267.	1267.	11.992	.0452	.00	2.92	.0	.3	6.9
25.540	1033.91	3.18	3914.	1539.	1539.	12.437	.0500	.00	2.63	.0	.4	7.9
26.167	1022.19	4.00	3232.	979.	979.	12.936	.0500	.00	3.47	.0	.4	8.2
26.910	1008.57	4.18	3194.	873.	873.	13.360	.0460	.00	3.78	.0	.4	7.6
28.278	987.09	3.84	3702.	1078.	1078.	14.209	.0500	.00	4.18	.0	.4	7.1
29.185	969.65	3.99	3719.	1185.	1185.	14.843	.0500	.00	3.18	.0	.4	5.6
29.860	958.74	2.76	5538.	1973.	1973.	15.278	.0485	.00	2.58	.0	.3	5.7

Maximum Froude Number (FRDM)	.44
Cross-Section of Maximum Froude Number (IFR)	24
Minimum Froude Number (FRM)	.05
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

[illegible]s Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	10.400	2401.	1178.34	1175.00	1175.34	1.00	100.00	2401.	2271.	0.	131.

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Time (TT)	10.8000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	2401.47
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1178.23
Flow at Downstream End of Model (QU(N), cfs)	14525.35
Water Elevation at Downstream End of Model (YU(N), ft MSL)	956.16

River Location X(I) (mi)	Water Surface Elevation Y (ft MSL)	Flow Velocity V (ft/s)	Flow Area A (sq ft)	Channel Top Width B (ft)	Top Width Including Storage BT (ft)	Flow Q*1000 (cfs)	Mannings n CMM	Contract/ Expansion Coeff. FKC	Height Above Initial Condition WAVHT (ft)	Discharge Volume From Reservoir DISV (acre-ft)	Froude Number FRD	Depth Above Channel Bottom DEPTH (ft)
14.170	1178.23	.48	5010.	2114.	2114.	2.401	.0400	.00	-13.81	39.7	.1	3.7
14.371	1172.45	1.90	1239.	1404.	1404.	2.354	.0400	.00	.01	.0	.4	1.9
14.576	1169.17	1.74	1339.	1676.	1676.	2.329	.0400	.00	.00	.0	.3	1.7
15.420	1148.77	1.27	1874.	2694.	2694.	2.384	.0500	.00	.02	.0	.3	1.3
16.660	1124.13	.91	2867.	4676.	4676.	2.619	.0500	.00	.05	.0	.2	1.1
18.117	1108.31	1.04	3735.	4806.	4806.	3.886	.0500	.00	.23	.0	.2	1.3
19.280	1096.69	1.63	3232.	2949.	2949.	5.253	.0500	.00	.44	.0	.3	1.7
20.390	1085.47	1.93	3344.	1985.	1985.	6.437	.0500	.00	.89	.0	.3	2.5
21.830	1070.95	2.16	3580.	1716.	1716.	7.745	.0450	.00	1.74	.0	.3	4.0
22.928	1061.31	1.71	5349.	3314.	3314.	9.166	.0500	.00	2.06	.0	.2	4.5
23.581	1055.32	2.34	4307.	1783.	1783.	10.070	.0498	.00	2.09	.0	.3	5.2
24.266	1048.26	2.93	3611.	1160.	1160.	10.578	.0500	.00	2.51	.0	.3	5.6
24.903	1041.02	3.04	3625.	1231.	1231.	11.038	.0460	.00	2.77	.0	.3	6.7
25.540	1033.75	3.12	3677.	1488.	1488.	11.482	.0500	.00	2.47	.0	.4	7.7
26.167	1021.99	3.94	3043.	946.	946.	11.976	.0500	.00	3.28	.0	.4	8.0
26.910	1008.42	4.04	3065.	863.	863.	12.392	.0467	.00	3.63	.0	.4	7.4
28.278	986.90	3.78	3502.	1041.	1041.	13.242	.0500	.00	3.99	.0	.4	6.9
29.185	969.49	3.93	3537.	1152.	1152.	13.893	.0500	.00	3.02	.0	.4	5.5
29.860	958.64	2.68	5350.	1962.	1962.	14.347	.0487	.00	2.48	.0	.3	5.6

