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**GA-A15579
VOLUME II
UC-77**

**CASY - A DYNAMIC SIMULATION
OF THE GAS-COOLED FAST BREEDER REACTOR
CORE AUXILIARY COOLING SYSTEM**

VOLUME II: EXAMPLE COMPUTER RUN

by
JAYCOR
Del Mar, California

Prepared under
Contract DE-AT03-76SF71023
for the San Francisco Operations Office
Department of Energy

DATE PUBLISHED: SEPTEMBER 1979

GENERAL ATOMIC COMPANY

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PREFACE

This report was prepared by JAYCOR of Del Mar, California in partial fulfillment of General Atomic Company Purchase Order No. 614990. It completely describes the model development and digital computer code for a dynamic simulation of a gas-cooled fast breeder reactor (GCFR) emergency core cooling system. This report is in two volumes:

Volume I - Technical Discussion

Volume II - Example Computer Run

The simulation described in this report represents the initial version of the development of an overall core auxiliary cooling system (CACS) dynamic simulation capability. The basic objective of this simulation development is to provide accurate predictions of overall system dynamic responses under anticipated operating conditions. Although this capability is primarily being developed to use in the design and analysis of CACS control systems, it will also be suitable for use in other system development areas (i.e., operating procedure definition, failure analysis, operating evaluation, system design studies, etc.).

The system's three independent cooling loops are modeled as a single equivalent loop on both the primary coolant (helium) side and the secondary coolant (water) side using lumped parameter modeling techniques. Since the purpose of this system

is residual heat removal from the shutdown reactor, the core model does not include reactor kinetics. The emphasis in this modeling development was on the accurate prediction of component input/output relationships over a wide range of operating characteristics. This is an open loop plant simulation in the sense that the plant control systems, or control loops, are not incorporated. If these control systems are required, specific configurations must be supplied by the user.

The digital computer code for the CACS simulation is contained in the catalog file CACSSM*SEP77. The table of contents of this file is listed below.

Program Element Name

PROG

RUN

MAP

The program element name PROG contains the SYSL* code of the corresponding simulation. The program element names RUN and MAP contain the computer system control statements needed to execute the simulation on the UNIVAC 1110 digital computer. The RUN and MAP statements are listed below.

*Estrine, E. A., "System Simulation Language (SYSL) User's Guide," General Atomic Report GA-D14439, May 1978.

CACSSM*SEP77.RUN

```
1:@PRT,CS CACSSM*SEP77.PROG
2:@ASG,A BIG*FOR.
3:@ASG,A SYSL*SIM.
4:@ASG,A SYSL*TRAN.
5:@ASG,T 3,F
6:@ASG,T 4,F2
7:@ASG,T 7,F2
8:@ASG,T 8,F2
9:@XQT SYSL*TRAN.SYSLTRAN
10:@ADD,P CACSSM*SEP77.PROG
11:@ADD,P 7.
```

CACSSM*SEP77.MAP

```
1:@ASG,X IC*CASY.
2:@ASG,A CALCOMP*BASIC.
3:@USE 12.,IC*CASY.
4:@MAP ,SYSLSIM
5: IN TPF$.
6: IN SYSL*SIM.MAIN
7: IN GCFR*SYSL.STEADY
8: LIB SYSL*SIM
9: LIB CALCOMP*BASIC.
10: IN SSCOM
11:@XQT SYLSIM
```

There are some differences between these RUN and MAP statements and those referenced in this report. These differences were produced by the different file identification used in CACSSM*SEP77 and by the elimination of unnecessary control statements in the report listings. The CACSSM*SEP77 file listings are correct and consistent with each other. The report listings of MAP and RUN statements should only be used for reference and for example when incorporating the features discussed in the User's Guide section (Appendix B).

The CACSSM*SEP77 file and the SYSL program have been entered into the General Atomic Company digital computer code archive library. The catalog numbers assigned to them are

CACSSM*SEP77 - SYSD 2923

SYSL TRANSLATOR - SYSD 2569

SYSL SIMULATOR - SYSD 2570

Herbert G. Greiner
General Atomic Company
August 1979

CASY - A Dynamic Simulation of the
Gas-Cooled Fast Breeder Reactor
Auxiliary Core Cooling System

Volume II: Example Computer Run

J77-6046-TR-02

Prepared by
R. W. McNamara and M. R. Ringham
JAYCOR
Del Mar, California

Prepared under
Contract No. 614990
General Atomic Company
San Diego, California

Project Coordinators: J. Khoe and H. G. Greiner

September 1977

JAYCOR, 1401 CAMINO DEL MAR, DEL MAR, CALIFORNIA, 92014, (714)453-6580

QASG,AK SYSS*RSUNS095236
FAC WARNING 040000100000

QASG,A RUN*CASE

2ADD,P,RUN,CASY.

0ASG,AX GCFR+CASY.
FAC WARNING 044000000000

DATA, L GCFR=CASY.

DATABR1GA-B SL72-B 09/29/77 10:13:26 (1)

1. TITLE GCFR CASY

2. ADDMAP MAP=CASY.

3.

4.

5.

6. * * * * *
* * NOMENCLATURE GUIDELINES FOR CASY-SEE SECTION 3 OF REPORT *
* * * * *

7.

8.

9.

10. * * FIRST LETTER DESIGNATION - TYPE OF VARIABLE

11.

12. * A NORMALIZED VALVE AREA (ND)

13. * B RATE OF THERMAL EXPANSION OR CONTRACTION (FT**3/SEC)

14. * D RATE OF CHANGE WRT TIME (PER SEC)

15. * E EFFICIENCY (ND)

16. * G GAS FLOW RATE (LBS/SEC)

17. * I INITIAL VALUE OF STATE

18. * J INTERMEDIATE VARIABLE

19. * K RESERVED FOR CONSTANTS

20. * L VALVE LIFT (ND) OR TANK LEVEL (FT)

21. * N ROTATIONAL SPEED (RPM) OR NUMBER (ND)

22. * O INTERMEDIATE VARIABLE

23. * P PRESSURE (PSIA) OR PRESSURE DIFFERENTIAL (PSID)

24. * Q RATE OF HEAT TRANSFER (BTU/SEC)

25. * R DENSITY (LB/FT**3)

26. * T TEMPERATURE (DEG F)

27. * W WATER FLOW RATE (LBS/SEC)

28. * X TORQUE (FT-LBS)

29.

30. * * SECOND AND THIRD LETTER DESIGNATIONS - COMPONENT ID

31.

32. * A- AIR BLAST HEAT EXCHANGER

33. * AA AIR SIDE

34. * AM TUBE AND FINS

35. * AW WATER SIDE

36. * BP CORE BYPASS

37. * CA CIRCULATOR AUXILIARY

38. * CC CIRCULATOR

39. * CM CIRCULATOR MOTOR

40. * CG CONTROL GUIDE

41. * CS CORE SUPPORT

42. * H- CAME HEAT EXCHANGER

43. * HH HELIUM SIDE

44. * HM TUBE METAL

45. * HW WATER SIDE

46. * LP LOWER PLENUM

47. * LR LOWER REFLECTOR

48. * PC PIPE FROM AIR BLAST HX AND CAME HX (COLD LEG)

49. * PH PIPE FROM CAME HX TO AIR BLAST HX (HOT LEG)

50. * PL PUMP (LARGE)

51. * PR PRESSURIZER

52. * PS PUMP (SMALL)

53. * RE CORE (NUCLEAR REACTOR)

54. * RF REACTOR FUEL

55. * RM REACTOR MODERATOR

```

56. * SR SIDE REFLECTOR
57. * SP SUPPORT POSTS
58. * UN UNIVERSAL (CONVERSION FACTOR OR CONSTANT)
59. * UP UPPER PLENUM
60. * UR UPPER REFLECTOR
61. *****
62.
63.
64. * * * * *
65. * * CONSTANTS, TABLES, AND MACROS USED BY MORE THAN ONE * *
66. * * COMPONENT MODEL HENCE CONTAINED IN MISCELLANEOUS * *
67. * * SECTION OF ALL * *
68. * * * * *
69.
70.
71.
72. CONST KUNACP=0.2407 , KUNGR =386. , KUNHCV=.746
73. CONST KUNWCP=1.0227 , KUNHCP=1.242
74.
75. AFGEN RETSL=510.,.62.,.560.,.62.,.0.,.610.,.61.,.2.,.660.,.60.,.1.,.710.,.58.,.8.,.760.,....
76. 57.,.3.,.810.,.55.,.6.,.860.,.53.,.7.,.910.,.51.,.5.,.960.,.49.,.0.,.1010.,.45.,.9.,.1060.,....
77. 92.,.4.,.1110.,.37.,.3
78. AFGEN PARTRT=510.,.-.0122.,.610.,.-.0187.,.660.,.-.0238.,.710.,.-.0282.,.760.,....
79. -.0323.,.810.,.-.0366.,.860.,.-.0412.,.910.,.-.0463.,.960.,.-.0560.,.1010.,....
80. -.0665.,.1110.,.-.0856
81. AFGEN FSPH=560.,.998.,.660.,.1.,.00.,.710.,.1.,.01.,.760.,.1.,.03.,.810.,.1.,.05.,....
82. 860.,.1.,.08.,.910.,.1.,.12.,.960.,.1.,.19.,.1010.,.1.,.31.,.1060.,.1.,.51
83. AFGEN FVTS=560.,.1.,.649.,.610.,.1.,.051.,.660.,.0.,.738.,.710.,.0.,.569.,.760.,.0.,.454.,....
84. 810.,.0.,.378.,.860.,.0.,.328.,.910.,.0.,.288.,.960.,.0.,.256.,.1010.,.0.,.230., ...
85. 1060.,.0.,.209.,.1110.,.0.,.197
86. AFGEN FCON=560.,.0.,.364.,.610.,.0.,.384.,.660.,.0.,.394.,.710.,.0.,.396.,.760.,.0.,.395.,....
87. 810.,.0.,.391.,.860.,.0.,.381.,.910.,.0.,.367.,.960.,.0.,.349.,.1010.,.0.,.325.,....
88. 1060.,.0.,.292.,.1110.,.0.,.280
89.
90. AFGEN HSATP=58.,.259.,.118.,.311.,.220.,.364.,.382.,.419.,....
91. 621.,.476.,.962.,.537.,.1431.,.603.,.2060.,.679.,....
92. 2895.,.784.
93. AFGEN HSATT=550.,.58.,.600.,.108.,.650.,.158.,.700.,.208., ...
94. 750.,.259.,.800.,.311.,.850.,.364.,.900.,.419.,.950.,.476.,....
95. 1000.,.537.,.1050.,.603.,.1100.,.679.,.1150.,.784.
96.
97. MACRO TGO,TWO,DTM,DTW,OGM,QWM,RW,BW=SPCFHX(TGI,TWI,ITM,TM,ITM,TM,...
98. HCAP,VOL,WTG1,WTG2,WTW1,WTW2,JGCP,VFLOW,JC,JHTW)
99. * SEE SECTION 6.2 OF REPORT
100. * SINGLE PHASE COUNTER FLOW HEAT EXCHANGER WITH INCOMPRESSIBLE
101. * FLUID ON W SIDE AND NEGLIGIBLE FLUID THERMAL CAPACITY ON G SIDE
102. * TGO=GAS EXIT TEMP, OGM=ENERGY TRANSFER GAS TO METAL
103. * RW=AVERAGE NODAL DENSITY, TW=AVERAGE NODAL TEMP,
104. * QWM=HEAT TRANSFER WATER TO METAL, TWO=WATER EXIT TEMP
105. RW=AFGEN(RFTSL,TW)
106. TGO=(TGI*(1.-WTG1*JC)+JC*TM)/(1.+WTG2*JC)
107. OGM=JGCP*(TGI-TGQ1)
108. TWO=(TW-WTW1+TW1)/WTW2
109. QWM=JHTW*(TW-TM)
110. DTM=(QWM+OGM)/HCAP
111. TM=INTGRL(ITM,DTM)
112. DTW=(VFLOW*(TW-TWO)-QWM/KUNWCP)/VOL/RW

```

```

113.      BM=DTW*VOL*AFGEN(PARTT,TW)
114.      TN=INTGRL(ITV,DTW)
115.      ENDMAC
116.
117.
118.      MACRO DTF,RF,JPRT=PIPE(FLO,TFI,VOL,MCAP,TF,ITF)
119.      * SEE SECTION 6.1 OF REPORT
120.      * PIPE THERMAL NODE WITH COMBINED METAL AND FLUID THERMAL CAPACITANCE
121.      RF=AFGEN(RFTSL,TF)
122.      DTF=FLO*(TFI-TF)/(MCAP/KUNMCP*VOL*RF)
123.      JPRT=VOL*DTF*AFGEN(PARTT,TF)
124.      TF=INTGRL(ITF,DTF)
125.      ENDMAC
126.
127.
128.
129.      * * * * *
130.      * * HOT LEG COMPONENT CONSTANTS, TABLES, AND MACROS * *
131.      * * * * *
132.
133.      CONST KPHVT =40.7      , KPHCT =1466.0      , KPHN =10.
134.
135.
136.
137.      * * * * *
138.      * * COLD LEG COMPONENT CONSTANTS, TABLES, AND MACROS * *
139.      * * * * *
140.
141.      CONST KPCVT =40.7      , KPCCT =1466.0      , KPCN =10.
142.
143.
144.
145.      * * * * *
146.      * * AIR BLAST HX COMPONENT CONSTANTS, TABLES, AND MACROS * *
147.      * * * * *
148.
149.      CONST KAVRX =5316.      , KAMR =1.08      , KAAR =29.52
150.      CONST KAVWR =42.78      , KAAG =761.1      , KAWA =1975.
151.      CONST KAAA =2438.      , KAATR =598.      , KAMTR =679.
152.      CONST KAWTR =760.      , KAAAU =.2831      , KAABU =.7169
153.      CONST KAAAK =.1777      , KAABK =.8223      , KAMAK =1.1546
154.      CONST KAMBK =.1546      , KAMCT =1039.6      , KAVVT =33.33
155.      CONST KAVN =10.      , KAVW1 =0.5      , KAAW1 =0.5
156.      CONST KAVV1 =3.      , KAVV0 =3.      , KAMCT =100.
157.      CONST KAMCO =100.
158.
159.
160.
161.      MACRO TG,JAIR,JWAT=HTCOE(WFLOW,GFLRAT,JCGP,TG1,TG2,THET,TWAT)
162.      * SEE APPENDIX C OF REPORT
163.      TG=(TG1+TG2)/2
164.      PROCED RAIR=RESX(GFLRAT)
165.      RAIR=KAAR*GFLRAT*(KAAAU+KAABU*(TG/KAATR))*+.681/...
166.      (KAAAK+KAABK*TG/KAATR)
167.      ENDPRO
168.      RMET=KAMR/(KAMAK-KAMBK*THET/KAMTR)
169.      CON=AFGEN(FCON,TWAT)

```

```

170.     VIS=AFGEN(FVIS,TWAT)
171.     SPH=AFGEN(FSPH,TWAT)
172.     RVAT=KAWRX/(CON*(WFLOW*3600./VIS)**.8*...
173.     (SPH*VIS/CON)**.333)
174.     JAIR=KAAA/KAWN/(0.5*RMET*RAIR)/JCGP
175.     JWAT=KAWA/KAWN/(0.5*RMET*KAWA/KAAA*RVAT)
176.     ENDMAC
177.
178.
179.
180.     * * * * *
181.     * * CAME COMPONENT CONSTANTS, TABLES, AND MACROS * *
182.     * * * * *
183.
184.
185.     CONST   KHMRY =1.614E5      , KHMRY =1.98E4      , KHMRY =28.14
186.     CONST   KHMCT =418.         , KHMCT =58.35     , KHMCT =58.35
187.     CONST   KHMVT =10.8         , KHMVT =3.91      , KHMVT =3.91
188.     CONST   KHMCI=208.         , KHMCI =.8267     , KHMCI =.8267
189.     CONST   KHMN  =6.0          , KHMN  =0.5        , KHMN  =0.5
190.     CONST   KHMVK =6.388E-4    , KHMVK =0.687     , KHMVK =1.062E-3
191.     CONST   KHMCKE=0.701       , KHMCKE =6.25      , KHMCKE =0.0055
192.     CONST   KHMHA =1141.       , KHMHA =888.5      , KHMHA =888.5
193.
194.     MACRO TG,JHEL,JWAT=HTKOE(WFLOW,HFLOW,JG,T1,T2,TN,TM)
195.     *   SEE APPENDIX C OF REPORT
196.     TG=(T1+T2)/2
197.     PROCED RHE=RESY(WFLOW)
198.     HSPH=1.242
199.     HVIS=KHMVK*TG**KHMVKE
200.     HCON=KHMCKE*TG**KHMCKE
201.     RHE=KHMRY/(HCON*(WFLOW*3600./HVIS)**.8*...
202.     (HSPH*HVIS/HCON)**.333)
203.     ENDPRO
204.     RMET=KHMRY/(KHMCKE*KHMCKE*(TN-460.))
205.     CON=AFGEN(FCON,TM)
206.     VIS=AFGEN(FVIS,TM)
207.     SPH=AFGEN(FSPH,TM)
208.     RVAT=KAWRX/(CON*(WFLOW*3600./VIS)**.8*...
209.     (SPH*VIS/CON)**.333)
210.     JWAT=(KHMVA/KHMN)/(1.5*RMET*KHMVA/KHMHA*RVAT)
211.     JHEL=(KHMHA/KHMN/JG)/(1.5*RMET*RHE)
212.     ENDMAC
213.
214.
215.     * * * * *
216.     * * PUMP AND PROCESS-FLOW COMPONENT CONSTANTS, TABLES, AND * *
217.     * * MACROS * *
218.     * * * * *
219.
220.     CONST   KAWSQ =.9031        , KAWSQ =.9016      , KAWSQ =.6803
221.     CONST   MPMSQ =.2268        , MPMSQ =.3300      , MPMSQ =.6800
222.
223.
224.     MACRO W,DWOP=MOPTV(KV,AV,SV,J0,J1,J2,WR,DELP)
225.     *   SEE SECTION 4.1 OF REPORT
226.     *   GENERAL PURPOSE PUMP MACRO FOR REPRESENTING CONSTANT OR VARIABLE

```

```

227. * SPEED PUMP WITH THROTTLE OR ISOLATION VALVE OPTIONAL. REQUIRES
228. * THAT USER SPECIFY RECIRCULATION FLOW AS INPUT. USER MUST SPECIFY
229. * PUMP CHARACTERISTIC AS SECOND ORDER POLYNOMIAL.
230.   JV=KV*KV*AV*AV
231.   IF(SV.EQ.0.) JV=1
232. * IF ISOLATION VALVE IS OPEN, THROTTLE VALVE SETTING IS IMMATERIAL
233. * AS IT DROPS OUT. SETTING JV=1. RESULTS IN AINV=-1/J2 AS APPROP.
234.   AINV=-JV/(SV-J2*JV)
235.   B=(J1+2.*WR*J2)
236.   BAINV=B*AINV
237.   CPART=WR*(J1+J2*WR)*J2
238.   DELPMX=-B*BAINV/4.*CPART
239.   IF(DELPMX-DELP) 1,1,2
240. 1. V=0.
241.   DVDP0=0.
242.   GO TO 3
243. 2. C=CPART-DELP
244.   N=-BAINV/2.*SQRT(BAINV*BAINV/4.-C*AINV)
245.   DVDP0=AINV/(2.*W*B*AINV)
246. 3. CONTINUE
247. ENDMAC
248.
249.
250. * * * * *
251. * * CORE COMPONENT CONSTANTS, TABLES, AND MACROS * *
252. * * * * *
253.
254.
255.
256. *   CONSTANTS --- CORE
257.
258. CONST   KRENN =30834.
259. CONST   KRFV1 =5.54054E-4 , KRFV2 =2.45467E-4 , KRFV3 =2.45467E-4
260. CONST   KRFV4 =2.45467E-4 , KRFV5 =2.45467E-4 , KRFV6 =4.51359E-4
261. CONST   KRCV1 =2.00803E-4 , KRCV2 =8.89634E-5 , KRCV3 =8.89634E-5
262. CONST   KRCV4 =8.89634E-5 , KRCV5 =8.89634E-5 , KRCV6 =1.63584E-4
263. CONST   KREA1 =0.13599 , KREA2 =0.06025 , KREA3 =0.06025
264. CONST   KREA4 =0.06025 , KREA5 =0.06025 , KREA6 =0.11079
265. CONST   KREL1 =1.475 , KREL2 =0.817 , KREL3 =0.817
266. CONST   KREL4 =0.817 , KREL5 =0.817 , KREL6 =1.475
267. CONST   KREPF1=0.0271 , KREPF2=0.2021 , KREPF3=0.2710
268. CONST   KREP0 =829.5 , KREPF =0.95 , KREGF =0.95
269. CONST   KREPF4=0.2710 , KREPF5=0.2021 , KREPF6=0.0271
270. CONST   KCCAN =3. , KCAAN =2. , KCAR =0.2471
271. CONST   KHHVI6=344.
272.
273. * * * * * TEMPORARY LAG ON CIRC TEMPERATURE * * * * *
274. CONST   KCATAU=1.
275.
276. MACRO JCG,JCF=CORHT(G,IC,IF,TG,A,L)
277. PROCED JCG,JCF=CORHT1(G)
278.   REY=3.055E8*G*TG**-.687
279.   IF(REY.LT.2300.)REY=2300.
280.   H=8.28E-4*TG**-.701*REY**-.8/3600.
281.   KC=L.693E-3*1.203E-6*TC
282.   RC=.02305/(KC*L)
283.   RCG=1./(H*A)*RC/2.

```

```

284. JCG=1./RCG
285. KF=57.78*.886*(1./118.2+.0271*TF/1.81+5.5F-13*(TF/1.81)**3)/3600.
286. KH=2.95E-7*(1*TF+TC)/2.1**0.701
287. RCF=.03229/(KF*L)+.0036/(KH*L)*RC/2,
288. JCF=1./RCF
289. ENDPRO
290. ENDMAC
291.
292. MACRO DTC,DTF,T60,TGA=CRNODE(JGC,JCF,VF,VC,TGI,G,QRF,ITF,TF,ITC,TC)
293. * SINGLE NODE FOR REACTOR EQUIVALENT FUEL CHANNEL MODEL
294. JL=JGC/(6*KUNHCP)
295. JW=1.-1./((1.-EXP(-JL*JW))*1./JL)
296. TGO=(TGI*(1.-JL*JW)+JL*TC)/(1.+JL*(1.-JW))
297. TGA=JW*TGI+(1.-JW)*TGO
298. QGC=KUNHCP*G*(TGO-TGI)
299. CF=0.5559*(52.492+0.03953*TF-1.512E-5*TF**2+2.203E-9*TF**3)
300. CC=0.1196*(218.378+0.6541*TC-4.504E-4*TC**2+1.143E-7*TC**3)
301. CAPF=VF*CF
302. CAPC=VC*CC
303. QFC=JCF*(TF-TC)
304. DTF=(QRF-QFC)/CAPF
305. TF=INTGRL(ITF,DTF)
306. DTC=(QFC-QGC)/CAPC
307. TC=INTGRL(ITC,DTC)
308. ENDMAC
309.
310.
311.
312.
313. INITIAL
314.
315.
316. * * * * *
317. * * * * * HOT LEG COMPONENT INCON AND PARAM SECTION * * * * *
318. * * * * *
319.
320.
321. INCON ITPH1 =1060. , ITPH2 =1060. , ITPH3 =1060.
322. INCON ITPH4 =1060. , ITPH5 =1060. , ITPH6 =1060.
323. INCON ITPH7 =1060. , ITPH8 =1060. , ITPH9 =1060.
324. INCON ITPH10=1060.
325. INCON ITPH11=1060.
326.
327. KPHC=KPHCT/KPHN
328. KPHV=KPHVT/KPHN
329.
330. TPH1=ITPH1
331. TPH2=ITPH2
332. TPH3=ITPH3
333. TPH4=ITPH4
334. TPH5=ITPH5
335. TPH6=ITPH6
336. TPH7=ITPH7
337. TPH8=ITPH8
338. TPH9=ITPH9
339. TPH10=ITPH10
340. TPH11=ITPH11

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```

341.
342.
343.
344. * * * * *
345. * * COLD LEG COMPONENT INCON AND PARAM SECTION * *
346. * * * * *
347.
348.
349. INCON ITPC1 =1060. , ITPC2 =1060. , ITPC3 =1060.
350. INCON ITPC4 =1060. , ITPC5 =1060. , ITPC6 =1060.
351. INCON ITPC7 =1060. , ITPC8 =1060. , ITPC9 =1060.
352. INCON ITPC10=1060.
353. INCON ITPCOM=1060.
354.
355. KPCCT=KPCCT/KPCN
356. KPCVT=KPCVT/KPCN
357.
358. TPC1=ITPC1
359. TPC2=ITPC2
360. TPC3=ITPC3
361. TPC4=ITPC4
362. TPC5=ITPC5
363. TPC6=ITPC6
364. TPC7=ITPC7
365. TPC8=ITPC8
366. TPC9=ITPC9
367. TPC10=ITPC10
368. TPCOM=ITPCOM
369.
370.
371.
372. * * * * *
373. * * AIR BLAST HX COMPONENT INCON AND PARAM SECTION * *
374. * * * * *
375.
376.
377. INCON ITAW0 =1060. , ITAW1 =1060. , ITAWI=1060.
378. INCON ITAW2 =1060. , ITAW3 =1060. , ITAW4=1060.
379. INCON ITAW5 =1060. , ITAW6 =1060. , ITAW7=1060.
380. INCON ITAW8 =1060. , ITAW9 =1060. , ITAW10=1060.
381. INCON ITAM1 =1060.
382. INCON ITAM2 =1060. , ITAM3 =1060. , ITAM4=1060.
383. INCON ITAM5 =1060. , ITAM6 =1060. , ITAM7=1060.
384. INCON ITAM8 =1060. , ITAM9 =1060. , ITAM10=1060.
385. PARAM TAA1 =1060. , TAA2 =1060. , TAA3 =1060.
386. PARAM TAA4 =1060. , TAA5 =1060. , TAA6 =1060.
387. PARAM TAA7 =1060. , TAA8 =1060. , TAA9 =1060.
388. PARAM TAA10=1060.
389.
390. TAWI=ITAWI
391. TAW0=ITAW0
392. TAW1=ITAW1
393. TAW2=ITAW2
394. TAW3=ITAW3
395. TAW4=ITAW4
396. TAW5=ITAW5
397. TAW6=ITAW6

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```

398.      TAM7=ITAM7
399.      TAM8=ITAM8
400.      TAM9=ITAM9
401.      TAM10=ITAM10
402.      TAM1=ITAM1
403.      TAM2=ITAM2
404.      TAM3=ITAM3
405.      TAM4=ITAM4
406.      TAM5=ITAM5
407.      TAM6=ITAM6
408.      TAM7=ITAM7
409.      TAM8=ITAM8
410.      TAM9=ITAM9
411.      TAM10=ITAM10
412.
413.      KAMW2=1.-KAMW1
414.      KAMW2=1.-KAMW1
415.      KAMC= KAMCI/KAMW
416.      KAMV= KAMVT/KAMW
417.
418.
419.      * * * * *
420.      * * CAHE COMPONENT INCON AND PARAM SECTION
421.      * * * * *
422.
423.
424.      INCON      ITHW0 =1060.      , ITHW1 =1060.      , ITHW2=1060.
425.      INCON      ITHW2 =1060.      , ITHW3 =1060.      , ITHW4=1060.
426.      INCON      ITHW5 =1060.      , ITHW6 =1060.
427.      INCON      ITHM1 =1060.
428.      INCON      ITHM2 =1060.      , ITHM3 =1060.      , ITHM4=1060.
429.      INCON      ITHM5 =1060.      , ITHM6 =1060.      , ITHM16=1060.
430.      PARAM      THH1 =1060.      , THH2 =1060.      , THH3 =1060.
431.      PARAM      THH4 =1060.      , THH5 =1060.      , THH6 =1060.
432.
433.
434.      THW0=ITHW0
435.      THW1=ITHW1
436.      THW2=ITHW2
437.      THW3=ITHW3
438.      THW4=ITHW4
439.      THW5=ITHW5
440.      THW6=ITHW6
441.      THM1=ITHM1
442.      THM2=ITHM2
443.      THM3=ITHM3
444.      THM4=ITHM4
445.      THM5=ITHM5
446.      THM6=ITHM6
447.      THM10=ITHM10
448.      THM16=ITHM16
449.
450.
451.      KHHW2=1.-KHHW1
452.      KHHW2=1.-KHHW1
453.      KHHM= KHHMT/KHHW
454.      KHHV= KHHVT/KHHW

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455.
456.
457.
458. * * * * *
459. * * PUMP AND PROCESS-FLOW COMPONENT INCON AND PARAM SECTION * *
460. * * * * *
461.
462.
463. INCON IVPRW = .201857+03, ITPRW = .538657+03, IPPRG = .209573+04
464. INCON ILOAD = .126990+03, INPL = .455178+04, IINT = .955553+04
465. INCON IAPS = 0.6731, IIPSIT = 0.6731
466. PARAM MFLOW = 0.0001
467.
468.
469. VPRW=IVPRW
470. TPRW=ITPRW
471. PPRG=IPPRG
472. PLOAD=ILOAD
473. NPL=INPL
474. INT=IINT
475. APS=IAPS
476. IPSIT=IIPSIT
477.
478.
479.
480. * * * * *
481. * * CORE COMPONENT INCON AND PARAM SECTION * *
482. * * * * *
483.
484.
485. * INITIAL CONDITIONS --- CORE
486. INCON ITRF1 = .115745+04, ITRF2 = .245830+04, ITRF3 = .300611+04
487. INCON ITRF4 = .310270+04, ITRF5 = .274210+04, ITRF6 = .156610+04
488. INCON ITRC1 = .109587+04, ITRC2 = .137460+04, ITRC3 = .154961+04
489. INCON ITRC4 = .165473+04, ITRC5 = .166634+04, ITRC6 = .149256+04
490. INCON ITUPH = .107490+04, ITLPH = .198027+04
491.
492. PARAM TREH1 = .108106+04, TREH2 = .112910+04, TREH3 = .122578+04
493. PARAM TREH4 = .133564+04, TREH5 = .143072+04, TREH6 = .147537+04
494.
495. INCON ITCAHA=1074.5
496.
497. INCON IICAN=0.01, INCAA=0.01
498.
499. * PARAMETERS --- CORE
500.
501. PARAM TSTART = 120.0
502. PARAM TFLAG = 1.0
503.
504. * INITIAL CALCULATIONS --- CORE
505. TLPH=ITLPH
506. TUPH=ITUPH
507. TRF1=ITRF1
508. TRF2=ITRF2
509. TRF3=ITRF3
510. TRF4=ITRF4
511. TRF5=ITRF5

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512.      TRF6=ITRF6
513.      TRC1=ITRC1
514.      TRC2=ITRC2
515.      TRC3=ITRC3
516.      TRC4=ITRC4
517.      TRC5=ITRC5
518.      TRC6=ITRC6
519.      * JUPV=700.0+562.0*KCAAN
520.      * JLPV=5201.0+344.0*KCAAN
521.      JUPV=12400.
522.      JLPV=6031.
523.      KREQT=3412000.*KREQO/3600.
524.
525.      T6PM=TUPM
526.      TCANOA=ITCAN
527.
528.      ICAN=IICAN
529.      NCAN=INCAN
530.      MNSS=PNSS*144./KUNGR*(JUPV/TUPM+JLPV/TLPM)
531.
532.
533.      * * * * *
534.      * * USER CONTROL SECTION-- TIME INDEPENDENT PART * * * * *
535.      * * * * *
536.
537.      * CACMS PUMP CONTROL PARAMETERS (TEMPORARY)
538.      *
539.      * KPLPB = 1. , KPLRT = 1.
540.      * KPLJ0 = 3.28 , KPLJ1 = 0.0985 , KPLJ2 = 1.344
541.      * KPLCR = 50.
542.      * WPLR = 0.0 , SPL = 1.0 , WPLS = 5.17
543.      * KPL = 2.5 , KPLM = 5000. , WPLS0 = 5.17
544.
545.      * NPS = 5500. , KPSPB = 10. , KPSRT = 10.
546.      * KPSJ0 = 2.2481 , KPSJ1 = 7.622E-4 , KPSJ2 = 1.126E-3
547.      * KPSCR = 10.
548.      * WPSR = 0.0 , SPS = 1. , WPS = 5.17
549.      * KPS = 40. , KPSM = 5000.
550.
551.      * WPRI = 0. , WPRO = 0. , GPRI = 0.
552.      * GPRO = 0. , QPR = 0. , TPRI = 530.
553.      * KPRV = 400.
554.
555.      * AIR BLAST WX PARAMETERS
556.      * GAA = 0.001 , TAA110=539.
557.
558.      * TEMPERATURE SENSOR LAGS
559.      * KTAU = 10.
560.
561.      * CORE PARAMETERS
562.      * GCAAS = 0.001 , GCCA = 510.8
563.      * KGPC = 1. , PNSS = 1395.
564.      * PRCD=1.00 , DUMHY = 1.00
565.
566.
567.      AFGEN_POWER=0.0,1.00,30.0,1.00,30.5,0.152,33.8,0.107, ...
568.      36.6,0.092,45.0,0.070,61.0,0.055,100.0,0.042, ...

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569.      296.,0.029,500.0,0.010
570.
571.      AFGEN HEFLOW=0.0,518.8,30.0,518.8,37.8,71.0,45.6,25.33, ...
572.      53.4,14.0,61.2,9.33,500.0,2.0
573.
574.      AFGEN AHEFLO=0.0,0.0001, 60.0,0.0001, 61.2,6.60,62.6,8.00,...
575.      68.8,15.70, 76.6,21.35, 84.1,25.40,92.1,27.70,...
576.      100.1,29.1,108.1,29.1,115.6,30.30,117.3,30.36,...
577.      125.3,30.63,131.1,30.70,148.3,30.95,156.3,31.04,...
578.      187.3,31.35,210.3,31.60,241.3,31.98,272.3,32.36,...
579.      500.0,33.0
580.
581.      AFGEN TINLET=0.0,1074.0,30.0,1074.0,37.8,1064.0, ...
582.      45.6,1055.0,53.4,1048.0,61.2,832.0,500.,1074.0
583.
584.      * * * CIRC SPEED CONTROL TEMP PARAMETERS
585.      PARAM      KCARG =500.      , KCAPBN= 10.      , KCART =1.
586.
587.      * * * SCAV IS SWITCH TO OPEN AUXILIARY HELIUM VALVE.
588.      * * * SCAV=0.0 IMPLIES THAT THE VALVE IS CLOSED AND
589.      * * * HELIUM TEMPERATURE TO CAME IS FIXED AT
590.      * * * TLPHD.
591.      * * * SCAV=1.0 IMPLIES THAT THE VALVE IS OPEN AND HELIUM
592.      * * * TEMPERATURE TO CAME IS SET TO TLPH WHICH
593.      * * * IS A VARIABLE.
594.      * * * SCAV NOT USED AT PRESENT
595.
596.      PARAM      SCAV =0.0      , TLPHD =1060.
597.
598.      PARAM      TSCRAM=30.      , THWOSS=1085.      , THWOS =1060.
599.
600.      DYNAMIC
601.
602.
603.      NOSORT
604.
605.
606.      * * * * *
607.      * * TIME DEPENDENT INPUT SECTION
608.      * * * * *
609.
610.
611.      GCCA=AFGEN(HEFLOW,TIME)
612.      IF (TIME.GT.60.0)GCCA=.00001
613.      PRCD=AFGEN(POWER,TIME)
614.      DUMMY=PRCD
615.      IF (TIME.GE.TSCRAM)HEFLOW=42.78
616.      IF (TIME.GE.TSCRAM)GAA=760.5
617.      IF (TIME.GT.TSCRAM+30.0)THWOS=THWOSS
618.
619.      SORT
620.
621.
622.
623.
624.
625.

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626.      * * * * * PIPE THERMAL MODELS * * * * *
627.      * * * * * SECTION 6.1 * * * * *
628.
629.
630.
631.
632.
633.
634.
635.      *      HOT LINE MODEL
636.
637.      DTPH1,RPH1,BPH1=PIPE1(WFLOW,TNHO,KPHV,KPHC,TPH1,ITPH1)
638.      DTPH2,RPH2,BPH2=PIPE1(WFLOW,TPH1,KPHV,KPHC,TPH2,ITPH2)
639.      DTPH3,RPH3,BPH3=PIPE1(WFLOW,TPH2,KPHV,KPHC,TPH3,ITPH3)
640.      DTPH4,RPH4,BPH4=PIPE1(WFLOW,TPH3,KPHV,KPHC,TPH4,ITPH4)
641.      DTPH5,RPH5,BPH5=PIPE1(WFLOW,TPH4,KPHV,KPHC,TPH5,ITPH5)
642.      DTPH6,RPH6,BPH6=PIPE1(WFLOW,TPH5,KPHV,KPHC,TPH6,ITPH6)
643.      DTPH7,RPH7,BPH7=PIPE1(WFLOW,TPH6,KPHV,KPHC,TPH7,ITPH7)
644.      DTPH8,RPH8,BPH8=PIPE1(WFLOW,TPH7,KPHV,KPHC,TPH8,ITPH8)
645.      DTPH9,RPH9,BPH9=PIPE1(WFLOW,TPH8,KPHV,KPHC,TPH9,ITPH9)
646.      DTPH10,RPH10,BPH10=PIPE1(WFLOW,TPH9,KPHV,KPHC,TPH10,ITPH10)
647.
648.      TPH0=TPH10
649.
650.      RPHAV=(RPH1+RPH2+RPH3+RPH4+RPH5+RPH6+RPH7+RPH8+RPH9+RPH10)/KPHN
651.      BPH1=BPH1+BPH2+BPH3+BPH4+BPH5+BPH6+BPH7+BPH8+BPH9+BPH10
652.
653.
654.
655.      *      COLD LINE MODEL
656.
657.      DTPC1,RPC1,BPC1=PIPE1(WFLOW,TAN0,KPCV,KPCC,TPC1,ITPC1)
658.      DTPC2,RPC2,BPC2=PIPE1(WFLOW,TPC1,KPCV,KPCC,TPC2,ITPC2)
659.      DTPC3,RPC3,BPC3=PIPE1(WFLOW,TPC2,KPCV,KPCC,TPC3,ITPC3)
660.      DTPC4,RPC4,BPC4=PIPE1(WFLOW,TPC3,KPCV,KPCC,TPC4,ITPC4)
661.      DTPC5,RPC5,BPC5=PIPE1(WFLOW,TPC4,KPCV,KPCC,TPC5,ITPC5)
662.      DTPC6,RPC6,BPC6=PIPE1(WFLOW,TPC5,KPCV,KPCC,TPC6,ITPC6)
663.      DTPC7,RPC7,BPC7=PIPE1(WFLOW,TPC6,KPCV,KPCC,TPC7,ITPC7)
664.      DTPC8,RPC8,BPC8=PIPE1(WFLOW,TPC7,KPCV,KPCC,TPC8,ITPC8)
665.      DTPC9,RPC9,BPC9=PIPE1(WFLOW,TPC8,KPCV,KPCC,TPC9,ITPC9)
666.      DTPC10,RPC10,BPC10=PIPE1(WFLOW,TPC9,KPCV,KPCC,TPC10,ITPC10)
667.
668.      TPC0=TPC10
669.
670.      RPCAV=(RPC1+RPC2+RPC3+RPC4+RPC5+RPC6+RPC7+RPC8+RPC9+RPC10)/KPCN
671.      BPC1=BPC1+BPC2+BPC3+BPC4+BPC5+BPC6+BPC7+BPC8+BPC9+BPC10
672.
673.
674.
675.
676.      * * * * * AIR BLAST HEAT EXCHANGER MODEL * * * * *
677.      * * * * * SECTION 6.4 * * * * *
678.
679.
680.
681.
682.

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683.
684.
685.      DTAW1,RAW1,BAW1=PIPE1(WFLOW,TPHO,KAWV1,KAMC1,TAW1,ITAW1)
686.      DTAW0,RAW0,BAW0=PIPE1(WFLOW,TAW0D,KAWV0,KAMC0,TAW0,ITAW0)
687.
688.
689.
690.      TAA10,JAAM10,JAWM10=HTCOE(WFLOW,JAAGR,JAACP,TAA10D,TAA01D,...
691.      TAM10,TAW10)
692.      TAA9,JAAM9,JAWM9=HTCOE(WFLOW,JAAGR,JAACP,TAA01D,TAA09,TAM9,TAW9)
693.      TAA8,JAAM8,JAWM8=HTCOE(WFLOW,JAAGR,JAACP,TAA09,TAA08,TAM8,TAW8)
694.      TAA7,JAAM7,JAWM7=HTCOE(WFLOW,JAAGR,JAACP,TAA08,TAA07,TAM7,TAW7)
695.      TAA6,JAAM6,JAWM6=HTCOE(WFLOW,JAAGR,JAACP,TAA07,TAA06,TAM6,TAW6)
696.      TAA5,JAAM5,JAWM5=HTCOE(WFLOW,JAAGR,JAACP,TAA06,TAA05,TAM5,TAW5)
697.      TAA4,JAAM4,JAWM4=HTCOE(WFLOW,JAAGR,JAACP,TAA05,TAA04,TAM4,TAW4)
698.      TAA3,JAAM3,JAWM3=HTCOE(WFLOW,JAAGR,JAACP,TAA04,TAA03,TAM3,TAW3)
699.      TAA2,JAAM2,JAWM2=HTCOE(WFLOW,JAAGR,JAACP,TAA03,TAA02,TAM2,TAW2)
700.      TAA1,JAAM1,JAWM1=HTCOE(WFLOW,JAAGR,JAACP,TAA02,TAA01,TAM1,TAW1)
701.
702.
703.      JAACP=GAA*KUNACP
704.      JAAGR=(GAA/KAA)*--.681
705.      TAA01D,TAW01D,DTAM10,DTAW10,QAAM10,QAWM10,RAW10,BAW10=SPCFHX(...
706.      TAA11D,TAW09,ITAM10,TAM10,ITAW10,TAW10,KAMC,KAWV,KAAW1,KAAW2,...
707.      KAWW1,KAWW2,JAACP,WFLOW,JAAM10,JAWM10)
708.      TAA09,TAW09,DTAM9,DTAW9,QAAM9,QAWM9,RAW9,BAW9=SPCFHX(TAA01D,...
709.      TAW08,ITAM9,TAM9,ITAW9,TAW9,KAMC,KAWV,KAAW1,KAAW2,...
710.      KAWW1,KAWW2,JAACP,WFLOW,JAAM9,JAWM9)
711.      TAA08,TAW08,DTAM8,DTAW8,QAAM8,QAWM8,RAW8,BAW8=SPCFHX(TAA09,...
712.      TAW07,ITAM8,TAM8,ITAW8,TAW8,KAMC,KAWV,KAAW1,KAAW2,...
713.      KAWW1,KAWW2,JAACP,WFLOW,JAAM8,JAWM8)
714.      TAA07,TAW07,DTAM7,DTAW7,QAAM7,QAWM7,RAW7,BAW7=SPCFHX(TAA08,...
715.      TAW06,ITAM7,TAM7,ITAW7,TAW7,KAMC,KAWV,KAAW1,KAAW2,...
716.      KAWW1,KAWW2,JAACP,WFLOW,JAAM7,JAWM7)
717.      TAA06,TAW06,DTAM6,DTAW6,QAAM6,QAWM6,RAW6,BAW6=SPCFHX(TAA07,...
718.      TAW05,ITAM6,TAM6,ITAW6,TAW6,KAMC,KAWV,KAAW1,KAAW2,...
719.      KAWW1,KAWW2,JAACP,WFLOW,JAAM6,JAWM6)
720.      TAA05,TAW05,DTAM5,DTAW5,QAAM5,QAWM5,RAW5,BAW5=SPCFHX(TAA06,...
721.      TAW04,ITAM5,TAM5,ITAW5,TAW5,KAMC,KAWV,KAAW1,KAAW2,...
722.      KAWW1,KAWW2,JAACP,WFLOW,JAAM5,JAWM5)
723.      TAA04,TAW04,DTAM4,DTAW4,QAAM4,QAWM4,RAW4,BAW4=SPCFHX(TAA05,...
724.      TAW03,ITAM4,TAM4,ITAW4,TAW4,KAMC,KAWV,KAAW1,KAAW2,...
725.      KAWW1,KAWW2,JAACP,WFLOW,JAAM4,JAWM4)
726.      TAA03,TAW03,DTAM3,DTAW3,QAAM3,QAWM3,RAW3,BAW3=SPCFHX(TAA04,...
727.      TAW02,ITAM3,TAM3,ITAW3,TAW3,KAMC,KAWV,KAAW1,KAAW2,...
728.      KAWW1,KAWW2,JAACP,WFLOW,JAAM3,JAWM3)
729.      TAA02,TAW02,DTAM2,DTAW2,QAAM2,QAWM2,RAW2,BAW2=SPCFHX(TAA03,...
730.      TAW01,ITAM2,TAM2,ITAW2,TAW2,KAMC,KAWV,KAAW1,KAAW2,...
731.      KAWW1,KAWW2,JAACP,WFLOW,JAAM2,JAWM2)
732.      TAA01,TAW01,DTAM1,DTAW1,QAAM1,QAWM1,RAW1,BAW1=SPCFHX(TAA02,...
733.      TAW1,ITAM1,TAM1,ITAW1,TAW1,KAMC,KAWV,KAAW1,KAAW2,...
734.      KAWW1,KAWW2,JAACP,WFLOW,JAAM1,JAWM1)
735.
736.
737.
738.      RAWAV=(RAW1+RAW2+RAW3+RAW4+RAW5+RAW6+RAW7+RAW8+RAW9+RAW10)/KAWN
739.

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```

740.      BAWT=BAW1+BAW2+BAW3+BAW4+BAW5+BAW6+BAW7+BAW8+...
741.      BAW9+BAW10+BAW0
742.
743.
744.
745.      * * * * * CORE AUXILIARY HEAT EXCHANGER MODEL * * * * *
746.      * * * * * SECTION 6.3 * * * * *
747.
748.
749.
750.
751.
752.
753.
754.      * CAME INLET AND EXIT WATER HEADER MODELS
755.
756.      DTHW1,RHW1,BHW1=PIPE1(WFLOW,TPCO,KHVV1,KHMC1,THW1,ITHW1)
757.      DTHW0,RHW0,BHW0=PIPE1(WFLOW,THW06,KHVV0,KHMC0,THW0,ITHW0)
758.
759.      * CAME HEATED ZONE MODEL
760.
761.      MHHI6=144.*PNSS+KHVV16/(KUNGR+THHI6)
762.      DTHHI6=GCAA*KUNHCP*(TLPH-THHI6)/(KUNHCV+MHHI6)
763.      THHI6=INTGRL(ITHHI6,DTHHI6)
764.
765.
766.      THH6,JHHM6,JHHM6=HTKOE(WFLOW,GCAA,JHHCP,THHI6,THH06,THH6,THW6)
767.      THH5,JHHM5,JHHM5=HTKOE(WFLOW,GCAA,JHHCP,THH06,THH05,THH5,THW5)
768.      THH4,JHHM4,JHHM4=HTKOE(WFLOW,GCAA,JHHCP,THH05,THH04,THH4,THW4)
769.      THH3,JHHM3,JHHM3=HTKOE(WFLOW,GCAA,JHHCP,THH04,THH03,THH3,THW3)
770.      THH2,JHHM2,JHHM2=HTKOE(WFLOW,GCAA,JHHCP,THH03,THH02,THH2,THW2)
771.      THH1,JHHM1,JHHM1=HTKOE(WFLOW,GCAA,JHHCP,THH02,THH01,THH1,THW1)
772.
773.
774.
775.      JHHCP=GCAA*KUNHCP
776.      THH06,THW06,DTHH6,DTHW6,QHHM6,QHMM6,RHW6,BHW6=SPCFHX(THHI6,...
777.      THH05,ITHH6,THH6,ITHW6,THW6,KHMC,KHVV,KHHW1,KHHW2,...
778.      KHHW1,KHHW2,JHHCP,WFLOW,JHHM6,JHHM6)
779.      THH05,THW05,DTHH5,DTHW5,QHHM5,QHMM5,RHW5,BHW5=SPCFHX(THH06,...
780.      THH04,ITHH5,THH5,ITHW5,THW5,KHMC,KHVV,KHHW1,KHHW2,...
781.      KHHW1,KHHW2,JHHCP,WFLOW,JHHM5,JHHM5)
782.      THH04,THW04,DTHH4,DTHW4,QHHM4,QHMM4,RHW4,BHW4=SPCFHX(THH05,...
783.      THH03,ITHH4,THH4,ITHW4,THW4,KHMC,KHVV,KHHW1,KHHW2,...
784.      KHHW1,KHHW2,JHHCP,WFLOW,JHHM4,JHHM4)
785.      THH03,THW03,DTHH3,DTHW3,QHHM3,QHMM3,RHW3,BHW3=SPCFHX(THH04,...
786.      THH02,ITHH3,THH3,ITHW3,THW3,KHMC,KHVV,KHHW1,KHHW2,...
787.      KHHW1,KHHW2,JHHCP,WFLOW,JHHM3,JHHM3)
788.      THH02,THW02,DTHH2,DTHW2,QHHM2,QHMM2,RHW2,BHW2=SPCFHX(THH03,...
789.      THH01,ITHH2,THH2,ITHW2,THW2,KHMC,KHVV,KHHW1,KHHW2,...
790.      KHHW1,KHHW2,JHHCP,WFLOW,JHHM2,JHHM2)
791.      THH01,THW01,DTHH1,DTHW1,QHHM1,QHMM1,RHW1,BHW1=SPCFHX(THH02,...
792.      THH1,ITHH1,THH1,ITHW1,THW1,KHMC,KHVV,KHHW1,KHHW2,...
793.      KHHW1,KHHW2,JHHCP,WFLOW,JHHM1,JHHM1)
794.
795.      BHW1=BHW1+BHW1+BHW2+BHW3+BHW4+BHW5+BHW6+BHW0
796.

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797.      RHMV=(RHM1+RHM2+RHM3+RHM4+RHM5+RHM6)/KHMN
798.
799.
800.
801.      * * * * * CACWS PROCESS-FLOW MODEL * * * * *
802.      * * * * * SECTION 4. * * * * *
803.
804.
805.      *      JPLO=KPLJ0+RPC1*(NPL/KPLN)**2
806.      *      JPL1=KPLJ1*(NPL/KPLN)
807.      *      JPL2=-KPLJ2/RPC1
808.      *
809.      *
810.      *      JPS0=KPSJ0+RPC1*(NPS/KPSN)**2
811.      *      JPS1=KPSJ1*(NPS/KPSN)
812.      *      JPS2=-KPSJ2/RPC1
813.      *
814.      *      JAWPL=1./SQRT((KHSQ/RPHAV+KPCSQ/RPCAV+KANSQ/RAHAV+KHSQ/RHMV+...
815.      *      KHWISQ/RHVI+KAWISQ/RAVI)
816.      *      RPUMP=RPC1
817.      *      *PROCED WFLOW,WPL,WPS,PLOAD=PRFLO(JAWPL,RPUMP,APL,SPL,WPLR,JPLO,JPL1,...
818.      *      JPL2,NPL,APS,SFS,WPSR,JPS0,JPS1,JPS2,NPS)
819.      *      4 IF(PLOAD)1,1,2
820.      *      1 WFLOW=0.
821.      *      WLOPD=0.
822.      *      GO TO 3
823.      *      2 WFLOW=JAWPL*SQRT(PLOAD)
824.      *      WLOPD=0.5*WFLOW/PLOAD
825.      *      3 CONTINUE
826.      *      JPL=KPL*SQRT(RPUMP)
827.      *      JPS=KPS*SQRT(RPUMP)
828.      *      WPL,WLOPD=MOPTV(JPL,APL,SPL,JPLO,JPL1,JPL2,WPLR,PLOAD)
829.      *      WPS,WSPD=MOPTV(JPS,APS,SFS,JPS0,JPS1,JPS2,WPSR,PLOAD)
830.      *      ERR=WPL+WPS-WFLOW
831.      *      PLOAD=PLOAD-ERR/(WLOPD+WSPD-WLOPD)
832.      *      IF(ERR*ERR.GT.0.01)GO TO 4
833.      *      *ENDPRO
834.
835.      * * PRESSURIZER MODEL
836.
837.      *      TPRG=TPRW
838.      *      JPRRP=DTPRW*AFGEN(PARTI,TPRW)*VPRW
839.      *      RPRW=AFGEN(RFTSL,TPRW)
840.      *      WPR=BPHT*BAWT*BPCT*BHWI
841.      *      THWX=TPC9
842.      *      DTPRW=(WPRI*(TPRI-TPRW)-QPR/KUNWCP*(THWX-TPRW)*LIMIT(0.0,...
843.      *      .1E6,-WPR))/RPRW/VPRW
844.      *      TPRW=INTGRL(ITPRW,DTPRW)
845.      *      DVPRW=(WPRI-WPRO-WPR-JPRRP)/RPRW
846.      *      VPRW=INTGRL(IVPRW,DVPRW)
847.      *      DPPRG=((GPRI-GPRO)*KUNGR/144.*TPRG*PPRG*DVPRW)/(KPRV-VPRW)
848.      *      PPRG=INTGRL(IPPRG,DPPRG)
849.
850.
851.
852.      * * * * * CORE MODEL * * * * *
853.      * * * * *

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854.
855.
856.      * * * TEMPORARY CIRC SPEED CONTROL ON TEMPERATURE ERROR
857.
858.      OCAERR=THWOS-YHWO
859.      * * * IF ERROR IS POSITIVE NCAD IS POSITIVE
860.      * * * THAT RESULTS IN IF WATER TEMP IS LOWER THAN
861.      * * * DESIRED, THEN TURN UP CIRC SPEED
862.      * * * ALSO THERE IS NO LIMIT ON CIRC SPEED
863.      PROPN=100./KCAPBN*OCAERR/KCARG
864.      DICAN=PROP/KCART
865.      ICAN=INTGRL(IICAN,DICAN)
866.      NCAD=PROP+ICAN
867.      DNCA=(NCAD-NCAR)/1.
868.      NCA=INTGRL(INCA,DNCA)
869.      TCCHOA=YHWO1
870.      * TCCHOA=(1.-SCAV)*ITUPH + SCAV*THWO1
871.      TCCHOA=AFGEN(TINLET,TIME)
872.      DTCAH=(THWO1-TCCHOA)/KCATAU
873.      TCAHOA=INTGRL(ITCAH,DTCAH)
874.
875.      GCAA=KCAR*144.*PNSS/TCAHOA/KUNGR*NCAA
876.
877.      * GCAA=GCAAS
878.
879.      GRETOT=KCCAN*GCAA*KCAAN*GCAA
880.
881.      * UPPER AND LOWER PLENUM TIME CONSTANTS
882.      PNSS=KUNGR*HNSS/(144.*(JUPV/TUPH+JLPV/TLPH))
883.      MUPH=PNSS*JUPV*144./((KUNGR*TUPH)
884.      DTUPH=(KUNHCP*(KCCAN*GCAA*(TCCHOA-TUPH)+KCAAN*GCAA*(TCAHOA-...
885.      TUPH))+JGPK*(TGPM-TUPH))/(KUNHCV*MUPH)
886.      TUPH=INTGRL(ITUPH,DTUPH)
887.      * TUPH=TCCHOA*(1.-SCAV)+TCAHOA*SCAV
888.      DTGPM=JGPK*(TUPH-TGPM)/KGPC
889.      TGPM=INTGRL(ITGPM,DTGPM)
890.      HLPH=PNSS*JLPV*144./((KUNGR*TLPH)
891.      DTLPH=(KUNHCP*(KRENN*GREH*(TREH06-TLPH)+GBPH*(TBPH-TLPH)))/...
892.      (KUNHCV*HLPH)
893.      TLPH=INTGRL(ITLPH,DTLPH)
894.
895.      GREH=GRETOT*KREGF/KRENN
896.      GBPH=GRETOT*(1.-KREGF)
897.      TBPH=TUPH*QBPH/KUNHCP/GBPH
898.
899.
900.      JRECK1,JRCFK1=CORHT(GREH,TRC1,TRF1,TREH1,KREA1,KREL1)
901.      JRECK2,JRCFK2=CORHT(GREH,TRC2,TRF2,TREH2,KREA2,KREL2)
902.      JRECK3,JRCFK3=CORHT(GREH,TRC3,TRF3,TREH3,KREA3,KREL3)
903.      JRECK4,JRCFK4=CORHT(GREH,TRC4,TRF4,TREH4,KREA4,KREL4)
904.      JRECK5,JRCFK5=CORHT(GREH,TRC5,TRF5,TREH5,KREA5,KREL5)
905.      JRECK6,JRCFK6=CORHT(GREH,TRC6,TRF6,TREH6,KREA6,KREL6)
906.
907.      DTRC1,DTRF1,TREH01,TREH1=CRNODE(JRECK1,JRCFK1,KRFV1,KRCV1,TUPH,...
908.      GREH,ORF1,ITRF1,TRF1,ITRC1,TRC1)
909.      DTRC2,DTRF2,TREH02,TREH2=CRNODE(JRECK2,JRCFK2,KRFV2,KRCV2,...
910.      TREH01,GREH,ORF2,ITRF2,TRF2,ITRC2,TRC2)

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911.      DTRC3,DTRF3,TREH03,TREH3=CRNODE(JRECK3,JRCFK3,KRFV3,KRCV3,...
912.      TREH02,GREH,QRF3,ITRF3,TRF3,ITRC3,TRC3)
913.      DTRC4,DTRF4,TREH04,TREH4=CRNODE(JRECK4,JRCFK4,KRFV4,KRCV4,...
914.      TREH03,GREH,QRF4,ITRF4,TRF4,ITRC4,TRC4)
915.      DTRC5,DTRF5,TREH05,TREH5=CRNODE(JRECK5,JRCFK5,KRFV5,KRCV5,...
916.      TREH04,GREH,QRF5,ITRF5,TRF5,ITRC5,TRC5)
917.      DTRC6,DTRF6,TREH06,TREH6=CRNODE(JRECK6,JRCFK6,KRFV6,KRCV6,...
918.      TREH05,GREH,QRF6,ITRF6,TRF6,ITRC6,TRC6)
919.
920.      * CORE DECAY HEAT GENERATION
921.
922.      PROCED      TSEC = DUMIT(TSTART,TIME,TFLAG)
923.      TSEC = TSTART + TIME
924.      IF(TFLAG.GT.0.0) TSEC = TSTART
925.      ENDPRO
926.
927.      * * * POWER DECAY WAS ESTABLISHED FROM A MINAUX RUN ON
928.      * * * AUGUST 12, 1977.
929.      *PROCED DECAY = FDPOM(TSEC)
930.      ** TEMPORARILY USE SHURES DATA FOR THERMAL REACTOR FISSION PRODUCT DECAY
931.      *STORAG  T(5),C(4),D(4)
932.      *TABLE  T(1-5) = 0.0,0.1,10.0,150.0,4.0E+5,  C(1-4) = 0.07,0.0603,...
933.      * 0.0765,0.1301,  D(1-4) = 0.0,0.0639,0.1807,0.2834
934.      *INTEGER  INDEX
935.      * IF(TSEC.LT.1.E-10) GO TO 30
936.      * DO 10 INDEX=1,4
937.      * IF(TSEC.LT.T(INDEX+1)) GO TO 20
938.      * 10 CONTINUE
939.      * 20 FPDK = C(INDEX) * TSEC**(-D(INDEX))
940.      * UDK=0.00129*EXP(-TSEC/2039.)
941.      * NDK=0.00112*EXP(-TSEC/292900.)
942.      * GO TO 40
943.      * 30 FPDK = C(1)
944.      * UDK=0.00129
945.      * NDK=0.00112
946.      * 40 DECAY=FPDK*UDK*NDK
947.      *ENDPRO
948.
949.      QRF1=KREPF1*KREQT*KREPF*PRCD/KRENN
950.      QRF2=KREPF2*KREQT*KREPF*PRCD/KRENN
951.      QRF3=KREPF3*KREQT*KREPF*PRCD/KRENN
952.      QRF4=KREPF4*KREQT*KREPF*PRCD/KRENN
953.      QRF5=KREPF5*KREQT*KREPF*PRCD/KRENN
954.      QRF6=KREPF6*KREQT*KREPF*PRCD/KRENN
955.      QBPH=KREQT*(1.-KREPF)*PRCD
956.
957.
958.
959.
960.      * * * * * MISCELLANEOUS * * * * *
961.
962.
963.
964.
965.
966.
967.      * TEMPORARY CACVS FLOW CONTROL AND ACTUATOR MODELS

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966.      *      PROP=100./KPLPB*(WPLS-WFLOW)/KPLCR
969.      *      DINT=PROP/KPLRT
971.      *      INT=INTGRL(IINT,DINT)
972.      *      NPLO=PROP*INT
973.      *      DNPL=(NPLO-NPL)/20.
974.      *      NPL=INTGRL(INPL,DNPL)
975.      *
976.      *
977.      *      PROPS=100./KPSPB*(WPSS-WFLOW)/KPSCR
978.      *      DIPSIT=PROPS/KPSRT
979.      *      IPSIT=INTGRL(IIPSIT,DIPSIT)
980.      *      APSD=PROPS*IPSIT
981.      *      DAPS=(APSD-APS)/4.
982.      *      APS=LIMINT(IAPS,0.0,1.0,DAPS)
983.      *
984.      *      COLD TEMPERATURE MEASUREMENT (KTAU SEC LAG)
985.      *
986.      *      DTPCOM=(TPC10-TPCOM)/KTAU
987.      *      TPCOM=INTGRL(ITPCOM,DTPCOM)
988.      *
989.      *      CANE EXIT TEMPERATURE MEASUREMENT (KTAU SEC LAG)
990.      *
991.      *      DTPHM=(TPH1-TPHM)/KTAU
992.      *      TPHM=INTGRL(ITPHM,DTPHM)
993.      *
994.      *      VARIABLES CALCULATED FOR OUTPUT PURPOSES ONLY
995.      *
996.      *      QHMMT=QHMM1+QHMM2+QHMM3+QHMM4+QHMM5+QHMM6
997.      *      QHHMT=QHHM1+QHHM2+QHHM3+QHHM4+QHHM5+QHHM6
998.      *      QAWMT=QAWM1+QAWM2+QAWM3+QAWM4+QAWM5+QAWM6+QAWM7+QAWM8+...
999.      *      QAWM9+QAWM10
1000.      *      QAAMT=QAAM1+QAAM2+QAAM3+QAAM4+QAAM5+QAAM6+QAAM7+QAAM8+...
1001.      *      QAAM9+QAAM10
1002.      *      MARGIN=AFGEN(HSATP,PPRG)-AFGEN(HSAT,THW06)
1003.      *
1004.      *      POWFLO=PRCD/GRETOT
1005.      *
1006.      *      EAE=DEBUG(1,0.0)
1007.      *      D1=DEBUG(1,30.0)
1008.      *      D2=DEBUG(1,60.0)
1009.      *      TERMINAL
1010.      *      EAE1=DEBUG(1,TIME)
1011.      *      TIMER DELT=.01,FINTIM=500.,DELPR=5.,DELGR=5.,TVARN=25.
1012.      *      / WRITE(12,73)  ITPH1,TPH2,TPH3,TPH4,TPH5,TPH6,TPH7,TPH8,TPH9,
1013.      *      /      ITPH10,
1014.      *      /      ITPHM
1015.      *      /73  FORMAT(' * * * HOT LINE INITIAL CONDITIONS',/,
1016.      *      /      1'INCON  ITPH1 =',E11.6,', ITPH2 =',E11.6,', ITPH3 =',E11.6,/,
1017.      *      /      1'INCON  ITPH4 =',E11.6,', ITPH5 =',E11.6,', ITPH6 =',E11.6,/,
1018.      *      /      1'INCON  ITPH7 =',E11.6,', ITPH8 =',E11.6,', ITPH9 =',E11.6,/,
1019.      *      /      1'INCON  ITPH10=',E11.6,/,
1020.      *      /      1'INCON  ITPHM =',E11.6,/)
1021.      *
1022.      *
1023.      *
1024.      *

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1025.
1026. / WRITE(12,72) TPC1,TPC2,TPC3,TPC4,TPC5,TPC6,TPC7,TPC8,TPC9,
1027. / TPC10,
1028. / TPCOM
1029. /72 FORMAT(' * * * COLD LINE INITIAL CONDITIONS',/,
1030. / 1*INCON ITPC1 =',E11.6,', ITPC2 =',E11.6,', ITPC3 =',E11.6,/,
1031. / 1*INCON ITPC4 =',E11.6,', ITPC5 =',E11.6,', ITPC6 =',E11.6,/,
1032. / 1*INCON ITPC7 =',E11.6,', ITPC8 =',E11.6,', ITPC9 =',E11.6,/,
1033. / 1*INCON ITPC10 =',E11.6,/,
1034. / 1*INCON ITPCOM =',E11.6,/)
1035.
1036.
1037. / WRITE(12,70) TAW0,TAW1,TAW2,TAW3,TAW4,TAW5,TAW6,TAW7,
1038. / TAW8,TAW9,TAW10,TAM1,TAM2,TAM3,TAM4,TAM5,TAM6,TAM7,TAM8,
1039. / TAM9,TAM10,TAA1,TAA2,TAA3,TAA4,TAA5,TAA6,TAA7,TAA8,TAA9,TAA10
1040. /70 FORMAT(' * * * AIR BLAST MX INITIAL CONDITIONS',/,
1041. / 1*INCON ITAW0 =',E11.6,', ITAW1 =',E11.6,', ITAW2 =',E11.6,/,
1042. / 1*INCON ITAW3 =',E11.6,', ITAW4 =',E11.6,', ITAW5 =',E11.6,/,
1043. / 1*INCON ITAW6 =',E11.6,', ITAW7 =',E11.6,', ITAW8 =',E11.6,/,
1044. / 1*INCON ITAW9 =',E11.6,', ITAW10 =',E11.6,/,
1045. / 1*INCON ITAM1 =',E11.6,', ITAM2 =',E11.6,', ITAM3 =',E11.6,/,
1046. / 1*INCON ITAM4 =',E11.6,', ITAM5 =',E11.6,', ITAM6 =',E11.6,/,
1047. / 1*INCON ITAM7 =',E11.6,', ITAM8 =',E11.6,', ITAM9 =',E11.6,/,
1048. / 1*INCON ITAM10 =',E11.6,/,
1049. / 1*PARAM TAA1 =',E11.6,', TAA2 =',E11.6,', TAA3 =',E11.6,/,
1050. / 1*PARAM TAA4 =',E11.6,', TAA5 =',E11.6,', TAA6 =',E11.6,/,
1051. / 1*PARAM TAA7 =',E11.6,', TAA8 =',E11.6,', TAA9 =',E11.6,/,
1052. / 1*PARAM TAA10 =',E11.6,/)
1053.
1054.
1055. / WRITE(12,71) THW1,THW2,THW3,THW4,THW5,THW6,THM1,THM2,
1056. / THM3,THM4,THM5,THM6,THW0,THM10,THM1,THM2,THM3,THM4,THM5,THM6
1057. /71 FORMAT(' * * * CAME INITIAL CONDITIONS',/,
1058. / 1*INCON ITHW1 =',E11.6,', ITHW2 =',E11.6,', ITHW3 =',E11.6,/,
1059. / 1*INCON ITHW4 =',E11.6,', ITHW5 =',E11.6,', ITHW6 =',E11.6,/,
1060. / 1*INCON ITHM1 =',E11.6,', ITHM2 =',E11.6,', ITHM3 =',E11.6,/,
1061. / 1*INCON ITHM4 =',E11.6,', ITHM5 =',E11.6,', ITHM6 =',E11.6,/,
1062. / 1*INCON ITHW0 =',E11.6,', ITHM10 =',E11.6,/,
1063. / 1*PARAM THW1 =',E11.6,', THW2 =',E11.6,', THW3 =',E11.6,/,
1064. / 1*PARAM THW4 =',E11.6,', THW5 =',E11.6,', THW6 =',E11.6,/,
1065.
1066.
1067. / WRITE(12,74) VPRV,TPRW,PPRG,LOAD,NPL,INT,APS,IPSIT,WFLOW
1068. /74 FORMAT(' * * * PUMP AND PROCESS-FLOW INITIAL CONDITIONS',/,
1069. / 1*INCON IVPRV =',E11.6,', ITPRW =',E11.6,', IPPRG =',E11.6,/,
1070. / 1*INCON ILOAD =',E11.6,', INPL =',E11.6,', IINT =',E11.6,/,
1071. / 1*INCON IAPS =',E11.6,', IIPSIT =',E11.6,/,
1072. / 1*PARAM WFLOW =',E11.6,/)
1073.
1074.
1075. /93 FORMAT(' * * * CORE INITIAL CONDITIONS',/,
1076. / 1*INCON ITRF1 =',E11.6,', ITRF2 =',E11.6,', ITRF3 =',E11.6,/,
1077. / 1*INCON ITRF4 =',E11.6,', ITRF5 =',E11.6,', ITRF6 =',E11.6,/,
1078. / 1*INCON ITRC1 =',E11.6,', ITRC2 =',E11.6,', ITRC3 =',E11.6,/,
1079. / 1*INCON ITRC4 =',E11.6,', ITRC5 =',E11.6,', ITRC6 =',E11.6,/,
1080. / 1*INCON ITUPH =',E11.6,', ITLPH =',E11.6,/,
1081. / 1*INCON ITCAHA =',E11.6,', IICAN =',E11.6,', INCAA =',E11.6,/,

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1082. / 1*PARAM TREH1 =*,E11.6,*, TREH2 =*,E11.6,*, TREH3 =*,E11.6,/,
1083. / 1*PARAM TREH4 =*,E11.6,*, TREH5 =*,E11.6,/, TREH6 =*,E11.6,/,
1084. / WRITE(12,93) TRF1,TRF2,TRF3,TRF4,TRF5,TRF6,TRC1,TRC2,TRC3,
1085. / 1TRC4,TRC5,TRC6,TUPH,TLPH,ICAN,ONCAA,NCAA,TREH1,TREH2,TREH3,
1086. / 1TREH4,TREH5,TREH6
1087. / WRITE(12,95)TIME,DUMMY
1088. / 95 FORMAT(* * * TIME AT END OF RUN=*,E11.6,*, DUMMY VARIABLE=*
1089. / 1,E11.6//)
1090.
1091. PRINT TPCO,THW0,TPH0,TAW0,THH01,WFLOW,MARGIN,PPRG,...
1092. PNSS,GCAA,GCCA,PRCD,POWFLO,...
1093. OCAERR,PROPN,ICAN,ONCAA,NCAA,...
1094. TRC1,TRF1,TREH1,TREH01,THH01,...
1095. TRC2,TRF2,TREH2,TREH02,THH02,...
1096. TRC3,TRF3,TREH3,TREH03,THH03,...
1097. TRC4,TRF4,TREH4,TREH04,THH04,...
1098. TRC5,TRF5,TREH5,TREH05,THH05,...
1099. TRC6,TRF6,TREH6,TREH06,THH06,...
1100. THH16,THM6,...
1101. TLPH,TUPH
1102. * QAAM1,QAAM2,QAAM3,QAAM4,QAAM5,QAAM6,QAAM7,QAAM8,QAAM9,QAAM10,...
1103. * QAAM1,...
1104. * QAAM1,QAAM2,QAAM3,QAAM4,QAAM5,QAAM6,QAAM7,QAAM8,QAAM9,QAAM10,...
1105. * QAAM1,...
1106. * QHMM1,QHMM2,QHMM3,QHMM4,QHMM5,QHMM6,QHMMT,...
1107. * QHMM1,QHMM2,QHMM3,QHMM4,QHMM5,QHMM6,QHMMT
1108. PREPAR TPCO,THW0,TPH0,TAW0,THH01,WFLOW,MARGIN,PPRG,...
1109. TRC1,TRF1,TREH1,TREH01,THH01,...
1110. PNSS,GCAA,GCCA,PRCD,POWFLO,...
1111. OCAERR,PROPN,ICAN,ONCAA,NCAA,...
1112. * TRC2,TRF2,TREH2,TREH02,THH02,...
1113. * TRC3,TRF3,TREH3,TREH03,THH03,...
1114. * TRC4,TRF4,TREH4,TREH04,THH04,...
1115. * TRC5,TRF5,TREH5,TREH05,THH05,...
1116. * TRC6,TRF6,TREH6,TREH06,THH06,...
1117. THH02,THH03,THH04,THH05,THH06,...
1118. TLPH,TUPH
1119. * QAAM1,QAAM2,QAAM3,QAAM4,QAAM5,QAAM6,QAAM7,QAAM8,QAAM9,QAAM10,...
1120. * QAAM1,...
1121. * QAAM1,QAAM2,QAAM3,QAAM4,QAAM5,QAAM6,QAAM7,QAAM8,QAAM9,QAAM10,...
1122. * QAAMT,...
1123. * QHMM1,QHMM2,QHMM3,QHMM4,QHMM5,QHMM6,QHMMT,...
1124. * QHMM1,QHMM2,QHMM3,QHMM4,QHMM5,QHMM6,QHMMT
1125. GRAPH TIME,TPCO,THW0,TPH0,...
1126. TAW0,THH01
1127. GRAPH TIME,WFLOW,PPRG
1128. GRAPH TIME,MARGIN
1129. GRAPH TIME,TLPH,TUPH
1130. *GRAPH TIME,THH01,THH02,THH03,THH04,THH05,THH06
1131. *GRAPH TIME,TREH01,TREH02,TREH03,TREH04,TREH05,TREH06
1132. *GRAPH TIME,TRC1,TRC2,TRC3,TRC4,TRC5,TRC6
1133. *GRAPH TIME,TRF1,TRF2,TRF3,TRF4,TRF5,TRF6
1134. *GRAPH TIME,TREH1,TREH2,TREH3,TREH4,TREH5,TREH6
1135. GRAPH TIME,OCAERR,PROPN,ICAN,NCAA
1136. GRAPH TIME,GCAA,GCCA,PNSS,PRCD,POWFLO
1137.
1138. INTEG WSEIG

```

```

1139.  *STEADY EIGEN,DELS=:.001
1150.  END
1191.  STOP
END DATA
3AS6,A,SYSL*SIM,
FAC WARNING 040200004000
3AS6,A,SYSL*PLOT1B,
FAC WARNING 040200004000
3AS6,I,3,F
3AS6,I,4,F2
3AS6,I,7,F2
3AS6,I,8,F2
3X01,SYSL*IRAN,SYSL*IRAN

```

**** SYSL/1110 TRANSLATOR INPUT ****

QADD,P GCFR=CASY.
TITLE GCFR CASY
ADDMAP MAP=CASY.

* * NOMENCLATURE GUIDELINES FOR CASY-SEE SECTION 3 OF REPORT *

* * FIRST LETTER DESIGNATION - TYPE OF VARIABLE

*	A	NORMALIZED VALVE AREA	(ND)
*	B	RATE OF THERMAL EXPANSION OR CONTRACTION	(FT**3/SEC)
*	D	RATE OF CHANGE WRT TIME	(PER SEC)
*	E	EFFICIENCY (ND)	
*	G	GAS FLOW RATE	(LBS/SEC)
*	I	INITIAL VALUE OF STATE	
*	J	INTERMEDIATE VARIABLE	
*	K	RESERVED FOR CONSTANTS	
*	L	VALVE LIFT (ND) OR TANK LEVEL (FT)	
*	N	ROTATIONAL SPEED (RPM) OR NUMBER (ND)	
*	O	INTERMEDIATE VARIABLE	
*	P	PRESSURE (PSIA) OR PRESSURE DIFFERENTIAL (PSID)	
*	Q	RATE OF HEAT TRANSFER (BTU/SEC)	
*	R	DENSITY (LB/FT**3)	
*	T	TEMPERATURE (DEG F)	
*	M	WATER FLOW RATE (LBS/SEC)	
*	X	TORQUE (FT-LBS)	

* * SECOND AND THIRD LETTER DESIGNATIONS - COMPONENT ID

*	A-	AIR BLAST HEAT EXCHANGER
*	AA	AIR SIDE
*	AM	TUBE AND FINS
*	AW	WATER SIDE
*	BP	CORE BYPASS
*	CA	CIRCULATOR AUXILIARY
*	CC	CIRCULATOR
*	CH	CIRCULATOR MOTOR
*	CG	CONTROL GUIDE
*	CS	CORE SUPPORT
*	H-	CANE HEAT EXCHANGER
*	HH	HELIUM SIDE
*	HM	TUBE METAL
*	HW	WATER SIDE
*	LP	LOWER PLENUM
*	LR	LOWER REFLECTOR
*	PC	PIPE FROM AIR BLAST HX AND CANE HX (COLD LEG)
*	PH	PIPE FROM CANE HX TO AIR BLAST HX (HOT LEG)
*	PL	PUMP (LARGE)

 * * *CONSTANTS, TABLES, AND MACROS USED BY MORE THAN ONE * * *
 * * *COMPONENT MODEL. HENCE, CONTAINED IN MISCELLANEOUS * * *
 * * *SECTION OF ALL * * *
 * * ******

CONST KUNACP=0.2407 , KUNGF=386. , KUNHCY=746
CONST KUNWCP=1.0227 , KUNHCP=1.242

AFGEN RFTSL=510.,62.4,560.,62.0,610.,61.2,660.,60.1,710.,58.8,760.,...
57.3,810.,55.6,860.,53.7,910.,51.5,960.,49.0,1010.,45.9,1060.,...
42.4,1110.,37.3

```
AFGEN PART1=510.,-.0122,610.,-.0187,660.,-.0238,710.,-.0282,760.,...
-.0323,810.,-.0366,860.,-.0412,910.,-.0463,960.,-.0560,1010.,...
-.0665,1110.,-.0856
```

AFGEN FSPH=	560.,	.998,	660.,	1.00,	710.,	1.01,	760.,	1.03,	810.,	1.05,	...
	860.,	1.08,	910.,	1.12,	960.,	1.19,	1010.,	1.31,	1060.,	1.51,	...

AFGEN FYIS=560.,1.649,610.,1.051,660.,0.738,710.,0.569,760.,0.454, ...
810.,0.378,860.,0.328,910.,0.288,960.,0.256,1010.,0.230, ...
1060.,0.209,1110.,.197

AFGEN FCON=560.,0.364,610.,0.394,660.,0.394,710.,0.396,760.,0.395,...
810.,0.391,860.,0.381,910.,0.367,960.,0.349,1010.,0.325,...
1060.,0.292,1110.,0.280

AFGEN HSATP=58.,259.,118.,311.,220.,364.,382.,419.,...
621.,476.,962.,537.,1431.,603.,2060.,679.,...
2895.,784.

AFGEN HSATT=550.,58.,600.,108.,65C.,158.,700.,208., ...
750.,259.,800.,311.,850.,364.,900.,419.,950.,476.,...
1000.,537.,1050.,603.,1100.,679.,1150.,784.

```
MACRO T60,TWO,DTM,DTW,OGM,QWM,RW,EW=SPCFHX(TG1,TWI,ITM,TM,ITW,TW,...
      MCAP,VOL,WTG1,WTG2,WTW1,WTW2,JGCP,WFLOW,JC,JHTW)
```

```

* SEE SECTION 6.2 OF REPORT
* SINGLE PHASE COUNTER FLOW HEAT EXCHANGER WITH INCOMPRESSIBLE
* FLUID ON W SIDE AND NEGLIGIBLE FLUID THERMAL CAPACITY ON G SIDE
* TGO=GAS EXIT TEMP, QGM=ENERGY TRANSFER GAS TO METAL
* RW=AVERAGE NODAL DENSITY, TW=AVERAGE NODAL TEMP,
* QWM=HEAT TRANSFER WATER TO METAL, TWO=WATER EXIT TEMP
RW=AFGEN(IRFSL,TW)
TGO=(TG1*(1.-WTG1)+JC1+JC*TM1)/(1.+WTG2+JC)
QGM=JGCP*(TG1-TGO)

```

```

TWO=(TW-TW1+TW2)/WTW2
QNH=JHTW*(TW-TW1)
DTM=(QNH+QGN)/MCAP
TM=INTGRL(ITM,DTM)
DTW=(WFLOW*(TW1-TWO)-QNH/KUNWCP)/VOL/RW
BW=DTW*VOL*AFGEN(PARTRT,TW)
TW=INTGRL(ITW,DTW)

```

ENDMAC

```

MACRO DTF,RF,JPRT=PIPE1(FLO,TFI,VOL,MCAP,TF,ITF)
* SEE SECTION 6.1 OF REPORT
* PIPE THERMAL NODE WITH COMBINED METAL AND FLUID THERMAL CAPACITANCE
RE=AFGEN(IRFISL,TFI)
DTF=FLO*(TFI-TF)/(MCAP/KUNWCP*VOL*RF)
JPRT=VOL*DTF*AFGEN(PARTRT,TF)
TF=INTGRL(ITF,DTF)

```

ENDMAC

```

* * * * *
* * HOT LEG COMPONENT CONSTANTS, TABLES, AND MACROS * *
* * * * *

```

```

CONST KPHVT =90.7 , KPHCT =1966.0 , KPHN =10.

```

```

* * * * *
* * COLD LEG COMPONENT CONSTANTS, TABLES, AND MACROS * *
* * * * *

```

```

CONST KPCVT =90.7 , KPCCT =1966.0 , KPCN =10.

```

```

* * * * *
* * AIR BLAST HX COMPONENT CONSTANTS, TABLES, AND MACROS * *
* * * * *

```

```

CONST KAWRX =5316. , KAMR =1.08 , KAAR =29.52
CONST KAWNR =42.78 , KAAG =761.1 , KAWA =1975.
CONST KAAA =2438. , KAATR =598. , KAMTR =679.
CONST KAWTR =760. , KAAAU =.2831 , KAABU =.7169
CONST KAAAK =.1777 , KAABK =.8223 , KAMAK =1.1546
CONST KAMBK =.1546 , KAMCT = 1039.6 , KAWVT =33.33
CONST KAWN =10. , KAWV1 =0.5 , KAWVJ =0.5
CONST KAWVI =3. , KAWVO =3. , KAMCI =100.
CONST KAMCO =100.

```

```

MACRO IG,JAIR,JWAT=HTCOE(WFLOW,GFLRAT,JCGP,IG1,IG2,JMET,TWAT)
* SEE APPENDIX C OF REPORT
TG=(IG1+IG2)/2
PROCED RAIR=RESX(IGFLRAT)

```



```
RAIR=KAAR*GFLRAT*(KAAAU*KAABU*(TG/KAATR))**.681/...
(KAAAK*KAABK*TG/KAATR)
```

```
ENDPRO
```

```
RHET=KANR/(KANAK-KAMBK*THET/KANTR)
CON=AFGEN(FCON,TWAT)
VIS=AFGEN(FVIS,TWAT)
SPH=AFGEN(FSPH,TWAT)
RWAT=KANRX/(CON*(FLOW*3600./VIS))**.8*...
(SPH*VIS/CON)**.333)
JAIR=KAAA/KAWN/(0.5*RHET*RAIR)/JCGP
JWAT=KAWA/KAWN/(0.5*RHET*KAWA/KAAA*RWAT)
```

```
ENDMAC
```

```
* * * * *
* * CAPE COMPONENT CONSTANTS, TABLES, AND MACROS
* * * * *
```

```
CONST KHRX =1.614E5 , KHRX =1.48E4 , KHRX =28.14
CONST KHCY =418. , KHCY =58.35 , KHCY =58.35
CONST KHVY =10.8 , KHVY =3.91 , KHVY =3.91
CONST KHCIO=208. , KHCIO =.8267 , KHCIO =.8267
CONST KHWY =6.0 , KHWY =0.5 , KHWY =0.5
CONST KHVYK =6.388E-4 , KHVYK =0.687 , KHVYK =1.062E-3
CONST KHCCKE=0.701 , KHCCKE =6.25 , KHCCKE =0.0055
CONST KHHA =1141. , KHHA =888.5
```

```
MACRO TG,JHEL,JWAT=HTKOE(FLOW,HFLOW,JG,T1,T2,TH,TW)
```

```
* SEE APPENDIX C OF REPORT
TG=(T1+T2)/2
```

```
PROCED RHE=RESY(FLOW)
```

```
HSPH=1.242
HVIS=KHVYK*TG**KHVYK
HCON=KHCCKE*TG**KHCKE
RHE=KHRX/(HCON*(FLOW*3600./HVIS))**.8*...
(HSPH*HVIS/HCON)**.333)
```

```
ENDPRO
```

```
RHET=KHRX/(KHMAK*KHMBK*(TH-.460.))
CON=AFGEN(FCON,TW)
VIS=AFGEN(FVIS,TW)
SPH=AFGEN(FSPH,TW)
RWAT=KHRX/(CON*(FLOW*3600./VIS))**.8*...
(SPH*VIS/CON)**.333)
JWAT=(KHWA/KAWN)/(1.5*RHET*KHWA/KHHA*RWAT)
JHEL=(KHHA/KAWN/JG)/(1.5*RHET*RHE)
```

```
ENDMAC
```

```
* * * * *
* * PUMP AND PROCESS-FLOW COMPONENT CONSTANTS, TABLES, AND
* * MACROS
* * * * *
```

```
CONST KAWSQ =.9031 , KAWSQ =.9016 , KAWSQ=.6803
CONST KPHSQ =.2268 , KPCSC =.3300 , KPHSQ=.6800
```

```

MACRO W,DWDPO=HOPV,IKV,AV,SV,JQ,J1,J2,WR,DELP)
* SEE SECTION 4.1 OF REPORT
* GENERAL PURPOSE PUMP MACRO FOR REPRESENTING CONSTANT OR VARIABLE
* SPEED PUMP WITH THROTTLE OR ISOLATION VALVE OPTIONAL. REQUIRES
* THAT USER SPECIFY RECIRCULATION FLOW AS INPUT. USER MUST SPECIFY
* PUMP CHARACTERISTIC AS SECOND ORDER POLYNOMIAL.
  JV=KV+KV*AV*AV
  IF(SV.EQ.0.) JV=1
* IF ISOLATION VALVE IS OPEN, THROTTLE VALVE SETTING IS IMMATERIAL
* AS IT DROPS OUT. SETTING JV=1. RESULTS IN AINV=-1/J2 AS APPROP.
  AINV=-JV/(SV-J2*JV)
  B=(J1+2.*WR+J2)
  BAINV=B*AINV
  CPART=WR*(J1+J2*WR)+JQ
  DELPMX=-B*BAINV/4.+CPART
  IF(DELPMX-DELP) 1,1,2
1 W=0.
  DWDPO=0.
  GO TO 3
2 C=CPART-DELP
  W=-BAINV/2.+SQRT(BAINV*BAINV/4.-C*AINV)
  DWDPO=AINV/(2.*W+B*AINV)
3 CONTINUE
ENDMAC

```

```

* * * * *
* * CORE COMPONENT CONSTANTS, TABLES, AND MACROS * *
* * * * *

```

* CONSTANTS --- CORE

```

CONST KRENN =30834.
CONST KRFV1 =5.54054E-4, KRFV2 =2.45467E-4, KRFV3 =2.45467E-4
CONST KRFV4 =2.45467E-4, KRFV5 =2.45467E-4, KRFV6 =4.51359E-4
CONST KRCV1 =2.00803E-4, KRCV2 =8.89634E-5, KRCV3 =8.89634E-5
CONST KRCV4 =8.89634E-5, KRCV5 =8.89634E-5, KRCV6 =1.63584E-4
CONST KREA1 =0.13599, KREA2 =0.06025, KREA3 =0.06025
CONST KREA4 =0.06025, KREA5 =0.06025, KREA6 =0.11079
CONST KREL1 =1.475, KREL2 =0.817, KREL3 =0.817
CONST KREL4 =0.817, KREL5 =0.817, KREL6 =1.475
CONST KREPF1=0.0271, KREPF2=0.2021, KREPF3=0.2710
CONST KREP0 =829.5, KREP =0.95, KREGF =0.95
CONST KREPF4=0.2710, KREPF5=0.2021, KREPF6=0.0271
CONST KCCAN =3., KCAAN =2., KCAR =0.2471
CONST KHMVI6=344.

```

```

* * * * TEMPERARY LAG ON CIRC TEMPERATURE * * * *
CONST KCATAU=1.

```

```

MACRO JCG,JCF=CORHT(G,IC,IF,TG,A,L)
PROCD JCG,JCF=CORHT1(G)
  REY=3.055E8*G*TG**-.687
  IF(IREY.LT.2300.)IREY=2300.

```

N=8.28E-4*TG**701*REY**8/3600.
KC=1.693E-3+1.208E-6*TC
RC=1.02305/(KC*L)
RCG=1./(H*A)*RC/2.
JCG=1./RCG
KF=57.78**RB6*(1./((8.2*0.0271*TF/(1.8)*5.5E-13*(TF/1.8)**3)/3600.
KH=2.95E-7*(TF*TC/2.)**0.701
RCF=.03229/(KF*L)*.0036/(KH*L*RC/2.
JCF=1./RCF

ENDPRO
ENDMAC

```

MACRO DTC,DTF,TGO,TGA=CRNODE1J5C,JCF,VF,VC,TGI,G,QRF,ITF,TF,ITC,TC)
* SINGLE NODE FOR REACTOR EQUIVALENT FUEL CHANNEL MODEL
  JL=JGC/(G*KUNHCP)
  JW=1.-1./(1.-EXP(-JL))*1./JL
  TGO=(TGI*(1.-JL*JW)+JL*TC)/(1.+JL*(1.-JW))
  TGA=JW*TGI*(1.-JW)*TGO
  QGC=KUNHCP*G*(TGO-TGI)
  CF=0.5559*(52.492+0.03953*TF-1.512E-5*TF**2+2.203E-9*TF**3)
  CC=0.1196*(218.378+0.654*TC-4.504E-4*TC**2+1.143E-7*TC**3)
  CAPC=VF*CF
  CAPC=VC*CC
  QFC=JCF*(TF-TG)
  DTF=(QRF-QFC)/CAPC
  TF=INTGRL(ITF,DTF)
  DTC=(QFC-QGC)/CAPC
  TC=INTGRL(ITC,DTC)
ENDMAC

```

INITIAL

* * * HOT LEG COMPONENT INCON AND PARAM SECTION * *

```
INCON ITPH1 =1060. , ITPH2 =1060. , ITPH3 =1060.
INCON ITPH4 =1060. , ITPH5 =1060. , ITPH6 =1060.
INCON ITPH7 =1060. , ITPH8 =1060. , ITPH9 =1060.
INCON ITPH10=1060.
INCON ITPHM =1060.
```

$$\begin{aligned} KPHC &= KPHCT / KPHN \\ KPHV &= KPHVT / KPHN \end{aligned}$$

```
TPH1=ITPH1
TPH2=ITPH2
TPH3=ITPH3
TPH4=ITPH4
TPH5=ITPH5
TPH6=ITPH6
TPH7=ITPH7
```

TPH8=ITPH8
 TPH9=ITPH9
 TPH10=ITPH10
 TPHH=ITPHH

* * * * *
 * * COLD LEG COMPONENT INCON AND PARAM SECTION * *
 * * * * *

INCON ITPC1 =1060. , ITPC2 =1060. , ITPC3 =1060.
 INCON ITPC4 =1060. , ITPC5 =1060. , ITPC6 =1060.
 INCON ITPC7 =1060. , ITPC8 =1060. , ITPC9 =1060.
 INCON ITPC10=1060.
 INCON ITPCOM=1060.

