TECHNICAL MEMORANDUM
FAILURE HYDROLGRAPHS FOR THE HARQUAHALA AND SADDLEBACK FLOOD RETARDING STRUCTURES

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CARTER ASSOCIATES, INC. / ENGINEERS & PLANNERS

TECHNICAL MEMORANDUM
FAILURE HYDROLGRAPHS FOR THE HARQUAHALA AND SADDLEBACK FLOOD RETARDING STRUCTURES

Prepared for:
THE FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

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

November 1990

Carter Job No. 06-016-83395.02
Project No. FCD-88-66

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INTRODUCTION

The following Technical Memorandum is prepared in fulfillment of the requirements for Deliverable No. 4 under Flood Control District of Maricopa County Contract FCD 88-66. The purpose of this memorandum is to summarize failure hydrograph information. The information summarized in this memorandum includes:

1. Routing of the 6-hour and 72-hour 1/2 probable maximum flood (PMF) hydrograph through each FRS to evaluate the potential for overtopping.
2. Based on the type of failure mechanism selected from Step 1 above, estimate ~~in~~ breach parameters such as breach size and shape as well as formation time.
3. Using the breach parameters estimated from the breach model for the hydrograph which produced the highest peak discharge, run the Dambreak-88 model for each failure scenario ~~the~~ to develop failure hydrograph~~s~~ for 3 breach locations on the HQFRS and 2 breach locations on the SBFRS.

The results of our analysis ~~is~~ are presented in the following text and appendices.

Routing of 1/2 PMF

The 1/2 PMF hydrographs resulting from the 6-hour and 72-hour probable maximum precipitation (PMP) events were estimated and presented in the Hydrology Report, Dambreak Analysis for Harquahala

and Saddleback Flood Retarding Structures, Volumes I and II, Carter Associates, Inc., August 1990 (Hydrology Report). The respective hydrographs were routed through the HQFRS and SBFRS to evaluate the potential for overtopping. The HEC-1 computer model was used to prepare this analysis. The detailed input to the model for each FRS is presented in the Hydrology Report (Carter Associates, August 1990) and Appendix A of this memorandum. Dynamic Routing?

The results of the flood routing indicated that neither the HQFRS or the SBFRS overtopped. The maximum stage obtained in our routing analysis is given on Table 1. We concluded from this analysis that the failure mechanism for each structure would be piping.

Failure Parameter

The failure parameters that were input into DAMBRK-88 were approximated using the microversion of the National Weather Service Breach Model dated January 1987. The failure parameters approximated using this model were final breach dimensions and time for breach formation. A copy of the input and output variable names is provided in Appendix B.

The basic dam shape data was presented in the Hydrology Report (Carter 1990). The properties of the materials comprising the structures were selected based on data provided in references 2, 3, 4, 5, 6, 7, 8 and 9, professional judgment. A detailed summary

of the values selected for each of the required input variables are given in Appendix C.

Our analysis consisted of running the breach model for the 1/2 PMF hydrographs resulting from the 6-hour and 72-hour PMP for each structure. The breach analysis was conducted at three locations on the HQFRS and two locations on the SBFRS (Figure 1).

The analysis at each breach location consisted of failing the structure via piping for various initial water surface elevations. The elevation at which the piping failure started were also varied. These variations were conducted for both the 6-hour and 72-hour events. The indicator used in selecting the inflow hydrograph, the breach size and the time for the breach to form was the peak breach discharge.

The peak breach discharge from the HQFRS was obtained for the 1/2 PMF resulting from a 72-hour PMP (Table 2). The elevation at which piping was started for the HQFRS breaches was selected to occur at about 1/2 the distance between the crest and the bottom of the dam. The initial reservoir water surface elevation at the time piping started was selected to correspond to the maximum reservoir stage during HEC-1 routing of the 72-hour 1/2 PMF event (Appendix A). The peak discharge from the SBFRS was also obtained for the 1/2 PMF resulting from a 72-hour PMP. The piping elevation was selected to occur near the bottom of the SBFRS and the initial water surface

was selected to be at the maximum stage estimated during the HEC-1 routing of the 72-hour, 1/2 PMF event (Appendix A).

The breach dimensions selected to run the DAMBRK-88 model were breach bottom width and time for breach formation. The breach bottom width was selected as approximately the width that existed at the time the peak discharge occurred while running the BREACH model. The time for breach formation was selected as approximately the time from when piping commenced to the time the peak breach discharge occurred. A summary of the break analysis is provided in Table 2. The detailed input and output for the 5 breaches selected is given in Appendix B.

Dambreak Failure Hydrographs

The DAMBRK-88 model was run with the breach parameters listed in Table 2. Carter Associates used BOSS DAMBRK prepared by Boss Corporation. This micro-computer program is based around a highly optimized version of two original programs written in 1984 and 1988 by Professor D. L. Fread, Senior Hydrologist with the Hydrologic Research Laboratory, National Weather Service, NOAA, Silver Spring, Maryland 20910. It is our understanding that the Flood Control District of Maricopa County has this model and using it is acceptable in lieu of the National Weather Service version.

The Dambreak model was run for piping failures at each of the five assumed failure locations for the 1/2 PMF resulting from the 72-hour PMP.

Problem Option No. 13 was selected for estimating the outflow hydrograph from each piping breach. The input data used in DAMBRK for each of the breach locations is given in Appendix D. Also included in Appendix D is a summary of breach discharge and breach discharge times. A summary of peak breach discharge for each of the five breach locations is given in Table 3.

REFERENCES

Boss Corporation, Boss DAMBRK, Madison, Wisconsin. 1989.

National Weather Service, Breach An Erosion Model for Earthen Dam Failures, Silver Springs, Maryland. 1987.

PRC Toups Corps, Harquahala WPP Embankment Design, September 1978.

Sergent, Hauskins and Beckwith Engineers, Geological Investigation Report, Saddleback FRS and Diversion, Materials Testing Results, February 1978.

Soil Conservation Service. Final Design Report and Design Calculations, Harquahala Valley WPP, Arizona, Harquahala FRS, August 1980.

Soil Conservation Service. Harquahala FRS and Floodway, Geological Investigation Summary and Test Results, Harquahala Valley Watershed, Maricopa and Yuma Counties, Arizona, August 1978.

Soil Conservation Service. Saddleback FRS and Diversion, Specifications and Drawings, Harquahala Valley Watershed, Maricopa and Yuma Counties, Arizona, August 1979.

Soil Conservation Service. Harquahala Valley WPP, Arizona, Harquahala FRS, Design Data, September 1980.

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TABLE 1

SUMMARY OF ROUTING OF 1/2 PMF HYDROGRAPHS

FRS	ELEV. DAM CREST	PMP STORM	ELEV. MAX STAGE
Harquahala (HQ)	1419.70	6-hour	1415.41
		72-hour	1418.48
Saddleback (SB)	1193.33	6-hour	1190.83
		72-hour	1192.07

TABLE 2

SUMMARY OF BREACH ANALYSIS

FRS	Breach Location	PMP	Top Initial W.S. Elev.	Initial Breach Elev	Peak Discharge (cfs)	Breach Botton Width	Time for Breach
HQ	East	6-hr.	1415.4	1397.8	146437	307	3.2
		72-hr.	1418.5	1397.8	217237	420	3.1
			1419.7				
HQ	Middle	6-hr.	1415.4	1404.9	120725	578	3.6
		72-hr.	1418.5	1404.9	203186	788	3.1
HQ	West	6-hr.	1415.4	1407.9	71888	563	4.5
		72-hr.	1418.5	1407.9	137821	793	3.5
SB	North	6-hr.	1190.80	1183.50	6537	122	5.8
		72-hr.	1192.00	1183.50	11835	201	5.4
			1193.3				
SB	South	6-hr.	1190.80	1176.90	11844	64	3.4
		72-hr.	1192.00	1176.90	18061	100	3.7

?

TABLE 3

SUMMARY OF DAMBRK FAILURE HYDROGRAPH ANALYSIS

FRS	BREACH LOCATION	½ PMP	PEAK DISCHARGE (cfs)
HQ	East	72-hour	185,478 ✓
HQ	Middle	72-hour	155,725 ✓
HQ	West	72-hour	117,823 ✓
SB	North	72-hour	12,054 ✓
SB	South	72-hour	18,480 ✓

DAMBREAK ANALYSIS
OF
FAR-WEST MARICOPA COUNTY STRUCTURES

LEGEND

- APPROXIMATE WATERSHED LIMITS
- APPROXIMATE SUB-WATERSHED LIMITS
- DA — DRAINAGE AREA
- CN — CURVE NUMBER
- DIRECTION OF FLOW
- FLOOD RETARDING STRUCTURE (PRIMARY STRUCTURE)
- FLOODWAY (SECONDARY STRUCTURE)
- UNGATED CONDUIT OVERCHUTES
- (3) SUB-WATERSHED DESIGNATION
- LEVEE OR DIKE (SECONDARY STRUCTURE)
- CP1 — CONCENTRATION POINT (COMBINED HYDROGRAPH)
- BREACH LOCATION

DATE: Oct. 24 1990
UOD Nº 0170.83395.03

CARTER ASSOCIATES, INC.
CONSULTING ENGINEERS, PLANNERS & SURVEYORS
5080 North 40th Street • Suite 300 • Phoenix, Az. 85018 • (602) 955-0900
7675 Dagget Street • Suite 350 • San Diego, Ca. 92111 • (619) 292-6161

dsn:
drn:
ckd:

BREACH LOCATION MAP

FIGURE 1

F.C.D.M.C. CONTRACT F.C.D. 88-66

APPENDIX A

HEC-1, 1/2 PMF INFLOW HYDROGRAPH ROUTING

HQFRS OUTPUT, 72-HOUR PMP, 1/2 PMF, ROUTED THROUGH HQFRS
HQFRS OUTPUT, 6-HOUR PMP, 1/2 PMF, ROUTED THROUGH HQFRS

SBFRS OUTPUT, 72-HOUR PMP, 1/2 PMF, ROUTED THROUGH SBFRS
SBFRS OUTPUT, 6-HOUR PMP, 1/2 PMF, ROUTED THROUGH SBFRS

```
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.072
              *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           UI       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
```

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 ***

```
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.06
              *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 THRU 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  111.98  166.29  272.73  401.06  718.81  1268.6 3160.99
 44           SV  4577.8  6287.6 8287.32 9998.0911880.79 15696.3 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
```

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 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
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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
```

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 ***

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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
```

```
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
```

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		

ROUTED TO						
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

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 ***

APPENDIX B

BREACH MODEL INPUT AND OUTPUT VARIABLES

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 streambed 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: $1 < B < 2$. 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 C

BREACH OUTPUT

HQFRS BREACH OUTPUT, 72-HOUR PMP 1/2 PMF, EAST BREACH
HQFRS BREACH OUTPUT, 6-HOUR PMP 1/2 PMF, EAST BREACH

HQFRS BREACH OUTPUT, 72-HOUR PMP 1/2 PMF, MIDDLE BREACH
HQFRS BREACH OUTPUT, 6-HOUR PMP 1/2 PMF, MIDDLE BREACH

HQFRS BREACH OUTPUT, 72-HOUR PMP 1/2 PMF, WEST BREACH
HQFRS BREACH OUTPUT, 6-HOUR PMP 1/2 PMF, WEST BREACH

SBFRS BREACH OUTPUT, 72-HOUR PMP 1/2 PMF, NORTH BREACH
SBFRS BREACH OUTPUT, 6-HOUR PMP 1/2 PMF, NORTH BREACH

SBFRS BREACH OUTPUT, 72-HOUR PMP 1/2 PMF, SOUTH BREACH
SBFRS BREACH OUTPUT, 6-HOUR PMP 1/2 PMF, SOUTH BREACH

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        BREACH MODEL, MICRO-VERSION: 1/87

PIPING 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
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APR= 39.0 TH1= 84.30 H1= 6.88 TH2= 31.73 H2= 22.73 TH3= 43.30 H3= 70.00

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
54	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

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
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
58	1.142	.002	2	0	36567.	13156.	23410.22	1.000	71.3	1418.2	1387.5	20.6	198.4	.0	.0098	.000	.000	0	38.3
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
86	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

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
112	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.	35673.65	1.000	85.0	1418.0	1378.8	20.6	223.5	8.7	.0098	.095	.095	2	38.3
120	1.266	.002	2	0	48769.	12953.	35816.44	1.000	85.1	1418.0	1378.8	20.6	223.7	8.8	.0098	.091	.091	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
123	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
147	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
148	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

159	1.812	.020	3	0	91283.	11072.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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
173	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
174	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	137063.	7839.	129224.00	1.000	220.5	1414.8	1375.9	151.5	4.5	11.6	.0098	2.259	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
183	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
184	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
208	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
209	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
234	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
235	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	67080.	0.	67080.20	1.000	613.6	1387.7	1375.9	544.5	2.3	3.6	.0098	1.170	1.169	3	38.3

KTT= 0 I= 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

TIME*****	44176.0	74176.0	104176.0	134176.0	164176.0	194176.0	224176.0	254176.0	284176.0	314176.0	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.

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        BREACH MODEL, MICRO-VERSION: 1/87

PIPING 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

50C=   .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

R=  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
54  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
55  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.
6833  .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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59	1.162	.002	2	0	23458.	8166.	15291.13	1.000	65.5	1415.0	1389.1	17.3	193.8	.0	.0098	.000	.000	0	38.3
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.	24956.93	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	33097.	7952.	25144.25	1.000	79.3	1414.8	1380.4	17.3	218.9	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
122	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
123	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
147	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
148	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
173	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
174	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

181	1.928	.020	3	0	66160.	5482.	60678.45	1.000	132.4	1413.4	1375.9	63.3	2.1	12.5	.0098	1.060	1.061	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
183	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
184	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
208	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
209	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
234	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
235	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

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

TF= .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

TIME*****	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.