Maximum Froude Number (FRDM)	.43
Cross-Section of Maximum Froude Number (IFR)	24
Minimum Froude Number (FRM)	.05
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number I	Iteration Count K	Elapsed Time TT (hr)	Outflow From Dam Q(I) (cfs)	Dam Water Surface Elevation H2 (ft MSL)	Breach Bottom Elevation YB (ft MSL)	Tailwater Elevation D (ft MSL)	Breach Submer-gence Correct. SUB	Breach Bottom Width BB (ft)	Flow Upstream Of Dam QU(1) (cfs)	Breach Outflow QBRECH (cfs)	Flow Over Top Of Dam QOVTOP (cfs)	Gate And Turbine Flow QOTHR (cfs)
1	1	10.800	2401.	1178.23	1175.00	1175.34	1.00	100.00	2401.	2274.	0.	127.

Normalized conservation of mass as percent of maximum flow
in reach = -.61

ROUTING COMPLETED :

Number of Time Steps Used (KTIME)	55
Maximum Number of Time Steps Allowed	1199
Total Time of Flood Routing (TT, hr)	11.2

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
14.170	1192.06	18585	.400	.49	.00	.00
14.200	1177.50	18585	3.600	3.71	.00	.00
14.234	1176.85	18571	3.600	3.66	97.49	.00
14.268	1176.22	18562	3.600	3.60	194.98	.00
14.302	1175.60	18554	3.600	3.53	292.47	.00
14.337	1174.99	18546	3.600	3.47	389.96	.00
14.371	1174.39	18537	3.600	3.41	487.45	.00
14.405	1173.80	18527	3.600	3.35	584.94	.00
14.439	1173.22	18515	3.600	3.29	682.44	.00
14.473	1172.64	18503	3.600	3.24	779.93	.00
14.507	1172.07	18489	3.600	3.18	877.42	.00
14.542	1171.51	18474	3.600	3.12	974.91	.00
14.576	1170.95	18462	3.800	3.06	1072.40	.00
14.610	1170.41	18470	3.800	2.99	1169.89	2.20
14.835	1164.09	18482	3.800	3.22	1163.79	2.60
15.060	1158.11	18438	3.800	2.83	1157.70	2.60
15.180	1155.47	18404	3.800	2.74	1155.10	2.80
15.300	1152.84	18398	4.000	2.67	1152.50	2.80
15.420	1150.23	18404	4.000	2.59	1149.90	2.80
15.540	1147.62	18394	4.000	2.56	1147.30	2.80
15.764	1143.19	18331	4.200	2.35	1142.82	3.00
15.988	1138.50	18344	4.200	2.59	1138.34	3.40
16.212	1134.24	18280	4.400	2.17	1133.86	3.20
16.436	1129.39	18295	4.400	2.72	1129.38	4.20
16.660	1125.39	18240	4.600	1.91	1124.90	3.20
16.955	1121.00	18231	4.600	2.19	1120.95	4.00
17.250	1117.25	18184	4.800	1.64	1117.00	3.80
17.467	1115.30	18119	5.000	1.67	1115.00	3.80
17.683	1113.37	18098	5.000	1.71	1113.00	4.00
17.900	1111.44	18040	5.200	1.74	1111.00	4.00
18.117	1109.52	18005	5.200	1.78	1109.00	4.00
18.333	1107.60	17967	5.400	1.83	1107.00	4.20
18.550	1105.77	17893	5.600	1.82	1105.00	4.20
18.795	1103.98	17858	5.600	1.73	1102.90	4.20
19.040	1101.54	17821	5.800	2.31	1100.80	4.40
19.160	1099.69	17814	5.800	2.40	1099.13	4.80
19.280	1097.89	17792	5.800	2.50	1097.45	5.00
19.400	1096.11	17765	6.000	2.67	1095.78	5.20
19.520	1095.02	17762	6.000	2.32	1094.10	5.00
19.785	1093.08	17689	6.200	2.22	1091.95	5.00
20.050	1090.71	17668	6.200	2.51	1089.80	5.20
20.220	1088.84	17624	6.400	2.56	1087.90	5.20
20.390	1086.99	17612	6.400	2.63	1086.00	5.20
20.560	1085.16	17593	6.400	2.70	1084.10	5.40
20.730	1083.31	17540	6.600	2.82	1082.20	5.40
21.060	1079.95	17519	6.600	2.89	1078.50	5.60
21.390	1076.14	17479	6.800	3.68	1074.80	5.60
21.610	1074.17	17480	6.800	3.20	1072.83	5.60