KPCCT=KPCCT/KPCN
 KPCVT=KPCVT/KPCN

TPC1=ITPC1
 TPC2=ITPC2
 TPC3=ITPC3
 TPC4=ITPC4
 TPC5=ITPC5
 TPC6=ITPC6
 TPC7=ITPC7
 TPC8=ITPC8
 TPC9=ITPC9
 TPC10=ITPC10
 TPCOM=ITPCOM

* * * * *
 * * AIR BLAST HX COMPONENT INCON AND PARAM SECTION * *
 * * * * *

INCON ITAW0 =1060. , ITAW1 =1060. , ITAWI=1060.
 INCON ITAW2 =1060. , ITAW3 =1060. , ITAW9=1060.
 INCON ITAW5 =1060. , ITAW6 =1060. , ITAW7=1060.
 INCON ITAW8 =1060. , ITAW9 =1060. , ITAW10=1060.
 INCON ITAM1 =1060.
 INCON ITAM2 =1060. , ITAM3 =1060. , ITAM4=1060.
 INCON ITAM5 =1060. , ITAM6 =1060. , ITAM7=1060.
 INCON ITAM8 =1060. , ITAM9 =1060. , ITAM10=1060.
 PARAM TAA1 =1060. , TAA2 =1060. , TAA3 =1060.
 PARAM TAA4 =1060. , TAA5 =1060. , TAA6 =1060.
 PARAM TAA7 =1060. , TAA8 =1060. , TAA9 =1060.
 PARAM TAA10=1060.

TAWI=ITAWI
 TAW0=ITAW0
 TAW1=ITAW1
 TAW2=ITAW2

TAW3=ITAW3
 TAW4=ITAW4
 TAW5=ITAW5
 TAW6=ITAW6
 TAW7=ITAW7
 TAW8=ITAW8
 TAW9=ITAW9
 TAW10=ITAW10
 TAM1=ITAM1
 TAM2=ITAM2
 TAM3=ITAM3
 TAM4=ITAM4
 TAM5=ITAM5
 TAM6=ITAM6
 TAM7=ITAM7
 TAM8=ITAM8
 TAM9=ITAM9
 TAM10=ITAM10

KAAW2=1.-KAAW1
 KAWW2=1.-KAWW1
 KAMC= KAMCT/KAWN
 KAWV= KAWVT/KAWN

* * * * *
 * * CAME COMPONENT INCON AND PARAM SECTION * *
 * * * * *

INCON ITHW0 =1060. , ITHW1 =1060. , ITHWI=1060.
 INCON ITHW2 =1060. , ITHW3 =1060. , ITHW4=1060.
 INCON ITHW5 =1060. , ITHW6 =1060.
 INCON ITHM1 =1060.
 INCON ITHM2 =1060. , ITHM3 =1060. , ITHM4=1060.
 INCON ITHM5 =1060. , ITHM6 =1060. , ITHM16=1060.
 PARAM THH1 =1060. , THH2 =1060. , THH3 =1060.
 PARAM THH4 =1060. , THH5 =1060. , THH6 =1060.

THW0=ITHW0
 THW1=ITHW1
 THW2=ITHW2
 THW3=ITHW3
 THW4=ITHW4
 THW5=ITHW5
 THW6=ITHW6
 THM1=ITHM1
 THM2=ITHM2
 THM3=ITHM3
 THM4=ITHM4
 THM5=ITHM5
 THM6=ITHM6
 THM10=ITHM10
 THM16=ITHM16

KHWW2=1.-KHWW1
 KHWW2=1.-KHWW1
 KHMCT= KHMCT/KHWN
 KHMV= KHMV/KHWN

* * * * *
 * * PUMP AND PROCESS-FLOW COMPONENT INCON AND PARAM SECTION * *
 * * * * *

INCON IVPRW = .201657+03, ITPRW = .538657+03, IPPRG = .209573+04
 INCON IPLOAD = .126990+03, INPL = .955178+04, IINT = .955553+04
 INCON IAPS = 0.6731, IIPSIT=0.6731
 PARAM WFLOW = 0.0001

VPRW=IVPRW
 IPRW=ITPRW
 PPRG=IPPRG
 PLOAD=IPLOAD
 NPL=INPL
 INT=IINT
 APS=IAPS
 IPSIT=IIPSIT

* * * * *
 * * CORE COMPONENT INCON AND PARAM SECTION * *
 * * * * *

* INITIAL CONDITIONS --- CORE
 INCON ITRF1 = .115745+04, ITRF2 = .295830+04, ITRF3 = .300611+04
 INCON ITRF4 = .310270+04, ITRF5 = .274210+04, ITRF6 = .156610+04
 INCON ITRC1 = .109587+04, ITRC2 = .137460+04, ITRC3 = .154961+04
 INCON ITRC4 = .165473+04, ITRC5 = .166634+04, ITRC6 = .149256+04
 INCON ITUPH = .107890+04, ITLPH = .148027+04

PARAM TREH1 = .108106+04, TREH2 = .112910+04, TREH3 = .122578+04
 PARAM TREH4 = .133564+04, TREH5 = .143072+04, TREH6 = .147537+04

INCON ITCAHA=1074.9

INCON IICAN=0.01, INCAA=0.01

* PARAMETERS --- CORE

PARAM TSTART = 120.0
 PARAM TELAG = 1.0

* INITIAL CALCULATIONS --- CORE
 TLPH=ITLPH
 TUPH=ITUPH
 TRF1=ITRF1

TRF2=ITRF2
 TRF3=ITRF3
 TRF4=ITRF4
 TRF5=ITRF5
 TRF6=ITRF6
 TRC1=ITRC1
 TRC2=ITRC2
 TRC3=ITRC3
 TRC4=ITRC4
 TRC5=ITRC5
 TRC6=ITRC6
 * JUPV=700.0*562.0*KCAAN
 * JLPV=5201.0*344.0*KCAAN
 JUPV=12400.
 JLPV=6031.
 KREQT=3412800.*KREP0/3600.

TGPM=TUPH
 TCAH0A=ITCAHA

ICAN=IICAN
 NCAA=INCAA
 MNSS=PNSS*144./KUNGR*(JUPV/TUPH+JLPV/TLPH)

* * * * *
 * * USER CONTROL SECTION-- TIME INDEPENDENT PART * * * * *
 * * * * *

* CACMS PUMP CONTROL PARAMETERS (TEMPORARY)

PARAM KPLPB = 1. , KPLRT = 1.
 PARAM KPLJD = 3.28 , KPLJ1 = .0985 , KPLJ2 = 1.344
 PARAM KPLCR = 50.
 PARAM WPLR = 0.0 , SPL = 1.0 , WPLS = 5.17
 CONST KPL = 2.5 , KPLN = 5000. , WPLS0 = 5.17

PARAM NPS = 5500. , KPSPB = 10. , KPSRT = 10.
 PARAM KPSJD = .2481 , KPSJ1 = 7.622E-4 , KPSJ2 = 1.126E-3
 PARAM KPSCR = 10.
 PARAM WPSR = 0.0 , SPS = 1. , WPSS = 5.17
 CONST KPS = .40 , KPSN = 5000.

PARAM WPRI = 0. , WPRO = 0. , GPRI = 0.
 PARAM GPRO = 0. , QPR = 0. , TPRI = 530.
 PARAM KPRV = 400.

* AIR BLAST HX PARAMETERS

PARAM GAA = 0.001 , TAA110=559.

* TEMPERATURE SENSOR LAGS

PARAM KTAU = 10.

* CORE PARAMETERS

PARAM GCAAS = 0.001 , GCCA = 518.8
 PARAM KGPC = 1. , PNSS = 1395.
 PARAM PRCD=1.00 , DUMMY = 1.00

```

AFGEN POWER=0.0,1.00,30.0,1.00,30.5,0.152,33.4,0.107, ...
36.6,0.092,45.8,0.070,61.,0.055,100.8,0.042, ...
226.,0.029,500.0,0.010

```

```

AFGEN HEFLO=0.0,518.8,30.0,518.8,37.8,71.0,45.6,25.33, ...
53.4,14.0,61.2,4.33,500.0,2.0

```

```

AFGEN AHEFLO=0.0,0.0001, 60.0,0.0001, 61.2,6.60,62.6,8.00,...
68.8,15.70,76.6,21.35,84.1,25.40,92.1,27.70,...
100.1,29.1,108.1,29.1,115.6,30.30,117.3,30.36,...
125.3,30.63,131.1,30.70,148.3,30.95,156.3,31.09,...
187.3,31.35,210.3,31.60,241.3,31.98,272.3,32.36,...
500.0,33.0

```

```

AFGEN TINLET=0.0,1074.0,30.0,1074.0,37.8,1064.0,...
45.6,1055.0,53.4,1048.0,61.2,832.0,500.,1074.0

```

```

* * * CIRC SPEED CONTROL TEMP PARAMETERS
PARAM KCARG=500., KCAPBN=10., KCART=1.

```

```

* * * SCAV IS SWITCH TO OPEN AUXILIARY HELIUM VALVE.
* * * SCAV=0.0 IMPLIES THAT THE VALVE IS CLOSED AND
* * * HELIUM TEMPERATURE TO CAHE IS FIXED AT
* * * TLPHO.
* * * SCAV=1.0 IMPLIES THAT THE VALVE IS OPEN AND HELIUM
* * * TEMPERATURE TO CAHE IS SET TO TLPH WHICH
* * * IS A VARIABLE.
* * * SCAV NOT USED AT PRESENT

```

```

PARAM SCAV =0.0 , TLPHO =1060.

```

```

PARAM TSCRAM=30. , THWOSS=1085. , THWOS =1060.

```

```

DYNAMIC

```

```

NOSORT

```

```

* * * TIME DEPENDENT INPUT SECTION
* * *

```

```

PARAM
GCCA=AFGEN(HEFLOW,TIME)
IF (TIME.GT.60.0)GCCA=.00001
PRCD=AFGEN(POWER,TIME)
DUMMY=PRCD
IF (TIME.GE.TSCRAM)HEFLOW=92.78
IF (TIME.GE.TSCRAM)GAA=760.5
IF (TIME.GT.TSCRAM+30.0)THWOS=THWOSS

```

```

SORT

```


* * * * * PIPE THERMAL MODELS * * * * *
 * * * * * SECTION 6.1 * * * * *

* HOT LINE MODEL

```

DTPH1,RPH1,BPH1=PIPE1(WFLOW,THW0,KPHV,KPHC,TPH1,ITPH1)
RPH1=AFGEN(RFTSL,TPH1)
DTPH1=WFLOW*(THW0-TPH1)/(KPHC/KUNWCP+KPHV+RPH1)
BPH1=KPHV*DTPH1+AFGEN(PARTRT,TPH1)
TPH1=INTGRL(ITPH1,DTPH1)
DTPH2,RPH2,BPH2=PIPE1(WFLOW,TPH1,KPHV,KPHC,TPH2,ITPH2)
RPH2=AFGEN(RFTSL,TPH2)
DTPH2=WFLOW*(TPH1-TPH2)/(KPHC/KUNWCP+KPHV+RPH2)
BPH2=KPHV*DTPH2+AFGEN(PARTRT,TPH2)
TPH2=INTGRL(ITPH2,DTPH2)
DTPH3,RPH3,BPH3=PIPE1(WFLOW,TPH2,KPHV,KPHC,TPH3,ITPH3)
RPH3=AFGEN(RFTSL,TPH3)
DTPH3=WFLOW*(TPH2-TPH3)/(KPHC/KUNWCP+KPHV+RPH3)
BPH3=KPHV*DTPH3+AFGEN(PARTRT,TPH3)
TPH3=INTGRL(ITPH3,DTPH3)
DTPH4,RPH4,BPH4=PIPE1(WFLOW,TPH3,KPHV,KPHC,TPH4,ITPH4)
RPH4=AFGEN(RFTSL,TPH4)
DTPH4=WFLOW*(TPH3-TPH4)/(KPHC/KUNWCP+KPHV+RPH4)
BPH4=KPHV*DTPH4+AFGEN(PARTRT,TPH4)
TPH4=INTGRL(ITPH4,DTPH4)
DTPH5,RPH5,BPH5=PIPE1(WFLOW,TPH4,KPHV,KPHC,TPH5,ITPH5)
RPH5=AFGEN(RFTSL,TPH5)
DTPH5=WFLOW*(TPH4-TPH5)/(KPHC/KUNWCP+KPHV+RPH5)
BPH5=KPHV*DTPH5+AFGEN(PARTRT,TPH5)
TPH5=INTGRL(ITPH5,DTPH5)
DTPH6,RPH6,BPH6=PIPE1(WFLOW,TPH5,KPHV,KPHC,TPH6,ITPH6)
RPH6=AFGEN(RFTSL,TPH6)
DTPH6=WFLOW*(TPH5-TPH6)/(KPHC/KUNWCP+KPHV+RPH6)
BPH6=KPHV*DTPH6+AFGEN(PARTRT,TPH6)
TPH6=INTGRL(ITPH6,DTPH6)
DTPH7,RPH7,BPH7=PIPE1(WFLOW,TPH6,KPHV,KPHC,TPH7,ITPH7)
RPH7=AFGEN(RFTSL,TPH7)
DTPH7=WFLOW*(TPH6-TPH7)/(KPHC/KUNWCP+KPHV+RPH7)
BPH7=KPHV*DTPH7+AFGEN(PARTRT,TPH7)
TPH7=INTGRL(ITPH7,DTPH7)
DTPH8,RPH8,BPH8=PIPE1(WFLOW,TPH7,KPHV,KPHC,TPH8,ITPH8)
RPH8=AFGEN(RFTSL,TPH8)
DTPH8=WFLOW*(TPH7-TPH8)/(KPHC/KUNWCP+KPHV+RPH8)
BPH8=KPHV*DTPH8+AFGEN(PARTRT,TPH8)
TPH8=INTGRL(ITPH8,DTPH8)
DTPH9,RPH9,BPH9=PIPE1(WFLOW,TPH8,KPHV,KPHC,TPH9,ITPH9)
RPH9=AFGEN(RFTSL,TPH9)
DTPH9=WFLOW*(TPH8-TPH9)/(KPHC/KUNWCP+KPHV+RPH9)
BPH9=KPHV*DTPH9+AFGEN(PARTRT,TPH9)

```

```

TPH9=INTGRL(ITPH9,DTPH9)
DTPH10,RPH10,BPH10=PIPE1(WFLOW,TPH9,KPHV,KPHC,TPH10,ITPH10)
RPH10=AFGEN(RFTSL,TPH10)
DTPH10=WFLOW*(TPH9-TPH10)/(KPHC/KUNWCP*KPHV+RPH10)
BPH10=KPHV*DTPH10+AFGEN(PARTRT,TPH10)
TPH10=INTGRL(ITPH10,DTPH10)

```

TPH0=TPH10

```

RPHAV=(RPH1+RPH2+RPH3+RPH4+RPH5+RPH6+RPH7+RPH8+RPH9+RPH10)/KPHN
BPH1=BPH1+BPH2+BPH3+BPH4+BPH5+BPH6+BPH7+BPH8+BPH9+BPH10

```

* COLD LINE MODEL

```

DTPC1,RPC1,BPC1=PIPE1(WFLOW,TAW0,KPCV,KPCC,TPC1,ITPC1)
RPC1=AFGEN(RFTSL,TPC1)
DTPC1=WFLOW*(TAW0-TPC1)/(KPCC/KUNWCP*KPCV+RPC1)
BPC1=KPCV*DTPC1+AFGEN(PARTRT,TPC1)
TPC1=INTGRL(ITPC1,DTPC1)
DTPC2,RPC2,BPC2=PIPE1(WFLOW,TPC1,KPCV,KPCC,TPC2,ITPC2)
RPC2=AFGEN(RFTSL,TPC2)
DTPC2=WFLOW*(TPC1-TPC2)/(KPCC/KUNWCP*KPCV+RPC2)
BPC2=KPCV*DTPC2+AFGEN(PARTRT,TPC2)
TPC2=INTGRL(ITPC2,DTPC2)
DTPC3,RPC3,BPC3=PIPE1(WFLOW,TPC2,KPCV,KPCC,TPC3,ITPC3)
RPC3=AFGEN(RFTSL,TPC3)
DTPC3=WFLOW*(TPC2-TPC3)/(KPCC/KUNWCP*KPCV+RPC3)
BPC3=KPCV*DTPC3+AFGEN(PARTRT,TPC3)
TPC3=INTGRL(ITPC3,DTPC3)
DTPC4,RPC4,BPC4=PIPE1(WFLOW,TPC3,KPCV,KPCC,TPC4,ITPC4)
RPC4=AFGEN(RFTSL,TPC4)
DTPC4=WFLOW*(TPC3-TPC4)/(KPCC/KUNWCP*KPCV+RPC4)
BPC4=KPCV*DTPC4+AFGEN(PARTRT,TPC4)
TPC4=INTGRL(ITPC4,DTPC4)
DTPC5,RPC5,BPC5=PIPE1(WFLOW,TPC4,KPCV,KPCC,TPC5,ITPC5)
RPC5=AFGEN(RFTSL,TPC5)
DTPC5=WFLOW*(TPC4-TPC5)/(KPCC/KUNWCP*KPCV+RPC5)
BPC5=KPCV*DTPC5+AFGEN(PARTRT,TPC5)
TPC5=INTGRL(ITPC5,DTPC5)
DTPC6,RPC6,BPC6=PIPE1(WFLOW,TPC5,KPCV,KPCC,TPC6,ITPC6)
RPC6=AFGEN(RFTSL,TPC6)
DTPC6=WFLOW*(TPC5-TPC6)/(KPCC/KUNWCP*KPCV+RPC6)
BPC6=KPCV*DTPC6+AFGEN(PARTRT,TPC6)
TPC6=INTGRL(ITPC6,DTPC6)
DTPC7,RPC7,BPC7=PIPE1(WFLOW,TPC6,KPCV,KPCC,TPC7,ITPC7)
RPC7=AFGEN(RFTSL,TPC7)
DTPC7=WFLOW*(TPC6-TPC7)/(KPCC/KUNWCP*KPCV+RPC7)
BPC7=KPCV*DTPC7+AFGEN(PARTRT,TPC7)
TPC7=INTGRL(ITPC7,DTPC7)
DTPC8,RPC8,BPC8=PIPE1(WFLOW,TPC7,KPCV,KPCC,TPC8,ITPC8)
RPC8=AFGEN(RFTSL,TPC8)
DTPC8=WFLOW*(TPC7-TPC8)/(KPCC/KUNWCP*KPCV+RPC8)
BPC8=KPCV*DTPC8+AFGEN(PARTRT,TPC8)
TPC8=INTGRL(ITPC8,DTPC8)
DTPC9,RPC9,BPC9=PIPE1(WFLOW,TPC8,KPCV,KPCC,TPC9,ITPC9)

```

```

RPC9=AFGEN(RFTSL,TPC9)
DTPC9=WFLOW*(TPC8-TPC9)/(KPC8/KUNWCP*KPCV*RPC9)
BPC9=KPCV*DTPC9*AFGEN(PARTT,TPC9)
TPC9=INTGRL(ITPC9,DTPC9)
DTPC10,RPC10,BPC10=PIPE1(WFLOW,TPC9,KPCV,KPC8,TPC10,ITPC10)
RPC10=AFGEN(RFTSL,TPC10)
DTPC10=WFLOW*(TPC9-TPC10)/(KPC8/KUNWCP*KPCV*RPC10)
BPC10=KPCV*DTPC10*AFGEN(PARTT,TPC10)
TPC10=INTGRL(ITPC10,DTPC10)

TPC0=TPC10

RPCAV=(RPC1+RPC2+RPC3+RPC4+RPC5+RPC6+RPC7+RPC8+RPC9+RPC10)/KPCN
BPC1=BPC1+BPC2+BPC3+BPC4+BPC5+BPC6+BPC7+BPC8+BPC9+BPC10

```

```

* * * * * AIR BLAST HEAT EXCHANGER MODEL * * * * *
* * * * * SECTION 6.4 * * * * *

```

```

DTAMI,RAMI,BAMI=PIPE1(WFLOW,TPHO,KAMVI,KAMCI,TAMI,ITAMI)
RAMI=AFGEN(RFTSL,TAMI)
DTAMI=WFLOW*(TPHO-TAMI)/(KAMCI/KUNWCP*KAMVI*RAMI)
BAMI=KAMVI*DTAMI*AFGEN(PARTT,TAMI)
TAMI=INTGRL(ITAMI,DTAMI)
DTAMO,RAVO,BAVO=PIPE1(WFLOW,TAMO10,KAMVO,KAMCO,TAMO,ITAMO)
RAVO=AFGEN(RFTSL,TAMO)
DTAMO=WFLOW*(TAMO10-TAMO)/(KAMCO/KUNWCP*KAMVO*RAVO)
BAVO=KAMVO*DTAMO*AFGEN(PARTT,TAMO)
TAMO=INTGRL(ITAMO,DTAMO)

```

```

TAA10,JAAM10,JAWM10=HTCOE(WFLOW,JAAGR,JAACP,TAA10,TAA010,...)
TAM10,TAM10
TAA10=(TAA110+TAA010)/2
PROCEDZ28000=Z28001(JAAGR)
Z28000=KAAR*JAAGR*(KAAAU*KAABU*(TAA10/KAATR))*+.681/...
(KAAAK*KAABK*TAA10/KAATR)
ENDPRO
Z28002=KAMR/(KAMAK-KAMBK*(TAM10)/KAMTR)
Z28003=AFGEN(FCON,TAM10)
Z28004=AFGEN(FVIS,TAM10)
Z28005=AFGEN(FSPH,TAM10)
Z28006=KAMRX/(Z28003*(WFLOW*3600./Z28004)*+.8*...
(Z28005+Z28004/Z28003)*+.333)
JAAM10=KAAA/KAWN/(0.5*Z28002+Z28000)/JAACP
JAWM10=KAWA/KAWN/(0.5*Z28002+KAWA/KAAA+Z28006)
TAA9,JAAM9,JAWM9=HTCOE(WFLOW,JAAGR,JAACP,TAA010,TAA09,TAM9,TAM9)
TAA9=(TAA010+TAA09)/2

```

```

PROCEDZ28007=Z28008(JAAGR)
Z28007=KAAR*JAAGR*(KAAAU*KAABU*(TAA9/KAATR))*681/...
(KAAAK*KAABK*TAA9/KAATR)
ENDPRO
Z28009=KAMR/(KAMAK-KAMBK*TAM9/KAMTR)
Z28010=AFGEN(FCON,TAM9)
Z28011=AFGEN(FVIS,TAM9)
Z28012=AFGEN(FSPH,TAM9)
Z28013=KAMRX/(Z28010*(WFLOW*3600./Z28011))*8*...
(Z28012*Z28011/Z28010))*333)
JAAH9=KAAA/KAWN/(0.5*Z28009*Z28007)/JAACP
JAWH9=KAWA/KAWN/(0.5*Z28009*KAWA/KAAA*Z28013)
TAA8,JAAH8,JAWH8=HTCOE(WFLOW,JAAGR,JAACP,TAA9,TAA8,TAM8,TAM8)
TAA8=(TAA9+TAA8)/2
PROCEDZ28014=Z28015(JAAGR)
Z28014=KAAR*JAAGR*(KAAAU*KAABU*(TAA8/KAATR))*681/...
(KAAAK*KAABK*TAA8/KAATR)
ENDPRO
Z28016=KAMR/(KAMAK-KAMBK*TAM8/KAMTR)
Z28017=AFGEN(FCON,TAM8)
Z28018=AFGEN(FVIS,TAM8)
Z28019=AFGEN(FSPH,TAM8)
Z28020=KAMRX/(Z28017*(WFLOW*3600./Z28018))*8*...
(Z28019*Z28018/Z28017))*333)
JAAH8=KAAA/KAWN/(0.5*Z28016*Z28014)/JAACP
JAWH8=KAWA/KAWN/(0.5*Z28016*KAWA/KAAA*Z28020)
TAA7,JAAH7,JAWH7=HTCOE(WFLOW,JAAGR,JAACP,TAA8,TAA7,TAM7,TAM7)
TAA7=(TAA8+TAA7)/2
PROCEDZ28021=Z28022(JAAGR)
Z28021=KAAR*JAAGR*(KAAAU*KAABU*(TAA7/KAATR))*681/...
(KAAAK*KAABK*TAA7/KAATR)
ENDPRO
Z28023=KAMR/(KAMAK-KAMBK*TAM7/KAMTR)
Z28024=AFGEN(FCON,TAM7)
Z28025=AFGEN(FVIS,TAM7)
Z28026=AFGEN(FSPH,TAM7)
Z28027=KAMRX/(Z28024*(WFLOW*3600./Z28025))*8*...
(Z28026*Z28025/Z28024))*333)
JAAH7=KAAA/KAWN/(0.5*Z28023*Z28021)/JAACP
JAWH7=KAWA/KAWN/(0.5*Z28023*KAWA/KAAA*Z28027)
TAA6,JAAH6,JAWH6=HTCOE(WFLOW,JAAGR,JAACP,TAA7,TAA6,TAM6,TAM6)
TAA6=(TAA7+TAA6)/2
PROCEDZ28028=Z28029(JAAGR)
Z28028=KAAR*JAAGR*(KAAAU*KAABU*(TAA6/KAATR))*681/...
(KAAAK*KAABK*TAA6/KAATR)
ENDPRO
Z28030=KAMR/(KAMAK-KAMBK*TAM6/KAMTR)
Z28031=AFGEN(FCON,TAM6)
Z28032=AFGEN(FVIS,TAM6)
Z28033=AFGEN(FSPH,TAM6)
Z28034=KAMRX/(Z28031*(WFLOW*3600./Z28032))*8*...
(Z28033*Z28032/Z28031))*333)
JAAH6=KAAA/KAWN/(0.5*Z28030*Z28028)/JAACP
JAWH6=KAWA/KAWN/(0.5*Z28030*KAWA/KAAA*Z28034)
TAA5,JAAH5,JAWH5=HTCOE(WFLOW,JAAGR,JAACP,TAA6,TAA5,TAM5,TAM5)
TAA5=(TAA6+TAA5)/2
PROCEDZ28035=Z28036(JAAGR)

```

```

ZZ8035=KAAR*JAAGR*(KAAAU*KABU*(TAA5/KAATR))*681/...
(KAAAK*KABK*TAA5/KAATR)
ENDPRO
ZZ8037=KAHR/(KAMAK-KAMBK*TAM5/KAHTR)
ZZ8038=AFGEN(FCON,TAM5)
ZZ8039=AFGEN(FVIS,TAM5)
ZZ8040=AFGEN(FSPH,TAM5)
ZZ8041=KAMRX/(ZZ8038*(WFLOW*3600./ZZ8039))*8*...
(ZZ8040*ZZ8039/ZZ8038)*333)
JAAH5=KAAA/KAWN/(0.5*ZZ8037*ZZ8035)/JAACP
JAWH5=KAWA/KAWN/(0.5*ZZ8037*KAWA/KAAA*ZZ8041)
TAA4,JAAH4,JAWH4=HTCOE(WFLOW,JAAGR,JAACP,TAA05,TAA09,TAM9)
TAA4=(TAA05+TAA04)/2
PROCEDZZ8042=ZZ8043(JAAGR)
ZZ8042=KAAR*JAAGR*(KAAAU*KABU*(TAA4/KAATR))*681/...
(KAAAK*KABK*TAA4/KAATR)
ENDPRO
ZZ8044=KAHR/(KAMAK-KAMBK*TAM4/KAHTR)
ZZ8045=AFGEN(FCON,TAM4)
ZZ8046=AFGEN(FVIS,TAM4)
ZZ8047=AFGEN(FSPH,TAM4)
ZZ8048=KAMRX/(ZZ8045*(WFLOW*3600./ZZ8046))*8*...
(ZZ8047*ZZ8046/ZZ8045)*333)
JAAH4=KAAA/KAWN/(0.5*ZZ8044*ZZ8042)/JAACP
JAWH4=KAWA/KAWN/(0.5*ZZ8044*KAWA/KAAA*ZZ8048)
TAA3,JAAH3,JAWH3=HTCOE(WFLOW,JAAGR,JAACP,TAA04,TAA03,TAM3)
TAA3=(TAA04+TAA03)/2
PROCEDZZ8049=ZZ8050(JAAGR)
ZZ8049=KAAR*JAAGR*(KAAAU*KABU*(TAA3/KAATR))*681/...
(KAAAK*KABK*TAA3/KAATR)
ENDPRO
ZZ8051=KAHR/(KAMAK-KAMBK*TAM3/KAHTR)
ZZ8052=AFGEN(FCON,TAM3)
ZZ8053=AFGEN(FVIS,TAM3)
ZZ8054=AFGEN(FSPH,TAM3)
ZZ8055=KAMRX/(ZZ8052*(WFLOW*3600./ZZ8053))*8*...
(ZZ8054*ZZ8053/ZZ8052)*333)
JAAH3=KAAA/KAWN/(0.5*ZZ8051*ZZ8049)/JAACP
JAWH3=KAWA/KAWN/(0.5*ZZ8051*KAWA/KAAA*ZZ8055)
TAA2,JAAH2,JAWH2=HTCOE(WFLOW,JAAGR,JAACP,TAA03,TAA02,TAM2)
TAA2=(TAA03+TAA02)/2
PROCEDZZ8056=ZZ8057(JAAGR)
ZZ8056=KAAR*JAAGR*(KAAAU*KABU*(TAA2/KAATR))*681/...
(KAAAK*KABK*TAA2/KAATR)
ENDPRO
ZZ8058=KAHR/(KAMAK-KAMBK*TAM2/KAHTR)
ZZ8059=AFGEN(FCON,TAM2)
ZZ8060=AFGEN(FVIS,TAM2)
ZZ8061=AFGEN(FSPH,TAM2)
ZZ8062=KAMRX/(ZZ8059*(WFLOW*3600./ZZ8060))*8*...
(ZZ8061*ZZ8060/ZZ8059)*333)
JAAH2=KAAA/KAWN/(0.5*ZZ8058*ZZ8056)/JAACP
JAWH2=KAWA/KAWN/(0.5*ZZ8058*KAWA/KAAA*ZZ8062)
TAA1,JAAH1,JAWH1=HTCOE(WFLOW,JAAGR,JAACP,TAA02,TAA01,TAM1)
TAA1=(TAA02+TAA01)/2
PROCEDZZ8063=ZZ8064(JAAGR)
ZZ8063=KAAR*JAAGR*(KAAAU*KABU*(TAA1/KAATR))*681/...

```

```

(KAAA*KAABK*TAA1/KAATR)
ENDPRO
Z28065=KAMR/(KAMAK-KAMBK*TAM1/KANTR)
Z28066=AFGEN(IFCON,TAM1)
Z28067=AFGEN(IFVIS,TAM1)
Z28068=AFGEN(IFSPH,TAM1)
Z28069=KAMRX/(Z28066*(WFLOW*3600./Z28067)**.8*...
(Z28068*Z28067/Z28066)**.333)
JAAH1=KAAA/KAMN/(0.5*Z28065*Z28063)/JAACP
JAWH1=KAWA/KAMN/(0.5*Z28065*KAWA/KAAA*Z28069)

JAACP=GAA*KUNACP
JAAGR=(GAA/KAAG)**-.681
TAA010,TAW010,DTAM10,DTAW10,QAAM10,QAWH10,RAW10,BAW10=SPCFHX(...
TAA110,TAW09,ITAM10,TAM10,ITAW10,TAV10,KAMC,KAMV,KAAW1,KAAW2,...
KAWW1,KAWW2,JAACP,WFLOW,JAAH10,JAWH10)
RAW10=AFGEN(RFTSL,TAW10)
TAA010=((TAA110)*(1.-KAAW1*JAAH10)+JAAH10*TAM10)/(1.+KAAW2*...
JAAH10)
QAAM10=JAACP*((TAA110)-TAA010)
TAW010=(TAW10-(KAWW1)*TAW09)/KAWW2
QAWH10=JAWH10*(TAW10-TAM10)
DTAM10=(QAWH10-QAAM10)/KAMC
TAM10=INTGRL(ITAM10,DTAM10)
DTAW10=(WFLOW*(TAW09-TAW010)-QAWH10/KUNWCP)/KAWV/RAW10
BAW10=DTAW10*KAWV*AFGEN(IPARTRT,TAW10)
TAW10=INTGRL(ITAW10,DTAW10)
TAA09,TAW09,DTAM9,DTAW9,QAAM9,QAWH9,RAW9,BAW9=SPCFHX(TAA010,...
TAW08,ITAM9,TAM9,ITAW9,TAW9,KAMC,KAMV,KAAW1,KAAW2,...
KAWW1,KAWW2,JAACP,WFLOW,JAAH9,JAWH9)
RAW9=AFGEN(RFTSL,TAW9)
TAA09=(TAA010*(1.-KAAW1*JAAH9)+JAAH9*TAM9)/(1.+KAAW2*JAAH9)
QAAM9=JAACP*(TAA010-TAA09)
TAW09=(TAW9-(KAWW1)*(TAW08))/KAWW2
QAWH9=JAWH9*(TAW9-TAM9)
DTAM9=(QAWH9-QAAM9)/KAMC
TAM9=INTGRL(ITAM9,DTAM9)
DTAW9=(WFLOW*((TAW08)-TAW09)-QAWH9/KUNWCP)/KAWV/RAW9
BAW9=DTAW9*KAWV*AFGEN(IPARTRT,TAW9)
TAW9=INTGRL(ITAW9,DTAW9)
TAA08,TAW08,DTAM8,DTAW8,QAAM8,QAWH8,RAW8,BAW8=SPCFHX(TAA09,...
TAW07,ITAM8,TAM8,ITAW8,TAW8,KAMC,KAMV,KAAW1,KAAW2,...
KAWW1,KAWW2,JAACP,WFLOW,JAAH8,JAWH8)
RAW8=AFGEN(RFTSL,TAW8)
TAA08=(TAA09*(1.-KAAW1*JAAH8)+JAAH8*TAM8)/(1.+KAAW2*JAAH8)
QAAM8=JAACP*(TAA09-TAA08)
TAW08=(TAW8-(KAWW1)*(TAW07))/KAWW2
QAWH8=JAWH8*(TAW8-TAM8)
DTAM8=(QAWH8-QAAM8)/KAMC
TAM8=INTGRL(ITAM8,DTAM8)
DTAW8=(WFLOW*((TAW07)-TAW08)-QAWH8/KUNWCP)/KAWV/RAW8
BAW8=DTAW8*KAWV*AFGEN(IPARTRT,TAW8)
TAW8=INTGRL(ITAW8,DTAW8)
TAA07,TAW07,DTAM7,DTAW7,QAAM7,QAWH7,RAW7,BAW7=SPCFHX(TAA08,...
TAW06,ITAM7,TAM7,ITAW7,TAW7,KAMC,KAMV,KAAW1,KAAW2,...
KAWW1,KAWW2,JAACP,WFLOW,JAAH7,JAWH7)

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RAW7=AFGEN(RFTSL,TAW7)
TAA07=(TAA08*(1.-KAAW1*JAAM7)+JAAM7*TAW7)/(1.+KAAW2*JAAM7)
QAAM7=JAACP*(TAA08-TAA07)
TAW7=(TAW7-(KAWW1)*(TAW06))/KAWW2
QAWW7=JAWW7*(TAW7-TAM7)
DTAM7=(QAWW7+QAAM7)/KAMC
TAM7=INTGRL(ITAM7,DTAM7)
DTAW7=(WFLOW*((TAW06)-TAW07)-QAWW7/KUNWCP)/KAWV/RAW7
BAW7=DTAW7*KAWV*AFGEN(PARTRT,TAW7)
TAW7=INTGRL(ITAW7,DTAW7)
TAA06,TAW06,DTAM6,DTAM6,QAAM6,QAWW6,RAW6,BAW6=SPCFHX(TAA07,...
TAW05,ITAM6,TAM6,ITAM6,TAW6,KAMC,KAWV,KAAW1,KAAW2,...
KAWW1,KAWW2,JAACP,WFLOW,JAAM6,JAWW6)
RAW6=AFGEN(RFTSL,TAW6)
TAA06=(TAA07*(1.-KAAW1*JAAM6)+JAAM6*TAW6)/(1.+KAAW2*JAAM6)
QAAM6=JAACP*(TAA07-TAA06)
TAW6=(TAW6-(KAWW1)*(TAW05))/KAWW2
QAWW6=JAWW6*(TAW6-TAM6)
DTAM6=(QAWW6+QAAM6)/KAMC
TAM6=INTGRL(ITAM6,DTAM6)
DTAW6=(WFLOW*((TAW05)-TAW06)-QAWW6/KUNWCP)/KAWV/RAW6
BAW6=DTAW6*KAWV*AFGEN(PARTRT,TAW6)
TAW6=INTGRL(ITAW6,DTAW6)
TAA05,TAW05,DTAM5,DTAM5,QAAM5,QAWW5,RAW5,BAW5=SPCFHX(TAA06,...
TAW04,ITAM5,TAM5,ITAM5,TAW5,KAMC,KAWV,KAAW1,KAAW2,...
KAWW1,KAWW2,JAACP,WFLOW,JAAM5,JAWW5)
RAW5=AFGEN(RFTSL,TAW5)
TAA05=(TAA06*(1.-KAAW1*JAAM5)+JAAM5*TAW5)/(1.+KAAW2*JAAM5)
QAAM5=JAACP*(TAA06-TAA05)
TAW5=(TAW5-(KAWW1)*(TAW04))/KAWW2
QAWW5=JAWW5*(TAW5-TAM5)
DTAM5=(QAWW5+QAAM5)/KAMC
TAM5=INTGRL(ITAM5,DTAM5)
DTAW5=(WFLOW*((TAW04)-TAW05)-QAWW5/KUNWCP)/KAWV/RAW5
BAW5=DTAW5*KAWV*AFGEN(PARTRT,TAW5)
TAW5=INTGRL(ITAW5,DTAW5)
TAA04,TAW04,DTAM4,DTAM4,QAAM4,QAWW4,RAW4,BAW4=SPCFHX(TAA05,...
TAW03,ITAM4,TAM4,ITAM4,TAW4,KAMC,KAWV,KAAW1,KAAW2,...
KAWW1,KAWW2,JAACP,WFLOW,JAAM4,JAWW4)
RAW4=AFGEN(RFTSL,TAW4)
TAA04=(TAA05*(1.-KAAW1*JAAM4)+JAAM4*TAW4)/(1.+KAAW2*JAAM4)
QAAM4=JAACP*(TAA05-TAA04)
TAW4=(TAW4-(KAWW1)*(TAW03))/KAWW2
QAWW4=JAWW4*(TAW4-TAM4)
DTAM4=(QAWW4+QAAM4)/KAMC
TAM4=INTGRL(ITAM4,DTAM4)
DTAW4=(WFLOW*((TAW03)-TAW04)-QAWW4/KUNWCP)/KAWV/RAW4
BAW4=DTAW4*KAWV*AFGEN(PARTRT,TAW4)
TAW4=INTGRL(ITAW4,DTAW4)
TAA03,TAW03,DTAM3,DTAM3,QAAM3,QAWW3,RAW3,BAW3=SPCFHX(TAA04,...
TAW02,ITAM3,TAM3,ITAM3,TAW3,KAMC,KAWV,KAAW1,KAAW2,...
KAWW1,KAWW2,JAACP,WFLOW,JAAM3,JAWW3)
RAW3=AFGEN(RFTSL,TAW3)
TAA03=(TAA04*(1.-KAAW1*JAAM3)+JAAM3*TAW3)/(1.+KAAW2*JAAM3)
QAAM3=JAACP*(TAA04-TAA03)
TAW3=(TAW3-(KAWW1)*(TAW02))/KAWW2
QAWW3=JAWW3*(TAW3-TAM3)

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DTAM3=(QAWM3+QAAM3)/KAMC
TAM3=INTGRL(ITAM3,DTAM3)
DTAW3=(WFLOW*((TAW02)-TAW03)-QAWM3/KUNWCP)/KAWV/RAW3
BAW3=DTAW3*KAWV*AFGEN(IPARTRT,TAM3)
TAW3=INTGRL(ITAW3,DTAW3)
TAA02,TAW02,DTAM2,DTAW2,QAWM2,RAW2,BAW2=SPCFHX(TAA03,...
TAW01,ITAM2,TAM2,ITAW2,TAW2,KAMC,KAWV,KAAM1,KAAM2,...
KAWM1,KAWM2,JAACP,WFLOW,JAAM2,JAWM2)
RAW2=AFGEN(RFTSL,TAW2)
TAA02=(TAA03*(1.-KAAM1*JAAM2)+JAAM2*TAM2)/(1.+KAAM2*JAAM2)
QAAM2=JAACP*(TAA03-TAA02)
TAW02=(TAW2-(KAWM1)*(TAW01))/KAWM2
QAWM2=JAWM2*(TAW2-TAM2)
DTAM2=(QAWM2+QAAM2)/KAMC
TAM2=INTGRL(ITAM2,DTAM2)
DTAW2=(WFLOW*((TAW01)-TAW02)-QAWM2/KUNWCP)/KAWV/RAW2
BAW2=DTAW2*KAWV*AFGEN(IPARTRT,TAM2)
TAW2=INTGRL(ITAW2,DTAW2)
TAA01,TAW01,DTAM1,DTAW1,QAAM1,QAWM1,RAW1,BAW1=SPCFHX(TAA02,...
TAW1,ITAM1,TAM1,ITAW1,TAW1,KAMC,KAWV,KAAM1,KAAM2,...
KAWM1,KAWM2,JAACP,WFLOW,JAAM1,JAWM1)
RAW1=AFGEN(RFTSL,TAW1)
TAA01=(TAA02*(1.-KAAM1*JAAM1)+JAAM1*TAM1)/(1.+KAAM2*JAAM1)
QAAM1=JAACP*(TAA02-TAA01)
TAW01=(TAW1-(KAWM1)*(TAW1))/KAWM2
QAWM1=JAWM1*(TAW1-TAM1)
DTAM1=(QAWM1+QAAM1)/KAMC
TAM1=INTGRL(ITAM1,DTAM1)
DTAW1=(WFLOW*((TAW1)-TAW01)-QAWM1/KUNWCP)/KAWV/RAW1
BAW1=DTAW1*KAWV*AFGEN(IPARTRT,TAM1)
TAW1=INTGRL(ITAW1,DTAW1)

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RAWAV=(RAW1+RAW2+RAW3+RAW4+RAW5+RAW6+RAW7+RAW8+RAW9+RAW10)/KAWN

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BAWT=BAW1+BAW2+BAW3+BAW4+BAW5+BAW6+BAW7+BAW8+...
BAW9+BAW10+BAW0

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* * * * * CORE AUXILIARY HEAT EXCHANGER MODEL * * * * *
* * * * * SECTION 6.3 * * * * *

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* CAKE INLET AND EXIT WATER HEADER MODELS

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DTHWI,RHWI,BHWI=PIPE1(WFLOW,TPCO,KHWWI,KHNCI,THWI,ITHWI)
RHWI=AFGEN(RFTSL,THWI)
DTHWI=WFLOW*(TPCO-THWI)/(KHNCI/KUNWCP+KHWWI+RHWI)
BHWI=KHWWI+DTHWI*AFGEN(IPARTRT,THWI)
THWI=INTGRL(ITHWI,DTHWI)

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DTMW0,RHW0,BHW0=PIPE1(WFLOW,THW06,KHWV0,KHMC0,THW0,ITHW0)
RHW0=AFGEN(RFTSL,THW0)
DTMW0=WFLOW*(THW06-THW0)/(KHMC0/KUNWCP*KHWV0*RHW0)
BHW0=KHWV0*DTMW0*AFGEN(PARTRT,THW0)
THW0=INTGRL(ITHW0,DTMW0)

* CAME HEATED ZONE MODEL

MHMI6=144.*PNSS*KHVI6/(KUNGR*THMI6)
DTMH6=GCAA*KUNHCP*(TLPH-THMI6)/(KUNHCV*MHMI6)
THMI6=INTGRL(ITHMI6,DTMH6)

THH6,JHHM6,JHHM6=HTKOE(WFLOW,GCAA,JHMC,P,THMI6,THH06,THH6,THW6)
THH6=(THMI6+THH06)/2
PROCED Z28070=Z28071(GCAA)
Z28072=1.242
Z28073=KHHVK*THH6**KHHVKE
Z28074=KHHCK*THH6**KHHCKE
Z28070=KHHRX/(Z28074*(GCAA*3600./Z28073)**.8*...
(Z28072*Z28073/Z28074)**.333)
ENDPRO
Z28075=KHHRX/(KHMAK*KHMBK*(THH6-460.))
Z28076=AFGEN(FCON,THW6)
Z28077=AFGEN(FVIS,THW6)
Z28078=AFGEN(FSPH,THW6)
Z28079=KHWRX/(Z28076*(WFLOW*3600./Z28077)**.8*...
(Z28078*Z28077/Z28076)**.333)
JHWM6=(KHWA/KHWN)/(1.5*Z28075*KHWA/KHMA*Z28079)
JHHM6=(KHHA/KHWN/JHMC/P)/(1.5*Z28075*Z28070)
THH5,JHHM5,JHHM5=HTKOE(WFLOW,GCAA,JHMC,P,THH06,THH05,THH5,THW5)
THH5=(THH06+THH05)/2
PROCED Z28080=Z28081(GCAA)
Z28082=1.242
Z28083=KHHVK*THH5**KHHVKE
Z28084=KHHCK*THH5**KHHCKE
Z28080=KHHRX/(Z28084*(GCAA*3600./Z28083)**.8*...
(Z28082*Z28083/Z28084)**.333)
ENDPRC
Z28085=KHHRX/(KHMAK*KHMBK*(THH5-460.))
Z28086=AFGEN(FCON,THW5)
Z28087=AFGEN(FVIS,THW5)
Z28088=AFGEN(FSPH,THW5)
Z28089=KHWRX/(Z28086*(WFLOW*3600./Z28087)**.8*...
(Z28088*Z28087/Z28086)**.333)
JHWM5=(KHWA/KHWN)/(1.5*Z28085*KHWA/KHMA*Z28089)
JHHM5=(KHHA/KHWN/JHMC/P)/(1.5*Z28085*Z28080)
THH4,JHHM4,JHHM4=HTKOE(WFLOW,GCAA,JHMC,P,THH06,THH04,THH4,THW4)
THH4=(THH05+THH04)/2
PROCED Z28090=Z28091(GCAA)
Z28092=1.242
Z28093=KHHVK*THH4**KHHVKE
Z28094=KHHCK*THH4**KHHCKE
Z28090=KHHRX/(Z28094*(GCAA*3600./Z28093)**.8*...
(Z28092*Z28093/Z28094)**.333)
ENDPRO
Z28095=KHHRX/(KHMAK*KHMBK*(THH4-460.))

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ZZ8096=AFGEN(FCON,THW4)
ZZ8097=AFGEN(FVIS,THW4)
ZZ8098=AFGEN(FSPH,THW4)
ZZ8099=KHWRX/(ZZ8096*(WFLOW*3600./ZZ8097)**.8*...
(ZZ8098*ZZ8097/ZZ8096)**.333)
JHMM4=(KHWA/KHWN)/(1.5*ZZ8095*KHWA/KHHA*ZZ8099)
JHMM4=(KHHA/KHWN/JHHCP)/(1.5*ZZ8095*ZZ809C)
THM3,JHMM3,JHMM3=HTKOE(WFLOW,GCAA,JHHCP,THH09,THH03,THM3,THW3)
THM3=(THH04*THH03)/2
PROCEDZZ8100=ZZ8101(GCAA)
ZZ8102=1.242
ZZ8103=KHHVK*THH3**KHHVKE
ZZ8104=KHHCK*THH3**KHHCKE
ZZ8100=KHWRX/(ZZ8104*(GCAA*3600./ZZ8103)**.8*...
(ZZ8102*ZZ8103/ZZ8104)**.333)
ENDPRO
ZZ8105=KHWRX/(KHMAK*KHMBK*(THH3-460.))
ZZ8106=AFGEN(FCON,THW3)
ZZ8107=AFGEN(FVIS,THW3)
ZZ8108=AFGEN(FSPH,THW3)
ZZ8109=KHWRX/(ZZ8106*(WFLOW*3600./ZZ8107)**.8*...
(ZZ8108*ZZ8107/ZZ8106)**.333)
JHMM3=(KHWA/KHWN)/(1.5*ZZ8105*KHWA/KHHA*ZZ8109)
JHMM3=(KHHA/KHWN/JHHCP)/(1.5*ZZ8105*ZZ8100)
THM2,JHMM2,JHMM2=HTKOE(WFLOW,GCAA,JHHCP,THH03,THH02,THM2,THW2)
THM2=(THH03*THH02)/2
PROCEDZZ8110=ZZ8111(GCAA)
ZZ8112=1.242
ZZ8113=KHHVK*THH2**KHHVKE
ZZ8114=KHHCK*THH2**KHHCKE
ZZ8110=KHWRX/(ZZ8114*(GCAA*3600./ZZ8113)**.8*...
(ZZ8112*ZZ8113/ZZ8114)**.333)
ENDPRO
ZZ8115=KHWRX/(KHMAK*KHMBK*(THH2-460.))
ZZ8116=AFGEN(FCON,THW2)
ZZ8117=AFGEN(FVIS,THW2)
ZZ8118=AFGEN(FSPH,THW2)
ZZ8119=KHWRX/(ZZ8116*(WFLOW*3600./ZZ8117)**.8*...
(ZZ8118*ZZ8117/ZZ8116)**.333)
JHMM2=(KHWA/KHWN)/(1.5*ZZ8115*KHWA/KHHA*ZZ8119)
JHMM2=(KHHA/KHWN/JHHCP)/(1.5*ZZ8115*ZZ8110)
THH1,JHMM1,JHMM1=HTKOE(WFLOW,GCAA,JHHCP,THH02,THH01,THH1,THW1)
THH1=(THH02*THH01)/2
PROCEDZZ8120=ZZ8121(GCAA)
ZZ8122=1.242
ZZ8123=KHHVK*THH1**KHHVKE
ZZ8124=KHHCK*THH1**KHHCKE
ZZ8120=KHWRX/(ZZ8124*(GCAA*3600./ZZ8123)**.8*...
(ZZ8122*ZZ8123/ZZ8124)**.333)
ENDPRO
ZZ8125=KHWRX/(KHMAK*KHMBK*(THH1-460.))
ZZ8126=AFGEN(FCON,THW1)
ZZ8127=AFGEN(FVIS,THW1)
ZZ8128=AFGEN(FSPH,THW1)
ZZ8129=KHWRX/(ZZ8126*(WFLOW*3600./ZZ8127)**.8*...
(ZZ8128*ZZ8127/ZZ8126)**.333)
JHMM1=(KHWA/KHWN)/(1.5*ZZ8125*KHWA/KHHA*ZZ8129)

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JHHM1=(KHH4/KHWN/JHHCP)/(1.5*ZZ8125+ZZ8120)
--

JHHCP=GCAA*KUNHCP
THM06,THW06,DTHM6,DTHW6,QHHM6,QHWM6,RHW6,BHW6=SPCFHX1THM16,...
THW05,ITHM6,THM6,ITHW6,THW6,KHMC,KHVV,KHHW1,KHHW2,...
KHHW1,KHHW2,JHHCP,WFLOW,JHHM6,JHWM6)
RHW6=AFGEN(RFTSL,THW6)
--
THM06=(THM16*(1.-KHHW1+JHHM6)+JHHM6*THM6)/(1.+KHHW2+JHHM6)
--
QHMM6=JHHCP*(THM16-THM06)
--
THW06=(THW6-(KHVV1)*(THW05))/KHWW2
--
QHWM6=JHWM6*(THW6-THM6)
--
DTHM6=(QHWM6+QHMM6)/KHMC
--
THM6=INTGRL(ITHM6,DTHM6)
--
DTHW6=(WFLOW*((THW05)-THW06)-QHWM6/KUNHCP)/KHVV/RHW6
--
BHW6=DTHW6+KHVV*AFGEN(PARTRT,THW6)
--
THW6=INTGRL(ITHW6,DTHW6)
--
THM05,THW05,DTHM5,DTHW5,QHHM5,QHWM5,RHW5,BHW5=SPCFHX1THM06,...
THM04,ITHM5,THM5,ITHW5,THW5,KHMC,KHVV,KHHW1,KHHW2,...
KHHW1,KHHW2,JHHCP,WFLOW,JHHM5,JHWM5)
RHW5=AFGEN(RFTSL,THW5)
--
THM05=(THM06*(1.-KHHW1+JHHM5)+JHHM5*THM5)/(1.+KHHW2+JHHM5)
--
QHMM5=JHHCP*(THM06-THM05)
--
THW05=(THW5-(KHVV1)*(THW04))/KHWW2
--
QHWM5=JHWM5*(THW5-THM5)
--
DTHM5=(QHWM5+QHMM5)/KHMC
--
THM5=INTGRL(ITHM5,DTHM5)
--
DTHW5=(WFLOW*((THW04)-THW05)-QHWM5/KUNHCP)/KHVV/RHW5
--
BHW5=DTHW5+KHVV*AFGEN(PARTRT,THW5)
--
THW5=INTGRL(ITHW5,DTHW5)
--
THM04,THW04,DTHM4,DTHW4,QHHM4,QHWM4,RHW4,BHW4=SPCFHX1THM05,...
THM03,ITHM4,THM4,ITHW4,THW4,KHMC,KHVV,KHHW1,KHHW2,...
KHHW1,KHHW2,JHHCP,WFLOW,JHHM4,JHWM4)
RHW4=AFGEN(RFTSL,THW4)
--
THM04=(THM05*(1.-KHHW1+JHHM4)+JHHM4*THM4)/(1.+KHHW2+JHHM4)
--
QHMM4=JHHCP*(THM05-THM04)
--
THW04=(THW4-(KHVV1)*(THW03))/KHWW2
--
QHWM4=JHWM4*(THW4-THM4)
--
DTHM4=(QHWM4+QHMM4)/KHMC
--
THM4=INTGRL(ITHM4,DTHM4)
--
DTHW4=(WFLOW*((THW03)-THW04)-QHWM4/KUNHCP)/KHVV/RHW4
--
BHW4=DTHW4+KHVV*AFGEN(PARTRT,THW4)
--
THW4=INTGRL(ITHW4,DTHW4)
--
THM03,THW03,DTHM3,DTHW3,QHHM3,QHWM3,RHW3,BHW3=SPCFHX1THM04,...
THW02,ITHM3,THM3,ITHW3,THW3,KHMC,KHVV,KHHW1,KHHW2,...
KHHW1,KHHW2,JHHCP,WFLOW,JHHM3,JHWM3)
RHW3=AFGEN(RFTSL,THW3)
--
THM03=(THM04*(1.-KHHW1+JHHM3)+JHHM3*THM3)/(1.+KHHW2+JHHM3)
--
QHMM3=JHHCP*(THM04-THM03)
--
THW03=(THW3-(KHVV1)*(THW02))/KHWW2
--
QHWM3=JHWM3*(THW3-THM3)
--
DTHM3=(QHWM3+QHMM3)/KHMC
--
THM3=INTGRL(ITHM3,DTHM3)
--
DTHW3=(WFLOW*((THW02)-THW03)-QHWM3/KUNHCP)/KHVV/RHW3
--
BHW3=DTHW3+KHVV*AFGEN(PARTRT,THW3)
--
THW3=INTGRL(ITHW3,DTHW3)

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THH02,THW02,DTHM2,DTHW2,QHHM2,QHWM2,RHW2,BHW2=SPCFHX(THH03,...
THW01,ITHM2,THM2,ITHW2,THW2,KHMC,KHVV,KHHW1,KHHW2,...
KHHW1,KHHW2,JHHCP,VFLOW,JHHM2,JHHM2)
RHW2=AFGEN(RFTSL,THW2)
THH02=(THH03*(1.-KHHW1/JHHM2)+JHHM2*THH2)/(1.+KHHW2/JHHM2)
QHHM2=JHHCP*(THH03-THH02)
THW02=(THW2-(KHHW1)*(THW01))/KHHW2
QHWM2=JHHM2*(THW2-THM2)
DTHM2=(QHWM2+QHHM2)/KHMC
THM2=INTGRL(ITHM2,DTHM2)
DTHW2=(VFLOW*((THW01)-THW02)-QHWM2/KUNWCP)/KHVV/RHW2
BHW2=DTHW2+KHVV*AFGEN(PARTRT,THW2)
THW2=INTGRL(ITHW2,DTHW2)
THH01,THW01,DTHM1,DTHW1,QHHM1,QHWM1,RHW1,BHW1=SPCFHX(THH02,...
THW1,ITHM1,THM1,ITHW1,THW1,KHMC,KHVV,KHHW1,KHHW2,...
KHHW1,KHHW2,JHHCP,VFLOW,JHHM1,JHHM1)
RHW1=AFGEN(RFTSL,THW1)
THH01=(THH02*(1.-KHHW1/JHHM1)+JHHM1*THH1)/(1.+KHHW2/JHHM1)
QHHM1=JHHCP*(THH02-THH01)
THW01=(THW1-(KHHW1)*(THW1))/KHHW2
QHWM1=JHHM1*(THW1-THM1)
DTHM1=(QHWM1+QHHM1)/KHMC
THM1=INTGRL(ITHM1,DTHM1)
DTHW1=(VFLOW*((THW1)-THW01)-QHWM1/KUNWCP)/KHVV/RHW1
BHW1=DTHW1+KHVV*AFGEN(PARTRT,THW1)
THW1=INTGRL(ITHW1,DTHW1)

BHWI=BHW1+BHW1*BHW2+BHW3+BHW4+BHW5+BHW6+BHW0
RHWAV=(RHW1+RHW2+RHW3+RHW4+RHW5+RHW6)/KHHW

```

***** CACWS PROCESS-FLOW MODE1 *****
 ***** SECTION 4. *****

```

* JPL0=KPLJ0*RPC1*(NPL/KPLN)**2
* JPL1=KPLJ1*(NPL/KPLN)
* JPL2=-KPLJ2/RPC1
*
* JPS0=KPSJ0*RPC1*(NPS/KPSN)**2
* JPS1=KPSJ1*(NPS/KPSN)
* JPS2=-KPSJ2/RPC1
*
* JAWPL=1./SORT(KPHSQ/RPHAV+KPCSQ/RPCAV+KANSQ/RAWAV+KHWSQ/RHWAV+...
* KHWSQ/RHWI+KAWISQ/RAWI)
* RPUMP=RPC1
* PROCD VFLOW,WPL,WPS,LOAD=PRFLO(JAWPL,RPUMP,APL,SPL,WPLR,JPL0,JPL1,...
* JPL2,NPL,APS,SPS,WPSR,JPS0,JPS1,JPS2,APS)
* 0 IF (LOAD)1,1,2
* 1 WFLOW=0.
* WLOPD=0.
* GO TO 3
* 2 WFLOW=JAWPL*SORT(LOAD)
* WLOPD=0.5*WFLOW/LOAD

```

```

* 3 CONTINUE
* JPL=KPL+SQRT(RPUMP)
* JPS=KPS+SQRT(RPUMP)
* WPL,WPLPD=MOPTV(JPL,APL,SPL,JPL0,JPL1,JPL2,WPLR,PLOAD)
* WPS,WSPD=MOPTV(JPS,APS,SPS,JPS0,JPS1,JPS2,WPSR,PLOAD)
* ERR=WPL+WPS-WFLOW
* PLOAD=PLOAD-ERR/(WPLPD+WSPD-WFLOW)
* IF(ERR*ERR.GT.0.01)GO TO 9
*ENDPRO

```

* * PRESSURIZER MODEL

```

* TPRG=TPRW
* JPRRP=DTPRW*AFGEN(PARTI,TPRW)*VPRW
* RPRW=AFGEN(RFTSL,TPRW)
* WPR=BPHT+BAWT+BPCT+BHWT
* THWX=TPC9
* DTPRW=(WPRI*(TPRI-TPRW)-QPR/KUNWCP*(THWX-TPRW)*LIMIT(D,0,...
* .1E6,-WPR))/RPRW/VPRW
* TPRW=INTGRL(ITPRW,DTPRW)
* DVPRW=(WPRI-WPRO-WPR-JPREP)/RPRW
* VPRW=INTGRL(IVPRW,DVPRW)
* DPPRG=((GPRI-GPRO)*KUNGR*144.*TPRG*PPRG*CVPRW)/(KPRV-VPRW)
* PPRG=INTGRL(IPPRG,DPPRG)

```

* * * * * CORE MODEL * * * * *

* * * TEMPORARY CIRC SPEED CONTROL ON TEMPERATURE ERROR

```

* OCAERR=THW05-THW0
* * * IF ERROR IS POSITIVE NCAD IS POSITIVE
* * * THAT RESULTS IN IF WATER TEMP IS LOWER THAN
* * * DESIRED, THEN TURN UP CIRC SPEED
* * * ALSO THERE IS NO LIMIT ON CIRC SPEED
* PROPN=100./KCAPBN*OCAERR/KCARG
* DICAN=PROPN/KCART
* ICAN=INTGRL(IICAN,DICAN)
* NCAD=PROPN*ICAN
* DNCAA=(NCAD-NCAA)/1.
* NCAA=INTGRL(INCAA,DNCAA)
* TCCH0A=THH01
* TCCH0A=(1.-SCAV)*ITUPH + SCAV*THH01
* TCCH0A=AFGEN(TINLET,TIME)
* DTCCHA=(THH01-TCCH0A)/KCATAU
* TCAH0A=INTGRL(ITCAHA,DTCCHA)
* GCAA=KCAR*144.*PNSS/TCAH0A/KUNGR*NCAA
* GCAA=GCAAS
* GRETOT=KCCAN*GCCA*KCAAN*GCAA

```

* UPPER AND LOWER PLENUM TIME CONSTANTS

```

PNSS=KUNGR*MNSS/(144.*(JUPV/TUPH*JLPV/TLPH))
MUPH=PNSS*JUPV/144./(KUNGR*TUPH)
DTUPH=(KUNHCP*(KCCAN*GCCA*(TCCHOA-TUPH)+KCAAN*GCAA*(TCAHOA-...
TUPH))+JGPK*(TGPM-TUPH))/(KUNHCV*MUPH)
TUPH=INTGRL(ITUPH,DTUPH)
*
TUPH=TCCHOA*(1.-SCAV)+TCAHOA*SCAV
DTGPM=JGPK*(TUPH-TGPM)/KGPC
TGPM=INTGRL(ITGPM,DTGPM)
MLPH=PNSS*JLPV/144./(KUNGR*TLPH)
DTLPH=(KUNHCP*(KRENN*GREH*(TREM06-TLPH)+GBPH*(TBPM-TLPH)))/...
(KUNHCV*MLPH)
TLPH=INTGRL(ITLPH,DTLPH)

GREH=GRETOT*KREGF/KRENN
GBPH=GRETOT*(1.-KREGF)
TBPM=TUPH*QBPH/KUNHCP/GBPH

JRECK1,JRCFK1=CORHT(GREH,TRC1,TRF1,TREH1,KREA1,KREL1)
PROCEDJRECK1,JRCFK1=Z28130(GREH)
Z28131=3.055E8*GREH*TREH1**-.687
IF(Z28131.LT.2300.)Z28131=2300.
Z28132=8.28E-4*TREH1**701*Z28131**8/3600.
Z28133=1.693E-3*1.208E-6*TRC1
Z28134=.02305/(Z28133*KREL1)
Z28135=1./(Z28132*KREA1)+Z28134/2.
JRECK1=1./Z28135
Z28136=57.78*.886*(1./((18.2+.0271*TRF1/1.8)+5.5E-13*(TRF1/1.8)*...
*3)/3600.
Z28137=2.95E-7*((TRF1+TRC1)/2.)*0.701
Z28138=.03229/(Z28136*KREL1)+.0036/(Z28137*KREL1)+Z28134/2.
JRCFK1=1./Z28138
ENDPRO

JRECK2,JRCFK2=CORHT(GREH,TRC2,TRF2,TREH2,KREA2,KREL2)
PROCEDJRECK2,JRCFK2=Z28139(GREH)
Z28140=3.055E8*GREH*TREH2**-.687
IF(Z28140.LT.2300.)Z28140=2300.
Z28141=8.28E-4*TREH2**701*Z28140**8/3600.
Z28142=1.693E-3*1.208E-6*TRC2
Z28143=.02305/(Z28142*KREL2)
Z28144=1./(Z28141*KREA2)+Z28143/2.
JRECK2=1./Z28144
Z28145=57.78*.886*(1./((18.2+.0271*TRF2/1.8)+5.5E-13*(TRF2/1.8)*...
*3)/3600.
Z28146=2.95E-7*((TRF2+TRC2)/2.)*0.701
Z28147=.03229/(Z28145*KREL2)+.0036/(Z28146*KREL2)+Z28143/2.
JRCFK2=1./Z28147
ENDPRO

JRECK3,JRCFK3=CORHT(GREH,TRC3,TRF3,TREH3,KREA3,KREL3)
PROCEDJRECK3,JRCFK3=Z28148(GREH)
Z28149=3.055E8*GREH*TREH3**-.687
IF(Z28149.LT.2300.)Z28149=2300.
Z28150=8.28E-4*TREH3**701*Z28149**8/3600.
Z28151=1.693E-3*1.208E-6*TRC3
Z28152=.02305/(Z28151*KREL3)
Z28153=1./(Z28150*KREA3)+Z28152/2.
JRECK3=1./Z28153

```

```

ZZ8154=57.78*.886*(1./((18.2+.0271*TRF3/1.8)+5.5E-13*(TRF3/1.8))*... --
*31/3600. --
ZZ8155=2.95E-7*((TRF3+TRC3)/2.)*.0.701 --
ZZ8156=.03229/(ZZ8154*KREL3)+.0036/(ZZ8155*KREL3)+ZZ8152/2. --
JRCFK3=1./ZZ8156 --
ENDPRO --
JRECK4,JRCFK4=CORHT(GREH,TRC4,TRF4,TREH4,KREA4,KREL4) --
PROCEDJRECK4,JRCFK4=ZZ8157(GREH) --
ZZ8158=3.055E8*GREH*TREH4**-.687 --
IF(ZZ8158.LT.2300.)ZZ8158=2300. --
ZZ8159=8.28E-4*TREH4**701*ZZ8158**8/3600. --
ZZ8160=1.693E-3*1.208E-6*TRC4 --
ZZ8161=.02305/(ZZ8160*KREL4) --
ZZ8162=1./((ZZ8159*KREA4)+ZZ8161/2. --
JRECK4=1./ZZ8162 --
ZZ8163=57.78*.886*(1./((18.2+.0271*TRF4/1.8)+5.5E-13*(TRF4/1.8))*... --
*31/3600. --
ZZ8164=2.95E-7*((TRF4+TRC4)/2.)*.0.701 --
ZZ8165=.03229/(ZZ8164*KREL4)+.0036/(ZZ8164*KREL4)+ZZ8161/2. --
JRCFK4=1./ZZ8165 --
ENDPRO --
JRECK5,JRCFK5=CORHT(GREH,TRC5,TRF5,TREH5,KREA5,KREL5) --
PROCEDJRECK5,JRCFK5=ZZ8166(GREH) --
ZZ8167=3.055E8*GREH*TREH5**-.687 --
IF(ZZ8167.LT.2300.)ZZ8167=2300. --
ZZ8168=8.28E-4*TREH5**701*ZZ8167**8/3600. --
ZZ8169=1.693E-3*1.208E-6*TRC5 --
ZZ8170=.02305/(ZZ8169*KREL5) --
ZZ8171=1./((ZZ8168*KREA5)+ZZ8170/2. --
JRECK5=1./ZZ8171 --
ZZ8172=57.78*.886*(1./((18.2+.0271*TRF5/1.8)+5.5E-13*(TRF5/1.8))*... --
*31/3600. --
ZZ8173=2.95E-7*((TRF5+TRC5)/2.)*.0.701 --
ZZ8174=.03229/(ZZ8172*KREL5)+.0036/(ZZ8173*KREL5)+ZZ8170/2. --
JRCFK5=1./ZZ8174 --
ENDPRO --
JRECK6,JRCFK6=CORHT(GREH,TRC6,TRF6,TREH6,KREA6,KREL6) --
PROCEDJRECK6,JRCFK6=ZZ8175(GREH) --
ZZ8176=3.055E8*GREH*TREH6**-.687 --
IF(ZZ8176.LT.2300.)ZZ8176=2300. --
ZZ8177=8.28E-4*TREH6**701*ZZ8176**8/3600. --
ZZ8178=1.693E-3*1.208E-6*TRC6 --
ZZ8179=.02305/(ZZ8178*KREL6) --
ZZ8180=1./((ZZ8177*KREA6)+ZZ8179/2. --
JRECK6=1./ZZ8180 --
ZZ8181=57.78*.886*(1./((18.2+.0271*TRF6/1.8)+5.5E-13*(TRF6/1.8))*... --
*31/3600. --
ZZ8182=2.95E-7*((TRF6+TRC6)/2.)*.0.701 --
ZZ8183=.03229/(ZZ8181*KREL6)+.0036/(ZZ8182*KREL6)+ZZ8179/2. --
JRCFK6=1./ZZ8183 --
ENDPRO --
DTRC1,DTRF1,TREH01,TREH1=CRNODE(JRECK1,JRCFK1,KRFV1,KRCV1,TUPH,... --
GREH,QRF1,ITRF1,TRF1,ITRC1,TRC1) --
ZZ8184=JRECK1/(GREH)*KUNHCP --
ZZ8185=1.-1./((1.-EXP(-ZZ8184))+1./ZZ8184 --
TREH01=(TUPH*(1.-ZZ8184+ZZ8185)+ZZ8184*TRC1)/(1.+ZZ8184*(1.-... --

```

```

ZZ8185))
TREH1=ZZ8185*TUPH*(1.-ZZ8185)*TREH01
ZZ8186=KUNHCP*(GREH)*(TREH01-TUPH)
ZZ8187=0.5559*(52.492*0.03953*TRF1-1.512E-5*TRF1**2+2.203E-9*...
TRF1**3)
ZZ8188=0.1196*(218.378*0.6541*TRC1-4.504E-4*TRC1**2+1.143E-7*...
TRC1**3)
ZZ8189=KRFV1*ZZ8187
ZZ8190=KRCV1*ZZ8188
ZZ8191=JRCFK1*(TRF1-TRC1)
DTRF1=(ORF1-ZZ8191)/ZZ8189
TRF1=INTGRL(ITRF1,DTRF1)
DTRC1=(ZZ8191-ZZ8186)/ZZ8190
TRC1=INTGRL(ITRC1,DTRC1)
DTRC2,DTRF2,TREH02,TREH2=CRNODE(JRECK2,JRCFK2,KRFV2,KRCV2,...
TREH01,GREH,ORF2,ITRF2,TRF2,ITRC2,TRC2)
ZZ8192=JRECK2/(GREH*KUNHCP)
ZZ8193=1.-1./(1.-EXP(-ZZ8192))+1./ZZ8192
TREH02=((TREH01)*(1.-ZZ8192*ZZ8193)+ZZ8192*TRC2)/(1.+ZZ8192*(1....
-ZZ8193))
TREH2=ZZ8193*(TREH01)+(1.-ZZ8193)*TREH02
ZZ8194=KUNHCP*GREH*(TREH02-(TREH01))
ZZ8195=0.5559*(52.492*0.03953*TRF2-1.512E-5*TRF2**2+2.203E-9*...
TRF2**3)
ZZ8196=0.1196*(218.378*0.6541*TRC2-4.504E-4*TRC2**2+1.143E-7*...
TRC2**3)
ZZ8197=KRFV2*ZZ8195
ZZ8198=KRCV2*ZZ8196
ZZ8199=JRCFK2*(TRF2-TRC2)
DTRF2=(ORF2-ZZ8199)/ZZ8197
TRF2=INTGRL(ITRF2,DTRF2)
DTRC2=(ZZ8199-ZZ8194)/ZZ8198
TRC2=INTGRL(ITRC2,DTRC2)
DTRC3,DTRF3,TREH03,TREH3=CRNODE(JRECK3,JRCFK3,KRFV3,KRCV3,...
TREH02,GREH,ORF3,ITRF3,TRF3,ITRC3,TRC3)
ZZ8200=JRECK3/(GREH*KUNHCP)
ZZ8201=1.-1./(1.-EXP(-ZZ8200))+1./ZZ8200
TREH03=((TREH02)*(1.-ZZ8200*ZZ8201)+ZZ8200*TRC3)/(1.+ZZ8200*(1....
-ZZ8201))
TREH3=ZZ8201*(TREH02)+(1.-ZZ8201)*TREH03
ZZ8202=KUNHCP*GREH*(TREH03-(TREH02))
ZZ8203=0.5559*(52.492*0.03953*TRF3-1.512E-5*TRF3**2+2.203E-9*...
TRF3**3)
ZZ8204=0.1196*(218.378*0.6541*TRC3-4.504E-4*TRC3**2+1.143E-7*...
TRC3**3)
ZZ8205=KRFV3*ZZ8203
ZZ8206=KRCV3*ZZ8204
ZZ8207=JRCFK3*(TRF3-TRC3)
DTRF3=(ORF3-ZZ8207)/ZZ8205
TRF3=INTGRL(ITRF3,DTRF3)
DTRC3=(ZZ8207-ZZ8202)/ZZ8206
TRC3=INTGRL(ITRC3,DTRC3)
DTRC4,DTRF4,TREH04,TREH4=CRNODE(JRECK4,JRCFK4,KRFV4,KRCV4,...
TREH03,GREH,ORF4,ITRF4,TRF4,ITRC4,TRC4)
ZZ8208=JRECK4/(GREH*KUNHCP)
ZZ8209=1.-1./(1.-EXP(-ZZ8208))+1./ZZ8208
TREH04=((TREH03)*(1.-ZZ8208*ZZ8209)+ZZ8208*TRC4)/(1.+ZZ8208*(1....

```



```

-ZZ8209))
TREH9=ZZ8209*(TREH03)+(1.-ZZ8209)*TREH04
ZZ8210=KUNHCP*GREH*(TREH04-(TREH03))
ZZ8211=0.5559*(52.492+0.03953*TRF4-1.512E-5*TRF4**2+2.203E-9*...
TRF4**3)
ZZ8212=0.1196*(218.378+0.6541*TRC4-4.504E-4*TRC4**2+1.143E-7*...
TRC4**3)
ZZ8213=KRFV4*ZZ8211
ZZ8214=KRCV4*ZZ8212
ZZ8215=JRCFK4*(TRF4-TRC4)
DTRF4=(ORF4-ZZ8215)/ZZ8213
TRF4=INTGRL(ITRF4,DTRF4)
DTRC4=(ZZ8215-ZZ8210)/ZZ8214
TRC4=INTGRL(ITRC4,DTRC4)
DTRC5,DTRF5,TREH05,TREH5=CRNODE(JRECK5,JRCFK5,KRFV5,KRCV5,...
TREH04,GREH,ORF5,ITRF5,TRF5,ITRC5,TRC5)
ZZ8216=JRECK5/(GREH*KUNHCP)
ZZ8217=1.-1./(1.-EXP(-ZZ8216)))+1./ZZ8216
TREH05=((TREH04)*(1.-ZZ8216*ZZ8217)+ZZ8216*TRC5)/(1.+ZZ8216*(1....
-ZZ8217))
TREH5=ZZ8217*(TREH04)+(1.-ZZ8217)*TREH05
ZZ8218=KUNHCP*GREH*(TREH05-(TREH04))
ZZ8219=0.5559*(52.492+0.03953*TRF5-1.512E-5*TRF5**2+2.203E-9*...
TRF5**3)
ZZ8220=0.1196*(218.378+0.6541*TRC5-4.504E-4*TRC5**2+1.143E-7*...
TRC5**3)
ZZ8221=KRFV5*ZZ8219
ZZ8222=KRCV5*ZZ8220
ZZ8223=JRCFK5*(TRF5-TRC5)
DTRF5=(ORF5-ZZ8223)/ZZ8221
TRF5=INTGRL(ITRF5,DTRF5)
DTRC5=(ZZ8223-ZZ8218)/ZZ8222
TRC5=INTGRL(ITRC5,DTRC5)
DTRC6,DTRF6,TREH06,TREH6=CRNODE(JRECK6,JRCFK6,KRFV6,KRCV6,...
TREH05,GREH,ORF6,ITRF6,TRF6,ITRC6,TRC6)
ZZ8224=JRECK6/(GREH*KUNHCP)
ZZ8225=1.-1./(1.-EXP(-ZZ8224)))+1./ZZ8224
TREH06=((TREH05)*(1.-ZZ8224*ZZ8225)+ZZ8224*TRC6)/(1.+ZZ8224*(1....
-ZZ8225))
TREH6=ZZ8225*(TREH05)+(1.-ZZ8225)*TREH06
ZZ8226=KUNHCP*GREH*(TREH06-(TREH05))
ZZ8227=0.5559*(52.492+0.03953*TRF6-1.512E-5*TRF6**2+2.203E-9*...
TRF6**3)
ZZ8228=0.1196*(218.378+0.6541*TRC6-4.504E-4*TRC6**2+1.143E-7*...
TRC6**3)
ZZ8229=KRFV6*ZZ8227
ZZ8230=KRCV6*ZZ8228
ZZ8231=JRCFK6*(TRF6-TRC6)
DTRF6=(ORF6-ZZ8231)/ZZ8229
TRF6=INTGRL(ITRF6,DTRF6)
DTRC6=(ZZ8231-ZZ8226)/ZZ8230
TRC6=INTGRL(ITRC6,DTRC6)

```

* CORE DECAY HEAT GENERATION

```

PROCD TSEC = DUMT(TSTART,TIME,TFLAG)
TSEC = TSTART + TIME

```

```

      IF (ITFLAG .GT. 0.0) TSEC = TSTART
ENDPRO

* * * POWER DECAY WAS ESTABLISHED FROM A MINAUX RUN ON
* * * AUGUST 12, 1977.
*PROCED DECAY = FDOPOW(TSEC)
** TEMPORARILY USE SHURES DATA FOR THERMAL REACTOR FISSION PRODUCT DECAY
*STORAG T(5),C(4),D(4)
*TABLE T(1-5) = 0.0,0.1,10.0,150.0,4.0E+5, C(1-4) = 0.07,0.0603,...
* 0.0765,0.1301, D(1-4) = 0.0,0.0639,0.1807,0.2839
*INTEGER INDEX
*  IF (TSEC.LT.1.E-10) GO TO 30
*  DO 10 INDEX=1,4
*  IF (TSEC.LT.T(INDEX+1)) GO TO 20
* 10 CONTINUE
* 20 FPDK = C(INDEX) * TSEC**(1-D(INDEX))
*  UDK=0.00129*EXP (-TSEC/2034.)
*  NDK=0.00112*EXP (-TSEC/292900.)
*  GO TO 40
* 30 FPDK = C(1)
*  UDK=0.00129
*  NDK=0.00112
* 40 DECAY=FPDK*UDK*NDK
*ENDPRO

ORF1=KREPF1*KREQT*KREPF*PRCD/KRENN
ORF2=KREPF2*KREQT*KREPF*PRCD/KRENN
ORF3=KREPF3*KREQT*KREPF*PRCD/KRENN
ORF4=KREPF4*KREQT*KREPF*PRCD/KRENN
ORF5=KREPF5*KREQT*KREPF*PRCD/KRENN
ORF6=KREPF6*KREQT*KREPF*PRCD/KRENN
OBPH=KREQT*(1.-KREPF)*PRCD

```

* * * * * MISCELLANEOUS * * * * *

* TEMPORARY CACMS FLOW CONTROL AND ACTUATOR MODELS

```

* PROP=100./KPLPB*(WPLS-WFLOW)/KPLCR
* DINT=PROP/KPLRT
* INT=INTGRL(IINT,DINT)
* NPLD=PROP*INT
* DNPL=(NPLD-NPL)/20.
* NPL=INTGRL(INPL,DNPL)
*
* PROPS=100./KPSPB*(WPSS-WFLOW)/KPSCR
* DIPSI=PROPS/KPSRT
* IPSIT=INTGRL(IIPSI,DIPSI)
* APSD=PROPS*IPSIT

```

```

* DAPS=(APSD-APS)/4.
* APS=LIMIT(IAPS,0.0,1.0,DAPS)

* COLD TEMPERATURE MEASUREMENT (KTAU SEC LAG)
DTPCOM=(TPC10-TPCOM)/KTAU
TPCOM=INTGRL(ITPCOM,DTPCOM)

* CAHE EXIT TEMPERATURE MEASUREMENT (KTAU SEC LAG)
DTPHM=(TPH1-TPHM)/KTAU
TPHM=INTGRL(ITPHM,DTPHM)

* VARIABLES CALCULATED FOR OUTPUT PURPOSES ONLY
QHMMT=QHMM1+QHMM2+QHMM3+QHMM4+QHMM5+QHMM6
QHMMT=QHMM1+QHMM2+QHMM3+QHMM4+QHMM5+QHMM6
QAWMT=QAWM1+QAWM2+QAWM3+QAWM4+QAWM5+QAWM6+QAWM7+QAWM8+...
QAWM9+QAWM10
QAAMT=QAAM1+QAAM2+QAAM3+QAAM4+QAAM5+QAAM6+QAAM7+QAAM8+...
QAAM9+QAAM10
MARGIN=AFGEN(HSATP,PPRG)-AFGEN(HSAT,THW06)

POWFLO=PRCD/GRETOT

EAE=DEBUG(1,0.0)
D1=DEBUG(1,30.0)
D2=DEBUG(1,60.0)
TERMINAL
EAE1=DEBUG(1,TIME)
TIMER DELT=.01,FINTIM=500.,DELFR=5.,DELGR=5.,TWAR=25.
WRITE(12,73) ITPH1,IPH2,IPH3,IPH4,IPH5,IPH6,IPH7,IPH8,IPH9,
/ ITPH10,
/ ITPHM
/73 FORMAT(' * * * HOT LINE INITIAL CONDITIONS',/,
/ 1*INCON ITPH1 =',E11.6,', ITPH2 =',E11.6,', ITPH3 =',E11.6,/,
/ 1*INCON ITPH4 =',E11.6,', ITPH5 =',E11.6,', ITPH6 =',E11.6,/,
/ 1*INCON ITPH7 =',E11.6,', ITPH8 =',E11.6,', ITPH9 =',E11.6,/,
/ 1*INCON ITPH10=',E11.6,/,
/ 1*INCON ITPHM =',E11.6,/)

/ WRITE(12,72) ITPC1,TPC2,TPC3,TPC4,TPC5,TPC6,TPC7,TPC8,TPC9,
/ ITPC10,
/ ITPCOM
/72 FORMAT(' * * * COLD LINE INITIAL CONDITIONS',/,
/ 1*INCON ITPC1 =',E11.6,', ITPC2 =',E11.6,', ITPC3 =',E11.6,/,
/ 1*INCON ITPC4 =',E11.6,', ITPC5 =',E11.6,', ITPC6 =',E11.6,/,
/ 1*INCON ITPC7 =',E11.6,', ITPC8 =',E11.6,', ITPC9 =',E11.6,/,
/ 1*INCON ITPC10=',E11.6,/,
/ 1*INCON ITPCOM=',E11.6,/)

/ WRITE(12,70) TAW0,TAW1,TAW2,TAW3,TAW4,TAW5,TAW6,TAW7,