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        BREACH MODEL, MICRO-VERSION: 1/87

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

HI=   1418.50  HU=   1419.70  HL=   1390.00  HPI=   1404.90  HSF=  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=   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.
.05876  .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
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99	1.026	.020	3	0	26233.	13425.	12808.07	1.000	45.2	1418.3	1390.0	14.7	1.0	12.3	.0098	.523	.523	2	27.2
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
106	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
107	1.186	.020	3	0	30427.	13270.	17157.48	1.000	55.1	1418.2	1390.0	24.6	1.4	10.6	.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	PPF	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
126	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
127	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	1.584	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
152	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
153	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

160	2.246	.020	3	0	109661.	9936.	99724.92	1.000	269.1	1416.0	1390.0	238.6	8.1	7.5	.0098	4.070	4.072	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
167	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
168	2.406	.020	3	0	131577.	8578.	122999.00	1.000	342.6	1415.2	1390.0	312.1	10.0	7.2	.0098	5.018	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	148784.	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	BO	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
187	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
188	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	196163.	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
213	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
214	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

221	3.466	.020	3	0	166518.	0.	166517.60	1.000	1114.7	1403.6	1390.01084.2	13.6	4.1	.0098	6.797	6.791	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
228	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
229	3.626	.020	3	0	127054.	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
248	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
249	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
274	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
275	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

282	4.686	.020	3	0	5101.	0.	5101.15	1.000	1314.1	1391.2	1390.01283.6	.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
289	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
290	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	4591.	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
309	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
310	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

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        BREACH MODEL, MICRO-VERSION: 1/87

PIPING 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


  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
```

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
114	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
115	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
133	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
134	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
159	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
160	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

167	1.936	.020	3	0	33223.	7054.	26168.98	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

228	3.156	.020	3	0	103312.	1582.	101730.30	1.000	393.5	1410.3	1390.0	363.2	8.3	5.9	.0098	4.159	4.157	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
236	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
255	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
256	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
281	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
282	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

289	4.376	.020	3	0	49741.	0.	49741.27	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
296	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
297	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

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TIME***** 24921.0   44921.0   64921.0   84921.0  104921.0  124921.0  144921.0  164921.0  184921.0  204921.0     DISCHARGE
  .120. *       .         .         .         .         .         .         .         .         .         .        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.
 1.120.     *   .         .         .         .         .         .         .         .         .         .       16543.
 1.160.     *   .         .         .         .         .         .         .         .         .         .       16821.
 1.200.     *   .         .         .         .         .         .         .         .         .         .       17301.
 1.240.     *   .         .         .         .         .         .         .         .         .         .       17810.
 1.280.      *  .         .         .         .         .         .         .         .         .         .       18350.
 1.320.      *  .         .         .         .         .         .         .         .         .         .       18923.
 1.360.      *  .         .         .         .         .         .         .         .         .         .       19530.
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        BREACH MODEL, MICRO-VERSION: 1/87

PIPING 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

DTH=  .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


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


  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.
```

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= 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

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

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.			
.05837	.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
95	1.036	.020	3	0	22734.	13468.	9265.79	1.000	41.8	1418.4	1396.0	19.2	.9	9.3	.0098	.442	.442	1	25.5
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
103	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
123	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
149	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.	50868.87	1.000	189.9	1417.0	1396.0	167.3	4.9	6.6	.0098	2.428	2.428	1	25.5
157	2.276	.020	3	0	63530.	11406.	52124.77	1.000	194.9	1416.9	1396.0	172.3	5.0	6.5	.0098	2.486	2.485	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
185	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
210	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
211	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	137146.	2831.	134314.70	1.000	751.1	1411.4	1396.0	728.5	12.8	4.8	.0098	6.422	6.417	1	25.5
218	3.496	.020	3	0	137400.	2635.	134764.70	1.000	764.0	1411.3	1396.0	741.4	12.9	4.8	.0098	6.430	6.425	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
225	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
226	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
245	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
246	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
271	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
272	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
279	4.716	.020	3	0	52767.	0.	52767.43	1.000	1377.1	1401.4	1396.0	1354.5	5.0	1.9	.0098	2.506	2.510	5	25.5
280	4.736	.020	3	0	51020.	0.	51019.79	1.000	1381.9	1401.3	1396.0	1359.3	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	1396.0	1364.0	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	1396.0	1368.5	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	1396.0	1372.9	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	1396.0	1377.1	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	1396.0	1381.2	4.1	1.6	.0098	2.049	2.042	5	25.5
286	4.856	.020	3	0	41305.	0.	41305.45	1.000	1407.8	1400.6	1396.0	1385.2	3.9	1.6	.0098	1.974	1.968	5	25.5
287	4.876	.020	3	0	39822.	0.	39822.21	1.000	1411.6	1400.4	1396.0	1389.0	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	1396.0	1392.6	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	1396.0	1396.2	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	1396.0	1399.6	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	1396.0	1402.9	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	1396.0	1406.0	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	1396.0	1409.1	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	1396.0	1412.0	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	1396.0	1414.8	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	1396.0	1417.5	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	1396.0	1420.1	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	1396.0	1420.1	.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	1396.0	1420.1	.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	1396.0	1420.1	.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	1396.0	1422.0	1.9	1.1	.0098	.956	.953	5	38.3

301	5.156	.020	3	0	23038.	0.	23038.44	1.000	1459.4	1397.0	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
305	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
306	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
331	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
332	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
338	5.896	.020	3	0	6508.	0.	6507.81	1.000	1496.8	1397.3	1396.01459.4		.5	.5	.0098	.271	.273	5	38.3
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
346	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
347	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

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

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QTIME***** 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.
 1.040.        *.         .         .         .         .         .         .         .         .        22788.
 1.080.        *.         .         .         .         .         .         .         .         .        23335.
 1.120.         *         .         .         .         .         .         .         .         .        23915.
 1.160.         *         .         .         .         .         .         .         .         .        24529.
 1.200.         *         .         .         .         .         .         .         .         .        25178.
 1.240.         .*        .         .         .         .         .         .         .         .        25866.
 1.280.         .*        .         .         .         .         .         .         .         .        26593.
 1.320.         .*        .         .         .         .         .         .         .         .        27362.
 1.360.         . *       .         .         .         .         .         .         .         .        28174.
 1.400.         . *       .         .         .         .         .         .         .         .        29032.
 1.440.         .  *      .         .         .         .         .         .         .         .        29937.
 1.480.         .  *      .         .         .         .         .         .         .         .        30893.
 1.520.         .   *     .         .         .         .         .         .         .         .        31900.
 1.560.         .   *     .         .         .         .         .         .         .         .        32962.
 1.600.         .    *    .         .         .         .         .         .         .         .        34081.
 1.640.         .    *    .         .         .         .         .         .         .         .        35257.
 1.680.         .     *   .         .         .         .         .         .         .         .        36497.
 1.720.         .      *  .         .         .         .         .         .         .         .        37799.
 1.760.         .      *  .         .         .         .         .         .         .         .        39167.
 1.800.         .       * .         .         .         .         .         .         .         .        40603.
 1.840.         .        *.         .         .         .         .         .         .         .        42109.
 1.880.         .         *         .         .         .         .         .         .         .        43688.
 1.920.         .         *         .         .         .         .         .         .         .        45339.
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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
129	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
153	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
154	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
179	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
180	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

182	2.164	.020	3	0	22534.	7241.	15292.69	1.000	79.6	1414.4	1396.0	57.0	1.5	6.2	.0098	.731	.730	1	25.5
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
190	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
214	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
215	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
240	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
241	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

243	3.384	.020	3	0	50618.	4097.	46521.56	1.000	250.4	1412.4	1396.0	227.8	4.4	5.1	.0098	2.223	2.222	1	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	6.8	3.7	.0098	3.425	3.423	2	25.5

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
304	4.604	.020	3	0	71515.	0.	71515.25	1.000	619.5	1407.6	1396.0	596.9	6.8	3.7	.0098	3.409	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
336	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
337	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	32588.	0.	32588.12	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.	31812.36	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

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TIME***** 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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        BREACH MODEL, MICRO-VERSION: 1/87

PIPING 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


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

  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
  51  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
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58	1.160	.020	3	0	3859.	1312.	2546.38	1.000	22.8	1192.0	1182.5	12.5	.3	6.3	.0098	.143	.143	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

I	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
85	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
86	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
111	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
112	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

119	2.380	.020	3	0	5925.	1290.	4634.95	1.000	50.1	1191.6	1182.5	39.8	.6	4.7	.0098	.297	.297	2	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
122	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
146	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
147	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
172	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
173	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

180	3.600	.020	3	0	8830.	1246.	7583.74	1.000	97.6	1191.0	1182.5	87.3	1.0	3.8	.0098	.484	.484	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
208	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
234	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

241	4.820	.020	3	0	11410.	1172.	10238.15	1.000	168.2	1189.9	1182.5	157.8	1.3	3.2	.0098	.656	.657	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
243	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
244	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
268	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
269	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
294	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
295	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

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
304	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
305	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
329	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
330	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
355	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
356	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
451	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
452	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
477	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
478	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
487	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
488	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
512	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
513	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
538	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
539	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	KG	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
548	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
549	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

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QTIME*****  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.
 1.300.         . *      .         .         .         .         .         .         .         .         .        4035.
 1.340.         .  *     .         .         .         .         .         .         .         .         .        4091.
 1.380.         .  *     .         .         .         .         .         .         .         .         .        4149.
 1.420.         .  *     .         .         .         .         .         .         .         .         .        4207.
 1.460.         .   *    .         .         .         .         .         .         .         .         .        4267.
 1.500.         .   *    .         .         .         .         .         .         .         .         .        4328.
 1.540.         .   *    .         .         .         .         .         .         .         .         .        4390.
 1.580.         .   *    .         .         .         .         .         .         .         .         .        4453.
 1.620.         .    *   .         .         .         .         .         .         .         .         .        4517.
 1.660.         .    *   .         .         .         .         .         .         .         .         .        4581.
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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

DTH=  .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


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


 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.
.05318  .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
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I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
57	1.140	.020	3	0	2935.	1228.	1707.42	1.000	20.6	1190.8	1182.5	10.3	.2	5.5	.0098	.093	.093	1	25.5
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
84	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
85	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
110	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
111	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

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

I	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

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

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	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
206	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
207	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
232	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
233	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

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
242	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
243	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
267	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
268	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
293	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
294	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

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
303	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
304	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
328	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
329	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
354	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
355	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

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
389	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
390	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
415	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
416	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
425	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
426	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
450	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
451	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

BREACH MODEL, MICRO-VERSION: 1/87

PIPING 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

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

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
54	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

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
122	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
123	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
147	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
148	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
173	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
174	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

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
181	3.620	.020	3	0	18039.	1087.	16952.07	1.000	113.2	1188.4	1175.0	95.7	.9	5.9	.0098	.433	.433	1	25.5
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
184	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
185	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
208	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
209	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
210	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
234	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
235	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

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
269	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
270	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
295	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
296	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
306	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
307	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
330	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
331	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
332	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
356	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
357	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
367	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
391	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
392	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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IME*****  4015.0    7015.0   10015.0   13015.0   16015.0   19015.0   22015.0   25015.0   28015.0   31015.0     DISCHARGE
 .080.  *      .         .         .         .         .         .         .         .         .         .      1841.
 .120.   *     .         .         .         .         .         .         .         .         .         .      2179.
 .160.    *    .         .         .         .         .         .         .         .         .         .      2528.
 .200.     *   .         .         .         .         .         .         .         .         .         .      2877.
 .240.      *  .         .         .         .         .         .         .         .         .         .      3221.
 .280.       * .         .         .         .         .         .         .         .         .         .      3559.
 .320.        *         .         .         .         .         .         .         .         .         .      3889.
 .360.        .*        .         .         .         .         .         .         .         .         .      4210.
 .400.        . *       .         .         .         .         .         .         .         .         .      4523.
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BREACH MODEL, MICRO-VERSION: 1/87

PIPING FAILURE IN SBFRS; STA. 60+50 FILE: S6oTOP.STH 23OCT90

HI= 1190.80 HU= 1193.33 HL= 1175.00 HPI= 1176.90 HSP= 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 WMP= .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

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

I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	ET	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
51	1.020	.020	4	0	6701.	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
54	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
55	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	PFP	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

120	2.400	.020	3	0	10778.	1127.	9651.47	1.000	56.3	1189.0	1175.0	38.8	.5	7.5	.0098	.246	.246	1	25.5
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
122	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
123	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	2	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
147	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
148	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
173	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
174	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

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
183	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
184	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
208	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
209	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	10628.	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
234	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
235	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

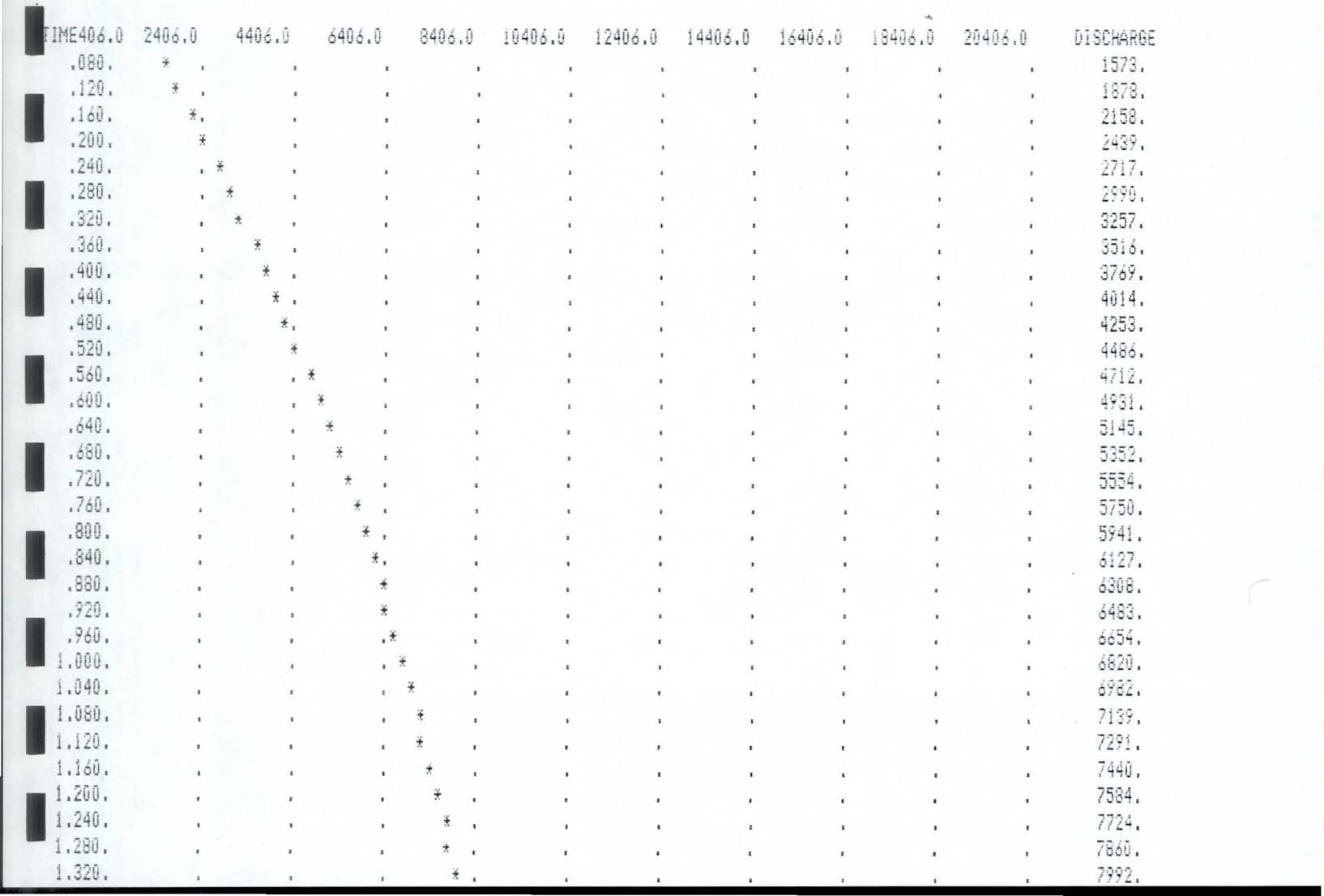
I	T	DTH	KG	KC	QTOT	QTS	QB	SUB	BT	HY	HC	BO	PPP	HP	CNN	DH	DHH	KIT	ALG
242	4.840	.020	3	0	9033.	655.	8377.83	1.000	119.4	1183.9	1175.0	101.9	.4	3.7	.0098	.214	.214	1	25.5
243	4.860	.020	3	0	8980.	649.	8331.65	1.000	119.8	1183.9	1175.0	102.3	.4	3.7	.0098	.212	.212	1	25.5
244	4.880	.020	3	0	8927.	642.	8284.87	1.000	120.2	1183.8	1175.0	102.7	.4	3.6	.0098	.212	.212	1	25.5
245	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
269	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
270	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
295	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
296	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
305	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
306	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
330	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
331	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
356	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
357	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