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
21.830	1072.14	17450	6.800	2.87	1070.87	5.80
22.050	1070.09	17428	7.000	2.64	1068.90	5.80
22.270	1068.07	17422	7.000	2.43	1066.93	6.00
22.490	1065.92	17365	7.200	2.43	1064.97	6.20
22.710	1064.18	17354	7.200	1.95	1063.00	6.20
22.819	1063.14	17319	7.400	2.00	1061.92	6.40
22.928	1062.11	17314	7.400	2.07	1060.84	6.40
23.037	1061.10	17306	7.400	2.13	1059.77	6.40
23.146	1060.12	17277	7.400	2.20	1058.69	6.60
23.254	1059.17	17230	7.600	2.26	1057.61	6.60
23.363	1058.26	17223	7.600	2.33	1056.53	6.60
23.472	1057.38	17190	7.600	2.42	1055.46	6.60
23.581	1056.46	17134	7.800	2.60	1054.38	6.80
23.690	1055.23	17116	7.800	3.28	1053.30	6.80
23.807	1054.01	17093	7.800	3.42	1052.03	6.80
23.925	1052.76	17045	8.000	3.55	1050.75	6.80
24.042	1051.53	17026	8.000	3.63	1049.47	6.80
24.160	1050.47	17028	8.000	3.53	1048.20	7.00
24.266	1049.22	17031	8.000	3.55	967.57	.00
24.372	1047.98	17033	8.000	3.58	886.94	.00
24.478	1046.75	17029	8.000	3.60	806.31	.00
24.585	1045.51	17017	8.000	3.61	725.68	.00
24.691	1044.28	16994	8.200	3.62	645.05	.00
24.797	1043.05	16978	8.200	3.63	564.42	.00
24.903	1041.82	16989	8.200	3.63	483.79	.00
25.009	1040.59	16994	8.200	3.64	403.16	.00
25.115	1039.35	16992	8.200	3.64	322.53	.00
25.222	1038.12	16973	8.200	3.63	241.90	.00
25.328	1036.90	16949	8.200	3.59	161.27	.00
25.434	1035.67	16927	8.400	3.57	80.63	.00
25.540	1034.46	16935	8.400	3.53	.00	.00
25.645	1032.67	16943	8.400	3.59	.00	.00
25.749	1030.83	16932	8.400	3.66	.00	.00
25.854	1028.92	16919	8.400	3.80	.00	.00
25.958	1026.95	16905	8.400	3.95	.00	.00
26.063	1024.94	16886	8.600	4.11	.00	.00
26.167	1022.90	16878	8.600	4.26	.00	.00
26.272	1020.84	16886	8.600	4.38	.00	.00
26.376	1018.77	16889	8.600	4.46	.00	.00
26.481	1016.72	16889	8.600	4.49	.00	.00
26.585	1014.70	16888	8.600	4.47	.00	.00
26.690	1012.70	16882	8.600	4.42	.00	.00
26.910	1009.06	16845	8.800	4.64	.00	.00
27.130	1005.48	16862	8.800	4.90	.00	.00
27.350	1002.08	16855	8.800	5.07	.00	.00
27.570	999.42	16823	8.800	4.31	.00	.00
27.806	995.48	16787	9.000	4.19	.00	.00
28.042	991.53	16787	9.000	4.07	.00	.00