```

```

/ 1TAM8,TAM9,TAM10,TAM1,TAM2,TAM3,TAM4,TAM5,TAM6,TAM7,TAM8,
/ 1TAM9,TAM10,TAA1,TAA2,TAA3,TAA4,TAA5,TAA6,TAA7,TAA8,TAA9,TAA10
/70 FORMAT(* * * AIR BLAST HX INITIAL CONDITIONS*,/)
/ 1*INCON ITAW0 =*,E11.6,*, ITAW1 =*,E11.6,*, ITAW2 =*,E11.6,/,
/ 1*INCON ITAW3 =*,E11.6,*, ITAW4 =*,E11.6,*, ITAW5 =*,E11.6,/,
/ 1*INCON ITAW6 =*,E11.6,*, ITAW7 =*,E11.6,/,
/ 1*INCON ITAW8 =*,E11.6,*, ITAW9 =*,E11.6,*, ITAW10 =*,E11.6,/,
/ 1*INCON ITAM1 =*,E11.6,*, ITAM2 =*,E11.6,*, ITAM3 =*,E11.6,/,
/ 1*INCON ITAM4 =*,E11.6,*, ITAM5 =*,E11.6,*, ITAM6 =*,E11.6,/,
/ 1*INCON ITAM7 =*,E11.6,*, ITAM8 =*,E11.6,*, ITAM9 =*,E11.6,/,
/ 1*INCON ITAM10 =*,E11.6,/,
/ 1*PARAM TAA1 =*,E11.6,*, TAA2 =*,E11.6,*, TAA3 =*,E11.6,/,
/ 1*PARAM TAA4 =*,E11.6,*, TAA5 =*,E11.6,*, TAA6 =*,E11.6,/,
/ 1*PARAM TAA7 =*,E11.6,*, TAA8 =*,E11.6,*, TAA9 =*,E11.6,/,
/ 1*PARAM TAA10 =*,E11.6,/)

/ WRITE(12,71) 1THW1,THW2,THW3,THW4,THW5,THW6,THM1,THM2,
/ 1THM3,THM4,THM5,THM6,THW0,THM10,THM1,THM2,THM3,THM4,THM5,THM6
/71 FORMAT(* * * CAKE INITIAL CONDITIONS*,/)
/ 1*INCON 1THW1 =*,E11.6,*, 1THW2 =*,E11.6,*, 1THW3 =*,E11.6,/,
/ 1*INCON 1THW4 =*,E11.6,*, 1THW5 =*,E11.6,*, 1THW6 =*,E11.6,/,
/ 1*INCON 1THM1 =*,E11.6,*, 1THM2 =*,E11.6,*, 1THM3 =*,E11.6,/,
/ 1*INCON 1THM4 =*,E11.6,*, 1THM5 =*,E11.6,*, 1THM6 =*,E11.6,/,
/ 1*INCON 1THW0 =*,E11.6,*, 1THM10 =*,E11.6,/,
/ 1*PARAM THM1 =*,E11.6,*, THM2 =*,E11.6,*, THM3 =*,E11.6,/,
/ 1*PARAM THM4 =*,E11.6,*, THM5 =*,E11.6,*, THM6 =*,E11.6,/)

/ WRITE(12,74)1VPRW,TPRW,PPRG,PLOAD,NPL,INT,APS,IPSIT,WFLOW
/ 74 FORMAT(* * * PUMP AND PROCESS-FLOW INITIAL CONDITIONS*,/)
/ 1*INCON 1VPRW =*,E11.6,*, 1TPRW =*,E11.6,*, 1PPRG =*,E11.6,/,
/ 1*INCON 1PLOAD =*,E11.6,*, 1NPL =*,E11.6,*, 1INT =*,E11.6,/,
/ 1*INCON 1APS =*,E11.6,*, 1IPSIT =*,E11.6,/,
/ 1*PARAM WFLOW =*,E11.6,/)

/93 FORMAT(* * * CORE INITIAL CONDITIONS*,/)
/ 1*INCON 1TRF1 =*,E11.6,*, 1TRF2 =*,E11.6,*, 1TRF3 =*,E11.6,/,
/ 1*INCON 1TRF4 =*,E11.6,*, 1TRF5 =*,E11.6,*, 1TRF6 =*,E11.6,/,
/ 1*INCON 1TRC1 =*,E11.6,*, 1TRC2 =*,E11.6,*, 1TRC3 =*,E11.6,/,
/ 1*INCON 1TRC4 =*,E11.6,*, 1TRC5 =*,E11.6,*, 1TRC6 =*,E11.6,/,
/ 1*INCON 1TUPH =*,E11.6,*, 1TLPH =*,E11.6,/,
/ 1*INCON 1TCAH =*,E11.6,*, 1ICAN =*,E11.6,*, 1NCAA =*,E11.6,/,
/ 1*PARAM 1TREH1 =*,E11.6,*, 1TREH2 =*,E11.6,*, 1TREH3 =*,E11.6,/,
/ 1*PARAM 1TREH4 =*,E11.6,*, 1TREH5 =*,E11.6,*, 1TREH6 =*,E11.6,/)
/ WRITE(12,93) TRF1,TRF2,TRF3,TRF4,TRF5,TRF6,TRC1,TRC2,TRC3,
/ 1TRC4,TRC5,TRC6,TUPH,TLPH,TCAH,ICAN,NCAA,TREH1,TREH2,TREH3,
/ 1TREH4,TREH5,TREH6
/ WRITE(12,95)TIME,DUMMY
/ 95 FORMAT(* * * TIME AT END OF RUN=*,E11.6,*, DUMMY VARIABLE=
/ 1,E11.6,/)

PRINT TPC0,THW0,TPH0,TAW0,THH01,WFLOW,MARGIN,PPRG, ...
PNSS,GCAA,GCCA,PRCD,POWFLO, ...
OCAERR,PROPN,ICAN,ONCAA,NCAA, ...
TRC1,TRF1,TREH1,TREH01,THH01, ...

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1	2	3	4	5	6	7	8
9	TPH5	10	TPH6	11	TPH7	12	TPH8
17	KPCV	18	TPC1	19	TPC2	20	TPC3
25	TPC8	26	TPC9	27	TPC10	28	TPCOM
33	TAW3	34	TAW4	35	TAW5	36	TAW6
41	TAM1	42	TAM2	43	TAM3	44	TAM4
49	TAM9	50	TAM10	51	KAAW2	52	KAAW2
57	THW1	58	THW2	59	THW3	60	THW4
65	THM3	66	THM4	67	THM5	68	THM6
73	KHMC	74	KHVV	75	VPRW	76	TPRW
81	APS	82	IPST	85	TRF1	86	TRF2
91	TRC1	92	TRC2	93	TRC3	94	TRC4
100	TGPH	101	TCAH0A	102	ICAN	103	NCAA
105		106	GCCA	107		108	PRCD
113	RPH1	114	DTPH1	116	TPH1	117	RPH2
124	TPH3	125	RPH4	126	DTPH4	128	TPH4
134	DTPH6	136	TPH6	137	RPH7	138	DTPH7
145	RPH9	146	DTPH9	148	TPH9	149	RPH10
159	TPC1	160	RPC2	161	DTPC2	163	TPC2
169	DTPC4	171	TPC4	172	RPC5	173	DTPC5
180	RPC7	181	DTPC7	183	TPC7	184	RPC8
191	TPC9	192	RPC10	193	DTPC10	195	TPC10
203	RAW0	392	TAW01	382	TAW02	372	TAW03
322	TAW08	312	TAW09	302	TAW010	204	DTAW0
209	ZZ8002	214	JAAW10	300	TAA010	301	QAAM10
215	JAAW10	303	QAAM10	304	DTAM10	305	TAM10
218	ZZ8009	223	JAAW9	310	TAA09	311	QAAM9
224	JAAW9	313	QAAM9	314	DTAM9	315	TAM9
227	ZZ8016	232	JAAW8	320	TAA08	321	QAAM8
233	JAAW8	323	QAAM8	324	DTAM8	325	TAM8
236	ZZ8023	241	JAAW7	330	TAA07	331	QAAM7
242	JAAW7	333	QAAM7	334	DTAM7	335	TAM7
245	ZZ8030	250	JAAW6	340	TAA06	341	QAAM6
251	JAAW6	343	QAAM6	344	DTAM6	345	TAM6
254	ZZ8037	259	JAAW5	350	TAA05	351	QAAM5
260	JAAW5	353	QAAM5	354	DTAM5	355	TAM5
263	ZZ8044	268	JAAW4	360	TAA04	361	QAAM4
269	JAAW4	363	QAAM4	364	DTAM4	365	TAM4
272	ZZ8051	277	JAAW3	370	TAA03	371	QAAM3
278	JAAW3	373	QAAM3	374	DTAM3	375	TAM3
281	ZZ8058	286	JAAW2	380	TAA02	381	QAAM2
287	JAAW2	383	QAAM2	384	DTAM2	385	TAM2
290	ZZ8065	295	JAAW1	390	TAA01	391	QAAM1
296	JAAW1	393	QAAM1	394	DTAM1	395	TAM1
196	TPC0	402	DTHW1	404	THW1	405	RHW0
480	THW5	470	THW06	406	DTHW0	408	THW0
411	THM16	413	ZZ8070	414	ZZ8075	466	JHMC
416	ZZ8077	415	ZZ8076	418	ZZ8079	419	JHMC
474	DTHW6	476	THW6	422	ZZ8080	423	ZZ8085
425	ZZ8087	424	ZZ8086	427	ZZ8089	428	JHMC
484	DTHW5	486	THW5	431	ZZ8090	432	ZZ8095
434	ZZ8097	433	ZZ8096	436	ZZ8099	437	JHMC
494	DTHW4	496	THW4	440	ZZ8100	441	ZZ8105
443	ZZ8107	442	ZZ8106	445	ZZ8109	446	JHMC
504	DTHW3	506	THW3	449	ZZ8110	450	ZZ8115
452	ZZ8117	451	ZZ8116	454	ZZ8119	455	JHMC
13	TPH9	14	TPH10	15	TPH11	16	TPH12
21	TPC4	22	TPC5	23	TPC6	24	TPC7
29	TAW1	30	TAW0	31	TAW1	32	TAW2
37	TAW7	38	TAW8	39	TAW9	40	TAW10
45	TAM5	46	TAM6	47	TAM7	48	TAM8
53	KAMC	54	KAMV	55	THW0	56	THW1
61	THW5	62	THW6	63	THM1	64	THM2
69	THM10	70	THM16	71	KHWW2	72	KHWW2
77	PPRG	78	PLOAD	79	NPL	80	INT
87	TRF3	88	TRF4	89	TRF5	90	TRF6
95	TRC5	96	TRC6	99	KREQT	84	TUPH
83	TLPM	98	JLPV	97	JUPV	104	MNSS
109	DUMMY	110		111		112	
118	DTPH2	120	TPH2	121	RPH3	122	DTPH3
129	RPH5	130	DTPH5	132	TPH5	133	RPH6
140	TPH7	141	RPH8	142	DTPH8	144	TPH8
150	DTPH10	152	TPH10	156	RPC1	157	DTPC1
164	RPC3	165	DTPC3	167	TPC3	168	RPC4
175	TPC5	176	RPC6	177	DTPC6	179	TPC6
185	DTPC8	187	TPC8	188	RPC9	189	DTPC9
199	RAW1	153	TPH0	200	DTAW1	202	TAW1
206	TAW0	297	JAAW0	298	JAAW0	208	ZZ8000
212	ZZ8005	211	ZZ8004	210	ZZ8003	213	ZZ8006
299	RAW10	306	DTAW10	308	TAW10	217	ZZ8007
221	ZZ8012	220	ZZ8011	219	ZZ8010	222	ZZ8013
309	RAW9	316	DTAW9	318	TAW9	226	ZZ8014
230	ZZ8019	229	ZZ8018	228	ZZ8017	231	ZZ8020
319	RAW8	326	DTAW8	328	TAW8	235	ZZ8021
239	ZZ8026	238	ZZ8025	237	ZZ8024	240	ZZ8027
329	RAW7	336	DTAW7	338	TAW7	244	ZZ8028
248	ZZ8033	247	ZZ8032	246	ZZ8031	249	ZZ8034
339	RAW6	346	DTAW6	348	TAW6	253	ZZ8035
257	ZZ8040	256	ZZ8039	255	ZZ8038	258	ZZ8041
349	RAW5	356	DTAW5	358	TAW5	262	ZZ8042
266	ZZ8047	265	ZZ8046	264	ZZ8045	267	ZZ8048
359	RAW4	366	DTAW4	368	TAW4	271	ZZ8049
275	ZZ8054	274	ZZ8053	273	ZZ8052	276	ZZ8055
369	RAW3	376	DTAW3	378	TAW3	280	ZZ8056
284	ZZ8061	283	ZZ8060	282	ZZ8059	285	ZZ8062
379	RAW2	386	DTAW2	388	TAW2	289	ZZ8063
293	ZZ8068	292	ZZ8067	291	ZZ8066	294	ZZ8069
389	RAW1	396	DTAW1	398	TAW1	401	RHW1
520	THW01	510	THW02	500	THW03	490	THW04
541	PNSS	409	MHM16	539	GCAA	410	DTHM16
420	JHMC	468	THM06	469	QHM06	417	ZZ8078
471	QHM06	472	DTHM6	473	THM6	467	RHW6
429	JHMC	478	THM05	479	QHM05	426	ZZ8088
481	QHM05	482	DTHM5	483	THM5	477	RHW5
438	JHMC	488	THM04	489	QHM04	435	ZZ8098
491	QHM04	492	DTHM4	493	THM4	487	RHW4
447	JHMC	498	THM03	499	QHM03	444	ZZ8108
501	QHM03	502	DTHM3	503	THM3	497	RHW3
456	JHMC	508	THM02	509	QHM02	453	ZZ8118
511	QHM02	512	DTHM2	513	THM2	507	RHW2

514	DTW2	516	THW2	458	ZZ8120	459	ZZ8125	465	JHMM1	518	THM01	519	QHMM1	462	ZZ8128
461	ZZ8127	460	ZZ8126	463	ZZ8129	464	JHMM1	521	QHMM1	522	DTMM1	523	THM1	517	RHM1
524	DTW1	526	THW1	529	OCAERR	530	PROP	531	DICAN	532	ICAN	533	NCAO	534	DNCAA
535	NCAA	537	DTCAHA	538	TCAHOA	542	MUPH	536	TCCMOA	543	DTUPH	544	TUPH	545	DTGPM
546	TGPM	547	MLPH	540	GRETOT	551	GBPH	556	QBPH	552	IBPH	550	GREM	564	JRCFK6
563	JRECK6	635	ZZ8224	636	ZZ8225	562	JRCFK5	561	JRECK5	621	ZZ8216	622	ZZ8217	560	JRCFK4
559	JRECK4	607	ZZ8208	608	ZZ8209	558	JRCFK3	557	JRECK3	593	ZZ8200	594	ZZ8201	556	JRCFK2
555	JRECK2	579	ZZ8192	580	ZZ8193	554	JRCFK1	553	JRECK1	565	ZZ8184	566	ZZ8185	567	TREH01
581	TREH02	595	TREH03	609	TREH04	623	TREH05	637	TREH06	548	DTLPH	549	TLPH	570	ZZ8187
572	ZZ8189	574	ZZ8191	650	ORF1	575	DTRF1	576	TRF1	571	ZZ8188	573	ZZ8190	569	ZZ8186
577	OTRC1	578	TRC1	584	ZZ8195	586	ZZ8197	588	ZZ8199	651	QRF2	589	DTRF2	590	TRF2
585	ZZ8196	587	ZZ8198	583	ZZ8194	591	OTRC2	592	TRC2	598	ZZ8203	600	ZZ8205	602	ZZ8207
652	QRF3	603	DTRF3	604	TRF3	599	ZZ8204	601	ZZ8206	597	ZZ8202	605	DTRC3	606	TRC3
612	ZZ8211	614	ZZ8213	616	ZZ8215	653	QRF4	617	DTRF4	618	TRF4	613	ZZ8212	615	ZZ8214
611	ZZ8210	619	DTRC4	620	TRC4	626	ZZ8219	628	ZZ8221	630	ZZ8223	654	QRF5	631	DTRF5
632	TRF5	627	ZZ8220	629	ZZ8222	625	ZZ8218	633	DTRC5	634	TRC5	640	ZZ8227	642	ZZ8229
644	ZZ8231	655	QRF6	645	DTRF6	646	TRF6	641	ZZ8228	643	ZZ8230	639	ZZ8226	647	DTRC6
648	TRC6	657	DTPCOM	658	TPCOM	659	DTPHM	660	TPHM	154	RPHAV	151	BPH10	147	BPH9
143	BPH8	139	BPH7	135	BPH6	131	BPH5	127	BPH4	123	BPH3	119	BPH2	115	BPH1
155	BPH1	197	RPCAV	194	BPC10	190	BPC9	186	BPC8	182	BPC7	178	BPC6	174	BPC5
170	BPC4	166	BPC3	162	BPC2	158	BPC1	198	BPC7	207	TAA10	216	TAA9	225	TAA8
234	TAA7	243	TAA6	252	TAA5	261	TAA4	270	TAA3	279	TAA2	288	TAA1	399	RAWAV
205	BAW0	307	BAW10	317	BAW9	327	BAW8	337	BAW7	347	BAW6	357	BAW5	367	BAW4
377	BAW3	387	BAW2	397	BAW1	201	BAW1	400	BAW1	412	THH6	421	THH5	430	THH4
439	THH3	448	THH2	457	THH1	407	BHW0	475	BHW6	485	BHW5	495	BHW4	505	BHW3
515	BHW2	525	BHW1	403	BHW1	527	BHW1	528	RHWAV	568	TREH1	582	TREH2	596	TREH3
610	TREH4	624	TREH5	638	TREH6	649	TSEC	661	QHMMT	662	QHMMT	663	QHMMT	664	QAAMT
665	MARGIN	666	POWFLO	667	EAE	668	01	669	02	670		671		672	EAE1
673		674		675		676		677		678		679		680	
681		682		683		684		685		686		687		688	
689		690		691		692		693		694		695		696	
697		698		699		700		701		702		703		704	
705		706		707		708		709		710		711		712	
713		714		715		716		717		718		719		720	
721		722		723		724		725		726		727		728	
729		730		731		732		733		734		735		736	
737															

SYSL RESOURCES UTILIZATION	MAXIMUM	ACTUAL
PARAMETERS	1000	285
MEMORY BLOCKS	30	19
STORAGE VARIABLES	24	0
INTEGER VARIABLES	50	0
USER INTEGRALS	30	0
SYMBOLS	3000	974
INTEGRATORS	500	77
OUTPUT VARIABLES	3000	737
INPUT VARIABLES	5000	1976
FORTTRAN RECORDS	3000	965
DATA RECORDS	1000	166
SGRT SECTIONS	10	2

••EXIT LOC••033461

9ADD,P 7.

SVJPF.FOR,ISX UPDATE,UPDATE
FOR 0E3-09/29/77-10:18:18 (,0)

SUBROUTINE UPDATE ENTRY POINT 011601

STORAGE USED: CODE(1) 011610; DATA(0) 001361; BLANK COMMON(2) 000000

COMMON BLOCKS:

0003 CURVAL 001515
0004 ZFLAGS 000003

EXTERNAL REFERENCES (BLOCK, NAME)

0005 AFGEN
0006 INTGRL
0007 DEBUG
0010 XPRR
0011 EXP
0012 NWDUS
0013 NIQ25
0014 NERR35

STORAGE ASSIGNMENT (BLOCK, TYPE, RELATIVE LOCATION, NAME)

0000	000252 70F	0000	000457 71F	0000	000166 72F	0000	000102 73F	0000	000607 74F
0000	000665 93F	0000	001025 95F	0001	000342 99998L	0001	011337 99999L	0005	R 000000 AFGEN
0003	001500 AHEFLO	0003	R 000267 APS	0003	R 000357 BAW1	0003	R 000361 BAW0	0003	R 000613 BAWT
0003	R 000611 BAW1	0003	R 000523 BAW10	0003	R 000603 BAW2	0003	R 000575 BAW3	0003	R 000567 BAW4
0003	R 000561 BAW5	0003	R 000553 BAW6	0003	R 000545 BAW7	0003	R 000537 BAW8	0003	R 000531 BAW9
0003	R 000615 BHW1	0003	R 000617 BHW0	0003	R 000754 BHW1	0003	R 000753 BHW1	0003	R 000745 BHW2
0003	R 000737 BHW3	0003	R 000731 BHW4	0003	R 000723 BHW5	0003	R 000715 BHW6	0003	R 000355 BPC1
0003	R 000330 BPC1	0003	R 000352 BPC10	0003	R 000332 BPC2	0003	R 000334 BPC3	0003	R 000336 BPC4
0003	R 000340 BPC5	0003	R 000342 BPC6	0003	R 000344 BPC7	0003	R 000346 BPC8	0003	R 000350 BPC9
0003	R 000326 BPH1	0003	R 000301 BPH1	0003	R 000323 BPH10	0003	R 000303 BPH2	0003	R 000305 BPH3
0003	R 000307 BPH4	0003	R 000311 BPH5	0003	R 000313 BPH6	0003	R 000315 BPH7	0003	R 000317 BPH8
0003	R 000321 BPH9	0007	R 000000 DEBUG	0003	R 000005 DELGR	0003	R 000004 DELMAX	0003	R 000003 DELMIN
0003	000011 DELPP	0003	R 000006 DELPR	0003	R 000007 DELS	0003	R 000001 DELT	0003	R 000220 DTCAN
0003	R 000221 DNCAA	0003	R 000177 DTAM1	0003	R 000155 DTAM10	0003	R 000175 DTAM2	0003	R 000173 DTAM3
0003	R 000171 DTAM4	0003	R 000167 DTAM5	0003	R 000165 DTAM6	0003	R 000163 DTAM7	0003	R 000161 DTAM8
0003	R 000157 DTAM9	0003	R 000153 DTAM1	0003	R 000154 DTAM0	0003	R 000200 DTAW1	0003	R 000156 DTAW10
0003	R 000176 DTAW2	0003	R 000174 DTAW3	0003	R 000172 DTAW4	0003	R 000170 DTAW5	0003	R 000166 DTAW6
0003	R 000164 DTAW7	0003	R 000162 DTAW8	0003	R 000160 DTAW9	0003	R 000222 DTCAM	0003	R 000224 DTGPH
0003	R 000203 DTHM16	0003	R 000216 DTHM1	0003	R 000214 DTHM2	0003	R 000212 DTHM3	0003	R 000210 DTHM4
0003	R 000206 DTHM5	0003	R 000204 DTHM6	0003	R 000201 DTHM1	0003	R 000202 DTHM0	0003	R 000217 DTHM1
0003	R 000215 DTHW2	0003	R 000213 DTHW3	0003	R 000211 DTHW4	0003	R 000207 DTHW5	0003	R 000205 DTHW6
0003	R 000225 DTLPH	0003	R 000242 DTPCOM	0003	R 000141 DTPC1	0003	R 000152 DTPC10	0003	R 000142 DTPC2
0003	R 000143 DTPC3	0003	R 000144 DTPC4	0003	R 000145 DTPC5	0003	R 000146 DTPC6	0003	R 000147 DTPC7
0003	R 000150 DTPC8	0003	R 000151 DTPC9	0003	R 000243 DTPHM	0003	R 000127 DTPH1	0003	R 000140 DTPH10
0003	R 000130 DTPH2	0003	R 000131 DTPH3	0003	R 000132 DTPH4	0003	R 000133 DTPH5	0003	R 000134 DTPH6
0003	R 000135 DTPH7	0003	R 000136 DTPH8	0003	R 000137 DTPH9	0003	R 000227 DTRC1	0003	R 000231 DTRC2
0003	R 000233 DTRC3	0003	R 000235 DTRC4	0003	R 000237 DTRC5	0003	R 000241 DTRC6	0003	R 000226 DTRF1
0003	R 000230 DTRF2	0003	R 000232 DTRF3	0003	R 000234 DTRF4	0003	R 000236 DTRF5	0003	R 000240 DTRF6

0003 R 000223 DTUPH	0003 R 000277 DUMPY	0003 R 001121 D1	0003 R 001122 D2	0003 R 001120 EAE
0003 R 001123 EAE1	0003 R 001135 FCON	0003 R 000002 FINTIM	0003 R 001133 FSPH	0003 R 001134 FVIS
0003 R 001471 GAA	0003 R 000770 GBPH	0003 R 000762 GCAA	0003 R 001474 GCAAS	0003 R 000275 GCCA
0003 R 001464 GPRI	0003 R 001465 GPRO	0003 R 000767 GREH	0003 R 000763 GRETOJ	0003 R 001477 HEFLOW
0003 R 001136 HSA TP	0003 R 001137 HSAT	0003 R 001404 IAPS	0003 R 000103 ICAN	0003 R 001426 IICAN
0003 R 001403 IINT	0003 R 001405 IIPSI7	0003 R 001427 INCAA	0000 R 001333 INJP\$	0003 R 001402 INPL
0003 R 000266 INT	0006 R 000000 INTGRL	0003 R 001401 IPLoad	0003 R 001400 IPPRG	0003 R 000270 IPSIT
0003 R 001345 ITAM1	0003 R 001356 ITAM10	0003 R 001346 ITAM2	0003 R 001347 ITAM3	0003 R 001350 ITAM4
0003 R 001351 ITAM5	0003 R 001352 ITAM6	0003 R 001353 ITAM7	0003 R 001354 ITAM8	0003 R 001355 ITAM9
0003 R 001333 ITAW1	0003 R 001331 ITAW0	0003 R 001332 ITAW1	0003 R 001344 ITAW10	0003 R 001334 ITAW2
0003 R 001335 ITAW3	0003 R 001336 ITAW4	0003 R 001337 ITAW5	0003 R 001340 ITAW6	0003 R 001341 ITAW7
0003 R 001342 ITAW8	0003 R 001343 ITAW9	0003 R 001425 ITCAMA	0003 R 001514 ITGPM	0003 R 001375 ITHH16
0003 R 001512 ITHM10	0003 R 001367 ITHM1	0003 R 001370 ITHM2	0003 R 001371 ITHM3	0003 R 001372 ITHM4
0003 R 001373 ITHM5	0003 R 001374 ITHM6	0003 R 001361 ITHW1	0003 R 001357 ITHW0	0003 R 001360 ITHW1
0003 R 001362 ITHW2	0003 R 001363 ITHW3	0003 R 001364 ITHW4	0003 R 001365 ITHW5	0003 R 001366 ITHW6
0003 R 001424 ITPC1	0003 R 001330 ITPC0M	0003 R 001316 ITPC1	0003 R 001327 ITPC10	0003 R 001317 ITPC2
0003 R 001320 ITPC3	0003 R 001321 ITPC4	0003 R 001322 ITPC5	0003 R 001323 ITPC6	0003 R 001324 ITPC7
0003 R 001325 ITPC8	0003 R 001326 ITPC9	0003 R 001315 ITPHM	0003 R 001303 ITPH1	0003 R 001314 ITPH10
0003 R 001304 ITPH2	0003 R 001305 ITPH3	0003 R 001306 ITPH4	0003 R 001307 ITPH5	0003 R 001310 ITPH6
0003 R 001311 ITPH7	0003 R 001312 ITPH8	0003 R 001313 ITPH9	0003 R 001377 ITPRW	0003 R 001415 ITRC1
0003 R 001416 ITRC2	0003 R 001417 ITRC3	0003 R 001420 ITRC4	0003 R 001421 ITRC5	0003 R 001422 ITRC6
0003 R 001407 ITRF1	0003 R 001410 ITRF2	0003 R 001411 ITRF3	0003 R 001412 ITRF4	0003 R 001413 ITRF5
0003 R 001414 ITRF6	0003 R 001423 ITUPH	0003 R 001376 IVPRW	0004 I 000002 IZZZZZ	0003 R 000514 JAACP
0003 R 000515 JAAGR	0003 R 000512 JAAM1	0003 R 000371 JAAM10	0003 R 000501 JAAM2	0003 R 000470 JAAM3
0003 R 000457 JAAM4	0003 R 000446 JAAM5	0003 R 000435 JAAM6	0003 R 000424 JAAM7	0003 R 000413 JAAM8
0003 R 000402 JAAM9	0003 R 000513 JAWM1	0003 R 000372 JAWM10	0003 R 000502 JAWM2	0003 R 000471 JAWM3
0003 R 000460 JAWM4	0003 R 000447 JAWM5	0003 R 000436 JAWM6	0003 R 000425 JAWM7	0003 R 000414 JAWM8
0003 R 000403 JAWM9	0003 R 001513 JGPK	0003 R 000707 JHMC	0003 R 000706 JHMH1	0003 R 000675 JHMH2
0003 R 000664 JHMH3	0003 R 000653 JHMH4	0003 R 000642 JHMH5	0003 R 000631 JHMH6	0003 R 000705 JHMH1
0003 R 000674 JHMH2	0003 R 000663 JHMH3	0003 R 000652 JHMH4	0003 R 000641 JHMH5	0003 R 000630 JHMH6
0003 R 000272 JLPV	0003 R 000773 JRCFK1	0003 R 000775 JRCFK2	0003 R 000777 JRCFK3	0003 R 001001 JRCFK4
0003 R 001003 JRCFK5	0003 R 001005 JRCFK6	0003 R 000772 JRECK1	0003 R 000774 JRECK2	0003 R 000776 JRECK3
0003 R 001000 JRECK4	0003 R 001002 JRECK5	0003 R 001004 JRECK6	0003 R 000271 JUPV	0003 R 001154 KAAA
0003 R 001162 KAAAK	0003 R 001160 KAAAU	0003 R 001163 KAABK	0003 R 001161 KAABU	0003 R 001152 KAAG
0003 R 001150 KAAR	0003 R 001155 KAATR	0003 R 001172 KAAW1	0003 R 000250 KAAW2	0003 R 001164 KAAW3
0003 R 001165 KAMBK	0003 R 000252 KAMC	0003 R 001175 KAMCI	0003 R 001176 KAMCO	0003 R 001166 KAMCT
0003 R 001147 KAMR	0003 R 001156 KAMTR	0003 R 001153 KAWA	0003 R 001230 KAWISQ	0003 R 001170 KAWN
0003 R 001146 KAWRX	0003 R 001226 KAWSQ	0003 R 001157 KAWTR	0003 R 000253 KAWV	0003 R 001173 KAWV1
0003 R 001174 KAWVO	0003 R 001167 KAWVT	0003 R 001151 KAWWR	0003 R 001171 KAWW1	0003 R 000251 KAWW2
0003 R 001277 KCAAN	0003 R 001503 KCAPBN	0003 R 001300 KCAR	0003 R 001502 KCARG	0003 R 001504 KCART
0003 R 001302 KCAU	0003 R 001276 KCCAN	0004 I 000000 KEAP	0003 R 001475 KGPC	0003 R 001224 KHHA
0003 R 001220 KHHCK	0003 R 001221 KHHCKE	0003 R 001177 KHHRX	0003 R 001301 KHHV16	0003 R 001216 KHHVX
0003 R 001217 KHHVKE	0003 R 001214 KHHW1	0003 R 000255 KHHW2	0003 R 001222 KHHAK	0003 R 001223 KHHBK
0003 R 000257 KHHM	0003 R 001203 KHHCI	0003 R 001210 KHHCI0	0003 R 001204 KHHM0	0003 R 001202 KHHM1
0003 R 001201 KHHRX	0003 R 001225 KHHW	0003 R 001233 KHHWISQ	0003 R 001211 KHHW1	0003 R 001212 KHHW0
0003 R 001213 KHHN	0003 R 001200 KHHRX	0003 R 001227 KHHW2	0003 R 000260 KHHW	0003 R 001206 KHHW1
0003 R 001207 KHHVO	0003 R 001205 KHHVT	0003 R 001215 KHHW1	0003 R 000256 KHHW2	0003 R 000246 KPCCT
0003 R 001144 KPCCT	0003 R 001145 KPCN	0003 R 001232 KPCSQ	0003 R 000247 KPCV	0003 R 001143 KPCVT
0003 R 000244 KPHC	0003 R 001141 KPHCT	0003 R 001142 KPHN	0003 R 001231 KPHSQ	0003 R 000245 KPHV
0003 R 001140 KPHVT	0003 R 001443 KPL	0003 R 001437 KPLCR	0003 R 001434 KPLJ0	0003 R 001435 KPLJ1
0003 R 001436 KPLJ2	0003 R 001444 KPLN	0003 R 001432 KPLPB	0003 R 001433 KPLRT	0003 R 001470 KPRV
0003 R 001460 KPS	0003 R 001454 KPSCR	0003 R 001451 KPSJ0	0003 R 001452 KPSJ1	0003 R 001453 KPSJ2
0003 R 001461 KPSN	0003 R 001447 KPSPB	0003 R 001450 KPSRT	0003 R 001243 KRCV1	0003 R 001244 KRCV2
0003 R 001245 KRCV3	0003 R 001246 KRCV4	0003 R 001247 KRCV5	0003 R 001250 KRCV6	0003 R 001251 KREA1
0003 R 001252 KREA2	0003 R 001253 KREA3	0003 R 001254 KREA4	0003 R 001255 KREA5	0003 R 001256 KREA6
0003 R 001272 KREL	0003 R 001257 KREL1	0003 R 001260 KREL2	0003 R 001261 KREL3	0003 R 001262 KREL4
0003 R 001263 KREL5	0003 R 001264 KREL6	0003 R 001234 KRENN	0003 R 001271 KREPF	0003 R 001265 KREPF1

0003 R 001266 KREPF2	0003 R 001267 KREPF3	0003 R 001273 KREPF4	0003 R 001274 KREPF5	0003 R 001275 KREPF6
0003 R 001270 KREP0	0003 R 000273 KREQ1	0003 R 001235 KRFV1	0003 R 001236 KRFV2	0003 R 001237 KRFV3
0003 R 001240 KRFV4	0003 R 001241 KRFV5	0003 R 001242 KRFV6	0003 R 001473 KTAU	0003 R 001124 KUNACP
0003 R 001125 KUNGR	0003 R 001130 KUNHCP	0003 R 001126 KUNHCV	0003 R 001127 KUNWCP	0003 R 001116 MARGIN
0003 R 000620 MHHI6	0003 R 000766 MLPH	0003 R 000274 MNSS	0003 R 000765 MUPH	0004 I 000001 NALARM
0003 R 000104 NCA	0003 R 000760 NCAQ	0003 R 000265 NPL	0003 R 001446 NPS	0003 R 000756 OCAERR
0003 R 001132 PARTRT	0003 R 000264 PLOAD	0003 R 000764 PNSS	0003 R 001476 POWER	0003 R 001117 POWFLO
0003 R 000263 PPRG	0003 R 000276 PRC0	0003 R 000757 PR0PN	0003 R 001115 QAAMT	0003 R 000606 QAAM1
0003 R 000520 QAAM10	0003 R 000600 QAAM2	0003 R 000572 QAAM3	0003 R 000564 QAAM4	0003 R 000556 QAAM5
0003 R 000550 QAAM6	0003 R 000542 QAAM7	0003 R 000534 QAAM8	0003 R 000526 QAAM9	0003 R 001114 QAWMT
0003 R 000610 QAWM1	0003 R 000522 QAWM10	0003 R 000602 QAWM2	0003 R 000574 QAWM3	0003 R 000566 QAWM4
0003 R 000560 QAWM5	0003 R 000552 QAWM6	0003 R 000544 QAWM7	0003 R 000536 QAWM8	0003 R 000530 QAWM9
0003 R 001111 QBPH	0003 R 001113 QHMM1	0003 R 000750 QHMM1	0003 R 000742 QHMM2	0003 R 000734 QHMM3
0003 R 000726 QHMM4	0003 R 000720 QHMM5	0003 R 000712 QHMM6	0003 R 001112 QHMMT	0003 R 000752 QHMM1
0003 R 000744 QHMM2	0003 R 000736 QHMM3	0003 R 000730 QHMM4	0003 R 000722 QHMM5	0003 R 000714 QHMM6
0003 R 001466 QRF	0003 R 001103 QRF1	0003 R 001104 QRF2	0003 R 001105 QRF3	0003 R 001106 QRF4
0003 R 001107 QRF5	0003 R 001110 QRF6	0003 R 000612 RAWAV	0003 R 000356 RAWI	0003 R 000360 RAWO
0003 R 000604 RAW1	0003 R 000516 RAW10	0003 R 000576 RAW2	0003 R 000570 RAW3	0003 R 000562 RAW4
0003 R 000554 RAW5	0003 R 000546 RAW6	0003 R 000540 RAW7	0003 R 000532 RAW8	0003 R 000524 RAW9
0003 R 001131 RFTSL	0003 R 000755 RHWAV	0003 R 000614 RHW1	0003 R 000616 RHW0	0003 R 000746 RHW1
0003 R 000740 RHW2	0003 R 000732 RHW3	0003 R 000724 RHW4	0003 R 000716 RHW5	0003 R 000714 RHW6
0003 R 000354 RPCAV	0003 R 000327 RPC1	0003 R 000351 RPC10	0003 R 000331 RPC2	0003 R 000333 RPC3
0003 R 000335 RPC4	0003 R 000337 RPC5	0003 R 000341 RPC6	0003 R 000343 RPC7	0003 R 000345 RPC8
0003 R 000347 RPC9	0003 R 000325 RPHAV	0003 R 000300 RPH1	0003 R 000322 RPH10	0003 R 000302 RPH2
0003 R 000304 RPH3	0003 R 000306 RPH4	0003 R 000310 RPH5	0003 R 000312 RPH6	0003 R 000314 RPH7
0003 R 000316 RPH8	0003 R 000320 RPH9	0003 R 001505 SCAV	0003 R 001441 SPL	0003 R 001456 SPS
0003 R 001472 TAA10	0003 R 000605 TAA01	0003 R 000517 TAA010	0003 R 000577 TAA02	0003 R 000571 TAA03
0003 R 000563 TAA04	0003 R 000555 TAA05	0003 R 000541 TAA06	0003 R 000541 TAA07	0003 R 000533 TAA08
0003 R 000525 TAA09	0003 R 000503 TAA1	0003 R 000362 TAA10	0003 R 000472 TAA2	0003 R 000461 TAA3
0003 R 000450 TAA4	0003 R 000437 TAA5	0003 R 000426 TAA6	0003 R 000415 TAA7	0003 R 000404 TAA8
0003 R 000373 TAA9	0003 R 000062 TAM1	0003 R 000040 TAM10	0003 R 000060 TAM2	0003 R 000056 TAM3
0003 R 000054 TAM4	0003 R 000052 TAM5	0003 R 000050 TAM6	0003 R 000046 TAM7	0003 R 000044 TAM8
0003 R 000042 TAM9	0003 R 000036 TAW1	0003 R 000037 TAW0	0003 R 000607 TAW01	0003 R 000521 TAW010
0003 R 000601 TAW02	0003 R 000573 TAW03	0003 R 000565 TAW04	0003 R 000557 TAW05	0003 R 000551 TAW06
0003 R 000543 TAW07	0003 R 000535 TAW08	0003 R 000527 TAW09	0003 R 000063 TAW1	0003 R 000041 TAW10
0003 R 000061 TAW2	0003 R 000057 TAW3	0003 R 000055 TAW4	0003 R 000053 TAW5	0003 R 000051 TAW6
0003 R 000047 TAW7	0003 R 000045 TAW8	0003 R 000043 TAW9	0003 R 000771 TBP8	0003 R 000105 TCAH0A
0003 R 000761 TCCH0A	0003 R 001431 TFLAG	0003 R 000107 TGP8	0003 R 000066 THH16	0003 R 000747 THH01
0003 R 000741 THH02	0003 R 000733 THH03	0003 R 000725 THH04	0003 R 000717 THH05	0003 R 000711 THH06
0003 R 000676 THH1	0003 R 000665 THH2	0003 R 000654 THH3	0003 R 000643 THH4	0003 R 000632 THH5
0003 R 000621 THH6	0003 R 000254 THH10	0003 R 000101 THH1	0003 R 000077 THH2	0003 R 000075 THH3
0003 R 000073 THH4	0003 R 000071 THH5	0003 R 000067 THH6	0003 R 000064 THH1	0003 R 000065 THH0
0003 R 001511 THW05	0003 R 001510 THW05S	0003 R 000751 THW01	0003 R 000743 THW02	0003 R 000735 THW03
0003 R 000727 THW04	0003 R 000721 THW05	0003 R 000713 THW06	0003 R 000102 THW1	0003 R 000100 THW2
0003 R 000076 THW3	0003 R 000074 THW4	0003 R 000072 THW5	0003 R 000070 THW6	0003 R 000000 TIME
0003 R 001501 TINLET	0003 R 000110 TLPH	0003 R 001506 TLPH0	0003 R 000353 TPC0	0003 R 000125 TPC0M
0003 R 000024 TPC1	0003 R 000035 TPC10	0003 R 000025 TPC2	0003 R 000026 TPC3	0003 R 000027 TPC4
0003 R 000030 TPC5	0003 R 000031 TPC6	0003 R 000032 TPC7	0003 R 000033 TPC8	0003 R 000034 TPC9
0003 R 000126 TPHM	0003 R 000324 TPH0	0003 R 000012 TPH1	0003 R 000023 TPH10	0003 R 000013 TPH2
0003 R 000014 TPH3	0003 R 000015 TPH4	0003 R 000016 TPH5	0003 R 000017 TPH6	0003 R 000020 TPH7
0003 R 000021 TPH8	0003 R 000022 TPH9	0003 R 001467 TPR1	0003 R 000262 TPRW	0003 R 000112 TRC1
0003 R 000114 TRC2	0003 R 000116 TRC3	0003 R 000120 TRC4	0003 R 000122 TRC5	0003 R 000124 TRC6
0003 R 001010 TREH01	0003 R 001022 TREH02	0003 R 001034 TREH03	0003 R 001046 TREH04	0003 R 001060 TREH05
0003 R 001072 TREH06	0003 R 001011 TREH1	0003 R 001023 TREH2	0003 R 001035 TREH3	0003 R 001047 TREH4
0003 R 001061 TREH5	0003 R 001073 TREH6	0003 R 000113 TRF1	0003 R 000113 TRF2	0003 R 000115 TRF3
0003 R 000117 TRF4	0003 R 000121 TRF5	0003 R 000123 TRF6	0003 R 001507 TSCRAM	0003 R 001102 TSEC
0003 R 001430 TSTART	0003 R 000106 TUPH	0003 R 000010 TWARN	0003 R 000261 VPRW	0003 R 001406 WFLOW

0003	001440	WPLR	0003	001442	WPLS	0003	001445	WPLSO	0003	001462	WPRI	0003	001463	WPRO
0003	001455	WPSR	0003	001457	WPSS	0003	000363	Z28000	0003	000364	Z28002	0003	000365	Z28003
0003	R 000366	Z28004	0003	R 000367	Z28005	0003	R 000370	Z28006	0003	R 000374	Z28007	0003	R 000375	Z28009
0003	R 000376	Z28010	0003	R 000377	Z28011	0003	R 000400	Z28012	0003	R 000401	Z28013	0003	R 000405	Z28014
0003	R 000406	Z28016	0003	R 000407	Z28017	0003	R 000410	Z28018	0003	R 000411	Z28019	0003	R 000412	Z28020
0003	R 000416	Z28021	0003	R 000417	Z28023	0003	R 000420	Z28024	0003	R 000421	Z28025	0003	R 000422	Z28026
0003	R 000423	Z28027	0003	R 000427	Z28028	0003	R 000430	Z28030	0003	R 000431	Z28031	0003	R 000432	Z28032
0003	R 000433	Z28033	0003	R 000434	Z28034	0003	R 000440	Z28035	0003	R 000441	Z28037	0003	R 000442	Z28038
0003	R 000443	Z28039	0003	R 000444	Z28040	0003	R 000445	Z28041	0003	R 000451	Z28042	0003	R 000452	Z28044
0003	R 000453	Z28045	0003	R 000454	Z28046	0003	R 000455	Z28047	0003	R 000456	Z28048	0003	R 000462	Z28049
0003	R 000463	Z28051	0003	R 000464	Z28052	0003	R 000465	Z28053	0003	R 000466	Z28054	0003	R 000467	Z28055
0003	R 000473	Z28056	0003	R 000474	Z28058	0003	R 000475	Z28059	0003	R 000476	Z28060	0003	R 000477	Z28061
0003	R 000500	Z28062	0003	R 000504	Z28063	0003	R 000505	Z28065	0003	R 000506	Z28066	0003	R 000507	Z28067
0003	R 000510	Z28068	0003	R 000511	Z28069	0003	R 000622	Z28070	0000	R 000000	Z28072	0000	R 000001	Z28073
0000	R 000002	Z28074	0003	R 000623	Z28075	0003	R 000624	Z28076	0003	R 000625	Z28077	0003	R 000626	Z28078
0003	R 000627	Z28079	0003	R 000633	Z28080	0000	R 000003	Z28082	0000	R 000004	Z28083	0000	R 000005	Z28084
0003	R 000634	Z28085	0003	R 000635	Z28086	0003	R 000636	Z28087	0003	R 000637	Z28088	0003	R 000640	Z28089
0003	R 000644	Z28090	0000	R 000006	Z28092	0000	R 000007	Z28093	0000	R 000010	Z28094	0003	R 000645	Z28095
0003	R 000646	Z28096	0003	R 000647	Z28097	0003	R 000650	Z28098	0003	R 000651	Z28099	0003	R 000655	Z28100
0000	R 000011	Z28102	0000	R 000012	Z28103	0000	R 000013	Z28104	0003	R 000656	Z28105	0003	R 000657	Z28106
0003	R 000660	Z28107	0003	R 000661	Z28108	0003	R 000662	Z28109	0003	R 000666	Z28110	0000	R 000014	Z28112
0000	R 000015	Z28113	0000	R 000016	Z28114	0003	R 000667	Z28115	0003	R 000670	Z28116	0003	R 000671	Z28117
0003	R 000672	Z28118	0003	R 000673	Z28119	0003	R 000677	Z28120	0000	R 000017	Z28122	0000	R 000020	Z28123
0000	R 000021	Z28124	0003	R 000700	Z28125	0003	R 000701	Z28126	0003	R 000702	Z28127	0003	R 000703	Z28128
0003	R 000704	Z28129	0000	R 000072	Z28131	0000	R 000073	Z28132	0000	R 000074	Z28133	0000	R 000075	Z28134
0000	R 000076	Z28135	0000	R 000077	Z28136	0000	R 000100	Z28137	0000	R 000101	Z28138	0000	R 000062	Z28140
0000	R 000063	Z28141	0000	R 000064	Z28142	0000	R 000065	Z28143	0000	R 000066	Z28144	0000	R 000067	Z28145
0000	R 000070	Z28146	0000	R 000071	Z28147	0000	R 000052	Z28149	0000	R 000053	Z28150	0000	R 000054	Z28151
0000	R 000055	Z28152	0000	R 000056	Z28153	0000	R 000057	Z28154	0000	R 000060	Z28155	0000	R 000061	Z28156
0000	R 000042	Z28158	0000	R 000043	Z28159	0000	R 000044	Z28160	0000	R 000045	Z28161	0000	R 000046	Z28162
0000	R 000047	Z28163	0000	R 000050	Z28164	0000	R 000051	Z28165	0000	R 000032	Z28167	0000	R 000033	Z28168
0000	R 000034	Z28169	0000	R 000035	Z28170	0000	R 000036	Z28171	0000	R 000037	Z28172	0000	R 000040	Z28173
0000	R 000041	Z28174	0000	R 000022	Z28176	0000	R 000023	Z28177	0000	R 000024	Z28178	0000	R 000025	Z28179
0000	R 000026	Z28180	0000	R 000027	Z28181	0000	R 000030	Z28182	0000	R 000031	Z28183	0003	R 001006	Z28184
0003	R 001007	Z28185	0003	R 001012	Z28186	0003	R 001013	Z28187	0003	R 001014	Z28188	0003	R 001015	Z28189
0003	R 001016	Z28190	0003	R 001017	Z28191	0003	R 001020	Z28192	0003	R 001021	Z28193	0003	R 001024	Z28194
0003	R 001025	Z28195	0003	R 001026	Z28196	0003	R 001027	Z28197	0003	R 001030	Z28198	0003	R 001031	Z28199
0003	R 001032	Z28200	0003	R 001033	Z28201	0003	R 001036	Z28202	0003	R 001037	Z28203	0003	R 001040	Z28204
0003	R 001041	Z28205	0003	R 001042	Z28206	0003	R 001043	Z28207	0003	R 001044	Z28208	0003	R 001045	Z28209
0003	R 001050	Z28210	0003	R 001051	Z28211	0003	R 001052	Z28212	0003	R 001053	Z28213	0003	R 001054	Z28214
0003	R 001055	Z28215	0003	R 001056	Z28216	0003	R 001057	Z28217	0003	R 001062	Z28218	0003	R 001063	Z28219
0003	R 001064	Z28220	0003	R 001065	Z28221	0003	R 001066	Z28222	0003	R 001067	Z28223	0003	R 001070	Z28224
0003	R 001071	Z28225	0003	R 001074	Z28226	0003	R 001075	Z28227	0003	R 001076	Z28228	0003	R 001077	Z28229
0003	R 001100	Z28230	0003	R 001101	Z28231									

00101	1*	SUBROUTINE UPDATE	000000
00103	2*	IMPLICIT REAL(A-Z)	000000
00104	3*	COMMON/CURVAL/TIME ,DEL1 ,FINTIM,DELMIN,DELMAX,DELGR ,DELP1 ,	000000
00104	4*	1DELS ,TWARN ,DELPP ,TPH1 ,TPH2 ,TPH3 ,TPH4 ,TPH5 ,TPH6 ,	000000
00104	5*	1TPH7 ,TPH8 ,TPH9 ,TPH10 ,TPC1 ,TPC2 ,TPC3 ,TPC4 ,TPC5 ,	000000
00104	6*	1TPC6 ,TPC7 ,TPC8 ,TPC9 ,TPC10 ,TAW1 ,TAW2 ,TAW3 ,TAW4 ,TAW5 ,	000000
00104	7*	1TAW6 ,TAW7 ,TAW8 ,TAW9 ,TAW10 ,TAW11 ,TAW12 ,TAW13 ,TAW14 ,	000000
00104	8*	1TAW15 ,TAW16 ,TAW17 ,TAW18 ,TAW19 ,TAW20 ,TAW21 ,TAW22 ,TAW23 ,	000000
00104	9*	1THW1 ,THW2 ,THW3 ,THW4 ,THW5 ,THW6 ,THW7 ,THW8 ,THW9 ,THW10 ,	000000

00104	10*	1THM3 ,THW3 ,THM2 ,THW2 ,THM1 ,THW1 ,ICAN ,NCAA ,TCAM0A ,	000000
00104	11*	1TUPH ,TGPM ,TLPH ,TRF1 ,TRC1 ,TRF2 ,TRC2 ,TRF3 ,TRC3 ,	000000
00104	12*	1TRF4 ,TRC4 ,TRF5 ,TRC5 ,TRF6 ,TRC6 ,TPCOM ,TPHM ,DTPH1 ,	000000
00104	13*	1DTPH2 ,DTPH3 ,DTPH4 ,DTPH5 ,DTPH6 ,DTPH7 ,DTPH8 ,DTPH9 ,DTPH10 ,	000000
00104	14*	1DTPC1 ,DTPC2 ,DTPC3 ,DTPC4 ,DTPC5 ,DTPC6 ,DTPC7 ,DTPC8 ,DTPC9 ,	000000
00104	15*	1DTPC10 ,DTAW1 ,DTAW0 ,DTAM10 ,DTAW10 ,DTAM9 ,DTAW9 ,DTAM8 ,DTAW8 ,	000000
00104	16*	1DTAM7 ,DTAW7 ,DTAM6 ,DTAW6 ,DTAM5 ,DTAW5 ,DTAM4 ,DTAW4 ,DTAM3 ,	000000
00104	17*	1DTAW3 ,DTAM2 ,DTAW2 ,DTAM1 ,DTAW1 ,DTHW1 ,DTHW0 ,DTHH16 ,DTHM6 ,	000000
00105	18*	COMMON/CURVAL/DTHW6 ,DTHM5 ,DTHW5 ,DTHM4 ,DTHW4 ,DTHM3 ,DTHW3 ,	000000
00105	19*	1DTHK2 ,DTHW2 ,DTHM1 ,DTHM1 ,DICAN ,ONCAA ,DTCAHA ,DTUPH ,DTGPM ,	000000
00105	20*	1DTLPH ,DTRF1 ,DTRC1 ,DTRF2 ,DTRC2 ,DTRF3 ,DTRC3 ,DTRF4 ,DTRC4 ,	000000
00105	21*	1DTRF5 ,DTRC5 ,DTRF6 ,DTRC6 ,DTPCOM ,DTPHM ,KPHC ,KPHV ,KPCC ,	000000
00105	22*	1KPCV ,KAAW2 ,KAWW2 ,KAMC ,KAVV ,THM10 ,KHHW2 ,KHHW2 ,KHMC ,	000000
00105	23*	1KHVV ,VPRW ,TPRW ,PPRG ,PLOAD ,NPL ,INT ,APS ,IPSTT ,	000000
00105	24*	1JUPV ,JLPV ,KREQT ,MNSS ,GCCA ,PRCD ,DUMMY ,RPH1 ,BPH1 ,	000000
00105	25*	1RPH2 ,BPH2 ,RPH3 ,BPH3 ,RPH4 ,BPH4 ,RPH5 ,BPH5 ,RPH6 ,	000000
00105	26*	1BPH6 ,RPH7 ,BPH7 ,RPH8 ,BPH8 ,RPH9 ,BPH9 ,RPH10 ,BPH10 ,	000000
00105	27*	1TPH0 ,RPHAV ,BPHT ,RPC1 ,BPC1 ,RPC2 ,BPC2 ,RPC3 ,BPC3 ,	000000
00105	28*	1RPC4 ,BPC4 ,RPC5 ,BPC5 ,RPC6 ,BPC6 ,RPC7 ,BPC7 ,RPC8 ,	000000
00105	29*	1BPC8 ,RPC9 ,BPC9 ,RPC10 ,BPC10 ,TPC0 ,RPCAV ,BPC1 ,RAW1 ,	000000
00105	30*	1BAW1 ,RAW0 ,BAW0 ,TAA10 ,Z28000 ,Z28002 ,Z28003 ,Z28004 ,Z28005 ,	000000
00105	31*	1Z28006 ,JAAH10 ,JAWM10 ,TAA9 ,Z28007 ,Z28009 ,Z28010 ,Z28011 ,Z28012 ,	000000
00105	32*	1Z28013 ,JAAH9 ,JAWM9 ,TAA8 ,Z28014 ,Z28016 ,Z28017 ,Z28018 ,Z28019 ,	000000
00106	33*	COMMON/CURVAL/Z28020 ,JAAH8 ,JAWM8 ,TAA7 ,Z28021 ,Z28023 ,Z28024 ,	000000
00106	34*	1Z28025 ,Z28026 ,Z28027 ,JAAH7 ,JAWM7 ,TAA6 ,Z28028 ,Z28030 ,Z28031 ,	000000
00106	35*	1Z28032 ,Z28033 ,Z28034 ,JAAH6 ,JAWM6 ,TAA5 ,Z28035 ,Z28037 ,Z28038 ,	000000
00106	36*	1Z28039 ,Z28040 ,Z28041 ,JAAH5 ,JAWM5 ,TAA4 ,Z28042 ,Z28044 ,Z28045 ,	000000
00106	37*	1Z28046 ,Z28047 ,Z28048 ,JAAH4 ,JAWM4 ,TAA3 ,Z28049 ,Z28051 ,Z28052 ,	000000
00106	38*	1Z28053 ,Z28054 ,Z28055 ,JAAH3 ,JAWM3 ,TAA2 ,Z28056 ,Z28058 ,Z28059 ,	000000
00106	39*	1Z28060 ,Z28061 ,Z28062 ,JAAH2 ,JAWM2 ,TAA1 ,Z28063 ,Z28065 ,Z28066 ,	000000
00106	40*	1Z28067 ,Z28068 ,Z28069 ,JAAH1 ,JAWM1 ,JAACP ,JAA6R ,RAW10 ,TAA010 ,	000000
00106	41*	1QAAM10 ,TAW010 ,QAWM10 ,BAW10 ,RAW9 ,TAA09 ,QAAM9 ,TAW09 ,QAWM9 ,	000000
00106	42*	1BAW9 ,RAW8 ,TAA08 ,QAAM8 ,TAW08 ,QAWM8 ,BAW8 ,RAW7 ,TAA07 ,	000000
00106	43*	1QAAM7 ,TAW07 ,QAWM7 ,BAW7 ,RAW6 ,TAA06 ,QAAM6 ,TAW06 ,QAWM6 ,	000000
00106	44*	1BAW6 ,RAW5 ,TAA05 ,QAAM5 ,TAW05 ,QAWM5 ,BAW5 ,RAW4 ,TAA04 ,	000000
00106	45*	1QAAM4 ,TAW04 ,QAWM4 ,BAW4 ,RAW3 ,TAA03 ,QAAM3 ,TAW03 ,QAWM3 ,	000000
00106	46*	1BAW3 ,RAW2 ,TAA02 ,QAAM2 ,TAW02 ,QAWM2 ,BAW2 ,RAW1 ,TAA01 ,	000000
00106	47*	1QAAM1 ,TAW01 ,QAWM1 ,BAW1 ,RAWAV ,BAW1 ,RHV1 ,BHW1 ,RHV0 ,	000000
00107	48*	COMMON/CURVAL/BHW0 ,MHH16 ,THH6 ,Z28070 ,Z28075 ,Z28076 ,Z28077 ,	000000
00107	49*	1Z28078 ,Z28079 ,JHWM6 ,JHHM6 ,THH5 ,Z28080 ,Z28085 ,Z28086 ,Z28087 ,	000000
00107	50*	1Z28088 ,Z28089 ,JHWM5 ,JHHM5 ,THH4 ,Z28090 ,Z28095 ,Z28096 ,Z28097 ,	000000
00107	51*	1Z28098 ,Z28099 ,JHWM4 ,JHHM4 ,THH3 ,Z28100 ,Z28105 ,Z28106 ,Z28107 ,	000000
00107	52*	1Z28108 ,Z28109 ,JHWM3 ,JHHM3 ,THH2 ,Z28110 ,Z28115 ,Z28116 ,Z28117 ,	000000
00107	53*	1Z28118 ,Z28119 ,JHWM2 ,JHHM2 ,THH1 ,Z28120 ,Z28125 ,Z28126 ,Z28127 ,	000000
00107	54*	1Z28128 ,Z28129 ,JHWM1 ,JHHM1 ,JHHCP ,RHV6 ,THH06 ,QHHM6 ,THW06 ,	000000
00107	55*	1QHHM6 ,RHV6 ,RHV5 ,THH05 ,QHHM5 ,THW05 ,QHHM5 ,BHW5 ,RHV4 ,	000000
00107	56*	1THH04 ,QHHM4 ,THW04 ,QHHM4 ,BHW4 ,RHV3 ,THH03 ,QHHM3 ,THW03 ,	000000
00107	57*	1QHHM3 ,BHW3 ,RHV2 ,THH02 ,QHHM2 ,THW02 ,QHHM2 ,BHW2 ,RHV1 ,	000000
00107	58*	1THH01 ,QHHM1 ,THW01 ,QHHM1 ,BHW1 ,BHW1 ,RHVAV ,OCAERR ,PROPN ,	000000
00107	59*	1NCAD ,TCCHOA ,GCAA ,GRETOT ,PNSS ,MUPH ,MLPH ,GREH ,GBPH ,	000000
00107	60*	1TBPH ,JRECK1 ,JRCFK1 ,JRECK2 ,JRCFK2 ,JRECK3 ,JRCFK3 ,JRECK4 ,JRCFK4 ,	000000
00107	61*	1JRECK5 ,JRCFK5 ,JRECK6 ,JRCFK6 ,Z28184 ,Z28185 ,TREH01 ,TREH1 ,Z28186 ,	000000
00107	62*	1Z28187 ,Z28188 ,Z28189 ,Z28190 ,Z28191 ,Z28192 ,Z28193 ,TREH02 ,TREH2 ,	000000
00110	63*	COMMON/CURVAL/Z28194 ,Z28195 ,Z28196 ,Z28197 ,Z28198 ,Z28199 ,Z28200 ,	000000
00110	64*	1Z28201 ,TREH03 ,TREH3 ,Z28202 ,Z28203 ,Z28204 ,Z28205 ,Z28206 ,Z28207 ,	000000
00110	65*	1Z28208 ,Z28209 ,TREH04 ,TREH4 ,Z28210 ,Z28211 ,Z28212 ,Z28213 ,Z28214 ,	000000
00110	66*	1Z28215 ,Z28216 ,Z28217 ,TREH05 ,TREH5 ,Z28218 ,Z28219 ,Z28220 ,Z28221 ,	000000

00110	67*	1ZZ8222,ZZ8223,ZZ8224,ZZ8225,TREH06,TREH6,ZZ8226,ZZ8227,ZZ8228,	000000
00110	68*	1ZZ8229,ZZ8230,ZZ8231,TSEC,ORF1,ORF2,ORF3,ORF4,ORF5,	000000
00110	69*	1ORF6,QBPH,QHMT,QHMT,QAMT,QAAMT,MARGIN,POWFLD,EAE,	000000
00110	70*	101,D2,EAE1,KUNACP,KUNGR,KUNHCV,KUNWCP,KUNHCP,RFTSL,	000000
00110	71*	1PARTRT,FSPH,FVIS,FCON,HSATP,HSATT,KPHVT,KPHCT,KPHN,	000000
00110	72*	1KPCVT,KPCCT,KPCN,KAWRX,KAMR,KAAAR,KAWVR,KAAAG,KAWA,	000000
00110	73*	1KAAA,KAAAT,KAMTR,KAWTR,KAAAU,KAAABU,KAAAK,KAAABK,KAMAK,	000000
00110	74*	1KAMBK,KAMCT,KAWVT,KAWN,KAWW1,KAAW1,KAWVI,KAWVO,KAMCI,	000000
00110	75*	1KAMCO,KHHRX,KHWRX,KHMRX,KHMCT,KHMC1,KHMC0,KHVV1,KHVV1,	000000
00110	76*	1KHVV0,KHMC10,KHWH1,KHWH0,KHWN,KHWH1,KHWH1,KHWHK,KHWHKE,	000000
00110	77*	1KHHC,KHHCKE,KHMAK,KHMBK,KHWA,KHWA,KAWSQ,KHWSQ,KAWISQ,	000000
00111	78*	COMMON/CURVAL/KPHSQ,KPCSQ,KHWSQ,KRENN,KRFV1,KRFV2,KRFV3,	000000
00111	79*	1KRFV4,KRFV5,KRFV6,KRCV1,KRCV2,KRCV3,KRCV4,KRCV5,KRCV6,	000000
00111	80*	1KREA1,KREA2,KREA3,KREA4,KREA5,KREA6,KREL1,KREL2,KREL3,	000000
00111	81*	1KREL4,KREL5,KREL6,KREPF1,KREPF2,KREPF3,KREPO,KREPF,KREGF,	000000
00111	82*	1KREPF4,KREPF5,KREPF6,KCCAN,KCAAN,KCAR,KHWH16,KCATAU,ITPH1,	000000
00111	83*	1ITPH2,ITPH3,ITPH4,ITPH5,ITPH6,ITPH7,ITPH8,ITPH9,ITPH10,	000000
00111	84*	1ITPHM,ITPC1,ITPC2,ITPC3,ITPC4,ITPC5,ITPC6,ITPC7,ITPC8,	000000
00111	85*	1ITPC9,ITPC10,ITPCON,ITAW0,ITAW1,ITAW1,ITAW2,ITAW3,ITAW4,	000000
00111	86*	1ITAW5,ITAW6,ITAW7,ITAW8,ITAW9,ITAW10,ITAM1,ITAM2,ITAM3,	000000
00111	87*	1ITAM4,ITAM5,ITAM6,ITAM7,ITAM8,ITAM9,ITAM10,ITHW0,ITHW1,	000000
00111	88*	1ITHW1,ITHW2,ITHW3,ITHW4,ITHW5,ITHW6,ITHM1,ITHM2,ITHM3,	000000
00111	89*	1ITHM4,ITHM5,ITHM6,ITHM16,IVPRW,ITPRW,IPPRG,IPL0AD,INPL,	000000
00111	90*	1IINT,IAPS,IIPSI7,WFLOW,ITRF1,ITRF2,ITRF3,ITRF4,ITRF5,	000000
00111	91*	1ITRF6,ITRC1,ITRC2,ITRC3,ITRC4,ITRC5,ITRC6,ITUPH,ITLPH,	000000
00111	92*	1ITCAHA,IICAN,INCAA,TSTART,TFLAG,KPLPB,KPLRT,KPLJD,KPLJ1,	000000
00112	93*	COMMON/CURVAL/KPLJ2,KPLCR,WPLR,SPL,WPLS,KPL,KPLN,	000000
00112	94*	1WPLSQ,NPS,KPSPB,KPSRT,KPSJD,KPSJ1,KPSJ2,KPSCR,WPSR,	000000
00112	95*	1SPS,WPS,KPS,KPSN,WPRI,WPRO,GPRI,GPRO,QPR,	000000
00112	96*	1TPRI,KPRV,GAA,IAA110,KTAU,GCAAS,KGPC,POWER,HEFLOW,	000000
00112	97*	1AHEFLO,TINLET,KCARG,KCAPBN,KCART,SCAV,TLPHD,TSCRAM,THWOSS,	000000
00112	98*	1THWOS,ITHM10,JGPK,ITGPM,	000000
00113	99*	COMMON/ZFLAGS/KEEP,NALARM,1ZZZZZ	000000
00114	100*	INTEGER KEEP,NALARM,1ZZZZZ	000000
00115	101*	IF(1ZZZZZ) 99997,99998,99999	000000
00120	102*	99997 CONTINUE @ INITIAL	000002
00121	103*	KPHC=KPHCT/KPHN	000002
00122	104*	KPHV=KPHVT/KPHN	000005
00123	105*	TPH1=ITPH1	000010
00124	106*	TPH2=ITPH2	000012
00125	107*	TPH3=ITPH3	000014
00126	108*	TPH4=ITPH4	000016
00127	109*	TPH5=ITPH5	000020
00130	110*	TPH6=ITPH6	000022
00131	111*	TPH7=ITPH7	000024
00132	112*	TPH8=ITPH8	000026
00133	113*	TPH9=ITPH9	000030
00134	114*	TPH10=ITPH10	000032
00135	115*	TPHM=ITPHM	000034
00136	116*	KPCCT=KPCCT/KPCN	000036
00137	117*	KPCV=KPCVT/KPCN	000041
00140	118*	TPC1=ITPC1	000044
00141	119*	TPC2=ITPC2	000046
00142	120*	TPC3=ITPC3	000050
00143	121*	TPC4=ITPC4	000052
00144	122*	TPC5=ITPC5	000054
00145	123*	TPC6=ITPC6	000056

00146	124*	TPC7=ITPC7	000060
00147	125*	TPC8=ITPC8	000062
00150	126*	TPC9=ITPC9	000064
00151	127*	TPC10=ITPC10	000066
00152	128*	TPCOM=ITPCOM	000070
00153	129*	TAW1=ITAW1	000072
00154	130*	TAW0=ITAW0	000074
00155	131*	TAW1=ITAW1	000076
00156	132*	TAW2=ITAW2	000100
00157	133*	TAW3=ITAW3	000102
00160	134*	TAW4=ITAW4	000104
00161	135*	TAW5=ITAW5	000106
00162	136*	TAW6=ITAW6	000110
00163	137*	TAW7=ITAW7	000112
00164	138*	TAW8=ITAW8	000114
00165	139*	TAW9=ITAW9	000116
00166	140*	TAW10=ITAW10	000120
00167	141*	TAM1=ITAM1	000122
00170	142*	TAM2=ITAM2	000124
00171	143*	TAM3=ITAM3	000126
00172	144*	TAM4=ITAM4	000130
00173	145*	TAM5=ITAM5	000132
00174	146*	TAM6=ITAM6	000134
00175	147*	TAM7=ITAM7	000136
00176	148*	TAM8=ITAM8	000140
00177	149*	TAM9=ITAM9	000142
00200	150*	TAM10=ITAM10	000144
00201	151*	KAAW2=1.-KAAW1	000146
00202	152*	KAWW2=1.-KAWW1	000151
00203	153*	KAMC= KAMCT/KAWN	000154
00204	154*	KAWV= KAWVT/KAWN	000157
00205	155*	THW0=ITHW0	000162
00206	156*	THW1=ITHW1	000164
00207	157*	THW1=ITHW1	000166
00210	158*	THW2=ITHW2	000170
00211	159*	THW3=ITHW3	000172
00212	160*	THW4=ITHW4	000174
00213	161*	THW5=ITHW5	000176
00214	162*	THW6=ITHW6	000200
00215	163*	THM1=ITHM1	000202
00216	164*	THM2=ITHM2	000204
00217	165*	THM3=ITHM3	000206
00220	166*	THM4=ITHM4	000210
00221	167*	THM5=ITHM5	000212
00222	168*	THM6=ITHM6	000214
00223	169*	THM10=ITHM10	000216
00224	170*	THM16=ITHM16	000220
00225	171*	KHHW2=1.-KHHW1	000222
00226	172*	KHHW2=1.-KHHW1	000225
00227	173*	KHMC= KHMCCT/KHWN	000230
00230	174*	KHVV= KHVVT/KHWN	000233
00231	175*	VPRW=IVPRW	000236
00232	176*	TPRW=ITPRW	000240
00233	177*	PPRG=IPPRG	000242
00234	178*	PL0AD=IPL0AD	000244
00235	179*	NPL=INPL	000246
00236	180*	INT=IINT	000250

00237	181*	APS=IAPS	000252
00240	182*	IPSIT=IIPSIT	000254
00241	183*	TRF1=ITRF1	000256
00242	184*	TRF2=ITRF2	000260
00243	185*	TRF3=ITRF3	000262
00244	186*	TRF4=ITRF4	000264
00245	187*	TRF5=ITRF5	000266
00246	188*	TRF6=ITRF6	000270
00247	189*	TRC1=ITRC1	000272
00250	190*	TRC2=ITRC2	000274
00251	191*	TRC3=ITRC3	000276
00252	192*	TRC4=ITRC4	000300
00253	193*	TRC5=ITRC5	000302
00254	194*	TRC6=ITRC6	000304
00255	195*	KREOT=3412800.*KREPO/3600.	000306
00256	196*	TUPH=ITUPH	000312
00257	197*	TGPH=ITUPH	000314
00260	198*	ICAH0A=ITCAHA	000315
00261	199*	ICAN=ICAN	000317
00262	200*	NCAA=INCAA	000321
00263	201*	TLPH=ITLPH	000323
00264	202*	JLPV=6031.	000325
00265	203*	JUPV=12400.	000327
00266	204*	MNSS=PNSS*194./KUNGR*(JUPV/TUPH+JLPV/TLPH).	000331
00267	205*	99998 CONTINUE 2 DYNAMIC	000342
00270	206*	GCCA=AFGEN(3,MEFLOW,TIME)	000342
00271	207*	IF (TIME.GT.60.0)GCCA=-00001	000347
00273	208*	PRCD=AFGEN(6,POWER,TIME)	000355
00274	209*	DUMHY=PRCD	000363
00275	210*	IF (TIME.GE.TSCRAM)WFLOW=42.78	000364
00277	211*	IF (TIME.GE.TSCRAM)GAA=760.5	000372
00301	212*	IF (TIME.GT.TSCRAM+30.0)THWOS=THWOS	000400
00303	213*	RPH1=AFGEN(9,RTSL,TPH1)	000407
00304	214*	DTPH1=WFLOW*(THW0-TPH1)/(KPHC/KUNWCP*KPHV*RPH1)	000415
00305	215*	TPH1=INTGRL(ITPH1,DTPH1)	000426
00306	216*	RPH2=AFGEN(15,RTSL,TPH2)	000433
00307	217*	DTPH2=WFLOW*(TPH1-TPH2)/(KPHC/KUNWCP*KPHV*RPH2)	000441
00310	218*	TPH2=INTGRL(ITPH2,DTPH2)	000452
00311	219*	RPH3=AFGEN(21,RTSL,TPH3)	000457
00312	220*	DTPH3=WFLOW*(TPH2-TPH3)/(KPHC/KUNWCP*KPHV*RPH3)	000465
00313	221*	TPH3=INTGRL(ITPH3,DTPH3)	000476
00314	222*	RPH4=AFGEN(27,RTSL,TPH4)	000503
00315	223*	DTPH4=WFLOW*(TPH3-TPH4)/(KPHC/KUNWCP*KPHV*RPH4)	000511
00316	224*	TPH4=INTGRL(ITPH4,DTPH4)	000522
00317	225*	RPH5=AFGEN(33,RTSL,TPH5)	000527
00320	226*	DTPH5=WFLOW*(TPH4-TPH5)/(KPHC/KUNWCP*KPHV*RPH5)	000535
00321	227*	TPH5=INTGRL(ITPH5,DTPH5)	000546
00322	228*	RPH6=AFGEN(39,RTSL,TPH6)	000553
00323	229*	DTPH6=WFLOW*(TPH5-TPH6)/(KPHC/KUNWCP*KPHV*RPH6)	000561
00324	230*	TPH6=INTGRL(ITPH6,DTPH6)	000572
00325	231*	RPH7=AFGEN(45,RTSL,TPH7)	000577
00326	232*	DTPH7=WFLOW*(TPH6-TPH7)/(KPHC/KUNWCP*KPHV*RPH7)	000605
00327	233*	TPH7=INTGRL(ITPH7,DTPH7)	000616
00330	234*	RPH8=AFGEN(51,RTSL,TPH8)	000623
00331	235*	DTPH8=WFLOW*(TPH7-TPH8)/(KPHC/KUNWCP*KPHV*RPH8)	000631
00332	236*	TPH8=INTGRL(ITPH8,DTPH8)	000642
00333	237*	RPH9=AFGEN(57,RTSL,TPH9)	000647

00334	238*	DTPH9=WFLOW*(TPH8-TPH9)/(KPHC/KUNWCP*KPHV*RP9)	000655
00335	239*	TPH9=INTGRL(ITPH9,DTPH9)	000666
00336	240*	RPH10=AFGEN(63,RFTSL,TPH10)	000673
00337	241*	DTPH10=WFLOW*(TPH9-TPH10)/(KPHC/KUNWCP*KPHV*RP10)	000701
00340	242*	TPH10=INTGRL(ITPH10,DTPH10)	000712
00341	243*	RPC1=AFGEN(69,RFTSL,TPC1)	000717
00342	244*	DTPC1=WFLOW*(TAW0-TPC1)/(KPCCK/KUNWCP*KPCV*RPC1)	000725
00343	245*	TPC1=INTGRL(ITPC1,DTPC1)	000736
00344	246*	RPC2=AFGEN(75,RFTSL,TPC2)	000743
00345	247*	DTPC2=WFLOW*(TPC1-TPC2)/(KPCCK/KUNWCP*KPCV*RPC2)	000751
00346	248*	TPC2=INTGRL(ITPC2,DTPC2)	000762
00347	249*	RPC3=AFGEN(81,RFTSL,TPC3)	000767
00350	250*	DTPC3=WFLOW*(TPC2-TPC3)/(KPCCK/KUNWCP*KPCV*RPC3)	000775
00351	251*	TPC3=INTGRL(ITPC3,DTPC3)	001006
00352	252*	RPC4=AFGEN(87,RFTSL,TPC4)	001013
00353	253*	DTPC4=WFLOW*(TPC3-TPC4)/(KPCCK/KUNWCP*KPCV*RPC4)	001021
00354	254*	TPC4=INTGRL(ITPC4,DTPC4)	001032
00355	255*	RPC5=AFGEN(93,RFTSL,TPC5)	001037
00356	256*	DTPC5=WFLOW*(TPC4-TPC5)/(KPCCK/KUNWCP*KPCV*RPC5)	001045
00357	257*	TPC5=INTGRL(ITPC5,DTPC5)	001056
00360	258*	RPC6=AFGEN(99,RFTSL,TPC6)	001063
00361	259*	DTPC6=WFLOW*(TPC5-TPC6)/(KPCCK/KUNWCP*KPCV*RPC6)	001071
00362	260*	TPC6=INTGRL(ITPC6,DTPC6)	001102
00363	261*	RPC7=AFGEN(105,RFTSL,TPC7)	001107
00364	262*	DTPC7=WFLOW*(TPC6-TPC7)/(KPCCK/KUNWCP*KPCV*RPC7)	001115
00365	263*	TPC7=INTGRL(ITPC7,DTPC7)	001126
00366	264*	RPC8=AFGEN(111,RFTSL,TPC8)	001133
00367	265*	DTPC8=WFLOW*(TPC7-TPC8)/(KPCCK/KUNWCP*KPCV*RPC8)	001141
00370	266*	TPC8=INTGRL(ITPC8,DTPC8)	001152
00371	267*	RPC9=AFGEN(117,RFTSL,TPC9)	001157
00372	268*	DTPC9=WFLOW*(TPC8-TPC9)/(KPCCK/KUNWCP*KPCV*RPC9)	001165
00373	269*	TPC9=INTGRL(ITPC9,DTPC9)	001176
00374	270*	RPC10=AFGEN(123,RFTSL,TPC10)	001203
00375	271*	DTPC10=WFLOW*(TPC9-TPC10)/(KPCCK/KUNWCP*KPCV*RPC10)	001211
00376	272*	TPC10=INTGRL(ITPC10,DTPC10)	001222
00377	273*	RAWI=AFGEN(129,RFTSL,TAWI)	001227
00400	274*	TPH0=TPH10	001235
00401	275*	DTAWI=WFLOW*(TPH0-TAWI)/(KAMCI/KUNWCP*KAWVI*RAWI)	001237
00402	276*	TAWI=INTGRL(ITAWI,DTAWI)	001247
00403	277*	RAW0=AFGEN(135,RFTSL,TAW0)	001254
00404	278*	TAW01=(TAW1-(KAWW1)*(TAWI))/KAWW2	001262
00405	279*	TAW02=(TAW2-(KAWW1)*(TAW01))/KAWW2	001267
00406	280*	TAW03=(TAW3-(KAWW1)*(TAW02))/KAWW2	001273
00407	281*	TAW04=(TAW4-(KAWW1)*(TAW03))/KAWW2	001277
00410	282*	TAW05=(TAW5-(KAWW1)*(TAW04))/KAWW2	001303
00411	283*	TAW06=(TAW6-(KAWW1)*(TAW05))/KAWW2	001307
00412	284*	TAW07=(TAW7-(KAWW1)*(TAW06))/KAWW2	001313
00413	285*	TAW08=(TAW8-(KAWW1)*(TAW07))/KAWW2	001317
00414	286*	TAW09=(TAW9-(KAWW1)*(TAW08))/KAWW2	001323
00415	287*	TAW010=(TAW10-(KAWW1)*(TAW09))/KAWW2	001327
00416	288*	DTAW0=WFLOW*(TAW010-TAW0)/(KAMCO/KUNWCP*KAWV0*RAW0)	001333
00417	289*	TAW0=INTGRL(ITAW0,DTAW0)	001343
00420	290*	JAACP=GAA*KUNACP	001350
00421	291*	JAAGR=(GAA/KAAG)*.681	001353
00422	292*	ZZ8000=KAAR*JAAGR*(KAAAU*KAABU*(TAA10/KAATR))*681/	001363
00422	293*	1(KAAAK*KAABK*TAA10/KAATR)	001363
00423	294*	ZZ8002=KAHR/(KAMAK-KAMBK*(TAM10)/KAMTR)	001405

00424	295*	JAAH10=KAAA/KAWN/(0.5*Z28002+Z28000)/JAACP	001414
00425	296*	TAA010=((TAA110)*(1.-KAAW1*JAAM10)+JAAH10*TAM10)/(1.+KAAW2*	001423
00425	297*	1JAAH10)	001423
00426	298*	QAAH10=JAACP*((TAA110)-TAA010)	001436
00427	299*	Z28005=AFGEN(147,FSPH,TAM10)	001441
00430	300*	Z28004=AFGEN(144,FVIS,TAM10)	001447
00431	301*	Z28003=AFGEN(141,FCON,TAM10)	001455
00432	302*	Z28006=KAWRX/(Z28003*(WFLOW*3600./Z28004))*8*	001463
00432	303*	1(Z28005+Z28004/Z28003))*333)	001463
00433	304*	JAWH10=KAWA/KAWN/(0.5*Z28002*KAWA/KAAA+Z28006)	001511
00434	305*	QAWH10=JAWH10*(TAW10-TAM10)	001522
00435	306*	DTAM10=(QAWH10+QAAH10)/KANC	001526
00436	307*	TAM10=INTGRL(ITAM10,DTAM10)	001531
00437	308*	RAW10=AFGEN(231,RFTSL,TAM10)	001536
00440	309*	DTAW10=(WFLOW*(TAW09-TAW010)-QAWH10/KUNWCP)/KAWV/RAW10	001544
00441	310*	TAW10=INTGRL(ITAW10,DTAW10)	001555
00442	311*	Z28007=KAAR*JAAGR*(KAAAU*KAABU*(TAA9/KAATR))*681/	001562
00442	312*	1(KAAAK*KAABK*TAA9/KAATR)	001562
00443	313*	Z28009=KAMR/(KAMAK-KAMBK*TAM9/KAMTR)	001605
00444	314*	JAAH9=KAAA/KAWN/(0.5*Z28009+Z28007)/JAACP	001614
00445	315*	TAA09=(TAA010*(1.-KAAW1*JAAM9)+JAAH9*TAM9)/(1.+KAAW2*JAAM9)	001623
00446	316*	QAAH9=JAACP*(TAA010-TAA09)	001636
00447	317*	Z28012=AFGEN(156,FSPH,TAM9)	001641
00450	318*	Z28011=AFGEN(153,FVIS,TAM9)	001647
00451	319*	Z28010=AFGEN(150,FCON,TAM9)	001655
00452	320*	Z28013=KAWRX/(Z28010*(WFLOW*3600./Z28011))*8*	001663
00452	321*	1(Z28012+Z28011/Z28010))*333)	001663
00453	322*	JAWH9=KAWA/KAWN/(0.5*Z28009*KAWA/KAAA+Z28013)	001711
00454	323*	QAWH9=JAWH9*(TAW9-TAM9)	001722
00455	324*	DTAM9=(QAWH9+QAAH9)/KANC	001726
00456	325*	TAM9=INTGRL(ITAM9,DTAM9)	001731
00457	326*	RAW9=AFGEN(237,RFTSL,TAM9)	001736
00460	327*	DTAW9=(WFLOW*(TAW08)-TAW09)-QAWH9/KUNWCP)/KAWV/RAW9	001744
00461	328*	TAW9=INTGRL(ITAW9,DTAW9)	001755
00462	329*	Z28014=KAAR*JAAGR*(KAAAU*KAABU*(TAA8/KAATR))*681/	001762
00462	330*	1(KAAAK*KAABK*TAA8/KAATR)	001762
00463	331*	Z28016=KAMR/(KAMAK-KAMBK*TAM8/KAMTR)	002004
00464	332*	JAAH8=KAAA/KAWN/(0.5*Z28016+Z28014)/JAACP	002013
00465	333*	TAA08=(TAA09*(1.-KAAW1*JAAM8)+JAAH8*TAM8)/(1.+KAAW2*JAAM8)	002022
00466	334*	QAAH8=JAACP*(TAA09-TAA08)	002035
00467	335*	Z28019=AFGEN(165,FSPH,TAM8)	002040
00470	336*	Z28018=AFGEN(162,FVIS,TAM8)	002046
00471	337*	Z28017=AFGEN(159,FCON,TAM8)	002054
00472	338*	Z28020=KAWRX/(Z28017*(WFLOW*3600./Z28018))*8*	002062
00472	339*	1(Z28019+Z28018/Z28017))*333)	002062
00473	340*	JAWH8=KAWA/KAWN/(0.5*Z28016*KAWA/KAAA+Z28020)	002110
00474	341*	QAWH8=JAWH8*(TAW8-TAM8)	002121
00475	342*	DTAM8=(QAWH8+QAAH8)/KANC	002125
00476	343*	TAM8=INTGRL(ITAM8,DTAM8)	002130
00477	344*	RAW8=AFGEN(243,RFTSL,TAM8)	002135
00500	345*	DTAW8=(WFLOW*(TAW07)-TAW08)-QAWH8/KUNWCP)/KAWV/RAW8	002143
00501	346*	TAW8=INTGRL(ITAW8,DTAW8)	002154
00502	347*	Z28021=KAAR*JAAGR*(KAAAU*KAABU*(TAA7/KAATR))*681/	002161
00502	348*	1(KAAAK*KAABK*TAA7/KAATR)	002161
00503	349*	Z28023=KAMR/(KAMAK-KAMBK*TAM7/KAMTR)	002203
00504	350*	JAAH7=KAAA/KAWN/(0.5*Z28023+Z28021)/JAACP	002212
00505	351*	TAA07=(TAA08*(1.-KAAW1*JAAM7)+JAAH7*TAM7)/(1.+KAAW2*JAAM7)	002221

00506	352*	QAAM7=JAACP*(TAA08-TAA07)	002234
00507	353*	ZZ8026=AFGEN(174,FSPH,TAW7)	002237
00510	354*	ZZ8025=AFGEN(171,FVIS,TAW7)	002245
00511	355*	ZZ8024=AFGEN(168,FCON,TAW7)	002253
00512	356*	ZZ8027=KAWRX/(ZZ8024*(WFLOW*3600./ZZ8025))*8*	002261
00512	357*	1(ZZ8026*ZZ8025/ZZ8024)*.333)	002261
00513	358*	JAWH7=KAWA/KAWN/(0.5*ZZ8023*KAWA/KAAA*ZZ8027)	002307
00514	359*	QAWH7=JAWH7*(TAW7-TAM7)	002320
00515	360*	DTAM7=(QAWH7-QAAM7)/KAMC	002324
00516	361*	TAM7=INTGRL(IITAM7,DTAM7)	002327
00517	362*	RAW7=AFGEN(249,RFTSL,TAW7)	002334
00520	363*	DTAW7=(WFLOW*(ITAW06)-TAW07)-QAWH7/KUNWCP1/KAWV/RAW7	002342
00521	364*	TAW7=INTGRL(IITAW7,DTAW7)	002353
00522	365*	ZZ8028=KAAR*JAAGR*(KAAAU*KAABU*(TAA6/KAATR))*681/	002360
00522	366*	1(KAAAK*KAABK*TAA6/KAATR)	002360
00523	367*	ZZ8030=KAMR/(KAMAK-KAMBK*TAM6/KAMTR)	002402
00524	368*	JAAH6=KAAA/KAWN/(0.5*ZZ8030*ZZ8028)/JAACP	002411
00525	369*	TAA06=(TAA07*(1.-KAAV1*JAAM6)+JAAM6*TAM6)/(1.+KAAV2*JAAM6)	002420
00526	370*	QAAM6=JAACP*(TAA07-TAA06)	002433
00527	371*	ZZ8033=AFGEN(183,FSPH,TAW6)	002436
00530	372*	ZZ8032=AFGEN(180,FVIS,TAW6)	002444
00531	373*	ZZ8031=AFGEN(177,FCON,TAW6)	002452
00532	374*	ZZ8034=KAWRX/(ZZ8031*(WFLOW*3600./ZZ8032))*8*	002460
00532	375*	1(ZZ8033*ZZ8032/ZZ8031)*.333)	002460
00533	376*	JAWH6=KAWA/KAWN/(0.5*ZZ8030*KAWA/KAAA*ZZ8034)	002506
00534	377*	QAWH6=JAWH6*(TAW6-TAM6)	002517
00535	378*	DTAM6=(QAWH6-QAAM6)/KAMC	002523
00536	379*	TAM6=INTGRL(IITAM6,DTAM6)	002526
00537	380*	RAW6=AFGEN(255,RFTSL,TAW6)	002533
00540	381*	DTAW6=(WFLOW*(ITAW05)-TAW06)-QAWH6/KUNWCP1/KAWV/RAW6	002541
00541	382*	TAW6=INTGRL(IITAW6,DTAW6)	002552
00542	383*	ZZ8035=KAAR*JAAGR*(KAAAU*KAABU*(TAA5/KAATR))*681/	002557
00542	384*	1(KAAAK*KAABK*TAA5/KAATR)	002557
00543	385*	ZZ8037=KAMR/(KAMAK-KAMBK*TAM5/KAMTR)	002601
00544	386*	JAAH5=KAAA/KAWN/(0.5*ZZ8037*ZZ8035)/JAACP	002610
00545	387*	TAA05=(TAA06*(1.-KAAV1*JAAM5)+JAAM5*TAM5)/(1.+KAAV2*JAAM5)	002617
00546	388*	QAAM5=JAACP*(TAA06-TAA05)	002632
00547	389*	ZZ8040=AFGEN(192,FSPH,TAW5)	002635
00550	390*	ZZ8039=AFGEN(189,FVIS,TAW5)	002643
00551	391*	ZZ8038=AFGEN(186,FCON,TAW5)	002651
00552	392*	ZZ8041=KAWRX/(ZZ8038*(WFLOW*3600./ZZ8039))*8*	002657
00552	393*	1(ZZ8040*ZZ8039/ZZ8038)*.333)	002657
00553	394*	JAWH5=KAWA/KAWN/(0.5*ZZ8037*KAWA/KAAA*ZZ8041)	002705
00554	395*	QAWH5=JAWH5*(TAW5-TAM5)	002716
00555	396*	DTAM5=(QAWH5-QAAM5)/KAMC	002722
00556	397*	TAM5=INTGRL(IITAM5,DTAM5)	002725
00557	398*	RAW5=AFGEN(261,RFTSL,TAW5)	002732
00560	399*	DTAW5=(WFLOW*(ITAW04)-TAW05)-QAWH5/KUNWCP1/KAWV/RAW5	002740
00561	400*	TAW5=INTGRL(IITAM5,DTAW5)	002751
00562	401*	ZZ8042=KAAR*JAAGR*(KAAAU*KAABU*(TAA5/KAATR))*681/	002756
00562	402*	1(KAAAK*KAABK*TAA4/KAATR)	002756
00563	403*	ZZ8044=KAMR/(KAMAK-KAMBK*TAM4/KAMTR)	003000
00564	404*	JAAH4=KAAA/KAWN/(0.5*ZZ8044*ZZ8042)/JAACP	003007
00565	405*	TAA04=(TAA05*(1.-KAAV1*JAAM4)+JAAM4*TAM4)/(1.+KAAV2*JAAM4)	003016
00566	406*	QAAM4=JAACP*(TAA05-TAA04)	003031
00567	407*	ZZ8047=AFGEN(201,FSPH,TAW4)	003034
00570	408*	ZZ8046=AFGEN(198,FVIS,TAW4)	003042

00571	409*	ZZ8045=AFGEN(195,FCON,TAW4)	003050
00572	410*	ZZ8048=KAWRX/(ZZ8045*(WFLOW*3600./ZZ8046))*+.8*	003056
00572	411*	1(ZZ8047*ZZ8046/ZZ8045)*+.333)	003056
00573	412*	JAWM4=KAWA/KAWN/(0.5*ZZ8049*KAWA/KAAA+ZZ8048)	003104
00574	413*	QAWM4=JAWM4*(TAW4-TAM4)	003115
00575	414*	DTAM4=(QAWM4+QAMM4)/KAMC	003121
00576	415*	TAM4=INTGRL(ITAM4,DTAM4)	003124
00577	416*	RAW4=AFGEN(267,RFTSL,TAW4)	003131
00600	417*	DTAW4=(WFLOW*(ITAW03)-TAW04)-QAWM4/KUNWCP)/KAWV/RAW4	003137
00601	418*	TAW4=INTGRL(ITAW4,DTAW4)	003150
00602	419*	ZZ8049=KAAR*JAAGR*(KAAA*KAABU*(TAA3/KAATR))*+.681/	003155
00602	420*	1(KAAA*KAABK*TAA3/KAATR)	003155
00603	421*	ZZ8051=KAMR/(KAMAK-KAMBK*TAM3/KAMTR)	003177
00604	422*	JAAM3=KAAA/KAWN/(0.5*ZZ8051+ZZ8049)/JAACP	003206
00605	423*	TAA03=(TAA04*(1.-KAAM1*JAAM3)+JAAM3*TAM3)/(1.-KAAM2*JAAM3)	003215
00606	424*	QAMM3=JAACP*(TAA04-TAA03)	003230
00607	425*	ZZ8054=AFGEN(210,FSPH,TAW3)	003233
00610	426*	ZZ8053=AFGEN(207,FVIS,TAW3)	003241
00611	427*	ZZ8052=AFGEN(204,FCON,TAW3)	003247
00612	428*	ZZ8055=KAWRX/(ZZ8052*(WFLOW*3600./ZZ8053))*+.8*	003255
00612	429*	1(ZZ8054*ZZ8053/ZZ8052)*+.333)	003255
00613	430*	JAWM3=KAWA/KAWN/(0.5*ZZ8051*KAWA/KAAA+ZZ8055)	003303
00614	431*	QAWM3=JAWM3*(TAW3-TAM3)	003314
00615	432*	DTAM3=(QAWM3+QAMM3)/KAMC	003320
00616	433*	TAM3=INTGRL(ITAM3,DTAM3)	003323
00617	434*	RAW3=AFGEN(273,RFTSL,TAW3)	003330
00620	435*	DTAW3=(WFLOW*(ITAW02)-TAW03)-QAWM3/KUNWCP)/KAWV/RAW3	003336
00621	436*	TAW3=INTGRL(ITAW3,DTAW3)	003347
00622	437*	ZZ8056=KAAR*JAAGR*(KAAA*KAABU*(TAA2/KAATR))*+.681/	003354
00622	438*	1(KAAA*KAABK*TAA2/KAATR)	003354
00623	439*	ZZ8058=KAMR/(KAMAK-KAMBK*TAM2/KAMTR)	003377
00624	440*	JAAM2=KAAA/KAWN/(0.5*ZZ8058+ZZ8056)/JAACP	003406
00625	441*	TAA02=(TAA03*(1.-KAAM1*JAAM2)+JAAM2*TAM2)/(1.-KAAM2*JAAM2)	003415
00626	442*	QAMM2=JAACP*(TAA03-TAA02)	003430
00627	443*	ZZ8061=AFGEN(219,FSPH,TAW2)	003433
00630	444*	ZZ8060=AFGEN(216,FVIS,TAW2)	003441
00631	445*	ZZ8059=AFGEN(213,FCON,TAW2)	003447
00632	446*	ZZ8062=KAWRX/(ZZ8059*(WFLOW*3600./ZZ8060))*+.8*	003455
00632	447*	1(ZZ8061*ZZ8060/ZZ8059)*+.333)	003455
00633	448*	JAWM2=KAWA/KAWN/(0.5*ZZ8058*KAWA/KAAA+ZZ8062)	003503
00634	449*	QAWM2=JAWM2*(TAW2-TAM2)	003514
00635	450*	DTAM2=(QAWM2+QAMM2)/KAMC	003520
00636	451*	TAM2=INTGRL(ITAM2,DTAM2)	003523
00637	452*	RAW2=AFGEN(279,RFTSL,TAW2)	003530
00640	453*	DTAW2=(WFLOW*(ITAW01)-TAW02)-QAWM2/KUNWCP)/KAWV/RAW2	003536
00641	454*	TAW2=INTGRL(ITAW2,DTAW2)	003547
00642	455*	ZZ8063=KAAR*JAAGR*(KAAA*KAABU*(TAA1/KAATR))*+.681/	003554
00642	456*	1(KAAA*KAABK*TAA1/KAATR)	003554
00643	457*	ZZ8065=KAMR/(KAMAK-KAMBK*TAM1/KAMTR)	003577
00644	458*	JAAM1=KAAA/KAWN/(0.5*ZZ8065+ZZ8063)/JAACP	003606
00645	459*	TAA01=(TAA02*(1.-KAAM1*JAAM1)+JAAM1*TAM1)/(1.-KAAM2*JAAM1)	003615
00646	460*	QAMM1=JAACP*(TAA02-TAA01)	003630
00647	461*	ZZ8068=AFGEN(228,FSPH,TAW1)	003633
00650	462*	ZZ8067=AFGEN(225,FVIS,TAW1)	003641
00651	463*	ZZ8066=AFGEN(222,FCON,TAW1)	003647
00652	464*	ZZ8069=KAWRX/(ZZ8066*(WFLOW*3600./ZZ8067))*+.8*	003655
00652	465*	1(ZZ8068*ZZ8067/ZZ8066)*+.333)	003655

00653	466*	JAWMI=KAWA/KAWN/(0.5*ZZ8065*KAWA/KAAA+ZZ8069)	003703
00654	467*	QAWMI=JAWMI*(TAW1-TAM1)	003714
00655	468*	DTAMI=(QAWMI+QAMMI)/KAMC	003720
00656	469*	TAM1=INTGRL(IITAMI,DTAMI)	003723
00657	470*	RAW1=AFGEN(285,RFTSL,TAW1)	003730
00660	471*	OTAW1=(WFLOW*(TAW1)-TAW01)-QAWMI/KUNWCP)/KAWV/RAW1	003736
00661	472*	TAW1=INTGRL(IITAW1,DTAW1)	003747
00662	473*	RHW1=AFGEN(291,RFTSL,THW1)	003754
00663	474*	TPCO=TPC10	003762
00664	475*	DTHW1=WFLOW*(TPCO-THW1)/(KHMCI/KUNWCP*KHWWI+RHW1)	003764
00665	476*	THW1=INTGRL(IITHW1,DTHW1)	003774
00666	477*	RHW0=AFGEN(297,RFTSL,THW0)	004001
00667	478*	THW01=(THW1-(KHWW1)*(THW1))/KHWW2	004007
00670	479*	THW02=(THW2-(KHWW1)*(THW01))/KHWW2	004014
00671	480*	THW03=(THW3-(KHWW1)*(THW02))/KHWW2	004020
00672	481*	THW04=(THW4-(KHWW1)*(THW03))/KHWW2	004024
00673	482*	THW05=(THW5-(KHWW1)*(THW04))/KHWW2	004030
00674	483*	THW06=(THW6-(KHWW1)*(THW05))/KHWW2	004034
00675	484*	DTHW0=WFLOW*(THW06-THW0)/(KHMCO/KUNWCP*KHWW0+RHW0)	004040
00676	485*	THW0=INTGRL(IITHW0,DTHW0)	004050
00677	486*	PNSS=KUNGR*PNSS/(144.*(JUPV/TUPH+JLPV/TLPH))	004055
00700	487*	MHH16=144.*PNSS*KHWW16/(KUNGR*THH16)	004067