APPENDIX D

DAMBRK OUTPUT

HQFRS OUTPUT DAMBRK EAST
HQFRS OUTPUT DAMBRK MIDDLE
HQFRS OUTPUT DAMBRK WEST

SBFRS OUTPUT DAMBRK NORTH
SBFRS OUTPUT DAMBRK SOUTH

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 : HQFRS--EAST BREACH (13-88)
PROJECT NUMBER : FILE: HQET.DBK
DESCRIPTION : EAST BREACH PIPING STARTS NEAR MIDDLE
ENGINEER : CARTER ASSOCIATES
DATE OF RUN : 10/25/1990
TIME OF RUN : 10:42 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)	16	
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)	12.00
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	1630
1.00	11917.0	1730
2.00	13640.0	1830
4.00	22252.0	2030
6.00	33805.0	
8.00	50760.0	OK 50,760
9.00	42405.0	
10.00	26254.0	
11.00	16658.0	
12.00	11964.0	
12.50	10235.0	
13.00	8883.0	
15.00	5237.0	
17.00	3630.0	
21.00	3311.0	
29.00	1290.0	

SUMMARY OF PROGRAM CONTROL PARAMETERS :

Number of Cross-Sections Entered (NS)	3	
Number of Top Widths Entered (NCS)	7	
Number of Cross-Sectional Hydrographs to Plot (NTT)	3	
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 2 3

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 DAM 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) (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)
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) .000

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

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)
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

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)
1359.00	2.0	.0	.0	.0
1360.00	400.0	.0	.0	.0
1364.00	1100.0	.0	.0	.0
1368.00	1500.0	.0	.0	.0
1372.00	2300.0	.0	.0	.0
1376.00	2500.0	.0	.0	.0
1380.00	2800.0	.0	.0	.0

DISTANCE BETWEEN INTERPOLATED CROSS-SECTIONS
(DXM) THAT WILL BE USED IN COMPUTATIONS :

Down Stream Reach Number I=1,NSI	Interp. Cross Section Distance DXM(I) (mi)
1	101.0000
2	.0300

Total number of cross-sections (original+interpolated) 11

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

RE-NUMBERED DAM/BRIDGE CROSS-SECTIONS :

Dam/ Bridge	Revised Cross Section Number
1	1

Number of Intermediate Cross-Sections (NN(NS)) 11

Number of Time Steps (NNU) 16

INITIAL CONDITIONS TABLE :

Cross Section Number	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	1360.28	1.28	1360.08	1.08	0	11	11

SUMMARY OF INITIAL DOWNSTREAM BOUNDARY CONDITIONS :

Cross-section Number at Downstream End of Model (IN)	11
Initial Water Surface Elev. at Downstream End (YNN, ft MSL)	1360.277
Initial Flow Depth at Downstream End (DEP, ft)	1.277

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
10	10.270	1000.0	1362.042	1.264	4
9	10.240	1000.0	1363.795	1.240	4
8	10.210	1000.0	1365.558	1.225	4
7	10.180	1000.0	1367.315	1.204	4
6	10.150	1000.0	1369.078	1.189	3
5	10.120	1000.0	1370.837	1.170	4
4	10.090	1000.0	1372.600	1.155	4
3	10.060	1000.0	1374.360	1.138	4
2	10.030	1000.0	1376.123	1.123	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	1374.36	1000.0
4	1372.60	1000.0
5	1370.84	1000.0
6	1369.08	1000.0
7	1367.32	1000.0
8	1365.56	1000.0
9	1363.80	1000.0
10	1362.04	1000.0
11	1360.28	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 (TT)	.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	0
Flow at Upstream End of Model (QU(1), cfs)	1000.00
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1406.70
Flow at Downstream End of Model (QU(N), cfs)	1000.00
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1360.28

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	1406.70	.02	48703.	2015.	2015.	1.000	.0400	.00	.00	16.5	.0	30.7
10.030	1376.12	2.94	340.	522.	522.	1.000	.0400	.00	.00	.0	.6	1.1
10.060	1374.36	2.96	337.	513.	513.	1.000	.0400	.00	.00	.0	.6	1.1
10.090	1372.60	2.98	336.	504.	504.	1.000	.0400	.00	.00	.0	.6	1.2
10.120	1370.84	3.01	333.	496.	496.	1.000	.0400	.00	.00	.0	.6	1.2
10.150	1369.08	3.02	331.	488.	488.	1.000	.0400	.00	.00	.0	.6	1.2
10.180	1367.32	3.05	328.	479.	479.	1.000	.0400	.00	.00	.0	.6	1.2
10.210	1365.56	3.06	327.	472.	472.	1.000	.0400	.00	.00	.0	.6	1.2
10.240	1363.80	3.09	323.	463.	463.	1.000	.0400	.00	.00	.0	.7	1.2
10.270	1362.04	3.09	324.	457.	457.	1.000	.0400	.00	.00	.0	.6	1.3
10.300	1360.28	3.14	318.	448.	448.	1.000	.0400	.00	.00	.0	.7	1.3

Maximum Froude Number (FRDM)	.66
Cross-Section of Maximum Froude Number (IFR)	11
Minimum Froude Number (FRM)	.00
Cross-Section of Minimum Froude Number (IFM)	1

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	1000.00
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1406.82
Flow at Downstream End of Model (QU(N), cfs)	1000.00
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1360.28

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	1406.82	.02	48952.	2017.	2017.	1.000	.0400	.00	.12	16.5	.0	30.8
10.030	1376.12	2.94	340.	522.	522.	1.000	.0400	.00	.00	.0	.6	1.1
10.060	1374.36	2.96	338.	513.	513.	1.000	.0400	.00	.00	.0	.6	1.1
10.090	1372.60	2.98	336.	504.	504.	1.000	.0400	.00	.00	.0	.6	1.2
10.120	1370.84	3.00	333.	496.	496.	1.000	.0400	.00	.00	.0	.6	1.2
10.150	1369.08	3.02	331.	488.	488.	1.000	.0400	.00	.00	.0	.6	1.2
10.180	1367.32	3.04	329.	479.	479.	1.000	.0400	.00	.00	.0	.6	1.2
10.210	1365.56	3.06	327.	472.	472.	1.000	.0400	.00	.00	.0	.6	1.2
10.240	1363.80	3.08	324.	464.	464.	1.000	.0400	.00	.00	.0	.6	1.2
10.270	1362.04	3.09	324.	457.	457.	1.000	.0400	.00	.00	.0	.6	1.3
10.300	1360.28	3.12	320.	449.	449.	1.000	.0400	.00	.00	.0	.7	1.3

Maximum Froude Number (FROM)	.65
Cross-Section of Maximum Froude Number (IFR)	11
Minimum Froude Number (FRM)	.00
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number	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 QUTHR (cfs)
1	1	.000	1000.	1406.82	1397.80	1376.12	1.00	.00	1000.	0.	0.	1000.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

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)	66510.98
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1389.32
Flow at Downstream End of Model (QU(N), cfs)	77773.58
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1366.86

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)
10.000	1389.32	4.21	15817.	1769.	1769.	66.511	.0400	.00	-17.63	1751.7	.2	13.3
10.030	1382.69	11.07	6009.	1269.	1269.	66.511	.0400	.00	6.56	.0	.9	7.7
10.060	1380.94	11.10	6105.	1284.	1284.	67.765	.0400	.00	6.58	.0	.9	7.7
10.090	1379.19	11.13	6203.	1299.	1299.	69.018	.0400	.00	6.59	.0	.9	7.7
10.120	1377.44	11.16	6294.	1313.	1313.	70.269	.0400	.00	6.60	.0	.9	7.8
10.150	1375.70	11.18	6398.	1328.	1328.	71.520	.0400	.00	6.62	.0	.9	7.8
10.180	1373.93	11.24	6476.	1340.	1340.	72.769	.0400	.00	6.62	.0	.9	7.8
10.210	1372.20	11.22	6598.	1356.	1356.	74.020	.0400	.00	6.65	.0	.9	7.9
10.240	1370.42	11.33	6641.	1365.	1365.	75.270	.0400	.00	6.62	.0	.9	7.9
10.270	1368.73	11.22	6822.	1385.	1385.	76.521	.0400	.00	6.68	.0	.9	7.9
10.300	1366.86	11.50	6762.	1386.	1386.	77.774	.0400	.00	6.58	.0	.9	7.9

Maximum Froude Number (FRDM)	.92
Cross-Section of Maximum Froude Number (IFR)	11
Minimum Froude Number (FRM)	.25
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number	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	66511.	1389.32	1376.00	1382.69	1.00	420.00	66511.	66511.	0.	0.

Normalized conservation of mass as percent of maximum flow
in reach = -.04

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	1417.71	185478	9.400	4.48	.00	.00
10.030	1386.82	185478	11.400	15.23	.00	.00
10.060	1385.05	185478	11.400	15.04	.00	.00
10.090	1383.26	185473	11.400	14.90	.00	.00
10.120	1381.48	185462	11.400	14.73	.00	.00
10.150	1379.69	185447	11.400	14.59	.00	.00
10.180	1377.91	185428	11.400	14.44	.00	.00
10.210	1376.12	185406	11.400	14.32	.00	.00
10.240	1374.34	185381	11.400	14.17	.00	.00
10.270	1372.55	185353	11.400	14.06	.00	.00
10.300	1370.76	185324	11.400	13.92	.00	.00

PROJECT TITLE : HQFRS--EAST BREACH (13-88)
PROJECT NUMBER : FILE: HQET.DBK 10/25/1990

COMPUTED WATER SURFACE ELEVATIONS AT REQUESTED STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count	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	1376.12	1360.28			
2	.200	1407.07	1376.12	1360.28			
3	.400	1407.20	1376.12	1360.28			
4	.600	1407.34	1376.12	1360.28			
5	.800	1407.49	1376.12	1360.28			
6	1.000	1407.64	1376.12	1360.28			
7	1.200	1407.80	1376.12	1360.28			
8	1.400	1407.96	1376.12	1360.28			
9	1.600	1408.13	1376.12	1360.28			
10	1.800	1408.29	1376.12	1360.28			
11	2.000	1408.46	1376.14	1360.29			
12	2.200	1408.63	1376.20	1360.34			
13	2.400	1408.82	1376.25	1360.41			
14	2.600	1409.00	1376.31	1360.47			
15	2.800	1409.20	1376.36	1360.53			
16	3.000	1409.40	1376.41	1360.59			
17	3.200	1409.60	1376.46	1360.65			
18	3.400	1409.82	1376.52	1360.71			
19	3.600	1410.03	1376.58	1360.78			
20	3.800	1410.25	1376.64	1360.85			
21	4.000	1410.48	1376.70	1360.91			
22	4.200	1410.71	1376.75	1360.97			
23	4.400	1410.95	1376.81	1361.03			
24	4.600	1411.20	1376.88	1361.10			
25	4.800	1411.45	1376.96	1361.19			
26	5.000	1411.71	1377.04	1361.27			
27	5.200	1411.97	1377.11	1361.35			
28	5.400	1412.23	1377.19	1361.43			
29	5.600	1412.50	1377.26	1361.51			
30	5.800	1412.78	1377.33	1361.59			
31	6.000	1413.06	1377.41	1361.66			
32	6.200	1413.34	1377.48	1361.73			
33	6.400	1413.63	1377.56	1361.82			
34	6.600	1413.93	1377.65	1361.91			
35	6.800	1414.24	1377.73	1361.99			
36	7.000	1414.55	1377.82	1362.08			
37	7.200	1414.87	1377.91	1362.17			
38	7.400	1415.19	1377.99	1362.25			
39	7.600	1415.52	1378.07	1362.34			
40	7.800	1415.85	1378.16	1362.42			
41	8.000	1416.19	1378.24	1362.50			
42	8.200	1416.52	1378.31	1362.57			
43	8.400	1416.82	1378.37	1362.63			
44	8.600	1417.10	1378.42	1362.68			
45	8.800	1417.36	1378.69	1362.89			
46	9.000	1417.57	1379.30	1363.42			
47	9.200	1417.69	1380.14	1364.16			
48	9.400	1417.71	1381.11	1364.96			
49	9.600	1417.59	1382.10	1365.81			

Time Step Count	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	1417.30	1383.08	1366.68			
51	10.000	1416.76	1384.55	1368.04			
52	10.200	1415.96	1385.11	1368.83			
53	10.400	1414.98	1385.55	1369.32			
54	10.600	1413.79	1385.97	1369.82			
55	10.800	1412.37	1386.31	1370.19			
56	11.000	1410.68	1386.57	1370.49			
57	11.200	1408.66	1386.74	1370.67			
58	11.400	1406.20	1386.82	1370.76			
59	11.600	1403.05	1386.70	1370.64			
60	11.800	1398.39	1385.72	1369.69			