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
28.278	987.53	16756	9.000	4.01	.00	.00
28.514	983.69	16728	9.200	3.77	.00	.00
28.750	979.26	16731	9.200	4.21	.00	.00
28.859	976.88	16726	9.200	4.22	.00	.00
28.967	974.52	16710	9.200	4.20	.00	.00
29.076	972.21	16678	9.400	4.17	.00	.00
29.185	969.93	16694	9.400	4.12	.00	.00
29.294	967.68	16706	9.400	4.06	.00	.00
29.402	965.46	16716	9.400	3.99	.00	.00
29.511	963.26	16713	9.400	3.94	.00	.00
29.620	961.52	16696	9.400	3.37	.00	.00
29.740	960.17	16641	9.600	3.11	.00	.00
29.860	958.87	16675	9.600	2.87	.00	.00
29.980	957.60	16682	9.600	2.68	.00	.00
30.100	956.31	16634	9.800	2.57	.00	.00

COMPUTED WATER SURFACE ELEVATIONS AT REQUESTED
STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Water Surface Elevation YC(K,1) (ft MSL)	Station 2 Water Surface Elevation YC(K,2) (ft MSL)	Station 3 Water Surface Elevation YC(K,3) (ft MSL)	Station 4 Water Surface Elevation YC(K,4) (ft MSL)	Station 5 Water Surface Elevation YC(K,5) (ft MSL)	Station 6 Water Surface Elevation YC(K,6) (ft MSL)
1	.000	1192.04	1146.08	1124.08	1092.54	1047.05	958.47
2	.200	1192.05	1146.08	1124.08	1092.54	1047.05	958.47
3	.400	1192.06	1146.08	1124.08	1092.54	1047.05	958.47
4	.600	1192.06	1146.08	1124.08	1092.54	1047.05	958.47
5	.800	1192.05	1146.10	1124.08	1092.54	1047.05	958.47
6	1.000	1192.01	1146.14	1124.08	1092.54	1047.05	958.47
7	1.200	1191.97	1146.23	1124.08	1092.54	1047.05	958.47
8	1.400	1191.91	1146.36	1124.08	1092.54	1047.05	958.47
9	1.600	1191.82	1146.50	1124.09	1092.54	1047.05	958.47
10	1.800	1191.72	1146.62	1124.13	1092.54	1047.05	958.47
11	2.000	1191.59	1146.74	1124.21	1092.54	1047.05	958.47
12	2.200	1191.43	1146.86	1124.33	1092.54	1047.05	958.47
13	2.400	1191.23	1146.99	1124.46	1092.54	1047.05	958.47
14	2.600	1190.99	1147.14	1124.58	1092.54	1047.05	958.47
15	2.800	1190.72	1147.30	1124.71	1092.54	1047.05	958.47
16	3.000	1190.43	1147.44	1124.85	1092.54	1047.05	958.47
17	3.200	1190.12	1147.52	1124.99	1092.54	1047.05	958.47
18	3.400	1189.78	1147.56	1125.14	1092.54	1047.05	958.47
19	3.600	1189.41	1147.58	1125.25	1092.55	1047.05	958.47
20	3.800	1189.02	1147.61	1125.31	1092.56	1047.05	958.47
21	4.000	1188.62	1147.62	1125.35	1092.61	1047.05	958.47
22	4.200	1188.21	1147.61	1125.37	1092.79	1047.05	958.47
23	4.400	1187.79	1147.58	1125.39	1093.15	1047.05	958.47
24	4.600	1187.35	1147.53	1125.39	1093.63	1047.05	958.47
25	4.800	1186.91	1147.48	1125.37	1094.08	1047.05	958.47
26	5.000	1186.47	1147.42	1125.34	1094.43	1047.05	958.47
27	5.200	1186.02	1147.37	1125.30	1094.69	1047.05	958.47
28	5.400	1185.56	1147.31	1125.26	1094.85	1047.05	958.47
29	5.600	1185.10	1147.25	1125.21	1094.95	1047.05	958.47
30	5.800	1184.65	1147.19	1125.17	1095.01	1047.06	958.47
31	6.000	1184.20	1147.14	1125.12	1095.02	1047.10	958.47
32	6.200	1183.76	1147.08	1125.07	1095.01	1047.17	958.47
33	6.400	1183.32	1147.01	1125.02	1094.98	1047.32	958.47
34	6.600	1182.88	1146.95	1124.97	1094.93	1047.62	958.47
35	6.800	1182.45	1146.89	1124.93	1094.87	1048.18	958.47
36	7.000	1182.00	1146.83	1124.88	1094.79	1049.00	958.47
37	7.200	1181.55	1146.77	1124.83	1094.72	1049.77	958.47
38	7.400	1181.11	1146.70	1124.78	1094.64	1050.18	958.47
39	7.600	1180.71	1146.64	1124.73	1094.56	1050.37	958.48
40	7.800	1180.35	1146.57	1124.68	1094.47	1050.45	958.49
41	8.000	1180.03	1146.51	1124.63	1094.39	1050.47	958.52
42	8.200	1179.75	1146.44	1124.58	1094.31	1050.45	958.63
43	8.400	1179.51	1146.38	1124.53	1094.23	1050.41	958.91
44	8.600	1179.30	1146.33	1124.49	1094.14	1050.35	959.47
45	8.800	1179.11	1146.28	1124.44	1094.06	1050.29	960.27
46	9.000	1178.96	1146.24	1124.39	1093.98	1050.23	960.98
47	9.200	1178.83	1146.20	1124.35	1093.90	1050.16	961.39
48	9.400	1178.72	1146.16	1124.31	1093.82	1050.08	961.52
49	9.600	1178.44	1146.14	1124.28	1093.74	1050.01	961.52