00701	488*	GCAA=KCAR*144.*PNSS/TICAMOA/KUNGR*NCAA	004075
00702	489*	DTHH16=GCAA*KUNHCP*(TLPH-THH16)/(KUNHCV*MHH16)	004104
00703	490*	THH16=INTGRL(IITHH16,CTHH16)	004113
00704	491*	ZZ8072=1.242	004120
00705	492*	ZZ8073=KHHVK*THH6+KHHVKE	004122
00706	493*	ZZ8074=KHHCK*THH6+KHHCKE	004130
00707	494*	ZZ8070=KHHRX/(ZZ8074*(GCAA*3600./ZZ8073)+.8*	004136
00707	495*	1(ZZ8072+ZZ8073/ZZ8074)+.333)	004136
00710	496*	ZZ8075=KHHRX/(KHHAK*KHHBK*(THH6-460.))	004164
00711	497*	JHHCP=GCAA*KUNHCP	004173
00712	498*	JHHM6=(KHHH/KHWN/JHHCP)/(1.5*ZZ8075+ZZ8070)	004176
00713	499*	THH06=(THH16*(1.-KHHW1+JHHM6)+JHHM6*THH6)/(1.+KHHW2+JHHM6)	004205
00714	500*	QHHM6=JHHCP*(THH16-THH06)	004220
00715	501*	ZZ8078=AFGEN(309,FSPH,THW6)	004223
00716	502*	ZZ8077=AFGEN(306,FVIS,THW6)	004231
00717	503*	ZZ8076=AFGEN(303,FCOM,THW6)	004237
00720	504*	ZZ8079=KHHRX/(ZZ8076*(WFLOW*3600./ZZ8077)+.8*	004245
00720	505*	1(ZZ8078+ZZ8077/ZZ8076)+.333)	004245
00721	506*	JHHM6=(KHHW/KHWN)/(1.5*ZZ8075+KHHW/KHHA+ZZ8079)	004273
00722	507*	QHHM6=JHHM6*(THW6-THH6)	004304
00723	508*	DTHH6=(QHHM6+QHHM6)/KHHCK	004310
00724	509*	THH6=INTGRL(IITHH6,DTHH6)	004313
00725	510*	RHW6=AFGEN(357,RFTSL,THW6)	004320
00726	511*	DTHW6=(WFLOW*(THW05)-THW06)-QHHM6/KUNWCP)/KHVV/RHW6	004326
00727	512*	THW6=INTGRL(IITHW6,DTHW6)	004337
00730	513*	ZZ8082=1.242	004344
00731	514*	ZZ8083=KHHVK*THH5+KHHVKE	004346
00732	515*	ZZ8084=KHHCK*THH5+KHHCKE	004354
00733	516*	ZZ8080=KHHRX/(ZZ8084*(GCAA*3600./ZZ8083)+.8*	004362
00733	517*	1(ZZ8082+ZZ8083/ZZ8084)+.333)	004362
00734	518*	ZZ8085=KHHRX/(KHHAK*KHHBK*(THH5-460.))	004410
00735	519*	JHHM5=(KHHH/KHWN/JHHCP)/(1.5*ZZ8085+ZZ8080)	004417
00736	520*	THH05=(THH06*(1.-KHHW1+JHHM5)+JHHM5*THH5)/(1.+KHHW2+JHHM5)	004426
00737	521*	QHHM5=JHHCP*(THH06-THH05)	004441
00740	522*	ZZ8088=AFGEN(318,FSPH,THW5)	004444

00741	523*	ZZ8087=AFGEN(315,FVIS,THW5)	004452
00742	524*	ZZ8086=AFGEN(312,FCCN,THW5)	004460
00743	525*	ZZ8089=KHWRX/(ZZ8086*(WFLOW*3600./ZZ8087)**.8*	004466
00743	526*	1(ZZ8088*ZZ8087/ZZ8086)**.333)	004466
00744	527*	JHWM5=(KHWA/KHWN)/(1.5*ZZ8085*KHWA/KHHA*ZZ8089)	004514
00745	528*	QHWM5=JHWM5*(THW5-THM5)	004525
00746	529*	DTM5=(QHWM5+QHMM5)/KHHK	004531
00747	530*	THM5=INTGRL(ITHM5,DTM5)	004534
00750	531*	RHW5=AFGEN(363,RFTSL,THW5)	004541
00751	532*	DTHW5=(WFLOW*(THW04)-THW05)-QHWM5/KUNWCP1/KHVV/RHW5	004547
00752	533*	THW5=INTGRL(ITHW5,DTHW5)	004560
00753	534*	ZZ8092=1.242	004565
00754	535*	ZZ8093=KHHVK*THH4**KHHVKE	004567
00755	536*	ZZ8094=KHHCK*THH4**KHHCKE	004575
00756	537*	ZZ8090=KHHRX/(ZZ8094*(GCAA*3600./ZZ8093)**.8*	004603
00756	538*	1(ZZ8092*ZZ8093/ZZ8094)**.333)	004603
00757	539*	ZZ8095=KHHRX/(KHHAK*KHHBK*(THM4-460.))	004631
00760	540*	JHMM4=(KHHA/KHWN/JHMCPI)/(1.5*ZZ8095*ZZ8090)	004640
00761	541*	THH04=(THH05*(1.-KHHW1-JHMM4)+JHMM4*THH4)/(1.+KHHW2+JHMM4)	004647
00762	542*	QHMM4=JHMCPI*(THH05-THH04)	004662
00763	543*	ZZ8098=AFGEN(327,FSPH,THW4)	004665
00764	544*	ZZ8097=AFGEN(324,FVIS,THW4)	004673
00765	545*	ZZ8096=AFGEN(321,FCON,THW4)	004701
00766	546*	ZZ8099=KHWRX/(ZZ8096*(WFLOW*3600./ZZ8097)**.8*	004707
00766	547*	1(ZZ8098*ZZ8097/ZZ8096)**.333)	004707
00767	548*	JHMM4=(KHWA/KHWN)/(1.5*ZZ8095*KHWA/KHHA*ZZ8099)	004735
00770	549*	QHMM4=JHMM4*(THW4-THM4)	004746
00771	550*	DTM4=(QHMM4+QHMM4)/KHHK	004752
00772	551*	THM4=INTGRL(ITHM4,DTM4)	004755
00773	552*	RHW4=AFGEN(369,RFTSL,THW4)	004762
00774	553*	DTHW4=(WFLOW*(THW03)-THW04)-QHMM4/KUNWCP1/KHVV/RHW4	004770
00775	554*	THW4=INTGRL(ITHW4,DTHW4)	005001
00776	555*	ZZ8102=1.242	005006
00777	556*	ZZ8103=KHHVK*THH3**KHHVKE	005010
01000	557*	ZZ8104=KHHCK*THH3**KHHCKE	005016
01001	558*	ZZ8100=KHHRX/(ZZ8104*(GCAA*3600./ZZ8103)**.8*	005024
01001	559*	1(ZZ8102*ZZ8103/ZZ8104)**.333)	005024
01002	560*	ZZ8105=KHHRX/(KHHAK*KHHBK*(THM3-460.))	005052
01003	561*	JHMM3=(KHHA/KHWN/JHMCPI)/(1.5*ZZ8105*ZZ8100)	005061
01004	562*	THH03=(THH04*(1.-KHHW1-JHMM3)+JHMM3*THH3)/(1.+KHHW2+JHMM3)	005070
01005	563*	QHMM3=JHMCPI*(THH04-THH03)	005103
01006	564*	ZZ8108=AFGEN(336,FSPH,THW3)	005106
01007	565*	ZZ8107=AFGEN(333,FVIS,THW3)	005114
01010	566*	ZZ8106=AFGEN(330,FCON,THW3)	005122
01011	567*	ZZ8109=KHWRX/(ZZ8106*(WFLOW*3600./ZZ8107)**.8*	005130
01011	568*	1(ZZ8108*ZZ8107/ZZ8106)**.333)	005130
01012	569*	JHMM3=(KHWA/KHWN)/(1.5*ZZ8105*KHWA/KHHA*ZZ8109)	005156
01013	570*	QHMM3=JHMM3*(THW3-THM3)	005167
01014	571*	DTM3=(QHMM3+QHMM3)/KHHK	005173
01015	572*	THM3=INTGRL(ITHM3,DTM3)	005176
01016	573*	RHW3=AFGEN(375,RFTSL,THW3)	005203
01017	574*	DTHW3=(WFLOW*(THW02)-THW03)-QHMM3/KUNWCP1/KHVV/RHW3	005211
01020	575*	THW3=INTGRL(ITHW3,DTHW3)	005222
01021	576*	ZZ8112=1.242	005227
01022	577*	ZZ8113=KHHVK*THH2**KHHVKE	005231
01023	578*	ZZ8114=KHHCK*THH2**KHHCKE	005237
01024	579*	ZZ8110=KHHRX/(ZZ8114*(GCAA*3600./ZZ8113)**.8*	005245

01024	580*	1(ZZ8112*ZZ8113/ZZ8114)*.333)	005245
01025	581*	ZZ8115=KMMRX/(KHMMA+KMMBK*(THM2-960.))	005273
01026	582*	JHMM2=(KHMA/KHWN/JHMC)/(.5*ZZ8115+ZZ8110)	005302
01027	583*	THM02=(THM03*(1.-KHMW1+JHMM2)+JHMM2*THM2)/(1.+KHMW2+JHMM2)	005311
01030	584*	QHMM2=JHMC*(THM03-THM02)	005324
01031	585*	ZZ8118=AFGEN(345,FSPH,THW2)	005327
01032	586*	ZZ8117=AFGEN(342,FVIS,THW2)	005335
01033	587*	ZZ8116=AFGEN(339,FCON,THW2)	005343
01034	588*	ZZ8119=KMMRX/(ZZ8116*(WFLOW+3600./ZZ8117)*.8*	005351
01034	589*	1(ZZ8118*ZZ8117/ZZ8116)*.333)	005351
01035	590*	JHMM2=(KHMA/KHWN)/(1.5*ZZ8115+KHMW/KHMA+ZZ8119)	005377
01036	591*	QHMM2=JHMM2*(THW2-THM2)	005410
01037	592*	DTMM2=(QHMM2+QHMM2)/KMMC	005414
01040	593*	THM2=INTGRL(ITHM2,DTMM2)	005417
01041	594*	RHM2=AFGEN(381,RFTSL,THW2)	005424
01042	595*	DTMM2=(WFLOW*(THW01)-THW02)-QHMM2/KUNWCP)/KHMV/RHM2	005432
01043	596*	THW2=INTGRL(ITHW2,DTMM2)	005443
01044	597*	ZZ8122=1.242	005450
01045	598*	ZZ8123=KHMVK*THM1+KHMVKE	005452
01046	599*	ZZ8124=KHMCK*THM1+KHMCKE	005460
01047	600*	ZZ8120=KMMRX/(ZZ8124*(GCAA+3600./ZZ8123)*.8*	005466
01047	601*	1(ZZ8122*ZZ8123/ZZ8124)*.333)	005466
01050	602*	ZZ8125=KMMRX/(KHMMA+KMMBK*(THM1-960.))	005514
01051	603*	JHMM1=(KHMA/KHWN/JHMC)/(.5*ZZ8125+ZZ8120)	005523
01052	604*	THM01=(THM02*(1.-KHMW1+JHMM1)+JHMM1*THM1)/(1.+KHMW2+JHMM1)	005532
01053	605*	QHMM1=JHMC*(THM02-THM01)	005545
01054	606*	ZZ8128=AFGEN(354,FSPH,THW1)	005550
01055	607*	ZZ8127=AFGEN(351,FVIS,THW1)	005556
01056	608*	ZZ8126=AFGEN(348,FCON,THW1)	005564
01057	609*	ZZ8129=KMMRX/(ZZ8126*(WFLOW+3600./ZZ8127)*.8*	005572
01057	610*	1(ZZ8128*ZZ8127/ZZ8126)*.333)	005572
01060	611*	JHMM1=(KHMA/KHWN)/(1.5*ZZ8125+KHMW/KHMA+ZZ8129)	005620
01061	612*	QHMM1=JHMM1*(THW1-THM1)	005631
01062	613*	DTMM1=(QHMM1+QHMM1)/KMMC	005635
01063	614*	THM1=INTGRL(ITHM1,DTMM1)	005640
01064	615*	RHM1=AFGEN(387,RFTSL,THW1)	005645
01065	616*	DTMM1=(WFLOW*(THW1)-THW01)-QHMM1/KUNWCP)/KHMV/RHM1	005653
01066	617*	THW1=INTGRL(ITHW1,DTMM1)	005664
01067	618*	OCAERR=THW05-THW0	005671
01070	619*	PROPBN=100./KCAPBN+OCAERR/KCARG	005674
01071	620*	DICAN=PROPBN/KCART	005701
01072	621*	ICAN=INTGRL(IIICAN,DICAN)	005703
01073	622*	NCAO=PROPBN+ICAN	005710
01074	623*	DNCAA=(NCAO-NCAA)/1.	005712
01075	624*	NCAA=INTGRL(INCAA,DNCAA)	005714
01076	625*	DTCAHA=(THM01-TCACHA)/KCATAU	005721
01077	626*	TCACHA=INTGRL(ITCAHA,DTCAHA)	005725
01100	627*	MUPH=PNSS*JUPV+144./KUNGR+TUPH)	005732
01101	628*	TCCHOA=AFGEN(393,TINLET,TIME)	005741
01102	629*	DTUPH=(KUNHCP*(KCCAN+ECCA*(TCCHOA-TUPH)+KCAAN+GCAA*(TCACHA-TUPH))+JGPK*(TGPM-TUPH))/(KUNHCV+MUPH)	005747
01102	630*	1 TUPH)	005747
01103	631*	TUPH=INTGRL(ITUPH,DTUPH)	005772
01104	632*	DTGPM=JGPK*(TUPH-TGPM)/KGPC	005777
01105	633*	TGPM=INTGRL(ITGPM,DTGPM)	006003
01106	634*	MLPH=PNSS*JLPV+144./KUNGR+TLPH)	006010
01107	635*	GRETOT=KCCAN+GCAA+KCAAN+GCAA	006017
01110	636*	GBPH=GRETOT*(1.-KREGF)	006025

01111	637*	QBPH=KREQT*(1.-KREPF)*PRCD	006031
01112	638*	TBPM=TUPH*QBPH/KUNHCP/68PH	006036
01113	639*	GREH=GRETOT*KREGF/KREAN	006042
01114	640*	ZZ8176=3.055E8*GREH*TREH6**-.687	006046
01115	641*	IF (ZZ8176.LT.2300.)ZZ8176=2300.	006056
01117	642*	ZZ8177=8.28E-4*TREH6**-.701*ZZ8176**-.8/3600.	006069
01120	643*	ZZ8178=1.693E-3*1.208E-6*TRC6	006101
01121	644*	ZZ8179=.02305/(ZZ8178*KREL6)	006105
01122	645*	ZZ8180=1./(ZZ8177*KRE A6)+ZZ8179/2.	006111
01123	646*	JRECK6=1./ZZ8180	006120
01124	647*	ZZ8181=57.78*.886*(1./(18.2*.0271*TRF6/1.8)+5.5E-13*(TRF6/1.8)*	006123
01124	648*	1*31/3600.	006123
01125	649*	ZZ8182=2.95E-7*((TRF6*TRC6)/2.)*.00701	006143
01126	650*	ZZ8183=.03229/(ZZ8181*KREL6)+.0036/(ZZ8182*KREL6)+ZZ8179/2.	006155
01127	651*	JRCFK6=1./ZZ8183	006167
01130	652*	ZZ8224=JRCFK6/(GREH*KUNHCP)	006172
01131	653*	ZZ8225=1.-1./(1.-EXP(-ZZ8224))*.1./ZZ8224	006177
01132	654*	ZZ8167=3.055E8*GREH*TREH5**-.687	006214
01133	655*	IF (ZZ8167.LT.2300.)ZZ8167=2300.	006222
01135	656*	ZZ8168=8.28E-4*TREH5**-.701*ZZ8167**-.8/3600.	006247
01136	657*	ZZ8169=1.693E-3*1.208E-6*TRC5	006264
01137	658*	ZZ8170=.02305/(ZZ8169*KREL5)	006270
01140	659*	ZZ8171=1./(ZZ8168*KRE A5)+ZZ8170/2.	006274
01141	660*	JRECK5=1./ZZ8171	006303
01142	661*	ZZ8172=57.78*.886*(1./(18.2*.0271*TRF5/1.8)+5.5E-13*(TRF5/1.8)*	006306
01142	662*	1*31/3600.	006306
01143	663*	ZZ8173=2.95E-7*((TRF5*TRC5)/2.)*.00701	006324
01144	664*	ZZ8174=.03229/(ZZ8172*KREL5)+.0036/(ZZ8173*KREL5)+ZZ8170/2.	006336
01145	665*	JRCFK5=1./ZZ8174	006350
01146	666*	ZZ8216=JRECK5/(GREH*KUNHCP)	006353
01147	667*	ZZ8217=1.-1./(1.-EXP(-ZZ8216))*.1./ZZ8216	006356
01150	668*	ZZ8158=3.055E8*GREH*TREH4**-.687	006372
01151	669*	IF (ZZ8158.LT.2300.)ZZ8158=2300.	006400
01153	670*	ZZ8159=8.28E-4*TREH4**-.701*ZZ8158**-.8/3600.	006406
01154	671*	ZZ8160=1.693E-3*1.208E-6*TRC4	006423
01155	672*	ZZ8161=.02305/(ZZ8160*KREL4)	006427
01156	673*	ZZ8162=1./(ZZ8159*KRE A4)+ZZ8161/2.	006433
01157	674*	JRECK4=1./ZZ8162	006442
01160	675*	ZZ8163=57.78*.886*(1./(18.2*.0271*TRF4/1.8)+5.5E-13*(TRF4/1.8)*	006445
01160	676*	1*31/3600.	006445
01161	677*	ZZ8164=2.95E-7*((TRF4*TRC4)/2.)*.00701	006463
01162	678*	ZZ8165=.03229/(ZZ8163*KREL4)+.0036/(ZZ8164*KREL4)+ZZ8161/2.	006475
01163	679*	JRCFK4=1./ZZ8165	006507
01164	680*	ZZ8208=JRECK4/(GREH*KUNHCP)	006512
01165	681*	ZZ8209=1.-1./(1.-EXP(-ZZ8208))*.1./ZZ8208	006515
01166	682*	ZZ8149=3.055E8*GREH*TREH3**-.687	006531
01167	683*	IF (ZZ8149.LT.2300.)ZZ8149=2300.	006537
01171	684*	ZZ8150=8.28E-4*TREH3**-.701*ZZ8149**-.8/3600.	006545
01172	685*	ZZ8151=1.693E-3*1.208E-6*TRC3	006562
01173	686*	ZZ8152=.02305/(ZZ8151*KREL3)	006566
01174	687*	ZZ8153=1./(ZZ8150*KRE A3)+ZZ8152/2.	006572
01175	688*	JRECK3=1./ZZ8153	006601
01176	689*	ZZ8154=57.78*.886*(1./(18.2*.0271*TRF3/1.8)+5.5E-13*(TRF3/1.8)*	006604
01176	690*	1*31/3600.	006604
01177	691*	ZZ8155=2.95E-7*((TRF3*TRC3)/2.)*.00701	006622
01200	692*	ZZ8156=.03229/(ZZ8154*KREL3)+.0036/(ZZ8155*KREL3)+ZZ8152/2.	006634
01201	693*	JRCFK3=1./ZZ8156	006646

01111	637*	QBPH=KREQT*(1.-KREPF1*PRCD	006031
01112	638*	TBPH=TUPH*QBPH/KUNHCP/GBPH	006036
01113	639*	GREH=GRETOT*KREGF/KRENN	006042
01114	640*	ZZ8176=3.055E8*GREH*TREH6**-.687	006046
01115	641*	IF (ZZ8176.LT.2300.)ZZ8176=2300.	006056
01117	642*	ZZ8177=8.28E-4*TREH6**+.701*ZZ8176**+.8/3600.	006064
01120	643*	ZZ8178=1.693E-3*1.208E-6*TRC6	006101
01121	644*	ZZ8179=.02305/(ZZ8178*KREL6)	006105
01122	645*	ZZ8180=1./(ZZ8177*KREAG1)*ZZ8179/2.	006111
01123	646*	JRECK6=1./ZZ8180	006120
01124	647*	ZZ8181=57.78*.886*(1./(18.2+.0271*TRF6/1.8)+5.5E-13*(TRF6/1.8)*	006123
01124	648*	1*3)/3600.	006123
01125	649*	ZZ8182=2.95E-7*((TRF6+TRC6)/2.)*.0.701	006143
01126	650*	ZZ8183=.03229/(ZZ8181*KREL6)*.0036/(ZZ8182*KREL6)+ZZ8179/2.	006155
01127	651*	JRCFK6=1./ZZ8183	006167
01130	652*	ZZ8224=JRECK6/(GREH*KUNHCP)	006172
01131	653*	ZZ8225=1.-1./(1.-EXP(-ZZ8224))*1./ZZ8224	006177
01132	654*	ZZ8167=3.055E8*GREH*TREH5**-.687	006214
01133	655*	IF (ZZ8167.LT.2300.)ZZ8167=2300.	006222
01135	656*	ZZ8168=8.28E-4*TREH5**+.701*ZZ8167**+.8/3600.	006247
01136	657*	ZZ8169=1.693E-3*1.208E-6*TRC5	006264
01137	658*	ZZ8170=.02305/(ZZ8169*KREL5)	006270
01140	659*	ZZ8171=1./(ZZ8168*KREAG5)+ZZ8170/2.	006274
01141	660*	JRECK5=1./ZZ8171	006303
01142	661*	ZZ8172=57.78*.886*(1./(18.2+.0271*TRF5/1.8)+5.5E-13*(TRF5/1.8)*	006306
01142	662*	1*3)/3600.	006306
01143	663*	ZZ8173=2.95E-7*((TRF5+TRC5)/2.)*.0.701	006324
01144	664*	ZZ8174=.03229/(ZZ8172*KREL5)*.0036/(ZZ8173*KREL5)+ZZ8170/2.	006336
01145	665*	JRCFK5=1./ZZ8174	006350
01146	666*	ZZ8216=JRECK5/(GREH*KUNHCP)	006353
01147	667*	ZZ8217=1.-1./(1.-EXP(-ZZ8216))*1./ZZ8216	006356
01150	668*	ZZ8158=3.055E8*GREH*TREH4**-.687	006372
01151	669*	IF (ZZ8158.LT.2300.)ZZ8158=2300.	006400
01153	670*	ZZ8159=8.28E-4*TREH4**+.701*ZZ8158**+.8/3600.	006406
01154	671*	ZZ8160=1.693E-3*1.208E-6*TRC4	006423
01155	672*	ZZ8161=.02305/(ZZ8160*KREL4)	006427
01156	673*	ZZ8162=1./(ZZ8159*KREAG4)+ZZ8161/2.	006433
01157	674*	JRECK4=1./ZZ8162	006442
01160	675*	ZZ8163=57.78*.886*(1./(18.2+.0271*TRF4/1.8)+5.5E-13*(TRF4/1.8)*	006445
01160	676*	1*3)/3600.	006445
01161	677*	ZZ8164=2.95E-7*((TRF4+TRC4)/2.)*.0.701	006463
01162	678*	ZZ8165=.03229/(ZZ8163*KREL4)*.0036/(ZZ8164*KREL4)+ZZ8161/2.	006475
01163	679*	JRCFK4=1./ZZ8165	006507
01164	680*	ZZ8208=JRECK4/(GREH*KUNHCP)	006512
01165	681*	ZZ8209=1.-1./(1.-EXP(-ZZ8208))*1./ZZ8208	006515
01166	682*	ZZ8149=3.055E8*GREH*TREH3**-.687	006531
01167	683*	IF (ZZ8149.LT.2300.)ZZ8149=2300.	006537
01171	684*	ZZ8150=8.28E-4*TREH3**+.701*ZZ8149**+.8/3600.	006545
01172	685*	ZZ8151=1.693E-3*1.208E-6*TRC3	006562
01173	686*	ZZ8152=.02305/(ZZ8151*KREL3)	006566
01174	687*	ZZ8153=1./(ZZ8150*KREAG3)+ZZ8152/2.	006572
01175	688*	JRECK3=1./ZZ8153	006601
01176	689*	ZZ8154=57.78*.886*(1./(18.2+.0271*TRF3/1.8)+5.5E-13*(TRF3/1.8)*	006604
01176	690*	1*3)/3600.	006604
01177	691*	ZZ8155=2.95E-7*((TRF3+TRC3)/2.)*.0.701	006622
01200	692*	ZZ8156=.03229/(ZZ8154*KREL3)*.0036/(ZZ8155*KREL3)+ZZ8152/2.	006634
01201	693*	JRCFK3=1./ZZ8156	006646

01202	694*	ZZ8200=JRECK3/(GREH*KUNHCP)	006651
01203	695*	ZZ8201=1.-1./(1.-EXP(-ZZ8200)))*1./ZZ8200	006654
01204	696*	ZZ8140=3.055E8*GREH*TREH2**-.687	006670
01205	697*	IF(ZZ8140.LT.2300.)ZZ8140=2300.	006676
01207	698*	ZZ8141=8.28E-4*TREH2**+.701*ZZ8140**+.8/3600.	006704
01210	699*	ZZ8142=1.693E-3*1.208E-6*TRC2	006721
01211	700*	ZZ8143=.02305/(ZZ8142*KREL2)	006725
01212	701*	ZZ8144=1./(ZZ8141*KREA21+ZZ8143/2.	006731
01213	702*	JRECK2=1./ZZ8144	006740
01214	703*	ZZ8145=57.78*.886*(1./(18.2+.0271*TRF2/1.8)*5.5E-13*(TRF2/1.8)*	006743
01214	704*	1*3)/3600.	006743
01215	705*	ZZ8146=2.95E-7*((TRF2*TRC2)/2.1**0.701	006761
01216	706*	ZZ8147=.03229/(ZZ8145*KREL2)*.0036/(ZZ8146*KREL2)+ZZ8143/2.	006773
01217	707*	JRCFK2=1./ZZ8147	007005
01220	708*	ZZ8192=JRECK2/(GREH*KUNHCP)	007010
01221	709*	ZZ8193=1.-1./(1.-EXP(-ZZ8192))*1./ZZ8192	007013
01222	710*	ZZ8131=3.055E8*GREH*TREH1**-.687	007027
01223	711*	IF(ZZ8131.LT.2300.)ZZ8131=2300.	007035
01225	712*	ZZ8132=8.28E-4*TREH1**+.701*ZZ8131**+.8/3600.	007043
01226	713*	ZZ8133=1.693E-3*1.208E-6*TRC1	007060
01227	714*	ZZ8134=.02305/(ZZ8133*KREL1)	007064
01230	715*	ZZ8135=1./(ZZ8132*KREA11+ZZ8134/2.	007070
01231	716*	JRECK1=1./ZZ8135	007077
01232	717*	ZZ8136=57.78*.886*(1./(18.2+.0271*TRF1/1.8)*5.5E-13*(TRF1/1.8)*	007102
01232	718*	1*3)/3600.	007102
01233	719*	ZZ8137=2.95E-7*((TRF1*TRC1)/2.1**0.701	007120
01234	720*	ZZ8138=.03229/(ZZ8136*KREL1)*.0036/(ZZ8137*KREL1)+ZZ8134/2.	007132
01235	721*	JRCFK1=1./ZZ8138	007144
01236	722*	ZZ8184=JRECK1/(GREH*KUNHCP)	007147
01237	723*	ZZ8185=1.-1./(1.-EXP(-ZZ8184))*1./ZZ8184	007152
01240	724*	TREH01=(TUPH*(1.-ZZ8184+ZZ8185)+ZZ8184*TRC1)/(1.+ZZ8184*(1.-	007166
01240	725*	ZZ8185))	007166
01241	726*	TREH02=((TREH01)*(1.-ZZ8192+ZZ8193)+ZZ8192*TRC2)/(1.+ZZ8192*(1.-	007202
01241	727*	1-ZZ8193))	007202
01242	728*	TREH03=((TREH02)*(1.-ZZ8200+ZZ8201)+ZZ8200*TRC3)/(1.+ZZ8200*(1.-	007217
01242	729*	1-ZZ8201))	007217
01243	730*	TREH04=((TREH03)*(1.-ZZ8208+ZZ8209)+ZZ8208*TRC4)/(1.+ZZ8208*(1.-	007234
01243	731*	1-ZZ8209))	007234
01244	732*	TREH05=((TREH04)*(1.-ZZ8216+ZZ8217)+ZZ8216*TRC5)/(1.+ZZ8216*(1.-	007251
01244	733*	1-ZZ8217))	007251
01245	734*	TREH06=((TREH05)*(1.-ZZ8224+ZZ8225)+ZZ8224*TRC6)/(1.+ZZ8224*(1.-	007266
01245	735*	1-ZZ8225))	007266
01246	736*	DTLPH=(KUNHCP*(KRENN*GREH*(TREH06-TLPH)+GBPH*(TBPH-TLPH)))/	007303
01246	737*	1 (KUNHCP*MLPH)	007303
01247	738*	TLPH=INTGRL(ITLPH,DTLPH)	007320
01250	739*	ZZ8187=0.5559*(52.492+0.03953*TRF1-1.512E-5*TRF1**2+2.203E-9*	007325
01250	740*	TRF1**3)	007325
01251	741*	ZZ8189=KRFV1+ZZ8187	007343
01252	742*	ZZ8191=JRCFK1*(TRF1-TRC1)	007345
01253	743*	ORF1=KREFP1*KREQT*KREFP*PRCD/KRENN	007351
01254	744*	OTRF1=(ORF1-ZZ8191)/ZZ8189	007357
01255	745*	TRF1=INTGRL(OTRF1,OTRF1)	007362
01256	746*	ZZ8188=0.1196*(218.378+C.6541*TRC1-4.504E-4*TRC1**2+1.143E-7*	007367
01256	747*	TRC1**3)	007367
01257	748*	ZZ8190=KRCV1+ZZ8188	007405
01260	749*	ZZ8186=KUNHCP*(GREH)*(TREH01-TUPH)	007407
01261	750*	OTRC1=(ZZ8191-ZZ8186)/ZZ8190	007415

01262	751*	TRC1=INTGRL(1TRC1,1TRC1)	007420
01263	752*	ZZ8195=0.5559*(52.492+0.03953*TRF2-1.512E-5*TRF2**2+2.203E-9*	007425
01263	753*	1TRF2**3)	007425
01264	754*	ZZ8197=KRCV2*ZZ8195	007443
01265	755*	ZZ8199=JRCFK2*(1TRF2-TRC2)	007445
01266	756*	QRF2=KREF2*KREQT*KREFP*PRCD/KRENN	007451
01267	757*	DTRF2=(QRF2-ZZ8199)/ZZ8197	007457
01270	758*	TRF2=INTGRL(1TRF2,DTRF2)	007462
01271	759*	ZZ8196=0.1196*(218.378+0.6541*TRC2-4.504E-4*TRC2**2+1.143E-7*	007467
01271	760*	1TRC2**3)	007467
01272	761*	ZZ8198=KRCV2*ZZ8196	007505
01273	762*	ZZ8194=KUNHCP*GREH*(1TREM02-(1TREM01))	007507
01274	763*	DTRC2=(ZZ8199-ZZ8194)/ZZ8198	007515
01275	764*	TRC2=INTGRL(1TRC2,DTRC2)	007520
01276	765*	ZZ8203=0.5559*(52.492+0.03953*TRF3-1.512E-5*TRF3**2+2.203E-9*	007525
01276	766*	1TRF3**3)	007525
01277	767*	ZZ8205=KRCV3*ZZ8203	007543
01300	768*	ZZ8207=JRCFK3*(1TRF3-TRC3)	007545
01301	769*	QRF3=KREF3*KREQT*KREFP*PRCD/KRENN	007551
01302	770*	DTRF3=(QRF3-ZZ8207)/ZZ8205	007557
01303	771*	TRF3=INTGRL(1TRF3,DTRF3)	007562
01304	772*	ZZ8204=0.1196*(218.378+0.6541*TRC3-4.504E-4*TRC3**2+1.143E-7*	007567
01304	773*	1TRC3**3)	007567
01305	774*	ZZ8206=KRCV3*ZZ8204	007605
01306	775*	ZZ8202=KUNHCP*GREH*(1TREM03-(1TREM02))	007607
01307	776*	DTRC3=(ZZ8207-ZZ8202)/ZZ8206	007615
01310	777*	TRC3=INTGRL(1TRC3,DTRC3)	007620
01311	778*	ZZ8211=0.5559*(52.492+0.03953*TRF4-1.512E-5*TRF4**2+2.203E-9*	007625
01311	779*	1TRF4**3)	007625
01312	780*	ZZ8213=KRCV4*ZZ8211	007643
01313	781*	ZZ8215=JRCFK4*(1TRF4-TRC4)	007645
01314	782*	QRF4=KREF4*KREQT*KREFP*PRCD/KRENN	007651
01315	783*	DTRF4=(QRF4-ZZ8215)/ZZ8213	007657
01316	784*	TRF4=INTGRL(1TRF4,DTRF4)	007662
01317	785*	ZZ8212=0.1196*(218.378+0.6541*TRC4-4.504E-4*TRC4**2+1.143E-7*	007667
01317	786*	1TRC4**3)	007667
01320	787*	ZZ8214=KRCV4*ZZ8212	007705
01321	788*	ZZ8210=KUNHCP*GREH*(1TREM04-(1TREM03))	007707
01322	789*	DTRC4=(ZZ8215-ZZ8210)/ZZ8214	007715
01323	790*	TRC4=INTGRL(1TRC4,DTRC4)	007720
01324	791*	ZZ8219=0.5559*(52.492+0.03953*TRF5-1.512E-5*TRF5**2+2.203E-9*	007725
01324	792*	1TRF5**3)	007725
01325	793*	ZZ8221=KRCV5*ZZ8219	007743
01326	794*	ZZ8223=JRCFK5*(1TRF5-TRC5)	007745
01327	795*	QRF5=KREF5*KREQT*KREFP*PRCD/KRENN	007751
01330	796*	DTRF5=(QRF5-ZZ8223)/ZZ8221	007757
01331	797*	TRF5=INTGRL(1TRF5,DTRF5)	007762
01332	798*	ZZ8220=0.1196*(218.378+0.6541*TRC5-4.504E-4*TRC5**2+1.143E-7*	007767
01332	799*	1TRC5**3)	007767
01333	800*	ZZ8222=KRCV5*ZZ8220	010005
01334	801*	ZZ8218=KUNHCP*GREH*(1TREM05-(1TREM04))	010007
01335	802*	DTRC5=(ZZ8223-ZZ8218)/ZZ8222	010015
01336	803*	TRC5=INTGRL(1TRC5,DTRC5)	010020
01337	804*	ZZ8227=0.5559*(52.492+0.03953*TRF6-1.512E-5*TRF6**2+2.203E-9*	010025
01337	805*	1TRF6**3)	010025
01340	806*	ZZ8229=KRCV6*ZZ8227	010043
01341	807*	ZZ8231=JRCFK6*(1TRF6-TRC6)	010045

01342	808*	ORF6=KREPF6*KREQT*KREPF*PRCD/KRENN	010051
01343	809*	DTRF6=(ORF6-ZZ8231)/ZZ8229	010057
01344	810*	TRF6=INTGRL(ITRF6,DTRF6)	010062
01345	811*	ZZ8228=0.1196*(218.37E+0.6541*TRC6-9.509E-4*TRC6**2+1.143E-7*	010067
01345	812*	TRC6**3)	010067
01346	813*	ZZ8230=KRCV6*ZZ8228	010105
01347	814*	ZZ8226=KUNHCP*GREH*(TREM06-(TREM05))	010107
01350	815*	DTRC6=(ZZ8231-ZZ8226)/ZZ8230	010115
01351	816*	TRC6=INTGRL(ITRC6,DTRC6)	010120
01352	817*	DTPCOM=(TPC10-TPCOM)/KTAU	010125
01353	818*	TPCOM=INTGRL(ITPCOM,DTPCOM)	010131
01354	819*	DTPHM=(TPH1-TPHM)/KTAU	010136
01355	820*	TPHM=INTGRL(ITPHM,DTPHM)	010142
01356	821*	RPHAV=(RPH1+RPH2+RPH3+RPH4+RPH5+RPH6+RPH7+RPH8+RPH9+RPH10)/KPHM	010147
01357	822*	BPH10=KPHV*DTPH10*AFGEN(66,PARTRT,TPH10)	010163
01360	823*	BPH9=KPHV*DTPH9*AFGEN(60,PARTRT,TPH9)	010174
01361	824*	BPH8=KPHV*DTPH8*AFGEN(54,PARTRT,TPH8)	010205
01362	825*	BPH7=KPHV*DTPH7*AFGEN(48,PARTRT,TPH7)	010216
01363	826*	BPH6=KPHV*DTPH6*AFGEN(42,PARTRT,TPH6)	010227
01364	827*	BPH5=KPHV*DTPH5*AFGEN(36,PARTRT,TPH5)	010240
01365	828*	BPH4=KPHV*DTPH4*AFGEN(30,PARTRT,TPH4)	010251
01366	829*	BPH3=KPHV*DTPH3*AFGEN(24,PARTRT,TPH3)	010262
01367	830*	BPH2=KPHV*DTPH2*AFGEN(18,PARTRT,TPH2)	010273
01370	831*	BPH1=KPHV*DTPH1*AFGEN(12,PARTRT,TPH1)	010304
01371	832*	BPH1=BPH1+BPH2+BPH3+BPH4+BPH5+BPH6+BPH7+BPH8+BPH9+BPH10	010315
01372	833*	RPCAV=(RPC1+RPC2+RPC3+RPC4+RPC5+RPC6+RPC7+RPC8+RPC9+RPC10)/KPCN	010327
01373	834*	BPC10=KPCV*DTPC10*AFGEN(126,PARTRT,TPC10)	010343
01374	835*	BPC9=KPCV*DTPC9*AFGEN(120,PARTRT,TPC9)	010354
01375	836*	BPC8=KPCV*DTPC8*AFGEN(114,PARTRT,TPC8)	010365
01376	837*	BPC7=KPCV*DTPC7*AFGEN(108,PARTRT,TPC7)	010376
01377	838*	BPC6=KPCV*DTPC6*AFGEN(102,PARTRT,TPC6)	010407
01400	839*	BPC5=KPCV*DTPC5*AFGEN(96,PARTRT,TPC5)	010420
01401	840*	BPC4=KPCV*DTPC4*AFGEN(90,PARTRT,TPC4)	010431
01402	841*	BPC3=KPCV*DTPC3*AFGEN(84,PARTRT,TPC3)	010442
01403	842*	BPC2=KPCV*DTPC2*AFGEN(78,PARTRT,TPC2)	010453
01404	843*	BPC1=KPCV*DTPC1*AFGEN(72,PARTRT,TPC1)	010464
01405	844*	BPCT=BPC1+BPC2+BPC3+BPC4+BPC5+BPC6+BPC7+BPC8+BPC9+BPC10	010475
01406	845*	TAA10=(TAA110+TAA010)/2	010507
01407	846*	TAA9=(TAA010+TAA09)/2	010513
01410	847*	TAA8=(TAA09+TAA08)/2	010517
01411	848*	TAA7=(TAA08+TAA07)/2	010523
01412	849*	TAA6=(TAA07+TAA06)/2	010527
01413	850*	TAA5=(TAA06+TAA05)/2	010533
01414	851*	TAA4=(TAA05+TAA04)/2	010537
01415	852*	TAA3=(TAA04+TAA03)/2	010543
01416	853*	TAA2=(TAA03+TAA02)/2	010547
01417	854*	TAA1=(TAA02+TAA01)/2	010553
01420	855*	RAWAV=(RAW1+RAW2+RAW3+RAW4+RAW5+RAW6+RAW7+RAW8+RAW9+RAW10)/KAWN	010557
01421	856*	BAW0=KAWV*DTAW0*AFGEN(138,PARTRT,TAW0)	010573
01422	857*	BAW10=DTAW10*KAWV*AFGEN(234,PARTRT,TAW10)	010604
01423	858*	BAW9=DTAW9*KAWV*AFGEN(240,PARTRT,TAW9)	010615
01424	859*	BAW8=DTAW8*KAWV*AFGEN(246,PARTRT,TAW8)	010626
01425	860*	BAW7=DTAW7*KAWV*AFGEN(252,PARTRT,TAW7)	010637
01426	861*	BAW6=DTAW6*KAWV*AFGEN(258,PARTRT,TAW6)	010650
01427	862*	BAW5=DTAW5*KAWV*AFGEN(264,PARTRT,TAW5)	010661
01430	863*	BAW4=DTAW4*KAWV*AFGEN(270,PARTRT,TAW4)	010672
01431	864*	BAW3=DTAW3*KAWV*AFGEN(276,PARTRT,TAW3)	010703

01432	865*	BAW2=DTAW2*KAWV*AFGEN(282,PARTRT,TAW2)	010714
01433	866*	BAW1=DTAW1*KAWV*AFGEN(288,PARTRT,TAW1)	010725
01434	867*	BAWI=KAWVI*DTAWI*AFGEN(132,PARTRT,TAWI)	010736
01435	868*	BAWT=BAWI*BAWI*BAW2*BAW3*BAW4*BAW5*BAW6*BAW7*BAW8*	010747
01435	869*	1 BAW9*BAW10*BAW0	010747
01436	870*	THH6=(THH16*THH06)/2	010763
01437	871*	THH5=(THH06*THH05)/2	010767
01440	872*	THH4=(THH05*THH04)/2	010773
01441	873*	THH3=(THH04*THH03)/2	010777
01442	874*	THH2=(THH03*THH02)/2	011003
01443	875*	THH1=(THH02*THH01)/2	011007
01444	876*	BHW0=KHVV0*OTHV0*AFGEN(300,PARTRT,THW0)	011013
01445	877*	BHW6=DTHW6*KHVV*AFGEN(360,PARTRT,THW6)	011024
01446	878*	BHW5=DTHW5*KHVV*AFGEN(366,PARTRT,THW5)	011035
01447	879*	BHW4=DTHW4*KHVV*AFGEN(372,PARTRT,THW4)	011046
01450	880*	BHW3=DTHW3*KHVV*AFGEN(378,PARTRT,THW3)	011057
01451	881*	BHW2=DTHW2*KHVV*AFGEN(384,PARTRT,THW2)	011070
01452	882*	BHW1=DTHW1*KHVV*AFGEN(390,PARTRT,THW1)	011101
01453	883*	BHWI=KHVVI*OTHWI*AFGEN(294,PARTRT,THWI)	011112
01454	884*	BHWT=BHWI*BHW1*BHW2*BHW3*BHW4*BHW5*BHW6*BHW0	011123
01455	885*	RHWAV=(RHW1*RHW2*RHW3*RHW4*RHW5*RHW6)/KHVN	011133
01456	886*	TREH1=Z28185*TUPH*(1.-Z28185)*TREH01	011143
01457	887*	TREH2=Z28193*(TREH01)*(1.-Z28193)*TREH02	011152
01460	888*	TREH3=Z28201*(TREH02)*(1.-Z28201)*TREH03	011161
01461	889*	TREH4=Z28209*(TREH03)*(1.-Z28209)*TREH04	011170
01462	890*	TREH5=Z28217*(TREH04)*(1.-Z28217)*TREH05	011177
01463	891*	TREH6=Z28225*(TREH05)*(1.-Z28225)*TREH06	011206
01464	892*	TSEC = TSTART + TIME	011215
01465	893*	IF (TFLAG .GT. 0.0) TSEC = TSTART	011220
01467	894*	QHWM1=QHWM2*QHWM3*QHWM4*QHWM5*QHWM6	011225
01470	895*	QHMT=QHMM1*QHMM2*QHMM3*QHMM4*QHMM5*QHMM6	011234
01471	896*	QAWMT=QAWM1*QAWM2*QAWM3*QAWM4*QAWM5*QAWM6*QAWM7*QAWM8*	011243
01471	897*	1 QAWM9*QAWM10	011243
01472	898*	QAAMT=QAAM1*QAAM2*QAAM3*QAAM4*QAAM5*QAAM6*QAAM7*QAAM8*	011256
01472	899*	1 QAAM9*QAAM10	011256
01473	900*	MARGIN=AFGEN(396,HSATP,PPRG)-AFGEN(399,HSATT,THW06)	011271
01474	901*	POWFLO=PRCC/GRETOT	011306
01475	902*	EAE=DEBUG(402,1,0.0)	011311
01476	903*	D1=DEBUG(404,1,30.0)	011317
01477	904*	D2=DEBUG(406,1,60.0)	011325
01500	905*	RETURN	011333
01501	906*	99999 CONTINUE 3 TERMINAL	011337
01502	907*	EAE1=DEBUG(408,1,TIME)	011337
01503	908*	WRITE(12,73) ITPH1,TPH2,TPH3,TPH4,TPH5,TPH6,TPH7,TPH8,TPH9,	011344
01503	909*	ITPH10,	011344
01503	910*	ITPHM	011344
01520	911*	73 FORMAT(' * * * HOT LINE INITIAL CONDITIONS',/,	011364
01520	912*	1*INCON ITPH1 ='E11.6,', ITPH2 ='E11.6,', ITPH3 ='E11.6,/,	011364
01520	913*	1*INCON ITPH4 ='E11.6,', ITPH5 ='E11.6,', ITPH6 ='E11.6,/,	011364
01520	914*	1*INCON ITPH7 ='E11.6,', ITPH8 ='E11.6,2, ITPH9 ='E11.6,/,	011364
01520	915*	1*INCON ITPH10 ='E11.6,/,	011364
01520	916*	1*INCON ITPHM ='E11.6,/,	011364
01521	917*	WRITE(12,72) ITPC1,TPC2,TPC3,TPC4,TPC5,TPC6,TPC7,TPC8,TPC9,	011364
01521	918*	ITPC10,	011364
01521	919*	ITPCM	011364
01536	920*	72 FORMAT(' * * * COLD LINE INITIAL CONDITIONS',/,	011404
01536	921*	1*INCON ITPC1 ='E11.6,', ITPC2 ='E11.6,', ITPC3 ='E11.6,/,	011404

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01536 922* 1*INCON ITPC4 =*,E11.6,*, ITPC5 =*,E11.6,*, ITPC6 =*,E11.6,/, 011404
01536 923* 1*INCON ITPC7 =*,E11.6,*, ITPC8 =*,E11.6,*, ITPC9 =*,E11.6,/, 011404
01536 924* 1*INCON ITPC10 =*,E11.6,/, 011404
01536 925* 1*INCON ITPCOM =*,E11.6,/, 011404
01537 926* WRITE(12,70) ITAW0,ITAW1,ITAW2,ITAW3,ITAW4,ITAW5,ITAW6,ITAW7, 011404
01537 927* ITAW8,ITAW9,ITAW10,ITAM1,ITAM2,ITAM3,ITAM4,ITAM5,ITAM6,ITAM7,ITAM8, 011404
01537 928* ITAM9,ITAM10,ITAA1,ITAA2,ITAA3,ITAA4,ITAA5,ITAA6,ITAA7,ITAA8,ITAA9,ITAA10 011404
01601 929* 70 FORMAT(* * * AIR BLAST FX INITIAL CONDITIONS*,/, 011451
01601 930* 1*INCON ITAW0 =*,E11.6,*, ITAW1 =*,E11.6,*, ITAW2 =*,E11.6,/, 011451
01601 931* 1*INCON ITAW3 =*,E11.6,*, ITAW4 =*,E11.6,/, 011451
01601 932* 1*INCON ITAW5 =*,E11.6,*, ITAW6 =*,E11.6,*, ITAW7 =*,E11.6,/, 011451
01601 933* 1*INCON ITAW8 =*,E11.6,*, ITAW9 =*,E11.6,*, ITAW10 =*,E11.6,/, 011451
01601 934* 1*INCON ITAM1 =*,E11.6,*, ITAM2 =*,E11.6,*, ITAM3 =*,E11.6,/, 011451
01601 935* 1*INCON ITAM4 =*,E11.6,*, ITAM5 =*,E11.6,*, ITAM6 =*,E11.6,/, 011451
01601 936* 1*INCON ITAM7 =*,E11.6,*, ITAM8 =*,E11.6,*, ITAM9 =*,E11.6,/, 011451
01601 937* 1*INCON ITAM10 =*,E11.6,/, 011451
01601 938* 1*PARAM ITAA1 =*,E11.6,*, ITAA2 =*,E11.6,*, ITAA3 =*,E11.6,/, 011451
01601 939* 1*PARAM ITAA4 =*,E11.6,*, ITAA5 =*,E11.6,*, ITAA6 =*,E11.6,/, 011451
01601 940* 1*PARAM ITAA7 =*,E11.6,*, ITAA8 =*,E11.6,*, ITAA9 =*,E11.6,/, 011451
01601 941* 1*PARAM ITAA10 =*,E11.6,/, 011451
01602 942* WRITE(12,71) ITHW1,ITHW2,ITHW3,ITHW4,ITHW5,ITHW6,ITHM1,ITHM2, 011451
01502 943* ITHM3,ITHM4,ITHM5,ITHM6,ITHM7,ITHM8,ITHM9,ITHM10,ITHM11,ITHM12,ITHM13,ITHM14,ITHM15,ITHM16 011451
01631 944* 71 FORMAT(* * * CAHE INITIAL CONDITIONS*,/, 011503
01631 945* 1*INCON ITHW1 =*,E11.6,*, ITHW2 =*,E11.6,/, 011503
01631 946* 1*INCON ITHW3 =*,E11.6,*, ITHW4 =*,E11.6,*, ITHW5 =*,E11.6,/, 011503
01631 947* 1*INCON ITHW6 =*,E11.6,*, ITHM1 =*,E11.6,*, ITHM2 =*,E11.6,/, 011503
01631 948* 1*INCON ITHM3 =*,E11.6,*, ITHM4 =*,E11.6,*, ITHM5 =*,E11.6,/, 011503
01631 949* 1*INCON ITHM6 =*,E11.6,*, ITHM7 =*,E11.6,*, ITHM8 =*,E11.6,/, 011503
01631 950* 1*PARAM ITHM9 =*,E11.6,*, ITHM10 =*,E11.6,/, 011503
01631 951* 1*PARAM ITHM11 =*,E11.6,*, ITHM12 =*,E11.6,/, 011503
01632 952* WRITE(12,74) IPRW,IPRW,IPRG,PLOAD,NPL,INT,APS,IPSIT,WFLOW 011503
01645 953* 74 FORMAT(* * * PUMP AND PROCESS-FLOW INITIAL CONDITIONS*,/, 011521
01645 954* 1*INCON IPRW =*,E11.6,*, IPRG =*,E11.6,/, 011521
01645 955* 1*INCON PLOAD =*,E11.6,*, NPL =*,E11.6,*, INT =*,E11.6,/, 011521
01645 956* 1*INCON APS =*,E11.6,*, IPSIT =*,E11.6,/, 011521
01645 957* 1*PARAM WFLOW =*,E11.6,/, 011521
01646 958* 93 FORMAT(* * * CORE INITIAL CONDITIONS*,/, 011521
01646 959* 1*INCON ITRF1 =*,E11.6,*, ITRF2 =*,E11.6,*, ITRF3 =*,E11.6,/, 011521
01646 960* 1*INCON ITRF4 =*,E11.6,*, ITRF5 =*,E11.6,*, ITRF6 =*,E11.6,/, 011521
01646 961* 1*INCON ITRC1 =*,E11.6,*, ITRC2 =*,E11.6,*, ITRC3 =*,E11.6,/, 011521
01646 962* 1*INCON ITRC4 =*,E11.6,*, ITRC5 =*,E11.6,*, ITRC6 =*,E11.6,/, 011521
01646 963* 1*INCON ITUPH =*,E11.6,*, ITLPH =*,E11.6,/, 011521
01646 964* 1*INCON ITCAHA =*,E11.6,*, ITCAN =*,E11.6,*, INCAA =*,E11.6,/, 011521
01646 965* 1*PARAM TREH1 =*,E11.6,*, TREH2 =*,E11.6,*, TREH3 =*,E11.6,/, 011521
01646 966* 1*PARAM TREH4 =*,E11.6,*, TREH5 =*,E11.6,*, TREH6 =*,E11.6,/, 011521
01647 967* WRITE(12,93) TRF1,TRF2,TRF3,TRF4,TRF5,TRF6,TRC1,TRC2,TRC3, 011521
01647 968* TRC4,TRC5,TRC6,TUPH,TLPH,TCAN,INCAA,TREH1,TREH2,TREH3, 011521
01647 969* TREH4,TREH5,TREH6 011521
01700 970* WRITE(12,95) TIME,DUMMY 011555
01704 971* 95 FORMAT(* * * TIME AT END OF RUN=*,E11.6,*, DUMMY VARIABLE=*, 011564
01704 972* 1,E11.6,/, 011564
01705 973* RETURN 011564
01706 974* END 011607

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END OF COMPILATION: NO DIAGNOSTICS.

AVJP=F.FOR,ISX BLDATA,BLDATA
FOR OE3-09/24/77-10:18:41 (,0)

BLOCK DATA

STORAGE USED: CODE(1) 000000; DATA(0) 000001; BLANK COMMON(2) 000000

COMMON BLOCKS:

OC03 CURVAL 013560
OC04 SYMBLS 001516
OC05 ZINSTO 002466
OC06 MEMRY 000632
OC07 KEYS 000026

STORAGE ASSIGNMENT (BLOCK, TYPE, RELATIVE LOCATION, NAME)

OC03	000000 C	0005	000031 CHIS	0007	000002 FILL	0000	I 000000 I	0005	000002 INHIST
0005	000001 INTYPE	0007	I 000001 KPOINT	0003	000000 LC	0007	000000 NFILL1	0005	000012 NINT
0007	I 000025 NLOCS	0007	I 000023 NMEMRY	0005	I 000000 NOINTG	0004	I 000000 NOSYMB	0007	I 000024 NZERO
0004	R 000001 SYMB	0006	000000 X						

00101	1*	BLOCK DATA	000000
00102	2*	COMMON/CURVAL/C(6000)	000000
00103	3*	DIMENSION LC(1)	000000
00104	4*	EQUIVALENCE (C,LC)	000000
00105	5*	COMMON/SYMBLS/ NOSYMB,SYMB(845)	000000
00106	6*	COMMON/ZINSTO/ NOINTG,INTYPE,INHIST(8),NINT(15),CHIS(1309)	000000
00107	7*	COMMON/MEMRY/ X(410)	000000
00110	8*	COMMON/KEYS/ NFILL1,KPOINT,FILL(17),NMEMRY,NZERO,NLOCS	000000
00111	9*	DATA NOINTG/ 77/,NOSYMB/ 845/,NMEMRY/ 410/,NZERO/ 845/	000000
00116	10*	DATA KPOINT/ 846/,NLOCS/ 6000/	000000
00121	11*	DATA (SYMB(I),I= 1 , 159 I/ 954HTIME DELT FINTIMDELMINDELMAX	000000
00121	12*	DELGR DELPR DELS TVARN DELPP TPH1 TPH2 TPH3 TPH4 TPH5 TPH6	000000
00121	13*	TPH7 TPH8 TPH9 TPH10 TPC1 TPC2 TPC3 TPC4 TPC5 TPC6 TPC7	000000
00121	14*	TPC8 TPC9 TPC10 TAW1 TAW0 TAM10 TAW10 TAM9 TAW9 TAM8 TAW8	000000
00121	15*	TAM7 TAW7 TAM6 TAW6 TAM5 TAW5 TAM4 TAW4 TAM3 TAW3 TAM2	000000
00121	16*	TAW2 TAM1 TAW1 THW1 THW0 THH16 THH6 THW6 THH5 THW5 THH4	000000
00121	17*	THW4 THH3 THW3 THH2 THW2 THH1 THW1 ICAN NCAA TCAHOATUPH	000000
00121	18*	ITGPM TLPH TRF1 TRC1 TRF2 TRC2 TRF3 TRC3 TRF4 TRC4 TRF5	000000
00121	19*	TRCS TRF6 TRC6 TPCOM TPHM DTPH1 DTPH2 DTPH3 DTPH4 DTPH5 DTPH6	000000
00121	20*	DTPH7 DTPH8 DTPH9 DTPH10DTPC1 DTPC2 DTPC3 DTPC4 DTPC5 DTPC6 DTPC7	000000
00121	21*	DTPC8 DTPC9 DTPC10DTAW1 DTAW0 DTAM10DTAW10DTAM9 DTAW9 DTAM8 DTAW8	000000
00121	22*	DTAM7 DTAW7 DTAM6 DTAW6 DTAM5 DTAW5 DTAM4 DTAW4 DTAM3 DTAW3 DTAM2	000000
00121	23*	DTAW2 DTAM1 DTAW1 DTHW1 DTHW0 DTHH16DTHH6 DTHW6 DTHH5 DTHW5 DTHH4	000000
00121	24*	DTHW4 DTHH3 DTHW3 DTHH2 DTHW2 DTHH1 DTHW1 DICAN DNCAA DTCAHADTUPH	000000
00121	25*	DTGPM DTLPH DTRF1 DTRC1 DTRF2 DTRC2 DTRF3 DTRC3 DTRF4 DTRC4 DTRF5	000000
00121	26*	I/	000000
00123	27*	DATA (SYMB(I),I= 160 , 318 I/ 954HDTCS DTRF6 DTRC6 DTPCOMDTPHM	000000
00123	28*	KPHC KPHV KPCC KPCV KAAW2 KAWW2 KAMC KAWV THH10 KHHW2 KHWW2	000000
00123	29*	KHMC KHWV VPRW TPRW PPRG PLOAD NPL INT APS IPSIT JUPV	000000
00123	30*	1JLPV KREQT MNSS GCCA PRCD DUMNY RPH1 BPH1 RPH2 BPH2 RPH3	000000
00123	31*	1BPH3 RPH4 BPH4 RPH5 BPH5 RPH6 BPH6 RPH7 BPH7 RPH8 BPH8	000000

00131	89*	11TRC4 ITRC5 ITRC6 ITUPH ITLPH ITCAHAIIICAN INCAA TSTARTTFLAG KPLPB	000000
00131	90*	1/	000000
00133	91*	DATA (SYMBII),I= 796 , 845 // 300HKPLRT KPLJ0 KPLJ1 KPLJ2 KPLCR	000000
00133	92*	1WPLR SPL WPLS KPL KPLN WPLSD NPS KPSPB KPSRT KPSJO KPSJ1	000000
00133	93*	1KPSJ2 KPSCR WPSR SPS WPS5 KPS KPSN WPRI WPRO GPRI GPRO	000000
00133	94*	1QPR TPRI KPRV GAA JAA11DKTAU GCAAS KGPC POWER HEFLOWAHEFLO	000000
00133	95*	11INLETKCAR6 KCAPBNKCART SCAV TLPHD TSCRANTHWSSTHWOS ITHHIOJGPK	000000
00133	96*	1ITGPM	000000
00133	97*	1/	000000
00135	98*	END	000000

END OF COMPILATION: NO DIAGNOSTICS.

BPREF
FURPUR27R2GA RL72-8 09/24/77 10:18:44
END PREF.

8XQT NEW*INDEXR.INDEXR

PROCS WERE TO BE PROCESSED BUT NONE WERE FOUND IN TPFS.

BLDATA	DATED 9/24/77	10:18:42
UPDATE	DATED 9/24/77	10:18:26
8FREE 618.		
8FREE 63.		

EXIT LOC027054

8XQT NEW*INDEX.INDEX

1* BLOCK DATA
2* COMMON/CURVAL/C(6000)
3* DIMENSION LC(1)
4* EQUIVALENCE (C,LC)
5* COMMON/SYMBLS/ NOSYMB,SYMB(845)
6* COMMON/ZINSTO/ NOINTG,INTYPE,INHIST(8),NINT(15),CHIS(1309)
7* COMMON/HEMRY/ X(410)
8* COMMON/KEYS/ NFILL1,KPOINT,FILL(17),NMEMRY,NZERO,NLOCS
9* DATA NOINTG/ 77/,NOSYMB/ 845/,NMEMRY/ 910/,NZERO/ 845/
10* DATA KPOINT/ 846/,NLOCS/ 6000/
11* DATA (SYMB(I),I= 1, 159)/ 954HTIME DELT FINTIMDELHINDELMAX
12* 1DELGR DELPR DELS TWARN DELPP TPH1 TPH2 TPH3 TPH4 TPH5 TPH6
13* 1TPH7 TPH8 TPH9 TPH10 TPC1 TPC2 TPC3 TPC4 TPC5 TPC6 TPC7
14* 1TPC8 TPC9 TPC10 TAW1 TAW0 TAM10 TAW10 TAW9 TAW8 TAW7
15* 1TAM7 TAW7 TAM6 TAW6 TAM5 TAW5 TAM4 TAW4 TAM3 TAW3 TAM2
16* 1TAW2 TAM1 TAW1 THW1 THW0 THH16 THH6 THW6 THH5 THW5 THH4
17* 1THW4 THH3 THW3 THH2 THW2 THH1 THW1 ICAN NCAA TCAHOATUPH
18* 1TGPH TLPH TRF1 TRC1 TRF2 TRC2 TRF3 TRC3 TRF4 TRC4 TRF5
19* 1TRC5 TRF6 TRC6 TPCOM TPHM DTPH1 DTPH2 DTPH3 DTPH4 DTPH5 DTPH6
20* 1DTPH7 DTPH8 DTPH9 DTPH10DTPC1 DTPC2 DTPC3 DTPC4 DTPC5 DTPC6 DTPC7
21* 1DTPC8 DTPC9 DTPC10DTAW1 DTAW0 DTAM10DTAM10DTAM9 DTAM9 DTAM8 DTAM7
22* 1DTAM7 DTAM7 DTAM6 DTAW6 DTAM5 DTAW5 DTAM4 DTAW4 DTAM3 DTAM3 DTAM2
23* 1DTAW2 DTAM1 DTAW1 DTHW1 DTHW0 DTHH16DTHH6 DTHW6 DTHH5 DTHW5 DTHH4
24* 1DTHW4 DTHH3 DTHW3 DTHH2 DTHW2 DTHH1 DTHW1 DICAN DNCAA DTCAHADIUPH
25* 1DTGPH DTLPH DTRF1 DTRC1 DTRF2 DTRC2 DTRF3 DTRC3 DTRF4 DTRC4 DTRF5
26* 1/
27* DATA (SYMB(I),I= 160, 318)/ 954HDTRC5 DTRF6 DTRC6 DTPCOMDTPHM
28* 1KPHC KPHV KPCC KPCV KAAW2 KAWW2 KAMC KAWV THH10 KHHW2 KHWW2
29* 1KHMC KHWV VPRV TPRV PPRG PLOAO NPL INT APS IPSIT JUPV
30* 1JLPV KREQT MNSS GCCA PRCD DUMVY RPH1 9PH1 RPH2 BPH2 RPH3
31* 1BPH3 RPH4 BPH4 RPH5 BPH5 RPH6 BPH6 RPH7 BPH7 RPH8 BPH8
32* 1RPH9 BPH9 RPH10 BPH10 TPH0 RPHAV BPHV BPC1 BPC1 RPC2 BPC2
33* 1RPC3 BPC3 RPC4 BPC4 RPC5 BPC5 RPC6 BPC6 RPC7 BPC7 RPC8
34* 1BPC8 RPC9 BPC9 RPC10 BPC10 TPC0 RPCAV BPCT RAW1 BAW1 RAW0
35* 1BAW0 TAA10 Z28000Z28002Z28003Z28004Z28005Z28006JAAH10JAWH10TAA9
36* 1Z28007Z28009Z28010Z28011Z28012Z28013JAAH9 JAWH9 TAA8 Z28014Z28016
37* 1Z28017Z28018Z28019Z28020JAAH8 JAWH8 TAA7 Z28021Z28023Z28024Z28025
38* 1Z28026Z28027JAAH7 JAWH7 TAA6 Z28028Z28030Z28031Z28032Z28033Z28034
39* 1JAAH6 JAWH6 TAA5 Z28035Z28037Z28038Z28039Z28040Z28041JAAH5 JAWH5
40* 1TAA4 Z28042Z28044Z28045Z28046Z28047Z28048JAAH4 JAWH4 TAA3 Z28049
41* 1Z28051Z28052Z28053Z28054Z28055JAAH3 JAWH3 TAA2 Z28056Z28058Z28059
42* 1/
43* DATA (SYMB(I),I= 319, 477)/ 954HZ28060Z28061Z28062JAAH2 JAWH2
44* 1TAA1 Z28063Z28065Z28066Z28067Z28068Z28069JAAH1 JAWH1 JAACP JAA6R
45* 1RAW10 TAA010QAAH10TAW010QAWH10BAW10 RAW9 TAA09 QAAH9 TAW09 QAWH9
46* 1BAW9 RAW8 TAA08 QAAH8 TAW08 QAWH8 BAW8 RAW7 TAA07 QAAH7 TAW07
47* 1QAWH7 BAW7 RAW6 TAA06 QAAH6 TAW06 QAWH6 BAW6 RAW5 TAA05 QAAH5
48* 1TAW05 QAWH5 BAW5 RAW4 TAA04 QAAH4 TAW04 QAWH4 BAW4 RAW3 TAA03
49* 1QAAH3 TAW03 QAWH3 BAW3 RAW2 TAA02 QAAH2 TAW02 QAWH2 BAW2 RAW1
50* 1TAA01 QAAH1 TAW01 QAWH1 BAW1 RAWAV BAWT BHW1 BHW1 BHW0 BHW0

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BLDATA

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51* 1MHH16 THH6 ZZ8070ZZ8075ZZ8076ZZ8077ZZ8078ZZ8079JHHM6 JHHM6 THH5
52* 1ZZ8080ZZ8085ZZ8086ZZ8087ZZ8088ZZ8089JHHM5 JHHM5 THH4 ZZ8090ZZ8095
53* 1ZZ8096ZZ8097ZZ8098ZZ8099JHHM4 JHHM4 THH3 ZZ8100ZZ8105ZZ8106ZZ8107
54* 1ZZ8108ZZ8109JHHM3 JHHM3 THH2 ZZ8110ZZ8115ZZ8116ZZ8117ZZ8118ZZ8119
55* 1JHHM2 JHHM2 THH1 ZZ8120ZZ8125ZZ8126ZZ8127ZZ8128ZZ8129JHHM1 JHHM1
56* 1JHHCP RHW6 THH06 QHHM6 THW06 QHHM6 BHW6 RHW5 THH05 QHHM5 THW05
57* 1QHHM5 BHW5 RHW4 THH04 QHHM4 THW04 QHHM4 BHW4 RHW3 THH03 QHHM3
58* 1/
59* DATA (SYMB(I),I= 978 , 636)/ 954HJHW03 QHHM3 BHW3 RHW2 THH02
60* 1QHHM2 THW02 QHHM2 BHW2 RHW1 THH01 QHHM1 THW01 QHHM1 BHW1 BHW1
61* 1RHV4V OCAERRPROP NCAD TCCHOAGCAA GREOTPNSS MUPH MLPH GREH
62* 1GBPH TBPH JRECM1JRCFK1JRECK2JRCFK2JRECK3JRCFK3JRECK4JRCFK4JRECK5
63* 1JRCFK5JRECK6JRCFK6ZZ8184ZZ8185TREM01TREM1 ZZ8186ZZ8187ZZ8188ZZ8189
64* 1ZZ8190ZZ8191ZZ8192ZZ8193TREM02TREM2 ZZ8194ZZ8195ZZ8196ZZ8197ZZ8198
65* 1ZZ8199ZZ8200ZZ8201TREM03TREM3 ZZ8202ZZ8203ZZ8204ZZ8205ZZ8206ZZ8207
66* 1ZZ8208ZZ8209TREM04TREM4 ZZ8210ZZ8211ZZ8212ZZ8213ZZ8214ZZ8215ZZ8216
67* 1ZZ8217TREM05TREM5 ZZ8218ZZ8219ZZ8220ZZ8221ZZ8222ZZ8223ZZ8224ZZ8225
68* 1TREM06TREM6 ZZ8226ZZ8227ZZ8228ZZ8229ZZ8230ZZ8231TSEC QRF1 QRF2
69* 1QRF3 QRF4 QRF5 QRF6 QBPH QHWT QHMT QAWMT QAAMT MARGINPOWFL0
70* 1EAE D1 D2 EAE1 KUNACPKUNGR KUNHCVKUNWCPKUNHCPRFTSL PARTRT
71* 1FSPH FVIS FCON HSATP HSATI KPHVT KPHCT KPHN KPCVT KPCCT KPCN
72* 1KAWRX KAMR KAAR KAWVR KAAG KAWA KAAA KAATR KAMTR KAWTR KAAAU
73* 1KAABU KAAAK KAABK KAMAK KAMBK KAPCT KAWVT KAWN KAWW1 KAAW1 KAWVI
74* 1/
75* DATA (SYMB(I),I= 637 , 795)/ 954HKAWV0 KAMCI KAMCO KHHRX KHWRX
76* 1KHHRX KHMCT KHMCI KHMCO KHWVT KHWVI KHWVO KHMCI0KHWMI KHWMO KHMN
77* 1KHHW1 KHHW1 KHHV1 KHHV1 KHHVK KHHCK KHHCK KHHMAK KHHBK KHHH KHHW KAWS0
78* 1KHHW0 KAWISQKPHS0 KPCS0 KHWISQKRENN KRFV1 KRFV2 KRFV3 KRFV4 KRFV5
79* 1KRFV6 KRCV1 KRCV2 KRCV3 KRCV4 KRCV5 KRCV6 KREA1 KREA2 KREA3 KREA4
80* 1KREA5 KREA6 KREL1 KREL2 KREL3 KREL4 KREL5 KREL6 KREPF1KREPF2KREPF3
81* 1KREPO KREPF KREGE KREPF4KREPF5KREPF6KCCAN KCAAN KCAR KHHVI6KCATAU
82* 1ITPH1 ITPH2 ITPH3 ITPH4 ITPH5 ITPH6 ITPH7 ITPH8 ITPH9 ITPH10ITPHM
83* 1ITPC1 ITPC2 ITPC3 ITPC4 ITPC5 ITPC6 ITPC7 ITPC8 ITPC9 ITPC10ITPCOM
84* 1ITAW0 ITAW1 ITAW2 ITAW3 ITAW4 ITAW5 ITAW6 ITAW7 ITAW8 ITAW9
85* 1ITAW10ITAM1 ITAM2 ITAM3 ITAM4 ITAM5 ITAM6 ITAM7 ITAM8 ITAM9 ITAM10
86* 1ITHW0 ITHW1 ITHW2 ITHW3 ITHW4 ITHW5 ITHW6 ITHW7 ITHW8 ITHW9
87* 1ITHH4 ITHH5 ITHH6 ITHH16IVPRW ITPRW IPPRG IPL0A0INPL IINT IAPS
88* 1IIPSIWFLOW ITRF1 ITRF2 ITRF3 ITRF4 ITRF5 ITRF6 ITRC1 ITRC2 ITRC3
89* 1ITRC4 ITRC5 ITRC6 ITUPH IILPH IICAHAIICAN INCAA TSTARTIFLAG KPLPB
90* 1/
91* DATA (SYMB(I),I= 796 , 845)/ 300HKPLRT KPLJ0 KPLJ1 KPLJ2 KPLCR
92* 1WPLR SPL WPLS KPL KPLN WPLS0 NPS KPSPB KPSRT KPSJD KPSJ1
93* 1KPSJ2 KPSCR WPSR SPS WPS5 KPS KPSN WPR1 WPRO GPRI GPRO
94* 1QPR TPRI KPRV GAA TAA10KTAU GCAAS KGPC POWER HEFLOWAHEFLO
95* 1ITINLETKCARG KCAP3NKCART SCAV TLPHO TSCRAHWHOSSTHWHOS ITHMIOJGPK
96* 1ITGPH
97* 1/
98* END

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BLDATA

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SYMBOL REFERENCES

BLDATA	-	1					
C	-	2C0	4EQ				
CHIS	-	6C0					
CURVAL	-	2					
FILL	-	8C0					
I	-	11DA	27DA	43DA	59DA	75DA	91DA
INHIST	-	6C0					
INTYPE	-	6C0					
KEYS	-	8					
KPOINT	-	8C0	10DA				
LC	-	3DI	4EQ				
MEMRY	-	7					
NFILL1	-	8C0					
NINT	-	6C0					
NLOCS	-	8C0	10DA				
NMEMRY	-	8C0	9DA				
NOINTG	-	6C0	9DA				
NOSYMB	-	5C0	9DA				
NZERO	-	8C0	9DA				
SYMB	-	5C0	11DA	27DA	43DA	59DA	75DA 91DA
SYMBLS	-	5					
X	-	7C0					
ZINSTO	-	6					

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1* SUBROUTINE UPDATE
2* IMPLICIT REAL(A-Z)
3* COMMON/CURVAL/TIME , DELT , FINIM, DELMIN, DELMAX, DELGR , DELPR ,
4* IDELS , TWARN , DELPP , TPH1 , TPH2 , TPH3 , TPH4 , TPH5 , TPH6 ,
5* 1TPH7 , TPH8 , TPH9 , TPH10 , TPC1 , TPC2 , TPC3 , TPC4 , TPC5 ,
6* 1TPC6 , TPC7 , TPC8 , TPC9 , TPC10 , TAW1 , TAW0 , TAM10 , TAV10 ,
7* 1TAN9 , TAV9 , TAMB , TAW8 , TAN7 , TAW7 , TAM6 , TAW6 , TAN5 ,
8* 1TAN5 , TAM4 , TAW4 , TAM3 , TAN3 , TAM2 , TAW2 , TAM1 , TAV1 ,
9* 1THW1 , THW0 , THH16 , THM6 , THW6 , THM5 , THW5 , THM4 , THW4 ,
10* 1THM3 , THW3 , THM2 , THW2 , THM1 , THW1 , ICAN , NCAA , TCAHOA ,
11* 1TUPH , TGPB , TLPB , TRF1 , TRC1 , TRF2 , TRC2 , TRF3 , TRC3 ,
12* 1TRF4 , TRC4 , TRF5 , TRC5 , TRF6 , TRC6 , TPCOM , TPHM , DTPH1 ,
13* 1DTPH2 , DTPH3 , DTPH4 , DTPH5 , DTPH6 , DTPH7 , DTPH8 , DTPH9 , DTPH10 ,
14* 1DTPC1 , DTPC2 , DTPC3 , DTPC4 , DTPC5 , DTPC6 , DTPC7 , DTPC8 , DTPC9 ,
15* 1DTPC10 , DTAW1 , DTAW0 , DTAM10 , DTAM10 , DTAM9 , DTAW9 , DTAM8 , DTAW8 ,
16* 1DTAM7 , DTAW7 , DTAM6 , DTAW6 , DTAM5 , DTAW5 , DTAM4 , DTAW4 , DTAM3 ,
17* 1DTAW3 , DTAM2 , DTAW2 , DTAM1 , DTAW1 , DTHW1 , DTHW0 , DTHH16 , DTHM6 ,
18* COMMON/CURVAL/DTHW6 , DTHM5 , DTHW5 , DTHM4 , DTHW4 , DTHM3 , DTHW3 ,
19* 1DTHM2 , DTHW2 , DTHM1 , DTHW1 , DICAN , DNCAA , DTCAHA , DTUPH , DTGPB ,
20* 1DTLPB , DTRF1 , DTRC1 , DTRF2 , DTRC2 , DTRF3 , DTRC3 , DTRF4 , DTRC4 ,
21* 1DTRF5 , DTRC5 , DTRF6 , DTRC6 , DTPCOM , DTPHM , KPHC , KPHV , KPCC ,
22* 1KPCV , KAAW2 , KAWW2 , KAMC , KAWV , THM10 , KHHW2 , KHHW2 , KHHC ,
23* 1KHHV , VPRV , TPRV , PPRG , PLOAO , NPL , INT , APS , IPSIT ,
24* 1JUPV , JLPV , KREQT , MNSS , GCCA , PRCD , DUMMY , RPH1 , BPH1 ,
25* 1RPH2 , BPH2 , RPH3 , BPH3 , RPH4 , BPH4 , RPH5 , BPH5 , RPH6 ,
26* 1BPH6 , RPH7 , BPH7 , RPH8 , BPH8 , RPH9 , BPH9 , RPH10 , BPH10 ,
27* 1RPH0 , RPH4 , BPH1 , RPC1 , BPC1 , RPC2 , BPC2 , RPC3 , BPC3 ,
28* 1RPC4 , BPC4 , RPC5 , BPC5 , RPC6 , BPC6 , RPC7 , BPC7 , RPC8 ,
29* 1BPC8 , RPC9 , BPC9 , RPC10 , BPC10 , TPC0 , PPCAV , BPC1 , RAW1 ,
30* 1BAW1 , RAW0 , BAW0 , TAA10 , ZZ8000 , ZZ8002 , ZZ8003 , ZZ8004 , ZZ8005 ,
31* 1ZZ8006 , JAAM10 , JAWM10 , TAA9 , ZZ8007 , ZZ8009 , ZZ8010 , ZZ8011 , ZZ8012 ,
32* 1ZZ8013 , JAAM9 , JAWM9 , TAA8 , ZZ8014 , ZZ8016 , ZZ8017 , ZZ8018 , ZZ8019 ,
33* COMMON/CURVAL/ZZ8020 , JAAM8 , JAWM8 , TAA7 , ZZ8021 , ZZ8023 , ZZ8024 ,
34* 1ZZ8025 , ZZ8026 , ZZ8027 , JAAM7 , JAWM7 , TAA6 , ZZ8028 , ZZ8030 , ZZ8031 ,
35* 1ZZ8032 , ZZ8033 , ZZ8034 , JAAM6 , JAWM6 , TAA5 , ZZ8035 , ZZ8037 , ZZ8038 ,
36* 1ZZ8039 , ZZ8040 , ZZ8041 , JAAM5 , JAWM5 , TAA4 , ZZ8042 , ZZ8044 , ZZ8045 ,
37* 1ZZ8046 , ZZ8047 , ZZ8048 , JAAM4 , JAWM4 , TAA3 , ZZ8049 , ZZ8051 , ZZ8052 ,
38* 1ZZ8053 , ZZ8054 , ZZ8055 , JAAM3 , JAWM3 , TAA2 , ZZ8056 , ZZ8058 , ZZ8059 ,
39* 1ZZ8060 , ZZ8061 , ZZ8062 , JAAM2 , JAWM2 , TAA1 , ZZ8063 , ZZ8065 , ZZ8066 ,
40* 1ZZ8067 , ZZ8068 , ZZ8069 , JAAM1 , JAWM1 , JAACP , JAAGR , RAW10 , TAA010 ,
41* 1QAAM10 , TAW010 , QAWM10 , BAW10 , RAW9 , TAA09 , QAAM9 , TAW09 , QAWM9 ,
42* 1BAW9 , RAW8 , TAA08 , QAAM8 , TAW08 , QAWM8 , BAW8 , RAW7 , TAA07 ,
43* 1QAAM7 , TAW07 , QAWM7 , BAW7 , PAW6 , TAA06 , QAAM6 , TAW06 , QAWM6 ,
44* 1BAW6 , RAW5 , TAA05 , QAAM5 , TAW05 , QAWM5 , BAW5 , RAW4 , TAA04 ,
45* 1QAAM4 , TAW04 , QAWM4 , BAW4 , RAW3 , TAA03 , QAAM3 , TAW03 , QAWM3 ,
46* 1BAW3 , RAW2 , TAA02 , QAAM2 , TAW02 , QAWM2 , BAW2 , RAW1 , TAA01 ,
47* 1QAAM1 , TAW01 , QAWM1 , BAW1 , RAWV , BAWT , RHW1 , BHW1 , RHW0 ,
48* COMMON/CURVAL/BHW0 , MHH16 , THM6 , ZZ8070 , ZZ8075 , ZZ8076 , ZZ8077 ,
49* 1ZZ8078 , ZZ8079 , JHHM6 , JHHM6 , THM5 , ZZ8080 , ZZ8085 , ZZ8086 , ZZ8087 ,
50* 1ZZ8088 , ZZ8089 , JHHM5 , JHHM5 , THM4 , ZZ8090 , ZZ8095 , ZZ8096 , ZZ8097 ,

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UPDATE

PAGE 5

51* 1228098,228099,JHMM4,JHMM4,THM1,228100,228105,228106,228107,
52* 1228108,228109,JHMM3,JHMM3,THM2,228110,228115,228116,228117,
53* 1228118,228119,JHMM2,JHMM2,THM1,228120,228125,228126,228127,
54* 1228128,228129,JHMM1,JHMM1,JHMC1,RHW6,THM6,QHMM6,THW6,
55* 1QHMM6,BHW6,RHW5,THM5,QHMM5,THW5,QHMM5,BHW5,RHW4,
56* 1THM04,QHMM4,THW04,QHMM4,BHW4,RHW3,THM03,QHMM3,THW03,
57* 1QHMM3,BHW3,RHW2,THM02,QHMM2,THW02,QHMM2,BHW2,RHW1,
58* 1THM01,QHMM1,THW01,QHMM1,BHW1,BHMT,RHWAV,OCAERR,PROP,N,
59* 1NCAD,1CCHOA,GCAA,GRET01,PNSS,MUPH,MLPH,GREH,GBPM,
60* 1TBPM,JRECK1,JRCFK1,JRECK2,JRCFK2,JRECK3,JRCFK3,JRECK4,JRCFK4,
61* 1JRECK5,JRCFK5,JRECK6,JRCFK6,228184,228185,TREH01,TREH1,228186,
62* 1228187,228188,228189,228190,228191,228192,228193,TREH02,TREH2,
63* COMMON/CURVAL/228194,228195,228196,228197,228198,228199,228200,
64* 1228201,TREH03,TREH3,228202,228203,228204,228205,228206,228207,
65* 1228208,228209,TREH04,TREH4,228210,228211,228212,228213,228214,
66* 1228215,228216,228217,TREH05,TREH5,228218,228219,228220,228221,
67* 1228222,228223,228224,228225,TREH06,TREH6,228226,228227,228228,
68* 1228229,228230,228231,TSEC,ORF1,ORF2,ORF3,ORF4,ORF5,
69* 1ORF6,OBPM,QHMMT,QHMMT,QAAMT,QAAMT,MARGIN,POWFLO,EAE,
70* 1D1,D2,EAE1,KUNACP,KUNGR,KUNHCV,KUNWCP,KUNHCP,RFTSL,
71* 1PARTI,FSPM,FVIS,FCON,HSATP,HSATI,KPHVT,KPHCT,KPMN,
72* 1KPCVT,KPCC1,KPCN,KAWRX,KAMR,KAAAR,KAWVR,KAAAG,KAWA,
73* 1KAAA,KAAAT,KAMTR,KAWTR,KAAAU,KAAAB,KAAAK,KAAAB,KAMAK,
74* 1KAMBK,KAMCT,KAWVT,KAWN,KAWW1,KAAW1,KAWVI,KAWVO,KAMCI,
75* 1KAMCO,KHMRX,KHVRX,KHMRX,KHMC1,KHMC1,KHMC1,KHVV1,KHVV1,
76* 1KHVV0,KHMC10,KHVM1,KHVM0,KHVN,KHVM1,KHVM1,KHVK,KHVK,
77* 1KHCK,KHMC1,KHMA,KHMBK,KHMA,KHWA,KAW5Q,KHVSQ,KAWISQ,
78* COMMON/CURVAL/KPHS0,KPCS0,KHVSQ,KRENN,KRFV1,KRFV2,KRFV3,
79* 1KRFV4,KRFV5,KRFV6,KRCV1,KRCV2,KRCV3,KRCV4,KRCV5,KRCV6,
80* 1KREA1,KREA2,KREA3,KREA4,KREA5,KREA6,KREL1,KREL2,KREL3,
81* 1KREL4,KREL5,KREL6,KREPF1,KREPF2,KREPF3,KREPO,KREPF,KREGF,
82* 1KREPF4,KREPF5,KREPF6,KCCAN,KCAAN,KCAR,KHVI6,KCATAU,ITPH1,
83* 1ITPH2,ITPH3,ITPH4,ITPH5,ITPH6,ITPH7,ITPH8,ITPH9,ITPH10,
84* 1ITPHM,ITPC1,ITPC2,ITPC3,ITPC4,ITPC5,ITPC6,ITPC7,ITPC8,
85* 1ITPC9,ITPC10,ITPCOM,ITAW0,ITAW1,ITAW1,ITAW2,ITAW3,ITAW4,
86* 1ITAW5,ITAW6,ITAW7,ITAW8,ITAW9,ITAW10,ITAM1,ITAM2,ITAM3,
87* 1ITAM4,ITAM5,ITAM6,ITAM7,ITAM8,ITAM9,ITAM10,ITHW0,ITHW1,
88* 1ITHW1,ITHW2,ITHW3,ITHW4,ITHW5,ITHW6,ITHM1,ITHM2,ITHM3,
89* 1ITHM4,ITHM5,ITHM6,ITHM6,IVPRW,IVPRW,IPPRG,IPLOAD,INPL,
90* 1IINT,IAPS,IIPSI,WFLOW,ITRF1,ITRF2,ITRF3,ITRF4,ITRF5,
91* 1ITRF6,ITRC1,ITRC2,ITRC3,ITRC4,ITRC5,ITRC6,ITUPH,ITLPH,
92* 1ITCAHA,ITCAN,INCAA,TSTART,TFLAG,KPLPB,KPLRT,KPLJD,KPLJ1,
93* COMMON/CURVAL/KPLJ2,KPLCR,WPLR,SPL,WPLS,KPL,KPLN,
94* 1WPLS0,NPS,KPSPB,KPSRT,KPSJD,KPSJ1,KPSJ2,KPSCR,WPSR,
95* 1SPS,WPS,KPS,KPSN,WPRI,WPRO,GPRI,GPRO,OPR,
96* 1TPRI,KPRV,GAA,TAAT10,KTAU,GCAAS,KGPC,POWER,HEFLOW,
97* 1AMEFLO,TINLET,KCARG,KCAPBN,KCART,SCAV,TLPHO,TSCRAN,THWSS,
98* 1THW05,ITHM10,JGPK,ITGPM,
99* COMMON/ZFLASS/KEEP,NALARM,12ZZZZ,
100* INTEGER KEEP,NALARM,12ZZZZ

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101*	IF(I2ZZZZ) 99957,99998,99999
102*	99997 CONTINUE 2 INITIAL
103*	KPHC=KPHCT/KPHN
104*	KPHV=KPHVT/KPHN
105*	TPH1=ITPH1
106*	TPH2=ITPH2
107*	TPH3=ITPH3
108*	TPH4=ITPH4
109*	TPH5=ITPH5
110*	TPH6=ITPH6
111*	TPH7=ITPH7
112*	TPH8=ITPH8
113*	TPH9=ITPH9
114*	TPH10=ITPH10
115*	TPHM=ITPHM
116*	KPCCT=KPCCT/KPCN
117*	KPCV=KPCVT/KPCN
118*	TPC1=ITPC1
119*	TPC2=ITPC2
120*	TPC3=ITPC3
121*	TPC4=ITPC4
122*	TPC5=ITPC5
123*	TPC6=ITPC6
124*	TPC7=ITPC7
125*	TPC8=ITPC8
126*	TPC9=ITPC9
127*	TPC10=ITPC10
128*	TPCOM=ITPCOM
129*	TAW1=ITAW1
130*	TAW0=ITAW0
131*	TAW1=ITAW1
132*	TAW2=ITAW2
133*	TAW3=ITAW3
134*	TAW4=ITAW4
135*	TAW5=ITAW5
136*	TAW6=ITAW6
137*	TAW7=ITAW7
138*	TAW8=ITAW8
139*	TAW9=ITAW9
140*	TAW10=ITAW10
141*	TAM1=ITAM1
142*	TAM2=ITAM2
143*	TAM3=ITAM3
144*	TAM4=ITAM4
145*	TAM5=ITAM5
146*	TAM6=ITAM6
147*	TAM7=ITAM7
148*	TAM8=ITAM8
149*	TAM9=ITAM9
150*	TAM10=ITAM10

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151* KAAW2=1.-KAAW1
152* KAAW2=1.-KAAW1
153* KAMCE=KAMCT/KAMN
154* KAMV=KAMVT/KAMN
155* THW0=ITHW0
156* THW1=ITHW1
157* THW1=ITHW1
158* THW2=ITHW2
159* THW3=ITHW3
160* THW4=ITHW4
161* THW5=ITHW5
162* THW6=ITHW6
163* THM1=ITHM1
164* THM2=ITHM2
165* THM3=ITHM3
166* THM4=ITHM4
167* THM5=ITHM5
168* THM6=ITHM6
169* THM10=ITHM10
170* THM16=ITHM16
171* KHHW2=1.-KHHW1
172* KHHW2=1.-KHHW1
173* KHMCE=KHMCT/KHMN
174* KHMV=KHMVT/KHMN
175* VPRW=IVPRW
176* TPRW=ITPRW
177* PPRG=IPPRG
178* PLOAD=IPLOAD
179* NPL=INPL
180* INT=IINT
181* APS=IAPS
182* IPSIT=IIPSIT
183* TRF1=ITRF1
184* TRF2=ITRF2
185* TRF3=ITRF3
186* TRF4=ITRF4
187* TRF5=ITRF5
188* TRF6=ITRF6
189* TRC1=ITRC1
190* TRC2=ITRC2
191* TRC3=ITRC3
192* TRC4=ITRC4
193* TRC5=ITRC5
194* TRC6=ITRC6
195* KREQT=3412800.*KREP0/3600.
196* TUPH=ITUPH
197* TGPH=TUPH
198* TCAH0A=ITCAHA
199* ICAN=IICAN
200* NCAA=INCAA

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201* TLPV=ITLPH
 202* JLPV=6031.
 203* JUPV=12400.
 204* MNSS=PNSS*14+./KUNGR*(JUPV/TUPV+JLPV/TLPV)
 205* 99998 CONTINUE 3 DYNAMIC
 206* GCCA=AFGEN(3,MEFLOW,TIME)
 207* IF (TIME.GT.63.0)GCCA=.00001.
 208* PRCD=AFGEN(6,POWER,TIME)
 209* DUMMY=PRCD
 210* IF (TIME.GE.TSCRAM)WFLOW=42.78
 211* IF (TIME.GE.TSCRAM)GAA=760.5
 212* IF (TIME.GT.TSCRAM+30.0)THWOS=THWOS
 213* RPH1=AFGEN(9,RFTSL,TPH1)
 214* DTPH1=WFLOW*(THW0-TPH1)/(KPHC/KUNWCP*KPHV*RPH1)
 215* TPH1=INTGRL (ITPH1,DTPH1)
 216* RPH2=AFGEN(15,RFTSL,TPH2)
 217* DTPH2=WFLOW*(TPH1-TPH2)/(KPHC/KUNWCP*KPHV*RPH2)
 218* TPH2=INTGRL (ITPH2,DTPH2)
 219* RPH3=AFGEN(21,RFTSL,TPH3)
 220* DTPH3=WFLOW*(TPH2-TPH3)/(KPHC/KUNWCP*KPHV*RPH3)
 221* TPH3=INTGRL (ITPH3,DTPH3)
 222* RPH4=AFGEN(27,RFTSL,TPH4)
 223* DTPH4=WFLOW*(TPH3-TPH4)/(KPHC/KUNWCP*KPHV*RPH4)
 224* TPH4=INTGRL (ITPH4,DTPH4)
 225* RPH5=AFGEN(33,RFTSL,TPH5)
 226* DTPH5=WFLOW*(TPH4-TPH5)/(KPHC/KUNWCP*KPHV*RPH5)
 227* TPH5=INTGRL (ITPH5,DTPH5)
 228* RPH6=AFGEN(39,RFTSL,TPH6)
 229* DTPH6=WFLOW*(TPH5-TPH6)/(KPHC/KUNWCP*KPHV*RPH6)
 230* TPH6=INTGRL (ITPH6,DTPH6)
 231* RPH7=AFGEN(45,RFTSL,TPH7)
 232* DTPH7=WFLOW*(TPH6-TPH7)/(KPHC/KUNWCP*KPHV*RPH7)
 233* TPH7=INTGRL (ITPH7,DTPH7)
 234* RPH8=AFGEN(51,RFTSL,TPH8)
 235* DTPH8=WFLOW*(TPH7-TPH8)/(KPHC/KUNWCP*KPHV*RPH8)
 236* TPH8=INTGRL (ITPH8,DTPH8)
 237* RPH9=AFGEN(57,RFTSL,TPH9)
 238* DTPH9=WFLOW*(TPH8-TPH9)/(KPHC/KUNWCP*KPHV*RPH9)
 239* TPH9=INTGRL (ITPH9,DTPH9)
 240* RPH10=AFGEN(63,RFTSL,TPH10)
 241* DTPH10=WFLOW*(TPH9-TPH10)/(KPHC/KUNWCP*KPHV*RPH10)
 242* TPH10=INTGRL (ITPH10,DTPH10)
 243* RPC1=AFGEN(69,RFTSL,TPC1)
 244* DTPC1=WFLOW*(TAW0-TPC1)/(KPCCKUNWCP*KPCV*RPC1)
 245* TPC1=INTGRL (ITPC1,DTPC1)
 246* RPC2=AFGEN(75,RFTSL,TPC2)
 247* DTPC2=WFLOW*(TPC1-TPC2)/(KPCCKUNWCP*KPCV*RPC2)
 248* TPC2=INTGRL (ITPC2,DTPC2)
 249* RPC3=AFGEN(81,RFTSL,TPC3)
 250* DTPC3=WFLOW*(TPC2-TPC3)/(KPCCKUNWCP*KPCV*RPC3)

251* TPC3=INTGRL(IITPC3,DTPC3)
252* RPC4=AFGEN(87,RFTSL,TPC4)
253* DTPC4=WFLOW*(ITPC3-TPC4)/(KPC4/KUNWCP*KPCV*RPC4)
254* TPC4=INTGRL(IITPC4,DTPC4)
255* RPC5=AFGEN(93,RFTSL,TPC5)
256* DTPC5=WFLOW*(ITPC4-TPC5)/(KPC5/KUNWCP*KPCV*RPC5)
257* TPC5=INTGRL(IITPC5,DTPC5)
258* RPC6=AFGEN(99,RFTSL,TPC6)
259* DTPC6=WFLOW*(ITPC5-TPC6)/(KPC6/KUNWCP*KPCV*RPC6)
260* TPC6=INTGRL(IITPC6,DTPC6)
261* RPC7=AFGEN(105,RFTSL,TPC7)
262* DTPC7=WFLOW*(ITPC6-TPC7)/(KPC7/KUNWCP*KPCV*RPC7)
263* TPC7=INTGRL(IITPC7,DTPC7)
264* RPC8=AFGEN(111,RFTSL,TPC8)
265* DTPC8=WFLOW*(ITPC7-TPC8)/(KPC8/KUNWCP*KPCV*RPC8)
266* TPC8=INTGRL(IITPC8,DTPC8)
267* RPC9=AFGEN(117,RFTSL,TPC9)
268* DTPC9=WFLOW*(ITPC8-TPC9)/(KPC9/KUNWCP*KPCV*RPC9)
269* TPC9=INTGRL(IITPC9,DTPC9)
270* RPC10=AFGEN(123,RFTSL,TPC10)
271* DTPC10=WFLOW*(ITPC9-TPC10)/(KPC10/KUNWCP*KPCV*RPC10)
272* TPC10=INTGRL(IITPC10,DTPC10)
273* RAWI=AFGEN(129,RFTSL,TAWI)
274* TPHO=TPHIO
275* DTAWI=WFLOW*(ITPHO-TAWI)/(KAWI/KUNWCP*KAWV*RAWI)
276* TAWI=INTGRL(ITAWI,DTAWI)
277* RAWO=AFGEN(135,RFTSL,TAWO)
278* TAWO1=(TAWI-(KAWW1)*(TAWI))/KAWW2
279* TAWO2=(TAW2-(KAWW1)*(TAWO1))/KAWW2
280* TAWO3=(TAW3-(KAWW1)*(TAWO2))/KAWW2
281* TAWO4=(TAW4-(KAWW1)*(TAWO3))/KAWW2
282* TAWO5=(TAW5-(KAWW1)*(TAWO4))/KAWW2
283* TAWO6=(TAW6-(KAWW1)*(TAWO5))/KAWW2
284* TAWO7=(TAW7-(KAWW1)*(TAWO6))/KAWW2
285* TAWO8=(TAW8-(KAWW1)*(TAWO7))/KAWW2
286* TAWO9=(TAW9-(KAWW1)*(TAWO8))/KAWW2
287* TAWO10=(TAW10-(KAWW1)*TAWO9)/KAWW2
288* DTAWO=WFLOW*(TAWO10-TAWO)/(KAWO/KUNWCP*KAWV*RAWO)
289* TAWO=INTGRL(ITAWO,DTAWO)
290* JAACP=GAA*KUNACP
291* JAAGR=(GAA/KAAG)**-.681
292* ZZ8000=KAAR*JAAGR*(KAAAU*KABU*(TAA10/KAATR))**-.681/
293* 1(KAAAK*KABK*TAA10/KAATR)
294* ZZ8002=KAHR/(KAMAK-KAMBK*(TAM10)/KAMTR)
295* JAAM10=KAA/KAWN/(10.5*ZZ8002+ZZ8000)/JAACP
296* TAA010=((TAA10)*(1.-KAAW1*JAAM10)+JAAM10*TAM10)/(1.+KAAW2*
297* 1JAAM10)
298* QAAM10=JAACP*((TAA10)-TAA010)
299* ZZ8005=AFGEN(147,FSPH,TAW:O)
300* ZZ8004=AFGEN(144,FVIS,TAW:O)

301* Z28003=AFGEN(191,FCON,TAW10)
302* Z28006=KAWRX/(Z28003*(WFLOW*3600./Z28004)**.8*
303* 1(Z28005*Z28004/Z28003)**.333)
304* JAWM10=KAWA/KAWN/(0.5*Z28002*KAWA/KAAA*Z28006)
305* QAWM10=JAWM10*(TAW10-TAM10)
306* DTAM10=(QAWM10-QAMM10)/KAMC
307* TAM10=INTGRL(ITAM10,DTAM10)
308* RAW10=AFGEN(231,RFTSL,TAW10)
309* DTAW10=(WFLOW*(TAW09-TAW010)-QAWM10/KUNWCP)/KAWV/RAW10
310* TAW10=INTGRL(ITAW10,DTAW10)
311* Z28007=KAAR*JAAGR*(KAAAU*KABBU*(TAA9/KAATR))**.681/
312* 1(KAAAK*KABK*TAA9/KAATR)
313* Z28009=KAMR/(KAMAK-KAMBK*TAM5/KAMTR)
314* JAAM9=KAAA/KAWN/(0.5*Z28009*Z28007)/JAACP
315* TAA09=(TAA010*(1.-KAAW1*JAAM9)*JAAM9*TAM9)/(1.+KAAW2*JAAM9)
316* QAMM9=JAACP*(TAA010-TAA09)
317* Z28012=AFGEN(156,FSPH,TAW9)
318* Z28011=AFGEN(153,FVIS,TAW9)
319* Z28010=AFGEN(150,FCON,TAW9)
320* Z28013=KAWRX/(Z28010*(WFLOW*3600./Z28011)**.8*
321* 1(Z28012*Z28011/Z28010)**.333)
322* JAWM9=KAWA/KAWN/(0.5*Z28009*KAWA/KAAA*Z28013)
323* QAWM9=JAWM9*(TAW9-TAM9)
324* DTAM9=(QAWM9-QAMM9)/KAMC
325* TAM9=INTGRL(ITAM9,DTAM9)
326* RAW9=AFGEN(237,RFTSL,TAW9)
327* DTAW9=(WFLOW*(TAW08-TAW09)-QAWM9/KUNWCP)/KAWV/RAW9
328* TAW9=INTGRL(ITAW9,DTAW9)
329* Z28014=KAAR*JAAGR*(KAAAU*KABBU*(TAA8/KAATR))**.681/
330* 1(KAAAK*KABK*TAA8/KAATR)
331* Z28016=KAMR/(KAMAK-KAMBK*TAM8/KAMTR)
332* JAAM8=KAAA/KAWN/(0.5*Z28016*Z28014)/JAACP
333* TAA08=(TAA09*(1.-KAAW1*JAAM8)*JAAM8*TAM8)/(1.+KAAW2*JAAM8)
334* QAMM8=JAACP*(TAA09-TAA08)
335* Z28019=AFGEN(165,FSPH,TAW8)
336* Z28018=AFGEN(162,FVIS,TAW8)
337* Z28017=AFGEN(159,FCON,TAW8)
338* Z28020=KAWRX/(Z28017*(WFLOW*3600./Z28018)**.8*
339* 1(Z28019*Z28018/Z28017)**.333)
340* JAWM8=KAWA/KAWN/(0.5*Z28016*KAWA/KAAA*Z28020)
341* QAWM8=JAWM8*(TAW8-TAM8)
342* DTAM8=(QAWM8-QAMM8)/KAMC
343* TAM8=INTGRL(ITAM8,DTAM8)
344* RAW8=AFGEN(243,RFTSL,TAW8)
345* DTAW8=(WFLOW*(TAW07-TAW08)-QAWM8/KUNWCP)/KAWV/RAW8
346* TAW8=INTGRL(ITAW8,DTAW8)
347* Z28021=KAAR*JAAGR*(KAAAU*KABBU*(TAA7/KAATR))**.681/
348* 1(KAAAK*KABK*TAA7/KAATR)
349* Z28023=KAMR/(KAMAK-KAMBK*TAM7/KAMTR)
350* JAAM7=KAAA/KAWN/(0.5*Z28023*Z28021)/JAACP

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351* TAA07=(TAA08*(1.-KAAW1*JAAM7)+JAAM7*TAM7)/(1.+KAAW2*JAAM7)
352* QAAM7=JAACP*(TAA08-TAA07)
353* Z28026=AFGEN(174,FSPH,TAM7)
354* Z28025=AFGEN(171,FVIS,TAM7)
355* Z28024=AFGEN(168,FCON,TAM7)
356* Z28027=KAWRX/(Z28024*(WFLOW+3600./Z28025)**.8*
357* 1(Z28026*Z28025/Z28024)**.333)
358* JAWM7=KAWA/KAWN/(0.5*Z28023*KAWA/KAAA+Z28027)
359* QAAM7=JAWM7*(TAM7-TAM7)
360* DTAM7=(QAAM7+QAAM7)/KAMC
361* TAM7=INTGRL(ITAM7,DTAM7)
362* RAW7=AFGEN(249,RFTSL,TAM7)
363* DTAM7=(WFLOW*((TAM06)-TAM07)-QAAM7/KUNWCP)/KAWV/RAW7
364* TAM7=INTGRL(ITAM7,DTAM7)
365* Z28028=KAAAR*JAAGR*(KAAAU*KAAABU*(TAA6/KAAIR))**.681/
366* 1(KAAAK*KAAAB*KAA6/KAAIR)
367* Z28030=KAMR/(KAAK-KAMBK*TAM6/KAMTR)
368* JAAM6=KAAA/KAWN/(0.5*Z28030+Z28028)/JAACP
369* TAA06=(TAA07*(1.-KAAW1*JAAM6)+JAAM6*TAM6)/(1.+KAAW2*JAAM6)
370* QAAM6=JAACP*(TAA07-TAA06)
371* Z28033=AFGEN(183,FSPH,TAM6)
372* Z28032=AFGEN(180,FVIS,TAM6)
373* Z28031=AFGEN(177,FCON,TAM6)