COMPUTED DISCHARGES AT REQUESTED
STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

me Step ount	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			
2	.200	1.00	1.00	1.00			
3	.400	1.00	1.00	1.00			
4	.600	1.00	1.00	1.00			
5	.800	1.00	1.00	1.00			
6	1.000	1.00	1.00	1.00			
7	1.200	1.00	1.00	1.00			
8	1.400	1.00	1.00	1.00			
9	1.600	1.00	1.00	1.00			
10	1.800	1.00	1.00	1.00			
11	2.000	1.05	1.05	1.03			
12	2.200	1.19	1.19	1.12			
13	2.400	1.34	1.34	1.28			
14	2.600	1.49	1.49	1.43			
15	2.800	1.64	1.64	1.58			
16	3.000	1.80	1.80	1.75			
17	3.200	1.97	1.97	1.91			
18	3.400	2.16	2.16	2.09			
19	3.600	2.36	2.36	2.29			
20	3.800	2.57	2.57	2.50			
21	4.000	2.78	2.78	2.71			
22	4.200	3.00	3.00	2.93			
23	4.400	3.22	3.22	3.16			
24	4.600	3.51	3.51	3.42			
25	4.800	3.85	3.85	3.75			
26	5.000	4.20	4.20	4.10			
27	5.200	4.55	4.55	4.45			
28	5.400	4.91	4.91	4.81			
29	5.600	5.27	5.27	5.18			
30	5.800	5.64	5.64	5.55			
31	6.000	6.02	6.02	5.92			
32	6.200	6.40	6.40	6.31			
33	6.400	6.87	6.87	6.75			
34	6.600	7.38	7.38	7.26			
35	6.800	7.91	7.91	7.79			
36	7.000	8.45	8.45	8.32			
37	7.200	8.99	8.99	8.87			
38	7.400	9.55	9.55	9.43			
39	7.600	10.11	10.11	9.99			
40	7.800	10.69	10.69	10.56			
41	8.000	11.27	11.27	11.14			
42	8.200	11.81	11.81	11.70			
43	8.400	12.25	12.25	12.17			
44	8.600	12.65	12.65	12.57			
45	8.800	14.78	14.78	14.21			
46	9.000	20.38	20.38	19.11			
47	9.200	29.43	29.43	27.76			

49	9.600	57.19	57.19	54.97

Time Step Count	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	75.48	75.48	73.05			
51	10.000	111.09	111.09	105.99			
52	10.200	126.49	126.49	126.29			
53	10.400	141.31	141.31	139.00			
54	10.600	154.84	154.84	153.78			
55	10.800	166.79	166.79	165.46			
56	11.000	176.25	176.25	175.44			
57	11.200	182.63	182.63	182.08			
58	11.400	185.48	185.48	185.32			
59	11.600	180.17	180.17	181.05			
60	11.800	145.44	145.44	150.40			

END OF OUTPUT

==========
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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ROGRAM ORIGIN :

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OJECT DESCRIPTION :

PROJECT TITLE : HQFRS--MIDDLE BREACH (13-88)
PROJECT NUMBER : FILE: HQMT.DBK
DESCRIPTION : MIDDLE BREACH-PIPING STARTS @ MIDDLE
ENGINEER : CARTER ASSOCIATES
DATE OF RUN : 10/25/1990
TIME OF RUN : 8:15 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)	16	
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

HSA(K) (ft MSL)	Elevation 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)	15.00
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	50760.0
9.00	42405.0
10.00	26254.0
11.00	16658.0
12.00	11964.0
12.50	10235.0
13.00	8883.0
15.00	5237.0
17.00	3630.0
21.00	3311.0
29.00	1290.0

SUMMARY OF PROGRAM CONTROL PARAMETERS :

Number of Cross-Sections Entered (NS)	3	
Number of Top Widths Entered (NCS)	5	
Number of Cross-Sectional Hydrographs to Plot (NTT)	3	
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 2 3

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 DAM 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) (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
1398.00	4200.0	.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) 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) .000

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

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)
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
1394.00	4200.0	.0400	.0	.0	.0000	.0	.0000	1.0000
1416.00	4300.0	.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

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)
1359.00	2.0	.0	.0	.0
1360.00	800.0	.0	.0	.0
1364.00	2500.0	.0	.0	.0
1368.00	4200.0	.0	.0	.0
1380.00	4300.0	.0	.0	.0

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

Total number of cross-sections (original+interpolated) 11

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	1390.000			
2	10.030	1386.000	1	.030	133.335

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

3	10.300	1359.000	2	.270	100.000

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

RE-NUMBERED DAM/BRIDGE CROSS-SECTIONS :

Dam/ Bridge	Revised Cross Section Number
1	1

Number of Intermediate Cross-Sections (NN(NS)) 11

Number of Time Steps (NNU) 16

INITIAL CONDITIONS TABLE :

Cross Section Number	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	1391.59	1.59	1391.09	1.09	0	11	11
2	10.030	1387.18	1.18	1387.09	1.09	0	11	11
3	10.060	1384.15	1.15	1384.07	1.07	0	11	11
4	10.090	1381.13	1.13	1381.03	1.03	0	11	11
5	10.120	1378.10	1.10	1378.01	1.01	0	11	11
6	10.150	1375.07	1.07	1374.98	.98	0	11	11
7	10.180	1372.04	1.04	1371.96	.96	0	11	11
8	10.210	1369.01	1.01	1368.93	.93	0	11	11
9	10.240	1365.98	.98	1365.89	.89	0	11	11
10	10.270	1362.94	.94	1362.86	.86	0	11	11
11	10.300	1359.91	.91	1359.83	.83	0	11	11

SUMMARY OF INITIAL DOWNSTREAM BOUNDARY CONDITIONS :

Cross-section Number at Downstream End of Model (IN)	11
Initial Water Surface Elev. at Downstream End (YNN, ft MSL)	1359.908
Initial Flow Depth at Downstream End (DEP, ft)	.907

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
10	10.270	1000.0	1362.940	.940	4
9	10.240	1000.0	1365.978	.978	4
8	10.210	1000.0	1369.006	1.006	4
7	10.180	1000.0	1372.041	1.041	4
6	10.150	1000.0	1375.067	1.066	4
5	10.120	1000.0	1378.098	1.098	4
4	10.090	1000.0	1381.122	1.121	4
3	10.060	1000.0	1384.150	1.150	4
2	10.030	1000.0	1387.172	1.172	4
1	10.000	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	1387.17	1000.0
3	1384.15	1000.0
4	1381.12	1000.0
5	1378.10	1000.0
6	1375.07	1000.0
7	1372.04	1000.0
8	1369.01	1000.0
9	1365.98	1000.0
10	1362.94	1000.0
11	1359.91	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 (TT)	.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	0
Flow at Upstream End of Model (QU(1), cfs)	1000.00
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1406.70
Flow at Downstream End of Model (QU(N), cfs)	1000.00
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1359.91

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	1406.70	.02	54214.	4240.	4240.	1.000	.0400	.00	.00	16.5	.0	16.7
10.030	1387.17	3.62	276.	470.	470.	1.000	.0400	.00	.00	.0	.8	1.2
10.060	1384.15	3.55	282.	488.	488.	1.000	.0400	.00	.00	.0	.8	1.1
10.090	1381.12	3.51	285.	505.	505.	1.000	.0400	.00	.00	.0	.8	1.1
10.120	1378.10	3.44	291.	528.	528.	1.000	.0400	.00	.00	.0	.8	1.1
10.150	1375.07	3.40	294.	549.	549.	1.000	.0400	.00	.00	.0	.8	1.1
10.180	1372.04	3.32	301.	577.	577.	1.000	.0400	.00	.00	.0	.8	1.0
10.210	1369.01	3.28	305.	604.	604.	1.000	.0400	.00	.00	.0	.8	1.0
10.240	1365.98	3.18	314.	641.	641.	1.000	.0400	.00	.00	.0	.8	1.0
10.270	1362.94	3.14	319.	677.	677.	1.000	.0400	.00	.00	.0	.8	.9
10.300	1359.91	3.03	330.	726.	726.	1.000	.0400	.00	.00	.0	.8	.9

Maximum Froude Number (FRDM)	.83
Cross-Section of Maximum Froude Number (IFR)	2
Minimum Froude Number (FRM)	.00
Cross-Section of Minimum Froude Number (IFM)	1

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	15.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	5333.44
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1391.11
Flow at Downstream End of Model (QU(N), cfs)	5444.50
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1360.71

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)
10.000	1391.11	21.60	247.	444.	444.	5.333	.0400	.00	-15.84	91.2	5.1	1.1
10.030	1388.24	5.21	1023.	1008.	1008.	5.333	.0400	.00	1.07	.0	.9	2.2
10.060	1385.19	5.17	1034.	1031.	1031.	5.350	.0400	.00	1.04	.0	.9	2.2
10.090	1382.13	5.15	1042.	1048.	1048.	5.360	.0400	.00	1.01	.0	.9	2.1
10.120	1379.07	5.13	1048.	1060.	1060.	5.370	.0400	.00	.98	.0	.9	2.1
10.150	1376.01	5.11	1053.	1070.	1070.	5.381	.0400	.00	.95	.0	.9	2.0
10.180	1372.95	5.10	1057.	1078.	1078.	5.393	.0400	.00	.91	.0	.9	2.0
10.210	1369.89	5.09	1062.	1085.	1085.	5.405	.0400	.00	.88	.0	.9	1.9
10.240	1366.83	5.09	1065.	1091.	1091.	5.419	.0400	.00	.85	.0	.9	1.8
10.270	1363.77	5.08	1069.	1096.	1096.	5.432	.0400	.00	.83	.0	.9	1.8
10.300	1360.71	5.08	1072.	1100.	1100.	5.445	.0400	.00	.80	.0	.9	1.7

Maximum Froude Number (FRDM)	5.10
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.91
Cross-Section of Minimum Froude Number (IFM)	10

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number	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	15.000	5333.	1391.11	1390.00	1388.24	1.00	788.00	5333.	5333.	0.	0.

Normalized conservation of mass as percent of maximum flow
in reach = .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)
10.000	1417.72	155725	9.400	23.08	.00	.00
10.030	1393.21	155725	11.200	11.48	.00	.00
10.060	1389.84	155618	11.400	12.53	.00	.00
10.090	1387.04	155646	11.200	11.76	.00	.00
10.120	1383.90	155597	11.400	12.20	.00	.00
10.150	1380.97	155592	11.200	11.98	.00	.00
10.180	1377.92	155569	11.400	12.17	.00	.00
10.210	1374.95	155558	11.200	12.14	.00	.00
10.240	1371.92	155546	11.200	12.26	.00	.00
10.270	1368.93	155535	11.200	12.30	.00	.00
10.300	1365.91	155526	11.200	12.39	.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	1387.17	1359.91			
2	.200	1407.07	1387.17	1359.91			
3	.400	1407.20	1387.17	1359.91			
4	.600	1407.34	1387.17	1359.91			
5	.800	1407.49	1387.17	1359.91			
6	1.000	1407.64	1387.17	1359.91			
7	1.200	1407.80	1387.17	1359.91			
8	1.400	1407.96	1387.17	1359.91			
9	1.600	1408.13	1387.17	1359.91			
10	1.800	1408.29	1387.17	1359.91			
11	2.000	1408.46	1387.19	1359.91			
12	2.200	1408.63	1387.25	1359.94			
13	2.400	1408.82	1387.31	1359.99			
14	2.600	1409.00	1387.36	1360.03			
15	2.800	1409.20	1387.41	1360.07			
16	3.000	1409.40	1387.46	1360.11			
17	3.200	1409.60	1387.51	1360.14			
18	3.400	1409.82	1387.57	1360.18			
19	3.600	1410.03	1387.62	1360.22			
20	3.800	1410.25	1387.67	1360.26			
21	4.000	1410.48	1387.72	1360.30			
22	4.200	1410.71	1387.77	1360.34			
23	4.400	1410.95	1387.82	1360.38			
24	4.600	1411.20	1387.88	1360.42			
25	4.800	1411.45	1387.95	1360.47			
26	5.000	1411.71	1388.01	1360.52			
27	5.200	1411.97	1388.09	1360.57			
28	5.400	1412.23	1388.17	1360.62			
29	5.600	1412.50	1388.23	1360.67			
30	5.800	1412.78	1388.30	1360.72			
31	6.000	1413.06	1388.35	1360.76			
32	6.200	1413.34	1388.41	1360.81			
33	6.400	1413.63	1388.47	1360.86			
34	6.600	1413.93	1388.54	1360.92			
35	6.800	1414.24	1388.60	1360.97			
36	7.000	1414.55	1388.66	1361.03			
37	7.200	1414.87	1388.72	1361.08			
38	7.400	1415.19	1388.78	1361.13			
39	7.600	1415.52	1388.83	1361.19			
40	7.800	1415.85	1388.89	1361.24			
41	8.000	1416.19	1388.94	1361.29			
42	8.200	1416.52	1388.98	1361.34			
43	8.400	1416.82	1389.02	1361.38			
44	8.600	1417.10	1389.05	1361.41			
45	8.800	1417.36	1389.21	1361.53			

47	9.200	1417.70	1389.98	1362.32
48	9.400	1417.72	1390.41	1362.86
49	9.600	1417.61	1390.86	1363.42

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	1417.34	1391.33	1363.97			
51	10.000	1416.84	1391.96	1364.70			
52	10.200	1416.13	1392.62	1365.11			
53	10.400	1415.26	1392.42	1365.35			
54	10.600	1414.22	1392.78	1365.58			
55	10.800	1413.01	1393.08	1365.74			
56	11.000	1411.62	1392.95	1365.86			
57	11.200	1410.04	1393.21	1365.91			
58	11.400	1408.24	1393.02	1365.90			
59	11.600	1406.19	1392.95	1365.83			
60	11.800	1403.92	1392.70	1365.48			
61	12.000	1401.56	1391.86	1364.83			
62	12.200	1399.16	1391.18	1364.07			
63	12.400	1396.37	1390.42	1363.17			
64	12.600	1392.64	1389.59	1362.19			
65	12.800	1391.11	1388.32	1361.13			
66	12.900	1391.53	1388.73	1360.89			
67	13.000	1391.50	1388.73	1361.10			
68	13.200	1391.46	1388.68	1361.09			
69	13.400	1391.42	1388.64	1361.01			
70	13.600	1391.37	1388.60	1361.01			
71	13.800	1391.33	1388.56	1360.95			
72	14.000	1391.29	1388.51	1360.92			
73	14.200	1391.24	1388.46	1360.88			
74	14.400	1391.20	1388.41	1360.84			
75	14.600	1391.15	1388.36	1360.79			
76	14.800	1391.11	1388.30	1360.75			