Time K	Elapsed Time TTP(K) (hr)	Station 1 Water Surface Elevation YC(K,1) (ft MSL)	Station 2 Water Surface Elevation YC(K,2) (ft MSL)	Station 3 Water Surface Elevation YC(K,3) (ft MSL)	Station 4 Water Surface Elevation YC(K,4) (ft MSL)	Station 5 Water Surface Elevation YC(K,5) (ft MSL)	Station 6 Water Surface Elevation YC(K,6) (ft MSL)
50	9.800	1178.55	1146.11	1124.25	1093.66	1049.93	961.49
51	10.000	1178.48	1146.09	1124.22	1093.59	1049.85	961.44
52	10.200	1178.41	1146.09	1124.19	1093.51	1049.75	961.39
53	10.400	1178.34	1146.09	1124.17	1093.43	1049.66	961.34
54	10.600	1178.29	1146.09	1124.15	1093.36	1049.56	961.28
55	10.800	1178.23	1146.09	1124.13	1093.29	1049.46	961.22

COMPUTED DISCHARGES AT REQUESTED
[redacted] WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count K	Elapsed Time TTP(K) (hr)	Station 1 Discharge QC(K,1) (cfs E3)	Station 2 Discharge QC(K,2) (cfs E3)	Station 3 Discharge QC(K,3) (cfs E3)	Station 4 Discharge QC(K,4) (cfs E3)	Station 5 Discharge QC(K,5) (cfs E3)	Station 6 Discharge QC(K,6) (cfs E3)
1	.000	2.33	2.33	2.33	2.33	2.33	2.33
2	.200	2.52	2.33	2.33	2.33	2.33	2.33
3	.400	3.09	2.34	2.33	2.33	2.33	2.33
4	.600	3.81	2.35	2.33	2.33	2.33	2.33
5	.800	4.61	2.44	2.34	2.33	2.33	2.33
6	1.000	5.47	2.69	2.34	2.33	2.33	2.33
7	1.200	6.33	3.24	2.34	2.33	2.33	2.33
8	1.400	7.31	4.08	2.36	2.33	2.33	2.33
9	1.600	8.40	5.07	2.45	2.33	2.33	2.33
10	1.800	9.58	6.11	2.72	2.33	2.33	2.33
11	2.000	10.99	7.21	3.41	2.33	2.33	2.33
12	2.200	12.52	8.44	4.51	2.33	2.33	2.33
13	2.400	15.67	9.87	5.78	2.33	2.33	2.33
14	2.600	16.38	11.63	7.12	2.33	2.33	2.33
15	2.800	17.01	13.75	8.59	2.33	2.33	2.33
16	3.000	17.55	15.71	10.32	2.33	2.33	2.33
17	3.200	18.00	16.85	12.35	2.33	2.33	2.33
18	3.400	18.35	17.37	14.45	2.34	2.33	2.33
19	3.600	18.59	17.81	16.12	2.35	2.33	2.33