374* Z28034=KAWRX/(Z28031*(WFLOW+3600./Z28032)**.8*
375* 1(Z28033*Z28032/Z28031)**.333)
376* JAWM6=KAWA/KAWN/(0.5*Z28030*KAWA/KAAA+Z28034)
377* QAAM6=JAWM6*(TAM6-TAM6)
378* DTAM6=(QAAM6+QAAM6)/KAMC
379* TAM6=INTGRL(ITAM6,DTAM6)
380* RAW6=AFGEN(255,RFTSL,TAM6)
381* DTAM6=(WFLOW*((TAM05)-TAM06)-QAAM6/KUNWCP)/KAWV/RAW6
382* TAM6=INTGRL(ITAM6,DTAM6)
383* Z28035=KAAAR*JAAGR*(KAAAU*KAAABU*(TAA5/KAAIR))**.681/
384* 1(KAAAK*KAAAB*KAA5/KAAIR)
385* Z28037=KAMR/(KAAK-KAMBK*TAM5/KAMTR)
386* JAAM5=KAAA/KAWN/(0.5*Z28037+Z28035)/JAACP
387* TAA05=(TAA06*(1.-KAAW1*JAAM5)+JAAM5*TAM5)/(1.+KAAW2*JAAM5)
388* QAAM5=JAACP*(TAA06-TAA05)
389* Z28040=AFGEN(192,FSPH,TAM5)
390* Z28039=AFGEN(189,FVIS,TAM5)
391* Z28038=AFGEN(186,FCON,TAM5)
392* Z28041=KAWRX/(Z28038*(WFLOW+3600./Z28039)**.8*
393* 1(Z28040*Z28039/Z28038)**.333)
394* JAWM5=KAWA/KAWN/(0.5*Z28037*KAWA/KAAA+Z28041)
395* QAAM5=JAWM5*(TAM5-TAM5)
396* DTAM5=(QAAM5+QAAM5)/KAMC
397* TAM5=INTGRL(ITAM5,DTAM5)
398* RAW5=AFGEN(261,RFTSL,TAM5)
399* DTAM5=(WFLOW*((TAM04)-TAM05)-QAAM5/KUNWCP)/KAWV/RAW5
400* TAM5=INTGRL(ITAM5,DTAM5)

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401* Z28042=KAAR*JAAGR*(KAAAU*KAABU*(TAA4/KAATR))*681/
402* 1(KAAAK*KAABK*TAA4/KAATR)
403* Z28044=KAMR/(KAKAK-KAMBK*TAM4/KAMTR)
404* JAAH4=KAAA/KAWN/(0.5*Z28044+Z28042)/JAACP
405* TAA04=(TAA05*(1.-KAAW1*JAAH4)+JAAH4*TAM4)/(1.+KAAW2*JAAH4)
406* QAAH4=JAACP*(TAA05-TAA04)
407* Z28047=AFGEN(201,FSPH,TAW4)
408* Z28046=AFGEN(198,FVIS,TAW4)
409* Z28045=AFGEN(195,FCON,TAW4)
410* Z28048=KAMRX/(Z28045*(WFLOW*3600./Z28046))*8*
411* 1(Z28047+Z28046/Z28045))*333)
412* JAWH4=KAWA/KAWN/(0.5*Z28044+KAWA/KAAA+Z28048)
413* QAWH4=JAWH4*(TAW4-TAM4)
414* DTAM4=(QAWH4+QAAH4)/KAMC
415* TAM4=INTGRL(ITAM4,DTAM4)
416* RAW4=AFGEN(267,RFTSL,TAW4)
417* DTAW4=(WFLOW*(TAW03-TAW04)-QAWH4/KUNWCP)/KAMV/RAW4
418* TAW4=INTGRL(ITAW4,DTAW4)
419* Z28049=KAAR*JAAGR*(KAAAU*KAABU*(TAA3/KAATR))*681/
420* 1(KAAAK*KAABK*TAA3/KAATR)
421* Z28051=KAMR/(KAKAK-KAMBK*TAM3/KAMTR)
422* JAAH3=KAAA/KAWN/(0.5*Z28051+Z28049)/JAACP
423* TAA03=(TAA04*(1.-KAAW1*JAAH3)+JAAH3*TAM3)/(1.+KAAW2*JAAH3)
424* CAAM3=JAACP*(TAA04-TAA03)
425* Z28054=AFGEN(210,FSPH,TAW3)
426* Z28053=AFGEN(207,FVIS,TAW3)
427* Z28052=AFGEN(204,FCON,TAW3)
428* Z28055=KAMRX/(Z28052*(WFLOW*3600./Z28053))*8*
429* 1(Z28054+Z28053/Z28052))*333)
430* JAWH3=KAWA/KAWN/(0.5*Z28051+KAWA/KAAA+Z28055)
431* CAWM3=JAWH3*(TAW3-TAM3)
432* DTAM3=(QAWH3+QAAH3)/KAMC
433* TAM3=INTGRL(ITAM3,DTAM3)
434* RAW3=AFGEN(273,RFTSL,TAW3)
435* DTAW3=(WFLOW*(TAW02-TAW03)-QAWH3/KUNWCP)/KAMV/RAW3
436* TAW3=INTGRL(ITAW3,DTAW3)
437* Z28056=KAAR*JAAGR*(KAAAU*KAABU*(TAA2/KAATR))*681/
438* 1(KAAAK*KAABK*TAA2/KAATR)
439* Z28058=KAMR/(KAKAK-KAMBK*TAM2/KAMTR)
440* JAAH2=KAAA/KAWN/(0.5*Z28058+Z28056)/JAACP
441* TAA02=(TAA03*(1.-KAAW1*JAAH2)+JAAH2*TAM2)/(1.+KAAW2*JAAH2)
442* QAAH2=JAACP*(TAA03-TAA02)
443* Z28061=AFGEN(219,FSPH,TAW2)
444* Z28060=AFGEN(216,FVIS,TAW2)
445* Z28059=AFGEN(213,FCON,TAW2)
446* Z28062=KAMRX/(Z28059*(WFLOW*3600./Z28060))*8*
447* 1(Z28061+Z28060/Z28059))*333)
448* JAWH2=KAWA/KAWN/(0.5*Z28058+KAWA/KAAA+Z28062)
449* QAWH2=JAWH2*(TAW2-TAM2)
450* DTAM2=(QAWH2+QAAH2)/KAMC

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451* TAM2=INTGRL(ITAM2,DTAM2)
452* RAW2=AFGEN(279,RFTSL,TAM2)
453* DTAM2=(WFLOW*(ITAM01)-TAM02)-QAWM2/KUNWCP)/KAWY/RAW2
454* TAM2=INTGRL(ITAM2,DTAM2)
455* ZZ8063=KAAR*JAAGR*(KAAAU*KAA3U*(TAA1/KAATR))*+.681/
456* 1(KAAAK*KAABK*TAA1/KAATR)
457* ZZ8065=KAMR/(KAMAK-KAMBK*TAM1/KAMTR)
458* JAAM1=KAAA/KAWN/(0.5*ZZ8065+ZZ8063)/JAACP
459* TAA01=(TAA02*(1.-KAAW1*JAAM1)+JAAM1*TAM1)/(1.+KAAW2*JAAM1)
460* QAAM1=JAACP*(TAA02-TAA01)
461* ZZ8068=AFGEN(228,FSPH,TAW1)
462* ZZ8067=AFGEN(225,FVIS,TAW1)
463* ZZ8066=AFGEN(222,FCON,TAW1)
464* ZZ8069=KAWRX/(ZZ8066*(WFLOW*3600./ZZ8067))*+.8*
465* 1(ZZ8068*ZZ8067/ZZ8066))*+.333)
466* JAWM1=KAWA/KAWN/(0.5*ZZ8065*KAWA/KAAA+ZZ8069)
467* QAWM1=JAWM1*(TAW1-TAM1)
468* DTAM1=(QAWM1+QAAM1)/KAMC
469* TAM1=INTGRL(ITAM1,DTAM1)
470* RAW1=AFGEN(285,RFTSL,TAW1)
471* DTAW1=(WFLOW*(ITAW1)-TAW01)-QAWM1/KUNWCP)/KAWY/RAW1
472* TAW1=INTGRL(ITAW1,DTAW1)
473* RHWI=AFGEN(291,RFTSL,THW1)
474* TPC0=TPC10
475* DTHW1=WFLOW*(TPC0-THW1)/(KHMCI/KUNWCP*KHWW1+RHWI)
476* THW1=INTGRL(ITHW1,DTHW1)
477* RHW0=AFGEN(297,RFTSL,THW0)
478* THW01=(THW1-(KHWW1)*(THW1))/KHWW2
479* THW02=(THW2-(KHWW1)*(THW01))/KHWW2
480* THW03=(THW3-(KHWW1)*(THW02))/KHWW2
481* THW04=(THW4-(KHWW1)*(THW03))/KHWW2
482* THW05=(THW5-(KHWW1)*(THW04))/KHWW2
483* THW06=(THW6-(KHWW1)*(THW05))/KHWW2
484* DTHW0=WFLOW*(THW06-THW0)/(KHMCO/KUNWCP*KHWW0+RHW0)
485* THW0=INTGRL(ITHW0,DTHW0)
486* PNSS=KUNGR*MNSS/(144.*(JUPV/TUPH*JLPV/TLPH))
487* MHHI6=144.*PNSS*KHHVI6/(KUNGR*THHI6)
488* GCAA=KCAR*144.*PNSS/TCANO/KUNGR*NCAA
489* DTHHI6=GCAA*KUNHCP*(TLPH-THHI6)/KUNHCV*MHHI6
490* THHI6=INTGRL(ITHHI6,DTHHI6)
491* ZZ8072=1.242
492* ZZ8073=KHHVK*THH6**KHHVKE
493* ZZ8074=KHHCK*THH6**KHHCKE
494* ZZ8070=KHHRX/(ZZ8074*(GCAA*3600./ZZ8073))*+.8*
495* 1(ZZ8072*ZZ8073/ZZ8074))*+.333)
496* ZZ8075=KHHRX/(KHMCK*KHMBK*(THH6-460.))
497* JHHCP=GCAA*KUNHCP
498* JHHM6=(KHHH/KHWN/JHHCP)/(0.5*ZZ8075+ZZ8070)
499* THH06=(THHI6*(1.-KHHM1*JHHM6)+JHHM6*THH6)/(1.+KHHM2*JHHM6)
500* QHHM6=JHHCP*(THHI6-THH06)

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501* Z28078=AFGENI 309,FSPH,THW6)
502* Z28077=AFGENI 306,FVIS,THW6)
503* Z28076=AFGENI 303,FCON,THW6)
504* Z28079=KHWRX,(Z28076*(WFLOW*3600./Z28077)**.8*
505* 1(Z28078*Z28077/Z28076)**.333)
506* JHWM6=(KHWA/KHWN)/(1.5*Z28075*KHWA/KHWA+Z28079)
507* QHWM6=JHWM6*(THW6-THM6)
508* DTHM6=(QHWM6-QHMM6)/KMMC
509* THM6=INTGRL(1THM6,DTHM6)
510* RHW6=AFGENI 357,RFTSL,THW6)
511* DTHW6=(WFLOW*((THW05)-THW06)-QHWM6/KUNWCP)/KHVV/RHW6
512* THW6=INTGRL(1THW6,DTHW6)
513* Z28082=1.242
514* Z28083=KHHVK*THM5**KHHVKE
515* Z28084=KHHCK*THM5**KHHCKE
516* Z28080=KHWRX,(Z28084*(GCAA*3600./Z28083)**.8*
517* 1(Z28082*Z28083/Z28084)**.333)
518* Z28085=KHWRX,(KHMMAK*KHMBK*(THM5-460.))
519* JHMM5=(KHWA/PHWN/JHHCP)/(1.5*Z28085+Z28080)
520* THM05=(THM06*(1.-KHHW1*JHMM5)+JHMM5*THM5)/(1.+KHHW2*JHMM5)
521* QHMM5=JHHCP*(THM06-THM05)
522* Z28088=AFGENI 318,FSPH,THW5)
523* Z28087=AFGENI 315,FVIS,THW5)
524* Z28086=AFGENI 312,FCON,THW5)
525* Z28089=KHWRX,(Z28086*(WFLOW*3600./Z28087)**.8*
526* 1(Z28088*Z28087/Z28086)**.333)
527* JHMM5=(KHWA/PHWN)/(1.5*Z28085*KHWA/KHWA+Z28089)
528* QHMM5=JHMM5*(THW5-THM5)
529* DTHM5=(QHMM5-QHMM5)/KMMC
530* THM5=INTGRL(1THM5,DTHM5)
531* RHW5=AFGENI 363,RFTSL,THW5)
532* DTHW5=(WFLOW*((THW04)-THW05)-QHMM5/KUNWCP)/KHVV/RHW5
533* THW5=INTGRL(1THW5,DTHW5)
534* Z28092=1.242
535* Z28093=KHHVK*THM4**KHHVKE
536* Z28094=KHHCK*THM4**KHHCKE
537* Z28090=KHWRX,(Z28094*(GCAA*3600./Z28093)**.8*
538* 1(Z28092*Z28093/Z28094)**.333)
539* Z28095=KHWRX,(KHMMAK*KHMBK*(THM4-460.))
540* JHMM4=(KHWA/PHWN/JHHCP)/(1.5*Z28095+Z28090)
541* THM04=(THM05*(1.-KHHW1*JHMM4)+JHMM4*THM4)/(1.+KHHW2*JHMM4)
542* QHMM4=JHHCP*(THM05-THM04)
543* Z28098=AFGENI 327,FSPH,THW4)
544* Z28097=AFGENI 324,FVIS,THW4)
545* Z28096=AFGENI 321,FCON,THW4)
546* Z28099=KHWRX,(Z28096*(WFLOW*3600./Z28097)**.8*
547* 1(Z28098*Z28097/Z28096)**.333)
548* JHMM4=(KHWA/PHWN)/(1.5*Z28095*KHWA/KHWA+Z28099)
549* QHMM4=JHMM4*(THW4-THM4)
550* DTHM4=(QHMM4-QHMM4)/KMMC

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551* THM4=INTGRL(ITHM4, DTHM4)
 552* RMW4=AFGEN(369, RFTSL, THW4)
 553* DTHW4=(WFLOW*(ITHM3)-THWQ4)-QHWM4/KUNWCP/KHNV/RHW4
 554* THW4=INTGRL(ITHW4, DTHW4)
 555* Z28102=1.242
 556* Z28103=KHHVK*THH3**KHHVKE
 557* Z28104=KHHCK*THH3**KHHCKE
 558* Z28100=KHHRX/(Z28104*(GCAA*3600./Z28103)**.8*
 559* 1(Z28102*Z28103/Z28104)**.333)
 560* Z28105=KHHRX/(KHHAK*KHHBK*(THH3-460.))
 561* JHHM3=(KHMA/KHWN/JHHCP)/(1.5*Z28105*Z28100)
 562* THH03=(THH04*(1.-KHHW1*JHHM3)+JHHM3*THH3)/(1.+KHHW2*JHHM3)
 563* QHHM3=JHHCP*(THH04-THH03)
 564* Z28108=AFGEN(336, FSPH, THW3)
 565* Z28107=AFGEN(333, FVIS, THW3)
 566* Z28106=AFGEN(330, FCON, THW3)
 567* Z28109=KHHRX/(Z28106*(WFLOW*3600./Z28107)**.8*
 568* 1(Z28108*Z28107/Z28106)**.333)
 569* JHHM3=(KHMA/KHWN)/(1.5*Z28105*KHMA/KHMA+Z28109)
 570* QHHM3=JHHM3*(THW3-THH3)
 571* DTHM3=(QHWM3*QHHM3)/KHHCK
 572* THM3=INTGRL(ITHM3, DTHM3)
 573* RMW3=AFGEN(375, RFTSL, THW3)
 574* DTHW3=(WFLOW*(ITHW2)-THWQ3)-QHWM3/KUNWCP/KHNV/RHW3
 575* THW3=INTGRL(ITHW3, DTHW3)
 576* Z28112=1.242
 577* Z28113=KHHVK*THH2**KHHVKE
 578* Z28114=KHHCK*THH2**KHHCKE
 579* Z28110=KHHRX/(Z28114*(GCAA*3600./Z28113)**.8*
 580* 1(Z28112*Z28113/Z28114)**.333)
 581* Z28115=KHHRX/(KHHAK*KHHBK*(THH2-460.))
 582* JHHM2=(KHMA/KHWN/JHHCP)/(1.5*Z28115*Z28110)
 583* THH02=(THH03*(1.-KHHW1*JHHM2)+JHHM2*THH2)/(1.+KHHW2*JHHM2)
 584* QHHM2=JHHCP*(THH03-THH02)
 585* Z28118=AFGEN(345, FSPH, THW2)
 586* Z28117=AFGEN(342, FVIS, THW2)
 587* Z28116=AFGEN(339, FCON, THW2)
 588* Z28119=KHHRX/(Z28116*(WFLOW*3600./Z28117)**.8*
 589* 1(Z28118*Z28117/Z28116)**.333)
 590* JHHM2=(KHMA/KHWN)/(1.5*Z28115*KHMA/KHMA+Z28119)
 591* QHHM2=JHHM2*(THW2-THH2)
 592* DTHM2=(QHWM2*QHHM2)/KHHCK
 593* THM2=INTGRL(ITHM2, DTHM2)
 594* RMW2=AFGEN(381, RFTSL, THW2)
 595* DTHW2=(WFLOW*(ITHW1)-THWQ2)-QHWM2/KUNWCP/KHNV/RHW2
 596* THW2=INTGRL(ITHW2, DTHW2)
 597* Z28122=1.242
 598* Z28123=KHHVK*THH1**KHHVKE
 599* Z28124=KHHCK*THH1**KHHCKE
 600* Z28120=KHHRX/(Z28124*(GCAA*3600./Z28123)**.8*

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601* 1(ZZ8122*ZZ8123/ZZ8124)**333)
602* ZZ8125=KMMRX/(KHMMA+KMMBK*(THM1-460.))
603* JHMM1=(KHMA/KHWN/JHMCPI/(1.5*ZZ8125*ZZ8120)
604* THM01=(THM02*(1.-KMMW1+JHMM1)+JHMM1*THM1)/(1.+KMMW2+JHMM1)
605* QHMM1=JHMCPI*(THM02-THM01)
606* ZZ8128=AFGEN(354,FSPH,THW1)
607* ZZ8127=AFGEN(351,FVIS,THW1)
608* ZZ8126=AFGEN(348,FCOH,THW1)
609* ZZ8129=KMMRX/(ZZ8126*(WFLOW*3600./ZZ8127)**.8*
610* 1(ZZ8128*ZZ8127/ZZ8126)**333)
611* JHMM1=(KHMA/KHWN)/(1.5*ZZ8125*KHMA/KHMA*ZZ8129)
612* QHMM1=JHMM1*(THW1-THM1)
613* DTHM1=(QHMM1+QHMM1)/KMMC
614* THM1=INTGRL(ITHM1,DTHM1)
615* RHW1=AFGEN(387,REISL,THW1)
616* DTHW1=(WFLOW*((THW1)-THW01)-QHMM1/KUNWCP)/KMMV/RHW1
617* THW1=INTGRL(ITHW1,DTHW1)
618* OCAERR=THW05-THW0
619* PROPN=100./KCAPBN*OCAERR/KCARG
620* DICAN=PROP/KCART
621* ICAN=INTGRL(IICAN,DICAN)
622* NCAD=PROP/ICAN
623* DNCAA=(NCAD-NCAA)/1.
624* NCAA=INTGRL(INCAA,DNCAA)
625* DTCAMA=(THM01-TCAH0A)/KCATAU
626* TCAH0A=INTGRL(ITCAHA,DTCAMA)
627* MUPH=PNSS*JLPV*144./KUNGR*JUPH)
628* TCCH0A=AFGEN(393,TINLEY,TIME)
629* DTUPH=(KUNHCP*(KCCAN*GCCA*(TCCH0A-TUPH)*KCAAN*GCCA*(TCAH0A-
630* 1 TUPH))+JGPK*(TGPH-TUPH))/(KUNHCV*MUPH)
631* TUPH=INTGRL(ITUPH,DTUPH)
632* DTGPH=JGPK*(TUPH-TGPH)/KGPC
633* TGPH=INTGRL(ITGPH,DTGPH)
634* HLPH=PNSS*JLPV*144./KUNGR*TLPH)
635* GRETOT=KCCAN*GCCA*KCAAN*GCCA
636* GBPH=GRETOT*(1.-KREGF)
637* QBPH=KREOT*(1.-KREPF)*PRCD
638* TBPH=TUPH+QBPH/KUNHCP/GBPH
639* GREH=GRETOT*KREGF/KRENN
640* ZZ8176=3.055E8*GREH*TRH6**-.687
641* IF(ZZ8176.LT.2300.)ZZ8176=2300.
642* ZZ8177=8.28E-4*TRH6**701*ZZ8176**8/3600.
643* ZZ8178=1.693E-3+1.20E-6*TRC6
644* ZZ8179=.02305/(ZZ8178*KREL6)
645* ZZ8180=1./(ZZ8177*KREA6)+ZZ8179/2.
646* JRECK6=1./ZZ8180
647* ZZ8181=57.78*.886*(1./(18.2+.0271*TRF6/1.8)*5.5E-13*(TRF6/1.8)*
648* 1*3)/3600.
649* ZZ8182=2.95E-7*((TRF6*TRC6)/2.)*.701
650* ZZ8183=.03229/(ZZ8181*KREL6)+.0036/(ZZ8182*KREL6)+ZZ8179/2.

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651*	JRCFK6=1./Z28183	
652*	Z28224=JRECK6/(GREH*KUNHCP)	
653*	Z28225=1.-1./((1.-EXPL(-Z28224)))*1./Z28224	
654*	Z28167=3.055E8*GREH*TREH5**-.687	
655*	IF(Z28167.LT.2300.)Z28167=2300.	
656*	Z28168=8.28E-4*TREH5**701*Z28167**8/3600.	
657*	Z28169=1.693E-3*1.208E-6*TRC5	
658*	Z28170=.02335/(Z28169*KREL5)	
659*	Z28171=1./((Z28168*KREA5)+Z28170/2.	
660*	JRECK5=1./Z28171	
661*	Z28172=57.78**886*(1./((18.2+.0271)*TRF5/1.8)*5.5E-13*(TRF5/1.8)*	
662*	1*31/3600.	
663*	Z28173=2.95E-7*(1*(TRF5+TRC5)/2.))*0.701	
664*	Z28174=.03229/(Z28172*KREL5)+.0036/(Z28173*KREL5)+Z28170/2.	
665*	JRCFK5=1./Z28174	
666*	Z28216=JRECK5/(GREH*KUNHCP)	
667*	Z28217=1.-1./((1.-EXPL(-Z28216)))*1./Z28216	
668*	Z28158=3.055E8*GREH*TREH4**-.687	
669*	IF(Z28158.LT.2300.)Z28158=2300.	
670*	Z28159=8.28E-4*TREH4**701*Z28158**8/3600.	
671*	Z28160=1.693E-3*1.208E-6*TRC4	
672*	Z28161=.02305/(Z28160*KREL4)	
673*	Z28162=1./((Z28159*KREA4)+Z28161/2.	
674*	JRECK4=1./Z28162	
675*	Z28163=57.78**886*(1./((18.2+.0271)*TRF4/1.8)*5.5E-13*(TRF4/1.8)*	
676*	1*31/3600.	
677*	Z28164=2.95E-7*(1*(TRF4+TRC4)/2.))*0.701	
678*	Z28165=.03229/(Z28163*KREL4)+.0036/(Z28164*KREL4)+Z28161/2.	
679*	JRCFK4=1./Z28165	
680*	Z28208=JRECK4/(GREH*KUNHCP)	
681*	Z28209=1.-1./((1.-EXPL(-Z28208)))*1./Z28208	
682*	Z28149=3.055E8*GREH*TREH3**-.687	
683*	IF(Z28149.LT.2300.)Z28149=2300.	
684*	Z28150=8.28E-4*TREH3**701*Z28149**8/3600.	
685*	Z28151=1.693E-3*1.208E-6*TRC3	
686*	Z28152=.02305/(Z28151*KREL3)	
687*	Z28153=1./((Z28150*KREA3)+Z28152/2.	
688*	JRECK3=1./Z28153	
689*	Z28154=57.78**886*(1./((18.2+.0271)*TRF3/1.8)*5.5E-13*(TRF3/1.8)*	
690*	1*31/3600.	
691*	Z28155=2.95E-7*(1*(TRF3+TRC3)/2.))*0.701	
692*	Z28156=.03229/(Z28154*KREL3)+.0036/(Z28155*KREL3)+Z28152/2.	
693*	JRCFK3=1./Z28156	
694*	Z28200=JRECK3/(GREH*KUNHCP)	
695*	Z28201=1.-1./((1.-EXPL(-Z28200)))*1./Z28200	
696*	Z28140=3.055E8*GREH*TREH2**-.687	
697*	IF(Z28140.LT.2300.)Z28140=2300.	
698*	Z28141=8.28E-4*TREH2**701*Z28140**8/3600.	
699*	Z28142=1.693E-3*1.208E-6*TRC2	
700*	Z28143=.02305/(Z28142*KREL2)	

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701* Z28194=1./(Z28191*KREA2)+Z28193/2.
702* JRECK2=1./Z28194
703* Z28195=57.78*.886*(1./(18.2+.0271*TRF2/1.8)+5.5E-13*(TRF2/1.8)*
704* 1*3)/3600.
705* Z28196=2.95E-7*(TRF2+TRC2)/2.)*.0.701
706* Z28197=.03229/(Z28195*KREL2)+.0036/(Z28196*KREL2)+Z28193/2.
707* JRCFK2=1./Z28197
708* Z28192=JRECK2/(GREH*KUNHCP)
709* Z28193=1.-1./(1.-EXP(-Z28192))+1./Z28192
710* Z28131=3.055E8*GREH*TREH1*-.687
711* IF(Z28131.LT.2300.)Z28131=2300.
712* Z28132=8.28E-4*TREH1*.701+Z28131*.8/3600.
713* Z28133=1.693E-3+1.208E-6*TRC1
714* Z28134=.02305/(Z28133*KREL1)
715* Z28135=1./(Z28132*KREA1)+Z28134/2.
716* JRECK1=1./Z28135
717* Z28136=57.78*.886*(1./(18.2+.0271*TRF1/1.8)+5.5E-13*(TRF1/1.8)*
718* 1*3)/3600.
719* Z28137=2.95E-7*(TRF1+TRC1)/2.)*.0.701
720* Z28138=.03229/(Z28136*KREL1)+.0036/(Z28137*KREL1)+Z28134/2.
721* JRCFK1=1./Z28138
722* Z28184=JRECK1/(GREH)*KUNHCP
723* Z28185=1.-1./(1.-EXP(-Z28184))+1./Z28184
724* TREH01=(TUPH*(1.-Z28184*Z28185)+Z28184*TRC1)/(1.+Z28184*(1.-
725* Z28185))
726* TREH02=((TREH01)*(1.-Z28192*Z28193)+Z28192*TRC2)/(1.+Z28192*(1.
727* 1-Z28193))
728* TREH03=((TREH02)*(1.-Z28200*Z28201)+Z28200*TRC3)/(1.+Z28200*(1.
729* 1-Z28201))
730* TREH04=((TREH03)*(1.-Z28208*Z28209)+Z28208*TRC4)/(1.+Z28208*(1.
731* 1-Z28209))
732* TREH05=((TREH04)*(1.-Z28216*Z28217)+Z28216*TRC5)/(1.+Z28216*(1.
733* 1-Z28217))
734* TREH06=((TREH05)*(1.-Z28224*Z28225)+Z28224*TRC5)/(1.+Z28224*(1.
735* 1-Z28225))
736* DTLPH=(KUNHCP*(KRENN*GREH*(TREH06-TLPH)+GBPH*(TBPH-TLPH)))/
737* 1 (KUNHCV*MLPH)
738* TLPH=INTGRL(ITLPH,DTLPH)
739* Z28187=0.5559*(52.492+0.03953*TRF1-1.512E-5*TRF1)*2+2.203E-9*
740* 1TRF1**3)
741* Z28189=KRFV1*Z28187
742* Z28191=JRCFK1*(TRF1-TRC1)
743* ORF1=KREF1*KREQT*KREPE*PRCO/KRENN
744* DTRF1=(ORF1-Z28191)/Z28189
745* TRF1=INTGRL(ITRF1,DTRF1)
746* Z28188=0.1196*(218.378+0.6541*TRC1-4.504E-4*TRC1**2+1.143E-7*
747* 1TRC1**3)
748* Z28190=KRCV1*Z28188
749* Z28186=KUNHCP*(GREH)*(TREH01-TUPH)
750* DTRC1=(Z28191-Z28186)/Z28190

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751* TRC1=INTGRL (ITRC1,DTRC1)
752* Z28195=0.5559*(52.492+0.03953*TRF2-1.512E-5*TRF2**2+2.203E-9*
753* 1TRF2**3)
754* Z28197=KRFV2*Z28195
755* Z28199=JRCFK2*(TRF2-TRC2)
756* QRF2=KREPF2*KREQT*KREPF*PRCD/KRENN
757* DTRF2=(QRF2-Z28199)/Z28197
758* TRF2=INTGRL (ITRF2,DTRF2)
759* Z28196=0.1196*(218.378+0.6541*TRC2-4.504E-4*TRC2**2+1.143E-7*
760* 1TRC2**3)
761* Z28198=KRCV2*Z28196
762* Z28194=KUNHCP*GREH*(TREH02-(TREH01))
763* DTRC2=(Z28199-Z28194)/Z28198
764* TRC2=INTGRL (ITRC2,DTRC2)
765* Z28203=0.5559*(52.492+0.03953*TRF3-1.512E-5*TRF3**2+2.203E-9*
766* 1TRF3**3)
767* Z28205=KRFV3*Z28203
768* Z28207=JRCFK3*(TRF3-TRC3)
769* QRF3=KREPF3*KREQT*KREPF*PRCD/KRENN
770* DTRF3=(QRF3-Z28207)/Z28205
771* TRF3=INTGRL (ITRF3,DTRF3)
772* Z28204=0.1196*(218.378+0.6541*TRC3-4.504E-4*TRC3**2+1.143E-7*
773* 1TRC3**3)
774* Z28206=KRCV3*Z28204
775* Z28202=KUNHCP*GREH*(TREH03-(TREH02))
776* DTRC3=(Z28207-Z28202)/Z28206
777* TRC3=INTGRL (ITRC3,DTRC3)
778* Z28211=0.5559*(52.492+0.03953*TRF4-1.512E-5*TRF4**2+2.203E-9*
779* 1TRF4**3)
780* Z28213=KRFV4*Z28211
781* Z28215=JRCFK4*(TRF4-TRC4)
782* QRF4=KREPF4*KREQT*KREPF*PRCD/KRENN
783* DTRF4=(QRF4-Z28215)/Z28213
784* TRF4=INTGRL (ITRF4,DTRF4)
785* Z28212=0.1196*(218.378+0.6541*TRC4-4.504E-4*TRC4**2+1.143E-7*
786* 1TRC4**3)
787* Z28214=KRCV4*Z28212
788* Z28210=KUNHCP*GREH*(TREH04-(TREH03))
789* DTRC4=(Z28215-Z28210)/Z28214
790* TRC4=INTGRL (ITRC4,DTRC4)
791* Z28219=0.5559*(52.492+0.03953*TRF5-1.512E-5*TRF5**2+2.203E-9*
792* 1TRF5**3)
793* Z28221=KRFV5*Z28219
794* Z28223=JRCFK5*(TRF5-TRC5)
795* QRF5=KREPF5*KREQT*KREPF*PRCD/KRENN
796* DTRF5=(QRF5-Z28223)/Z28221
797* TRF5=INTGRL (ITRF5,DTRF5)
798* Z28220=0.1196*(218.378+0.6541*TRC5-4.504E-4*TRC5**2+1.143E-7*
799* 1TRC5**3)
800* Z28222=KRCV5*Z28220

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801* ZZ8218=KUNHCP*GREH*(TREM05-(TREM04))
802* DTRC5=(ZZ8223-ZZ8218)/ZZ8222
803* TRC5=INTGRL(IIRCS,DTRC5)
804* ZZ8227=0.5559*(52.492+0.03953*TRF6-1.512E-5*TRF6**2+2.203E-9*
805*)TRF6**3)
806* ZZ8229=KRFV6*ZZ8227
807* ZZ8231=JRCFK6*(TRF6-TRC6)
808* QRF6=KREPF6*KREQT*KREPF*PRCD/KRENN
809* DTRF6=(QRF6-ZZ8231)/ZZ8229
810* TRF6=INTGRL(IIRF6,DTRF6)
811* ZZ8228=0.1196*(218.378+0.6541*TRC6-4.504E-4*TRC6**2+1.193E-7*
812*)TRC6**3)
813* ZZ8230=KRCV6*ZZ8228
814* ZZ8226=KUNHCP*GREH*(TREM06-(TREM05))
815* DTRC6=(ZZ8231-ZZ8226)/ZZ8230
816* TRC6=INTGRL(IIRCS,DTRC6)
817* DTPCOM=(TPC10-TPCOM)/KTAU
818* TPCOM=INTGRL(IITPCOM,DTPCOM)
819* DTPHM=(TPH1-TPHM)/KTAU
820* TPHM=INTGRL(IITPHM,DTPHM)
821* RPHAV=(RPH1+RPH2+RPH3+RPH4+RPH5+RPH6+RPH7+RPH8+RPH9+RPH10)/KPHN
822* BPH10=KPHV*DTPH10*AFGEN(66,PARTRT,TPH10)
823* BPH9=KPHV*DTPH9*AFGEN(60,PARTRT,TPH9)
824* BPH8=KPHV*DTPH8*AFGEN(54,PARTRT,TPH8)
825* BPH7=KPHV*DTPH7*AFGEN(48,PARTRT,TPH7)
826* BPH6=KPHV*DTPH6*AFGEN(42,PARTRT,TPH6)
827* BPH5=KPHV*DTPH5*AFGEN(36,PARTRT,TPH5)
828* BPH4=KPHV*DTPH4*AFGEN(30,PARTRT,TPH4)
829* BPH3=KPHV*DTPH3*AFGEN(24,PARTRT,TPH3)
830* BPH2=KPHV*DTPH2*AFGEN(18,PARTRT,TPH2)
831* BPH1=KPHV*DTPH1*AFGEN(12,PARTRT,TPH1)
832* BPH1=BPH1+BPH2+BPH3+BPH4+BPH5+BPH6+BPH7+BPH8+BPH9+BPH10
833* RPCAV=(RPC1+RPC2+RPC3+RPC4+RPC5+RPC6+RPC7+RPC8+RPC9+RPC10)/KPCN
834* BPC10=KPCV*DTPC10*AFGEN(126,PARTRT,TPC10)
835* BPC9=KPCV*DTPC9*AFGEN(120,PARTRT,TPC9)
836* BPC8=KPCV*DTPC8*AFGEN(114,PARTRT,TPC8)
837* BPC7=KPCV*DTPC7*AFGEN(108,PARTRT,TPC7)
838* BPC6=KPCV*DTPC6*AFGEN(102,PARTRT,TPC6)
839* BPC5=KPCV*DTPC5*AFGEN(96,PARTRT,TPC5)
840* BPC4=KPCV*DTPC4*AFGEN(90,PARTRT,TPC4)
841* BPC3=KPCV*DTPC3*AFGEN(84,PARTRT,TPC3)
842* BPC2=KPCV*DTPC2*AFGEN(78,PARTRT,TPC2)
843* BPC1=KPCV*DTPC1*AFGEN(72,PARTRT,TPC1)
844* BPC1=BPC1+BPC2+BPC3+BPC4+BPC5+BPC6+BPC7+BPC8+BPC9+BPC10
845* TAA10=(TAA110+TAA010)/2
846* TAA9=(TAA010+TAA09)/2
847* TAA8=(TAA09+TAA08)/2
848* TAA7=(TAA08+TAA07)/2
849* TAA6=(TAA07+TAA06)/2
850* TAA5=(TAA06+TAA05)/2

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851* TAA4=(TAA05+TAA04)/2
 852* TAA3=(TAA04+TAA03)/2
 853* TAA2=(TAA03+TAA02)/2
 854* TAA1=(TAA02+TAA01)/2
 855* RAWAV=(RAW1+RAW2+RAW3+RAW4+RAW5+RAW6+RAW7+RAW8+RAW9+RAW10)/KAWW
 856* BAW0=KAWV0*DTAW0*AFGEN(138,PARTRT,TAW0)
 857* BAW10=DTAW10*KAWV*AFGEN(239,PARTRT,TAW10)
 858* BAW9=DTAW9*KAWV*AFGEN(240,PARTRT,TAW9)
 859* BAW8=DTAW8*KAWV*AFGEN(246,PARTRT,TAW8)
 860* BAW7=DTAW7*KAWV*AFGEN(252,PARTRT,TAW7)
 861* BAW6=DTAW6*KAWV*AFGEN(258,PARTRT,TAW6)
 862* BAW5=DTAW5*KAWV*AFGEN(264,PARTRT,TAW5)
 863* BAW4=DTAW4*KAWV*AFGEN(270,PARTRT,TAW4)
 864* BAW3=DTAW3*KAWV*AFGEN(276,PARTRT,TAW3)
 865* BAW2=DTAW2*KAWV*AFGEN(282,PARTRT,TAW2)
 866* BAW1=DTAW1*KAWV*AFGEN(288,PARTRT,TAW1)
 867* BAWI=KAWVI*DTAWI*AFGEN(132,PARTRT,TAWI)
 868* BAWT=BAWI+BAW1+BAW2+BAW3+BAW4+BAW5+BAW6+BAW7+BAW8+
 869* BAW9+BAW10+BAW0
 870* THH6=(THH16+THH06)/2
 871* THH5=(THH06+THH05)/2
 872* THH4=(THH05+THH04)/2
 873* THH3=(THH04+THH03)/2
 874* THH2=(THH03+THH02)/2
 875* THH1=(THH02+THH01)/2
 876* BHW0=KHWV0*DTHW0*AFGEN(300,PARTRT,THW0)
 877* BHW6=DTHW6*KHWV*AFGEN(360,PARTRT,THW6)
 878* BHW5=DTHW5*KHWV*AFGEN(366,PARTRT,THW5)
 879* BHW4=DTHW4*KHWV*AFGEN(372,PARTRT,THW4)
 880* BHW3=DTHW3*KHWV*AFGEN(378,PARTRT,THW3)
 881* BHW2=DTHW2*KHWV*AFGEN(384,PARTRT,THW2)
 882* BHW1=DTHW1*KHWV*AFGEN(390,PARTRT,THW1)
 883* BHWI=KHWVI*DTHWI*AFGEN(294,PARTRT,THWI)
 884* BHWT=BHWI+BHW1+BHW2+BHW3+BHW4+BHW5+BHW6+BHW0
 885* RHWAV=(RHW1+RHW2+RHW3+RHW4+RHW5+RHW6)/KHWV
 886* TREH1=Z28185+TUPH*(1.-Z28185)*TREH01
 887* TREH2=Z28193*(TREH01)+(1.-Z28193)*TREH02
 888* TREH3=Z28201*(TREH02)+(1.-Z28201)*TREH03
 889* TREH4=Z28209*(TREH03)+(1.-Z28209)*TREH04
 890* TREH5=Z28217*(TREH04)+(1.-Z28217)*TREH05
 891* TREH6=Z28225*(TREH05)+(1.-Z28225)*TREH06
 892* TSEC = TSTART + TIME
 893* IF (IFLAG .GT. 0.0) TSEC = TSTART
 894* QHWM1=QHWM1+QHWM2+QHWM3+QHWM4+QHWM5+QHWM6
 895* QHMT=QHMM1+QHMM2+QHMM3+QHMM4+QHMM5+QHMM6
 896* QAWMT=QAWM1+QAWM2+QAWM3+QAWM4+QAWM5+QAWM6+QAWM7+QAWM8+
 897* QAWM9+QAWM10
 898* QAAMT=QAAM1+QAAM2+QAAM3+QAAM4+QAAM5+QAAM6+QAAM7+QAAM8+
 899* QAAM9+QAAM10
 900* MARGIN=AFGEN(396,MSATP,PPRG)-AFGEN(399,MSATT,THW06)

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901*      POWFLO=PRCD/GRETOT
902*      EAE=DEBUG( 402,1,0.0)
903*      D1=DEBUG( 404,1,30.0)
904*      D2=DEBUG( 406,1,60.0)
905*      RETURN
906*      99999 CONTINUE      a TERMINAL
907*      EAE1=DEBUG( 408,1,TIME)
908*      WRITE(12,73) ITPH1,TPH2,TPH3,TPH4,TPH5,TPH6,TPH7,TPH8,TPH9,
909*      ITPH10,
910*      ITPHM
911*      73  FORMAT('** * * HOT LINE INITIAL CONDITIONS',/,
912*      1*INCON ITPH1 =',E11.6,', ITPH2 =',E11.6,', ITPH3 =',E11.6,/,
913*      1*INCON ITPH4 =',E11.6,', ITPH5 =',E11.6,', ITPH6 =',E11.6,/,
914*      1*INCON ITPH7 =',E11.6,', ITPH8 =',E11.6,', ITPH9 =',E11.6,/,
915*      1*INCON ITPH10=',E11.6,/,
916*      1*INCON ITPHM =',E11.6,/)
917*      WRITE(12,72) ITPC1,TPC2,TPC3,TPC4,TPC5,TPC6,TPC7,TPC8,TPC9,
918*      ITPC10,
919*      ITPCOM
920*      72  FORMAT('** * * COLD LINE INITIAL CONDITIONS',/,
921*      1*INCON ITPC1 =',E11.6,', ITPC2 =',E11.6,', ITPC3 =',E11.6,/,
922*      1*INCON ITPC4 =',E11.6,', ITPC5 =',E11.6,', ITPC6 =',E11.6,/,
923*      1*INCON ITPC7 =',E11.6,', ITPC8 =',E11.6,', ITPC9 =',E11.6,/,
924*      1*INCON ITPC10=',E11.6,/,
925*      1*INCON ITPCOM=',E11.6,/)
926*      WRITE(12,70) ITAW0,TAW1,TAW2,TAW3,TAW4,TAW5,TAW6,TAW7,
927*      ITAW8,TAW9,TAW10,TAM1,TAM2,TAM3,TAM4,TAM5,TAM6,TAM7,TAM8,
928*      ITAM9,TAM10,TAA1,TAA2,TAA3,TAA4,TAA5,TAA6,TAA7,TAA8,TAA9,TAA10
929*      70  FORMAT('** * * AIR BLAST HX INITIAL CONDITIONS',/,
930*      1*INCON ITAW0 =',E11.6,', ITAW1 =',E11.6,', ITAW2 =',E11.6,/,
931*      1*INCON ITAW3 =',E11.6,', ITAW4 =',E11.6,/,
932*      1*INCON ITAW5 =',E11.6,', ITAW6 =',E11.6,', ITAW7 =',E11.6,/,
933*      1*INCON ITAW8 =',E11.6,', ITAW9 =',E11.6,', ITAW10=',E11.6,/,
934*      1*INCON ITAM1 =',E11.6,', ITAM2 =',E11.6,', ITAM3 =',E11.6,/,
935*      1*INCON ITAM4 =',E11.6,', ITAM5 =',E11.6,', ITAM6 =',E11.6,/,
936*      1*INCON ITAM7 =',E11.6,', ITAM8 =',E11.6,', ITAM9 =',E11.6,/,
937*      1*INCON ITAM10=',E11.6,/,
938*      1*PARAM TAA1 =',E11.6,', TAA2 =',E11.6,', TAA3 =',E11.6,/,
939*      1*PARAM TAA4 =',E11.6,', TAA5 =',E11.6,', TAA6 =',E11.6,/,
940*      1*PARAM TAA7 =',E11.6,', TAA8 =',E11.6,', TAA9 =',E11.6,/,
941*      1*PARAM TAA10=',E11.6,/)
942*      WRITE(12,71) ITHW1,THW2,THW3,THW4,THW5,THW6,THM1,THM2,
943*      ITHM3,THM4,THM5,THM6,THW0,THM10,THM1,THM2,THM3,THM4,THM5,THM6
944*      71  FORMAT('** * * CAHE INITIAL CONDITIONS',/,
945*      1*INCON ITHW1 =',E11.6,', ITHW2 =',E11.6,', ITHW3 =',E11.6,/,
946*      1*INCON ITHW4 =',E11.6,', ITHW5 =',E11.6,/,
947*      1*INCON ITHW6 =',E11.6,', ITHM1 =',E11.6,', ITHM2 =',E11.6,/,
948*      1*INCON ITHM3 =',E11.6,', ITHM4 =',E11.6,', ITHM5 =',E11.6,/,
949*      1*INCON ITHM6 =',E11.6,', ITHW0 =',E11.6,', ITHM10=',E11.6,/,
950*      1*PARAM THM1 =',E11.6,', THM2 =',E11.6,', THM3 =',E11.6,/,

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951*      1*PARAM      THW4 =',E11.6,', THW5 =',E11.6,', THW6 =',E11.6,/)
952*      WRITE(12,74)IVPRW,IPRW,PPRG,PLOAD,NPL,INT,APS,IPSIT,WFLOW
953*      74  FORMAT(' * * * PUMP AND PROCESS-FLOW INITIAL CONDITIONS',/)
954*      1*INCON      IVPRW =',E11.6,', IPRW =',E11.6,', IPPRG =',E11.6,/,
955*      1*INCON      IPLOAD=',E11.6,', INPL =',E11.6,', IINT =',E11.6,/,
956*      1*INCON      IAPS =',E11.6,', IPSIT=',E11.6,/,
957*      1*PARAM      WFLOW =',E11.6,/)
958*      93  FORMAT(' * * * CORE INITIAL CONDITIONS',/)
959*      1*INCON      ITRF1 =',E11.6,', ITRF2 =',E11.6,', ITRF3 =',E11.6,/,
960*      1*INCON      ITRF4 =',E11.6,', ITRF5 =',E11.6,', ITRF6 =',E11.6,/,
961*      1*INCON      ITRC1 =',E11.6,', ITRC2 =',E11.6,', ITRC3 =',E11.6,/,
962*      1*INCON      ITRC4 =',E11.6,', ITRC5 =',E11.6,', ITRC6 =',E11.6,/,
963*      1*INCON      ITUPH =',E11.6,', ITLPH =',E11.6,/,
964*      1*INCON      ITCAN =',E11.6,', IICAN =',E11.6,', INCAA =',E11.6,/,
965*      1*PARAM      TREH1 =',E11.6,', TREH2 =',E11.6,', TREH3 =',E11.6,/,
966*      1*PARAM      TREH4 =',E11.6,', TREH5 =',E11.6,', TREH6 =',E11.6,/)
967*      WRITE(12,93) ITRF1,TRF2,TRF3,TRF4,TRF5,TRF6,TRC1,TRC2,TRC3,
968*      ITRC4,TRC5,TRC6,TUPH,TLPH,TCANOA,ICAN,NCAA,TREH1,TREH2,TREH3,
969*      TREH4,TREH5,TREH6
970*      WRITE(12,95)TIME,DUMMY
971*      95  FORMAT(' * * * TIME AT END OF RUN=',E11.6,', DUMMY VARIABLE='
972*      1,E11.6,/)
973*      RETURN
974*      END
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SYMBOL = = = = = REFERENCES = = = = =

70	-	926WR	929*							
71	-	942WR	944*							
72	-	917WR	920*							
73	-	908WR	911*							
74	-	952WR	953*							
93	-	958*	967WR							
95	-	970WR	971*							
99997	-	101	102*							
99998	-	101	205*							
99999	-	101	906*							
A	-	2RL								
AFGEN	-	206	208	213	216	219	222	225	228	231
		237	240	243	246	249	252	255	258	261
		267	270	273	277	299	300	301	308	317
		319	326	335	336	337	344	353	354	355
		371	372	373	380	389	390	391	398	407
		409	416	425	426	427	434	443	444	445
		461	462	463	470	473	477	501	502	503
		522	523	524	531	543	544	545	552	564
		566	573	585	586	587	594	606	607	608
		628	822	823	824	825	826	827	828	829
		831	834	835	836	837	838	839	840	841
		843	856	857	858	859	860	861	862	863
		865	866	867	876	877	878	879	880	881
		883	900							882
AHEFLO	-	97CO								
APS	-	23CO	181=	952WR						
BAW1	-	30CO	867=	868						
BAW0	-	30CO	856=	869						
BAW7	-	47CO	868=							
BAW1	-	47CO	866=	868						
BAW10	-	41CO	857=	869						
BAW2	-	46CO	865=	868						
BAW3	-	46CO	864=	868						
BAW4	-	45CO	863=	868						
BAW5	-	44CO	862=	868						
BAW6	-	44CO	861=	868						
BAW7	-	43CO	860=	868						
BAW8	-	42CO	859=	868						
BAW9	-	42CO	858=	869						
BHW1	-	47CO	883=	884						
BHW0	-	48CO	876=	884						
BHW7	-	58CO	894=							
BHW1	-	58CO	892=	884						
BHW2	-	57CO	881=	884						
BHW3	-	57CO	880=	884						
BHW4	-	56CO	879=	884						
BHW5	-	55CO	878=	884						

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BHW6	-	55C0	877=	884							
BPC1	-	29C0	844=								
BPC1	-	27C0	843=	844							
BPC10	-	29C0	834=	844							
BPC2	-	27C0	842=	844							
BPC3	-	27C0	841=	844							
BPC4	-	28C0	840=	844							
BPC5	-	28C0	839=	844							
BPC6	-	28C0	838=	844							
BPC7	-	28C0	837=	844							
BPC8	-	29C0	836=	844							
BPC9	-	29C0	835=	844							
BPH1	-	27C0	832=								
BPH1	-	24C0	831=	832							
BPH10	-	26C0	822=	832							
BPH2	-	25C0	830=	832							
BPH3	-	25C0	829=	832							
BPH4	-	25C0	828=	832							
BPH5	-	25C0	827=	832							
BPH6	-	26C0	826=	832							
BPH7	-	26C0	825=	832							
BPH8	-	26C0	824=	832							
BPH9	-	26C0	823=	832							
CURVAL	-	3	18	33	48	63	78	93			
DEBUG	-	902	903	904	907						
DELGR	-	3C0									
DELMAX	-	3C0									
DELMIN	-	3C0									
DELPP	-	4C0									
DELPR	-	3C0									
DELS	-	4C0									
DELT	-	3C0									
DICAN	-	19C0	620=	621							
DNCAA	-	19C0	623=	624							
DTAM1	-	17C0	468=	469							
DTAM10	-	15C0	306=	307							
DTAM2	-	17C0	450=	451							
DTAM3	-	16C0	432=	433							
DTAM4	-	16C0	414=	415							
DTAM5	-	16C0	396=	397							
DTAM6	-	16C0	378=	379							
DTAM7	-	16C0	360=	361							
DTAM8	-	15C0	342=	343							
DTAM9	-	15C0	324=	325							
DTAW1	-	15C0	275=	276	867						
DTAW0	-	15C0	288=	289	856						
DTAW1	-	17C0	471=	472	866						
DTAW10	-	15C0	309=	310	857						
DTAW2	-	17C0	453=	454	865						
DTAW3	-	17C0	435=	436	864						

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DTAW4	-	16C0	417=	418	863
DTAW5	-	16C0	399=	400	862
DTAW6	-	16C0	381=	382	861
DTAW7	-	16C0	363=	364	860
DTAW8	-	15C0	345=	346	859
DTAW9	-	15C0	327=	328	858
DTCAHA	-	19C0	625=	626	
DTGPM	-	19C0	632=	633	
DTMMI6	-	17C0	489=	490	
DTMM1	-	19C0	613=	614	
DTMM2	-	19C0	592=	593	
DTMM3	-	18C0	571=	572	
DTMM4	-	18C0	550=	551	
DTMM5	-	18C0	529=	530	
DTMM6	-	17C0	508=	509	
DTHWI	-	17C0	475=	476	883
DTHW0	-	17C0	484=	485	876
DTHW1	-	19C0	616=	617	882
DTHW2	-	19C0	595=	596	881
DTHW3	-	18C0	574=	575	880
DTHW4	-	18C0	553=	554	879
DTHW5	-	18C0	532=	533	878
DTHW6	-	18C0	511=	512	877
DTLPH	-	20C0	736=	738	
DTPCOM	-	21C0	817=	818	
DTPC1	-	14C0	244=	245	843
DTPC10	-	15C0	271=	272	834
DTPC2	-	14C0	247=	248	842
DTPC3	-	14C0	250=	251	841
DTPC4	-	14C0	253=	254	840
DTPC5	-	14C0	256=	257	839
DTPC6	-	14C0	259=	260	838
DTPC7	-	14C0	262=	263	837
DTPC8	-	14C0	265=	266	836
DTPC9	-	14C0	268=	269	835
DTPHM	-	21C0	819=	820	
DTPH1	-	12C0	214=	215	831
DTPH10	-	13C0	241=	242	822
DTPH2	-	13C0	217=	218	830
DTPH3	-	13C0	220=	221	829
DTPH4	-	13C0	223=	224	828
DTPH5	-	13C0	226=	227	827
DTPH6	-	13C0	229=	230	826
DTPH7	-	13C0	232=	233	825
DTPH8	-	13C0	235=	236	824
DTPH9	-	13C0	238=	239	823
DTRC1	-	20C0	750=	751	
DTRC2	-	20C0	763=	764	
DTRC3	-	20C0	776=	777	
DTRC4	-	20C0	789=	790	

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DTRC5	-	21C0	802=	803							
DTRC6	-	21C0	815=	816							
DTRF1	-	20C0	744=	745							
DTRF2	-	20C0	757=	758							
DTRF3	-	20C0	770=	771							
DTRF4	-	20C0	783=	784							
DTRF5	-	21C0	796=	797							
DTRF6	-	21C0	809=	810							
DTUPH	-	19C0	629=	631							
DUMMY	-	24C0	209=	970WR							
D1	-	70C0	903=								
D2	-	70C0	904=								
EAE	-	69C0	902=								
EAE1	-	70C0	907=								
EXP	-	653	667	681	695	709	723				
FCOM	-	71C0	301	319	337	355	373	391	409	427	445
		463	503	524	545	566	587	608			
FINTIM	-	3C0									
FSPH	-	71C0	299	317	335	353	371	389	407	425	443
		461	501	522	543	564	585	606			
FVIS	-	71C0	300	318	336	354	372	390	408	426	444
		462	502	523	544	565	586	607			
GAA	-	96C0	211=	290	291						
GBPH	-	59C0	636=	638	736						
GCAA	-	59C0	488=	489	494	497	516	537	558	579	600
		629	635								
GCAAS	-	96C0									
GCCA	-	24C0	206=	207=	629	635					
GPRI	-	95C0									
GPRO	-	95C0									
GREH	-	59C0	639=	640	652	654	666	668	680	682	694
		696	708	710	722	736	749	762	775	788	801
		814									
GRETOT	-	59C0	635=	636	639	901					
HEFLOW	-	96C0	206								
HSATP	-	71C0	900								
HSATT	-	71C0	900								
IAPS	-	90C0	181								
ICAN	-	10C0	199=	621=	622	968WR					
IICAN	-	92C0	199	621							
IINT	-	90C0	180								
IIPSTT	-	90C0	182								
INCAA	-	92C0	200	624							
INPL	-	89C0	179								
INT	-	23C0	180=	952WR							
INTGRL	-	215	218	221	224	227	230	233	236	239	242
		245	248	251	254	257	260	263	266	269	272
		276	289	307	310	325	328	343	346	361	364
		379	382	397	400	415	418	433	436	451	454
		469	472	476	485	490	509	512	530	533	551

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	554	572	575	593	596	614	617	621	629	626
	631	633	738	745	751	758	764	771	777	784
	790	797	803	810	816	818	820			
IPLDAD -	89C0	178								
IPPRG -	89C0	177								
IPSIT -	23C0	182	952WR							
ITAM1 -	86C0	141	469							
ITAM10 -	87C0	150	307							
ITAM2 -	86C0	142	451							
ITAM3 -	86C0	143	433							
ITAM4 -	87C0	144	415							
ITAM5 -	87C0	145	397							
ITAM6 -	87C0	146	379							
ITAM7 -	87C0	147	361							
ITAM8 -	87C0	148	343							
ITAM9 -	87C0	149	325							
ITAW1 -	85C0	129	276							
ITAW0 -	85C0	130	289							
ITAW1 -	85C0	131	472							
ITAW10 -	86C0	140	310							
ITAW2 -	85C0	132	454							
ITAW3 -	85C0	133	436							
ITAW4 -	85C0	134	418							
ITAW5 -	86C0	135	400							
ITAW6 -	86C0	136	382							
ITAW7 -	86C0	137	364							
ITAW8 -	86C0	138	346							
ITAW9 -	86C0	139	328							
ITCAMA -	92C0	198	626							
ITGPH -	98C0	633								
ITHHI6 -	89C0	170	490							
ITHMI0 -	98C0	169								
ITHM1 -	88C0	163	614							
ITHM2 -	88C0	164	593							
ITHM3 -	88C0	165	572							
ITHM4 -	89C0	166	551							
ITHM5 -	89C0	167	530							
ITHM6 -	89C0	168	509							
ITHWI -	88C0	156	476							
ITHW0 -	87C0	155	485							
ITHW1 -	87C0	157	617							
ITHW2 -	88C0	158	596							
ITHW3 -	88C0	159	575							
ITHW4 -	88C0	160	554							
ITHW5 -	88C0	161	533							
ITHW6 -	88C0	162	512							
ITLPH -	91C0	201	738							
ITPCOM -	85C0	12E	818							
ITPC1 -	84C0	11E	245							
ITPC10 -	85C0	127	272							

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ITPC2	-	84C0	119	248							
ITPC3	-	84C0	120	251							
ITPC4	-	84C0	121	254							
ITPC5	-	84C0	122	257							
ITPC6	-	84C0	123	260							
ITPC7	-	84C0	124	263							
ITPC8	-	84C0	125	266							
ITPC9	-	85C0	126	269							
ITPHM	-	84C0	115	820							
ITPH1	-	82C0	105	215							
ITPH10	-	83C0	114	242							
ITPH2	-	83C0	106	218							
ITPH3	-	83C0	107	221							
ITPH4	-	83C0	108	224							
ITPH5	-	83C0	109	227							
ITPH6	-	83C0	110	230							
ITPH7	-	83C0	111	233							
ITPH8	-	83C0	112	236							
ITPH9	-	83C0	113	239							
ITPRM	-	89C0	176								
ITRC1	-	91C0	189	751							
ITRC2	-	91C0	190	764							
ITRC3	-	91C0	191	777							
ITRC4	-	91C0	192	790							
ITRC5	-	91C0	193	803							
ITRC6	-	91C0	194	816							
ITRF1	-	90C0	183	745							
ITRF2	-	90C0	184	758							
ITRF3	-	90C0	185	771							
ITRF4	-	90C0	186	784							
ITRF5	-	90C0	187	797							
ITRF6	-	91C0	188	810							
ITUPM	-	91C0	196	631							
IVPRM	-	89C0	175								
IZZZZZ	-	99C0	100	101							
I/O	-	908	917	926	942	952	967	970			
JAACP	-	40C0	290=	295	288	314	316	332	334	350	352
			368	370	386	388	404	406	422	424	440
			458	460							442
JAAGR	-	40C0	291=	292	311	329	347	365	383	401	419
			437	455							
JAAM1	-	40C0	458=	459							
JAAM10	-	31C0	295=	296	297						
JAAM2	-	39C0	440=	441							
JAAM3	-	38C0	422=	423							
JAAM4	-	37C0	404=	405							
JAAM5	-	36C0	386=	387							
JAAM6	-	35C0	368=	369							
JAAM7	-	34C0	350=	351							
JAAM8	-	33C0	332=	333							

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JAAH9	-	32C0	319=	315							
JAAH1	-	40C0	466=	467							
JAAH10	-	31C0	309=	305							
JAAH2	-	39C0	448=	449							
JAAH3	-	38C0	430=	431							
JAAH4	-	37C0	412=	413							
JAAH5	-	36C0	394=	395							
JAAH6	-	35C0	376=	377							
JAAH7	-	34C0	358=	359							
JAAH8	-	33C0	340=	341							
JAAH9	-	32C0	322=	323							
JGPK	-	98C0	630	632							
JHHCP	-	54C0	497=	498	500	519	521	540	542	561	563
		582	584	603	605						
JHHM1	-	54C0	603=	604							
JHHM2	-	53C0	582=	583							
JHHM3	-	52C0	561=	562							
JHHM4	-	51C0	540=	541							
JHHM5	-	50C0	519=	520							
JHHM6	-	49C0	498=	499							
JHVM1	-	54C0	611=	612							
JHVM2	-	53C0	590=	591							
JHVM3	-	52C0	569=	570							
JHVM4	-	51C0	548=	549							
JHVM5	-	50C0	527=	528							
JHVM6	-	49C0	506=	507							
JLPV	-	24C0	202=	209	486	634					
JRCFK1	-	60C0	721=	742							
JRCFK2	-	60C0	707=	755							
JRCFK3	-	60C0	693=	768							
JRCFK4	-	60C0	679=	781							
JRCFK5	-	61C0	665=	794							
JRCFK6	-	61C0	651=	807							
JRECK1	-	60C0	716=	722							
JRECK2	-	60C0	702=	708							
JRECK3	-	60C0	688=	694							
JRECK4	-	60C0	674=	680							
JRECK5	-	61C0	660=	666							
JRECK6	-	61C0	646=	652							
JUPV	-	24C0	203=	204	486	627					
KAAA	-	73C0	295	304	314	322	332	340	350	358	368
		376	386	394	404	412	422	430	440	448	458
		466									
KAAAK	-	73C0	293	312	330	348	366	384	402	420	438
		456									
KAAAU	-	73C0	292	311	329	347	365	383	401	419	437
		455									
KAABK	-	73C0	293	312	330	348	366	384	402	420	438
		456									
KAABU	-	73C0	292	311	329	347	365	383	401	419	437

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KAAG	-	72C0	291								
KAAR	-	72C0	292	311	329	347	365	383	401	419	437
KAATR	-	73C0	292	293	311	312	329	330	347	348	365
		366	383	384	401	402	419	420	437	438	455
KAAM1	-	74C0	151	296	315	333	351	369	387	405	423
KAAM2	-	22C0	151	296	315	333	351	369	387	405	423
KAMAK	-	73C0	294	313	331	349	367	385	403	421	439
KAMBK	-	74C0	294	313	331	349	367	385	403	421	439
KAMC	-	22C0	153	306	324	342	360	378	396	414	432
KAMCI	-	74C0	275								
KAMCO	-	75C0	288								
KAMCT	-	74C0	153								
KAMR	-	72C0	294	313	331	349	367	385	403	421	439
KAMTR	-	73C0	294	313	331	349	367	385	403	421	439
KAMA	-	72C0	309	322	340	358	376	394	412	430	448
KAMISQ	-	77C0									
KAMN	-	74C0	153	154	295	304	314	322	332	340	350
		358	368	376	386	394	404	412	422	430	440
KAMRX	-	72C0	302	320	338	356	374	392	410	428	446
KAMSQ	-	77C0									
KAMTR	-	73C0									
KAMV	-	22C0	154	309	327	345	363	381	399	417	435
		453	471	487	505	523	541	559	577	595	613
KAMVI	-	74C0	275	867							
KAMVO	-	74C0	288	856							
KAMVT	-	74C0	154								
KAMWR	-	72C0									
KAMW1	-	74C0	152	278	279	280	281	282	283	284	285
KAMW2	-	22C0	152	278	279	280	281	282	283	284	285
KCAAN	-	82C0	629	635							
KCAPBN	-	97C0	619								
KCAR	-	82C0	488								
KCARG	-	97C0	619								
KCART	-	97C0	620								

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KCATAU	-	82C0	625									
KCCAN	-	82C0	629	635								
KEEP	-	99C0	100									
KGPC	-	96C0	632									
KHMA	-	77C0	498	506	519	527	540	548	561	569	582	
		590	603	611								
KHHCK	-	77C0	493	515	536	557	578	599				
KHHCKE	-	77C0	493	515	536	557	578	599				
KHHRX	-	75C0	499	516	537	558	579	600				
KHHVI6	-	82C0	487									
KHHVK	-	76C0	492	514	535	556	577	598				
KHHVKE	-	76C0	492	514	535	556	577	598				
KHHW1	-	76C0	171	499	520	541	562	583	609			
KHHW2	-	22C0	171	499	520	541	562	583	609			
KHMAK	-	77C0	496	518	539	560	581	602				
KHMBK	-	77C0	496	518	539	560	581	602				
KHMC	-	22C0	173	508	529	550	571	592	613			
KHMC1	-	75C0	475									
KHMC10	-	76C0										
KHMC0	-	75C0	484									
KHMC1	-	75C0	173									
KHMRX	-	75C0	496	518	539	560	581	602				
KHWA	-	77C0	506	527	548	569	590	611				
KHWISQ	-	78C0										
KHMMI	-	76C0										
KHMMO	-	76C0										
KHMN	-	76C0	173	174	498	506	519	527	540	548	561	
		569	582	590	603	611	885					
KHWRX	-	75C0	504	525	546	567	588	609				
KHWSQ	-	77C0										
KHVV	-	23C0	174	511	532	553	574	595	616	877	878	
		879	880	881	882							
KHVV1	-	75C0	475	883								
KHVV0	-	76C0	484	876								
KHVV1	-	75C0	174									
KHVV1	-	76C0	172	478	479	480	481	482	483			
KHVV2	-	22C0	172	478	479	480	481	482	483			
KPCC	-	21C0	116	244	247	250	253	256	259	262	265	
		268	271									
KPCCT	-	72C0	116									
KPCN	-	72C0	116	117	833							
KPCSQ	-	78C0										
KPCV	-	22C0	117	244	247	250	253	256	259	262	265	
		268	271	834	835	836	837	838	839	840	841	
		842	843									
KPCVT	-	72C0	117									
KPHC	-	21C0	103	214	217	220	223	226	229	232	235	
		238	241									
KPHCI	-	71C0	103									
KPHN	-	71C0	103	104	821							

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KPHSQ	-	78C0									
KPHV	-	21C0	104	214	217	220	223	226	229	232	235
		238	291	822	823	824	825	826	827	828	829
		830	831								
KPHVT	-	71C0	104								
KPL	-	93C0									
KPLCR	-	93C0									
KPLJ0	-	92C0									
KPLJ1	-	92C0									
KPLJ2	-	93C0									
KPLN	-	93C0									
KPLPB	-	92C0									
KPLRT	-	92C0									
KPRV	-	96C0									
KPS	-	95C0									
KPSCR	-	94C0									
KPSJ0	-	94C0									
KPSJ1	-	94C0									
KPSJ2	-	94C0									
KPSN	-	95C0									
KPSPB	-	94C0									
KPSRT	-	94C0									
KRCV1	-	79C0	748								
KRCV2	-	79C0	761								
KRCV3	-	79C0	774								
KRCV4	-	79C0	787								
KRCV5	-	79C0	800								
KRCV6	-	79C0	813								
KREA1	-	80C0	715								
KREA2	-	80C0	701								
KREA3	-	80C0	687								
KREA4	-	80C0	673								
KREA5	-	80C0	659								
KREA6	-	80C0	645								
KREGF	-	81C0	636	639							
KREL1	-	80C0	714	720							
KREL2	-	80C0	700	706							
KREL3	-	80C0	686	692							
KREL4	-	81C0	672	678							
KREL5	-	81C0	658	664							
KREL6	-	81C0	644	650							
KRENN	-	78C0	639	736	743	756	769	782	795	808	
KREPF	-	81C0	637	743	756	769	782	795	808		
KREPF1	-	81C0	743								
KREPF2	-	81C0	756								
KREPF3	-	81C0	769								
KREPF4	-	82C0	782								
KREPF5	-	82C0	795								
KREPF6	-	82C0	808								
KREPO	-	81C0	195								

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KREQ1	-	24C0	195=	637	743	756	769	782	795	808
KRFV1	-	78C0	741							
KRFV2	-	78C0	754							
KRFV3	-	78C0	767							
KRFV4	-	79C0	780							
KRFV5	-	79C0	793							
KRFV6	-	79C0	806							
KTAU	-	96C0	817	819						
KUNACP	-	70C0	290							
KUNGR	-	70C0	204	486	487	488	627	634		
KUNHCP	-	70C0	489	497	629	638	652	666	680	699
		722	736	749	762	775	788	801	814	708
KUNHCV	-	70C0	489	630	737					
KUNWCP	-	70C0	214	217	220	223	226	229	232	235
		241	244	247	250	253	256	259	262	265
		271	275	288	309	327	345	363	381	399
		435	453	471	475	484	511	532	553	574
		616								
MARGIN	-	69C0	900=							
MMHI6	-	48C0	487=	489						
MLPH	-	59C0	634=	737						
MNSS	-	24C0	204=	486						
MUPH	-	59C0	627=	630						
NALARM	-	99C0	100							
NCAA	-	10C0	200=	488	623	624=	968WR			
NCAD	-	59C0	622=	623						
NPL	-	23C0	179=	952WR						
NPS	-	94C0								
OCAERR	-	58C0	618=	619						
PARTRT	-	71C0	822	823	824	825	826	827	828	829
		831	834	835	836	837	838	839	840	841
		843	856	857	858	859	860	861	862	863
		865	866	867	876	877	878	879	880	881
		883								
PLOAD	-	23C0	178=	952WR						
PNSS	-	59C0	204	486=	487	488	627	634		
POWER	-	96C0	208							
POWFLO	-	69C0	901=							
PPRG	-	23C0	177=	900	952WR					
PRCD	-	24C0	208=	209	637	743	756	769	782	795
		901								808
PROPN	-	58C0	619=	620	622					
QAAMT	-	69C0	898=							
QAAM1	-	47C0	460=	468	898					
QAAM10	-	41C0	298=	306	899					
QAAM2	-	46C0	442=	450	898					
QAAM3	-	45C0	424=	432	898					
QAAM4	-	45C0	406=	414	898					
QAAM5	-	44C0	388=	396	898					
QAAM6	-	43C0	370=	378	898					

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QAAM7	-	43C0	352=	360	898	
QAAM8	-	42C0	334=	342	898	
QAAM9	-	41C0	316=	324	899	
QAWM1	-	69C0	896=			
QAWM10	-	47C0	467=	468	471	896
QAWM2	-	41C0	305=	306	309	897
QAWM3	-	46C0	449=	450	453	896
QAWM4	-	45C0	431=	432	435	896
QAWM5	-	45C0	413=	414	417	896
QAWM6	-	44C0	395=	396	399	896
QAWM7	-	43C0	377=	378	381	896
QAWM8	-	43C0	359=	360	363	896
QAWM9	-	42C0	341=	342	345	896
QBPH	-	41C0	323=	324	327	897
QHMM1	-	69C0	637=	638		
QHMM2	-	69C0	895=			
QHMM3	-	58C0	605=	613	895	
QHMM4	-	57C0	584=	592	895	
QHMM5	-	56C0	563=	571	895	
QHMM6	-	56C0	542=	550	895	
QHMM7	-	55C0	521=	529	895	
QHMM8	-	54C0	500=	508	895	
QHMM9	-	69C0	894=			
QHMM10	-	58C0	612=	613	616	894
QHMM11	-	57C0	591=	592	595	894
QHMM12	-	57C0	570=	571	574	894
QHMM13	-	56C0	549=	550	553	894
QHMM14	-	55C0	528=	529	532	894
QHMM15	-	55C0	507=	508	511	894
QPR	-	95C0				
QRF1	-	68C0	743=	744		
QRF2	-	68C0	756=	757		
QRF3	-	68C0	769=	770		
QRF4	-	68C0	782=	783		
QRF5	-	68C0	795=	796		
QRF6	-	69C0	808=	809		
RAAV	-	47C0	855=			
RAV1	-	29C0	273=	275		
RAV2	-	30C0	277=	288		
RAV3	-	46C0	470=	471	855	
RAV4	-	40C0	308=	309	855	
RAV5	-	46C0	452=	453	855	
RAV6	-	45C0	434=	435	855	
RAV7	-	44C0	416=	417	855	
RAV8	-	44C0	398=	399	855	
RAV9	-	43C0	380=	381	855	
RAV10	-	42C0	362=	363	855	
RAV11	-	42C0	344=	345	855	
RAV12	-	41C0	326=	327	855	
RETURN	-	905	973			

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RFTSL	-	70C0	213	216	219	222	225	228	231	234	237
		240	243	246	249	252	255	258	261	264	267
		270	273	277	308	326	344	362	380	398	416
		434	452	470	473	477	510	531	552	573	594
		615									
RHWAV	-	58C0	885								
RHWI	-	47C0	473	475							
RHW0	-	47C0	477	484							
RHW1	-	57C0	615	616	865						
RHW2	-	57C0	594	595	865						
RHW3	-	56C0	573	574	865						
RHW4	-	55C0	552	553	865						
RHW5	-	55C0	531	532	865						
RHW6	-	54C0	510	511	865						
RPCAV	-	29C0	833								
RPC1	-	27C0	243	244	833						
RPC10	-	29C0	270	271	833						
RPC2	-	27C0	246	247	833						
RPC3	-	27C0	249	250	833						
RPC4	-	28C0	252	253	833						
RPC5	-	28C0	255	256	833						
RPC6	-	28C0	258	259	833						
RPC7	-	28C0	261	262	833						
RPC8	-	28C0	264	265	833						
RPC9	-	29C0	267	268	833						
RPHAV	-	27C0	821								
RPH1	-	24C0	213	214	821						
RPH10	-	26C0	240	241	821						
RPH2	-	25C0	216	217	821						
RPH3	-	25C0	219	220	821						
RPH4	-	25C0	222	223	821						
RPH5	-	25C0	225	226	821						
RPH6	-	25C0	228	229	821						
RPH7	-	26C0	231	232	821						
RPH8	-	26C0	234	235	821						
RPH9	-	26C0	237	238	821						
SCAV	-	97C0									
SPL	-	93C0									
SPS	-	95C0									
TAA110	-	96C0	296	298	845						
TAA01	-	46C0	459	460	854						
TAA010	-	40C0	296	298	315	316	845	846			
TAA02	-	46C0	441	442	459	460	853	854			
TAA03	-	45C0	423	424	441	442	852	853			
TAA04	-	44C0	405	406	423	424	851	852			
TAA05	-	44C0	387	388	405	406	850	851			
TAA06	-	43C0	369	370	387	388	849	850			
TAA07	-	42C0	351	352	369	370	848	849			
TAA08	-	42C0	333	334	351	352	847	848			
TAA09	-	41C0	315	316	333	334	846	847			

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TAW9	-	7C0	139=	286	317	318	319	323	326	328=	858
		927WR									
TBPM	-	60C0	638=	736							
TCAHOA	-	10C0	198=	488	625	626=	629	968WR			
TCCHOA	-	59C0	628=	629							
TFLAG	-	92C0	893								
TGPM	-	11C0	197=	630	632	633=					
THH16	-	9C0	170=	487	489	490=	499	500	870		
THH01	-	58C0	509=	605	625	875					
THH02	-	57C0	583=	584	604	605	874	875			
THH03	-	56C0	562=	563	583	584	873	874			
THH04	-	56C0	541=	542	562	563	872	873			
THH05	-	55C0	520=	521	541	542	871	872			
THH06	-	54C0	499=	500	520	521	870	871			
THH1	-	53C0	598	599	875=	943WR					
THH2	-	52C0	577	578	874=	943WR					
THH3	-	51C0	556	557	873=	943WR					
THH4	-	50C0	535	536	872=	943WR					
THH5	-	49C0	514	515	871=	943WR					
THH6	-	48C0	492	493	870=	943WR					
THH10	-	22C0	169=	943WR							
THM1	-	10C0	163=	602	604	612	614=	942WR			
THM2	-	10C0	164=	581	583	591	593=	942WR			
THM3	-	10C0	165=	560	562	570	572=	943WR			
THM4	-	9C0	166=	539	541	549	551=	943WR			
THM5	-	9C0	167=	518	520	528	530=	943WR			
THM6	-	9C0	168=	496	499	507	509=	943WR			
THW1	-	9C0	156=	473	475	476=	478	616	883	942WR	
THW0	-	9C0	155=	214	477	484	485=	618	876	943WR	
THW05	-	98C0	212=	618							
THW05S	-	97C0	212								
THW01	-	58C0	478=	479	595	616					
THW02	-	57C0	479=	480	574	595					
THW03	-	56C0	480=	481	553	574					
THW04	-	56C0	481=	482	532	553					
THW05	-	55C0	482=	483	511	532					
THW06	-	54C0	483=	484	511	900					
THW1	-	10C0	157=	478	606	607	608	612	615	617=	882
		942WR									
THW2	-	10C0	158=	479	585	586	587	591	594	596=	881
		942WR									
THW3	-	10C0	159=	480	564	565	566	570	573	575=	880
		942WR									
THW4	-	9C0	160=	481	543	544	545	549	552	554=	879
		942WR									
THW5	-	9C0	161=	482	522	523	524	528	531	533=	878
		942WR									
THW6	-	9C0	162=	483	501	502	503	507	510	512=	877
		942WR									
TIME	-	3C0	206	207	208	210	211	212	628	892	907

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TRF3	-	11C0	185=	689	691	765	766	768	771=	967WR
TRF4	-	12C0	186=	675	677	778	779	781	784=	967WR
TRF5	-	12C0	187=	661	663	791	792	794	797=	967WR
TRF6	-	12C0	188=	647	649	804	805	807	810=	967WR
TSCRAM	-	97C0	210	211	212					
TSEC	-	68C0	892=	893=						
TSTART	-	92C0	892	893						
TUPH	-	11C0	196=	197	204	486	627	629	630	631= 632
		638	724	749	886	958WR				
TWARN	-	4C0								
UPDATE	-	1								
VPRW	-	23C0	175=	952WR						
WFLOW	-	90C0	210=	214	217	220	223	226	229	232 235
		238	241	244	247	250	253	256	259	262 265
		268	271	275	288	302	309	320	327	338 345
		356	363	374	381	392	399	410	417	428 435
		446	453	464	471	475	484	504	511	525 532
		546	553	567	574	588	595	609	616	952WR
WPLR	-	93C0								
WPLS	-	93C0								
WPLSO	-	94C0								
WPRI	-	95C0								
WPRO	-	95C0								
WPSR	-	94C0								
WPSS	-	95C0								
Z	-	2RL								
ZFLAGS	-	99								
ZZ8000	-	30C0	292=	295						
ZZ8002	-	30C0	294=	295	304					
ZZ8003	-	30C0	301=	302	303					
ZZ8004	-	30C0	300=	302	303					
ZZ8005	-	30C0	299=	303						
ZZ8006	-	31C0	302=	304						
ZZ8007	-	31C0	311=	314						
ZZ8009	-	31C0	313=	314	322					
ZZ8010	-	31C0	319=	320	321					
ZZ8011	-	31C0	318=	320	321					
ZZ8012	-	31C0	317=	321						
ZZ8013	-	32C0	320=	322						
ZZ8014	-	32C0	329=	332						
ZZ8016	-	32C0	331=	332	340					
ZZ8017	-	32C0	337=	338	339					
ZZ8018	-	32C0	336=	338	339					
ZZ8019	-	32C0	335=	339						
ZZ8020	-	33C0	338=	340						
ZZ8021	-	33C0	347=	350						
ZZ8023	-	33C0	349=	350	358					
ZZ8024	-	33C0	355=	356	357					
ZZ8025	-	34C0	354=	356	357					
ZZ8026	-	34C0	353=	357						

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ZZ8027	-	34C0	356=	358	
ZZ8028	-	34C0	365=	368	
ZZ8030	-	34C0	367=	368	376
ZZ8031	-	34C0	373=	374	375
ZZ8032	-	35C0	372=	374	375
ZZ8033	-	35C0	371=	375	
ZZ8034	-	35C0	374=	376	
ZZ8035	-	35C0	383=	386	
ZZ8037	-	35C0	385=	386	394
ZZ8038	-	35C0	391=	392	393
ZZ8039	-	36C0	390=	392	393
ZZ8040	-	36C0	389=	393	
ZZ8041	-	36C0	392=	394	
ZZ8042	-	36C0	401=	404	
ZZ8044	-	36C0	403=	404	412
ZZ8045	-	36C0	409=	410	411
ZZ8046	-	37C0	408=	410	411
ZZ8047	-	37C0	407=	411	
ZZ8048	-	37C0	410=	412	
ZZ8049	-	37C0	419=	422	
ZZ8051	-	37C0	421=	422	430
ZZ8052	-	37C0	427=	428	429
ZZ8053	-	38C0	426=	428	429
ZZ8054	-	38C0	425=	429	
ZZ8055	-	38C0	428=	430	
ZZ8056	-	38C0	437=	440	
ZZ8058	-	38C0	439=	440	448
ZZ8059	-	38C0	445=	446	447
ZZ8060	-	39C0	444=	446	447
ZZ8061	-	39C0	443=	447	
ZZ8062	-	39C0	446=	448	
ZZ8063	-	39C0	455=	458	
ZZ8065	-	39C0	457=	458	466
ZZ8066	-	39C0	463=	464	465
ZZ8067	-	40C0	462=	464	465
ZZ8068	-	40C0	461=	465	
ZZ8069	-	40C0	464=	466	
ZZ8070	-	48C0	494=	498	
ZZ8072	-	491=	495		
ZZ8073	-	492=	494	495	
ZZ8074	-	493=	494	495	
ZZ8075	-	48C0	496=	498	506
ZZ8076	-	48C0	503=	504	505
ZZ8077	-	48C0	502=	504	505
ZZ8078	-	49C0	501=	505	
ZZ8079	-	49C0	504=	506	
ZZ8080	-	49C0	516=	519	
ZZ8082	-	513=	517		
ZZ8083	-	514=	516	517	
ZZ8084	-	515=	516	517	

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228085	-	49C0	518=	519	527
228086	-	49C0	524=	525	526
228087	-	49C0	523=	525	526
228088	-	50C0	522=	526	
228089	-	50C0	525=	527	
228090	-	50C0	537=	540	
228092	-	534=	538		
228093	-	535=	537	538	
228094	-	536=	537	538	
228095	-	50C0	539=	540	548
228096	-	50C0	545=	546	547
228097	-	50C0	544=	546	547
228098	-	51C0	543=	547	
228099	-	51C0	546=	548	
228100	-	51C0	558=	561	
228102	-	555=	559		
228103	-	556=	558	559	
228104	-	557=	558	559	
228105	-	51C0	560=	561	569
228106	-	51C0	566=	567	568
228107	-	51C0	565=	567	568
228108	-	52C0	564=	568	
228109	-	52C0	567=	569	
228110	-	52C0	579=	582	
228112	-	576=	580		
228113	-	577=	579	580	
228114	-	578=	579	580	
228115	-	52C0	581=	582	590
228116	-	52C0	587=	588	589
228117	-	52C0	586=	588	589
228118	-	53C0	585=	589	
228119	-	53C0	588=	590	
228120	-	53C0	600=	603	
228122	-	597=	601		
228123	-	598=	600	601	
228124	-	599=	600	601	
228125	-	53C0	602=	603	611
228126	-	53C0	608=	609	610
228127	-	53C0	607=	609	610
228128	-	54C0	606=	610	
228129	-	54C0	609=	611	
228131	-	710=	711	712	
228132	-	712=	715		
228133	-	713=	714		
228134	-	714=	715	720	
228135	-	715=	716		
228136	-	717=	720		
228137	-	719=	720		
228138	-	720=	721		
228140	-	696=	697	698	

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ZZ8191	-	698=	701		
ZZ8192	-	699=	700		
ZZ8193	-	700=	701	706	
ZZ8194	-	701=	702		
ZZ8195	-	703=	706		
ZZ8196	-	705=	706		
ZZ8197	-	706=	707		
ZZ8199	-	682=	683	684	
ZZ8150	-	684=	687		
ZZ8151	-	685=	686		
ZZ8152	-	686=	687	692	
ZZ8153	-	687=	688		
ZZ8154	-	689=	692		
ZZ8155	-	691=	692		
ZZ8156	-	692=	693		
ZZ8158	-	668=	669	670	
ZZ8159	-	670=	673		
ZZ8160	-	671=	672		
ZZ8161	-	672=	673	678	
ZZ8162	-	673=	674		
ZZ8163	-	675=	678		
ZZ8164	-	677=	678		
ZZ8165	-	678=	679		
ZZ8167	-	654=	655	656	
ZZ8168	-	656=	659		
ZZ8169	-	657=	658		
ZZ8170	-	658=	659	664	
ZZ8171	-	659=	660		
ZZ8172	-	661=	664		
ZZ8173	-	663=	664		
ZZ8174	-	664=	665		
ZZ8176	-	640=	641	642	
ZZ8177	-	642=	645		
ZZ8178	-	643=	644		
ZZ8179	-	644=	645	650	
ZZ8180	-	645=	646		
ZZ8181	-	647=	650		
ZZ8182	-	649=	650		
ZZ8183	-	650=	651		
ZZ8184	-	61C0	722=	723	724
ZZ8185	-	61C0	723=	724	725
ZZ8186	-	61C0	749=	750	886
ZZ8187	-	62C0	739=	741	
ZZ8188	-	62C0	746=	748	
ZZ8189	-	62C0	741=	744	
ZZ8190	-	62C0	748=	750	
ZZ8191	-	62C0	742=	744	750
ZZ8192	-	62C0	708=	709	726
ZZ8193	-	62C0	709=	726	727
ZZ8194	-	63C0	762=	763	887

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228195	-	63C0	752=	754		
228196	-	63C0	755=	761		
228197	-	63C0	754=	757		
228198	-	63C0	761=	763		
228199	-	63C0	755=	757	761	
228200	-	63C0	694=	695	728	
228201	-	64C0	695=	728	729	888
228202	-	64C0	775=	776		
228203	-	64C0	765=	767		
228204	-	64C0	772=	774		
228205	-	64C0	761=	770		
228206	-	64C0	774=	776		
228207	-	64C0	768=	770	776	
228208	-	65C0	680=	681	730	
228209	-	65C0	681=	730	731	889
228210	-	65C0	788=	789		
228211	-	65C0	778=	780		
228212	-	65C0	785=	787		
228213	-	65C0	780=	783		
228214	-	65C0	787=	789		
228215	-	66C0	781=	783	789	
228216	-	66C0	666=	667	732	
228217	-	66C0	667=	732	733	890
228218	-	66C0	801=	802		
228219	-	66C0	791=	793		
228220	-	66C0	798=	800		
228221	-	66C0	793=	796		
228222	-	67C0	800=	802		
228223	-	67C0	794=	796	802	
228224	-	67C0	652=	653	734	
228225	-	67C0	653=	734	735	891
228226	-	67C0	814=	815		
228227	-	67C0	804=	806		
228228	-	67C0	811=	813		
228229	-	68C0	806=	809		
228230	-	68C0	813=	815		
228231	-	68C0	807=	809	815	

***** SUPER_INDEX *****

SYMBOL - ===== ROUTINES IN WHICH THE SYMBOL APPEARS =====
(AN * FOLLOWS ALL ROUTINE NAMES IN WHICH THE SYMBOL IS USED.)

A - UPDATE
AFGEN - UPDATE*
ANEFLO - UPDATE*
APS - UPDATE*
BAW1 - UPDATE*
BAW0 - UPDATE*
BAW7 - UPDATE*
BAW1 - UPDATE*
BAW10 - UPDATE*
BAW2 - UPDATE*
BAW3 - UPDATE*
BAW4 - UPDATE*
BAW5 - UPDATE*
BAW6 - UPDATE*
BAW7 - UPDATE*
BAW8 - UPDATE*
BAW9 - UPDATE*
BHW1 - UPDATE*
BHW0 - UPDATE*
BHW7 - UPDATE*
BHW1 - UPDATE*
BHW2 - UPDATE*
BHW3 - UPDATE*
BHW4 - UPDATE*
BHW5 - UPDATE*
BHW6 - UPDATE*
BPC1 - UPDATE*
BPC10 - UPDATE*
BPC2 - UPDATE*
BPC3 - UPDATE*
BPC4 - UPDATE*
BPC5 - UPDATE*
BPC6 - UPDATE*
BPC7 - UPDATE*
BPC8 - UPDATE*
BPC9 - UPDATE*
BPHT - UPDATE*
BPH1 - UPDATE*
BPH10 - UPDATE*
BPH2 - UPDATE*
BPH3 - UPDATE*
BPH4 - UPDATE*
BPH5 - UPDATE*
BPH6 - UPDATE*
BPH7 - UPDATE*
BPH8 - UPDATE*

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BPM9 - UPDATE*
C - BLDATA*
CHIS - BLDATA*
CURVAL - BLDATA* UPDATE*
DEBUG - UPDATE*
DELGR - UPDATE*
DELMAX - UPDATE*
DELMIN - UPDATE*
DELPP - UPDATE*
DELPR - UPDATE*
DELS - UPDATE*
DELT - UPDATE*
DICAN - UPDATE*
DNCAA - UPDATE*
DTAM1 - UPDATE*
DTAM10 - UPDATE*
DTAM2 - UPDATE*
DTAM3 - UPDATE*
DTAM4 - UPDATE*
DTAM5 - UPDATE*
DTAM6 - UPDATE*
DTAM7 - UPDATE*
DTAM8 - UPDATE*
DTAM9 - UPDATE*
DTAMI - UPDATE*
DTAW0 - UPDATE*
DTAW1 - UPDATE*
DTAW10 - UPDATE*
DTAW2 - UPDATE*
DTAW3 - UPDATE*
DTAW4 - UPDATE*
DTAW5 - UPDATE*