COMPUTED DISCHARGES AT REQUESTED
STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count	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			
2	.200	1.00	1.00	1.00			
3	.400	1.00	1.00	1.00			
4	.600	1.00	1.00	1.00			
5	.800	1.00	1.00	1.00			
6	1.000	1.00	1.00	1.00			
7	1.200	1.00	1.00	1.00			
8	1.400	1.00	1.00	1.00			
9	1.600	1.00	1.00	1.00			
10	1.800	1.00	1.00	1.00			
11	2.000	1.05	1.05	1.02			
12	2.200	1.19	1.19	1.12			
13	2.400	1.34	1.34	1.27			
14	2.600	1.49	1.49	1.43			
15	2.800	1.64	1.64	1.58			
16	3.000	1.80	1.80	1.74			
17	3.200	1.97	1.97	1.91			
18	3.400	2.16	2.16	2.09			
19	3.600	2.36	2.36	2.29			
20	3.800	2.57	2.57	2.50			
21	4.000	2.78	2.78	2.71			
22	4.200	3.00	3.00	2.93			
23	4.400	3.22	3.22	3.15			
24	4.600	3.51	3.51	3.41			
25	4.800	3.85	3.85	3.74			
26	5.000	4.20	4.20	4.09			
27	5.200	4.55	4.55	4.44			
28	5.400	4.91	4.91	4.80			
29	5.600	5.27	5.27	5.16			
30	5.800	5.64	5.64	5.53			
31	6.000	6.02	6.02	5.91			
32	6.200	6.40	6.40	6.29			
33	6.400	6.87	6.87	6.73			
34	6.600	7.38	7.38	7.24			
35	6.800	7.91	7.91	7.77			
36	7.000	8.45	8.45	8.30			
37	7.200	8.99	8.99	8.85			
38	7.400	9.55	9.55	9.41			
39	7.600	10.11	10.11	9.97			
40	7.800	10.69	10.69	10.54			
41	8.000	11.27	11.27	11.12			
42	8.200	11.81	11.81	11.68			
43	8.400	12.25	12.25	12.15			
44	8.600	12.65	12.65	12.56			
45	8.800	14.71	14.71	14.08			
46	9.000	20.15	20.15	18.70			
47	9.200	28.94	28.94	26.98			

48	9.400	40.97	40.97	38.62
49	9.600	55.81	55.81	53.29

Time Step Count	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	73.30	73.30	70.59			
51	10.000	102.47	102.47	97.75			
52	10.200	116.06	116.06	115.68			
53	10.400	128.50	128.50	126.37			
54	10.600	139.12	139.12	138.15			
55	10.800	147.49	147.49	146.45			
56	11.000	153.18	153.18	152.66			
57	11.200	155.73	155.73	155.53			
58	11.400	154.71	154.71	154.99			
59	11.600	150.25	150.25	150.93			
60	11.800	129.72	129.72	133.16			
61	12.000	98.35	98.35	102.75			
62	12.200	69.68	69.68	73.50			
63	12.400	41.37	41.37	46.06			
64	12.600	20.94	20.94	24.41			
65	12.800	5.71	5.71	9.28			
66	12.900	9.28	9.28	6.88			
67	13.000	9.02	9.02	8.97			
68	13.200	8.59	8.59	9.01			
69	13.400	8.25	8.25	8.08			
70	13.600	7.88	7.88	8.15			
71	13.800	7.52	7.52	7.52			
72	14.000	7.15	7.15	7.30			
73	14.200	6.79	6.79	6.87			
74	14.400	6.42	6.42	6.53			
75	14.600	6.06	6.06	6.17			
76	14.800	5.70	5.70	5.80			

END OF OUTPUT

ROUTING COMPLETED :

Number of Time Steps Used (KTIME)	76
Maximum Number of Time Steps Allowed	1199
Total Time of Flood Routing (TT, hr)	15.2

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 : HQFRS--WEST BREACH (13-88)
PROJECT NUMBER : FILE: HQWT.DBK
DESCRIPTION : WEST BREACH PIPING STARTS NEAR MIDDLE
ENGINEER : CARTER ASSOCIATES
DATE OF RUN : 10/25/1990
TIME OF RUN : 7:30 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)	11	
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)		1408.00
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)	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	13640.0
2.00	22252.0
4.00	33805.0
6.00	50760.0
7.00	41405.0
8.00	25254.0
9.00	16658.0
11.00	8883.0
15.00	3630.0
19.00	3311.0
27.00	1290.0

SUMMARY OF PROGRAM CONTROL PARAMETERS :

Number of Cross-Sections Entered (NS)	3	
Number of Top Widths Entered (NCS)	4	
Number of Cross-Sectional Hydrographs to Plot (NTT)	3	
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 2 3

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 DAM 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) (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)
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

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) .000

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

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)
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
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

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)
1380.00	2.0	.0	.0	.0
1382.00	1000.0	.0	.0	.0
1384.00	2500.0	.0	.0	.0
1400.00	3000.0	.0	.0	.0

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

Total number of cross-sections (original+interpolated) 11

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	1396.000			
2	10.030	1395.200	1	.030	26.669
3	10.300	1380.000	2	.270	56.296

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

RE-NUMBERED DAM/BRIDGE CROSS-SECTIONS :

Dam/ Bridge	Revised Cross Section Number
1	1

Number of Intermediate Cross-Sections (NN(NS)) 11

Number of Time Steps (NNU) 11

INITIAL CONDITIONS TABLE :

Cross Section Number	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	1397.59	1.59	1397.08	1.08	0	11	11
2	10.030	1396.11	.91	1395.96	.76	0	11	11
3	10.060	1394.48	.97	1394.31	.80	0	11	11
4	10.090	1392.84	1.01	1392.65	.83	0	11	11
5	10.120	1391.18	1.05	1390.99	.86	0	11	11
6	10.150	1389.52	1.08	1389.34	.89	0	11	11
7	10.180	1387.86	1.11	1387.67	.91	0	11	11
8	10.210	1386.20	1.13	1386.00	.93	0	11	11
9	10.240	1384.54	1.16	1384.34	.96	0	11	11
10	10.270	1382.88	1.19	1382.67	.98	0	11	11
11	10.300	1381.20	1.20	1380.99	.99	0	10	10

SUMMARY OF INITIAL DOWNSTREAM BOUNDARY CONDITIONS :

Cross-section Number at Downstream End of Model (IN)	11
Initial Water Surface Elev. at Downstream End (YNN, ft MSL)	1381.201
Initial Flow Depth at Downstream End (DEP, ft)	1.201

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
10	10.270	1000.0	1382.881	1.192	5
9	10.240	1000.0	1384.540	1.162	5
8	10.210	1000.0	1386.212	1.146	4
7	10.180	1000.0	1387.869	1.114	4
6	10.150	1000.0	1389.533	1.088	4
5	10.120	1000.0	1391.188	1.054	4
4	10.090	1000.0	1392.843	1.021	5
3	10.060	1000.0	1394.486	.974	4
2	10.030	1000.0	1396.121	.921	4
1	10.000	1000.0	1408.000	12.000	0

Interp. Cross Section I	Water Elevation YI(I) (ft MSL)	Initial Flow QDI(I) (cfs)
1	1408.00	1000.0
2	1396.12	1000.0
3	1394.49	1000.0
4	1392.84	1000.0
5	1391.19	1000.0
6	1389.53	1000.0
7	1387.87	1000.0
8	1386.21	1000.0
9	1384.54	1000.0
10	1382.88	1000.0
11	1381.20	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)	6.000
Time Step Size (DTHI, hr)	.200

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	0
Flow at Upstream End of Model (QU(1), cfs)	1000.00
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1408.00
Flow at Downstream End of Model (QU(N), cfs)	1000.00
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1381.20

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	1408.00	.05	20402.	2200.	2200.	1.000	.0400	.00	.00	16.5	.0	12.0
10.030	1396.12	2.38	420.	836.	836.	1.000	.0400	.00	.00	.0	.6	.9
10.060	1394.49	2.39	419.	836.	836.	1.000	.0400	.00	.00	.0	.6	1.0
10.090	1392.84	2.42	413.	808.	808.	1.000	.0400	.00	.00	.0	.6	1.0
10.120	1391.19	2.48	403.	762.	762.	1.000	.0400	.00	.00	.0	.6	1.1
10.150	1389.53	2.52	396.	726.	726.	1.000	.0400	.00	.00	.0	.6	1.1
10.180	1387.87	2.59	387.	692.	692.	1.000	.0400	.00	.00	.0	.6	1.1
10.210	1386.21	2.60	384.	669.	669.	1.000	.0400	.00	.00	.0	.6	1.1
10.240	1384.54	2.68	374.	641.	641.	1.000	.0400	.00	.00	.0	.6	1.2
10.270	1382.88	2.67	374.	625.	625.	1.000	.0400	.00	.00	.0	.6	1.2
10.300	1381.20	2.76	362.	601.	601.	1.000	.0400	.00	.00	.0	.6	1.2

Maximum Froude Number (FRDM)	.63
Cross-Section of Maximum Froude Number (IFR)	11
Minimum Froude Number (FRM)	.00
Cross-Section of Minimum Froude Number (IFM)	1

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	1000.00
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1408.18
Flow at Downstream End of Model (QU(N), cfs)	1000.50
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1381.21

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	1408.18	.05	20787.	2204.	2204.	1.000	.0400	.00	.18	16.5	.0	12.2
10.030	1396.12	2.38	420.	836.	836.	1.000	.0400	.00	.00	.0	.6	.9
10.060	1394.49	2.38	420.	836.	836.	1.000	.0400	.00	.00	.0	.6	1.0
10.090	1392.84	2.42	413.	808.	808.	1.000	.0400	.00	.00	.0	.6	1.0
10.120	1391.19	2.48	403.	762.	762.	1.000	.0400	.00	.00	.0	.6	1.1
10.150	1389.53	2.52	396.	726.	726.	1.000	.0400	.00	.00	.0	.6	1.1
10.180	1387.87	2.58	388.	693.	693.	1.000	.0400	.00	.00	.0	.6	1.1
10.210	1386.21	2.60	384.	669.	669.	1.000	.0400	.00	.00	.0	.6	1.1
10.240	1384.54	2.66	376.	643.	643.	1.001	.0400	.00	.00	.0	.6	1.2
10.270	1382.88	2.68	374.	625.	625.	1.001	.0400	.00	.00	.0	.6	1.2
10.300	1381.21	2.73	366.	604.	604.	1.001	.0400	.00	.01	.0	.6	1.2

Maximum Froude Number (FRDM)	.62
Cross-Section of Maximum Froude Number (IFR)	11
Minimum Froude Number (FRM)	.00
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

Dam Cross Section Number	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	.000	1000.	1408.18	1407.90	1396.12	1.00	.00	1000.	0.	0.	1000.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	13.0000
Time Step (DTH)	.2000
Number of Iterations Required after Time Step Reduction (ITERR)	3
Flow at Upstream End of Model (QU(1), cfs)	8830.71
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1398.43
Flow at Downstream End of Model (QU(N), cfs)	8557.79
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1382.75

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)
10.000	1398.43	7.37	1198.	1056.	1056.	8.831	.0400	.00	-9.92	145.2	1.2	2.4
10.030	1397.46	4.87	1814.	1239.	1239.	8.831	.0400	.00	1.34	.0	.7	2.3
10.060	1395.84	4.84	1846.	1277.	1277.	8.936	.0400	.00	1.35	.0	.7	2.3
10.090	1394.20	4.80	1868.	1312.	1312.	8.959	.0400	.00	1.36	.0	.7	2.4
10.120	1392.56	4.74	1883.	1347.	1347.	8.927	.0400	.00	1.38	.0	.7	2.4
10.150	1390.92	4.68	1893.	1380.	1380.	8.863	.0400	.00	1.39	.0	.7	2.5
10.180	1389.28	4.62	1902.	1413.	1413.	8.785	.0400	.00	1.41	.0	.7	2.5
10.210	1387.64	4.56	1908.	1445.	1445.	8.707	.0400	.00	1.43	.0	.7	2.6
10.240	1386.01	4.50	1922.	1481.	1481.	8.639	.0400	.00	1.46	.0	.7	2.6
10.270	1384.37	4.45	1931.	1516.	1516.	8.590	.0400	.00	1.49	.0	.7	2.7
10.300	1382.75	4.38	1956.	1559.	1559.	8.558	.0400	.00	1.54	.0	.7	2.7

Maximum Froude Number (FRDM)	1.22
Cross-Section of Maximum Froude Number (IFR)	1
Minimum Froude Number (FRM)	.69
Cross-Section of Minimum Froude Number (IFM)	11

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	13.000	8831.	1398.43	1396.00	1397.46	.63	793.00	8831.	8831.	0.	0.

Normalized conservation of mass as percent of maximum flow
in reach = .00

ROUTING COMPLETED :

Number of Time Steps Used (KTIME)	66
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)
10.000	1417.78	117823	7.600	11.12	.00	.00
10.030	1402.13	117823	9.800	11.50	.00	.00
10.060	1400.40	117817	9.800	11.37	.00	.00
10.090	1398.68	117813	9.800	11.23	.00	.00
10.120	1396.96	117811	9.800	11.10	.00	.00
10.150	1395.24	117810	9.800	10.98	.00	.00
10.180	1393.52	117810	9.800	10.86	.00	.00
10.210	1391.81	117810	9.800	10.75	.00	.00
10.240	1390.09	117811	9.800	10.63	.00	.00
10.270	1388.38	117812	9.800	10.53	.00	.00
10.300	1386.68	117813	9.800	10.42	.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	1408.35	1396.12	1381.21			
2	.200	1408.52	1396.15	1381.23			
3	.400	1408.71	1396.20	1381.28			
4	.600	1408.90	1396.24	1381.34			
5	.800	1409.09	1396.28	1381.40			
6	1.000	1409.30	1396.33	1381.46			
7	1.200	1409.51	1396.37	1381.51			
8	1.400	1409.72	1396.41	1381.56			
9	1.600	1409.94	1396.46	1381.62			
10	1.800	1410.16	1396.50	1381.68			
11	2.000	1410.39	1396.55	1381.73			
12	2.200	1410.63	1396.59	1381.79			
13	2.400	1410.87	1396.64	1381.84			
14	2.600	1411.12	1396.69	1381.89			
15	2.800	1411.37	1396.75	1381.96			
16	3.000	1411.63	1396.81	1382.03			
17	3.200	1411.89	1396.87	1382.11			
18	3.400	1412.16	1396.93	1382.18			
19	3.600	1412.43	1396.98	1382.25			
20	3.800	1412.71	1397.04	1382.31			
21	4.000	1412.99	1397.09	1382.37			
22	4.200	1413.28	1397.15	1382.43			
23	4.400	1413.57	1397.21	1382.49			
24	4.600	1413.87	1397.27	1382.56			
25	4.800	1414.18	1397.34	1382.63			
26	5.000	1414.49	1397.40	1382.70			
27	5.200	1414.81	1397.47	1382.76			
28	5.400	1415.14	1397.53	1382.82			
29	5.600	1415.47	1397.59	1382.88			
30	5.800	1415.80	1397.66	1382.94			
31	6.000	1416.14	1397.71	1383.00			
32	6.200	1416.47	1397.77	1383.05			
33	6.400	1416.77	1397.81	1383.10			
34	6.600	1417.05	1397.85	1383.13			
35	6.800	1417.31	1397.97	1383.22			
36	7.000	1417.52	1398.24	1383.42			
37	7.200	1417.69	1398.61	1383.73			
38	7.400	1417.78	1399.05	1384.08			
39	7.600	1417.78	1399.52	1384.40			
40	7.800	1417.68	1400.00	1384.75			
41	8.000	1417.47	1400.40	1385.11			
42	8.200	1417.12	1400.99	1385.61			
43	8.400	1416.63	1401.26	1385.90			
44	8.600	1416.04	1401.48	1386.08			
45	8.800	1415.36	1401.68	1386.27			