20	3.800	18.28	18.22	17.10	2.40	2.33	2.33
21	4.000	17.50	18.39	17.63	2.63	2.33	2.33
22	4.200	16.71	18.24	18.00	3.42	2.33	2.33
23	4.400	15.90	17.74	18.24	5.27	2.33	2.33
24	4.600	15.09	17.01	18.21	8.09	2.33	2.33
25	4.800	14.28	16.23	17.88	11.02	2.33	2.33
26	5.000	13.48	15.45	17.29	13.51	2.33	2.33
27	5.200	12.69	14.67	16.58	15.39	2.33	2.33
28	5.400	11.90	13.90	15.82	16.59	2.33	2.33
29	5.600	11.12	13.13	15.07	17.32	2.34	2.33
30	5.800	10.37	12.39	14.32	17.68	2.36	2.33
31	6.000	9.64	11.66	13.58	17.76	2.44	2.33
32	6.200	8.94	10.94	12.86	17.60	2.61	2.33
33	6.400	8.27	10.24	12.15	17.26	2.96	2.33
34	6.600	7.61	9.56	11.45	16.77	3.72	2.33
35	6.800	6.97	8.91	10.77	16.19	5.56	2.33
36	7.000	6.34	8.27	10.12	15.56	9.01	2.33
37	7.200	5.73	7.66	9.48	14.91	12.71	2.33
38	7.400	5.15	7.06	8.86	14.26	15.02	2.34
39	7.600	4.64	6.49	8.27	13.61	16.38	2.34
40	7.800	4.19	5.92	7.69	12.98	16.96	2.37
41	8.000	3.81	5.39	7.13	12.36	17.03	2.45
42	8.200	3.49	4.90	6.60	11.77	16.86	2.72
43	8.400	3.22	4.46	6.08	11.17	16.51	3.46
44	8.600	2.99	4.08	5.59	10.60	16.08	5.26
45	8.800	2.80	3.75	5.13	10.04	15.59	8.66
46	9.000	2.64	3.46	4.71	9.50	15.08	12.99
47	9.200	2.51	3.21	4.33	8.98	14.55	15.88
48	9.400	2.40	3.00	4.00	8.48	14.04	16.70
49	9.600	2.40	2.82	3.72	7.99	13.52	16.62

Time	Elapsed Time	Station 1 Discharge	Station 2 Discharge	Station 3 Discharge	Station 4 Discharge	Station 5 Discharge	Station 6 Discharge
	TTP(K) (hr)	QC(K,1) (cfs E3)	QC(K,2) (cfs E3)	QC(K,3) (cfs E3)	QC(K,4) (cfs E3)	QC(K,5) (cfs E3)	QC(K,6) (cfs E3)
50	9.800	2.40	2.67	3.48	7.53	12.98	16.36
51	10.000	2.40	2.54	3.25	7.08	12.47	16.00
52	10.200	2.40	2.45	3.05	6.65	11.96	15.58
53	10.400	2.40	2.45	2.88	6.25	11.46	15.13
54	10.600	2.40	2.44	2.74	5.86	10.97	14.66
55	10.800	2.40	2.42	2.62	5.49	10.49	14.19

END OF OUTPUT