DTAW6 - UPDATE*
DTAW7 - UPDATE*
DTAW8 - UPDATE*
DTAW9 - UPDATE*
DTCAHA - UPDATE*
DTGPM - UPDATE*
DTHHI6 - UPDATE*
DTHM1 - UPDATE*
DTHM2 - UPDATE*
DTHM3 - UPDATE*
DTHM4 - UPDATE*
DTHM5 - UPDATE*
DTHM6 - UPDATE*
DTHWI - UPDATE*
DTHW0 - UPDATE*
DTHW1 - UPDATE*
DTHW2 - UPDATE*
DTHW3 - UPDATE*

I N D E X

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*****_SUPER_INDEX_*****

DTHW4 - UPDATE*
DTHW5 - UPDATE*
DTHW6 - UPDATE*
DTLPH - UPDATE*
DTPCOM - UPDATE*
DTPC1 - UPDATE*
DTPC10 - UPDATE*
DTPC2 - UPDATE*
DTPC3 - UPDATE*
DTPC4 - UPDATE*
DTPC5 - UPDATE*
DTPC6 - UPDATE*
DTPC7 - UPDATE*
DTPC8 - UPDATE*
DTPC9 - UPDATE*
DTPHM - UPDATE*
DTPH1 - UPDATE*
DTPH10 - UPDATE*
DTPH2 - UPDATE*
DTPH3 - UPDATE*
DTPH4 - UPDATE*
DTPH5 - UPDATE*
DTPH6 - UPDATE*
DTPH7 - UPDATE*
DTPH8 - UPDATE*
DTPH9 - UPDATE*
DTRC1 - UPDATE*
DTRC2 - UPDATE*
DTRC3 - UPDATE*
DTRC4 - UPDATE*
DTRC5 - UPDATE*
DTRC6 - UPDATE*
DTRF1 - UPDATE*
DTRF2 - UPDATE*
DTRF3 - UPDATE*
DTRF4 - UPDATE*
DTRF5 - UPDATE*
DTRF6 - UPDATE*
DTUPH - UPDATE*
DUMMY - UPDATE*
D1 - UPDATE*
D2 - UPDATE*
EAE - UPDATE*
EAE1 - UPDATE*
EXP - UPDATE*
FCON - UPDATE*
FILL - BLDATA
FINTIM - UPDATE*
FSPH - UPDATE*
FVIS - UPDATE*

I N D E X

PAGE 48

*****9_SUPER_INDEX*****

GAA - UPDATE*
GBPH - UPDATE*
GCAA - UPDATE*
GCAAS - UPDATE*
GCCA - UPDATE*
GPRI - UPDATE*
GPRO - UPDATE*
GREH - UPDATE*
GRETO1 - UPDATE*
HEFLO - UPDATE*
HSATP - UPDATE*
HSATT - UPDATE*
I - BLDATA*
IAPS - UPDATE*
ICAN - UPDATE*
IICAN - UPDATE*
IINT - UPDATE*
IIPSIT - UPDATE*
INCAA - UPDATE*
INHIST - BLDATA*
INPL - UPDATE*
INT - UPDATE*
INTGRL - UPDATE*
INTYPE - BLDATA*
IPLOAD - UPDATE*
IPPRG - UPDATE*
IPSIT - UPDATE*
ITAM1 - UPDATE*
ITAM10 - UPDATE*
ITAM2 - UPDATE*
ITAM3 - UPDATE*
ITAM4 - UPDATE*
ITAM5 - UPDATE*
ITAM6 - UPDATE*
ITAM7 - UPDATE*
ITAM8 - UPDATE*
ITAM9 - UPDATE*
ITAW1 - UPDATE*
ITAW0 - UPDATE*
ITAW1 - UPDATE*
ITAW10 - UPDATE*
ITAW2 - UPDATE*
ITAW3 - UPDATE*
ITAW4 - UPDATE*
ITAW5 - UPDATE*
ITAW6 - UPDATE*
ITAW7 - UPDATE*
ITAW8 - UPDATE*
ITAW9 - UPDATE*
ITCAHA - UPDATE*

I N D E X

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***** SUPER INDEX *****

ITGPM - UPDATE*
ITHH16 - UPDATE*
ITHH10 - UPDATE*
ITHH1 - UPDATE*
ITHH2 - UPDATE*
ITHH3 - UPDATE*
ITHH4 - UPDATE*
ITHH5 - UPDATE*
ITHH6 - UPDATE*
ITHH1 - UPDATE*
ITHH0 - UPDATE*
ITHW1 - UPDATE*
ITHW2 - UPDATE*
ITHW3 - UPDATE*
ITHW4 - UPDATE*
ITHW5 - UPDATE*
ITHW6 - UPDATE*
ITLPH - UPDATE*
ITPCOM - UPDATE*
ITPC1 - UPDATE*
ITPC10 - UPDATE*
ITPC2 - UPDATE*
ITPC3 - UPDATE*
ITPC4 - UPDATE*
ITPC5 - UPDATE*
ITPC6 - UPDATE*
ITPC7 - UPDATE*
ITPC8 - UPDATE*
ITPC9 - UPDATE*
ITPHM - UPDATE*
ITPH1 - UPDATE*
ITPH10 - UPDATE*
ITPH2 - UPDATE*
ITPH3 - UPDATE*
ITPH4 - UPDATE*
ITPH5 - UPDATE*
ITPH6 - UPDATE*
ITPH7 - UPDATE*
ITPH8 - UPDATE*
ITPH9 - UPDATE*
ITPRW - UPDATE*
ITRC1 - UPDATE*
ITRC2 - UPDATE*
ITRC3 - UPDATE*
ITRC4 - UPDATE*
ITRC5 - UPDATE*
ITRC6 - UPDATE*
ITRF1 - UPDATE*
ITRF2 - UPDATE*
ITRF3 - UPDATE*

I N D E X

***** SUPER INDEX *****

PAGE 50

ITRF4 - UPDATE*
ITRF5 - UPDATE*
ITRF6 - UPDATE*
ITUPH - UPDATE*
IVPRW - UPDATE*
IZZZZZ - UPDATE*
I/O - UPDATE*
JAACP - UPDATE*
JAAGR - UPDATE*
JAAM1 - UPDATE*
JAAM10 - UPDATE*
JAAM2 - UPDATE*
JAAM3 - UPDATE*
JAAM4 - UPDATE*
JAAM5 - UPDATE*
JAAM6 - UPDATE*
JAAM7 - UPDATE*
JAAM8 - UPDATE*
JAAM9 - UPDATE*
JAWM1 - UPDATE*
JAWM10 - UPDATE*
JAWM2 - UPDATE*
JAWM3 - UPDATE*
JAWM4 - UPDATE*
JAWM5 - UPDATE*
JAWM6 - UPDATE*
JAWM7 - UPDATE*
JAWM8 - UPDATE*
JAWM9 - UPDATE*
JGPK - UPDATE*
JHHCPC - UPDATE*
JHHM1 - UPDATE*
JHHM2 - UPDATE*
JHHM3 - UPDATE*
JHHM4 - UPDATE*
JHHM5 - UPDATE*
JHHM6 - UPDATE*
JHWM1 - UPDATE*
JHWM2 - UPDATE*
JHWM3 - UPDATE*
JHWM4 - UPDATE*
JHWM5 - UPDATE*
JHWM6 - UPDATE*
JLPV - UPDATE*
JRCFK1 - UPDATE*
JRCFK2 - UPDATE*
JRCFK3 - UPDATE*
JRCFK4 - UPDATE*
JRCFK5 - UPDATE*
JRCFK6 - UPDATE*

I N D E X

***** SUPER_INDEX *****

PAGE 51

JRECK1 - UPDATE*
JRECK2 - UPDATE*
JRECK3 - UPDATE*
JRECK4 - UPDATE*
JRECK5 - UPDATE*
JRECK6 - UPDATE*
JUPV - UPDATE*
KAAA - UPDATE*
KAAAK - UPDATE*
KAAAU - UPDATE*
KAABK - UPDATE*
KAABU - UPDATE*
KAAG - UPDATE*
KAAR - UPDATE*
KAATR - UPDATE*
KAAM1 - UPDATE*
KAAM2 - UPDATE*
KAHAK - UPDATE*
KAMBK - UPDATE*
KAMC - UPDATE*
KAMCI - UPDATE*
KAMCO - UPDATE*
KAMCT - UPDATE*
KAMR - UPDATE*
KAMTR - UPDATE*
KAMA - UPDATE*
KAWISO - UPDATE*
KAWN - UPDATE*
KAWRX - UPDATE*
KAWSO - UPDATE*
KAWTR - UPDATE*
KAWV - UPDATE*
KAWVI - UPDATE*
KAWVO - UPDATE*
KAWVT - UPDATE*
KAWWR - UPDATE*
KAWW1 - UPDATE*
KAWW2 - UPDATE*
KCAAN - UPDATE*
KCAPBN - UPDATE*
KCAR - UPDATE*
KCARG - UPDATE*
KCART - UPDATE*
KCATAU - UPDATE*
KCCAN - UPDATE*
KEEP - UPDATE*
KEYS - BLDATA*
KGPC - UPDATE*
KHHA - UPDATE*
KHHCK - UPDATE*

I N D E X

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PAGE 52

KHHCKE - UPDATE*
KHHRX - UPDATE*
KHHVI6 - UPDATE*
KHHVK - UPDATE*
KHHVKE - UPDATE*
KHHW1 - UPDATE*
KHHW2 - UPDATE*
KHHAK - UPDATE*
KHHBK - UPDATE*
KHHMC - UPDATE*
KHHCI - UPDATE*
KHHCIO - UPDATE*
KHHCO - UPDATE*
KHHCT - UPDATE*
KHHRX - UPDATE*
KHW - UPDATE*
KHWISQ - UPDATE*
KHWMI - UPDATE*
KHWNO - UPDATE*
KHWN - UPDATE*
KHWRX - UPDATE*
KHW50 - UPDATE*
KHWV - UPDATE*
KHWVI - UPDATE*
KHWVO - UPDATE*
KHWVT - UPDATE*
KHWV1 - UPDATE*
KHWV2 - UPDATE*
KPCCT - UPDATE*
KPCCT - UPDATE*
KPCN - UPDATE*
KPCSQ - UPDATE*
KPCV - UPDATE*
KPCVT - UPDATE*
KPHC - UPDATE*
KPHCT - UPDATE*
KPHN - UPDATE*
KPHSQ - UPDATE*
KPHV - UPDATE*
KPHVT - UPDATE*
KPL - UPDATE*
KPLCR - UPDATE*
KPLJD - UPDATE*
KPLJ1 - UPDATE*
KPLJ2 - UPDATE*
KPLN - UPDATE*
KPLPB - UPDATE*
KPLRT - UPDATE*
KPOINT - BLDATA*
KPRV - UPDATE*

I N D E X

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PAGE 53

KPS - UPDATE
KPSCR - UPDATE
KPSJO - UPDATE
KPSJ1 - UPDATE
KPSJ2 - UPDATE
KPSN - UPDATE
KPSPB - UPDATE
KPSRT - UPDATE
KRCV1 - UPDATE*
KRCV2 - UPDATE*
KRCV3 - UPDATE*
KRCV4 - UPDATE*
KRCV5 - UPDATE*
KRCV6 - UPDATE*
KREA1 - UPDATE*
KREA2 - UPDATE*
KREA3 - UPDATE*
KREA4 - UPDATE*
KREA5 - UPDATE*
KREA6 - UPDATE*
KREGF - UPDATE*
KREL1 - UPDATE*
KREL2 - UPDATE*
KREL3 - UPDATE*
KREL4 - UPDATE*
KREL5 - UPDATE*
KREL6 - UPDATE*
KRENN - UPDATE*
KREPF - UPDATE*
KREPF1 - UPDATE*
KREPF2 - UPDATE*
KREPF3 - UPDATE*
KREPF4 - UPDATE*
KREPF5 - UPDATE*
KREPF6 - UPDATE*
KREP0 - UPDATE*
KREQT - UPDATE*
KRFV1 - UPDATE*
KRFV2 - UPDATE*
KRFV3 - UPDATE*
KRFV4 - UPDATE*
KRFV5 - UPDATE*
KRFV6 - UPDATE*
KTAU - UPDATE*
KUNACP - UPDATE*
KUNGR - UPDATE*
KUNHCP - UPDATE*
KUNHCV - UPDATE*
KUNWCP - UPDATE*
LC - BLDATA*

I N D E X

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PAGE 54

MARGIN - UPDATE*
MEMRY - BLDATA*
MMH16 - UPDATE*
MLPH - UPDATE*
MNSS - UPDATE*
MUPH - UPDATE*
NALARM - UPDATE*
NCAA - UPDATE*
NCAD - UPDATE*
NFILL1 - BLDATA
NINT - BLDATA
NLOCS - BLDATA*
NMEMRY - BLDATA*
NOINTG - BLDATA*
NOSYMB - BLDATA*
NPL - UPDATE*
NPS - UPDATE*
NZERO - BLDATA*
OCAERR - UPDATE*
PARTRT - UPDATE*
PLOAD - UPDATE*
PNSS - UPDATE*
POWER - UPDATE*
POWFLO - UPDATE*
PPRG - UPDATE*
PRCD - UPDATE*
PROPN - UPDATE*
QAAMT - UPDATE*
QAAM1 - UPDATE*
QAAM10 - UPDATE*
QAAM2 - UPDATE*
QAAM3 - UPDATE*
QAAM4 - UPDATE*
QAAM5 - UPDATE*
QAAM6 - UPDATE*
QAAM7 - UPDATE*
QAAM8 - UPDATE*
QAAM9 - UPDATE*
QAWMT - UPDATE*
QAWM1 - UPDATE*
QAWM10 - UPDATE*
QAWM2 - UPDATE*
QAWM3 - UPDATE*
QAWM4 - UPDATE*
QAWM5 - UPDATE*
QAWM6 - UPDATE*
QAWM7 - UPDATE*
QAWM8 - UPDATE*
QAWM9 - UPDATE*
QBPH - UPDATE*

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PAGE 55

QHMMT - UPDATE*
QHMM1 - UPDATE*
QHMM2 - UPDATE*
QHMM3 - UPDATE*
QHMM4 - UPDATE*
QHMM5 - UPDATE*
QHMM6 - UPDATE*
QHMMT - UPDATE*
QHMM1 - UPDATE*
QHMM2 - UPDATE*
QHMM3 - UPDATE*
QHMM4 - UPDATE*
QHMM5 - UPDATE*
QHMM6 - UPDATE*
QPR - UPDATE*
QRF1 - UPDATE*
QRF2 - UPDATE*
QRF3 - UPDATE*
QRF4 - UPDATE*
QRF5 - UPDATE*
QRF6 - UPDATE*
RAVAV - UPDATE*
RAV1 - UPDATE*
RAV0 - UPDATE*
RAV1 - UPDATE*
RAV10 - UPDATE*
RAV2 - UPDATE*
RAV3 - UPDATE*
RAV4 - UPDATE*
RAV5 - UPDATE*
RAV6 - UPDATE*
RAV7 - UPDATE*
RAV8 - UPDATE*
RAV9 - UPDATE*
RETURN - UPDATE*
RFTSL - UPDATE*
RHAVV - UPDATE*
RHV1 - UPDATE*
RHV0 - UPDATE*
RHV1 - UPDATE*
RHV2 - UPDATE*
RHV3 - UPDATE*
RHV4 - UPDATE*
RHV5 - UPDATE*
RHV6 - UPDATE*
RPCAV - UPDATE*
RPC1 - UPDATE*
RPC10 - UPDATE*
RPC2 - UPDATE*
RPC3 - UPDATE*

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PAGE 56

RPC4 - UPDATE*
RPC5 - UPDATE*
RPC6 - UPDATE*
RPC7 - UPDATE*
RPC8 - UPDATE*
RPC9 - UPDATE*
RPHAV - UPDATE*
RPH1 - UPDATE*
RPH10 - UPDATE*
RPH2 - UPDATE*
RPH3 - UPDATE*
RPH4 - UPDATE*
RPH5 - UPDATE*
RPH6 - UPDATE*
RPH7 - UPDATE*
RPH8 - UPDATE*
RPH9 - UPDATE*
SCAV - UPDATE*
SPL - UPDATE*
SPS - UPDATE*
SYMB - BLDATA*
SYMBLS - BLDATA*
TAA110 - UPDATE*
TAA01 - UPDATE*
TAA010 - UPDATE*
TAA02 - UPDATE*
TAA03 - UPDATE*
TAA04 - UPDATE*
TAA05 - UPDATE*
TAA06 - UPDATE*
TAA07 - UPDATE*
TAA08 - UPDATE*
TAA09 - UPDATE*
TAA1 - UPDATE*
TAA10 - UPDATE*
TAA2 - UPDATE*
TAA3 - UPDATE*
TAA4 - UPDATE*
TAA5 - UPDATE*
TAA6 - UPDATE*
TAA7 - UPDATE*
TAA8 - UPDATE*
TAA9 - UPDATE*
TAM1 - UPDATE*
TAM10 - UPDATE*
TAM2 - UPDATE*
TAM3 - UPDATE*
TAM4 - UPDATE*
TAM5 - UPDATE*
TAM6 - UPDATE*

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PAGE 57

TAM7 - UPDATE*
TAM8 - UPDATE*
TAM9 - UPDATE*
TAM1 - UPDATE*
TAM0 - UPDATE*
TAM01 - UPDATE*
TAM010 - UPDATE*
TAM02 - UPDATE*
TAM03 - UPDATE*
TAM04 - UPDATE*
TAM05 - UPDATE*
TAM06 - UPDATE*
TAM07 - UPDATE*
TAM08 - UPDATE*
TAM09 - UPDATE*
TAM1 - UPDATE*
TAM10 - UPDATE*
TAM2 - UPDATE*
TAM3 - UPDATE*
TAM4 - UPDATE*
TAM5 - UPDATE*
TAM6 - UPDATE*
TAM7 - UPDATE*
TAM8 - UPDATE*
TAM9 - UPDATE*
TBPH - UPDATE*
TCAH0A - UPDATE*
TCCM0A - UPDATE*
TFLAG - UPDATE*
TGPH - UPDATE*
THH16 - UPDATE*
THH01 - UPDATE*
THH02 - UPDATE*
THH03 - UPDATE*
THH04 - UPDATE*
THH05 - UPDATE*
THH06 - UPDATE*
THH1 - UPDATE*
THH2 - UPDATE*
THH3 - UPDATE*
THH4 - UPDATE*
THH5 - UPDATE*
THH6 - UPDATE*
THH10 - UPDATE*
THH1 - UPDATE*
THH2 - UPDATE*
THH3 - UPDATE*
THH4 - UPDATE*
THH5 - UPDATE*
THH6 - UPDATE*

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PAGE 58

THW1 - UPDATE*
THW0 - UPDATE*
THW05 - UPDATE*
THW055 - UPDATE*
THW01 - UPDATE*
THW02 - UPDATE*
THW03 - UPDATE*
THW04 - UPDATE*
THW05 - UPDATE*
THW06 - UPDATE*
THW1 - UPDATE*
THW2 - UPDATE*
THW3 - UPDATE*
THW4 - UPDATE*
THW5 - UPDATE*
THW6 - UPDATE*
TIME - UPDATE*
TINLET - UPDATE*
TLPH - UPDATE*
TLPH0 - UPDATE*
TPC0 - UPDATE*
TPCOM - UPDATE*
TPC1 - UPDATE*
TPC10 - UPDATE*
TPC2 - UPDATE*
TPC3 - UPDATE*
TPC4 - UPDATE*
TPC5 - UPDATE*
TPC6 - UPDATE*
TPC7 - UPDATE*
TPC8 - UPDATE*
TPC9 - UPDATE*
TPHM - UPDATE*
TPH0 - UPDATE*
TPH1 - UPDATE*
TPH10 - UPDATE*
TPH2 - UPDATE*
TPH3 - UPDATE*
TPH4 - UPDATE*
TPH5 - UPDATE*
TPH6 - UPDATE*
TPH7 - UPDATE*
TPH8 - UPDATE*
TPH9 - UPDATE*
TPRI - UPDATE*
TPRW - UPDATE*
TRC1 - UPDATE*
TRC2 - UPDATE*
TRC3 - UPDATE*
TRC4 - UPDATE*

I N D E X

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PAGE 59

TRC5 - UPDATE*
TRC6 - UPDATE*
TREH01 - UPDATE*
TREH02 - UPDATE*
TREH03 - UPDATE*
TREH04 - UPDATE*
TREH05 - UPDATE*
TREH06 - UPDATE*
TREH1 - UPDATE*
TREH2 - UPDATE*
TREH3 - UPDATE*
TREH4 - UPDATE*
TREH5 - UPDATE*
TREH6 - UPDATE*
TRF1 - UPDATE*
TRF2 - UPDATE*
TRF3 - UPDATE*
TRF4 - UPDATE*
TRF5 - UPDATE*
TRF6 - UPDATE*
TSCRAM - UPDATE*
TSEC - UPDATE*
TSTART - UPDATE*
TUPH - UPDATE*
TWARN - UPDATE*
VPRW - UPDATE*
WFLOW - UPDATE*
WPLR - UPDATE*
WPLS - UPDATE*
WPLSO - UPDATE*
WPRI - UPDATE*
WPRO - UPDATE*
WPSR - UPDATE*
WPSS - UPDATE*
X - BLDATA
Z - UPDATE*
ZFLAGS - UPDATE*
ZINST0 - BLDATA*
ZZ8000 - UPDATE*
ZZ8002 - UPDATE*
ZZ8003 - UPDATE*
ZZ8004 - UPDATE*
ZZ8005 - UPDATE*
ZZ8006 - UPDATE*
ZZ8007 - UPDATE*
ZZ8009 - UPDATE*
ZZ8010 - UPDATE*
ZZ8011 - UPDATE*
ZZ8012 - UPDATE*
ZZ8013 - UPDATE*

I N D E X

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PAGE 60

ZZ8014 - UPDATE*
ZZ8016 - UPDATE*
ZZ8017 - UPDATE*
ZZ8018 - UPDATE*
ZZ8019 - UPDATE*
ZZ8020 - UPDATE*
ZZ8021 - UPDATE*
ZZ8023 - UPDATE*
ZZ8024 - UPDATE*
ZZ8025 - UPDATE*
ZZ8026 - UPDATE*
ZZ8027 - UPDATE*
ZZ8028 - UPDATE*
ZZ8030 - UPDATE*
ZZ8031 - UPDATE*
ZZ8032 - UPDATE*
ZZ8033 - UPDATE*
ZZ8034 - UPDATE*
ZZ8035 - UPDATE*
ZZ8037 - UPDATE*
ZZ8038 - UPDATE*
ZZ8039 - UPDATE*
ZZ8040 - UPDATE*
ZZ8041 - UPDATE*
ZZ8042 - UPDATE*
ZZ8044 - UPDATE*
ZZ8045 - UPDATE*
ZZ8046 - UPDATE*
ZZ8047 - UPDATE*
ZZ8048 - UPDATE*
ZZ8049 - UPDATE*
ZZ8051 - UPDATE*
ZZ8052 - UPDATE*
ZZ8053 - UPDATE*
ZZ8054 - UPDATE*
ZZ8055 - UPDATE*
ZZ8056 - UPDATE*
ZZ8058 - UPDATE*
ZZ8059 - UPDATE*
ZZ8060 - UPDATE*
ZZ8061 - UPDATE*
ZZ8062 - UPDATE*
ZZ8063 - UPDATE*
ZZ8065 - UPDATE*
ZZ8066 - UPDATE*
ZZ8067 - UPDATE*
ZZ8068 - UPDATE*
ZZ8069 - UPDATE*
ZZ8070 - UPDATE*
ZZ8072 - UPDATE*

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PAGE 61

ZZ8073 - UPDATE*
ZZ8074 - UPDATE*
ZZ8075 - UPDATE*
ZZ8076 - UPDATE*
ZZ8077 - UPDATE*
ZZ8078 - UPDATE*
ZZ8079 - UPDATE*
ZZ8080 - UPDATE*
ZZ8082 - UPDATE*
ZZ8083 - UPDATE*
ZZ8084 - UPDATE*
ZZ8085 - UPDATE*
ZZ8086 - UPDATE*
ZZ8087 - UPDATE*
ZZ8088 - UPDATE*
ZZ8089 - UPDATE*
ZZ8090 - UPDATE*
ZZ8092 - UPDATE*
ZZ8093 - UPDATE*
ZZ8094 - UPDATE*
ZZ8095 - UPDATE*
ZZ8096 - UPDATE*
ZZ8097 - UPDATE*
ZZ8098 - UPDATE*
ZZ8099 - UPDATE*
ZZ8100 - UPDATE*
ZZ8102 - UPDATE*
ZZ8103 - UPDATE*
ZZ8104 - UPDATE*
ZZ8105 - UPDATE*
ZZ8106 - UPDATE*
ZZ8107 - UPDATE*
ZZ8108 - UPDATE*
ZZ8109 - UPDATE*
ZZ8110 - UPDATE*
ZZ8112 - UPDATE*
ZZ8113 - UPDATE*
ZZ8114 - UPDATE*
ZZ8115 - UPDATE*
ZZ8116 - UPDATE*
ZZ8117 - UPDATE*
ZZ8118 - UPDATE*
ZZ8119 - UPDATE*
ZZ8120 - UPDATE*
ZZ8122 - UPDATE*
ZZ8123 - UPDATE*
ZZ8124 - UPDATE*
ZZ8125 - UPDATE*
ZZ8126 - UPDATE*
ZZ8127 - UPDATE*

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PAGE 62

ZZ8128 - UPDATE*
ZZ8129 - UPDATE*
ZZ8131 - UPDATE*
ZZ8132 - UPDATE*
ZZ8133 - UPDATE*
ZZ8134 - UPDATE*
ZZ8135 - UPDATE*
ZZ8136 - UPDATE*
ZZ8137 - UPDATE*
ZZ8138 - UPDATE*
ZZ8140 - UPDATE*
ZZ8141 - UPDATE*
ZZ8142 - UPDATE*
ZZ8143 - UPDATE*
ZZ8144 - UPDATE*
ZZ8145 - UPDATE*
ZZ8146 - UPDATE*
ZZ8147 - UPDATE*
ZZ8149 - UPDATE*
ZZ8150 - UPDATE*
ZZ8151 - UPDATE*
ZZ8152 - UPDATE*
ZZ8153 - UPDATE*
ZZ8154 - UPDATE*
ZZ8155 - UPDATE*
ZZ8156 - UPDATE*
ZZ8158 - UPDATE*
ZZ8159 - UPDATE*
ZZ8160 - UPDATE*
ZZ8161 - UPDATE*
ZZ8162 - UPDATE*
ZZ8163 - UPDATE*
ZZ8164 - UPDATE*
ZZ8165 - UPDATE*
ZZ8167 - UPDATE*
ZZ8168 - UPDATE*
ZZ8169 - UPDATE*
ZZ8170 - UPDATE*
ZZ8171 - UPDATE*
ZZ8172 - UPDATE*
ZZ8173 - UPDATE*
ZZ8174 - UPDATE*
ZZ8176 - UPDATE*
ZZ8177 - UPDATE*
ZZ8178 - UPDATE*
ZZ8179 - UPDATE*
ZZ8180 - UPDATE*
ZZ8181 - UPDATE*
ZZ8182 - UPDATE*
ZZ8183 - UPDATE*

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ZZ8184 - UPDATE*
ZZ8185 - UPDATE*
ZZ8186 - UPDATE*
ZZ8187 - UPDATE*
ZZ8188 - UPDATE*
ZZ8189 - UPDATE*
ZZ8190 - UPDATE*
ZZ8191 - UPDATE*
ZZ8192 - UPDATE*
ZZ8193 - UPDATE*
ZZ8194 - UPDATE*
ZZ8195 - UPDATE*
ZZ8196 - UPDATE*
ZZ8197 - UPDATE*
ZZ8198 - UPDATE*
ZZ8199 - UPDATE*
ZZ8200 - UPDATE*
ZZ8201 - UPDATE*
ZZ8202 - UPDATE*
ZZ8203 - UPDATE*
ZZ8204 - UPDATE*
ZZ8205 - UPDATE*
ZZ8206 - UPDATE*
ZZ8207 - UPDATE*
ZZ8208 - UPDATE*
ZZ8209 - UPDATE*
ZZ8210 - UPDATE*
ZZ8211 - UPDATE*
ZZ8212 - UPDATE*
ZZ8213 - UPDATE*
ZZ8214 - UPDATE*
ZZ8215 - UPDATE*
ZZ8216 - UPDATE*
ZZ8217 - UPDATE*
ZZ8218 - UPDATE*
ZZ8219 - UPDATE*
ZZ8220 - UPDATE*
ZZ8221 - UPDATE*
ZZ8222 - UPDATE*
ZZ8223 - UPDATE*
ZZ8224 - UPDATE*
ZZ8225 - UPDATE*
ZZ8226 - UPDATE*
ZZ8227 - UPDATE*
ZZ8228 - UPDATE*
ZZ8229 - UPDATE*
ZZ8230 - UPDATE*
ZZ8231 - UPDATE*

THE FOLLOWING 64 SYMBOLS ARE NOT USED IN ANY OF THE ROUTINES LISTED ABOVE -

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A	AHEFLO	CHIS	DELGR	DELMAX	DELMIN	DELPP	DELPR
DELS	DELT	FILL	FINTIM	GCAAS	GPRI	GPRO	INHIST
INTYPE	KAWISQ	KAWSQ	KAWJR	KAWNR	KHMCIO	KHWISQ	KHWHI
KHWMO	KHWSQ	KPCSQ	KPHSQ	KPL	KPLCR	KPLJO	KPLJ1
KPLJ2	KPLN	KPLPB	KPLRT	KPRV	KPS	KPSCR	KPSJO
KPSJ1	KPSJ2	KPSN	KPSPB	KPSRT	NFILL1	NINT	NPS
QPR	SCAV	SPL	SPS	TLPHO	TPRI	TUARN	WPLR
WPLS	WPLSC	WPRI	WPRO	WPSR	WPSS	X	Z

==EXIT LOC==021673

AFREE 618.

AFREE 53.

QASG,AX ABS*CASE.

FAC WARNING 044000000000

QASG,X IC*CASE.

FAC WARNING 044000000000

QUSE 12,,IC*CASE.

QASG,AX SIMOUT*CASE.

FAC WARNING 044000000000

MAP ,SYSLSIM
MAP28R2 GAC BL72-8 09/29/77 10:19:59

1. IN TPFS.
2. IN SYSL*SIM.MAIN
3. LIB SYSL*SIM
4. LIB SYSL*PLOT.LIB
5. LIB CSD*PLOT

ADDRESS LIMITS 001000 062164 25205 IBANK WORDS DECIMAL
063000 146655 26542 DBANK WORDS DECIMAL
STARTING ADDRESS 062197

SEGMENT	SHAINS	001000 062164	063000 146655
NBDCVS/GAFOR-E3	S(1)	001000 001130	S(2) 063000 063055
NFTVS/FOR-E2	S(1)	001131 001153	
NCNVS/GAFOR	S(1)	001154 001375	S(2) 063056 063152
NBFQVS/FOR			S(2) 063153 065400
EBDS/GA	S(1)	001376 001460	
OCTOMP/GA	S(1)	001461 001715	S(0) 065401 065555
NFTCHS/GAFOR-E2	S(1)	001716 002203	S(2) 065556 065571
NININS/GAFOR	S(1)	002209 002446	S(2) 065572 065572
NINPTS/GAFOR	S(1)	002447 004046	S(2) 065573 065626
NCLOSS/GAFOR	S(1)	004047 004321	S(2) 065627 065656
NSWTCS/GAFOR69	S(1)	004322 004352	
NBSBLS/FOR-E3	S(1)	004353 004407	
NUPDAS/FOR68	S(1)	004410 004443	
NRBLKS/FOR-E2	S(1)	004444 004466	
NVBLKS/FOR68	S(1)	004467 004600	
KILLS/GA	S(1)	004601 004705	
FORCOMS/GAFOR			S(2) 065657 065664
FORVCOMS/GAFOR			S(2) 065665 065671
NERCOMS/FOR-TE3	S(1)	004706 004765	S(2) 065675 065710
ERUS/SYS72-8			
NOTINS/GAFOR-E3	S(1)	004766 005257	S(2) 065711 065714
NOUTS/GA	S(1)	005260 007072	S(2) 065715 065761
NFMTS/GAFOR	S(1)	007073 007755	S(2) 065762 066036
NIOERS/GAFOR	S(1)	007756 010212	S(2) 066037 066205
NFCHKS/GAFOR	S(1)	010213 011222	S(2) 066206 066356
	S(3)	011223 011223	S(3) 066357 066430
NTABS/FOR-TE3			S(2) 066431 066467
ALOGS/FOR-E3	S(1)	011224 011342	S(2) 066470 066530
NISYMS/FOR-E3	S(1)	011343 011516	S(2) 066531 066532
UTILITY4/GA	S(1)	011517 011543	
MERR/GA	S(1)	011544 011557	S(0) 066533 066543
UTILITY5/GA	S(1)	011560 011611	
UTILITY2/GA	S(1)	011612 011652	
INBCOL/GA	S(1)	011653 011764	
INOUT/GA	S(1)	011765 012561	S(0) 066544 066722
DATGET/GA	S(1)	012562 012657	
SINCOSS/FOR-E3	S(1)	012660 013014	S(2) 066723 066745
DSQRTS/FOR59	S(1)	013015 013065	S(2) 066746 066764
NFINPS/GAFOR-E3	S(1)	013066 013536	S(0) 066765 066765

PAPER/GA	S(1)	013537 014074	S(2)	066766 067052
SORTS/FCR59	S(1)	014075 014135	S(0)	067053 067123
NOSYMS/FOR-E3	S(1)	014136 014400	S(2)	067124 067135
NFOUTS/GAFOR-E3	S(1)	014401 015035	S(2)	067136 067137
NEXPSS/FOR68	S(1)	015036 015123	S(2)	067140 067163
NIBUFS/FOR-E2	S(1)	015124 015163	S(2)	067164 067173
NVEFS/GAFOR-E2	S(1)	015164 015366	S(2)	067174 067174
WARN/GA			S(0)	067175 067214
EXTIME/GA			S(0)	067215 067250
EXITSF/GAFOR	S(1)	015367 015367	S(0)	067251 067300
NRWNOB/GAFOR-E3	S(1)	015370 015471	S(2)	067301 067313
NSTOPS/GAFOR	S(1)	015472 015543	S(2)	067314 067327
NINTRS/GAFOR	S(1)	015544 015637	S(2)	067330 067360
NERRS/GAFOR	S(1)	015640 016205	S(2)	067361 067542
NTERS/GAFOR-E3	S(1)	016206 016370	S(2)	067543 067662
NOBUFS/FOR68	S(1)	016371 016431		
EXPSS/FOR59	S(1)	016432 016521	S(2)	067663 067703
NEXP6S/FOR-E3	S(1)	016522 016717	S(2)	067704 067755
FDCON/PL0T2	S(1)	016720 017052	S(0)	067756 070103
			S(2)	BLANKSCOMMON
DVROPT/PL0T2	S(1)	017053 017375	S(0)	070104 070132
	S(3)	PPKGC	S(2)	BLANKSCOMMON
DUMP1/PL0T2	S(1)	017376 017512	S(0)	070133 070172
	S(3)	QUITER	S(2)	BLANKSCOMMON
PLTLIM/PL0T2	S(1)	017513 017660	S(0)	070173 070200
	S(3)	PL0TLM	S(2)	BLANKSCOMMON
TYUNIT/PL0T2	S(1)	017661 017790	S(0)	070201 070211
	S(3)	PPKGC	S(2)	BLANKSCOMMON
	S(5)	TRANS	S(4)	PPKAXS
TXUNIT/P_0T2	S(1)	017741 020017	S(0)	070212 070222
	S(3)	PPKGC	S(2)	BLANKSCOMMON
	S(5)	TRANS	S(4)	PPKAXS
CONVRT/PL0T2	S(1)	020020 020135	S(0)	070223 070235
			S(2)	BLANKSCOMMON
THASKS(COMMONBLOCK)				070236 070251
PPKGC1(COMMONBLOCK)				070252 070370
TSP/PL0T2	S(1)	020136 020666	S(0)	070371 070450
	S(3)	PPKGC	S(2)	BLANKSCOMMON
	S(5)	PPKGC1	S(4)	PLTPK
			S(6)	THASKS
CUTMRK/PL0T2	S(1)	020667 020717	S(0)	070451 070472
			S(2)	BLANKSCOMMON
STORE/PL0T2	S(1)	020720 020753	S(0)	070473 070477
	S(3)	PICTUR	S(2)	BLANKSCOMMON
			S(4)	PLTPK
FINISH/PL0T2	S(1)	020754 021715	S(0)	070500 070630
	S(3)	PLTPK	S(2)	BLANKSCOMMON
			S(4)	QUITER
PICTUR(COMMONBLOCK)				070631 070631
ADF/PL0T2	S(1)	021716 021755	S(0)	070632 070636
	S(3)	PLTPK	S(2)	BLANKSCOMMON
	S(5)	PICTUR	S(4)	QUITER
PL0TLM(COMMONBLOCK)				070637 070642
DVR/PL0T2	S(1)	021756 023067	S(0)	070643 070754
	S(3)	PPKGC	S(2)	BLANKSCOMMON
	S(5)	PL0TLM	S(4)	PLTPK

FRAME/PLOT2	\$ (1)	023070 023163	\$ (0)	070755 070770
	\$ (3)	PPKGC	\$ (2)	BLANKSCOMMON
			\$ (4)	PPKAXS
PPKAXS (COMMONBLOCK)				070771 070772
TRANS (COMMONBLOCK)				070773 070776
PPKGC (COMMONBLOCK)				070777 071091
PLTPK (COMMONBLOCK)				071042 072340
QUITER (COMMONBLOCK)				072341 072342
SETUP/PLOT2	\$ (1)	023164 023317	\$ (0)	072343 072414
	\$ (3)	QUITER	\$ (2)	BLANKSCOMMON
	\$ (5)	PPKGC	\$ (4)	PLTPK
	\$ (7)	PPKAXS	\$ (6)	TRANS
DRAW	\$ (1)	023320 023523	\$ (0)	072415 072737
			\$ (2)	BLANKSCOMMON
NUMBER	\$ (1)	023524 024146	\$ (0)	072740 073021
			\$ (2)	BLANKSCOMMON
SYMBOL	\$ (1)	024147 024325	\$ (0)	073022 073060
			\$ (2)	BLANKSCOMMON
AXIS	\$ (1)	024326 025040	\$ (0)	073061 073161
			\$ (2)	BLANKSCOMMON
PLOTS	\$ (1)	025041 025207	\$ (0)	073162 073210
			\$ (2)	BLANKSCOMMON
QRT	\$ (1)	025210 026043	\$ (0)	073211 073272
			\$ (2)	BLANKSCOMMON
SETRNG	\$ (1)	026044 026253	\$ (0)	073273 073330
			\$ (2)	BLANKSCOMMON
DMINV	\$ (1)	026254 027110	\$ (0)	073331 073451
			\$ (2)	BLANKSCOMMON
QREIG	\$ (1)	027111 030156	\$ (0)	073452 073555
			\$ (2)	BLANKSCOMMON
HESSEN	\$ (1)	030157 030552	\$ (0)	073556 073625
			\$ (2)	BLANKSCOMMON
MATSC	\$ (1)	030553 031127	\$ (0)	073626 073711
			\$ (2)	BLANKSCOMMON
PRINTH	\$ (1)	031130 031432	\$ (0)	073712 074004
			\$ (2)	BLANKSCOMMON
BUILD	\$ (1)	031433 031467	\$ (0)	074005 074015
	\$ (3)	INCARD	\$ (2)	BLANKSCOMMON
PLOTR	\$ (1)	031470 033522	\$ (0)	074016 074744
	\$ (3)	CURVAL	\$ (2)	BLANKSCOMMON
	\$ (5)	KEYS	\$ (4)	ZFLAGS
	\$ (7)	PLOTRNG	\$ (6)	DATUM
USER	\$ (1)	033523 033532	\$ (0)	074745 074750
			\$ (2)	BLANKSCOMMON
RECT	\$ (1)	033533 033575	\$ (0)	074751 074762
	\$ (3)	CURVAL	\$ (2)	BLANKSCOMMON
	\$ (5)	ZFLAGS	\$ (4)	ZINSTO
TRAPZ	\$ (1)	033576 033726	\$ (0)	074763 075006
	\$ (3)	CURVAL	\$ (2)	BLANKSCOMMON
	\$ (5)	ZFLAGS	\$ (4)	ZINSTO
RKGF	\$ (1)	033727 034101	\$ (0)	075007 075056
	\$ (3)	CURVAL	\$ (2)	BLANKSCOMMON
	\$ (5)	ZFLAGS	\$ (4)	ZINSTO
USEIG	\$ (1)	034102 035117	\$ (0)	075057 075173
	\$ (3)	CURVAL	\$ (2)	BLANKSCOMMON
	\$ (5)	ZFLAGS	\$ (4)	ZINSTO
ADM	\$ (1)	035120 035667	\$ (0)	075174 075262

	\$ (3)	CURVAL	\$ (2)	BLANK\$COMMON
	\$ (5)	ZFLAGS	\$ (4)	ZINSTO
HAK	\$ (1)	035670 036474	\$ (0)	075263 075390
	\$ (3)	CURVAL	\$ (2)	BLANK\$COMMON
	\$ (5)	ZFLAGS	\$ (4)	ZINSTO
RKH	\$ (1)	036475 037077	\$ (0)	075341 075415
	\$ (3)	CURVAL	\$ (2)	BLANK\$COMMON
	\$ (5)	ZFLAGS	\$ (4)	ZINSTO
STEADY	\$ (1)	037100 042155	\$ (0)	075416 111572
	\$ (3)	ZINSTO	\$ (2)	BLANK\$COMMON
	\$ (5)	ZFLAGS	\$ (4)	ZCOUNT
	\$ (7)	SYMBLS	\$ (6)	CURVAL
			\$ (010)	ZSTEAD
OUTPUT	\$ (1)	042156 042532	\$ (0)	111573 111700
	\$ (3)	CURVAL	\$ (2)	BLANK\$COMMON
	\$ (5)	ZFLAGS	\$ (4)	SYMBLS
	\$ (7)	DATUM	\$ (6)	KEYS
	\$ (011)	PSCALE	\$ (010)	PLOTNG
			\$ (012)	LFLAGS
NUMER	\$ (1)	042533 043260	\$ (0)	111701 111726
	\$ (3)	INCARD	\$ (2)	BLANK\$COMMON
ALPHA	\$ (1)	043261 043476	\$ (0)	111727 111750
	\$ (3)	INCARD	\$ (2)	BLANK\$COMMON
READC	\$ (1)	043477 043565	\$ (0)	111751 112002
	\$ (3)	INCARD	\$ (2)	BLANK\$COMMON
SYSORT	\$ (1)	043566 044162	\$ (0)	112003 112074
			\$ (2)	BLANK\$COMMON
ENDJOB	\$ (1)	044163 044244	\$ (0)	112075 112101
	\$ (3)	KEYS	\$ (2)	BLANK\$COMMON
	\$ (5)	LFLAGS	\$ (4)	PLOTNG
PSCALE (COMMONBLOCK)				112102 112411
SIMUL	\$ (1)	044245 045531	\$ (0)	112412 112710
	\$ (3)	CURVAL	\$ (2)	BLANK\$COMMON
	\$ (5)	ZINSTO	\$ (4)	SYMBLS
	\$ (7)	ZFLASS	\$ (6)	ZCOUNT
	\$ (011)	HEMR	\$ (010)	KEYS
	\$ (013)	PLOTNG	\$ (012)	DATUM
	\$ (015)	LFLASS	\$ (014)	PSCALE
			\$ (016)	ZSTEAD
INCARD (COMMONBLOCK)				112711 113044
DATUM (COMMONBLOCK)				113045 114155
INTRAN	\$ (1)	045532 047366	\$ (0)	114156 114574
	\$ (3)	CURVAL	\$ (2)	BLANK\$COMMON
	\$ (5)	ZINSTO	\$ (4)	SYMBLS
	\$ (7)	KEYS	\$ (6)	ZFLAGS
	\$ (011)	DATUM	\$ (010)	PLOTNG
	\$ (013)	INCARD	\$ (012)	LFLAGS
			\$ (014)	ZSTEAD
PLOTNG (COMMONBLOCK)				114575 116162
ZSTEAD (COMMONBLOCK)				116163 116252
INITLZ	\$ (1)	047367 047602	\$ (0)	116253 116274
	\$ (3)	CURVAL	\$ (2)	BLANK\$COMMON
	\$ (5)	ZINSTO	\$ (4)	SYMBLS
	\$ (7)	ZSORT	\$ (6)	ZFLAGS
	\$ (011)	KEYS	\$ (010)	ZSTEAD
	\$ (013)	LFLAGS	\$ (012)	PLOTNG
ZSORT (COMMONBLOCK)				116275 124164

DEBUG	\$ (1)	047603 050004	\$ (0)	124165 124255
	\$ (3)	CURVAL	\$ (2)	BLANK\$COMMON
	\$ (5)	SYMBLS	\$ (4)	MEMRY
	\$ (7)	ZSORT	\$ (6)	ZFLAGS
ZCOUNT (COMMONBLOCK)				124256 124256
INTGRL	\$ (1)	050005 050052	\$ (0)	124257 124267
	\$ (3)	CURVAL	\$ (2)	BLANK\$COMMON
	\$ (5)	ZCOUNT	\$ (4)	ZINSTO
			\$ (6)	ZFLAGS
AFGEN	\$ (1)	050053 050136	\$ (0)	124270 124401
	\$ (3)	CURVAL	\$ (2)	BLANK\$COMMON
	\$ (5)	MEMRY	\$ (4)	SYMBLS
			\$ (6)	ZINSTO
LFLAGS (COMMONBLOCK)				124402 124406
KEYS (COMMONBLOCK)				124407 124450
MEMRY (COMMONBLOCK)				124451 125302
ZINSTO (COMMONBLOCK)				125303 127770
SYMBLS (COMMONBLOCK)				127771 131506
ZFLAGS (COMMONBLOCK)				131507 131512
CURVAL (COMMONBLOCK)				131513 145272
BLANK\$COMMON (COMMONBLOCK)				
BLDATA	\$ (3)	CURVAL	\$ (0)	145273 145273
	\$ (5)	ZINSTO	\$ (2)	BLANK\$COMMON
	\$ (7)	KEYS	\$ (4)	SYMBLS
			\$ (6)	MEMRY
UPDATE	\$ (1)	050537 062146	\$ (0)	145274 146654
	\$ (3)	CURVAL	\$ (2)	BLANK\$COMMON
			\$ (4)	ZFLAGS
MAIN	\$ (1)	062147 062164	\$ (0)	146655 146655
	\$ (3)	LFLAGS	\$ (2)	BLANK\$COMMON

SYSS*RLIBS. LEVEL 72-8
END MAP

@COPY, A TPFS., ABS=CASY.
FURPUR27R2GA RL72-8 09/24/77 10:20:15
1 ABS

@PACK ABS=CASY.
END PACK. TEXT=19, TOC=1, ABS=1

@XOT SYSLSIM

-----SYSL/1110 SIMULATION DATA-----

TITLE GCFR CASY

CONST KUNACP=0.2907 , KUNGR =386. , KUNHCV=.746

CONST KUNMCP=1.0227 , KUNHCP=1.242

AFGEN RFTSL=510.,62.4,560.,62.0,610.,61.2,660.,60.1,710.,58.8,760.,...

57.3,810.,55.6,860.,53.7,910.,51.5,960.,49.0,1010.,45.9,1060.,...

42.4,1110.,37.3

AFGEN PARTRT=510.,-.0122,610.,-.0187,660.,-.0238,710.,-.0282,760.,...

-.0323,810.,-.0366,860.,-.0412,910.,-.0463,960.,-.0560,1010.,...

-.0665,1110.,-.0856

AFGEN FSPH=560.,.998,660.,1.00,710.,1.01,760.,1.03,810.,1.05,...

860.,1.08,910.,1.12,960.,1.19,1010.,1.31,1060.,1.51

AFGEN FVIS=560.,1.649,610.,1.051,660.,0.738,710.,0.569,760.,0.454, ...

810.,0.378,860.,0.328,910.,0.288,960.,0.256,1010.,0.230, ...

1060.,0.209,1110.,.197

AFGEN FCON=560.,0.364,610.,0.384,660.,0.394,710.,0.396,760.,0.395,...

810.,0.391,860.,0.381,910.,0.367,960.,0.349,1010.,0.325,...

1060.,0.292,1110.,0.280

AFGEN HSATP=58.,259.,118.,311.,220.,364.,382.,419.,...

621.,476.,962.,537.,1431.,603.,2060.,679.,...

2895.,784.

AFGEN HSATT=550.,58.,600.,108.,650.,158.,700.,208., ...

750.,259.,800.,311.,850.,364.,900.,419.,950.,476.,...

1000.,537.,1050.,603.,1100.,679.,1150.,784.

CONST KPHVT =40.7 , KPHCT =1466.0 , KPHN =10.

CONST KPCVT =40.7 , KPCCT =1466.0 , KPCN =10.

CONST KAMRX =5316. , KAMR =1.08 , KAAR =29.52

CONST KAMWR =42.78 , KAAG =761.1 , KAWA =1975.

CONST KAAA =2438. , KAATR =598. , KAMTR =679.

CONST	KAWTR =760.	, KAAAU =.2831	, KAABU =.7169
CONST	KAAAK =.1777	, KAABK =.8223	, KAMAK =1.1546
CONST	KAMBK =.1546	, KAMCT = 1039.6	, KAVVT =33.33
CONST	KAWN =10.	, KAWV1 =0.5	, KAAW1=0.5
CONST	KAWVI =3.	, KAWVO =3.	, KAMCI =100.
CONST	KAMCO =100.		
CONST	KHHRX =1.614E5	, KHVRX =1.48E4	, KHMRX =28.14
CONST	KHMCT =418.	, KHMCI =58.35	, KHMCO =58.35
CONST	KHVV1 =10.8	, KHVVI =3.91	, KHVVO =3.91
CONST	KHMCIO=208.	, KHMMI =.8267	, KHMMO =.8267
CONST	KHMN =6.0	, KHMW1 =0.5	, KHMW1 =0.5
CONST	KHHVK =6.388E-4	, KHHVKE=0.687	, KHHCK =1.062E-3
CONST	KHHCKE=0.701	, KHMMAK =6.25	, KHMMAK =0.0055
CONST	KHHA =1141.	, KHWA =888.5	
CONST	KAMSQ =.9031	, KHWSQ =.9016	, KAVISQ=.6803
CONST	KPHSQ =.2268	, KPCSQ =.3300	, KHVISQ=.6800
CONST	KRENN =30834.		
CONST	KRFV1 =5.54054E-4	, KRFV2 =2.45467E-4	, KRFV3 =2.45467E-4
CONST	KRFV4 =2.45467E-4	, KRFV5 =2.45467E-4	, KRFV6 =4.51359E-4
CONST	KRCV1 =2.00803E-4	, KRCV2 =8.89634E-5	, KRCV3 =8.89634E-5
CONST	KRCV4 =8.89634E-5	, KRCV5 =8.89634E-5	, KRCV6 =1.63584E-4
CONST	KREA1 =0.13599	, KREA2 =0.06025	, KREA3 =0.06025
CONST	KREA4 =0.06025	, KREA5 =0.06025	, KREA6 =0.11079
CONST	KREL1 =1.475	, KREL2 =0.817	, KREL3 =0.817
CONST	KREL4 =0.817	, KREL5 =0.817	, KREL6 =1.475
CONST	KREPF1=0.0271	, KREPF2=0.2021	, KREPF3=0.2710
CONST	KREPO =829.5	, KREPF =0.95	, KREGF =0.95
CONST	KREPF4=0.2710	, KREPF5=0.2021	, KREPF6=0.0271
CONST	KCCAN =3.	, KCAAN =2.	, KCAR =0.2471


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CONST KMHVI6=344.
CONST KCATAU=1.
INCON ITPH1 =1060. , ITPH2 =1060. , ITPH3 =1060.
INCON ITPH4 =1060. , ITPH5 =1060. , ITPH6 =1060.
INCON ITPH7 =1060. , ITPH8 =1060. , ITPH9 =1060.
INCON ITPH10=1060.
INCON ITPHM =1060.
INCON ITPC1 =1060. , ITPC2 =1060. , ITPC3 =1060.
INCON ITPC4 =1060. , ITPC5 =1060. , ITPC6 =1060.
INCON ITPC7 =1060. , ITPC8 =1060. , ITPC9 =1060.
INCON ITPC10=1060.
INCON ITPCOM=1060.
INCON ITAW0 =1060. , ITAW1 =1060. , ITAW1=1060.
INCON ITAW2 =1060. , ITAW3 =1060. , ITAW4=1060.
INCON ITAW5 =1060. , ITAW6 =1060. , ITAW7=1060.
INCON ITAW8 =1060. , ITAW9 =1060. , ITAW10=1060.
INCON ITAM1 =1060.
INCON ITAM2 =1060. , ITAM3 =1060. , ITAM4=1060.
INCON ITAM5 =1060. , ITAM6 =1060. , ITAM7=1060.
INCON ITAM8 =1060. , ITAM9 =1060. , ITAM10=1060.
PARAM TAA1 =1060. , TAA2 =1060. , TAA3 =1060.
PARAM TAA4 =1060. , TAA5 =1060. , TAA6 =1060.
PARAM TAA7 =1060. , TAA8 =1060. , TAA9 =1060.
PARAM TAA10=1060.
INCON ITHW0 =1060. , ITHW1 =1060. , ITHWI=1060.
INCON ITHW2 =1060. , ITHW3 =1060. , ITHW4=1060.
INCON ITHW5 =1060. , ITHW6 =1060.
INCON ITHM1 =1060.
INCON ITHM2 =1060. , ITHM3 =1060. , ITHM4=1060.

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INCON  ITHM5 =1060.      , ITHM6 =1060.      , ITHM16=1060.
PARAM  THM1 =1060.      , THM2 =1060.      , THM3 =1060.
PARAM  THM4 =1060.      , THM5 =1060.      , THM6 =1060.
INCON  IVPRW = .201657*03, ITPRW = .538657*01, IPPRG = .209573*04
INCON  IPLOAD= .126990*03, INPL = .455178*04, IINT = .455553*04
INCON  IAPS =0.6731      , IIPSIT=0.6731
PARAM  WFLOW = 0.0001
INCON  ITRF1 = .115745*04, ITRF2 = .245830*04, ITRF3 = .300611*04
INCON  ITRF4 = .310270*04, ITRF5 = .274210*04, ITRF6 = .156610*04
INCON  ITRC1 = .109587*04, ITRC2 = .137460*04, ITRC3 = .154961*04
INCON  ITRC4 = .165473*04, ITRC5 = .166634*04, ITRC6 = .149256*04
INCON  ITUPH = .107490*04, ITLPH = .148027*04
PARAM  TREH1 = .108106*04, TREH2 = .112910*04, TREH3 = .122578*04
PARAM  TREH4 = .133564*04, TREH5 = .143072*04, TREH6 = .147537*04
INCON  IYCAHA=1074.9
INCON  IICAN=0.01      , INCAA=0.01
PARAM  TSTART = 120.0
PARAM  TFLAG = 1.0
PARAM  KPLPB = 1.      , KPLRT = 1.
PARAM  KPLJD =3.28      , KPLJ1 =.0985      , KPLJ2 =1.344
PARAM  KPLCR =50.
PARAM  WPLR =0.0      , SPL =1.0      , WPLS =5.17
CONST  KPL =2.5      , KPLN =5000.      , WPLSO =5.17
PARAM  NPS =5500.      , KPSPB =10.      , KPSRT =10.
PARAM  KPSJD =.2481      , KPSJ1 =7.622E-4      , KPSJ2 =1.126E-3
PARAM  KPSCR =10.
PARAM  WPSR =0.0      , SPS =1.      , WPSS =5.17
CONST  KPS =.40      , KPSN =5000.
PARAM  WPRI =0.      , WPRO =0.      , GPRI =0.

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PARAM  GPRO =0.      , QPR  =0.      , TPRI  =530.
PARAM  KPRV  =400.
PARAM  GAA   =0.001.  , TAAI10=559.
PARAM  KTAU  =10.
PARAM  GCAAS =0.001   , GCCA  =518.8
PARAM  KGPC  =1.      , PNSS  =1395.
PARAM  PRCD=1.00      , DUMMY =1.00
AFGEN POWER=0.0,1.00,30.0,1.00,30.5,0.152,33.6,0.107, ...
          36.6,0.092,45.8,0.070,61.0,0.055,100.8,0.042, ...
          296.0,0.029,500.0,0.010
AFGEN HEFLO=0.0,518.8,30.0,518.8,37.8,71.0,45.6,25.33, ...
          53.4,14.0,61.2,4.33,500.0,2.0
AFGEN AHEFLO=0.0,0.0001, 60.0,0.0001, 61.2,6.60,62.6,8.00,...
          68.8,15.70, 76.6,21.35, 84.1,25.40,92.1,27.70,...
          100.1,29.1,108.1,29.1,115.6,30.30,117.3,30.36,...
          125.3,30.63,131.1,30.70,148.3,30.95,156.3,31.04,...
          187.3,31.35,210.3,31.60,241.3,31.98,272.3,32.36,...
          500.0,33.0
AFGEN TINLET=0.0,1074.0,30.0,1074.0,37.8,1064.0, ...
          45.6,1055.0,53.4,1048.0,61.2,832.0,500.0,1074.0
PARAM  KCARG =500.      , KCAPBN= 10.      , KCART =1.
PARAM  SCAV  =0.0      , TLPHO =1060.
PARAM  TSCRM=30.      , THWSS=1085.      , THWOS =1060.
TIMER DELT=.01,FINTIM=500.,DELPR=5.,DELGR=5.,TWARN=25.
PRINT IPCO,THVO,TPHO,TAWO,THHO1,WFLOW,MARGIN,PPRG, ...
          PNSS,GCAA,GCCA,PRCD,POWFLO, ...
          OCAERR,PROPN,ICAN,ONCAA,NCAA, ...
          TRC1,TRF1,TREH1,TREH01,THH01, ...
          TRC2,TRF2,TREH2,TREH02,THH02, ...

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TRC3,TRF3,TREH3,TREH03,THH03, ...
TRC4,TRF4,TREH4,TREH04,THH04, ...
TRC5,TRF5,TREH5,TREH05,THH05, ...
TRC6,TRF6,TREH6,TREH06,THH06, ...
THH16,THH6, ...
TLPH,TUPH

PREPAR TPC0,THW0,TPH0,TAW0,THH01,WFLOW,MARGIN,PPRG, ...

TRC1,TRF1,TREH1,TREH01,THH01, ...

PNSS,GCAA,GCCA,PRCD,POWFLO, ...

OCAERR,PROPN,ICAN,DNCAA,NCAA, ...

THH02,THH03,THH04,THH05,THH06, ...

TLPH,TUPH

GRAPH TIME,TPC0,THW0,TPH0,...

TAW0,THH01

GRAPH TIME,WFLOW,PPRG

GRAPH TIME,MARGIN

GRAPH TIME,TLPH,TUPH

GRAPH TIME,OCAERR,PROPN,ICAN,NCAA

GRAPH TIME,GCAA,GCCA,PNSS,PRCD,POWFLO

INTEG WSE16

END

DEBUG OUTPUT AT TIME = 0.00000

AHEFLO 1.05000+03 APS 6.73100-01 BAW1 0.00000 BAW0 1.54738-12 BAWT -1.18949-12 BAW1 -2.73687-12
BAW10 0.00000 BAW2 0.00000 BAW3 0.00000 BAW4 0.00000 BAW5 0.00000 BAW6 0.00000
BAW7 0.00000 BAW8 0.00000 BAW9 0.00000 BAWI 0.00000 BHW0 2.03613-12 BHW1 -7.00737-13
BHW1 -2.73687-12 BHW2 0.00000 BHW3 0.00000 BHW4 0.00000 BHW5 0.00000 BHW6 0.00000
BPC1 0.00000 BPC1 0.00000 BPC10 0.00000 BPC2 0.00000 BPC3 0.00000 BPC4 0.00000
BPC5 0.00000 BPC6 0.00000 BPC7 0.00000 BPC8 0.00000 BPC9 0.00000 BPH1 0.00000
BPH1 0.00000 BPH10 0.00000 BPH2 0.00000 BPH3 0.00000 BPH4 0.00000 BPH5 0.00000
BPH6 0.00000 BPH7 0.00000 BPH8 0.00000 BPH9 0.00000 DELGR 5.00000+00 DELMAX 1.00000+36
DELMIN 1.00000-06 DELPP 0.00000 DELPR 5.00000+00 DELS 0.00000 DELT 1.00000-02 DICAN 0.00000
DNCAA 0.00000 DTAM1 1.01041-07 DTAM10 -1.52979-03 DTAM2 -2.92982-07 DTAM3 8.49483-07 DTAM4 -2.46316-06
DTAM5 7.14004-06 DTAM6 -2.07132-05 DTAM7 5.99544-05 DTAM8 -1.74698-04 DTAM9 4.99964-04 DTAW1 0.00000
DTAW0 -6.78229-12 DTAW1 1.07974-11 DTAW10 0.00000 DTAW2 0.00000 DTAW3 0.00000 DTAW4 0.00000
DTAW5 0.00000 DTAW6 0.00000 DTAW7 0.00000 DTAW8 0.00000 DTAW9 0.00000 DTCAHA -1.49000+01

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DIGPM	0.00000	DTHM16	4.95636-03	DTHM1	0.00000	DTHM2	0.00000	DTHM3	0.00000	DTHM4	0.00000
DTHM5	0.00000	DTHM6	0.00000	DTHM7	0.00000	DTHM8	-6.84745-12	DTHM9	1.99932-11	DTHM10	0.00000
DTHM11	0.00000	DTHM12	0.00000	DTHM13	0.00000	DTHM14	0.00000	DTHM15	1.96878-01	DTHM16	0.00000
DTPC1	0.00000	DTPC10	0.00000	DTPC2	0.00000	DTPC3	0.00000	DTPC4	0.00000	DTPC5	0.00000
DTPC6	0.00000	DTPC7	0.00000	DTPC8	0.00000	DTPC9	0.00000	DTPC10	0.00000	DTPC11	0.00000
DTPH10	0.00000	DTPH2	0.00000	DTPH3	0.00000	DTPH4	0.00000	DTPH5	0.00000	DTPH6	0.00000
DTPH7	0.00000	DTPH8	0.00000	DTPH9	0.00000	DTRC1	-9.09057+00	DTRC2	2.02831+00	DTRC3	3.13305+00
DTRC4	3.37821+00	DTRC5	2.77307+00	DTRC6	-3.81858-01	DTRF1	5.22773+00	DTRF2	-8.15810-05	DTRF3	-2.29646-03
DTRF4	-1.89585-03	DTRF5	-2.97588-03	DTRF6	5.46834-01	DTUPH	-3.88448-01	DUMMY	1.00000+00	D1	3.00000+01
D2	6.00000+01	EAE	0.00000	EAE1	0.00000	FCOA	9.43000+02	FINTIM	5.00000+02	FSPH	8.97000+02
FVIS	9.18000+02	GAA	1.00000-03	GBPH	7.78201+01	GCAA	1.19634-03	GCAAS	1.00000-03	GCCA	5.18800+02
GPRI	0.00000	GPRI0	0.00000	GREH	4.79530-02	GRETOT	1.55640+03	HEFLOW	1.03500+03	HSATP	9.68000+02
HSATT	9.87000+02	IAPS	6.73100-01	ICAN	1.00000-02	IICAN	1.00000-02	IINT	4.55553+03	IIPST	6.73100-01
INCAA	1.00000-02	INPL	4.55178+03	INT	4.55553+03	IPLAD	1.26990+02	IPPRG	2.09573+03	IPSIT	6.73100-01
ITAM1	1.06000+03	ITAM10	1.06000+03	ITAM2	1.06000+03	ITAM3	1.06000+03	ITAM4	1.06000+03	ITAM5	1.06000+03
ITAM6	1.06000+03	ITAM7	1.06000+03	ITAM8	1.06000+03	ITAM9	1.06000+03	ITAMI	1.06000+03	ITAW0	1.06000+03
ITAM11	1.06000+03	ITAM10	1.06000+03	ITAM2	1.06000+03	ITAM3	1.06000+03	ITAM4	1.06000+03	ITAM5	1.06000+03
ITAM6	1.06000+03	ITAM7	1.06000+03	ITAM8	1.06000+03	ITAM9	1.06000+03	ITAM10	1.06000+03	ITGPM	0.00000
ITAM11	1.06000+03	ITAM10	1.06000+03	ITAM2	1.06000+03	ITAM3	1.06000+03	ITAM4	1.06000+03	ITAM5	1.06000+03
ITAM6	1.06000+03	ITAM7	1.06000+03	ITAM8	1.06000+03	ITAM9	1.06000+03	ITAM10	1.06000+03	ITAM11	1.06000+03
ITAM12	1.06000+03	ITAM13	1.06000+03	ITAM14	1.06000+03	ITAM15	1.06000+03	ITAM16	1.06000+03	ITAM17	1.06000+03
ITAM18	1.06000+03	ITAM19	1.06000+03	ITAM20	1.06000+03	ITAM21	1.06000+03	ITAM22	1.06000+03	ITAM23	1.06000+03
ITAM24	1.06000+03	ITAM25	1.06000+03	ITAM26	1.06000+03	ITAM27	1.06000+03	ITAM28	1.06000+03	ITAM29	1.06000+03
ITAM30	1.06000+03	ITAM31	1.06000+03	ITAM32	1.06000+03	ITAM33	1.06000+03	ITAM34	1.06000+03	ITAM35	1.06000+03
ITAM36	1.06000+03	ITAM37	1.06000+03	ITAM38	1.06000+03	ITAM39	1.06000+03	ITAM40	1.06000+03	ITAM41	1.06000+03
ITAM42	1.06000+03	ITAM43	1.06000+03	ITAM44	1.06000+03	ITAM45	1.06000+03	ITAM46	1.06000+03	ITAM47	1.06000+03
ITAM48	1.06000+03	ITAM49	1.06000+03	ITAM50	1.06000+03	ITAM51	1.06000+03	ITAM52	1.06000+03	ITAM53	1.06000+03
ITAM54	1.06000+03	ITAM55	1.06000+03	ITAM56	1.06000+03	ITAM57	1.06000+03	ITAM58	1.06000+03	ITAM59	1.06000+03
ITAM60	1.06000+03	ITAM61	1.06000+03	ITAM62	1.06000+03	ITAM63	1.06000+03	ITAM64	1.06000+03	ITAM65	1.06000+03
ITAM66	1.06000+03	ITAM67	1.06000+03	ITAM68	1.06000+03	ITAM69	1.06000+03	ITAM70	1.06000+03	ITAM71	1.06000+03
ITAM72	1.06000+03	ITAM73	1.06000+03	ITAM74	1.06000+03	ITAM75	1.06000+03	ITAM76	1.06000+03	ITAM77	1.06000+03
ITAM78	1.06000+03	ITAM79	1.06000+03	ITAM80	1.06000+03	ITAM81	1.06000+03	ITAM82	1.06000+03	ITAM83	1.06000+03
ITAM84	1.06000+03	ITAM85	1.06000+03	ITAM86	1.06000+03	ITAM87	1.06000+03	ITAM88	1.06000+03	ITAM89	1.06000+03
ITAM90	1.06000+03	ITAM91	1.06000+03	ITAM92	1.06000+03	ITAM93	1.06000+03	ITAM94	1.06000+03	ITAM95	1.06000+03
ITAM96	1.06000+03	ITAM97	1.06000+03	ITAM98	1.06000+03	ITAM99	1.06000+03	ITAM100	1.06000+03	ITAM101	1.06000+03
ITAM102	1.06000+03	ITAM103	1.06000+03	ITAM104	1.06000+03	ITAM105	1.06000+03	ITAM106	1.06000+03	ITAM107	1.06000+03
ITAM108	1.06000+03	ITAM109	1.06000+03	ITAM110	1.06000+03	ITAM111	1.06000+03	ITAM112	1.06000+03	ITAM113	1.06000+03
ITAM114	1.06000+03	ITAM115	1.06000+03	ITAM116	1.06000+03	ITAM117	1.06000+03	ITAM118	1.06000+03	ITAM119	1.06000+03
ITAM120	1.06000+03	ITAM121	1.06000+03	ITAM122	1.06000+03	ITAM123	1.06000+03	ITAM124	1.06000+03	ITAM125	1.06000+03
ITAM126	1.06000+03	ITAM127	1.06000+03	ITAM128	1.06000+03	ITAM129	1.06000+03	ITAM130	1.06000+03	ITAM131	1.06000+03
ITAM132	1.06000+03	ITAM133	1.06000+03	ITAM134	1.06000+03	ITAM135	1.06000+03	ITAM136	1.06000+03	ITAM137	1.06000+03
ITAM138	1.06000+03	ITAM139	1.06000+03	ITAM140	1.06000+03	ITAM141	1.06000+03	ITAM142	1.06000+03	ITAM143	1.06000+03
ITAM144	1.06000+03	ITAM145	1.06000+03	ITAM146	1.06000+03	ITAM147	1.06000+03	ITAM148	1.06000+03	ITAM149	1.06000+03
ITAM150	1.06000+03	ITAM151	1.06000+03	ITAM152	1.06000+03	ITAM153	1.06000+03	ITAM154	1.06000+03	ITAM155	1.06000+03
ITAM156	1.06000+03	ITAM157	1.06000+03	ITAM158	1.06000+03	ITAM159	1.06000+03	ITAM160	1.06000+03	ITAM161	1.06000+03
ITAM162	1.06000+03	ITAM163	1.06000+03	ITAM164	1.06000+03	ITAM165	1.06000+03	ITAM166	1.06000+03	ITAM167	1.06000+03
ITAM168	1.06000+03	ITAM169	1.06000+03	ITAM170	1.06000+03	ITAM171	1.06000+03	ITAM172	1.06000+03	ITAM173	1.06000+03
ITAM174	1.06000+03	ITAM175	1.06000+03	ITAM176	1.06000+03	ITAM177	1.06000+03	ITAM178	1.06000+03	ITAM179	1.06000+03
ITAM180	1.06000+03	ITAM181	1.06000+03	ITAM182	1.06000+03	ITAM183	1.06000+03	ITAM184	1.06000+03	ITAM185	1.06000+03
ITAM186	1.06000+03	ITAM187	1.06000+03	ITAM188	1.06000+03	ITAM189	1.06000+03	ITAM190	1.06000+03	ITAM191	1.06000+03
ITAM192	1.06000+03	ITAM193	1.06000+03	ITAM194	1.06000+03	ITAM195	1.06000+03	ITAM196	1.06000+03	ITAM197	1.06000+03
ITAM198	1.06000+03	ITAM199	1.06000+03	ITAM200	1.06000+03	ITAM201	1.06000+03	ITAM202	1.06000+03	ITAM203	1.06000+03
ITAM204	1.06000+03	ITAM205	1.06000+03	ITAM206	1.06000+03	ITAM207	1.06000+03	ITAM208	1.06000+03	ITAM209	1.06000+03
ITAM210	1.06000+03	ITAM211	1.06000+03	ITAM212	1.06000+03	ITAM213	1.06000+03	ITAM214	1.06000+03	ITAM215	1.06000+03
ITAM216	1.06000+03	ITAM217	1.06000+03	ITAM218	1.06000+03	ITAM219	1.06000+03	ITAM220	1.06000+03	ITAM221	1.06000+03
ITAM222	1.06000+03	ITAM223	1.06000+03	ITAM224	1.06000+03	ITAM225	1.06000+03	ITAM226	1.06000+03	ITAM227	1.06000+03
ITAM228	1.06000+03	ITAM229	1.06000+03	ITAM230	1.06000+03	ITAM231	1.06000+03	ITAM232	1.06000+03	ITAM233	1.06000+03
ITAM234	1.06000+03	ITAM235	1.06000+03	ITAM236	1.06000+03	ITAM237	1.06000+03	ITAM238	1.06000+03	ITAM239	1.06000+03
ITAM240	1.06000+03	ITAM241	1.06000+03	ITAM242	1.06000+03	ITAM243	1.06000+03	ITAM244	1.06000+03	ITAM245	1.06000+03
ITAM246	1.06000+03	ITAM247	1.06000+03	ITAM248	1.06000+03	ITAM249	1.06000+03	ITAM250	1.06000+03	ITAM251	1.06000+03
ITAM252	1.06000+03	ITAM253	1.06000+03	ITAM254	1.06000+03	ITAM255	1.06000+03	ITAM256	1.06000+03	ITAM257	1.06000+03
ITAM258	1.06000+03	ITAM259	1.06000+03	ITAM260	1.06000+03	ITAM261	1.06000+03	ITAM262	1.06000+03	ITAM263	1.06000+03
ITAM264	1.06000+03	ITAM265	1.06000+03	ITAM266	1.06000+03	ITAM267	1.06000+03	ITAM268	1.06000+03	ITAM269	1.06000+03
ITAM270	1.06000+03	ITAM271	1.06000+03	ITAM272	1.06000+03	ITAM273	1.06000+03	ITAM274	1.06000+03	ITAM275	1.06000+03
ITAM276	1.06000+03	ITAM277	1.06000+03	ITAM278	1.06000+03	ITAM279	1.06000+03	ITAM280	1.06000+03	ITAM281	1.06000+03
ITAM282	1.06000+03	ITAM283	1.06000+03	ITAM284	1.06000+03	ITAM285	1.06000+03	ITAM286	1.06000+03	ITAM287	1.06000+03
ITAM288	1.06000+03	ITAM289	1.06000+03	ITAM290	1.06000+03	ITAM291	1.06000+03	ITAM292	1.06000+03	ITAM293	1.06000+03
ITAM294	1.06000+03	ITAM295	1.06000+03	ITAM296	1.06000+03	ITAM297	1.06000+03	ITAM298	1.06000+03	ITAM299	1.06000+03
ITAM300	1.06000+03	ITAM301	1.06000+03	ITAM302	1.06000+03	ITAM303	1.06000+03	ITAM304	1.06000+03	ITAM305	1.06000+03
ITAM306	1.06000+03	ITAM307	1.06000+03	ITAM308	1.06000+03	ITAM309	1.06000+03	ITAM310	1.06000+03	ITAM311	1.06000+03
ITAM312	1.06000+03	ITAM313	1.06000+03	ITAM314	1.06000+03	ITAM315	1.06000+03	ITAM316	1.06000+03	ITAM317	1.06000+03
ITAM318	1.06000+03	ITAM319	1.06000+03	ITAM320	1.06000+03	ITAM321	1.06000+03	ITAM322	1.06000+03	ITAM323	1.06000+03
ITAM324	1.06000+03	ITAM325	1.06000+03	ITAM326	1.06000+03	ITAM327	1.06000+03	ITAM328	1.06000+03	ITAM329	1.06000+03
ITAM330	1.06000+03	ITAM331	1.06000+03	ITAM332	1.06000+03	ITAM333	1.06000+03	ITAM334	1.06000+03	ITAM335	1.06000+03
ITAM336	1.06000+03	ITAM337	1.06000+03	ITAM338	1.06000+03	ITAM339	1.06000+03	ITAM340	1.06000+03	ITAM341	1.06000+03
ITAM342	1.06000+03	ITAM343	1.06000+03	ITAM344	1.06000+03	ITAM345	1.06000+03	ITAM346	1.06000+03	ITAM347	1.06000+03
ITAM348	1.06000+03	ITAM349	1.06000+03	ITAM350	1.06000+03	ITAM351	1.06000+03	ITAM352	1.06000+03	ITAM353	1.06000+03
ITAM354	1.06000+03	ITAM355	1.06000+03	ITAM356	1.06000+03	ITAM357	1.06000+03	ITAM358	1.06000+03	ITAM359	1.06000+03
ITAM360	1.06000+03	ITAM361	1.06000+03	ITAM362	1.06000+03	ITAM363	1.06000+03	ITAM364	1.06000+03	ITAM365	1.06000+03
ITAM366	1.06000+03	ITAM367	1.06000+03	ITAM368	1.06000+03	ITAM369	1.06000+03	ITAM370	1.06000+03	ITAM371	1.06000+03
ITAM372	1.06000+03	ITAM373	1.06000+03	ITAM374	1.06000+03	ITAM375	1.06000+03	ITAM376	1.06000+03	ITAM377	1.06000+03
ITAM378	1.06000+03	ITAM379	1.06000+03	ITAM380	1.06000+03	ITAM381	1.06000+03	ITAM382	1.06000+03	ITAM383	1.06000+03
ITAM384	1.06000+03	ITAM385	1.06000+03	ITAM386	1.06000+03	ITAM					

KRFV4	2.45467-04	KRFV5	2.45467-04	KRFV6	4.51359-04	KTAU	1.00000+01	KUNACP	2.40700-01	KUNGR	3.86000+02
KUNHCP	1.24200+00	KUNHCV	7.46000-01	KUNWCP	1.02270+00	MARGIN	6.52930+01	MHHI6	1.68889+02	MLPH	2.12030+03
MNSS	8.12378+03	MUPH	6.00348+03	NCAA	1.00000-02	NCAO	1.00000-02	NPL	4.55178+03	NPS	5.50000+03
OCAERR	0.00000	PARTRT	8.74000+02	FLOAD	1.26990+02	PNSS	1.39500+03	POWER	1.01400+03	POWFLO	6.42507-04
PPRG	2.09573+03	PRCD	1.00000+00	PROPBN	0.00000	QAAMT	-1.20588-01	QAAM1	1.05042-05	QAAM10	-1.59037-01
QAAM2	-3.04585-05	QAAM3	8.83122-05	QAAM4	-2.56071-04	QAAM5	7.42278-04	QAAM6	-2.15334-03	QAAM7	6.23286-03
QAAM8	-1.81616-02	QAAM9	5.19762-02	QAAMT	0.00000	QAAM1	0.00000	QAAM10	0.00000	QAAM2	0.00000
QAAM3	0.00000	QAAM4	0.00000	QAAM5	0.00000	QAAM6	0.00000	QAAM7	0.00000	QAAM8	0.00000
QAAM9	0.00000	Q8PH	3.93183+04	QHMMT	0.00000	QHMM1	0.00000	QHMM2	0.00000	QHMM3	0.00000
QHMM4	0.00000	QHMM5	0.00000	QHMM6	0.00000	QHMMT	0.00000	QHMM1	0.00000	QHMM2	0.00000
QHMM3	0.00000	QHMM4	0.00000	QHMM5	0.00000	QHMM6	0.00000	QPR	0.00000	QRF1	6.56580-01
QRF2	4.89649+00	QRF3	6.56580+00	QRF4	6.56580+00	QRF5	4.89649+00	QRF6	6.56580-01	RAWAV	4.24000+01
RAW1	4.24000+01	RAW0	4.24000+01	RAW1	4.24000+01	RAW10	4.24000+01	RAW2	4.24000+01	RAW3	4.24000+01
RAW4	4.24000+01	RAW5	4.24000+01	RAW6	4.24000+01	RAW7	4.24000+01	RAW8	4.24000+01	RAW9	4.24000+01
RFTSL	8.47000+02	RHWAV	4.24000+01	RHWI	4.24000+01	RHW0	4.24000+01	RHW1	4.24000+01	RHW2	4.24000+01
RHW3	4.24000+01	RHW4	4.24000+01	RHW5	4.24000+01	RHW6	4.24000+01	RPCAV	4.24000+01	RPC1	4.24000+01
RPC10	4.24000+01	RPC2	4.24000+01	RPC3	4.24000+01	RPC4	4.24000+01	RPC5	4.24000+01	RPC6	4.24000+01
RPC7	4.24000+01	RPC8	4.24000+01	RPC9	4.24000+01	RPHAV	4.24000+01	RPH1	4.24000+01	RPH10	4.24000+01
RPH2	4.24000+01	RPH3	4.24000+01	RPH4	4.24000+01	RPH5	4.24000+01	RPH6	4.24000+01	RPH7	4.24000+01
RPH8	4.24000+01	RPH9	4.24000+01	SCAV	0.00000	SPL	1.00000+00	SPS	1.00000+00	TAA110	5.59000+02
TAA01	1.05999+03	TAA010	1.21973+03	TAA02	1.06003+03	TAA03	1.05991+03	TAA04	1.06027+03	TAA05	1.05921+03
TAA06	1.06229+03	TAA07	1.05335+03	TAA08	1.07924+03	TAA09	1.00379+03	TAA1	1.06001+03	TAA10	8.89363+02
TAA2	1.05997+03	TAA3	1.06009+03	TAA4	1.05974+03	TAA5	1.06075+03	TAA6	1.05782+03	TAA7	1.06629+03
TAA8	1.04151+03	TAA9	1.11176+03	TAM1	1.06000+03	TAM10	1.06000+03	TAM2	1.06000+03	TAM3	1.06000+03
TAM4	1.06000+03	TAM5	1.06000+03	TAM6	1.06000+03	TAM7	1.06000+03	TAM8	1.06000+03	TAM9	1.06000+03
TAW1	1.06000+03	TAW0	1.06000+03	TAW01	1.06000+03	TAW010	1.06000+03	TAW02	1.06000+03	TAW03	1.06000+03
TAW04	1.06000+03	TAW05	1.06000+03	TAW06	1.06000+03	TAW07	1.06000+03	TAW08	1.06000+03	TAW09	1.06000+03
TAW1	1.06000+03	TAW10	1.06000+03	TAW2	1.06000+03	TAW3	1.06000+03	TAW4	1.06000+03	TAW5	1.06000+03
TAW6	1.06000+03	TAW7	1.06000+03	TAW8	1.06000+03	TAW9	1.06000+03	TBPH	1.48170+03	TCAM0A	1.07490+03
TCCH0A	1.07400+03	TFLAG	1.00000+00	TGPM	0.00000	TMMI6	1.06000+03	TMM01	1.06000+03	TMM02	1.06000+03
TMM03	1.06000+03	TMM04	1.06000+03	TMM05	1.06000+03	TMM06	1.06000+03	TMM1	1.06000+03	TMM2	1.06000+03
TMM3	1.06000+03	TMM4	1.06000+03	TMM5	1.06000+03	TMM6	1.06000+03	TMM10	0.00000	TMM1	1.06000+03
TMM2	1.06000+03	TMM3	1.06000+03	TMM4	1.06000+03	TMM5	1.06000+03	TMM6	1.06000+03	TMM1	1.06000+03
TMM0	1.06000+03	TMM05	1.06000+03	TMM05S	1.08500+03	TMM01	1.06000+03	TMM02	1.06000+03	TMM03	1.06000+03
TMM04	1.06000+03	TMM05	1.06000+03	TMM06	1.06000+03	TMM1	1.06000+03	TMM2	1.06000+03	TMM3	1.06000+03
TMM4	1.06000+03	TMM5	1.06000+03	TMM6	1.06000+03	TIME	0.00000	TINLET	1.09300+03	TLPH	1.98027+03
TLPH0	1.06000+03	TPC0	1.06000+03	TPC0M	1.06000+03	TPC1	1.06000+03	TPC10	1.06000+03	TPC2	1.06000+03
TPC3	1.06000+03	TPC4	1.06000+03	TPC5	1.06000+03	TPC6	1.06000+03	TPC7	1.06000+03	TPC8	1.06000+03
TPC9	1.06000+03	TPHM	1.06000+03	TPH0	1.06000+03	TPH1	1.06000+03	TPH10	1.06000+03	TPH2	1.06000+03
TPH3	1.06000+03	TPH4	1.06000+03	TPH5	1.06000+03	TPH6	1.06000+03	TPH7	1.06000+03	TPH8	1.06000+03
TPH9	1.06000+03	TPRI	5.30000+02	TPRW	5.38657+02	TRC1	1.09587+03	TRC2	1.37460+03	TRC3	1.54961+03
TRC4	1.65473+03	TRC5	1.66634+03	TRC6	1.99256+03	TREH01	1.08572+03	TREH02	1.16773+03	TREH03	1.27765+03
TREH04	1.38754+03	TREH05	1.46947+03	TREH06	1.48036+03	TREH1	1.08096+03	TREH2	1.12900+03	TREH3	1.22579+03
TREH4	1.33575+03	TREH5	1.43087+03	TREH6	1.47549+03	TRF1	1.15745+03	TRF2	2.45830+03	TRF3	3.00611+03
TRF4	3.10270+03	TRF5	2.74210+03	TRF6	1.56610+03	TSCRAM	3.00000+01	TSEC	1.20000+02	TSTART	1.20000+02
TUPH	1.07490+03	TWARN	2.50000+01	VPRW	2.01657+02	WFLOW	1.00000-04	WPLR	0.00000	WPLS	5.17000+00
WPLS0	5.17000+00	WPR1	0.00000	WPRO	0.00000	WPSR	0.00000	WPS5	5.17000+00	Z28000	2.61582+05
Z28002	1.18259+00	Z28003	2.92000-01	Z28004	2.09000-01	Z28005	1.51000+00	Z28006	1.14826+04	Z28007	2.42772+05
Z28009	1.18259+00	Z28010	2.92000-01	Z28011	2.09000-01	Z28012	1.51000+00	Z28013	1.14826+04	Z28014	2.48144+05
Z28016	1.18259+00	Z28017	2.92000-01	Z28018	2.09000-01	Z28019	1.51000+00	Z28020	1.14826+04	Z28021	2.46191+05
Z28023	1.18259+00	Z28024	2.92000-01	Z28025	2.09000-01	Z28026	1.51000+00	Z28027	1.14826+04	Z28028	2.46851+05
Z28030	1.18259+00	Z28031	2.92000-01	Z28032	2.09000-01	Z28033	1.51000+00	Z28034	1.14826+04	Z28035	2.46622+05
Z28037	1.18259+00	Z28038	2.92000-01	Z28039	2.09000-01	Z28040	1.51000+00	Z28041	1.14826+04	Z28042	2.46701+05
Z28044	1.18259+00	Z28045	2.92000-01	Z28046	2.09000-01	Z28047	1.51000+00	Z28048	1.14826+04	Z28049	2.46674+05
Z28051	1.18259+00	Z28052	2.92000-01	Z28053	2.09000-01	Z28054	1.51000+00	Z28055	1.14826+04	Z28056	2.46683+05
Z28058	1.18259+00	Z28059	2.92000-01	Z28060	2.09000-01	Z28061	1.51000+00	Z28062	1.14826+04	Z28063	2.46680+05
Z28065	1.18259+00	Z28066	2.92000-01	Z28067	2.09000-01	Z28068	1.51000+00	Z28069	1.14826+04	Z28070	5.21181+04

ZZ8075	2.94660+00	ZZ8076	2.92000-01	ZZ8077	2.09000-01	ZZ8078	1.51000+00	ZZ8079	3.19682+04	ZZ8080	5.21181+04
ZZ8085	2.94660+00	ZZ8086	2.92000-01	ZZ8087	2.09000-01	ZZ8088	1.51000+00	ZZ8089	3.19682+04	ZZ8090	5.21181+04
ZZ8095	2.94660+00	ZZ8096	2.92000-01	ZZ8097	2.09000-01	ZZ8098	1.51000+00	ZZ8099	3.19682+04	ZZ8100	5.21181+04
ZZ8105	2.94660+00	ZZ8106	2.92000-01	ZZ8107	2.09000-01	ZZ8108	1.51000+00	ZZ8109	3.19682+04	ZZ8110	5.21181+04
ZZ8115	2.94660+00	ZZ8116	2.92000-01	ZZ8117	2.09000-01	ZZ8118	1.51000+00	ZZ8119	3.19682+04	ZZ8120	5.21181+04
ZZ8125	2.94660+00	ZZ8126	2.92000-01	ZZ8127	2.09000-01	ZZ8128	1.51000+00	ZZ8129	3.19682+04	ZZ8130	7.25643-01
ZZ8185	4.40054-01	ZZ8186	6.44427-01	ZZ8187	4.52535+01	ZZ8188	6.51477+01	ZZ8189	2.50729-02	ZZ8190	1.30819-02
ZZ8191	5.25506-01	ZZ8192	3.31922-01	ZZ8193	4.72225-01	ZZ8194	4.88433+00	ZZ8195	5.05996+01	ZZ8196	6.73752+01
ZZ8197	1.24205-02	ZZ8198	5.95393-03	ZZ8199	4.89649+00	ZZ8200	3.39456-01	ZZ8201	4.71766-01	ZZ8202	6.54664+00
ZZ8203	5.25514+01	ZZ8204	6.88602+01	ZZ8205	1.28996-02	ZZ8206	6.12609-03	ZZ8207	6.56583+00	ZZ8208	3.44499-01
ZZ8209	4.71348-01	ZZ8210	6.54479+00	ZZ8211	5.30254+01	ZZ8212	7.00091+01	ZZ8213	1.30160-02	ZZ8214	6.22825-03
ZZ8215	6.56583+00	ZZ8216	3.47925-01	ZZ8217	4.71065-01	ZZ8218	4.87922+00	ZZ8219	5.14815+01	ZZ8220	7.01533+01
ZZ8221	1.26385-02	ZZ8222	6.24107-03	ZZ8223	4.89653+00	ZZ8224	6.38492-01	ZZ8225	4.47150-01	ZZ8226	6.49079-01
ZZ8227	4.76838+01	ZZ8228	6.83323+01	ZZ8229	2.15225-02	ZZ8230	1.11781-02	ZZ8231	6.44811-01		
KEEP	1	NALARM	0								

GCFR CASEY

TIME = 0.00000

TPC0 = 1.06000+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAW0 = 1.06000+03
THH01 = 1.06000+03	WFLOW = 1.00000-04	MARGIN = 6.52930+01	PPRG = 2.09573+03
PNSS = 1.39500+03	GCAA = 1.19634-03	GCCA = 5.18800+02	PRCD = 1.00000+00
POWFLO = 6.42507-04	OCAERR = 0.00000	PROPN = 0.00000	ICAN = 1.00000-02
DNCAA = 0.00000	NCAA = 1.00000-02	TRC1 = 1.09587+03	TRF1 = 1.15745+03
TREH1 = 1.08096+03	TREH01 = 1.08572+03	THH01 = 1.06000+03	TRC2 = 1.37460+03
TRF2 = 2.45830+03	TREH2 = 1.12900+03	TREH02 = 1.16773+03	THH02 = 1.06000+03
TRC3 = 1.54961+03	TRF3 = 3.00611+03	TREH3 = 1.22579+03	TREH03 = 1.27765+03
THH03 = 1.06000+03	TRC4 = 1.65473+03	TRF4 = 3.10270+03	TREH4 = 1.33575+03
TREH04 = 1.38759+03	THH04 = 1.06000+03	TRC5 = 1.66634+03	TRF5 = 2.74210+03
TREH5 = 1.43087+03	TREH05 = 1.46947+03	THH05 = 1.06000+03	TRC6 = 1.49256+03
TRF6 = 1.56610+03	TREH6 = 1.47549+03	TREH06 = 1.48036+03	THH06 = 1.06000+03
THH16 = 1.06000+03	THM6 = 1.06000+03	TLPH = 1.48027+03	TUPH = 1.07490+03

TIME = 4.99000+00

TPC0 = 1.06000+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAW0 = 1.06000+03
THH01 = 1.06000+03	WFLOW = 1.00000-04	MARGIN = 6.52930+01	PPRG = 2.09573+03
PNSS = 1.39428+03	GCAA = 1.21241-03	GCCA = 5.18800+02	PRCD = 1.00000+00
POWFLO = 6.42507-04	OCAERR = 0.00000	PROPN = 0.00000	ICAN = 1.00000-02
DNCAA = 0.00000	NCAA = 1.00000-02	TRC1 = 1.09457+03	TRF1 = 1.16861+03
TREH1 = 1.08002+03	TREH01 = 1.08466+03	THH01 = 1.06000+03	TRC2 = 1.37427+03
TRF2 = 2.45798+03	TREH2 = 1.12805+03	TREH02 = 1.16687+03	THH02 = 1.06000+03
TRC3 = 1.54984+03	TRF3 = 3.00621+03	TREH3 = 1.22510+03	TREH03 = 1.27710+03
THH03 = 1.06000+03	TRC4 = 1.65532+03	TRF4 = 3.10306+03	TREH4 = 1.33537+03
TREH04 = 1.38732+03	THH04 = 1.06000+03	TRC5 = 1.66702+03	TRF5 = 2.74254+03
TREH5 = 1.43080+03	TREH05 = 1.46951+03	THH05 = 1.06000+03	TRC6 = 1.49273+03
TRF6 = 1.56729+03	TREH6 = 1.47557+03	TREH06 = 1.48047+03	THH06 = 1.06000+03
THH16 = 1.06002+03	THM6 = 1.06000+03	TLPH = 1.48043+03	TUPH = 1.07410+03

TIME = 1.00000+01

TPC0 = 1.06000+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAW0 = 1.06000+03
THH01 = 1.06000+03	WFLOW = 1.00000-04	MARGIN = 6.52930+01	PPRG = 2.09573+03
PNSS = 1.39426+03	GCAA = 1.21251-03	GCCA = 5.18800+02	PRCD = 1.00000+00
POWFLO = 6.42507-04	OCAERR = 0.00000	PROPN = 0.00000	ICAN = 1.00000-02
DNCAA = 0.00000	NCAA = 1.00000-02	TRC1 = 1.09515+03	TRF1 = 1.17136+03
TREH1 = 1.08012+03	TREH01 = 1.08492+03	THH01 = 1.06000+03	TRC2 = 1.37450+03
TRF2 = 2.45811+03	TREH2 = 1.12830+03	TREH02 = 1.16712+03	THH02 = 1.06000+03
TRC3 = 1.55009+03	TRF3 = 3.00643+03	TREH3 = 1.22535+03	TREH03 = 1.27735+03
THH03 = 1.06000+03	TRC4 = 1.65559+03	TRF4 = 3.10335+03	TREH4 = 1.33563+03
TREH04 = 1.38758+03	THH04 = 1.06000+03	TRC5 = 1.66730+03	TRF5 = 2.74287+03
TREH5 = 1.43106+03	TREH05 = 1.46978+03	THH05 = 1.06000+03	TRC6 = 1.49307+03
TRF6 = 1.56779+03	TREH6 = 1.47586+03	TREH06 = 1.48077+03	THH06 = 1.05999+03
THH16 = 1.06005+03	THM6 = 1.06000+03	TLPH = 1.48074+03	TUPH = 1.07401+03

GCFR CASY

TIME = 1.50000+01	TPC0 = 1.06000+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAV0 = 1.06000+03
	THH01 = 1.06000+03	WFLOW = 1.00000-04	MARGIN = 6.52930+01	PPRG = 2.09573+03
	PNSS = 1.39429+03	GCAA = 1.21253-03	GCCA = 5.18800+02	PRCD = 1.00000+00
	POWFLO = 6.42507-04	OCAERR = 0.00000	PROP = 0.00000	ICAN = 1.00000-02
	DNCAA = 0.00000	NCAA = 1.00000-02	TRC1 = 1.09531+03	TRF1 = 1.17207+03
	TREH1 = 1.08016+03	TREH01 = 1.08499+03	THH01 = 1.06000+03	TRC2 = 1.37459+03
	TRF2 = 2.45624+03	TREH2 = 1.12838+03	TREH02 = 1.16720+03	THH02 = 1.06000+03
	TRC3 = 1.55020+03	TRF3 = 3.00658+03	TREH3 = 1.22543+03	TREH03 = 1.27744+03
	THH03 = 1.06000+03	TRC4 = 1.65570+03	TRF4 = 3.10352+03	TREH4 = 1.33572+03
	TREH04 = 1.38768+03	THH04 = 1.06000+03	TRC5 = 1.66743+03	TRF5 = 2.74307+03
	TREH5 = 1.43116+03	TREH05 = 1.46989+03	THH05 = 1.06000+03	TRC6 = 1.49322+03
	TRF6 = 1.56803+03	TREH6 = 1.47597+03	TREH06 = 1.48090+03	THH06 = 1.05999+03
	THH16 = 1.06008+03	THM6 = 1.06000+03	TLPH = 1.48087+03	TUPH = 1.07400+03
TIME = 2.00000+01	TPC0 = 1.06000+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAV0 = 1.06000+03
	THH01 = 1.06000+03	WFLOW = 1.00000-04	MARGIN = 6.52930+01	PPRG = 2.09573+03
	PNSS = 1.39430+03	GCAA = 1.21255-03	GCCA = 5.18800+02	PRCD = 1.00000+00
	POWFLO = 6.42507-04	OCAERR = 0.00000	PROP = 0.00000	ICAN = 1.00000-02
	DNCAA = 0.00000	NCAA = 1.00000-02	TRC1 = 1.09536+03	TRF1 = 1.17227+03
	TREH1 = 1.08017+03	TREH01 = 1.08502+03	THH01 = 1.06000+03	TRC2 = 1.37463+03