46	9.000	1414.37	1401.84	1386.41
47	9.200	1413.69	1401.97	1386.53
48	9.400	1412.71	1402.06	1386.61
49	9.600	1411.64	1402.12	1386.66

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	1410.47	1402.13	1386.68			
51	10.000	1409.19	1402.11	1386.66			
52	10.200	1407.86	1401.85	1386.46			
53	10.400	1406.57	1401.39	1386.07			
54	10.600	1405.38	1400.97	1385.69			
55	10.800	1404.29	1400.57	1385.34			
56	11.000	1403.29	1400.20	1385.02			
57	11.200	1402.39	1399.84	1384.73			
58	11.400	1401.58	1399.48	1384.47			
59	11.600	1400.85	1399.16	1384.25			
60	11.800	1400.20	1398.89	1384.06			
61	12.000	1399.57	1398.73	1383.93			
62	12.200	1398.97	1398.52	1383.77			
63	12.300	1398.79	1397.53	1383.38			
64	12.400	1398.75	1397.47	1382.82			
65	12.600	1398.65	1397.47	1382.74			
66	12.800	1398.55	1397.45	1382.80			

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			
2	.200	1.10	1.10	1.04			
3	.400	1.25	1.25	1.16			
4	.600	1.40	1.40	1.32			
5	.800	1.56	1.56	1.48			
6	1.000	1.72	1.72	1.64			
7	1.200	1.89	1.89	1.81			
8	1.400	2.07	2.07	1.99			
9	1.600	2.27	2.27	2.18			
10	1.800	2.48	2.48	2.39			
11	2.000	2.70	2.70	2.61			
12	2.200	2.92	2.92	2.83			
13	2.400	3.14	3.14	3.05			
14	2.600	3.40	3.40	3.30			
15	2.800	3.74	3.74	3.60			
16	3.000	4.09	4.09	3.96			
17	3.200	4.45	4.45	4.32			
18	3.400	4.81	4.81	4.68			
19	3.600	5.18	5.18	5.05			
20	3.800	5.55	5.55	5.42			
21	4.000	5.93	5.93	5.80			
22	4.200	6.32	6.32	6.18			
23	4.400	6.76	6.76	6.60			
24	4.600	7.28	7.28	7.10			
25	4.800	7.81	7.81	7.64			
26	5.000	8.35	8.35	8.18			
27	5.200	8.90	8.90	8.73			
28	5.400	9.46	9.46	9.29			
29	5.600	10.03	10.03	9.85			
30	5.800	10.60	10.60	10.43			
31	6.000	11.19	11.19	11.01			
32	6.200	11.74	11.74	11.58			
33	6.400	12.18	12.18	12.07			
34	6.600	12.58	12.58	12.47			
35	6.800	13.88	13.88	13.43			
36	7.000	17.03	17.03	16.04			
37	7.200	22.04	22.04	20.66			
38	7.400	28.88	28.88	27.19			
39	7.600	37.33	37.33	35.59			
40	7.800	47.29	47.29	45.57			
41	8.000	58.60	58.60	56.89			
42	8.200	76.84	76.84	73.96			
43	8.400	85.47	85.47	85.23			
44	8.600	93.58	93.58	92.24			
45	8.800	100.75	100.75	100.13			
46	9.000	106.80	106.80	106.08			

48	9.400	115.15	115.15	114.78
49	9.600	117.23	117.23	117.07

PROJECT TITLE : HQFRS--WEST BREACH (13-88)

PROJECT NUMBER : FILE: HQWT.DBK 10/25/1990

Time Step Count	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	117.82	117.82	117.81			
51	10.000	116.90	116.90	117.06			
52	10.200	106.85	106.85	108.45			
53	10.400	90.20	90.20	92.31			
54	10.600	75.74	75.74	77.39			
55	10.800	63.29	63.29	64.96			
56	11.000	52.65	52.65	54.12			
57	11.200	43.70	43.70	45.06			
58	11.400	36.34	36.34	37.60			
59	11.600	30.48	30.48	31.60			
60	11.800	26.12	26.12	27.01			
61	12.000	23.68	23.68	24.13			
62	12.200	20.62	20.62	21.45			
63	12.300	9.21	9.21	15.68			
64	12.400	9.00	9.00	9.23			
65	12.600	8.83	8.83	8.40			
66	12.800	8.74	8.74	9.14			

END OF OUTPUT

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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ROGRAM ORIGIN :

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

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OJECT DESCRIPTION :

PROJECT TITLE : SBFRS--NORTH BREACH (13-88)
PROJECT NUMBER : FILE: SBNTOP.DBK
DESCRIPTION : NORTH BREACH (72 HOUR 1/2 PMF)
ENGINEER : CARTER ASSOCIATES
DATE OF RUN : 10/31/1990
TIME OF RUN : 5:00 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
1182.60	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)	1193.33
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)	6.00
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	1127.0
6.00	965.0
8.00	953.0
12.00	949.0
16.00	542.0

SUMMARY OF PROGRAM CONTROL PARAMETERS :

Number of Cross-Sections Entered (NS)	3	
Number of Top Widths Entered (NCS)	7	
Number of Cross-Sectional Hydrographs to Plot (NTT)	3	
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 2 3

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)	.0000
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 DAM 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) (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)
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) 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) .000

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

CROSS-SECTION and REACH DESCRIPTION :

evation US(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)
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) 10.380

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)
1173.50	2.0	.0	.0	.0
1174.00	950.0	.0	.0	.0
1177.00	2250.0	.0	.0	.0
1179.00	2700.0	.0	.0	.0
1181.00	4150.0	.0	.0	.0
1183.00	4850.0	.0	.0	.0
1191.00	7600.0	.0	.0	.0

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

Total number of cross-sections (original+interpolated) 13

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	1182.500			
2	10.030	1181.500	1	.030	33.334
3	10.380	1173.500	2	.350	22.857

RE-NUMBERED DAM/BRIDGE CROSS-SECTIONS :

Dam/ Bridge	Revised Cross Section Number
1	1

Number of Intermediate Cross-Sections (NN(NS)) 13

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	10.000	1184.05	1.55	1183.52	1.02	0	10	10
2	10.030	1182.96	1.46	1182.48	.98	0	10	10
3	10.062	1182.20	1.43	1181.74	.97	0	10	10
4	10.094	1181.46	1.41	1180.99	.95	0	10	10
5	10.125	1180.71	1.39	1180.25	.93	0	10	10
6	10.157	1179.97	1.38	1179.51	.91	0	10	10
7	10.189	1179.21	1.34	1178.76	.90	0	10	10
8	10.221	1178.46	1.32	1178.02	.88	0	10	10
9	10.253	1177.72	1.31	1177.27	.86	0	10	10
10	10.285	1176.97	1.29	1176.54	.86	0	10	10
11	10.316	1176.23	1.27	1175.80	.85	0	10	10
12	10.348	1175.48	1.26	1175.06	.83	0	10	10
13	10.380	1174.74	1.24	1174.33	.83	0	10	10

SUMMARY OF INITIAL DOWNSTREAM BOUNDARY CONDITIONS :

Cross-section Number at Downstream End of Model (IN)	13
Initial Water Surface Elev. at Downstream End (YNN, ft MSL)	1174.739
Initial Flow Depth at Downstream End (DEP, ft)	1.239

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
12	10.348	2315.0	1175.483	1.256	4
11	10.316	2315.0	1176.227	1.272	4
10	10.285	2315.0	1176.969	1.287	5
9	10.253	2315.0	1177.714	1.305	5
8	10.221	2315.0	1178.459	1.323	5
7	10.189	2315.0	1179.205	1.342	5
6	10.157	2315.0	1179.952	1.361	5
5	10.125	2315.0	1180.699	1.381	5
4	10.094	2315.0	1181.447	1.402	5
3	10.062	2315.0	1182.196	1.423	5
2	10.030	2315.0	1182.945	1.445	5
1	10.000	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	1182.95	2315.0
3	1182.20	2315.0
4	1181.45	2315.0
5	1180.70	2315.0
6	1179.95	2315.0
7	1179.21	2315.0
8	1178.46	2315.0
9	1177.71	2315.0
10	1176.97	2315.0
11	1176.23	2315.0
12	1175.48	2315.0
13	1174.74	2315.0

DAM OUTFLOW HYDROGRAPH TIME PARAMETERS :

Time to Failure (TFH, hr)	5.400
Time to Start of Rising Limb of Hydrograph (TFO, hr)	6.000
Time to Peak (TP, hr)	.000
Time Step Size (DTHI, hr)	.270

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	.0000
Time Step (DTH)	.2700
Number of Iterations Required after Time Step Reduction (ITERR)	0
Flow at Upstream End of Model (QU(1), cfs)	2315.00
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1192.00
Flow at Downstream End of Model (QU(N), cfs)	2315.00
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1174.74

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	1192.00	.09	25226.	4850.	4850.	2.315	.0400	.00	.00	51.7	.0	9.5
10.030	1182.95	2.28	1016.	1154.	1154.	2.315	.0400	.00	.00	.0	.4	1.4
10.062	1182.20	2.27	1018.	1161.	1161.	2.315	.0400	.00	.00	.0	.4	1.4
10.094	1181.45	2.27	1021.	1169.	1169.	2.315	.0400	.00	.00	.0	.4	1.4
10.125	1180.70	2.26	1025.	1178.	1178.	2.315	.0400	.00	.00	.0	.4	1.4
10.157	1179.95	2.25	1028.	1187.	1187.	2.315	.0400	.00	.00	.0	.4	1.4
10.189	1179.21	2.24	1032.	1197.	1197.	2.315	.0400	.00	.00	.0	.4	1.3
10.221	1178.46	2.23	1036.	1208.	1208.	2.315	.0400	.00	.00	.0	.4	1.3
10.253	1177.71	2.23	1040.	1219.	1219.	2.315	.0400	.00	.00	.0	.4	1.3
10.285	1176.97	2.22	1044.	1231.	1231.	2.315	.0400	.00	.00	.0	.4	1.3
10.316	1176.23	2.20	1051.	1244.	1244.	2.315	.0400	.00	.00	.0	.4	1.3
10.348	1175.48	2.19	1055.	1257.	1257.	2.315	.0400	.00	.00	.0	.4	1.3
10.380	1174.74	2.19	1058.	1270.	1270.	2.315	.0400	.00	.00	.0	.4	1.2

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

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	.0000
Time Step (DTH)	.2700
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	2316.83
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1192.03
Flow at Downstream End of Model (QU(N), cfs)	2317.39
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1174.74

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	1192.03	.09	25352.	4859.	4859.	2.317	.0400	.00	.03	51.7	.0	9.5
10.030	1182.95	2.28	1016.	1154.	1154.	2.317	.0400	.00	.00	.0	.4	1.4
10.062	1182.20	2.27	1019.	1161.	1161.	2.317	.0400	.00	.00	.0	.4	1.4
10.094	1181.45	2.27	1022.	1169.	1169.	2.317	.0400	.00	.00	.0	.4	1.4
10.125	1180.70	2.26	1025.	1178.	1178.	2.316	.0400	.00	.00	.0	.4	1.4
10.157	1179.95	2.25	1029.	1187.	1187.	2.316	.0400	.00	.00	.0	.4	1.4
10.189	1179.21	2.24	1032.	1197.	1197.	2.316	.0400	.00	.00	.0	.4	1.3
10.221	1178.46	2.24	1036.	1208.	1208.	2.316	.0400	.00	.00	.0	.4	1.3
10.253	1177.71	2.23	1040.	1219.	1219.	2.316	.0400	.00	.00	.0	.4	1.3
10.285	1176.97	2.22	1045.	1231.	1231.	2.316	.0400	.00	.00	.0	.4	1.3
10.316	1176.23	2.20	1051.	1244.	1244.	2.316	.0400	.00	.00	.0	.4	1.3
10.348	1175.48	2.20	1055.	1257.	1257.	2.317	.0400	.00	.00	.0	.4	1.3
10.380	1174.74	2.19	1058.	1270.	1270.	2.317	.0400	.00	.00	.0	.4	1.2

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 Cross Section Number	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	.000	2317.	1192.03	1183.50	1182.95	1.00	.01	2317.	0.	0.	2317.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	6.0000
Time Step (DTH)	.1000
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	9571.96
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1188.22
Flow at Downstream End of Model (QU(N), cfs)	9887.79
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1175.94

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	1188.22	.96	9983.	2859.	2859.	9.572	.0400	.00	-3.83	80.3	.1	5.7
10.030	1184.18	3.36	2852.	1814.	1814.	9.572	.0400	.00	1.24	.0	.5	2.7
10.062	1183.43	3.36	2854.	1809.	1809.	9.601	.0400	.00	1.24	.0	.5	2.7
10.094	1182.68	3.37	2857.	1805.	1805.	9.630	.0400	.00	1.23	.0	.5	2.6
10.125	1181.93	3.38	2860.	1801.	1801.	9.660	.0400	.00	1.23	.0	.5	2.6
10.157	1181.18	3.38	2863.	1798.	1798.	9.689	.0400	.00	1.23	.0	.5	2.6
10.189	1180.43	3.39	2867.	1795.	1795.	9.717	.0400	.00	1.23	.0	.5	2.6
10.221	1179.68	3.39	2871.	1793.	1793.	9.746	.0400	.00	1.22	.0	.5	2.5
10.253	1178.93	3.40	2875.	1792.	1792.	9.774	.0400	.00	1.22	.0	.5	2.5
10.285	1178.18	3.40	2880.	1791.	1791.	9.803	.0400	.00	1.21	.0	.5	2.5
10.316	1177.44	3.41	2885.	1790.	1790.	9.831	.0400	.00	1.21	.0	.5	2.5
10.348	1176.69	3.41	2890.	1790.	1790.	9.860	.0400	.00	1.20	.0	.5	2.5
10.380	1175.94	3.42	2894.	1790.	1790.	9.888	.0400	.00	1.20	.0	.5	2.4

Maximum Froude Number (FRDM)	.47
Cross-Section of Maximum Froude Number (IFR)	13
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	1	6.000	9572.	1188.22	1182.50	1184.18	1.00	198.00	9572.	8517.	0.	1055.