	TRF2 = 2.45631+03	TREH2 = 1.12841+03	TREH02 = 1.16723+03	THH02 = 1.06000+03
	TRC3 = 1.55022+03	TRF3 = 3.00665+03	TREH3 = 1.22546+03	TREH03 = 1.27747+03
	THH03 = 1.06000+03	TRC4 = 1.65576+03	TRF4 = 3.10361+03	TREH4 = 1.33575+03
	TREH04 = 1.38772+03	THH04 = 1.06000+03	TRC5 = 1.66746+03	TRF5 = 2.74316+03
	TREH5 = 1.43120+03	TREH05 = 1.46992+03	THH05 = 1.06000+03	TRC6 = 1.49328+03
	TRF6 = 1.56813+03	TREH6 = 1.47602+03	TREH06 = 1.48095+03	THH06 = 1.05999+03
	THH16 = 1.06010+03	THM6 = 1.06000+03	TLPH = 1.48093+03	TUPH = 1.07400+03
TIME = 2.50000+01	TPC0 = 1.06000+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAV0 = 1.06000+03
	THH01 = 1.06000+03	WFLOW = 1.00000-04	MARGIN = 6.52930+01	PPRG = 2.09573+03
	PNSS = 1.39430+03	GCAA = 1.21255-03	GCCA = 5.18800+02	PRCD = 1.00000+00
	POWFLO = 6.42507-04	OCAERR = 0.00000	PROP = 0.00000	ICAN = 1.00000-02
	DNCAA = 0.00000	NCAA = 1.00000-02	TRC1 = 1.09536+03	TRF1 = 1.17233+03
	TREH1 = 1.08017+03	TREH01 = 1.08502+03	THH01 = 1.06000+03	TRC2 = 1.37464+03
	TRF2 = 2.45833+03	TREH2 = 1.12841+03	TREH02 = 1.16724+03	THH02 = 1.06000+03
	TRC3 = 1.55024+03	TRF3 = 3.00667+03	TREH3 = 1.22547+03	TREH03 = 1.27748+03
	THH03 = 1.06000+03	TRC4 = 1.65575+03	TRF4 = 3.10363+03	TREH4 = 1.33576+03
	TREH04 = 1.38772+03	THH04 = 1.06000+03	TRC5 = 1.66749+03	TRF5 = 2.74320+03
	TREH5 = 1.43121+03	TREH05 = 1.46993+03	THH05 = 1.06000+03	TRC6 = 1.49329+03
	TRF6 = 1.56817+03	TREH6 = 1.47603+03	TREH06 = 1.48096+03	THH06 = 1.05999+03
	THH16 = 1.06013+03	THM6 = 1.06000+03	TLPH = 1.48095+03	TUPH = 1.07400+03
*** INPUT TO AFGEN 156 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 2.9002+01 ***				
*** INPUT TO AFGEN 174 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 2.9002+01 ***				
*** INPUT TO AFGEN 156 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 2.8922+01 ***				
*** INPUT TO AFGEN 174 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 2.8922+01 ***				
*** INPUT TO AFGEN 156 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 2.8882+01 ***				
*** INPUT TO AFGEN 174 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 2.8882+01 ***				
*** INPUT TO AFGEN 156 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 2.8862+01 ***				

*** INPUT TO AFGEN 174 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 2.8862+01 ***

DEBUG OUTPUT AT TIME = 3.00000+01

AHEFLO	1.05000+03	APS	6.73100-01	BAW1	0.00000	BAW0	5.70154-01	BAWT	3.10975+01	BAW1	1.85572+00
BAW10	3.51912+00	BAW2	3.19384+00	BAW3	2.61000+00	BAW4	3.03317+00	BAW5	3.05119+00	BAW6	3.10266+00
BAW7	3.33289+00	BAW8	3.28952+00	BAW9	3.53925+00	BHW1	0.00000	BHW0	8.71056-07	BHW7	-2.99775-C7
BHW1	-1.17083-06	BHW2	0.00000	BHW3	0.00000	BHW4	0.00000	BHW5	0.00000	BHW6	0.00000
BPC1	5.23329-02	BPC1	5.00842-02	BPC10	0.00000	BPC2	2.17771-03	BPC3	7.03523-05	BPC4	6.39566-07
BPC5	0.00000	BPC6	0.00000	BPC7	0.00000	BPC8	0.00000	BPC9	0.00000	BPH1	0.00000
BPH1	0.00000	BPH10	0.00000	BPH2	0.00000	BPH3	0.00000	BPH4	0.00000	BPH5	0.00000
BPH6	0.00000	BPH7	0.00000	BPH8	0.00000	BPH9	0.00000	DELGR	5.00000+00	DELMAX	1.00000+36
DELMIN	1.00000-06	DELPP	3.00000+01	DELPR	5.00000+00	DELS	0.00000	DELT	1.08539-01	DICAN	0.00000
DNCAA	0.00000	DTAM1	-8.89200+00	DTAM10	-1.47511+01	DTAM2	-1.27244+01	DTAM3	-1.09346+01	DTAM4	-1.27094+01
DTAM5	-1.24219+01	DTAM6	-1.31650+01	DTAM7	-1.35928+01	DTAM8	-1.38883+01	DTAM9	-1.45785+01	DTAW1	0.00000
DTAW0	-2.50689+00	DTAW1	-7.47432+00	DTAW10	-1.43774+01	DTAW2	-1.29799+01	DTAW3	-1.05592+01	DTAW4	-1.23305+01
DTAW5	-1.23871+01	DTAW6	-1.26284+01	DTAW7	-1.35701+01	DTAW8	-1.34119+01	DTAW9	-1.44465+01	DTCAHA	0.00000
DTGPM	0.00000	DTHM16	5.03311-C3	DTHM1	-3.29850-10	DTHM2	6.59700-10	DTHM3	-3.95820-09	DTHM4	3.66133-08
DTHM5	-3.61515-07	DTHM6	3.58293-06	DTHM7	0.00000	DTHM0	-2.92934-06	DTHM1	8.55308-06	DTHM2	0.00000
DTHM3	0.00000	DTHM4	0.00000	DTHM5	0.00000	DTHM6	0.00000	DTLPH	6.12232-04	DTPCOM	0.00000
DTPC1	-1.61833-01	DTPC10	0.00000	DTPC2	-7.63572-03	DTPC3	-2.27292-04	DTPC4	-2.06629-06	DTPC5	0.00000
DTPC6	0.00000	DTPC7	0.00000	DTPC8	0.00000	DTPC9	0.00000	DTPHM	0.00000	DTPH1	0.00000
DTPH10	0.00000	DTPH2	0.00000	DTPH3	0.00000	DTPH4	0.00000	DTPH5	0.00000	DTPH6	0.00000
DTPH7	0.00000	DTPH8	0.00000	DTPH9	0.00000	DTRC1	3.44024-04	DTRC2	3.57989-04	DTRC3	3.50239-04
DTRC4	2.96618-04	DTRC5	7.16131-04	DTRC6	7.95768-04	DTRF1	1.25630-03	DTRF2	8.30205-04	DTRF3	8.22434-04
DTRF4	8.37943-04	DTRF5	1.20724-03	DTRF6	1.17815-03	DTUPH	3.75536-06	DUMHY	1.00000+00	D1	3.00000+01
D2	6.00000+01	EAE	0.00000	EAE1	0.00000	FCUN	9.43000+02	FINTIM	5.00000+02	FSPH	8.97000+02
FVIS	9.18000+02	GAA	7.60500+02	GBPH	7.78201+01	GCAA	1.21255-03	GCAAS	1.00000-03	GCCA	5.18800+02
GPRI	0.00000	GPRO	0.00000	GREH	4.79530-02	GREYOT	1.55640+03	MEFLOW	1.03500+03	MSATP	9.68000+02
HSATT	9.87000+02	IAPS	6.73100-01	ICAN	1.00000-02	IICAN	1.00000-02	IINT	4.55553+03	IIPSI1	6.73100-01
INCAA	1.00000-02	INPL	4.55178+03	INT	4.55553+03	IPLAD	1.26990+02	IPPRG	2.09573+03	IPSIT	6.73100-01
ITAM1	1.06000+03	ITAM10	1.06000+03	ITAM2	1.06000+03	ITAM3	1.06000+03	ITAM4	1.06000+03	ITAM5	1.06000+03
ITAM6	1.06000+03	ITAM7	1.06000+03	ITAM8	1.06000+03	ITAM9	1.06000+03	ITAW1	1.06000+03	ITAW0	1.06000+03
ITAW1	1.06000+03	ITAW10	1.06000+03	ITAW2	1.06000+03	ITAW3	1.06000+03	ITAW4	1.06000+03	ITAW5	1.06000+03
ITAW6	1.06000+03	ITAW7	1.06000+03	ITAW8	1.06000+03	ITAW9	1.06000+03	ITCAHA	1.07490+03	ITGPM	0.00000
ITHM16	1.06000+03	ITHM10	0.00000	ITHM1	1.06000+03	ITHM2	1.06000+03	ITHM3	1.06000+03	ITHM4	1.06000+03
ITHM5	1.06000+03	ITHM6	1.06000+03	ITHM7	1.06000+03	ITHM0	1.06000+03	ITHM1	1.06000+03	ITHM2	1.06000+03
ITHM3	1.06000+03	ITHM4	1.06000+03	ITHM5	1.06000+03	ITHM6	1.06000+03	ITLPH	1.48027+03	ITPCOM	1.06000+03
ITPC1	1.06000+03	ITPC10	1.06000+03	ITPC2	1.06000+03	ITPC3	1.06000+03	ITPC4	1.06000+03	ITPC5	1.06000+03
ITPC6	1.06000+03	ITPC7	1.06000+03	ITPC8	1.06000+03	ITPC9	1.06000+03	ITPHM	1.06000+03	ITPH1	1.06000+03
ITPH10	1.06000+03	ITPH2	1.06000+03	ITPH3	1.06000+03	ITPH4	1.06000+03	ITPH5	1.06000+03	ITPH6	1.06000+03
ITPH7	1.06000+03	ITPH8	1.06000+03	ITPH9	1.06000+03	ITPRW	5.38657+02	ITRC1	1.09587+03	ITRC2	1.37860+03
ITRC3	1.54961+03	ITRC4	1.65473+03	ITRC5	1.66634+03	ITRC6	1.49256+03	ITRF1	1.15745+03	ITRF2	2.45830+03
ITRF3	3.00611+03	ITRF4	3.10270+03	ITRF5	2.74210+03	ITRF6	1.56610+03	ITUPH	1.07490+03	IVPRW	2.01657+02
JAACP	1.83052+02	JAAGR	1.00054+00	JAAH1	4.71459-02	JAAH10	4.35035-02	JAAH2	4.68212-02	JAAH3	4.64787-02
JAAH4	4.61181-02	JAAH5	4.57378-02	JAAH6	4.53370-02	JAAH7	4.49145-02	JAAH8	4.44690-02	JAAH9	4.39991-02
JAWM1	2.35949+02	JAWM10	2.35988+02	JAWM2	2.35898+02	JAWM3	2.35945+02	JAWM4	2.35929+02	JAWM5	2.35951+02
JAWM6	2.35952+02	JAWM7	2.35962+02	JAWM8	2.35971+02	JAWM9	2.35976+02	JGPK	0.00000	JHHCPC	1.50599-03
JHMM1	2.44900+00	JHMM2	2.44900+00	JHMM3	2.44900+00	JHMM4	2.44900+00	JHMM5	2.44900+00	JHMM6	2.44902+00
JHMM1	6.89841+01	JHMM2	6.89841+01	JHMM3	6.89841+01	JHMM4	6.89841+01	JHMM5	6.89841+01	JHMM6	6.89841+01
JLPV	6.03100+03	JRCFK1	8.52908-03	JRCFK2	4.51831-03	JRCFK3	4.50810-03	JRCFK4	4.53478-03	JRCFK5	4.55184-03
JRCFK6	8.76730-03	JRECK1	9.32124-02	JRECK2	1.98862-02	JRECK3	2.02168-02	JRECK4	2.05181-02	JRECK5	2.07229-02
JRECK6	3.80298-02	JUPV	1.24000+04	KAAA	2.43800+03	KAAAK	1.77700-01	KAAAU	2.83100-01	KAAKB	8.22300-01
KAAAB	7.16900-01	KAAAG	7.61100+02	KAAAR	2.95200+01	KAAAT	5.98000+02	KAAW1	5.00000-01	KAAW2	5.00000-01
KAMAK	1.15460+00	KAMBK	1.54600-01	KAMC	1.03960+02	KAMCI	1.00000+02	KAMCO	1.00000+02	KAMCT	1.03960+03
KAMR	1.08000+00	KAMTR	6.79000+02	KAWA	1.97500+03	KAWISQ	6.80300-01	KAWN	1.00000+01	KAWRX	5.31600+03
KAWSQ	9.03100-01	KAWTR	7.60000+02	KAWV	3.33300+00	KAWVI	3.00000+00	KAWVO	3.00000+00	KAWVT	3.33300+01

KAWR	4.27800+01	KAW1	5.00000-01	KAW2	5.00000-01	KCAAN	2.00000+00	KCAPBN	1.00000+01	KCAR	2.47100-01
KCARG	5.00000+02	KCART	1.00000+00	KCATAU	1.00000+00	KCCAN	3.00000+00	KGPC	1.00000+00	KCHA	1.14100+03
KHHCK	1.06200-03	KHHCKE	7.01000-01	KHHRX	1.61400+05	KHHVI6	3.44000+02	KHHVK	6.38800-04	KHHVKE	6.87000-01
KHHW1	5.00000-01	KHHW2	5.00000-01	KHMA1	6.25000+00	KHMBK	5.50000-03	KHMC	6.96667+01	KHMC1	5.83500+01
KHMC10	2.08000+02	KHMC0	5.83500+01	KHMC1	4.18000+02	KHMRX	2.81400+01	KHWA	8.88500+02	KHWISO	6.80000-01
KHWHI	8.26700-01	KHWM0	8.26700-01	KHWN	6.00000+00	KHWRX	1.48000+04	KHWSQ	9.01600-01	KHWV	1.80000+00
KHWHI	3.91000+00	KHWO0	3.91000+00	KHWT1	1.08000+01	KHWW1	5.00000-01	KHWW2	5.00000-01	KPCC	1.46600+02
KPCC1	1.46600+03	KPCN	1.00000+01	KPCS3	3.30000-01	KPCV	4.07000+00	KPCVT	4.07000+01	KPHC	1.46600+02
KPHCT	1.46600+03	KPHN	1.00000+01	KPHS0	2.26800-01	KPHV	4.07000+00	KPHVT	4.07000+01	KPL	2.50000+00
KPLCR	5.00000+01	KPLJ0	3.28000+00	KPLJ1	9.85000-02	KPLJ2	1.34400+00	KPLN	5.00000+03	KPLPB	1.00000+00
KPLRT	1.00000+00	KPRV	4.00000+02	KPS	4.00000-01	KPSCR	1.00000+01	KPSJ0	2.48100-01	KPSJ1	7.62200-04
KPSJ2	1.12600-03	KPSN	5.00000+03	KPSPB	1.00000+01	KPSRT	1.00000+01	KRCV1	2.00803-04	KRCV2	8.89634-05
KRCV3	8.89634-05	KRCV4	8.89634-05	KRCV5	8.89634-05	KRCV6	1.63584-04	KREA1	1.35990-01	KREA2	6.02500-02
KREA3	6.02500-02	KREA4	6.02500-02	KREA5	6.02500-02	KREA6	1.10790-01	KREGF	9.50000-01	KREL1	1.47500+00
KREL2	8.17000-01	KREL3	8.17000-01	KREL4	8.17000-01	KREL5	8.17000-01	KREL6	1.47500+00	KRENN	3.08340+04
KREPF	9.50000-01	KREPF1	2.71000-02	KREPF2	2.02100-01	KREPF3	2.71000-01	KREPF4	2.71000-01	KREPF5	2.02100-01
KREPF6	2.71000-02	KREPO	8.29500+02	KREOT	7.86366+05	KRFV1	5.54054-04	KRFV2	2.45467-04	KRFV3	2.45467-04
KRFV4	2.45467-04	KRFV5	2.45467-04	KRFV6	4.51359-04	KTAU	1.00000+01	KUNACP	2.40700-01	KUNGR	3.86000+02
KUNHCP	1.24200+00	KUNHCV	7.46000-01	KUNWCP	1.02270+00	MARGIN	6.52930+01	MHHI6	1.68781+02	MLPH	2.11827+03
MNS5	8.12378+03	MUPH	6.00551+03	NCAA	1.00000-02	NCAO	1.00000-02	NPL	4.55178+03	NPS	5.50000+03
OCAERR	0.00000	PARTRT	8.74000+02	PLOAD	1.26990+02	PNSS	1.39430+03	POWER	1.01400+03	POWFO	6.42507-04
PPRG	2.09573+03	PRCD	1.00000+00	PROPEN	0.00000	QAAMT	-3.22030+04	QAAM1	-2.73331+03	QAAM10	-3.72573+03
QAAM2	-2.82585+03	QAAM3	-2.94324+03	QAAM4	-3.04569+03	QAAM5	-3.16171+03	QAAM6	-3.27048+03	QAAM7	-3.38594+03
QAAM8	-3.49829+03	QAAM9	-3.61280+03	QAAMT	1.89317+04	QAAM1	1.80890+03	QAAM10	2.19221+03	QAAM2	1.50302+03
QAAM3	1.80648+03	QAAM4	1.72442+03	QAAM5	1.87032+03	QAAM6	1.90185+03	QAAM7	1.97283+03	QAAM8	2.05447+03
QAAM9	2.09722+03	QBPH	3.93183+04	QHMT	2.26716-04	QHMT1	-2.29795-08	QHMT2	4.59591-08	QHMT3	-2.75754-07
QHMT4	2.55073-06	QHMT5	-2.51856-05	QHMT6	2.49604-04	QHMT7	0.00000	QHMT1	0.00000	QHMT2	0.00000
QHMT3	0.00000	QHMT4	0.00000	QHMT5	0.00000	QHMT6	0.00000	QPR	0.00000	QRF1	6.56580-01
QRF2	4.89649+00	QRF3	6.56580+00	QRF4	6.56580+00	QRF5	4.89649+00	QRF6	6.56580-01	RAWAV	4.32203+01
RAW1	4.24000+01	RAW0	4.24874+01	RAW1	4.29713+01	RAW10	4.33575+01	RAW2	4.32153+01	RAW3	4.30925+01
RAW4	4.32230+01	RAW5	4.31867+01	RAW6	4.32561+01	RAW7	4.32652+01	RAW8	4.33023+01	RAW9	4.33329+01
RFTSL	8.47000+02	RHWAV	4.24000+01	RHW1	4.24000+01	RHW0	4.24000+01	RHW1	4.24000+01	RHW2	4.24000+01
RHW3	4.24000+01	RHW4	4.24000+01	RHW5	4.24000+01	RHW6	4.24000+01	RPCAV	4.24004+01	RPC1	4.24038+01
RPC10	4.24000+01	RPC2	4.24001+01	RPC3	4.24000+01	RPC4	4.24000+01	RPC5	4.24000+01	RPC6	4.24000+01
RPC7	4.24000+01	RPC8	4.24000+01	RPC9	4.24000+01	RPHAV	4.24000+01	RPH1	4.24000+01	RPH10	4.24000+01
RPH2	4.24000+01	RPH3	4.24000+01	RPH4	4.24000+01	RPH5	4.24000+01	RPH6	4.24000+01	RPH7	4.24000+01
RPH8	4.24000+01	RPH9	4.24000+01	SCAV	0.00000	SPL	1.00000+00	SPS	1.00000+00	TAA110	5.59000+02
TAA01	7.34923+02	TAA010	5.79353+02	TAA02	7.19991+02	TAA03	7.04553+02	TAA04	6.88475+02	TAA05	6.71836+02
TAA06	6.54564+02	TAA07	6.36698+02	TAA08	6.18201+02	TAA09	5.99090+02	TAA1	7.27457+02	TAA10	5.69177+02
TAA2	7.12272+02	TAA3	6.96514+02	TAA4	6.80155+02	TAA5	6.63200+02	TAA6	6.45631+02	TAA7	6.27449+02
TAA8	6.08645+02	TAA9	5.89222+02	TAM1	1.04417+03	TAM10	1.03703+03	TAM2	1.04198+03	TAM3	1.04245+03
TAM4	1.04093+03	TAM5	1.04083+03	TAM6	1.03971+03	TAM7	1.03928+03	TAM8	1.03840+03	TAM9	1.03779+03
TAW1	1.06000+03	TAW0	1.05875+03	TAW01	1.04368+03	TAW010	1.04555+03	TAW02	1.05303+03	TAW03	1.04719+03
TAW04	1.04930+03	TAW05	1.04823+03	TAW06	1.04732+03	TAW07	1.04796+03	TAW08	1.04625+03	TAW09	1.04709+03
TAW1	1.05184+03	TAW10	1.04632+03	TAW2	1.04835+03	TAW3	1.05011+03	TAW4	1.04824+03	TAW5	1.04876+03
TAW6	1.04777+03	TAW7	1.04764+03	TAW8	1.04711+03	TAW9	1.04667+03	TBPH	1.48080+03	TCAH0A	1.06000+03
TCCH0A	1.07400+03	TFLA6	1.00000+00	TGPH	0.00000	THH16	1.06015+03	THH01	1.06000+03	THH02	1.06000+03
THH03	1.06000+03	THH04	1.06000+03	THH05	1.06000+03	THH06	1.05998+03	THH1	1.06000+03	THH2	1.06000+03
THH3	1.06000+03	THH4	1.06000+03	THH5	1.05999+03	THH6	1.06007+03	THH10	0.00000	THH1	1.06000+03
THH2	1.06000+03	THH3	1.06000+03	THH4	1.06000+03	THH5	1.06000+03	THH6	1.06000+03	THH7	1.06000+03
THH0	1.06000+03	THH05	1.06000+03	THH0SS	1.08500+03	THH01	1.06000+03	THH02	1.06000+03	THH03	1.06000+03
THH04	1.06000+03	THH05	1.06000+03	THH06	1.06000+03	THH1	1.06000+03	THH2	1.06000+03	THH3	1.06000+03
THH4	1.06000+03	THH5	1.06000+03	THH6	1.06000+03	TIME	3.00000+01	TINLET	1.09300+03	TLPH	1.48095+03
TLPH0	1.06000+03	TPC0	1.06000+03	TPC0M	1.06000+03	TPC1	1.05995+03	TPC10	1.06000+03	TPC2	1.06000+03
TPC3	1.06000+03	TPC4	1.06000+03	TPC5	1.06000+03	TPC6	1.06000+03	TPC7	1.06000+03	TPC8	1.06000+03
TPC9	1.06000+03	TPHM	1.06000+03	TPH0	1.06000+03	TPH1	1.06000+03	TPH10	1.06000+03	TPH2	1.06000+03
TPH3	1.06000+03	TPH4	1.06000+03	TPH5	1.06000+03	TPH6	1.06000+03	TPH7	1.06000+03	TPH8	1.06000+03

TPH9	1.06000+03	TPRI	5.30000+02	TPRW	5.38657+02	TRC1	1.09537+03	TRC2	1.37464+03	TRC3	1.55024+03
TRC4	1.65576+03	TRC5	1.66749+03	TRC6	1.49330+03	TREH01	1.08502+03	TREH02	1.16729+03	TREH03	1.27748+03
TREH04	1.38772+03	TREH05	1.46994+03	TREH06	1.48096+03	TREH1	1.08017+03	TREH2	1.12841+03	TREH3	1.22547+03
TREH4	1.33576+03	TREH5	1.43121+03	TREH6	1.47603+03	TRF1	1.17234+03	TRF2	2.45834+03	TRF3	3.00668+03
TRF4	3.10364+03	TRF5	2.74321+03	TRF6	1.56818+03	TSCRAM	3.00000+01	TSEC	1.20000+02	TSTART	1.20000+02
TUPH	1.07400+03	TWARN	2.50000+01	VPRW	2.01657+02	WFLOW	9.27800+01	WPLR	0.00000	WPLS	5.17000+00
WPLSD	5.17000+00	WPRI	0.00000	WPRO	0.00000	WPSR	0.00000	WPSS	5.17000+00	ZZ8000	3.00271+01
ZZ8002	1.17586+00	ZZ8003	3.01028-01	ZZ8004	2.14745-01	ZZ8005	1.45529+00	ZZ8006	3.60363-01	ZZ8007	2.96821+01
ZZ8009	1.17607+00	ZZ8010	3.00796-01	ZZ8011	2.14597-01	ZZ8012	1.45669+00	ZZ8013	3.60587-01	ZZ8014	2.93622+01
ZZ8016	1.17625+00	ZZ8017	3.00508-01	ZZ8018	2.14414-01	ZZ8019	1.45844+00	ZZ8020	3.60530-01	ZZ8021	2.90650+01
ZZ8023	1.17651+00	ZZ8024	3.00158-01	ZZ8025	2.14191-01	ZZ8026	1.46056+00	ZZ8027	3.60461-01	ZZ8028	2.87885+01
ZZ8030	1.17664+00	ZZ8031	3.00071-01	ZZ8032	2.14136-01	ZZ8033	1.46108+00	ZZ8034	3.60444-01	ZZ8035	2.85310+01
ZZ8037	1.17696+00	ZZ8038	2.99418-01	ZZ8039	2.13720-01	ZZ8040	1.46505+00	ZZ8041	3.60316-01	ZZ8042	2.82909+01
ZZ8044	1.17699+00	ZZ8045	2.99760-01	ZZ8046	2.13938-01	ZZ8047	1.46297+00	ZZ8048	3.60382-01	ZZ8049	2.80665+01
ZZ8051	1.17744+00	ZZ8052	2.98529-01	ZZ8053	2.13155-01	ZZ8054	1.47043+00	ZZ8055	3.60144-01	ZZ8056	2.78570+01
ZZ8058	1.17730+00	ZZ8059	2.99687-01	ZZ8060	2.13892-01	ZZ8061	1.46341+00	ZZ8062	3.60368-01	ZZ8063	2.76608+01
ZZ8065	1.17794+00	ZZ8066	2.97386-01	ZZ8067	2.12428-01	ZZ8068	1.47736+00	ZZ8069	3.59927-01	ZZ8070	5.15595+04
ZZ8075	2.94660+00	ZZ8076	2.92000-01	ZZ8077	2.09000-01	ZZ8078	1.51000+00	ZZ8079	9.99369-01	ZZ8080	5.15600+04
ZZ8085	2.94660+00	ZZ8086	2.92000-01	ZZ8087	2.09000-01	ZZ8088	1.51000+00	ZZ8089	9.99369-01	ZZ8090	5.15599+04
ZZ8095	2.94660+00	ZZ8096	2.92000-01	ZZ8097	2.09000-01	ZZ8098	1.51000+00	ZZ8099	9.99369-01	ZZ8100	5.15599+04
ZZ8105	2.94660+00	ZZ8106	2.92000-01	ZZ8107	2.09000-01	ZZ8108	1.51000+00	ZZ8109	9.99369-01	ZZ8110	5.15599+04
ZZ8115	2.94660+00	ZZ8116	2.92000-01	ZZ8117	2.09000-01	ZZ8118	1.51000+00	ZZ8119	9.99369-01	ZZ8120	5.15599+04
ZZ8125	2.94660+00	ZZ8126	2.92000-01	ZZ8127	2.09000-01	ZZ8128	1.51000+00	ZZ8129	9.99369-01	ZZ8184	7.25556-01
ZZ8185	4.40061-01	ZZ8186	6.56544-01	ZZ8187	4.53634+01	ZZ8188	6.51430+01	ZZ8189	2.51338-02	ZZ8190	1.30809-02
ZZ8191	6.56549-01	ZZ8192	3.33898-01	ZZ8193	4.72227-01	ZZ8194	4.89648+00	ZZ8195	5.05997+01	ZZ8196	6.73755-01
ZZ8197	1.24206-02	ZZ8198	5.99395-03	ZZ8199	4.89648+00	ZZ8200	3.39449-01	ZZ8201	4.71767-01	ZZ8202	6.56579+00
ZZ8203	5.25540+01	ZZ8204	6.88663+01	ZZ8205	1.29003-02	ZZ8206	6.12658-03	ZZ8207	6.56579+00	ZZ8208	3.44509-01
ZZ8209	4.71348-01	ZZ8210	6.56579+00	ZZ8211	5.30302+01	ZZ8212	7.00218+01	ZZ8213	1.30172-02	ZZ8214	6.22938-03
ZZ8215	6.56579+00	ZZ8216	3.47946-01	ZZ8217	4.71063-01	ZZ8218	4.89647+00	ZZ8219	5.14914+01	ZZ8220	7.01678+01
ZZ8221	1.26394-02	ZZ8222	6.24237-03	ZZ8223	4.89647+00	ZZ8224	6.38538-01	ZZ8225	4.47147-01	ZZ8226	6.56546-01
ZZ8227	4.76934+01	ZZ8228	6.83388+01	ZZ8229	2.15269-02	ZZ8230	1.11791-02	ZZ8231	6.56555-01		
KEEP	1	NALARM	0								

GCFR CASY

TIME = 3.00000+01	TPCO = 1.36000+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAV0 = 1.05875+03
	THH01 = 1.06000+03	WFLOW = 4.27800+01	MARGIN = 6.52930+01	PPRG = 2.09573+03
	PNSS = 1.39430+03	GCAA = 1.21255+03	GCCA = 5.18800+02	PRCD = 1.00000+00
	POWFLO = 6.42507-04	OCAERR = 0.00000	PROPN = 0.00000	ICAN = 1.00000-02
	DNCAA = 0.00000	NCAA = 1.00000-02	TRC1 = 1.09537+03	TRF1 = 1.17234+03
	TREH1 = 1.38017+03	TREH01 = 1.08502+03	THH01 = 1.06000+03	TRC2 = 1.37464+03
	TRF2 = 2.45834+03	TREH2 = 1.12841+03	TREH02 = 1.16724+03	THH02 = 1.06000+03
	TRC3 = 1.55024+03	TRF3 = 3.00668+03	TREH3 = 1.22547+03	TREH03 = 1.27748+03
	THH03 = 1.06000+03	TRC4 = 1.65576+03	TRF4 = 3.10364+03	TREH4 = 1.33576+03
	TREH04 = 1.38772+03	THH04 = 1.06000+03	TRC5 = 1.66749+03	TRF5 = 2.74321+03
	TREH5 = 1.43121+03	TREH05 = 1.46994+03	THH05 = 1.06000+03	TRC6 = 1.49330+03
	TRF6 = 1.56818+03	TREH6 = 1.47603+03	TREH06 = 1.48096+03	THH06 = 1.05998+03
	THH16 = 1.06015+03	THH6 = 1.06000+03	TLPH = 1.48095+03	TUPH = 1.07400+03
TIME = 3.50000+01	TPCO = 1.36000+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAV0 = 1.02681+03
	THH01 = 1.06000+03	WFLOW = 4.27800+01	MARGIN = 6.52930+01	PPRG = 2.09573+03
	PNSS = 1.37112+03	GCAA = 1.19238+03	GCCA = 2.31749+02	PRCD = 1.00000+01
	POWFLO = 1.43833-04	OCAERR = 0.00000	PROPN = 0.00000	ICAN = 1.00000-02
	DNCAA = 0.00000	NCAA = 1.00000-02	TRC1 = 1.08630+03	TRF1 = 1.11282+03
	TREH1 = 1.37630+03	TREH01 = 1.08013+03	THH01 = 1.06000+03	TRC2 = 1.25757+03
	TRF2 = 1.57820+03	TREH2 = 1.11179+03	TREH02 = 1.13944+03	THH02 = 1.06000+03
	TRC3 = 1.38484+03	TRF3 = 1.83494+03	TREH3 = 1.18366+03	TREH03 = 1.22222+03
	THH03 = 1.06000+03	TRC4 = 1.47106+03	TRF4 = 1.93003+03	TREH4 = 1.26750+03
	TREH04 = 1.30692+03	THH04 = 1.06000+03	TRC5 = 1.49734+03	TRF5 = 1.84443+03
	TREH5 = 1.34183+03	TREH05 = 1.37219+03	THH05 = 1.06000+03	TRC6 = 1.41056+03
	TRF6 = 1.46331+03	TREH6 = 1.38384+03	TREH06 = 1.39285+03	THH06 = 1.05998+03
	THH16 = 1.36017+03	THH6 = 1.06000+03	TLPH = 1.40069+03	TUPH = 1.07115+03
TIME = 4.00000+01	TPCO = 1.06000+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAV0 = 9.79968+02
	THH01 = 1.06000+03	WFLOW = 4.27800+01	MARGIN = 6.52930+01	PPRG = 2.09573+03
	PNSS = 1.36973+03	GCAA = 1.19118+03	GCCA = 5.81187+01	PRCD = 8.38696-02
	POWFLO = 4.81018-04	OCAERR = 0.00000	PROPN = 0.00000	ICAN = 1.00000-02
	DNCAA = 0.00000	NCAA = 1.00000-02	TRC1 = 1.08722+03	TRF1 = 1.09705+03
	TREH1 = 1.07667+03	TREH01 = 1.08189+03	THH01 = 1.06000+03	TRC2 = 1.27398+03
	TRF2 = 1.38622+03	TREH2 = 1.12658+03	TREH02 = 1.16374+03	THH02 = 1.06000+03
	TRC3 = 1.41730+03	TRF3 = 1.56731+03	TREH3 = 1.22338+03	TREH03 = 1.27284+03
	THH03 = 1.06000+03	TRC4 = 1.51470+03	TRF4 = 1.66074+03	TREH4 = 1.33034+03
	TREH04 = 1.37792+03	THH04 = 1.06000+03	TRC5 = 1.54180+03	TRF5 = 1.64395+03
	TREH5 = 1.41719+03	TREH05 = 1.44962+03	THH05 = 1.06000+03	TRC6 = 1.43626+03
	TRF6 = 1.43498+03	TREH6 = 1.44450+03	TREH06 = 1.44088+03	THH06 = 1.05998+03
	THH16 = 1.06019+03	THH6 = 1.06000+03	TLPH = 1.40364+03	TUPH = 1.06883+03

GCFR CASE

TIME = 4.50000+01

TPC0 = 1.06000+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAW0 = 9.32839+02
THH01 = 1.06000+03	WFLOW = 4.27800+01	MARGIN = 6.52930+01	PPRG = 2.09573+03
PNSS = 1.37309+03	GCAA = 1.19410+03	GCCA = 2.88431+01	PRCD = 7.19130+02
POWFLOW = 8.31061+04	QCAERR = 0.00000	PROP = 0.00000	ICAN = 1.00000+02
ONCAA = 0.00000	NCAA = 1.00000+02	TRC1 = 1.08712+03	TRF1 = 1.09353+03
TREH1 = 1.07653+03	TREH01 = 1.08237+03	THH01 = 1.06000+03	TRC2 = 1.28496+03
TRF2 = 1.35917+03	TREH2 = 1.13560+03	TREH02 = 1.17857+03	THH02 = 1.06000+03
TRC3 = 1.43635+03	TRF3 = 1.53341+03	TREH3 = 1.24710+03	TREH03 = 1.30225+03
THH03 = 1.06000+03	TRC4 = 1.54058+03	TRF4 = 1.63399+03	TREH4 = 1.36632+03
TREH04 = 1.91773+03	THH04 = 1.06000+03	TRC5 = 1.57080+03	TRF5 = 1.63519+03
TREH5 = 1.45921+03	TREH05 = 1.49242+03	THH05 = 1.06000+03	TRC6 = 1.45590+03
TRF6 = 1.45202+03	TREH6 = 1.47690+03	TREH06 = 1.46655+03	THH06 = 1.05998+03
THH16 = 1.06021+03	THM6 = 1.06000+03	TLPH = 1.42254+03	TUPH = 1.06715+03

*** INPUT TO AFGEN 309 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7388+01 ***

*** INPUT TO AFGEN 327 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7388+01 ***

*** INPUT TO AFGEN 345 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7388+01 ***

*** INPUT TO AFGEN 309 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7388+01 ***

*** INPUT TO AFGEN 327 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7388+01 ***

*** INPUT TO AFGEN 345 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7388+01 ***

*** INPUT TO AFGEN 309 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7406+01 ***

*** INPUT TO AFGEN 327 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7406+01 ***

*** INPUT TO AFGEN 345 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7406+01 ***

*** INPUT TO AFGEN 327 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7677+01 ***

*** INPUT TO AFGEN 345 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7677+01 ***

*** INPUT TO AFGEN 327 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7677+01 ***

*** INPUT TO AFGEN 345 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7677+01 ***

*** INPUT TO AFGEN 327 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7713+01 ***

*** INPUT TO AFGEN 345 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7713+01 ***

*** INPUT TO AFGEN 318 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7967+01 ***

*** INPUT TO AFGEN 345 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7967+01 ***

*** INPUT TO AFGEN 318 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7967+01 ***

*** INPUT TO AFGEN 345 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.7967+01 ***

*** INPUT TO AFGEN 318 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.8003+01 ***

*** INPUT TO AFGEN 345 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.8003+01 ***

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*** INPUT TO AFGEN 318 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.8256+01 ***
*** INPUT TO AFGEN 345 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.8256+01 ***
*** INPUT TO AFGEN 318 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.8256+01 ***
*** INPUT TO AFGEN 318 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.8292+01 ***
*** INPUT TO AFGEN 318 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.8546+01 ***
*** INPUT TO AFGEN 318 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.8546+01 ***
*** INPUT TO AFGEN 318 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.8582+01 ***
*** INPUT TO AFGEN 318 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.8835+01 ***
*** INPUT TO AFGEN 336 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.9703+01 ***
*** INPUT TO AFGEN 336 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.9703+01 ***
*** INPUT TO AFGEN 336 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 4.9739+01 ***
*** INPUT TO AFGEN 309 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0000+01 ***
*** INPUT TO AFGEN 336 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0000+01 ***
*** INPUT TO AFGEN 309 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0000+01 ***
*** INPUT TO AFGEN 336 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0000+01 ***

TIME = 5.00000+01
TPC0 = 1.05999+03 THW0 = 1.06000+03 TPH0 = 1.06000+03 TAW0 = 8.91289+02
THH01 = 1.06000+03 MFLOW = 9.27800+01 MARGIN = 6.52932+01 PPRG = 2.09573+03
PNSS = 1.37611+03 GCAA = 1.19673-03 GCCA = 1.89387+01 PRCD = 6.58553-02
PDWFLO = 1.15905-03 OCAERR = 0.00000 PROPN = 0.00000 ICAN = 1.00000-02
DNCAA = 0.00000 ACAAA = 1.00000-02 TRC1 = 1.08835+03 TRF1 = 1.09324+03
TREH1 = 1.07703+03 TREH01 = 1.08368+03 THH01 = 1.06000+03 TRC2 = 1.31207+03
TRF2 = 1.37058+03 TREH2 = 1.14808+03 TREH02 = 1.19906+03 THH02 = 1.06000+03
TRC3 = 1.47941+03 TRF3 = 1.55417+03 TREH3 = 1.27916+03 TREH03 = 1.34233+03
THH03 = 1.06000+03 TRC4 = 1.59200+03 TRF4 = 1.66250+03 TREH4 = 1.41453+03
TREH04 = 1.47126+03 THH04 = 1.06000+03 TRC5 = 1.62032+03 TRF5 = 1.66736+03
TREH5 = 1.51472+03 TREH05 = 1.54878+03 THH05 = 1.06000+03 TRC6 = 1.48010+03
TRF6 = 1.47376+03 TREH6 = 1.51779+03 TREH06 = 1.49791+03 THH06 = 1.05998+03
THH16 = 1.06024+03 THH6 = 1.06000+03 TLPH = 1.43896+03 TUPH = 1.06591+03

*** INPUT TO AFGEN 309 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0036+01 ***
*** INPUT TO AFGEN 336 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0036+01 ***
*** INPUT TO AFGEN 309 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0579+01 ***
*** INPUT TO AFGEN 327 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0579+01 ***
*** INPUT TO AFGEN 336 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0579+01 ***
*** INPUT TO AFGEN 309 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0579+01 ***
*** INPUT TO AFGEN 327 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0579+01 ***

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*** INPUT TO AFGEN 336 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0579+01 ***

*** INPUT TO AFGEN 309 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0615+01 ***

*** INPUT TO AFGEN 327 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0615+01 ***

*** INPUT TO AFGEN 336 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.0615+01 ***

*** INPUT TO AFGEN 336 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.1158+01 ***

*** INPUT TO AFGEN 309 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.2315+01 ***

*** INPUT TO AFGEN 327 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 5.2315+01 ***

TIME = 5.50000+01

TPCO = 1.05995+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAW0 = 8.53677+02
THH01 = 1.05999+03	WFLOW = 4.27800+01	MARGIN = 6.52931+01	PPRG = 2.09573+03
PNSS = 1.37867+03	GCAA = 1.19902+03	GCCA = 1.20164+01	PRCD = 6.09211+02
POWFLO = 1.68983+03	CCAERR = 0.00000	PROP = 0.00000	ICAN = 1.00000+02
DNCAA = 0.00000	NCAA = 1.00004+02	TRC1 = 1.08999+03	TRF1 = 1.09399+03
TREH1 = 1.07784+03	TREH01 = 1.08544+03	THH01 = 1.05999+03	TRC2 = 1.34394+03
TRF2 = 1.39272+03	TREH2 = 1.16397+03	TREH02 = 1.22471+03	THH02 = 1.06000+03
TRC3 = 1.52923+03	TRF3 = 1.59055+03	TREH3 = 1.31859+03	TREH03 = 1.39085+03
THH03 = 1.06000+03	TRC4 = 1.65008+03	TRF4 = 1.70714+03	TREH4 = 1.47268+03
TREH04 = 1.53515+03	THH04 = 1.06000+03	TRC5 = 1.67445+03	TRF5 = 1.71174+03
TREH5 = 1.58080+03	TREH05 = 1.61519+03	THH05 = 1.06000+03	TRC6 = 1.50453+03
TRF6 = 1.49746+03	TREH6 = 1.56062+03	TREH06 = 1.52785+03	THH06 = 1.05997+03
THH16 = 1.06026+03	THH6 = 1.06000+03	TLPH = 1.45455+03	TUPH = 1.06449+03

DEBUG OUTPUT AT TIME = 6.00000+01

AHEFLO 1.05000+03	APS 6.73100+01	BAW1 0.00000	BAW0 6.67239+01	BAWT 3.95237+00	BAW1 1.77276+02
BAW10 5.44476+01	BAW2 4.64009+02	BAW3 7.60131+02	BAW4 1.26621+01	BAW5 2.26496+01	BAW6 3.89543+01
BAW7 5.70966+01	BAW8 6.66636+01	BAW9 6.20254+01	BHW1 7.98664+03	BHW0 -3.39712+05	BHW1 1.21398+02
BHW1 2.59430+03	BHW2 1.12831+03	BHW3 3.34019+04	BHW4 1.32892+04	BHW5 -7.62838+05	BHW6 7.39421+05
BPC1 7.07609+00	BPC1 1.21705+00	BPC10 1.91937+02	BPC2 1.42419+00	BPC3 1.43934+00	BPC4 1.20100+00
BPCS 8.38201+01	BPC6 5.02098+01	BPC7 2.62551+01	BPC8 1.21736+01	BPC9 5.07198+02	BPH1 1.27913+06
BPH1 1.27913+06	BPH10 0.00000	BPH2 0.00000	BPH3 0.00000	BPH4 0.00000	BPH5 0.00000
BPH6 0.00000	BPH7 0.00000	BPH8 0.00000	BPH9 0.00000	DELGR 5.03000+00	DELMAX 1.00000+36
DELMIN 1.00000+06	DELPP 6.00000+01	DELPR 5.00000+00	DELS 0.00000	DELT 7.96309+02	DICAN 6.10352+07
DNCAA 6.10249+07	DTAM1 -9.93635+02	DTAM10 -4.57653+00	DTAM2 -2.73350+01	DTAM3 -5.05980+01	DTAM4 -9.32882+01
DTAM5 -1.80623+00	DTAM6 -3.23271+00	DTAM7 -4.81214+00	DTAM8 -5.51978+00	DTAM9 -5.12790+00	DTAW1 0.00000
DTAW0 -5.91259+00	DTAW1 -7.63770+02	DTAW10 -4.69698+00	DTAW2 -2.44580+01	DTAW3 -4.88545+01	DTAW4 -9.03001+01
DTAW5 -1.74840+00	DTAW6 -3.17779+00	DTAW7 -4.78234+00	DTAW8 -5.62624+00	DTAW9 -5.26816+00	DTCAHA -1.22681+02
DTGPM 0.00000	DTHH16 4.86870+03	DTHM1 -1.50025+02	DTHM2 -5.55992+03	DTHM3 -1.61663+03	DTHM4 -1.96342+04
DTHM5 -3.08985+05	DTHM6 3.68614+05	DTHM1 -2.68650+02	DTHW0 1.14244+04	DTHW1 -1.89546+02	DTHW2 -8.24288+03
DTHW3 -2.44408+03	DTHW4 -9.70794+04	DTHW5 5.57263+04	DTHW6 -5.40157+04	DTLPH 2.06867+00	DTPCOM -1.73141+02
DTPC1 -6.92993+00	DTPC10 -6.20462+02	DTPC2 -6.84634+00	DTPC3 -5.85443+00	DTPC4 -4.37898+00	DTPC5 -2.87899+00
DTPC6 -1.66908+00	DTPC7 -8.58644+01	DTPC8 -3.95187+01	DTPC9 -1.64148+01	DTPHM 0.00000	DTPH1 -9.13259+06
DTPH10 0.00000	DTPH2 0.00000	DTPH3 0.00000	DTPH4 0.00000	DTPH5 0.00000	DTPH6 0.00000
DTPH7 0.00000	DTPH8 0.00000	DTPH9 0.00000	DTRC1 5.54056+01	DTRC2 8.23124+00	DTRC3 1.44853+01
DTRC4 1.69353+01	DTRC5 1.56435+01	DTRC6 4.73141+00	DTRF1 3.63476+01	DTRF2 6.46585+00	DTRF3 1.10069+01
DTRF4 1.32981+01	DTRF5 1.26286+01	DTRF6 5.28189+00	DTUPH -9.41579+01	DUMHY 5.59868+02	D1 3.00000+01
D2 6.00000+01	EAE 0.00000	EAE1 0.00000	FCON 9.43000+02	FINTIM 5.00000+02	FSPH 8.97000+02
FVIS 9.18000+02	GAA 7.60500+02	G8PH 8.72774+01	GCAA 1.19821+03	GCAAS 1.00000+03	GCCA 5.81769+00
GPR1 0.00000	GPRO 0.00000	GREH 5.37806+04	GREYOT 1.74555+01	HEFLOW 1.03500+03	HSATP 9.68000+02
HSATT 9.87000+02	IAPS 6.73100+01	ICAN 1.00018+02	IICAN 1.00000+02	IINT -4.55553+03	IIPSIT 6.73100+01
INCAA 1.00000+02	INPL 4.55178+03	INT 4.55553+03	IPLoad 1.26990+02	IPRG 2.09573+03	IPSIT 6.73100+01

ITAM1	1.06000+03	ITAM10	1.06000+03	ITAM2	1.06000+03	ITAM3	1.06000+03	ITAM4	1.06000+03	ITAM5	1.06000+03
ITAM6	1.06000+03	ITAM7	1.06000+03	ITAM8	1.06000+03	ITAM9	1.06000+03	ITAM1	1.06000+03	ITAM0	1.06000+03
ITAW1	1.06000+03	ITAW10	1.06000+03	ITAW2	1.06000+03	ITAW3	1.06000+03	ITAW4	1.06000+03	ITAW5	1.06000+03
ITAW6	1.06000+03	ITAW7	1.06000+03	ITAW8	1.06000+03	ITAW9	1.06000+03	ITCAHA	1.07490+03	ITGPM	0.00000
ITHM16	1.06000+03	ITHM10	0.00000	ITHM1	1.06000+03	ITHM2	1.06000+03	ITHM3	1.06000+03	ITHM4	1.06000+03
ITHM5	1.06000+03	ITHM6	1.06000+03	ITHM1	1.06000+03	ITHM0	1.06000+03	ITHM1	1.06000+03	ITHM2	1.06000+03
ITHM3	1.06000+03	ITHM4	1.06000+03	ITHM5	1.06000+03	ITHM6	1.06000+03	ITLPH	1.48027+03	ITPCOM	1.06000+03
ITPC1	1.06000+03	ITPC10	1.06000+03	ITPC2	1.06000+03	ITPC3	1.06000+03	ITPC4	1.06000+03	ITPC5	1.06000+03
ITPC6	1.06000+03	ITPC7	1.06000+03	ITPC8	1.06000+03	ITPC9	1.06000+03	ITPHM	1.06000+03	ITPH1	1.06000+03
ITPH10	1.06000+03	ITPH2	1.06000+03	ITPH3	1.06000+03	ITPH4	1.06000+03	ITPH5	1.06000+03	ITPH6	1.06000+03
ITPH7	1.06000+03	ITPH8	1.06000+03	ITPH9	1.06000+03	ITPRW	5.38657+02	ITRC1	1.09587+03	ITRC2	1.37460+03
ITRC3	1.54961+03	ITRC4	1.65473+03	ITRC5	1.66634+03	ITRC6	1.49256+03	ITRF1	1.15745+03	ITRF2	2.45830+03
ITRF3	3.00611+03	ITRF4	3.10270+03	ITRF5	2.74210+03	ITRF6	1.56610+03	ITUPH	1.07490+03	IVPRW	2.01657+02
JAACP	1.83052+02	JAAGR	1.00054+00	JAAM1	4.56710+02	JAAM10	4.34168+02	JAAM2	4.53394+02	JAAM3	4.50461+02
JAAM4	4.47848+02	JAAM5	4.45480+02	JAAM6	4.43261+02	JAAM7	4.41080+02	JAAM8	4.38847+02	JAAM9	4.36536+02
JAMW1	2.35928+02	JAMW10	2.18275+02	JAMW2	2.33798+02	JAMW3	2.30803+02	JAMW4	2.27558+02	JAMW5	2.24303+02
JAMW6	2.22088+02	JAMW7	2.20298+02	JAMW8	2.19755+02	JAMW9	2.19321+02	JGPK	0.00000	JHHCPC	1.48817+03
JHMM1	2.45482+00	JHMM2	2.45483+00	JHMM3	2.45483+00	JHMM4	2.45483+00	JHMM5	2.45483+00	JHMM6	2.45488+00
JHMM7	6.89825+01	JHMM8	6.89836+01	JHMM9	6.89840+01	JHMM0	6.89841+01	JHMM5	6.89841+01	JHMM6	6.89841+01
JLPV	6.03100+03	JRCFK1	8.54250+03	JRCFK2	4.85178+03	JRCFK3	4.87437+03	JRCFK4	4.87437+03	JRCFK5	4.88141+03
JRCFK6	8.83654+03	JRECK1	2.03873+03	JRECK2	9.89140+04	JRECK3	1.11331+03	JRECK4	1.20804+03	JRECK5	1.25019+03
JRECK6	2.17792+03	JUPV	1.24000+04	KAAA	2.43800+03	KAAAK	1.77700+01	KAAAU	2.83100+01	KAABK	8.22300+01
KABU	7.16900+01	KAG	7.61100+02	KAA	2.95200+01	KAAAT	5.98000+02	KAAW1	5.00000+01	KAAW2	5.00000+01
KAMAK	1.15460+00	KAMBK	1.54600+01	KAMC	1.03960+02	KAMCI	1.00000+02	KAMC0	1.00000+02	KAMCT	1.03960+03
KAMR	1.08000+00	KAMTR	6.79000+02	KAWA	1.97500+03	KAWISQ	6.80300+01	KAWN	1.00000+01	KAWRX	5.31600+03
KAWSQ	9.03100+01	KAWTR	7.60000+02	KAWV	3.33300+00	KAWVI	3.00000+00	KAWVO	3.00000+00	KAWVT	3.33300+01
KAWWR	4.27800+01	KAWW1	5.00000+01	KAWW2	5.00000+01	KCAAN	2.00000+00	KCAPBN	1.00000+01	KCAR	2.47100+01
KCARG	5.00000+02	KCAT	1.00000+00	KCATAU	1.00000+00	KCCAN	3.00000+00	KGPC	1.00000+00	KHMA	1.14100+03
KHMCK	1.06200+03	KHMCKE	7.01000+01	KHHRX	1.61400+05	KHMHV16	3.44000+02	KHMHV6	6.36800+04	KHMHVKE	6.87000+01
KHWW1	5.00000+01	KHWW2	5.00000+01	KHMAK	6.25000+00	KHMBK	5.50000+03	KHMC	6.96667+01	KHMC1	5.83500+01
KHMC10	2.08000+02	KHMC0	5.83500+01	KHMC7	4.18000+02	KHMRX	2.81400+01	KHWA	8.88500+02	KHWSQ	6.80000+01
KHWW1	8.26700+01	KHWM0	8.26700+01	KHWN	6.00000+00	KHWRX	1.48000+04	KHWS0	9.01600+01	KHVV	1.80000+00
KHWWI	3.91000+00	KHWW0	3.91000+00	KHWWT	1.08000+01	KHWW1	5.00000+01	KHWW2	5.00000+01	KPCC	1.46600+02
KPCCT	1.46600+03	KPCN	1.00000+01	KPCSQ	3.30000+01	KPCV	4.07000+00	KPCVT	4.07000+01	KPHC	1.46600+02
KPHCT	1.46600+03	KPHN	1.00000+01	KPHSQ	2.26800+01	KPHV	4.07000+00	KPHVT	4.07000+01	KPL	2.50000+00
KPLCR	5.00000+01	KPLJ0	3.28000+00	KPLJ1	9.85000+02	KPLJ2	1.34400+00	KPLN	5.00000+03	KPLPB	1.00000+00
KPLRT	1.00000+00	KPRV	4.00000+02	KPS	4.00000+01	KPSCR	1.00000+01	KPSJ0	2.48100+01	KPSJ1	7.62200+04
KPSJ2	1.12600+03	KPSN	5.00000+03	KPSPB	1.00000+01	KPSRT	1.00000+01	KRCV1	2.00803+04	KRCV2	8.89634+05
KRCV3	8.89634+05	KRCV4	8.89634+05	KRCV5	8.89634+05	KRCV6	1.63584+04	KREA1	1.35990+01	KREA2	6.02500+02
KREA3	6.02500+02	KREA4	6.02500+02	KREA5	6.02500+02	KREA6	1.10790+01	KREGF	9.50000+01	KREL1	1.47500+00
KREL2	8.17000+01	KREL3	8.17000+01	KREL4	8.17000+01	KREL5	8.17000+01	KREL6	1.47500+00	KRENN	3.08340+04
KREPF	9.50000+01	KREPF1	2.71000+02	KREPF2	2.02100+01	KREPF3	2.71000+01	KREPF4	2.71000+01	KREPF5	2.02100+01
KREPF6	2.71000+02	KREP0	8.29500+02	KREQT	7.86366+05	KRFV1	5.54054+04	KRFV2	2.45467+04	KRFV3	2.45467+04
KRFV4	2.45467+04	KRFV5	2.45467+04	KRFV6	4.51359+04	KTAU	1.00000+01	KUNACP	2.40700+01	KUNGR	3.86000+02
KUNHCP	1.24200+00	KUNHCV	7.46000+01	KUNWCP	1.02270+00	MARGIN	6.52921+01	MHM16	1.66728+02	MLPH	2.11237+03
MNSS	8.12378+03	MUPH	6.01141+03	NCAA	1.00018+02	NCAD	1.00024+02	NPL	4.55178+03	NPS	5.50000+03
OCAERR	3.05176+05	PARTRT	8.74000+02	PLoad	1.26990+02	PNSS	1.37751+03	POWER	1.01400+03	POWFLO	3.20741+03
PPRG	2.09573+03	PRCD	5.59868+02	PROPN	6.10352+07	QAANT	-1.99663+04	QAAM1	-2.95904+03	QAAM10	-1.74265+03
QAAM2	-2.56153+03	QAAM3	-2.23219+03	QAAM4	-1.96728+03	QAAM5	-1.77319+03	QAAM6	-1.66516+03	QAAM7	-1.64743+03
QAAM8	-1.68807+03	QAAM9	-1.72976+03	QAAMT	1.71705+04	QAAMV	2.94871+03	QAAM10	1.26687+03	QAAM2	2.53311+03
QAAM3	2.17959+03	QAAM4	1.87030+03	QAAM5	1.58541+03	QAAM6	1.32846+03	QAAM7	1.14716+03	QAAM8	1.11423+03
QAAM9	1.19667+03	QBPH	2.20131+03	QHMMT	4.92485+04	QHMM1	4.91168+05	QHMM2	1.80299+05	QHMM3	4.45071+06
QHMM4	5.47256+06	QHMM5	4.73683+05	QHMM6	4.62783+04	QHMMT	-1.55889+00	QHMM1	-1.04522+00	QHMM2	-3.87359+01
QHMM3	-1.12629+01	QHMM4	-1.36840+02	QHMM5	-2.10523+03	QHMM6	-2.10523+03	QPR	0.00000	QRF1	3.67598+02
QRF2	2.74139+01	QRF3	3.67598+01	QRF4	3.67598+01	QRF5	2.74139+01	QRF6	3.67598+02	RAWAV	5.32741+01
RAW1	4.24000+01	RAW0	5.51800+01	RAW1	4.47496+01	RAW10	5.63197+01	RAW2	4.87282+01	RAW3	5.14016+01
RAW4	5.33243+01	RAW5	5.46635+01	RAW6	5.55262+01	RAW7	5.59081+01	RAW8	5.60152+01	RAW9	5.61043+01

RFTSL	8.47000+02	RHWA	4.24010+01	RHWI	4.24063+01	RHW0	4.24000+01	RHW1	4.24043+01	RHW2	4.24014+01
RHW3	4.24003+01	RHW4	4.24000+01	RHW5	4.24000+01	RHW6	4.24000+01	RPCAV	4.53766+01	RPC1	5.28586+01
RPC10	4.24161+01	RPC2	5.02600+01	RPC3	4.76990+01	RPC4	4.55749+01	RPC5	4.40550+01	RPC6	4.31835+01
RPC7	4.27377+01	RPC8	4.25331+01	RPC9	4.24482+01	RPHAY	4.24000+01	RPH1	4.24000+01	RPH10	4.24000+01
RPH2	4.24000+01	RPH3	4.24000+01	RPH4	4.24000+01	RPH5	4.24000+01	RPH6	4.24000+01	RPH7	4.24000+01
RPH8	4.24000+01	RPH9	4.24000+01	SCAV	0.00000	SPL	1.00000+00	SPS	1.00000+00	TAA110	5.59000+02
TAA01	6.68074+02	TAA010	5.68520+02	TAA02	6.51909+02	TAA03	6.37916+02	TAA04	6.25722+02	TAA05	6.14974+02
TAA06	6.05288+02	TAA07	5.96191+02	TAA08	5.87191+02	TAA09	5.77970+02	TAA1	6.59992+02	TAA10	5.63760+02
TAA2	6.44913+02	TAA3	6.31819+02	TAA4	6.20348+02	TAA5	6.10131+02	TAA6	6.00739+02	TAA7	5.91691+02
TAA8	5.82580+02	TAA9	5.73245+02	TAM1	1.01394+03	TAM10	7.83029+02	TAM2	9.53549+02	TAM3	9.02525+02
TAM4	8.60320+02	TAM5	8.27577+02	TAM6	8.05960+02	TAM7	7.95731+02	TAM8	7.92717+02	TAM9	7.89712+02
TAW1	1.06000+03	TAW0	8.21053+02	TAW01	9.92869+02	TAW010	7.84659+02	TAW02	9.35899+02	TAW03	8.88038+02
TAW04	8.49041+02	TAW05	8.20250+02	TAW06	8.03633+02	TAW07	7.98244+02	TAW08	7.97330+02	TAW09	7.93006+02
TAW1	1.02643+03	TAW10	7.88833+02	TAW2	9.64384+02	TAW3	9.11969+02	TAW4	8.68539+02	TAW5	8.34645+02
TAW6	8.11941+02	TAW7	8.00938+02	TAW8	7.97787+02	TAW9	7.95168+02	TBPH	3.09078+03	TCAH04	1.05996+03
TCH04	8.65231+02	TFLAG	1.00000+00	TGPM	0.00000	TMM16	1.06028+03	TMM01	1.05995+03	TMM02	1.05998+03
TMM03	1.06000+03	TMM04	1.06000+03	TMM05	1.06000+03	TMM06	1.05997+03	TMM1	1.05997+03	TMM2	1.05999+03
TMM3	1.06000+03	TMM4	1.06000+03	TMM5	1.05999+03	TMM6	1.06013+03	TMM10	0.00000	TMM1	1.05995+03
TMM2	1.05999+03	TMM3	1.06000+03	TMM4	1.06000+03	TMM5	1.06000+03	TMM6	1.06000+03	TMM1	1.05991+03
TMM0	1.06000+03	TMM05	1.06000+03	TMM05S	1.08500+03	TMM01	1.05997+03	TMM02	1.05999+03	TMM03	1.06000+03
TMM04	1.06000+03	TMM05	1.06000+03	TMM06	1.06000+03	TMM1	1.05998+03	TMM2	1.05998+03	TMM3	1.06000+03
TMM4	1.06000+03	TMM5	1.06000+03	TMM6	1.06000+03	TMM	6.00000+01	TINLEY	1.09300+03	TLPH	1.46720+03
TLPHD	1.06000+03	TPC0	1.05977+03	TPCOM	1.05994+03	TPC1	8.79123+02	TPC10	1.05977+03	TPC2	9.34800+02
TPC3	9.80984+02	TPC4	1.01464+03	TPC5	1.03636+03	TPC6	1.04881+03	TPC7	1.05518+03	TPC8	1.05810+03
TPC9	1.05931+03	TPHM	1.06000+03	TPH0	1.06000+03	TPH1	1.06000+03	TPH10	1.06000+03	TPH2	1.06000+03
TPH3	1.06000+03	TPH4	1.06000+03	TPH5	1.06000+03	TPH6	1.06000+03	TPH7	1.06000+03	TPH8	1.06000+03
TPH9	1.06000+03	TPR1	5.30000+02	TPRW	5.38657+02	TRC1	1.09224+03	TRC2	1.38184+03	TRC3	1.58993+03
TRC4	1.72153+03	TRC5	1.74180+03	TRC6	1.53229+03	TREH01	1.09071+03	TREH02	1.31562+03	TREH03	1.53810+03
TREH04	1.69147+03	TREH05	1.73406+03	TREH06	1.54003+03	TREH1	1.08218+03	TREH2	1.22996+03	TREH3	1.45644+03
TREH4	1.63674+03	TREH5	1.71905+03	TREH6	1.59180+03	TRF1	1.09598+03	TRF2	1.42298+03	TRF3	1.63875+03
TRF4	1.76446+03	TRF5	1.76715+03	TRF6	1.52364+03	TSCRAM	3.00000+01	TSEC	1.20000+02	TSTART	1.20000+02
TUPH	1.06003+03	TWARN	2.50000+01	VPRW	2.01657+02	WFLOW	4.27800+01	WPLR	0.00000	WPLS	5.17000+00
WPLS0	5.17000+00	WPR1	0.00000	WPRO	0.00000	WPSR	0.00000	WPSS	5.17000+00	Z8000	3.01230+01
Z28002	1.10620+00	Z28003	3.92693+01	Z28004	4.10174+01	Z28005	1.04153+00	Z28006	4.56760+01	Z28007	2.99558+01
Z28009	1.10793+00	Z28010	3.92187+01	Z28011	4.00544+01	Z28012	1.04907+00	Z28013	4.51744+01	Z28014	2.97947+01
Z28016	1.10871+00	Z28017	3.91977+01	Z28018	3.96564+01	Z28019	1.04511+00	Z28020	4.49652+01	Z28021	2.96907+01
Z28023	1.10949+00	Z28024	3.91725+01	Z28025	3.91774+01	Z28026	1.04638+00	Z28027	4.47119+01	Z28028	2.94908+01
Z28030	1.11215+00	Z28031	3.90612+01	Z28032	3.76059+01	Z28033	1.05116+00	Z28034	4.38818+01	Z28035	2.93383+01
Z28037	1.11781+00	Z28038	3.86071+01	Z28039	3.53355+01	Z28040	1.06479+00	Z28041	4.27740+01	Z28042	2.91759+01
Z28044	1.12651+00	Z28045	3.78609+01	Z28046	3.21169+01	Z28047	1.08683+00	Z28048	4.11623+01	Z28049	2.89976+01
Z28051	1.13791+00	Z28052	3.66291+01	Z28053	2.86740+01	Z28054	1.12276+00	Z28055	3.94803+01	Z28056	2.87993+01
Z28058	1.15201+00	Z28059	3.46896+01	Z28060	2.53720+01	Z28061	1.20052+00	Z28062	3.78130+01	Z28063	2.85774+01
Z28065	1.16916+00	Z28066	3.14153+01	Z28067	2.23098+01	Z28068	1.37574+00	Z28069	3.63556+01	Z28070	5.20522+04
Z28075	2.94660+00	Z28076	2.92000+01	Z28077	2.09000+01	Z28078	1.51000+00	Z28079	9.99369+01	Z28080	5.20532+04
Z28085	2.94660+00	Z28086	2.92000+01	Z28087	2.09000+01	Z28088	1.51000+00	Z28089	9.99369+01	Z28090	5.20531+04
Z28095	2.94660+00	Z28096	2.92000+01	Z28097	2.09000+01	Z28098	1.51000+00	Z28099	9.99369+01	Z28100	5.20531+04
Z28105	2.94660+00	Z28106	2.92003+01	Z28107	2.09002+01	Z28108	1.50998+00	Z28109	9.99370+01	Z28110	5.20532+04
Z28115	2.94662+00	Z28116	2.92013+01	Z28117	2.09008+01	Z28118	1.50992+00	Z28119	9.99375+01	Z28120	5.20534+04
Z28125	2.94667+00	Z28126	2.92040+01	Z28127	2.09026+01	Z28128	1.50976+00	Z28129	9.99388+01	Z28130	3.05219+00
Z28185	2.78034+01	Z28186	2.04983+02	Z28187	4.47763+01	Z28188	6.51134+01	Z28189	2.48065+02	Z28190	1.30750+02
Z28191	2.77425+02	Z28192	1.48085+00	Z28193	3.80883+01	Z28194	1.50230+01	Z28195	4.69591+01	Z28196	6.74306+01
Z28197	1.15269+02	Z28198	5.99885+03	Z28199	1.99608+01	Z28200	1.66675+00	Z28201	3.67138+01	Z28202	1.48621+01
Z28203	4.80087+01	Z28204	6.92704+01	Z28205	1.17845+02	Z28206	6.16253+03	Z28207	2.37887+01	Z28208	1.80857+00
Z28209	3.56911+01	Z28210	1.02429+01	Z28211	4.85131+01	Z28212	7.08940+01	Z28213	1.19084+02	Z28214	6.30697+03
Z28215	2.09240+01	Z28216	1.87167+00	Z28217	3.52436+01	Z28218	2.84452+02	Z28219	4.85232+01	Z28220	7.11909+01
Z28221	1.19108+02	Z28222	6.33339+03	Z28223	1.23722+01	Z28224	3.26058+00	Z28225	2.66797+01	Z28226	1.29604+01
Z28227	4.74810+01	Z28228	6.86939+01	Z28229	2.14310+02	Z28230	1.12372+02	Z28231	-7.64363+02		

KEEP 1 NALARM 0

GCFR CASY

TIME = 6.00000+01

TPC0 = 1.05977+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAW0 = 8.21053+02
THH01 = 1.05995+03	WFLOW = 4.27800+01	MARGIN = 6.52921+01	PPRG = 2.09573+03
PNSS = 1.37751+03	GCAA = 1.19821-03	GCCA = 5.81769+00	PRCD = 5.59868-02
POWFLO = 3.20741-03	QCAERR = 3.05176-05	PROPN = 6.10352-07	ICAN = 1.00018-02
DNCAA = 6.10249-07	NCAA = 1.00018-02	TRC1 = 1.09224+03	TRF1 = 1.09548+03
TREH1 = 1.08218+03	TREH01 = 1.09071+03	THH01 = 1.05995+03	TRC2 = 1.38184+03
TRF2 = 1.42298+03	TREH2 = 1.22996+03	TREH02 = 1.31562+03	THH02 = 1.05998+03
TRC3 = 1.58993+03	TRF3 = 1.63875+03	TREH3 = 1.45644+03	TREH03 = 1.53813+03
THH03 = 1.06000+03	TRC4 = 1.72153+03	TRF4 = 1.76446+03	TREH4 = 1.63674+03
TREH04 = 1.69147+03	THH04 = 1.06000+03	TRC5 = 1.79180+03	TRF5 = 1.76715+03
TREH5 = 1.71905+03	TREH05 = 1.73406+03	THH05 = 1.06000+03	TRC6 = 1.53229+03
TRF6 = 1.52364+03	TREH6 = 1.59180+03	TREH06 = 1.54003+03	THH06 = 1.05997+03
THH16 = 1.06028+03	THH6 = 1.06000+03	TLPH = 1.46720+03	TUPH = 1.06003+03

TIME = 6.50000+01

TPC0 = 1.05923+03	THW0 = 1.06000+03	TPH0 = 1.06000+03	TAW0 = 7.94113+02
THH01 = 1.05988+03	WFLOW = 4.27800+01	MARGIN = 6.52855+01	PPRG = 2.09573+03
PNSS = 1.37916+03	GCAA = 3.01060-01	GCCA = 1.00000-05	PRCD = 5.36935-02
POWFLO = 8.91694-02	QCAERR = 2.49992+01	PROPN = 4.99984-01	ICAN = 2.51025+00
DNCAA = 5.00339-01	NCAA = 2.50990+00	TRC1 = 1.09805+03	TRF1 = 1.09955+03
TREH1 = 1.09763+03	TREH01 = 1.09805+03	THH01 = 1.05988+03	TRC2 = 1.47077+03
TRF2 = 1.49037+03	TREH2 = 1.46308+03	TREH02 = 1.47077+03	THH02 = 1.05999+03
TRC3 = 1.70359+03	TRF3 = 1.72933+03	TREH3 = 1.69926+03	TREH03 = 1.70359+03
THH03 = 1.06009+03	TRC4 = 1.83004+03	TRF4 = 1.85583+03	TREH4 = 1.82781+03
TREH04 = 1.83004+03	THH04 = 1.06025+03	TRC5 = 1.81889+03	TRF5 = 1.83781+03
TREH5 = 1.81908+03	TREH05 = 1.81889+03	THH05 = 1.06061+03	TRC6 = 1.53193+03
TRF6 = 1.53288+03	TREH6 = 1.53505+03	TREH06 = 1.53193+03	THH06 = 1.06143+03
THH16 = 1.06338+03	THH6 = 1.06001+03	TLPH = 1.47406+03	TUPH = 1.06001+03

TIME = 7.00000+01

TPC0 = 1.05797+03	THW0 = 1.06002+03	TPH0 = 1.06000+03	TAW0 = 7.70620+02
THH01 = 1.05974+03	WFLOW = 4.27800+01	MARGIN = 6.52004+01	PPRG = 2.09573+03
PNSS = 1.38080+03	GCAA = 6.01682-01	GCCA = 1.00000-05	PRCD = 5.20603-02
POWFLO = 4.32612-02	QCAERR = 2.49815+01	PROPN = 4.99630-01	ICAN = 5.00962+00
DNCAA = 4.99654-01	NCAA = 5.00959+00	TRC1 = 1.10243+03	TRF1 = 1.10395+03
TREH1 = 1.10149+03	TREH01 = 1.10243+03	THH01 = 1.05974+03	TRC2 = 1.53919+03
TRF2 = 1.55963+03	TREH2 = 1.52166+03	TREH02 = 1.53919+03	THH02 = 1.06013+03
TRC3 = 1.79616+03	TRF3 = 1.82213+03	TREH3 = 1.78695+03	TREH03 = 1.79616+03
THH03 = 1.06060+03	TRC4 = 1.92240+03	TRF4 = 1.94809+03	TREH4 = 1.91809+03
TREH04 = 1.92240+03	THH04 = 1.06139+03	TRC5 = 1.88941+03	TRF5 = 1.90778+03
TREH5 = 1.89054+03	TREH05 = 1.88941+03	THH05 = 1.06293+03	TRC6 = 1.53939+03
TRF6 = 1.53966+03	TREH6 = 1.54694+03	TREH06 = 1.53939+03	THH06 = 1.06610+03
THH16 = 1.07266+03	THH6 = 1.06008+03	TLPH = 1.48081+03	TUPH = 1.06001+03

GCFR CASY

TIME = 7.50000+01	TPC0 = 1.05550+03	THW0 = 1.06010+03	TPH0 = 1.06000+03	TAV0 = 7.48721+02
	THH01 = 1.05943+03	WFLOW = 4.27800+01	MARGIN = 6.49101+01	PPRG = 2.09573+03
	PNSS = 1.38239+03	ECOA = 9.02594-01	GCCA = 1.00000-05	PRCD = 5.04271-02
	POWFLO = 2.79341-02	OCAERR = 2.48967+01	PROPN = 9.97935-01	ICAN = 7.50440+00
	DNCAA = 4.97933-01	NCAA = 7.50440+00	TRC1 = 1.10649+03	TRF1 = 1.10806+03
	TREH1 = 1.10494+03	TREH01 = 1.10649+03	THH01 = 1.05943+03	TRC2 = 1.60098+03
	TRF2 = 1.62272+03	TREH2 = 1.57189+03	TREH02 = 1.60098+03	THH02 = 1.06043+03
	TRC3 = 1.88268+03	TRF3 = 1.90914+03	TREH3 = 1.86799+03	TREH03 = 1.88268+03
	THH03 = 1.06169+03	TRC4 = 2.00982+03	TRF4 = 2.03554+03	TREH4 = 2.00351+03
	TREH04 = 2.00982+03	THH04 = 1.06371+03	TRC5 = 1.95759+03	TRF5 = 1.97539+03
	TREH5 = 1.96022+03	TREH05 = 1.95759+03	THH05 = 1.06740+03	TRC6 = 1.54849+03
	TRF6 = 1.54764+03	TREH6 = 1.56163+03	TREH06 = 1.54849+03	THH06 = 1.07444+03
	THH16 = 1.08807+03	THH6 = 1.06031+03	TLPH = 1.48747+03	TUPH = 1.06001+03
TIME = 8.00000+01	TPC0 = 1.05131+03	THW0 = 1.06032+03	TPH0 = 1.06000+03	TAV0 = 7.28542+02
	THH01 = 1.05875+03	WFLOW = 4.27800+01	MARGIN = 6.43254+01	PPRG = 2.09573+03
	PNSS = 1.38396+03	ECOA = 1.20293+00	GCCA = 1.00000-05	PRCD = 4.87940-02
	POWFLO = 2.02811-02	OCAERR = 2.46794+01	PROPN = 9.93587-01	ICAN = 9.98460+00
	DNCAA = 4.93587-01	NCAA = 9.98460+00	TRC1 = 1.11023+03	TRF1 = 1.11186+03
	TREH1 = 1.10800+03	TREH01 = 1.11023+03	THH01 = 1.05875+03	TRC2 = 1.65575+03
	TRF2 = 1.67907+03	TREH2 = 1.61376+03	TREH02 = 1.65575+03	THH02 = 1.06080+03
	TRC3 = 1.96298+03	TRF3 = 1.99013+03	TREH3 = 1.94221+03	TREH03 = 1.96298+03
	THH03 = 1.06336+03	TRC4 = 2.09238+03	TRF4 = 2.11816+03	TREH4 = 2.08405+03
	TREH04 = 2.09238+03	THH04 = 1.06731+03	TRC5 = 2.02363+03	TRF5 = 2.04070+03
	TREH5 = 2.02814+03	TREH05 = 2.02363+03	THH05 = 1.07413+03	TRC6 = 1.55956+03
	TRF6 = 1.55783+03	TREH6 = 1.57928+03	TREH06 = 1.55956+03	THH06 = 1.08650+03
	THH16 = 1.10935+03	THH6 = 1.06076+03	TLPH = 1.49406+03	TUPH = 1.06000+03
TIME = 8.50000+01	TPC0 = 1.04497+03	THW0 = 1.06071+03	TPH0 = 1.06000+03	TAV0 = 7.11147+02
	THH01 = 1.05742+03	WFLOW = 4.27800+01	MARGIN = 6.39462+01	PPRG = 2.09573+03
	PNSS = 1.38551+03	ECOA = 1.50142+00	GCCA = 1.00000-05	PRCD = 4.71608-02
	POWFLO = 1.57052-02	OCAERR = 2.42856+01	PROPN = 9.85712-01	ICAN = 1.24344+01
	DNCAA = 4.85712-01	NCAA = 1.24344+01	TRC1 = 1.11362+03	TRF1 = 1.11532+03
	TREH1 = 1.11065+03	TREH01 = 1.11362+03	THH01 = 1.05742+03	TRC2 = 1.70319+03
	TRF2 = 1.72831+03	TREH2 = 1.64736+03	TREH02 = 1.70317+03	THH02 = 1.06100+03
	TRC3 = 2.03688+03	TRF3 = 2.06487+03	TREH3 = 2.00938+03	TREH03 = 2.03688+03
	THH03 = 1.06547+03	TRC4 = 2.17009+03	TRF4 = 2.19597+03	TREH4 = 2.15966+03
	TREH04 = 2.17009+03	THH04 = 1.07208+03	TRC5 = 2.08765+03	TRF5 = 2.10399+03
	TREH5 = 2.09425+03	TREH05 = 2.08765+03	THH05 = 1.08302+03	TRC6 = 1.57291+03
	TRF6 = 1.56994+03	TREH6 = 1.59997+03	TREH06 = 1.57291+03	THH06 = 1.10206+03
	THH16 = 1.13600+03	THH6 = 1.06142+03	TLPH = 1.50061+03	TUPH = 1.06000+03

GCFR CASY

TIME = 9.00000+01	TPCO = 1.03622+03	THW0 = 1.06126+03	TPH0 = 1.06000+03	TAW0 = 6.97286+02
	THH01 = 1.05513+03	WEL0W = 4.27800+01	MARGIN = 6.24329+01	PPRG = 2.09573+03
	PNSS = 1.38704+03	GCAA = 1.79702+00	GCCA = 1.00000+05	PRCD = 4.55276+02
	POWFLO = 1.26675+02	CCAERR = 2.37480+01	PROPN = 9.79881+01	ICAN = 1.98367+01
	DNCAA = 4.74882+01	NCAA = 1.48367+01	TRC1 = 1.11665+03	TRF1 = 1.11843+03
	TREH1 = 1.11290+03	TREH01 = 1.11665+03	THH01 = 1.05513+03	TRC2 = 1.74314+03
	TRF2 = 1.77019+03	TREH2 = 1.67291+03	TREH02 = 1.74306+03	THH02 = 1.06075+03
	TRC3 = 2.10421+03	TRF3 = 2.13319+03	TREH3 = 2.06932+03	TREH03 = 2.10419+03
	THH03 = 1.06772+03	TRC4 = 2.24296+03	TRF4 = 2.26897+03	TREH4 = 2.23024+03
	TREH04 = 2.24295+03	THH04 = 1.07277+03	TRC5 = 2.14972+03	TRE5 = 2.16531+03
	TREH5 = 2.15847+03	TREH05 = 2.14973+03	THH05 = 1.09378+03	TRC6 = 1.58878+03
	TRF6 = 1.58446+03	TREH6 = 1.62371+03	TREH06 = 1.58878+03	THH06 = 1.12070+03
	THH16 = 1.16731+03	THH6 = 1.06216+03	TLPH = 1.50717+03	TUPH = 1.05998+03
TIME = 9.50000+01	TPCO = 1.02498+03	THW0 = 1.06184+03	TPH0 = 1.06000+03	TAW0 = 6.86959+02
	THH01 = 1.05158+03	WEL0W = 4.27800+01	MARGIN = 6.16115+01	PPRG = 2.09573+03
	PNSS = 1.38856+03	GCAA = 2.08976+00	GCCA = 1.00000+05	PRCD = 4.38945+02
	POWFLO = 1.05022+02	CCAERR = 2.31578+01	PROPN = 4.63155+01	ICAN = 1.71813+01
	DNCAA = 4.63156+01	NCAA = 1.71813+01	TRC1 = 1.11932+03	TRF1 = 1.12119+03
	TREH1 = 1.11476+03	TREH01 = 1.11932+03	THH01 = 1.05158+03	TRC2 = 1.77560+03
	TRF2 = 1.80462+03	TREH2 = 1.69070+03	TREH02 = 1.77531+03	THH02 = 1.05971+03
	TRC3 = 2.16479+03	TRF3 = 2.19489+03	TREH3 = 2.12180+03	TREH03 = 2.16474+03
	THH03 = 1.06979+03	TRC4 = 2.31096+03	TRF4 = 2.33714+03	TREH4 = 2.29569+03
	TREH04 = 2.31095+03	THH04 = 1.08398+03	TRC5 = 2.20986+03	TRF5 = 2.22469+03
	TREH5 = 2.22066+03	TREH05 = 2.20986+03	THH05 = 1.10593+03	TRC6 = 1.60734+03
	TRF6 = 1.60158+03	TREH6 = 1.65048+03	TREH06 = 1.60735+03	THH06 = 1.14181+03
	THH16 = 1.20235+03	THH6 = 1.06275+03	TLPH = 1.51382+03	TUPH = 1.05995+03
TIME = 1.00000+02	TPCO = 1.01137+03	THW0 = 1.06223+03	TPH0 = 1.06000+03	TAW0 = 6.79625+02
	THH01 = 1.04661+03	WEL0W = 4.27800+01	MARGIN = 6.15509+01	PPRG = 2.09573+03
	PNSS = 1.39009+03	GCAA = 2.38188+00	GCCA = 1.00000+05	PRCD = 4.22613+02
	POWFLO = 8.87135+03	CCAERR = 2.27734+01	PROPN = 4.55468+01	ICAN = 1.94745+01
	DNCAA = 4.55469+01	NCAA = 1.94745+01	TRC1 = 1.12161+03	TRF1 = 1.12357+03
	TREH1 = 1.11621+03	TREH01 = 1.12161+03	THH01 = 1.04661+03	TRC2 = 1.80064+03
	TRF2 = 1.83164+03	TREH2 = 1.70102+03	TREH02 = 1.79989+03	THH02 = 1.05764+03
	TRC3 = 2.21847+03	TRF3 = 2.24980+03	TREH3 = 2.16659+03	TREH03 = 2.21834+03
	THH03 = 1.07132+03	TRC4 = 2.37407+03	TRF4 = 2.40045+03	TREH4 = 2.35587+03
	TREH04 = 2.37404+03	THH04 = 1.09029+03	TRC5 = 2.26801+03	TRF5 = 2.28213+03
	TREH5 = 2.28069+03	TREH05 = 2.26804+03	THH05 = 1.11893+03	TRC6 = 1.62874+03
	TRF6 = 1.62146+03	TREH6 = 1.68026+03	TREH06 = 1.62875+03	THH06 = 1.16463+03
	THH16 = 1.24006+03	THH6 = 1.06285+03	TLPH = 1.52064+03	TUPH = 1.05989+03

GCFR CASE

TIME = 1.05000+02	TPC0 = 9.55633+02	THW0 = 1.06214+03	TPH0 = 1.06000+03	TAW0 = 6.74563+02
	THH01 = 1.04016+03	WFLOW = 4.27800+01	MARGIN = 6.26937+01	PPRG = 2.09573+03
	PNSS = 1.29164+03	GCAA = 2.67897+00	GCCA = 1.00000+05	PRCD = 4.17203+02
	POWFLO = 7.78658+03	OCAERR = 2.28646+01	PROPN = 4.57292+01	ICAN = 2.17506+01
	DNCAA = 4.57293+01	NCAA = 2.17506+01	TRC1 = 1.12355+03	TRF1 = 1.12563+03
	TREH1 = 1.11728+03	TREH01 = 1.12355+03	THH01 = 1.04016+03	TRC2 = 1.81881+03
	TRF2 = 1.85204+03	TREH2 = 1.70439+03	TREH02 = 1.81719+03	THH02 = 1.05439+03
	TRC3 = 2.26554+03	TRF3 = 2.29868+03	TREH3 = 2.20380+03	TREH03 = 2.26522+03
	THH03 = 1.07208+03	TRC4 = 2.43267+03	TRF4 = 2.45977+03	TREH4 = 2.41102+03
	TREH04 = 2.53260+03	THH04 = 1.09633+03	TRC5 = 2.32449+03	TRF5 = 2.33825+03
	TREH5 = 2.33877+03	TREH05 = 2.32454+03	THH05 = 1.13226+03	TRC6 = 1.65312+03
	TRF6 = 1.64427+03	TREH6 = 1.71315+03	TREH06 = 1.65313+03	THH06 = 1.18843+03
	THH16 = 1.27933+03	THH6 = 1.06219+03	TLPH = 1.52782+03	TUPH = 1.05979+03
TIME = 1.10000+02	TPC0 = 9.78099+02	THW0 = 1.06129+03	TPH0 = 1.06001+03	TAW0 = 6.71110+02
	THH01 = 1.03232+03	WFLOW = 4.27800+01	MARGIN = 6.52957+01	PPRG = 2.09573+03
	PNSS = 1.29325+03	GCAA = 2.99003+00	GCCA = 1.00000+05	PRCD = 4.13873+02
	POWFLO = 6.42084+03	OCAERR = 2.37112+01	PROPN = 4.74223+01	ICAN = 2.40717+01
	DNCAA = 4.74223+01	NCAA = 2.40717+01	TRC1 = 1.12521+03	TRF1 = 1.12741+03
	TREH1 = 1.11801+03	TREH01 = 1.12520+03	THH01 = 1.03232+03	TRC2 = 1.83134+03
	TRF2 = 1.86696+03	TREH2 = 1.70176+03	TREH02 = 1.82823+03	THH02 = 1.04996+03
	TRC3 = 2.20716+03	TRF3 = 2.39253+03	TREH3 = 2.23431+03	TREH03 = 2.30649+03
	THH03 = 1.07196+03	TRC4 = 2.48802+03	TRF4 = 2.51619+03	TREH4 = 2.46221+03
	TREH04 = 2.48786+03	THH04 = 1.10188+03	TRC5 = 2.38026+03	TRF5 = 2.39391+03
	TREH5 = 2.39585+03	TREH05 = 2.38037+03	THH05 = 1.14553+03	TRC6 = 1.68071+03
	TRF6 = 1.67023+03	TREH6 = 1.74951+03	TREH06 = 1.68074+03	THH06 = 1.21254+03
	THH16 = 1.31913+03	THH6 = 1.06056+03	TLPH = 1.53559+03	TUPH = 1.05962+03
TIME = 1.15000+02	TPC0 = 9.59148+02	THW0 = 1.05950+03	TPH0 = 1.06002+03	TAW0 = 6.68750+02
	THH01 = 1.02329+03	WFLOW = 4.27800+01	MARGIN = 6.95869+01	PPRG = 2.09573+03
	PNSS = 1.39494+03	GCAA = 3.32685+00	GCCA = 1.00000+05	PRCD = 4.10543+02
	POWFLO = 6.17011+03	OCAERR = 2.54971+01	PROPN = 5.09943+01	ICAN = 2.65231+01
	DNCAA = 5.09943+01	NCAA = 2.65231+01	TRC1 = 1.12656+03	TRF1 = 1.12891+03
	TREH1 = 1.11836+03	TREH01 = 1.12654+03	THH01 = 1.02329+03	TRC2 = 1.83831+03
	TRF2 = 1.37635+03	TREH2 = 1.69296+03	TREH02 = 1.83279+03	THH02 = 1.04450+03
	TRC3 = 2.34305+03	TRF3 = 2.38090+03	TREH3 = 2.25741+03	TREH03 = 2.34171+03
	THH03 = 1.07102+03	TRC4 = 2.53998+03	TRF4 = 2.56940+03	TREH4 = 2.50905+03
	TREH04 = 2.53965+03	THH04 = 1.10686+03	TRC5 = 2.43529+03	TRF5 = 2.44891+03
	TREH5 = 2.45184+03	TREH05 = 2.43549+03	THH05 = 1.15849+03	TRC6 = 1.71175+03
	TRF6 = 1.59952+03	TREH6 = 1.78968+03	TREH06 = 1.71182+03	THH06 = 1.23650+03
	THH16 = 1.35857+03	THH6 = 1.05792+03	TLPH = 1.54413+03	TUPH = 1.05936+03

GCFR CASY

TIME = 1.20000+02
TPC0 = 9.39145+02 THW0 = 1.05671+03 TPO0 = 1.06005+03 TAW0 = 6.67131+02
THH01 = 1.01340+03 WFLOW = 9.27800+01 MARGIN = 7.54989+01 PPR6 = 2.09573+03
PNSS = 1.39671+03 GCAA = 3.70293+00 GCCA = 1.00000-05 PRCD = 4.07213-02
POWFLO = 5.42851-03 OCAERR = 2.82940+01 PROPN = 5.65880-01 ICAN = 2.92037+01
DNCAA = 5.65879-01 NCAA = 2.92037+01 TRC1 = 1.12758+03 TRF1 = 1.13010+03
TREN1 = 1.11827+03 TREH01 = 1.12753+03 THH01 = 1.01340+03 TRC2 = 1.83965+03
TRF2 = 1.88016+03 TREH2 = 1.67763+03 TREH02 = 1.83034+03 THH02 = 1.03825+03
TRC3 = 2.37257+03 TRF3 = 2.41325+03 TREH3 = 2.27195+03 TREH03 = 2.37003+03
THH03 = 1.06944+03 TRC4 = 2.58819+03 TRF4 = 2.61906+03 TREH4 = 2.55079+03
TREH04 = 2.58754+03 THH04 = 1.11136+03 TRC5 = 2.48941+03 TRF5 = 2.50310+03
TREH5 = 2.50644+03 TREH05 = 2.48972+03 THH05 = 1.17106+03 TRC6 = 1.74651+03
TRF6 = 1.73238+03 TREH6 = 1.83406+03 TREH06 = 1.74666+03 THH06 = 1.25996+03