Normalized conservation of mass as percent of maximum flow

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	1192.09	12054	.700	.96	.00	.00
10.030	1184.46	12054	4.400	3.57	.00	.00
10.062	1183.71	12054	4.400	3.58	.00	.00
10.094	1182.95	12055	4.400	3.58	.00	.00
10.125	1182.20	12055	4.400	3.59	.00	.00
10.157	1181.44	12054	4.400	3.60	.00	.00
10.189	1180.69	12054	4.400	3.60	.00	.00
10.221	1179.94	12053	4.400	3.61	.00	.00
10.253	1179.18	12053	4.400	3.61	.00	.00
10.285	1178.43	12052	4.500	3.61	.00	.00
10.316	1177.68	12052	4.500	3.62	.00	.00
10.348	1176.93	12052	4.500	3.62	.00	.00
10.380	1176.17	12052	4.500	3.62	.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	1192.05	1182.95	1174.74			
2	.100	1192.06	1182.95	1174.74			
3	.200	1192.07	1182.96	1174.74			
4	.300	1192.08	1182.99	1174.75			
5	.400	1192.08	1183.02	1174.77			
6	.500	1192.09	1183.05	1174.79			
7	.600	1192.09	1183.10	1174.82			
8	.700	1192.09	1183.14	1174.86			
9	.800	1192.09	1183.18	1174.90			
10	.900	1192.09	1183.22	1174.94			
11	1.000	1192.09	1183.26	1174.97			
12	1.100	1192.08	1183.31	1175.01			
13	1.200	1192.07	1183.35	1175.05			
14	1.300	1192.06	1183.40	1175.10			
15	1.400	1192.05	1183.44	1175.14			
16	1.500	1192.04	1183.48	1175.18			
17	1.600	1192.02	1183.52	1175.22			
18	1.700	1192.00	1183.55	1175.25			
19	1.800	1191.98	1183.59	1175.29			
20	1.900	1191.96	1183.63	1175.32			
21	2.000	1191.93	1183.67	1175.36			
22	2.100	1191.90	1183.71	1175.40			
23	2.200	1191.87	1183.75	1175.44			
24	2.300	1191.84	1183.79	1175.48			
25	2.400	1191.80	1183.83	1175.52			
26	2.500	1191.76	1183.88	1175.56			
27	2.600	1191.71	1183.92	1175.60			
28	2.700	1191.67	1183.96	1175.64			
29	2.800	1191.62	1184.01	1175.68			
30	2.900	1191.56	1184.06	1175.72			
31	3.000	1191.50	1184.10	1175.77			
32	3.100	1191.44	1184.15	1175.82			
33	3.200	1191.37	1184.34	1175.90			
34	3.300	1191.28	1184.38	1176.02			
35	3.400	1191.20	1184.39	1176.09			
36	3.500	1191.11	1184.41	1176.11			
37	3.600	1191.01	1184.42	1176.12			
38	3.700	1190.92	1184.43	1176.13			
39	3.800	1190.82	1184.44	1176.14			
40	3.900	1190.72	1184.44	1176.15			
41	4.000	1190.62	1184.45	1176.16			
42	4.100	1190.51	1184.45	1176.16			
43	4.200	1190.41	1184.46	1176.17			
44	4.300	1190.30	1184.46	1176.17			
45	4.400	1190.19	1184.46	1176.17			
46	4.500	1190.07	1184.46	1176.17			

47	4.600	1189.96	1184.46	1176.17
48	4.700	1189.84	1184.45	1176.17
49	4.800	1189.72	1184.45	1176.17

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	4.900	1189.60	1184.44	1176.16			
51	5.000	1189.48	1184.43	1176.16			
52	5.100	1189.35	1184.42	1176.15			
53	5.200	1189.23	1184.41	1176.14			
54	5.300	1189.10	1184.40	1176.13			
55	5.400	1188.97	1184.39	1176.12			
56	5.500	1188.84	1184.36	1176.10			
57	5.600	1188.72	1184.32	1176.07			
58	5.700	1188.59	1184.29	1176.04			
59	5.800	1188.47	1184.25	1176.01			
60	5.900	1188.34	1184.22	1175.97			

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	2.32			
2	.100	2.34	2.34	2.32			
3	.200	2.39	2.39	2.33			
4	.300	2.47	2.47	2.36			
5	.400	2.59	2.59	2.43			
6	.500	2.74	2.74	2.53			
7	.600	2.93	2.93	2.67			
8	.700	3.11	3.11	2.84			
9	.800	3.28	3.28	3.02			
10	.900	3.47	3.47	3.21			
11	1.000	3.67	3.67	3.39			
12	1.100	3.89	3.89	3.59			
13	1.200	4.12	4.12	3.81			
14	1.300	4.36	4.36	4.03			
15	1.400	4.58	4.58	4.27			
16	1.500	4.77	4.77	4.50			
17	1.600	4.98	4.98	4.71			
18	1.700	5.19	5.19	4.92			
19	1.800	5.42	5.42	5.13			
20	1.900	5.66	5.66	5.36			
21	2.000	5.91	5.91	5.60			
22	2.100	6.16	6.16	5.85			
23	2.200	6.43	6.43	6.10			
24	2.300	6.70	6.70	6.37			
25	2.400	6.98	6.98	6.64			
26	2.500	7.27	7.27	6.93			
27	2.600	7.56	7.56	7.21			
28	2.700	7.85	7.85	7.51			
29	2.800	8.22	8.22	7.82			
30	2.900	8.60	8.60	8.17			
31	3.000	8.97	8.97	8.55			
32	3.100	9.35	9.35	8.93			
33	3.200	11.16	11.16	9.58			
34	3.300	11.30	11.30	10.63			
35	3.400	11.44	11.44	11.35			
36	3.500	11.56	11.56	11.46			
37	3.600	11.67	11.67	11.53			
38	3.700	11.77	11.77	11.67			
39	3.800	11.85	11.85	11.76			
40	3.900	11.92	11.92	11.84			
41	4.000	11.97	11.97	11.91			
42	4.100	12.01	12.01	11.96			
43	4.200	12.04	12.04	12.01			
44	4.300	12.05	12.05	12.03			
45	4.400	12.05	12.05	12.05			
46	4.500	12.04	12.04	12.05			

48	4.700	11.70	11.70	12.02
49	4.800	11.93	11.93	11.98

Time Step Count	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	4.900	11.87	11.87	11.93			
51	5.000	11.80	11.80	11.87			
52	5.100	11.71	11.71	11.80			
53	5.200	11.61	11.61	11.71			
54	5.300	11.50	11.50	11.61			
55	5.400	11.38	11.38	11.50			
56	5.500	11.06	11.06	11.34			
57	5.600	10.75	10.75	11.09			
58	5.700	10.45	10.45	10.78			
59	5.800	10.15	10.15	10.47			
60	5.900	9.86	9.86	10.18			

END OF OUTPUT

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--SOUTH BREACH (13-88)
PROJECT NUMBER : FILE: SBSTOP.BRK
DESCRIPTION : SOUTH BREACH 72 HOUR 1/2 PMF
ENGINEER : CARTER ASSOCIATES
DATE OF RUN : 10/23/1990
TIME OF RUN : 2:49 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)	6	
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

HSA(K) (ft MSL)	Elevation 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)	1193.33
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)	8.00
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	1127.0
6.00	965.0
8.00	953.0
12.00	949.0

PROJECT TITLE : SBFRS--SOUTH BREACH (13-88)
PROJECT NUMBER : FILE: SBSTOP.BRK 10/23/1990

SUMMARY OF PROGRAM CONTROL PARAMETERS :

Number of Cross-Sections Entered (NS)	3	
Number of Top Widths Entered (NCS)	7	
Number of Cross-Sectional Hydrographs to Plot (NTT)	3	
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 2 3

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)	.0000
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 DAM LOCATION

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

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 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)
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) 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) .000

Minimum Distance Between Interpolated Cross-Sections (DXM, mi) .020

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)
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) 10.380

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)
1166.00	2.0	.0	.0	.0
1167.00	300.0	.0	.0	.0
1169.00	1600.0	.0	.0	.0
1171.00	2600.0	.0	.0	.0
1175.00	4000.0	.0	.0	.0
1179.00	5200.0	.0	.0	.0
1183.00	7000.0	.0	.0	.0

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	.0200

Total number of cross-sections (original+interpolated) 19

Maximum number of cross-sections allowed 300

UTPUT 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	1174.500			
2	10.030	1173.000	1	.030	50.000

WARNING: Slopes greater than 50 ft/mi may cause supercritical flow

3	10.380	1166.000	2	.350	20.000

RE-NUMBERED DAM/BRIDGE CROSS-SECTIONS :

Dam/ Bridge	Revised Cross Section Number
1	1

Number of Intermediate Cross-Sections (NN(NS)) 19

Number of Time Steps (NNU) 6

PROJECT TITLE : SBFRS--SOUTH BREACH (13-88)
PROJECT NUMBER : FILE: SBSTOP.BRK 10/23/1990

INITIAL CONDITIONS TABLE :

Cross Section Number	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	1176.15	1.65	1175.70	1.20	0	10	10
2	10.030	1175.27	2.27	1174.67	1.67	0	10	10
3	10.051	1174.85	2.27	1174.26	1.67	0	10	10
4	10.071	1174.44	2.27	1173.84	1.67	0	10	10
5	10.092	1174.03	2.27	1173.43	1.67	0	10	10
6	10.112	1173.62	2.27	1173.02	1.67	0	10	10
7	10.133	1173.21	2.27	1172.61	1.67	0	10	10
8	10.154	1172.80	2.27	1172.20	1.67	0	10	10
9	10.174	1172.38	2.27	1171.79	1.67	0	10	10
10	10.195	1171.97	2.27	1171.37	1.67	0	10	10
11	10.215	1171.56	2.27	1170.96	1.67	0	10	10
12	10.236	1171.15	2.27	1170.55	1.67	0	10	10
13	10.256	1170.74	2.27	1170.14	1.67	0	10	10
14	10.277	1170.33	2.27	1169.73	1.67	0	10	10
15	10.298	1169.91	2.27	1169.32	1.67	0	10	10
16	10.318	1169.50	2.27	1168.90	1.67	0	10	10
17	10.339	1169.09	2.27	1168.49	1.67	0	10	10
18	10.359	1168.68	2.27	1168.08	1.67	0	10	10
19	10.380	1168.27	2.27	1167.67	1.67	0	10	10

SUMMARY OF INITIAL DOWNSTREAM BOUNDARY CONDITIONS :

Cross-section Number at Downstream End of Model (IN)	19
Initial Water Surface Elev. at Downstream End (YNN, ft MSL)	1168.266
Initial Flow Depth at Downstream End (DEP, ft)	2.266

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
18	10.359	2329.0	1168.685	2.273	5
17	10.339	2329.0	1169.098	2.274	5
16	10.318	2329.0	1169.510	2.275	5
15	10.298	2329.0	1169.922	2.275	5
14	10.277	2329.0	1170.333	2.275	5
13	10.256	2329.0	1170.745	2.275	5
12	10.236	2329.0	1171.157	2.275	5
11	10.215	2329.0	1171.569	2.275	5
10	10.195	2329.0	1171.980	2.275	5
9	10.174	2329.0	1172.392	2.275	5
8	10.154	2329.0	1172.804	2.275	5
7	10.133	2329.0	1173.216	2.275	5
6	10.112	2329.0	1173.628	2.275	5
5	10.092	2329.0	1174.039	2.275	5
4	10.071	2329.0	1174.451	2.275	5
3	10.051	2329.0	1174.863	2.275	5
2	10.030	2329.0	1175.275	2.275	5
1	10.000	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	1175.27	2329.0
3	1174.86	2329.0
4	1174.45	2329.0
5	1174.04	2329.0
6	1173.63	2329.0
7	1173.22	2329.0
8	1172.80	2329.0
9	1172.39	2329.0
10	1171.98	2329.0
11	1171.57	2329.0
12	1171.16	2329.0
13	1170.75	2329.0
14	1170.33	2329.0
15	1169.92	2329.0
16	1169.51	2329.0
17	1169.10	2329.0
18	1168.68	2329.0
19	1168.27	2329.0

DAM OUTFLOW HYDROGRAPH TIME PARAMETERS :

Time to Failure (TFH, hr)	3.700
Time to Start of Rising Limb of Hydrograph (TFO, hr)	8.000
Time to Peak (TP, hr)	.000
Time Step Size (DTHI, hr)	.185

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Time (TT)	.0000
Time Step (DTH)	.1850
Number of Iterations Required after Time Step Reduction (ITERR)	0
Flow at Upstream End of Model (QU(1), cfs)	2329.00
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1192.00
Flow at Downstream End of Model (QU(N), cfs)	2329.00
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1168.27

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)
10.000	1192.00	.04	64456.	6640.	6640.	2.329	.0400	.00	.00	35.6	.0	17.5
10.030	1175.27	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.051	1174.86	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.071	1174.45	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.092	1174.04	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.112	1173.63	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.133	1173.22	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.154	1172.80	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.174	1172.39	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.195	1171.98	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.215	1171.57	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.236	1171.16	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.256	1170.75	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.277	1170.33	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.298	1169.92	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.318	1169.51	2.19	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.339	1169.10	2.20	1061.	1128.	1128.	2.329	.0400	.00	.00	.0	.4	2.3
10.359	1168.68	2.20	1060.	1127.	1127.	2.329	.0400	.00	.00	.0	.4	2.3
10.380	1168.27	2.21	1052.	1123.	1123.	2.329	.0400	.00	.00	.0	.4	2.3

Maximum Froude Number (FRDM)	.40
Cross-Section of Maximum Froude Number (IFR)	19
Minimum Froude Number (FRM)	.00
Cross-Section of Minimum Froude Number (IFM)	1

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Time (TT)	.0000
Time Step (DTH)	.1850
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	2330.24
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1192.02
Flow at Downstream End of Model (QU(N), cfs)	2329.00
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1168.27

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)
10.000	1192.02	.04	64573.	6646.	6646.	2.330	.0400	.00	.02	35.6	.0	17.5
10.030	1175.27	2.20	1062.	1129.	1129.	2.330	.0400	.00	.00	.0	.4	2.3
10.051	1174.86	2.19	1062.	1129.	1129.	2.330	.0400	.00	.00	.0	.4	2.3
10.071	1174.45	2.19	1062.	1129.	1129.	2.330	.0400	.00	.00	.0	.4	2.3
10.092	1174.04	2.19	1062.	1129.	1129.	2.330	.0400	.00	.00	.0	.4	2.3
10.112	1173.63	2.20	1061.	1128.	1128.	2.330	.0400	.00	.00	.0	.4	2.3
10.133	1173.22	2.19	1062.	1129.	1129.	2.330	.0400	.00	.00	.0	.4	2.3
10.154	1172.80	2.20	1061.	1129.	1129.	2.330	.0400	.00	.00	.0	.4	2.3
10.174	1172.39	2.19	1061.	1129.	1129.	2.330	.0400	.00	.00	.0	.4	2.3
10.195	1171.98	2.19	1061.	1129.	1129.	2.330	.0400	.00	.00	.0	.4	2.3
10.215	1171.57	2.19	1061.	1129.	1129.	2.330	.0400	.00	.00	.0	.4	2.3
10.236	1171.16	2.19	1061.	1129.	1129.	2.330	.0400	.00	.00	.0	.4	2.3
10.256	1170.75	2.19	1061.	1129.	1129.	2.330	.0400	.00	.00	.0	.4	2.3
10.277	1170.33	2.20	1061.	1128.	1128.	2.330	.0400	.00	.00	.0	.4	2.3
10.298	1169.92	2.19	1061.	1129.	1129.	2.330	.0400	.00	.00	.0	.4	2.3
10.318	1169.51	2.20	1061.	1128.	1128.	2.330	.0400	.00	.00	.0	.4	2.3
10.339	1169.10	2.20	1061.	1128.	1128.	2.330	.0400	.00	.00	.0	.4	2.3
10.359	1168.69	2.20	1060.	1128.	1128.	2.330	.0400	.00	.00	.0	.4	2.3
10.380	1168.27	2.21	1056.	1125.	1125.	2.329	.0400	.00	.00	.0	.4	2.3

Maximum Froude Number (FRDM)	.40
Cross-Section of Maximum Froude Number (IFR)	19
Minimum Froude Number (FRM)	.00
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	7.400	3736.	1179.97	1175.00	1175.65	1.00	100.00	3736.	3500.	0.	237.

- - - - - - - - - - - - - - - - NEXT CYCLE - - - - - - - - - - - - - - - -

Time (TT)	7.6868
Time Step (DTH)	.1868
Number of Iterations Required after Time Step Reduction (ITERR)	1
Flow at Upstream End of Model (QU(1), cfs)	3062.87
Water Elevation at Upstream End of Model (YU(1), ft MSL)	1179.36
Flow at Downstream End of Model (QU(N), cfs)	3432.29
Water Elevation at Downstream End of Model (YU(N), ft MSL)	1168.58

ver 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	1179.36	.40	7574.	2425.	2425.	3.063	.0400	.00	-12.67	50.6	.0	4.9
10.030	1175.49	2.33	1315.	1266.	1266.	3.063	.0400	.00	.21	.0	.4	2.5
10.051	1175.08	2.33	1322.	1270.	1270.	3.084	.0400	.00	.22	.0	.4	2.5
10.071	1174.67	2.34	1329.	1273.	1273.	3.105	.0400	.00	.22	.0	.4	2.5
10.092	1174.27	2.34	1336.	1277.	1277.	3.126	.0400	.00	.23	.0	.4	2.5
10.112	1173.86	2.34	1343.	1280.	1280.	3.148	.0400	.00	.23	.0	.4	2.5
10.133	1173.45	2.35	1350.	1284.	1284.	3.169	.0400	.00	.24	.0	.4	2.5
10.154	1173.05	2.35	1357.	1287.	1287.	3.191	.0400	.00	.24	.0	.4	2.5
10.174	1172.64	2.36	1364.	1291.	1291.	3.212	.0400	.00	.25	.0	.4	2.5
10.195	1172.24	2.36	1371.	1294.	1294.	3.234	.0400	.00	.25	.0	.4	2.5
10.215	1171.83	2.36	1377.	1298.	1298.	3.255	.0400	.00	.26	.0	.4	2.5
10.236	1171.42	2.37	1385.	1301.	1301.	3.277	.0400	.00	.27	.0	.4	2.5
10.256	1171.02	2.37	1391.	1305.	1305.	3.299	.0400	.00	.27	.0	.4	2.5
10.277	1170.61	2.37	1398.	1308.	1308.	3.321	.0400	.00	.28	.0	.4	2.6
10.298	1170.20	2.38	1406.	1312.	1312.	3.343	.0400	.00	.28	.0	.4	2.6
10.318	1169.80	2.38	1413.	1315.	1315.	3.365	.0400	.00	.29	.0	.4	2.6
10.339	1169.39	2.39	1420.	1319.	1319.	3.388	.0400	.00	.29	.0	.4	2.6
10.359	1168.98	2.39	1427.	1322.	1322.	3.410	.0400	.00	.30	.0	.4	2.6
10.380	1168.58	2.39	1434.	1326.	1326.	3.432	.0400	.00	.31	.0	.4	2.6

Maximum Froude Number (FROM)	.41
Cross-Section of Maximum Froude Number (IFR)	19
Minimum Froude Number (FRM)	.04
Cross-Section of Minimum Froude Number (IFM)	1

RESERVOIR OUTFLOW INFORMATION :

m Cross ction mber 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	7.687	3063.	1179.36	1175.00	1175.49	1.00	100.00	3063.	2874.	0.	189.

Normalized conservation of mass as percent of maximum flow
in reach = -.01

ROUTING COMPLETED :

Number of Time Steps Used (KTIME)	77
Maximum Number of Time Steps Allowed	1199
Total Time of Flood Routing (TT, hr)	8.1

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	1192.06	18480	.500	.42	.00	.00
10.030	1177.46	18480	3.700	3.76	.00	.00
10.051	1177.04	18477	3.700	3.76	.00	.00
10.071	1176.63	18475	3.700	3.76	.00	.00
10.092	1176.22	18472	3.700	3.76	.00	.00
10.112	1175.81	18469	3.700	3.76	.00	.00
10.133	1175.40	18466	3.700	3.76	.00	.00
10.154	1174.98	18463	3.700	3.76	.00	.00
10.174	1174.57	18460	3.700	3.76	.00	.00
10.195	1174.16	18457	3.700	3.76	.00	.00
10.215	1173.75	18453	3.700	3.76	.00	.00
10.236	1173.34	18450	3.700	3.76	.00	.00
10.256	1172.92	18446	3.700	3.76	.00	.00
10.277	1172.51	18442	3.700	3.76	.00	.00
10.298	1172.10	18438	3.700	3.76	.00	.00
10.318	1171.69	18434	3.700	3.76	.00	.00
10.339	1171.28	18430	3.700	3.76	.00	.00
10.359	1170.86	18426	3.700	3.76	.00	.00
10.380	1170.45	18421	3.700	3.76	.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	1175.28	1168.27			
2	.100	1192.04	1175.29	1168.27			
3	.200	1192.05	1175.33	1168.28			
4	.300	1192.06	1175.39	1168.31			
5	.400	1192.06	1175.48	1168.36			
6	.500	1192.06	1175.57	1168.43			
7	.600	1192.06	1175.65	1168.52			
8	.700	1192.05	1175.73	1168.61			
9	.800	1192.04	1175.82	1168.69			
10	.900	1192.03	1175.91	1168.78			
11	1.000	1192.01	1175.98	1168.86			
12	1.100	1191.99	1176.05	1168.95			
13	1.200	1191.97	1176.12	1169.02			
14	1.300	1191.94	1176.19	1169.10			
15	1.400	1191.90	1176.27	1169.17			
16	1.500	1191.87	1176.34	1169.25			
17	1.600	1191.82	1176.41	1169.32			
18	1.700	1191.77	1176.49	1169.40			
19	1.800	1191.72	1176.56	1169.47			
20	1.900	1191.66	1176.64	1169.55			
21	2.000	1191.59	1176.73	1169.63			
22	2.100	1191.52	1176.81	1169.72			
23	2.200	1191.43	1176.89	1169.80			
24	2.300	1191.33	1177.14	1169.93			
25	2.400	1191.22	1177.21	1170.10			
26	2.500	1191.09	1177.24	1170.20			
27	2.600	1190.97	1177.27	1170.23			
28	2.700	1190.83	1177.30	1170.26			
29	2.800	1190.69	1177.32	1170.29			
30	2.900	1190.55	1177.35	1170.32			
31	3.000	1190.39	1177.37	1170.34			
32	3.100	1190.23	1177.39	1170.37			
33	3.200	1190.07	1177.41	1170.39			
34	3.300	1189.90	1177.42	1170.40			
35	3.400	1189.71	1177.44	1170.42			
36	3.500	1189.53	1177.44	1170.43			
37	3.600	1189.33	1177.45	1170.44			
38	3.700	1189.13	1177.46	1170.45			
39	3.800	1188.92	1177.43	1170.45			
40	3.900	1188.70	1177.39	1170.42			
41	4.000	1188.49	1177.36	1170.39			
42	4.100	1188.27	1177.32	1170.35			
43	4.200	1188.05	1177.28	1170.32			
44	4.300	1187.82	1177.24	1170.28			
45	4.400	1187.59	1177.20	1170.24			
46	4.500	1187.35	1177.16	1170.20			

47	4.600	1187.11	1177.12	1170.16
48	4.700	1186.88	1177.08	1170.12
49	4.800	1186.63	1177.03	1170.08

Time Step Count #	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	4.900	1186.39	1176.99	1170.04			
51	5.000	1186.15	1176.95	1169.99			
52	5.100	1185.90	1176.90	1169.95			
53	5.200	1185.65	1176.86	1169.91			
54	5.300	1185.40	1176.81	1169.86			
55	5.400	1185.14	1176.76	1169.81			
56	5.500	1184.89	1176.71	1169.77			
57	5.600	1184.64	1176.67	1169.72			
58	5.700	1184.39	1176.62	1169.67			
59	5.800	1184.13	1176.57	1169.63			
60	5.900	1183.88	1176.52	1169.58			
61	6.000	1183.63	1176.47	1169.53			
62	6.100	1183.38	1176.42	1169.48			
63	6.200	1183.13	1176.37	1169.43			
64	6.300	1182.87	1176.32	1169.38			
65	6.400	1182.62	1176.26	1169.33			
66	6.500	1182.35	1176.21	1169.28			
67	6.600	1182.08	1176.15	1169.22			
68	6.700	1181.81	1176.09	1169.17			
69	6.800	1181.52	1176.03	1169.11			
70	6.900	1181.24	1175.97	1169.05			
71	7.000	1180.96	1175.90	1168.99			
72	7.100	1180.70	1175.84	1168.93			
73	7.200	1180.44	1175.77	1168.87			
74	7.300	1180.20	1175.71	1168.81			
75	7.400	1179.97	1175.65	1168.74			
76	7.500	1179.75	1175.59	1168.69			
77	7.687	1179.36	1175.49	1168.58			

COMPUTED DISCHARGES AT REQUESTED
STATIONS WHERE HYDROGRAPHS ARE PLOTTED :

Time Step Count	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	.100	2.38	2.38	2.33			
3	.200	2.52	2.52	2.36			
4	.300	2.76	2.76	2.44			
5	.400	3.09	3.09	2.60			
6	.500	3.47	3.47	2.87			
7	.600	3.81	3.81	3.22			
8	.700	4.19	4.19	3.60			
9	.800	4.61	4.61	3.98			
10	.900	5.06	5.06	4.39			
11	1.000	5.47	5.47	4.83			
12	1.100	5.88	5.88	5.28			
13	1.200	6.33	6.33	5.73			
14	1.300	6.81	6.81	6.19			
15	1.400	7.31	7.31	6.67			
16	1.500	7.84	7.84	7.18			
17	1.600	8.40	8.40	7.71			
18	1.700	8.98	8.98	8.27			
19	1.800	9.58	9.58	8.86			
20	1.900	10.25	10.25	9.48			
21	2.000	10.99	10.99	10.15			
22	2.100	11.75	11.75	10.89			
23	2.200	12.52	12.52	11.66			
24	2.300	15.27	15.27	12.84			
25	2.400	15.65	15.65	14.53			
26	2.500	16.01	16.01	15.68			
27	2.600	16.35	16.35	16.02			
28	2.700	16.67	16.67	16.32			
29	2.800	16.97	16.97	16.67			
30	2.900	17.24	17.24	16.96			
31	3.000	17.49	17.49	17.23			
32	3.100	17.72	17.72	17.48			
33	3.200	17.92	17.92	17.71			
34	3.300	18.09	18.09	17.91			
35	3.400	18.23	18.23	18.08			
36	3.500	18.35	18.35	18.23			
37	3.600	18.43	18.43	18.34			
38	3.700	18.48	18.48	18.42			
39	3.800	18.07	18.07	18.37			
40	3.900	17.66	17.66	18.08			
41	4.000	17.24	17.24	17.66			
42	4.100	16.82	16.82	17.24			
43	4.200	16.39	16.39	16.83			
44	4.300	15.96	15.96	16.40			
45	4.400	15.52	15.52	15.97			
46	4.500	15.09	15.09	15.54			
47	4.600	14.65	14.65	15.11			

49	4.800	13.78	13.78	14.24

Time Step Count	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	4.900	13.35	13.35	13.81			
51	5.000	12.91	12.91	13.38			
52	5.100	12.48	12.48	12.95			
53	5.200	12.05	12.05	12.52			
54	5.300	11.61	11.61	12.10			
55	5.400	11.19	11.19	11.67			
56	5.500	10.77	10.77	11.25			
57	5.600	10.35	10.35	10.83			
58	5.700	9.94	9.94	10.42			
59	5.800	9.54	9.54	10.01			
60	5.900	9.14	9.14	9.61			
61	6.000	8.75	8.75	9.22			
62	6.100	8.36	8.36	8.83			
63	6.200	7.98	7.98	8.45			
64	6.300	7.59	7.59	8.07			
65	6.400	7.21	7.21	7.69			
66	6.500	6.83	6.83	7.31			
67	6.600	6.45	6.45	6.94			
68	6.700	6.07	6.07	6.57			
69	6.800	5.69	5.69	6.19			
70	6.900	5.31	5.31	5.82			
71	7.000	4.95	4.95	5.46			
72	7.100	4.62	4.62	5.12			
73	7.200	4.30	4.30	4.79			
74	7.300	4.01	4.01	4.47			
75	7.400	3.74	3.74	4.17			
76	7.500	3.48	3.48	3.90			
77	7.687	3.06	3.06	3.43			

END OF OUTPUT