THH16 = 1.39694+03 THH6 = 1.05427+03 TLPH = 1.55368+03 TUPH = 1.05899+03

TIME = 1.25000+02
TPC0 = 9.18468+02 THW0 = 1.05295+03 TPO0 = 1.06010+03 TAW0 = 6.66011+02
THH01 = 1.00303+03 WFLOW = 9.27800+01 MARGIN = 8.23751+01 PPR6 = 2.09573+03
PNSS = 1.39861+03 GCAA = 4.13198+00 GCCA = 1.00000-05 PRCD = 4.03883-02
POWFLO = 4.88726-03 OCAERR = 3.20452+01 PROPN = 6.40903-01 ICAN = 3.22130+01
DNCAA = 6.40904-01 NCAA = 3.22130+01 TRC1 = 1.12824+03 TRF1 = 1.13094+03
TREN1 = 1.11767+03 TREH01 = 1.12814+03 THH01 = 1.00303+03 TRC2 = 1.83521+03
TRF2 = 1.87824+03 TREH2 = 1.65555+03 TREH02 = 1.82020+03 THH02 = 1.03160+03
TRC3 = 2.39496+03 TRF3 = 2.43888+03 TREH3 = 2.27653+03 TREH03 = 2.39029+03
THH03 = 1.06754+03 TRC4 = 2.63208+03 TRF4 = 2.66471+03 TREH4 = 2.58638+03
TREH04 = 2.63083+03 THH04 = 1.11561+03 TRC5 = 2.54236+03 TRF5 = 2.55624+03
TREH5 = 2.55920+03 TREH05 = 2.54283+03 THH05 = 1.18335+03 TRC6 = 1.78529+03
TRF6 = 1.76909+03 TREH6 = 1.88302+03 TREH06 = 1.78562+03 THH06 = 1.28283+03
THH16 = 1.43375+03 THH6 = 1.04994+03 TLPH = 1.56452+03 TUPH = 1.05847+03

TIME = 1.30000+02
TPC0 = 8.97482+02 THW0 = 1.04845+03 TPO0 = 1.06017+03 TAW0 = 6.65227+02
THH01 = 9.92561+02 WFLOW = 9.27800+01 MARGIN = 8.91974+01 PPR6 = 2.09573+03
PNSS = 1.40067+03 GCAA = 4.62620+00 GCCA = 1.00000-05 PRCD = 4.00553-02
POWFLO = 4.32917-03 OCAERR = 3.65527+01 PROPN = 7.31055-01 ICAN = 3.56376+01
DNCAA = 7.31055-01 NCAA = 3.56376+01 TRC1 = 1.12849+03 TRF1 = 1.13140+03
TREN1 = 1.11650+03 TREH01 = 1.12829+03 THH01 = 9.92561+02 TRC2 = 1.82499+03
TRF2 = 1.87052+03 TREH2 = 1.62683+03 TREH02 = 1.80170+03 THH02 = 1.02492+03
TRC3 = 2.40924+03 TRF3 = 2.45692+03 TREH3 = 2.26958+03 TREH03 = 2.40092+03
THH03 = 1.06569+03 TRC4 = 2.67095+03 TRF4 = 2.70572+03 TREH4 = 2.61444+03
TREH04 = 2.66858+03 THH04 = 1.11992+03 TRC5 = 2.59379+03 TRF5 = 2.60805+03
TREH5 = 2.60946+03 TREH05 = 2.59445+03 THH05 = 1.19554+03 TRC6 = 1.82843+03
TRF6 = 1.80998+03 TREH6 = 1.93688+03 TREH06 = 1.82909+03 THH06 = 1.30508+03
THH16 = 1.46875+03 THH6 = 1.04526+03 TLPH = 1.57704+03 TUPH = 1.05778+03

GCFR CASE

TIME = 1.35000+02	TPC0 = 8.76517+02	THW0 = 1.04352+03	TPH0 = 1.06027+03	TAW0 = 6.64677+02
	THM01 = 9.82420+02	WFLOW = 4.27800+01	MARGIN = 9.60915+01	PPRG = 2.09573+03
	PNSS = 1.40295+03	GCAA = 5.19416+00	GCCA = 1.00000-05	PRCD = 3.97223-02
	POWFLOW = 3.82374-03	OCAERR = 4.14870+01	PROPN = 8.29661-01	ICAN = 3.95372+01
	DNCAA = 8.29662-01	NCAA = 3.95372+01	TRC1 = 1.12828+03	TRF1 = 1.13143+03
	TREH1 = 1.11472+03	TREH01 = 1.12790+03	THM01 = 9.82420+02	TRC2 = 1.80916+03
	TRF2 = 1.85711+03	TREH2 = 1.59229+03	TREH02 = 1.77463+03	THM02 = 1.01863+03
	TRC3 = 2.41443+03	TRF3 = 2.46637+03	TREH3 = 2.24976+03	TREH03 = 2.40009+03
	THM03 = 1.06425+03	TRC4 = 2.70381+03	TRF4 = 2.74125+03	TREH4 = 2.63321+03
	TREH04 = 2.69943+03	THM04 = 1.12461+03	TRC5 = 2.64319+03	TRF5 = 2.65811+03
	TREH5 = 2.65619+03	TREH05 = 2.64398+03	THM05 = 1.20789+03	TRC6 = 1.87619+03
	TRF6 = 1.85535+03	TREH6 = 1.99561+03	TREH06 = 1.87744+03	THM06 = 1.32689+03
	THM16 = 1.50195+03	THM6 = 1.04068+03	TLPH = 1.59172+03	TUPH = 1.05687+03
TIME = 1.40000+02	TPC0 = 8.55880+02	THW0 = 1.03855+03	TPH0 = 1.06039+03	TAW0 = 6.64293+02
	THM01 = 9.72956+02	WFLOW = 4.27800+01	MARGIN = 1.02417+02	PPRG = 2.09573+03
	PNSS = 1.40552+03	GCAA = 5.83936+00	GCCA = 1.00000-05	PRCD = 3.93893-02
	POWFLOW = 3.37274-03	OCAERR = 4.64466+01	PROPN = 9.28932-01	ICAN = 4.39352+01
	DNCAA = 9.28934-01	NCAA = 4.39352+01	TRC1 = 1.12758+03	TRF1 = 1.13099+03
	TREH1 = 1.11228+03	TREH01 = 1.12690+03	THM01 = 9.72996+02	TRC2 = 1.78818+03
	TRF2 = 1.83830+03	TREH2 = 1.55324+03	TREH02 = 1.73941+03	THM02 = 1.01311+03
	TRC3 = 2.40950+03	TRF3 = 2.46625+03	TREH3 = 2.21615+03	TREH03 = 2.38583+03
	THM03 = 1.06363+03	TRC4 = 2.72946+03	TRF4 = 2.77022+03	TREH4 = 2.64061+03
	TREH04 = 2.72161+03	THM04 = 1.13005+03	TRC5 = 2.68982+03	TRF5 = 2.70579+03
	TREH5 = 2.69793+03	TREH05 = 2.69051+03	THM05 = 1.22074+03	TRC6 = 1.92866+03
	TRF6 = 1.90535+03	TREH6 = 2.05862+03	TREH06 = 1.93088+03	THM06 = 1.34857+03
	THM16 = 1.53368+03	THM6 = 1.03667+03	TLPH = 1.60915+03	TUPH = 1.05572+03
TIME = 1.45000+02	TPC0 = 8.35833+02	THW0 = 1.03398+03	TPH0 = 1.06050+03	TAW0 = 6.64026+02
	THM01 = 9.64650+02	WFLOW = 4.27800+01	MARGIN = 1.07620+02	PPRG = 2.09573+03
	PNSS = 1.40845+03	GCAA = 6.55902+00	GCCA = 1.00000-05	PRCD = 3.90564-02
	POWFLOW = 2.97729-03	OCAERR = 5.10240+01	PROPN = 1.02048+00	ICAN = 4.88139+01
	DNCAA = 1.02048+00	NCAA = 4.88139+01	TRC1 = 1.12636+03	TRF1 = 1.13005+03
	TREH1 = 1.10920+03	TREH01 = 1.12520+03	THM01 = 9.64650+02	TRC2 = 1.76282+03
	TRF2 = 1.81472+03	TREH2 = 1.51155+03	TREH02 = 1.69743+03	THM02 = 1.00876+03
	TRC3 = 2.39378+03	TRF3 = 2.45562+03	TREH3 = 2.16896+03	TREH03 = 2.35668+03
	THM03 = 1.06421+03	TRC4 = 2.74644+03	TRF4 = 2.79132+03	TREH4 = 2.63445+03
	TREH04 = 2.73289+03	THM04 = 1.13664+03	TRC5 = 2.73266+03	TRF5 = 2.75022+03
	TREH5 = 2.73272+03	TREH05 = 2.73267+03	THM05 = 1.23450+03	TRC6 = 1.98560+03
	TRF6 = 1.95992+03	TREH6 = 2.12552+03	TREH06 = 1.98928+03	THM06 = 1.37059+03
	THM16 = 1.56464+03	THM6 = 1.03368+03	TLPH = 1.63003+03	TUPH = 1.05431+03

GCFR CASY

TIME = 1.50000+02	TPC0 = 8.16612+02	THW0 = 1.03023+03	TPH0 = 1.06056+03	TAW0 = 6.63839+02
	THH01 = 9.57709+02	WFLOW = 4.27800+01	MARGIN = 1.11072+02	PPRG = 2.09573+03
	PNSS = 1.41183+03	GCAA = 7.34346+00	GCCA = 1.00000-05	PRCD = 3.87234-02
	POWFLO = 2.63658-03	OCAERR = 5.47696+01	PROPN = 1.09539+00	ICAN = 5.91127+01
	DNCAA = 1.09539+00	NCAA = 5.41127+01	TRC1 = 1.12460+03	TRF1 = 1.12658+03
	TREH1 = 1.10554+03	TREH01 = 1.12279+03	THH01 = 9.57709+02	TRC2 = 1.73409+03
	TRF2 = 1.78727+03	TREH2 = 1.46927+03	TREH02 = 1.65088+03	THH02 = 1.00592+03
	TRC3 = 2.36729+03	TRF3 = 2.43421+03	TREH3 = 2.10980+03	TREH03 = 2.31242+03
	THH03 = 1.06637+03	TRC4 = 2.75327+03	TRF4 = 2.80305+03	TREH4 = 2.61298+03
	TREH04 = 2.73096+03	THH04 = 1.14481+03	TRC5 = 2.77034+03	TRF5 = 2.79022+03
	TREH5 = 2.75820+03	TREH05 = 2.76856+03	THH05 = 1.24970+03	TRC6 = 2.04636+03
	TRF6 = 2.01862+03	TREH6 = 2.19404+03	TREH06 = 2.05200+03	THH06 = 1.39368+03
	THH16 = 1.59591+03	THM6 = 1.03218+03	TLPH = 1.65510+03	TUPH = 1.05261+03

TIME = 1.55000+02	TPC0 = 7.98415+02	THW0 = 1.02776+03	TPH0 = 1.06053+03	TAW0 = 6.63711+02
	THH01 = 9.52459+02	WFLOW = 4.27800+01	MARGIN = 1.12190+02	PPRG = 2.09573+03
	PNSS = 1.41574+03	GCAA = 8.17535+00	GCCA = 1.00000-05	PRCD = 3.83904-02
	POWFLO = 2.34793-03	OCAERR = 5.72374+01	PROPN = 1.14475+00	ICAN = 5.97259+01
	DNCAA = 1.14475+00	NCAA = 5.97259+01	TRC1 = 1.12231+03	TRF1 = 1.12657+03
	TREH1 = 1.10138+03	TREH01 = 1.11967+03	THH01 = 9.52459+02	TRC2 = 1.70316+03
	TRF2 = 1.75704+03	TREH2 = 1.42828+03	TREH02 = 1.60239+03	THH02 = 1.00491+03
	TRC3 = 2.33079+03	TRF3 = 2.40237+03	TREH3 = 2.04170+03	TREH03 = 2.25444+03
	THH03 = 1.07050+03	TRC4 = 2.74854+03	TRF4 = 2.80399+03	TREH4 = 2.57542+03
	TREH04 = 2.71374+03	THH04 = 1.15503+03	TRC5 = 2.80124+03	TRF5 = 2.82431+03
	TREH5 = 2.77182+03	TREH05 = 2.79587+03	THH05 = 1.26696+03	TRC6 = 2.10975+03
	TRF6 = 2.08051+03	TREH6 = 2.26205+03	TREH06 = 2.11774+03	THH06 = 1.41872+03
	THH16 = 1.62887+03	THM6 = 1.03259+03	TLPH = 1.68510+03	TUPH = 1.05062+03

TIME = 1.60000+02	TPC0 = 7.81395+02	THW0 = 1.02701+03	TPH0 = 1.06034+03	TAW0 = 6.63622+02
	THH01 = 9.49128+02	WFLOW = 4.27800+01	MARGIN = 1.10459+02	PPRG = 2.09573+03
	PNSS = 1.42022+03	GCAA = 9.03011+00	GCCA = 1.00000-05	PRCD = 3.80574-02
	POWFLO = 2.10725-03	OCAERR = 5.79890+01	PROPN = 1.15978+00	ICAN = 6.55036+01
	DNCAA = 1.15978+00	NCAA = 6.55036+01	TRC1 = 1.11953+03	TRF1 = 1.12405+03
	TREH1 = 1.09685+03	TREH01 = 1.11591+03	THH01 = 9.49128+02	TRC2 = 1.67119+03
	TRF2 = 1.72519+03	TREH2 = 1.39001+03	TREH02 = 1.55448+03	THH02 = 1.00602+03
	TRC3 = 2.28584+03	TRF3 = 2.36122+03	TREH3 = 1.96859+03	TREH03 = 2.18590+03
	THH03 = 1.07694+03	TRC4 = 2.73148+03	TRF4 = 2.79299+03	TREH4 = 2.52262+03
	TREH04 = 2.68034+03	THH04 = 1.16775+03	TRC5 = 2.82358+03	TRF5 = 2.85080+03
	TREH5 = 2.77144+03	TREH05 = 2.81215+03	THH05 = 1.28691+03	TRC6 = 2.17403+03
	TRF6 = 2.14416+03	TREH6 = 2.32671+03	TREH06 = 2.18449+03	THH06 = 1.44665+03
	THH16 = 1.66500+03	THM6 = 1.03530+03	TLPH = 1.72059+03	TUPH = 1.04837+03

GCFR CASY

TIME = 1.65000+02	TPC0 = 7.65666+02	THW0 = 1.02838+03	TPH0 = 1.05992+03	TAW0 = 6.63560+02
	THH01 = 9.47845+02	WFLOW = 9.27800+01	MARGIN = 1.05367+02	PPRG = 2.09573+03
	PNSS = 1.42525+03	GCAA = 9.87528+00	GCCA = 1.00000-05	PRCD = 3.77244-02
	POWFLO = 1.91004-03	OCAERR = 5.66152+01	PROPN = 1.13230+00	ICAN = 7.12537+01
	DNCAA = 1.13230+00	NCAA = 7.12537+01	TRC1 = 1.11631+03	TRF1 = 1.12106+03
	TREH1 = 1.09210+03	TREH01 = 1.11165+03	THH01 = 9.47845+02	TRC2 = 1.63920+03
	TRF2 = 1.69282+03	TREH2 = 1.35544+03	TREH02 = 1.50927+03	THH02 = 1.00940+03
	TRC3 = 2.23463+03	TRF3 = 2.31265+03	TREH3 = 1.89486+03	TREH03 = 2.11132+03
	THH03 = 1.08589+03	TRC4 = 2.70218+03	TRF4 = 2.76970+03	TREH4 = 2.45737+03
	TREH04 = 2.63164+03	THH04 = 1.18328+03	TRC5 = 2.83581+03	TRF5 = 2.86803+03
	TREH5 = 2.75601+03	TREH05 = 2.81539+03	THH05 = 1.31003+03	TRC6 = 2.23702+03
	TRF6 = 2.20761+03	TREH6 = 2.38494+03	TREH06 = 2.24964+03	THH06 = 1.47827+03
	THH16 = 1.70558+03	THM6 = 1.04057+03	TLPH = 1.76183+03	TUPH = 1.04591+03
TIME = 1.70000+02	TPC0 = 7.51302+02	THW0 = 1.03222+03	TPH0 = 1.05920+03	TAW0 = 6.63518+02
	THH01 = 9.48595+02	WFLOW = 9.27800+01	MARGIN = 9.66424+01	PPRG = 2.09573+03
	PNSS = 1.43076+03	GCAA = 1.06735+01	GCCA = 1.00000-05	PRCD = 3.73914-02
	POWFLO = 1.75160-03	OCAERR = 5.27831+01	PROPN = 1.05566+00	ICAN = 7.67457+01
	DNCAA = 1.05566+00	NCAA = 7.67457+01	TRC1 = 1.11273+03	TRF1 = 1.11767+03
	TREH1 = 1.08727+03	TREH01 = 1.10706+03	THH01 = 9.48595+02	TRC2 = 1.60804+03
	TRF2 = 1.66087+03	TREH2 = 1.32502+03	TREH02 = 1.46820+03	THH02 = 1.01503+03
	TRC3 = 2.17967+03	TRF3 = 2.25900+03	TREH3 = 1.82432+03	TREH03 = 2.03553+03
	THH03 = 1.09739+03	TRC4 = 2.66175+03	TRF4 = 2.73466+03	TREH4 = 2.38393+03
	TREH04 = 2.57043+03	THH04 = 1.20172+03	TRC5 = 2.83689+03	TRF5 = 2.87469+03
	TREH5 = 2.72608+03	TREH05 = 2.80472+03	THH05 = 1.33656+03	TRC6 = 2.29632+03
	TRF6 = 2.26860+03	TREH6 = 2.43404+03	TREH06 = 2.31036+03	THH06 = 1.51400+03
	THH16 = 1.75138+03	THM6 = 1.04858+03	TLPH = 1.80861+03	TUPH = 1.04329+03
TIME = 1.75000+02	TPC0 = 7.38330+02	THW0 = 1.03870+03	TPH0 = 1.05814+03	TAW0 = 6.63488+02
	THH01 = 9.51140+02	WFLOW = 9.27800+01	MARGIN = 8.43548+01	PPRG = 2.09573+03
	PNSS = 1.43659+03	GCAA = 1.13853+01	GCCA = 1.00000-05	PRCD = 3.70584-02
	POWFLO = 1.62747-03	OCAERR = 4.63035+01	PROPN = 9.26010-01	ICAN = 8.17229+01
	DNCAA = 9.26010-01	NCAA = 8.17229+01	TRC1 = 1.10889+03	TRF1 = 1.11396+03
	TREH1 = 1.08253+03	TREH01 = 1.10231+03	THH01 = 9.51140+02	TRC2 = 1.57837+03
	TRF2 = 1.63011+03	TREH2 = 1.29887+03	TREH02 = 1.43204+03	THH02 = 1.02266+03
	TRC3 = 2.12338+03	TRF3 = 2.20277+03	TREH3 = 1.75975+03	TREH03 = 1.96274+03
	THH03 = 1.11115+03	TRC4 = 2.61226+03	TRF4 = 2.68945+03	TREH4 = 2.30715+03
	TREH04 = 2.50097+03	THH04 = 1.22279+03	TRC5 = 2.82647+03	TRF5 = 2.87001+03
	TREH5 = 2.68382+03	TREH05 = 2.78065+03	THH05 = 1.36623+03	TRC6 = 2.34971+03
	TRF6 = 2.32484+03	TREH6 = 2.47215+03	TREH06 = 2.36406+03	THH06 = 1.55367+03
	THH16 = 1.80242+03	THM6 = 1.05921+03	TLPH = 1.86008+03	TUPH = 1.04062+03

GCFR CASY

TIME = 1.80000+02	TPCO = 7.26752+02	THW0 = 1.04782+03	TPH0 = 1.05670+03	TAW0 = 6.63466+02
	THM01 = 9.55027+02	WFLOW = 4.27800+01	MARGIN = 6.71445+01	PPRG = 2.09573+03
	PNSS = 1.44252+03	GCAA = 1.19733+01	GCCA = 1.00000-05	PRCD = 3.67254-02
	POWFLO = 1.53363-03	OCAERR = 3.71754+01	PROPN = 7.43508-01	ICAN = 8.59187+01
	DNCAA = 7.43505-01	NCAA = 8.59187+01	TRC1 = 1.10488+03	TRF1 = 1.11003+03
	TREH1 = 1.07801+03	TREH01 = 1.09761+03	THM01 = 9.55027+02	TRC2 = 1.55067+03
	TRF2 = 1.60110+03	TREH2 = 1.27684+03	TREH02 = 1.40112+03	THM02 = 1.03175+03
	TRC3 = 2.06792+03	TRF3 = 2.14625+03	TREH3 = 1.70292+03	TREH03 = 1.89613+03
	THM03 = 1.12653+03	TRC4 = 2.55640+03	TRF4 = 2.63641+03	TREH4 = 2.23176+03
	TREH04 = 2.42818+03	THM04 = 1.24575+03	TRC5 = 2.80532+03	TRF5 = 2.85422+03
	TREH5 = 2.63288+03	TREH05 = 2.74540+03	THM05 = 1.39827+03	TRC6 = 2.39541+03
	TRF6 = 2.37434+03	TREH6 = 2.49866+03	TREH06 = 2.40885+03	THM06 = 1.59646+03
	THM16 = 1.85779+03	THM6 = 1.07207+03	TLPH = 1.91481+03	TUPH = 1.03798+03
TIME = 1.85000+02	TPCO = 7.16531+02	THW0 = 1.05928+03	TPH0 = 1.05490+03	TAW0 = 6.63452+02
	THM01 = 9.59571+02	WFLOW = 4.27800+01	MARGIN = 4.67142+01	PPRG = 2.09573+03
	PNSS = 1.44832+03	GCAA = 1.24059+01	GCCA = 1.00000-05	PRCD = 3.63924-02
	POWFLO = 1.46674-03	OCAERR = 2.57233+01	PROPN = 5.14467-01	ICAN = 8.90818+01
	DNCAA = 5.14466-01	NCAA = 8.90818+01	TRC1 = 1.10082+03	TRF1 = 1.10598+03
	TREH1 = 1.07383+03	TREH01 = 1.09310+03	THM01 = 9.59571+02	TRC2 = 1.52525+03
	TRF2 = 1.57422+03	TREH2 = 1.25870+03	TREH02 = 1.37538+03	THM02 = 1.04143+03
	TRC3 = 2.01504+03	TRF3 = 2.09142+03	TREH3 = 1.65462+03	TREH03 = 1.83765+03
	THM03 = 1.14254+03	TRC4 = 2.49717+03	TRF4 = 2.57839+03	TREH4 = 2.16155+03
	TREH04 = 2.35670+03	THM04 = 1.26947+03	TRC5 = 2.77505+03	TRF5 = 2.82846+03
	TREH5 = 2.57747+03	TREH05 = 2.70229+03	THM05 = 1.43134+03	TRC6 = 2.43241+03
	TRF6 = 2.41573+03	TREH6 = 2.51421+03	TREH06 = 2.44387+03	THM06 = 1.64085+03
	THM16 = 1.91582+03	THM6 = 1.08638+03	TLPH = 1.97091+03	TUPH = 1.03545+03
TIME = 1.90000+02	TPCO = 7.07606+02	THW0 = 1.07241+03	TPH0 = 1.05278+03	TAW0 = 6.63446+02
	THM01 = 9.63926+02	WFLOW = 4.27800+01	MARGIN = 2.52735+01	PPRG = 2.09573+03
	PNSS = 1.45376+03	GCAA = 1.26632+01	GCCA = 1.00000-05	PRCD = 3.60594-02
	POWFLO = 1.42378-03	OCAERR = 1.25927+01	PROPN = 2.51855-01	ICAN = 9.10097+01
	DNCAA = 2.51855-01	NCAA = 9.10097+01	TRC1 = 1.09681+03	TRF1 = 1.10192+03
	TREH1 = 1.07007+03	TREH01 = 1.08890+03	THM01 = 9.63926+02	TRC2 = 1.50225+03
	TRF2 = 1.54970+03	TREH2 = 1.24411+03	TREH02 = 1.35454+03	THM02 = 1.05069+03
	TRC3 = 1.96596+03	TRF3 = 2.03979+03	TREH3 = 1.61492+03	TREH03 = 1.78820+03
	THM03 = 1.15794+03	TRC4 = 2.43739+03	TRF4 = 2.51831+03	TREH4 = 2.09916+03
	TREH04 = 2.29025+03	THM04 = 1.29250+03	TRC5 = 2.73788+03	TRF5 = 2.79462+03
	TREH5 = 2.52169+03	TREH05 = 2.65508+03	THM05 = 1.46379+03	TRC6 = 2.46052+03
	TRF6 = 2.44838+03	TREH6 = 2.52044+03	TREH06 = 2.46927+03	THM06 = 1.68494+03
	THM16 = 1.97433+03	THM6 = 1.10103+03	TLPH = 2.02630+03	TUPH = 1.03309+03

GCFR CASEY

TIME = 1.95000+02

TPC0 = 6.99892+02	THW0 = 1.08619+03	TPH0 = 1.05092+03	TAW0 = 6.63443+02
THH01 = 9.67241+02	WFLOW = 4.27800+01	MARGIN = 4.84579+00	PPRG = 2.09573+03
PNSS = 1.45866+03	GCAA = 1.27390+01	GCCA = 1.00000-05	PRCD = 3.57264-02
POWFLO = 1.40225-03	OCAERR = -1.19150+00	PROP = -2.38300-02	ICAN = 9.15839+01
DNCAA = -2.38295-02	NCAA = 9.15839+01	TRC1 = 1.09292+03	TRF1 = 1.09794+03
TREH1 = 1.06675+03	TREH01 = 1.08510+03	THH01 = 9.67241+02	TRC2 = 1.48176+03
TRF2 = 1.52766+03	TREH2 = 1.23273+03	TREH02 = 1.33820+03	THH02 = 1.05848+03
TRC3 = 1.92146+03	TRF3 = 1.99219+03	TREH3 = 1.58332+03	TREH03 = 1.74773+03
THH03 = 1.17148+03	TRC4 = 2.37947+03	TRF4 = 2.45882+03	TREH4 = 2.04588+03
TREH04 = 2.23116+03	THH04 = 1.31336+03	TRC5 = 2.69634+03	TRF5 = 2.75506+03
TRH5 = 2.46879+03	TREH05 = 2.60726+03	THH05 = 1.49387+03	TRC6 = 2.48024+03
TRF6 = 2.47242+03	TREH6 = 2.51956+03	TREH06 = 2.48607+03	THH06 = 1.72674+03
THH16 = 2.03168+03	THH6 = 1.11470+03	TLPH = 2.07905+03	TUPH = 1.03092+03

TIME = 2.00000+02

TPC0 = 6.93255+02	THW0 = 1.09928+03	TPH0 = 1.04796+03	TAW0 = 6.63448+02
THH01 = 9.68753+02	WFLOW = 4.27800+01	MARGIN = -1.89414+01	PPRG = 2.09573+03
PNSS = 1.46285+03	GCAA = 1.26403+01	GCCA = 1.00000-05	PRCD = 3.53934-02
POWFLO = 1.40002-03	OCAERR = -1.42810+01	PROP = -2.85621-01	ICAN = 9.07983+01
DNCAA = -2.85620-01	NCAA = 9.07983+01	TRC1 = 1.08923+03	TRF1 = 1.09412+03
TREH1 = 1.06368+03	TREH01 = 1.08171+03	THH01 = 9.68753+02	TRC2 = 1.46375+03
TRF2 = 1.50812+03	TREH2 = 1.22419+03	TREH02 = 1.32589+03	THH02 = 1.06388+03
TRC3 = 1.88204+03	TRF3 = 1.94984+03	TREH3 = 1.55915+03	TREH03 = 1.71578+03
THH03 = 1.18205+03	TRC4 = 2.32530+03	TRF4 = 2.40209+03	TREH4 = 2.00214+03
TREH04 = 2.18069+03	THH04 = 1.33070+03	TRC5 = 2.65290+03	TRF5 = 2.71226+03
TRH5 = 2.42109+03	TREH05 = 2.56159+03	THH05 = 1.52006+03	TRC6 = 2.49260+03
TRF6 = 2.48862+03	TREH6 = 2.51385+03	TREH06 = 2.49570+03	THH06 = 1.76451+03
THH16 = 2.08418+03	THH6 = 1.12603+03	TLPH = 2.12764+03	TUPH = 1.02891+03

*** INPUT TO AFGEN 297 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1103+03 AT TIME = 2.0500+02 ***

*** INPUT TO AFGEN 300 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1103+03 AT TIME = 2.0500+02 ***

*** INPUT TO AFGEN 297 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1103+03 AT TIME = 2.0500+02 ***

*** INPUT TO AFGEN 300 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1103+03 AT TIME = 2.0500+02 ***

*** INPUT TO AFGEN 297 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1103+03 AT TIME = 2.0500+02 ***

*** INPUT TO AFGEN 300 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1103+03 AT TIME = 2.0500+02 ***

TIME = 2.05000+02

TPC0 = 6.87709+02	THW0 = 1.11030+03	TPH0 = 1.04555+03	TAW0 = 6.63460+02
THH01 = 9.68157+02	WFLOW = 4.27800+01	MARGIN = -3.61791+01	PPRG = 2.09573+03
PNSS = 1.46628+03	GCAA = 1.23931+01	GCCA = 1.00000-05	PRCD = 3.50605-02
POWFLO = 1.41452-03	OCAERR = -2.52997+01	PROP = -5.05994-01	ICAN = 8.87963+01
DNCAA = -5.05997-01	NCAA = 8.87963+01	TRC1 = 1.08578+03	TRF1 = 1.09050+03
TREH1 = 1.06140+03	TREH01 = 1.07873+03	THH01 = 9.68157+02	TRC2 = 1.44815+03
TRF2 = 1.49134+03	TREH2 = 1.21811+03	TREH02 = 1.31705+03	THH02 = 1.06635+03
TRC3 = 1.84779+03	TRF3 = 1.91245+03	TREH3 = 1.54141+03	TREH03 = 1.69137+03
THH03 = 1.18895+03	TRC4 = 2.27611+03	TRF4 = 2.34972+03	TREH4 = 1.96737+03
TREH04 = 2.13887+03	THH04 = 1.34369+03	TRC5 = 2.60972+03	TRF5 = 2.66857+03
TRH5 = 2.37965+03	TREH05 = 2.51982+03	THH05 = 1.54132+03	TRC6 = 2.49891+03
TRF6 = 2.49810+03	TREH6 = 2.50525+03	TREH06 = 2.49980+03	THH06 = 1.79707+03
THH16 = 2.13229+03	THH6 = 1.13400+03	TLPH = 2.17109+03	TUPH = 1.02704+03

*** INPUT TO AFGEN 297 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1104+03 AT TIME = 2.0504+02 ***

*** INPUT TO AFGEN 300 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1104+03 AT TIME = 2.0504+02 ***
*** INPUT TO AFGEN 297 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1124+03 AT TIME = 2.0616+02 ***
*** INPUT TO AFGEN 300 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1124+03 AT TIME = 2.0616+02 ***
*** INPUT TO AFGEN 297 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1114+03 AT TIME = 2.0558+02 ***
*** INPUT TO AFGEN 300 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1114+03 AT TIME = 2.0558+02 ***
*** INPUT TO AFGEN 297 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1114+03 AT TIME = 2.0558+02 ***
*** INPUT TO AFGEN 300 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1114+03 AT TIME = 2.0558+02 ***
*** INPUT TO AFGEN 297 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1115+03 AT TIME = 2.0562+02 ***
*** INPUT TO AFGEN 300 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1115+03 AT TIME = 2.0562+02 ***
*** INPUT TO AFGEN 297 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1124+03 AT TIME = 2.0616+02 ***
*** INPUT TO AFGEN 300 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1124+03 AT TIME = 2.0616+02 ***
*** INPUT TO AFGEN 297 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1124+03 AT TIME = 2.0616+02 ***
*** INPUT TO AFGEN 300 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1124+03 AT TIME = 2.0616+02 ***

GCFR CASY

TIME = 2.10000+02	TPCO = 6.83024+02	THW0 = 1.11807+03	TPH0 = 1.04338+03	TAW0 = 6.63478+02
	THH01 = 9.65254+02	WFLOW = 4.27800+01	MARGIN = -4.52312+01	PPRG = 2.09573+03
	PNSS = 1.46889+03	GCAA = 1.20329+01	GCCA = 1.00000-05	PRCD = 3.47275-02
	POWFLO = 1.44302-03	OCAERR = -3.30665+01	PROPN = -6.61329-01	ICAN = 8.58462+01
	DNCAA = -6.61331-01	NCAA = 8.58462+01	TRC1 = 1.08258+03	TRF1 = 1.08714+03
	TREH1 = 1.05926+03	TREH01 = 1.07610+03	THH01 = 9.65254+02	TRC2 = 1.43482+03
	TRF2 = 1.47629+03	TREH2 = 1.21407+03	TREH02 = 1.31110+03	THH02 = 1.06575+03
	TRC3 = 1.81865+03	TRF3 = 1.88024+03	TREH3 = 1.52909+03	TREH03 = 1.67342+03
	THH03 = 1.19192+03	TRC4 = 2.23263+03	TRF4 = 2.30270+03	TREH4 = 1.94064+03
	TREH04 = 2.10515+03	THH04 = 1.35196+03	TRC5 = 2.56845+03	TRF5 = 2.62591+03
	TREH5 = 2.34472+03	TREH05 = 2.48278+03	THH05 = 1.55720+03	TRC6 = 2.50053+03
	TRF6 = 2.50219+03	TREH6 = 2.49527+03	TREH06 = 2.49984+03	THH06 = 1.82384+03
	THH16 = 2.17477+03	THH6 = 1.13794+03	TLPH = 2.20903+03	TUPH = 1.02523+03

*** INPUT TO AFGEN 9 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1105+03 AT TIME = 2.1347+02 ***

*** INPUT TO AFGEN 12 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1105+03 AT TIME = 2.1347+02 ***

*** INPUT TO AFGEN 9 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1105+03 AT TIME = 2.1347+02 ***

*** INPUT TO AFGEN 12 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1105+03 AT TIME = 2.1347+02 ***

*** INPUT TO AFGEN 9 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1106+03 AT TIME = 2.1355+02 ***

*** INPUT TO AFGEN 12 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1106+03 AT TIME = 2.1355+02 ***

*** INPUT TO AFGEN 9 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1114+03 AT TIME = 2.1405+02 ***

*** INPUT TO AFGEN 12 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1114+03 AT TIME = 2.1405+02 ***

*** INPUT TO AFGEN 9 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1114+03 AT TIME = 2.1405+02 ***

*** INPUT TO AFGEN 12 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1114+03 AT TIME = 2.1405+02 ***

*** INPUT TO AFGEN 9 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1115+03 AT TIME = 2.1413+02 ***

*** INPUT TO AFGEN 12 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1115+03 AT TIME = 2.1413+02 ***

*** INPUT TO AFGEN 9 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1127+03 AT TIME = 2.1500+02 ***

*** INPUT TO AFGEN 12 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1127+03 AT TIME = 2.1500+02 ***

*** INPUT TO AFGEN 9 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1127+03 AT TIME = 2.1500+02 ***

*** INPUT TO AFGEN 12 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1127+03 AT TIME = 2.1500+02 ***

TIME = 2.15000+02	TPCO = 6.79132+02	THW0 = 1.12198+03	TPH0 = 1.04168+03	TAW0 = 6.63504+02
	THH01 = 9.60380+02	WFLOW = 4.27800+01	MARGIN = -4.53479+01	PPRG = 2.09573+03
	PNSS = 1.47072+03	GCAA = 1.16061+01	GCCA = 1.00000-05	PRCD = 3.43945-02
	POWFLO = 1.48174-03	OCAERR = -3.69751+01	PROPN = -7.39503-01	ICAN = 8.23098+01
	DNCAA = -7.39502-01	NCAA = 8.23098+01	TRC1 = 1.07964+03	TRF1 = 1.08402+03
	TREH1 = 1.05736+03	TREH01 = 1.07377+03	THH01 = 9.60380+02	TRC2 = 1.42358+03
	TRF2 = 1.46373+03	TREH2 = 1.21161+03	TREH02 = 1.30738+03	THH02 = 1.06237+03
	TRC3 = 1.79430+03	TRF3 = 1.85301+03	TREH3 = 1.52101+03	TREH03 = 1.66059+03
	THH03 = 1.19127+03	TRC4 = 2.19501+03	TRF4 = 2.26149+03	TREH4 = 1.92049+03

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TREH04= 2.07833+03 THH04 = 1.35575+03 TRC5 = 2.53021+03 TRF5 = 2.58569+03
TREH5 = 2.31568+03 TREH05= 2.45047+03 THH05 = 1.56787+03 TRC6 = 2.49862+03
TRF6 = 2.50216+03 TREH6 = 2.46475+03 TREH06= 2.49693+03 THH06 = 1.84488+03
THH16 = 2.21153+03 THM6 = 1.13769+03 TLPH = 2.24155+03 TUPH = 1.02344+03

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*** INPUT TO AEGEN 9 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1128+03 AT TIME = 2.1508+02 ***

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*** INPUT TO AEGEN 12 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1128+03 AT TIME = 2.1508+02 ***

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*** INPUT TO AEGEN 9 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1142+03 AT TIME = 2.1616+02 ***

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*** INPUT TO AEGEN 12 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1142+03 AT TIME = 2.1616+02 ***

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TIME = 2.20000+02 TPC0 = 6.75928+02 THW0 = 1.12191+03 TPH0 = 1.04068+03 TAW0 = 6.63528+02
THH01 = 9.54083+02 WFLOW = 4.27800+01 MARGIN= -3.75947+01 PPRG = 2.09573+03
PNSS = 1.47181+03 GCAA = 1.11592+01 GCCA = 1.00000-05 PRCD = 3.40615-02
POWFLO= 1.52615-03 OCAERR= -3.69137+01 PROPN = -7.38275-01 ICAN = 7.85818+01
DNCAA = -7.38276-01 NCA = 7.85818+01 TRC1 = 1.07694+03 TRF1 = 1.08116+03
TREH1 = 1.05562+03 TREH01= 1.07165+03 THH01 = 9.54083+02 TRC2 = 1.41420+03
TRF2 = 1.45314+03 TREH2 = 1.21026+03 TREH02= 1.30522+03 THH02 = 1.05686+03
TRC3 = 1.77428+03 TRF3 = 1.83035+03 TREH3 = 1.51600+03 TREH03= 1.65159+03
THH03 = 1.18771+03 TRC4 = 2.16303+03 TRF4 = 2.22607+03 TREH4 = 1.90541+03
TREH04= 2.05704+03 THH04 = 1.35582+03 TRC5 = 2.49553+03 TRF5 = 2.54875+03
TREH5 = 2.29152+03 TREH05= 2.42238+03 THH05 = 1.57403+03 TRC6 = 2.49421+03
TRF6 = 2.49906+03 TREH6 = 2.47417+03 TREH06= 2.49198+03 THH06 = 1.86079+03
THH16 = 2.24290+03 THM6 = 1.13370+03 TLPH = 2.26905+03 TUPH = 1.02162+03

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*** INPUT TO AEGEN 15 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1105+03 AT TIME = 2.2232+02 ***

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*** INPUT TO AEGEN 18 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1105+03 AT TIME = 2.2232+02 ***

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*** INPUT TO AEGEN 15 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1105+03 AT TIME = 2.2232+02 ***

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*** INPUT TO AEGEN 18 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1105+03 AT TIME = 2.2232+02 ***

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*** INPUT TO AEGEN 15 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1106+03 AT TIME = 2.2240+02 ***

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*** INPUT TO AEGEN 18 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1106+03 AT TIME = 2.2240+02 ***

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*** INPUT TO AEGEN 15 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1112+03 AT TIME = 2.2289+02 ***

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*** INPUT TO AEGEN 18 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1112+03 AT TIME = 2.2289+02 ***

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*** INPUT TO AEGEN 15 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1112+03 AT TIME = 2.2289+02 ***

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*** INPUT TO AEGEN 18 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1112+03 AT TIME = 2.2289+02 ***

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*** INPUT TO AEGEN 15 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1113+03 AT TIME = 2.2297+02 ***

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*** INPUT TO AEGEN 18 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1113+03 AT TIME = 2.2297+02 ***

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*** INPUT TO AEGEN 15 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1118+03 AT TIME = 2.2347+02 ***

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*** INPUT TO AEGEN 18 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1118+03 AT TIME = 2.2347+02 ***

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*** INPUT TO AEGEN 15 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1118+03 AT TIME = 2.2347+02 ***

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*** INPUT TO AFGEN 18 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1118+03 AT TIME = 2.2347+02 ***
*** INPUT TO AFGEN 15 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1119+03 AT TIME = 2.2355+02 ***
*** INPUT TO AFGEN 18 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1119+03 AT TIME = 2.2355+02 ***
*** INPUT TO AFGEN 15 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1124+03 AT TIME = 2.2405+02 ***
*** INPUT TO AFGEN 18 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1124+03 AT TIME = 2.2405+02 ***

GCFR CASY

TIME = 2.25000+02	TPC0 = 6.73312+02	THW0 = 1.11825+03	TPH0 = 1.04061+03	TAW0 = 6.63545+02
	THH01 = 9.47134+02	WFLOW = 4.27800+01	MARGIN = -2.35178+01	PPRG = 2.09573+03
	PNSS = 1.47225+03	GCAA = 1.07375+01	GCCA = 1.00000-05	PRCD = 3.37285-02
	POWFLO = 1.57059-03	OCAERR = -3.32461+01	PROP = -6.64922-01	ICAN = 7.50459+01
	DNCAA = -6.64923-01	NCAA = 7.50459+01	TRC1 = 1.07444+03	TRF1 = 1.07852+03
	TREM1 = 1.05395+03	TREM01 = 1.06965+03	THH01 = 9.47134+02	TRC2 = 1.40639+03
	TRF2 = 1.44425+03	TREM2 = 1.20948+03	TREM02 = 1.30392+03	THH02 = 1.05016+03
	TRC3 = 1.75797+03	TRF3 = 1.81173+03	TREM3 = 1.51283+03	TREM03 = 1.64506+03
	THH03 = 1.18230+03	TRC4 = 2.13610+03	TRF4 = 2.19603+03	TREM4 = 1.89375+03
	TREM04 = 2.03976+03	THH04 = 1.35329+03	TRC5 = 2.46446+03	TRF5 = 2.51540+03
	TREM5 = 2.27095+03	TREM05 = 2.39765+03	THH05 = 1.57680+03	TRC6 = 2.48802+03
	TRF6 = 2.49380+03	TREM6 = 2.46360+03	TREM06 = 2.48555+03	THH06 = 1.87254+03
	THH16 = 2.26944+03	THW6 = 1.12693+03	TLPH = 2.29210+03	TUPH = 1.01975+03

TIME = 2.30000+02	TPC0 = 6.71194+02	THW0 = 1.11184+03	TPH0 = 1.04169+03	TAW0 = 6.63544+02
	THH01 = 9.40367+02	WFLOW = 4.27800+01	MARGIN = -5.59509+00	PPRG = 2.09573+03
	PNSS = 1.47212+03	GCAA = 1.03791+01	GCCA = 1.00000-05	PRCD = 3.33955-02
	POWFLO = 1.60879-03	OCAERR = -2.68411+01	PROP = -5.36823-01	ICAN = 7.20217+01
	DNCAA = -5.36826-01	NCAA = 7.20217+01	TRC1 = 1.07210+03	TRF1 = 1.07606+03
	TREM1 = 1.05227+03	TREM01 = 1.06772+03	THH01 = 9.40367+02	TRC2 = 1.39983+03
	TRF2 = 1.43677+03	TREM2 = 1.20877+03	TREM02 = 1.30279+03	THH02 = 1.04329+03
	TRC3 = 1.74464+03	TRF3 = 1.79646+03	TREM3 = 1.51031+03	TREM03 = 1.63974+03
	THH03 = 1.17625+03	TRC4 = 2.11340+03	TRF4 = 2.17065+03	TREM4 = 1.88389+03
	TREM04 = 2.02500+03	THH04 = 1.34949+03	TRC5 = 2.43669+03	TRF5 = 2.48552+03
	TREM5 = 2.25258+03	TREM05 = 2.37526+03	THH05 = 1.57750+03	TRC6 = 2.48053+03
	TRF6 = 2.48699+03	TREM6 = 2.45287+03	TREM06 = 2.47796+03	THH06 = 1.88125+03
	THH16 = 2.29177+03	THW6 = 1.11860+03	TLPH = 2.31128+03	TUPH = 1.01781+03

*** INPUT TO AFGEN 21 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1103+03 AT TIME = 2.3174+02 ***

*** INPUT TO AFGEN 24 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1103+03 AT TIME = 2.3174+02 ***

*** INPUT TO AFGEN 21 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1103+03 AT TIME = 2.3174+02 ***

*** INPUT TO AFGEN 24 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1103+03 AT TIME = 2.3174+02 ***

*** INPUT TO AFGEN 21 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1104+03 AT TIME = 2.3182+02 ***

*** INPUT TO AFGEN 24 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1104+03 AT TIME = 2.3182+02 ***

*** INPUT TO AFGEN 21 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1108+03 AT TIME = 2.3232+02 ***

*** INPUT TO AFGEN 24 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1108+03 AT TIME = 2.3232+02 ***

*** INPUT TO AFGEN 21 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1108+03 AT TIME = 2.3232+02 ***

*** INPUT TO AFGEN 24 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1108+03 AT TIME = 2.3232+02 ***

*** INPUT TO AFGEN 21 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1108+03 AT TIME = 2.3240+02 ***

*** INPUT TO AFGEN 24 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1108+03 AT TIME = 2.3240+02 ***

*** INPUT TO AFGEN 21 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1112+03 AT TIME = 2.3289+02 ***

*** INPUT TO AFGEN 24 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1112+03 AT TIME = 2.3289+02 ***

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*** INPUT TO AFGEN 21 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1112+03 AT TIME = 2.3289+02 ***
*** INPUT TO AFGEN 24 ABOVE RANGE OF FUNCTION PARTRY--INPUT = 1.1112+03 AT TIME = 2.3289+02 ***
*** INPUT TO AFGEN 21 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1112+03 AT TIME = 2.3297+02 ***
*** INPUT TO AFGEN 24 ABOVE RANGE OF FUNCTION PARTRY--INPUT = 1.1112+03 AT TIME = 2.3297+02 ***
*** INPUT TO AFGEN 21 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1115+03 AT TIME = 2.3347+02 ***
*** INPUT TO AFGEN 24 ABOVE RANGE OF FUNCTION PARTRY--INPUT = 1.1115+03 AT TIME = 2.3347+02 ***

TIME = 2.35000+02
TPC0 = 6.69492+02 THW0 = 1.10382+03 TPH0 = 1.09405+03 TAV0 = 6.63514+02
THW01 = 9.34519+02 WFLOW = 4.27800+03 MARGIN = 1.08946+01 PPPG = 2.09573+03
PNSS = 1.47152+03 GCAA = 1.01097+03 GCCA = 1.00000-05 PRCD = 3.30625-02
POWFL0 = 1.63518-03 OCAERR = -1.88238+01 PROPW = -3.76476-01 ICAN = 6.97294+01
DNCAA = -3.76477-01 NCAA = 6.97294+01 TRC1 = 1.06987+03 TRF1 = 1.07374+03
TREW1 = 1.05051+03 TREW01 = 1.06578+03 THM01 = 9.34519+02 TRC2 = 1.39416+03
TRF2 = 1.43035+03 TREW2 = 1.20763+03 TREW02 = 1.30122+03 THM02 = 1.03720+03
TRC3 = 1.73350+03 TRF3 = 1.78378+03 TREW3 = 1.50742+03 TREW03 = 1.63454+03
THM03 = 1.17067+03 TRC4 = 2.09395+03 TRF4 = 2.14904+03 TREW4 = 1.87447+03
TREW04 = 2.01147+03 THM04 = 1.34567+03 TRC5 = 2.41160+03 TRF5 = 2.45864+03
TREW5 = 2.23514+03 TREW05 = 2.35424+03 THM05 = 1.57742+03 TRC6 = 2.47202+03
TRF6 = 2.47900+03 TREW6 = 2.44171+03 TREW06 = 2.46938+03 THM06 = 1.88806+03
THM16 = 2.31051+03 THM6 = 1.10996+03 TLPH = 2.32714+03 TUPH = 1.01582+03

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GCFR CASY

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TIME = 2.40000+02  TPC0 = 6.68136+02  THW0 = 1.09545+03  TPH0 = 1.04777+03  TAW0 = 6.63450+02
THH01 = 9.30122+02  WFLOW = 4.27800+01  MARGIN = 2.35038+01  PPRG = 2.09573+03
PNSS = 1.47051+03  GCAA = 9.94078+00  GCCA = 1.00000-05  PRCD = 3.27295-02
POWFLO = 1.64622-03  OCAERR = -1.04547+01  PROPN = -2.69095-01  ICAN = 6.82659+01
DNCAA = -2.09092-01  NCAA = 6.82659+01  TRC1 = 1.06770+03  TRF1 = 1.07150+03
TREH1 = 1.04862+03  TREH01 = 1.06378+03  THH01 = 9.30122+02  TRC2 = 1.38904+03
TRF2 = 1.42464+03  TREH2 = 1.20575+03  TREH02 = 1.29881+03  THH02 = 1.03260+03
TRC3 = 1.72379+03  TRF3 = 1.77291+03  TREH3 = 1.50340+03  TREH03 = 1.62864+03
THH03 = 1.16645+03  TRC4 = 2.07678+03  TRF4 = 2.13022+03  TREH4 = 1.86443+03
TREH04 = 1.99812+03  THH04 = 1.34284+03  TRC5 = 2.38849+03  TRF5 = 2.43411+03
TREH5 = 2.21765+03  TREH05 = 2.33376+03  THH05 = 1.57762+03  TRC6 = 2.46257+03
TRF6 = 2.47003+03  TREH6 = 2.42983+03  TREH06 = 2.45983+03  THH06 = 1.89390+03
THH16 = 2.32616+03  THH6 = 1.10225+03  TLPH = 2.34011+03  TUPH = 1.01379+03

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*** INPUT TO AFGEN 27 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1101+03 AT TIME = 2.4347+02 ***
*** INPUT TO AFGEN 30 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1101+03 AT TIME = 2.4347+02 ***
*** INPUT TO AFGEN 27 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1101+03 AT TIME = 2.4347+02 ***
*** INPUT TO AFGEN 30 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1101+03 AT TIME = 2.4347+02 ***
*** INPUT TO AFGEN 27 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1101+03 AT TIME = 2.4355+02 ***
*** INPUT TO AFGEN 30 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1101+03 AT TIME = 2.4355+02 ***
*** INPUT TO AFGEN 27 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1102+03 AT TIME = 2.4405+02 ***
*** INPUT TO AFGEN 30 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1102+03 AT TIME = 2.4405+02 ***
*** INPUT TO AFGEN 27 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1102+03 AT TIME = 2.4405+02 ***
*** INPUT TO AFGEN 30 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1102+03 AT TIME = 2.4405+02 ***
*** INPUT TO AFGEN 27 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1102+03 AT TIME = 2.4413+02 ***
*** INPUT TO AFGEN 30 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1102+03 AT TIME = 2.4413+02 ***
*** INPUT TO AFGEN 27 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1103+03 AT TIME = 2.4500+02 ***
*** INPUT TO AFGEN 30 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1103+03 AT TIME = 2.4500+02 ***
*** INPUT TO AFGEN 27 ABOVE RANGE OF FUNCTION RFTSL --INPUT = 1.1103+03 AT TIME = 2.4500+02 ***
*** INPUT TO AFGEN 30 ABOVE RANGE OF FUNCTION PARTRT--INPUT = 1.1103+03 AT TIME = 2.4500+02 ***

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TIME = 2.45000+02  TPC0 = 6.67063+02  THW0 = 1.08781+03  TPH0 = 1.05280+03  TAW0 = 6.63344+02
THH01 = 9.27413+02  WFLOW = 4.27800+01  MARGIN = 3.35289+01  PPRG = 2.09573+03
PNSS = 1.46919+03  ECRA = 9.86864+00  GCCA = 1.00000-05  PRCD = 3.23965-02
POWFLO = 1.64138-03  OCAERR = -2.80786+00  PROPN = -5.61572-02  ICAN = 6.76102+01
DNCAA = -5.61609-02  NCAA = 6.76102+01  TRC1 = 1.06553+03  TRF1 = 1.06931+03
TREH1 = 1.04659+03  TREH01 = 1.06168+03  THH01 = 9.27413+02  TRC2 = 1.38416+03
TRF2 = 1.41932+03  TREH2 = 1.20296+03  TREH02 = 1.29535+03  THH02 = 1.02983+03
TRC3 = 1.71481+03  TRF3 = 1.76311+03  TREH3 = 1.49787+03  TREH03 = 1.62155+03
THH03 = 1.16406+03  TRC4 = 2.06099+03  TRF4 = 2.11323+03  TREH4 = 1.85316+03

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TREH04=	1.98426+03	THH04 =	1.34159+03	TRC5 =	2.36666+03	TRF5 =	2.41123+03
TREH5 =	2.19948+03	TREH05=	2.31321+03	THH05 =	1.57875+03	TRC6 =	2.45218+03
TRF6 =	2.46011+03	TREH6 =	2.41697+03	TREH06=	2.44926+03	THH06 =	1.89939+03
THH16 =	2.33909+03	THH6 =	1.09634+03	TLPH =	2.35053+03	TUPH =	1.01174+03

*** INPUT TO AEGEN 27 ABOVE RANGE OF FUNCTION RETSL --INPUT = 1.1103+03 AT TIME = 2.4508+02 ***

*** INPUT TO AEGEN 30 ABOVE RANGE OF FUNCTION PARTRI--INPUT = 1.1103+03 AT TIME = 2.4508+02 ***

*** INPUT TO AEGEN 27 ABOVE RANGE OF FUNCTION RETSL --INPUT = 1.1103+03 AT TIME = 2.4616+02 ***

*** INPUT TO AEGEN 30 ABOVE RANGE OF FUNCTION PARTRI--INPUT = 1.1103+03 AT TIME = 2.4616+02 ***

TIME = 2.50000+02	TPC0 =	6.66220+02	THW0 =	1.08169+03	TPH0 =	1.05896+03	TAW0 =	6.63161+02
	THH01 =	9.26338+02	WFLOW =	4.27800+01	MARGIN=	4.01682+01	PPRG =	2.09573+03
	PNSS =	1.46760+03	GCAA =	9.87818+00	GCCA =	1.00000-05	PRC0 =	3.20635-02
	PWFLO=	1.62294+03	OCAERR=	3.31020+00	PROP =	6.62039-02	ICAN =	6.76477+01
	DNCAA =	6.62050+02	NCAA =	6.76477+01	TRC1 =	1.06336+03	TRF1 =	1.06711+03
	TREH1 =	1.04443+03	TREH01=	1.05949+03	THH01 =	9.26338+02	TRC2 =	1.37929+03
	TRF2 =	1.41411+03	TREH2=	1.19531+03	TREH02=	1.29087+03	THH02=	1.02890+03
	TRC3 =	1.70604+03	TRF3 =	1.75377+03	TREH3 =	1.49079+03	TREH03=	1.61314+03
	THH03 =	1.16357+03	TRC4 =	2.04585+03	TRF4 =	2.09726+03	TREH4 =	1.84046+03
	TREH04=	1.96954+03	THH04 =	1.34206+03	TRC5 =	2.34550+03	TRF5 =	2.38933+03
	TREH5 =	2.18034+03	TREH05=	2.29221+03	THH05 =	1.58103+03	TRC6 =	2.44081+03
	TRF6 =	2.44923+03	TREH6 =	2.40299+03	TREH06=	2.43763+03	THH06 =	1.90477+03
	THH16 =	2.34954+03	THH6 =	1.09268+03	TLPH =	2.35855+03	TUPH =	1.00969+03

GCFR CASY

TIME = 2.55000+02	TPC0 = 6.65562+02	THW0 = 1.07758+03	TPH0 = 1.06594+03	TAW0 = 6.62918+02
	THH01 = 9.26613+02	WFLOW = 4.27800+01	MARGIN = 4.32130+01	PPRG = 2.09573+03
	PNSS = 1.46579+03	GCAA = 9.94650+00	GCCA = 1.00000-05	PRCD = 3.17305-02
	POWFLOW = 1.52506-03	OCAERR = 7.91824+00	PROPEN = 1.48365-01	ICAN = 6.82024+01
	DNCAA = 1.48367-01	NCAA = 6.82024+01	TRC1 = 1.06114+03	TRF1 = 1.06489+03
	TREH1 = 1.04215+03	TREH01 = 1.05720+03	THH01 = 9.26613+02	TRC2 = 1.37427+03
	TRF2 = 1.40883+03	TREH2 = 1.19498+03	TREH02 = 1.28554+03	THH02 = 1.02951+03
	TRC3 = 1.69712+03	TRF3 = 1.74446+03	TREH3 = 1.48242+03	TREH03 = 1.60353+03
	THH03 = 1.16469+03	TRC4 = 2.03087+03	TRF4 = 2.08171+03	TREH4 = 1.82647+03
	TREH04 = 1.95389+03	THH04 = 1.34399+03	TRC5 = 2.32456+03	TRF5 = 2.36788+03
	TREH5 = 2.16025+03	TREH05 = 2.27064+03	THH05 = 1.58426+03	TRC6 = 2.42840+03
	TRF6 = 2.43733+03	TREH6 = 2.38782+03	TREH06 = 2.42487+03	THH06 = 1.90998+03
	THH16 = 2.35768+03	THM6 = 1.09130+03	TLPH = 2.36443+03	TUPH = 1.00767+03
TIME = 2.60000+02	TPC0 = 6.65053+02	THW0 = 1.07560+03	TPH0 = 1.07328+03	TAW0 = 6.62610+02
	THH01 = 9.27796+02	WFLOW = 4.27800+01	MARGIN = 4.30921+01	PPRG = 2.09573+03
	PNSS = 1.46381+03	GCAA = 1.00471+01	GCCA = 1.00000-05	PRCD = 3.13975-02
	POWFLOW = 1.56252-03	OCAERR = 9.40457+00	PROPEN = 1.88091-01	ICAN = 6.90612+01
	DNCAA = 1.88092-01	NCAA = 6.90612+01	TRC1 = 1.05888+03	TRF1 = 1.06263+03
	TREH1 = 1.03982+03	TREH01 = 1.05485+03	THH01 = 9.27796+02	TRC2 = 1.36906+03
	TRF2 = 1.40338+03	TREH2 = 1.19022+03	TREH02 = 1.27969+03	THH02 = 1.03115+03
	TRC3 = 1.68789+03	TRF3 = 1.73492+03	TREH3 = 1.47321+03	TREH03 = 1.59307+03
	THH03 = 1.16687+03	TRC4 = 2.01576+03	TRF4 = 2.06617+03	TREH4 = 1.81159+03
	TREH04 = 1.93755+03	THH04 = 1.34684+03	TRC5 = 2.30360+03	TRF5 = 2.34655+03
	TREH5 = 2.13950+03	TREH05 = 2.24861+03	THH05 = 1.58796+03	TRC6 = 2.41492+03
	TRF6 = 2.42438+03	TREH6 = 2.37157+03	TREH06 = 2.41099+03	THH06 = 1.91472+03
	THH16 = 2.36358+03	THM6 = 1.09186+03	TLPH = 2.36813+03	TUPH = 1.00570+03
TIME = 2.65000+02	TPC0 = 6.64662+02	THW0 = 1.07550+03	TPH0 = 1.08043+03	TAW0 = 6.62237+02
	THH01 = 9.29395+02	WFLOW = 4.27800+01	MARGIN = 4.06458+01	PPRG = 2.09573+03
	PNSS = 1.46168+03	GCAA = 1.01549+01	GCCA = 1.00000-05	PRCD = 3.10645-02
	POWFLOW = 1.52953-03	OCAERR = 9.49658+00	PROPEN = 1.89932-01	ICAN = 7.00210+01
	DNCAA = 1.89934-01	NCAA = 7.00210+01	TRC1 = 1.05659+03	TRF1 = 1.06033+03
	TREH1 = 1.03748+03	TREH01 = 1.05245+03	THH01 = 9.29395+02	TRC2 = 1.36365+03
	TRF2 = 1.39773+03	TREH2 = 1.18533+03	TREH02 = 1.27362+03	THH02 = 1.03325+03
	TRC3 = 1.67833+03	TRF3 = 1.72506+03	TREH3 = 1.46369+03	TREH03 = 1.58224+03
	THH03 = 1.16948+03	TRC4 = 2.00046+03	TRF4 = 2.05047+03	TREH4 = 1.79638+03
	TREH04 = 1.92090+03	THH04 = 1.34997+03	TRC5 = 2.28255+03	TRF5 = 2.32516+03
	TREH5 = 2.11853+03	TREH05 = 2.22639+03	THH05 = 1.59155+03	TRC6 = 2.40043+03
	TRF6 = 2.41039+03	TREH6 = 2.35441+03	TREH06 = 2.39607+03	THH06 = 1.91861+03
	THH16 = 2.36729+03	THM6 = 1.09375+03	TLPH = 2.36977+03	TUPH = 1.00379+03

GCFR CASH

TIME = 2.70000+02	TPCO = 6.64363+02	THW0 = 1.07682+03	TPH0 = 1.08687+03	TAW0 = 6.61808+02
	THM01 = 9.30971+02	WFLOW = 4.27800+01	MARGIN = 3.69389+01	PPRG = 2.09573+03
	PNSS = 1.45942+03	GCAA = 1.02509+01	GCCA = 1.00000-05	PRCD = 3.07316-02
	POWFLO = 1.49897-03	OCAERR = 8.17931+00	PROPN = 1.63586-01	ICAN = 7.09144+01
	DNCAA = 1.63584-01	NCAA = 7.09144+01	TRC1 = 1.05427+03	TRF1 = 1.05800+03
	TREH1 = 1.03517+03	TREH01 = 1.05006+03	THM01 = 9.30971+02	TRC2 = 1.35809+03
	TRF2 = 1.39191+03	TREH2 = 1.18052+03	TREH02 = 1.26762+03	THM02 = 1.03528+03
	TRC3 = 1.66855+03	TRF3 = 1.71492+03	TREH3 = 1.45428+03	TREH03 = 1.57144+03
	THM03 = 1.17194+03	TRC4 = 1.98504+03	TRF4 = 2.03463+03	TREH4 = 1.78134+03
	TREH04 = 1.90436+03	THM04 = 1.35276+03	TRC5 = 2.26147+03	TRF5 = 2.30371+03
	TREH5 = 2.09778+03	TREH05 = 2.20433+03	THM05 = 1.59448+03	TRC6 = 2.38500+03
	TRF6 = 2.39541+03	TREH6 = 2.33658+03	TREH06 = 2.38022+03	THM06 = 1.92127+03
	THM16 = 2.36890+03	THM6 = 1.09627+03	TLPH = 2.36943+03	TUPH = 1.00195+03
TIME = 2.75000+02	TPCO = 6.64137+02	THW0 = 1.07891+03	TPH0 = 1.09216+03	TAW0 = 6.61348+02
	THM01 = 9.32187+02	WFLOW = 4.27800+01	MARGIN = 3.30726+01	PPRG = 2.09573+03
	PNSS = 1.45704+03	GCAA = 1.03233+01	GCCA = 1.00000-05	PRCD = 3.03986-02
	POWFLO = 1.47233-03	OCAERR = 6.08528+00	PROPN = 1.21706-01	ICAN = 7.16317+01
	DNCAA = 1.21705-01	NCAA = 7.16317+01	TRC1 = 1.05195+03	TRF1 = 1.05566+03
	TREH1 = 1.03293+03	TREH01 = 1.04769+03	THM01 = 9.32187+02	TRC2 = 1.35246+03
	TRF2 = 1.38599+03	TREH2 = 1.17593+03	TREH02 = 1.26188+03	THM02 = 1.03683+03
	TRC3 = 1.65868+03	TRF3 = 1.70464+03	TREH3 = 1.44530+03	TREH03 = 1.56102+03
	THM03 = 1.17377+03	TRC4 = 1.96967+03	TRF4 = 2.01875+03	TREH4 = 1.76686+03
	TREH04 = 1.88828+03	THM04 = 1.35473+03	TRC5 = 2.24053+03	TRF5 = 2.28233+03
	TREH5 = 2.07761+03	TREH05 = 2.18273+03	THM05 = 1.59631+03	TRC6 = 2.36879+03
	TRF6 = 2.37958+03	TREH6 = 2.31837+03	TREH06 = 2.36364+03	THM06 = 1.92244+03
	THM16 = 2.36848+03	THM6 = 1.09875+03	TLPH = 2.36720+03	TUPH = 1.00018+03
TIME = 2.80000+02	TPCO = 6.63966+02	THW0 = 1.08116+03	TPH0 = 1.09600+03	TAW0 = 6.60883+02
	THM01 = 9.32855+02	WFLOW = 4.27800+01	MARGIN = 2.98877+01	PPRG = 2.09573+03
	PNSS = 1.45456+03	GCAA = 1.03683+01	GCCA = 1.00000-05	PRCD = 3.00656-02
	POWFLO = 1.44987-03	OCAERR = 3.84357+00	PROPN = 7.68713-02	ICAN = 7.21272+01
	DNCAA = 7.68728-02	NCAA = 7.21272+01	TRC1 = 1.04964+03	TRF1 = 1.05332+03
	TREH1 = 1.03075+03	TREH01 = 1.04537+03	THM01 = 9.32855+02	TRC2 = 1.34684+03
	TRF2 = 1.38004+03	TREH2 = 1.17163+03	TREH02 = 1.25649+03	THM02 = 1.03767+03
	TRC3 = 1.64886+03	TRF3 = 1.69434+03	TREH3 = 1.43690+03	TREH03 = 1.55114+03
	THM03 = 1.17472+03	TRC4 = 1.95451+03	TRF4 = 2.00301+03	TREH4 = 1.75314+03
	TREH04 = 1.87290+03	THM04 = 1.35561+03	TRC5 = 2.21990+03	TRF5 = 2.26116+03
	TREH5 = 2.05828+03	TREH05 = 2.16184+03	THM05 = 1.59680+03	TRC6 = 2.35196+03
	TRF6 = 2.36304+03	TREH6 = 2.29997+03	TREH06 = 2.34651+03	THM06 = 1.92201+03
	THM16 = 2.36617+03	THM6 = 1.10069+03	TLPH = 2.36324+03	TUPH = 9.98468+02

GCFR CASEY

TIME = 2.85000+02

TPCO = 6.63836+02	THW0 = 1.08303+03	TPH0 = 1.09830+03	TAW0 = 6.60440+02
THH01 = 9.32922+02	WFLOW = 4.27800+01	MARGIN = 2.79419+01	PPRG = 2.09573+03
PNSS = 1.45197+03	GCAA = 1.03889+01	GCCA = 1.00000-05	PRCD = 2.97326-02
POWFLO = 1.43097-03	OCAERR = 1.97475+00	PROPN = 3.94949-02	ICAN = 7.24134+01
DNCAA = 3.94945-02	NCAA = 7.24134+01	TRC1 = 1.04735+03	TRF1 = 1.05099+03
TREH1 = 1.02865+03	TREH01 = 1.04310+03	THH01 = 9.32922+02	TRC2 = 1.34128+03
TRF2 = 1.37412+03	TREH2 = 1.16761+03	TREH02 = 1.25144+03	THH02 = 1.03774+03
TRC3 = 1.63922+03	TRF3 = 1.68416+03	TREH3 = 1.42908+03	TREH03 = 1.54186+03
THH03 = 1.17470+03	TRC4 = 1.93972+03	TRF4 = 1.98755+03	TREH4 = 1.74025+03
TREH04 = 1.85829+03	THH04 = 1.35532+03	TRC5 = 2.19974+03	TRF5 = 2.24039+03
TREH5 = 2.03986+03	TREH05 = 2.14175+03	THH05 = 1.59593+03	TRC6 = 2.33469+03
TRF6 = 2.34596+03	TREH6 = 2.28157+03	TREH06 = 2.32901+03	THH06 = 1.92001+03
THH16 = 2.36214+03	THM6 = 1.10177+03	TLPH = 2.35772+03	TUPH = 9.96808+02

TIME = 2.90000+02

TPCO = 6.63734+02	THW0 = 1.08418+03	TPH0 = 1.09914+03	TAW0 = 6.60057+02
THH01 = 9.32457+02	WFLOW = 4.27800+01	MARGIN = 2.74280+01	PPRG = 2.09573+03
PNSS = 1.44929+03	GCAA = 1.03928+01	GCCA = 1.00000-05	PRCD = 2.93996-02
POWFLO = 1.41442-03	OCAERR = 8.19870-01	PROPN = 1.63974-02	ICAN = 7.25464+01
DNCAA = 1.63965-02	NCAA = 7.25464+01	TRC1 = 1.04510+03	TRF1 = 1.04870+03
TREH1 = 1.02660+03	TREH01 = 1.04088+03	THH01 = 9.32457+02	TRC2 = 1.33581+03
TRF2 = 1.36828+03	TREH2 = 1.16382+03	TREH02 = 1.24667+03	THH02 = 1.03712+03
TRC3 = 1.62982+03	TRF3 = 1.67419+03	TREH3 = 1.42174+03	TREH03 = 1.53309+03
THH03 = 1.17380+03	TRC4 = 1.92536+03	TRF4 = 1.97250+03	TREH4 = 1.72808+03
TREH04 = 1.84440+03	THH04 = 1.35397+03	TRC5 = 2.18014+03	TRF5 = 2.22013+03
TREH5 = 2.02229+03	TREH05 = 2.12247+03	THH05 = 1.59380+03	TRC6 = 2.31711+03
TRF6 = 2.32851+03	TREH6 = 2.26324+03	TREH06 = 2.31126+03	THH06 = 1.91657+03
THH16 = 2.35655+03	THM6 = 1.10190+03	TLPH = 2.35081+03	TUPH = 9.95186+02

*** INPUT TO AFGEN 228 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 2.9405+02 ***

*** INPUT TO AFGEN 228 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 2.9405+02 ***

*** INPUT TO AFGEN 228 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0600+03 AT TIME = 2.9417+02 ***

*** INPUT TO AFGEN 228 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0602+03 AT TIME = 2.9500+02 ***

*** INPUT TO AFGEN 228 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0601+03 AT TIME = 2.9453+02 ***

*** INPUT TO AFGEN 228 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0601+03 AT TIME = 2.9453+02 ***

*** INPUT TO AFGEN 228 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0601+03 AT TIME = 2.9464+02 ***

*** INPUT TO AFGEN 228 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0602+03 AT TIME = 2.9500+02 ***

*** INPUT TO AFGEN 228 ABOVE RANGE OF FUNCTION FSPH --INPUT = 1.0602+03 AT TIME = 2.9500+02 ***

TIME = 2.95000+02

TPCO = 6.63651+02	THW0 = 1.08448+03	TPH0 = 1.09873+03	TAW0 = 6.59772+02
THH01 = 9.31605+02	WFLOW = 4.27800+01	MARGIN = 2.82857+01	PPRG = 2.09573+03
PNSS = 1.44650+03	GCAA = 1.03901+01	GCCA = 1.00000-05	PRCD = 2.90666-02
POWFLO = 1.39876-03	OCAERR = 5.17288-01	PROPN = 1.03458-02	ICAN = 7.26060+01
DNCAA = 1.03464-02	NCAA = 7.26060+01	TRC1 = 1.04287+03	TRF1 = 1.04643+03
TREH1 = 1.02459+03	TREH01 = 1.03869+03	THH01 = 9.31605+02	TRC2 = 1.33044+03
TRF2 = 1.36253+03	TREH2 = 1.16015+03	TREH02 = 1.24205+03	THH02 = 1.03596+03
TRC3 = 1.62067+03	TRF3 = 1.66446+03	TREH3 = 1.41470+03	TREH03 = 1.52466+03
THH03 = 1.17223+03	TRC4 = 1.91146+03	TRF4 = 1.95790+03	TREH4 = 1.71641+03

TREH04 =	1.33106+03	THM04 =	1.35177+03	TRC5 =	2.16114+03	TRF5 =	2.20045+03
TREH5 =	2.00540+03	TREH05 =	2.10388+03	THM05 =	1.59063+03	TRC6 =	2.29935+03
TRF6 =	2.31081+03	TREH6 =	2.24498+03	TREH06 =	2.29336+03	THM06 =	1.91191+03
THH16 =	2.54960+03	THM6 =	1.10117+03	TLPH =	2.34266+03	TUPH =	9.93589+02

*** INPUT TO AFGEN 228 ABOVE RANGE DE FUNCTION ESPH --INPUT = 1.0602+03 AT TIME = 2.9512+02 ***

GCFR CASY

TIME = 3.00000+02	TPC0 = 6.63577+02	THW0 = 1.08396+03	TPH0 = 1.09737+03	TAW0 = 6.59672+02
	THH01 = 9.30550+02	WFLOW = 4.27800+01	MARGIN = 3.02275+01	PPRG = 2.09573+03
	PNSS = 1.44362+03	GCAA = 1.03911+01	GCCA = 1.00000-05	PRCD = 2.86275-02
	POWFLO = 1.37750-03	OCAERR = 1.09332+00	PROPN = 2.08664-02	ICAN = 7.26775+01
	DNCAA = 2.08664-02	NCAA = 7.26775+01	TRC1 = 1.04068+03	TRF1 = 1.04419+03
	TREH1 = 1.02261+03	TREH01 = 1.03654+03	THH01 = 9.30550+02	TRC2 = 1.32512+03
	TRF2 = 1.35681+03	TREH2 = 1.15649+03	TREH02 = 1.23745+03	THH02 = 1.03451+03
	TRC3 = 1.61167+03	TRF3 = 1.65487+03	TREH3 = 1.40771+03	TREH03 = 1.51632+03
	THH03 = 1.17022+03	TRC4 = 1.89791+03	TRF4 = 1.94364+03	TREH4 = 1.70495+03
	TREH04 = 1.81800+03	THH04 = 1.34879+03	TRC5 = 2.14266+03	TRF5 = 2.18129+03
	TREH5 = 1.98891+03	TREH05 = 2.08576+03	THH05 = 1.58671+03	TRC6 = 2.28147+03
	TRF6 = 2.29295+03	TREH6 = 2.22676+03	TREH06 = 2.27535+03	THH06 = 1.90630+03
	THH16 = 2.34142+03	THP6 = 1.09978+03	TLPH = 2.33341+03	TUPH = 9.92008+02
TIME = 3.05000+02	TPC0 = 6.63504+02	THW0 = 1.08278+03	TPH0 = 1.09539+03	TAW0 = 6.59776+02
	THH01 = 9.29465+02	WFLOW = 4.27800+01	MARGIN = 3.28261+01	PPRG = 2.09573+01
	PNSS = 1.44063+03	GCAA = 1.04044+01	GCCA = 1.00000-05	PRCD = 2.81618-02
	POWFLO = 1.35336-03	OCAERR = 2.21788+00	PROPN = 4.43576-02	ICAN = 7.28359+01
	DNCAA = 4.43602-02	NCAA = 7.28359+01	TRC1 = 1.03850+03	TRF1 = 1.04197+03
	TREH1 = 1.02062+03	TREH01 = 1.03439+03	THH01 = 9.29465+02	TRC2 = 1.31970+03
	TRF2 = 1.35098+03	TREH2 = 1.15269+03	TREH02 = 1.23265+03	THH02 = 1.03297+03
	TRC3 = 1.60262+03	TRF3 = 1.64523+03	TREH3 = 1.40045+03	TREH03 = 1.50772+03
	THH03 = 1.16804+03	TRC4 = 1.88446+03	TRF4 = 1.92950+03	TREH4 = 1.69327+03
	TREH04 = 1.80481+03	THH04 = 1.34590+03	TRC5 = 2.12449+03	TRF5 = 2.16247+03
	TREH5 = 1.97241+03	TREH05 = 2.06776+03	THH05 = 1.58231+03	TRC6 = 2.26346+03
	TRF6 = 2.27496+03	TREH6 = 2.20841+03	TREH06 = 2.25719+03	THH06 = 1.89995+03
	THH16 = 2.33213+03	THM6 = 1.09800+03	TLPH = 2.32315+03	TUPH = 9.90440+02
TIME = 3.10000+02	TPC0 = 6.63424+02	THW0 = 1.08119+03	TPH0 = 1.09311+03	TAW0 = 6.60106+02
	THH01 = 9.28496+02	WFLOW = 4.27800+01	MARGIN = 3.56884+01	PPRG = 2.09573+03
	PNSS = 1.43756+03	GCAA = 1.04361+01	GCCA = 1.00000-05	PRCD = 2.76961-02
	POWFLO = 1.32694-03	OCAERR = 3.80563+00	PROPN = 7.61127-02	ICAN = 7.31347+01
	DNCAA = 7.61108-02	NCAA = 7.31347+01	TRC1 = 1.03634+03	TRF1 = 1.03976+03
	TREH1 = 1.01862+03	TREH01 = 1.03223+03	THH01 = 9.28496+02	TRC2 = 1.31415+03
	TRF2 = 1.34503+03	TREH2 = 1.14869+03	TREH02 = 1.22758+03	THH02 = 1.03152+03
	TRC3 = 1.59341+03	TRF3 = 1.63546+03	TREH3 = 1.39277+03	TREH03 = 1.49869+03
	THH03 = 1.16590+03	TRC4 = 1.87095+03	TRF4 = 1.91537+03	TREH4 = 1.68115+03
	TREH04 = 1.79127+03	THH04 = 1.34275+03	TRC5 = 2.10646+03	TRF5 = 2.14387+03
	TREH5 = 1.95568+03	TREH05 = 2.04966+03	THH05 = 1.57767+03	TRC6 = 2.24531+03
	TRF6 = 2.25683+03	TREH6 = 2.18983+03	TREH06 = 2.23885+03	THH06 = 1.89306+03
	THH16 = 2.32183+03	THM6 = 1.09612+03	TLPH = 2.31197+03	TUPH = 9.88880+02

GCFR CASY

TIME = 3.15000+02	TPC0 = 6.63331+02	THW0 = 1.07944+03	TPH0 = 1.09080+03	TAW0 = 6.60701+02
	THH01 = 9.27726+02	WFLOW = 4.27800+01	MARGIN = 3.84213+01	PPRG = 2.09573+03
	PNSS = 1.43440+03	GCAA = 1.04869+01	GCCA = 1.00000-05	PRC0 = 2.72304-02
	POWFLO = 1.29806-03	CCAERR = 5.55615+00	PROPN = 1.11123-01	ICAN = 7.36023+01
	DNCAA = 1.11121-01	NCAA = 7.36023+01	TRC1 = 1.03417+03	TRF1 = 1.03756+03
	TREH1 = 1.01660+03	TREH01 = 1.03005+03	THH01 = 9.27726+02	TRC2 = 1.30847+03
	TRF2 = 1.33894+03	TREH2 = 1.14447+03	TREH02 = 1.22220+03	THH02 = 1.03027+03
	TRC3 = 1.58397+03	TRF3 = 1.62551+03	TREH3 = 1.38460+03	TREH03 = 1.48914+03
	THH03 = 1.16392+03	TRC4 = 1.85728+03	TRF4 = 1.90113+03	TREH4 = 1.66845+03
	TREH04 = 1.77721+03	THH04 = 1.33967+03	TRC5 = 2.08845+03	TRF5 = 2.12534+03
	TREH5 = 1.93851+03	TREH05 = 2.03127+03	THH05 = 1.57293+03	TRC6 = 2.22697+03
	TRF6 = 2.23854+03	TREH6 = 2.17093+03	TREH06 = 2.22026+03	THH06 = 1.88578+03
	THH16 = 2.31059+03	THH6 = 1.09434+03	TLPH = 2.29992+03	TUPH = 9.87329+02
TIME = 3.20000+02	TPC0 = 6.53219+02	THW0 = 1.07775+03	TPH0 = 1.08866+03	TAW0 = 6.61555+02
	THH01 = 9.27195+02	WFLOW = 4.27800+01	MARGIN = 4.07863+01	PPRG = 2.09573+03
	PNSS = 1.43116+03	GCAA = 1.05630+01	GCCA = 1.00000-05	PRC0 = 2.67647-02
	POWFLO = 1.26691-03	CCAERR = 7.25186+00	PROPN = 1.45037-01	ICAN = 7.42440+01
	DNCAA = 1.45037-01	NCAA = 7.42440+01	TRC1 = 1.03200+03	TRF1 = 1.03536+03
	TREH1 = 1.01455+03	TREH01 = 1.02786+03	THH01 = 9.27195+02	TRC2 = 1.30261+03
	TRF2 = 1.33271+03	TREH2 = 1.14003+03	TREH02 = 1.21651+03	THH02 = 1.02928+03
	TRC3 = 1.57426+03	TRF3 = 1.61530+03	TREH3 = 1.37592+03	TREH03 = 1.47904+03
	THH03 = 1.16219+03	TRC4 = 1.84331+03	TRF4 = 1.88666+03	TREH4 = 1.65511+03
	TREH04 = 1.76255+03	THH04 = 1.33676+03	TRC5 = 2.07029+03	TRF5 = 2.10676+03
	TREH5 = 1.92080+03	TREH05 = 2.01246+03	THH05 = 1.56819+03	TRC6 = 2.20839+03
	TRF6 = 2.22003+03	TREH6 = 2.15162+03	TREH06 = 2.20136+03	THH06 = 1.87817+03
	THH16 = 2.29846+03	THH6 = 1.09282+03	TLPH = 2.28704+03	TUPH = 9.85790+02
TIME = 3.25000+02	TPC0 = 6.63085+02	THW0 = 1.07626+03	TPH0 = 1.08683+03	TAW0 = 6.62649+02
	THH01 = 9.26888+02	WFLOW = 4.27800+01	MARGIN = 4.26567+01	PPRG = 2.09573+03
	PNSS = 1.42785+03	GCAA = 1.06564+01	GCCA = 1.00000-05	PRC0 = 2.62990-02
	POWFLO = 1.23395-03	CCAERR = 8.73875+00	PROPN = 1.74775-01	ICAN = 7.50458+01
	DNCAA = 1.74773-01	NCAA = 7.50458+01	TRC1 = 1.02983+03	TRF1 = 1.03315+03
	TREH1 = 1.01249+03	TREH01 = 1.02564+03	THH01 = 9.26888+02	TRC2 = 1.29660+03
	TRF2 = 1.32631+03	TREH2 = 1.13538+03	TREH02 = 1.21053+03	THH02 = 1.02853+03
	TRC3 = 1.56421+03	TRF3 = 1.60478+03	TREH3 = 1.36676+03	TREH03 = 1.46840+03
	THH03 = 1.16068+03	TRC4 = 1.82898+03	TRF4 = 1.87186+03	TREH4 = 1.64112+03
	TREH04 = 1.74726+03	THH04 = 1.33402+03	TRC5 = 2.05189+03	TRF5 = 2.08797+03
	TREH5 = 1.90251+03	TREH05 = 1.99316+03	THH05 = 1.56345+03	TRC6 = 2.18950+03
	TRF6 = 2.20125+03	TREH6 = 2.13185+03	TREH06 = 2.18210+03	THH06 = 1.87026+03
	THH16 = 2.28547+03	THH6 = 1.09164+03	TLPH = 2.27336+03	TUPH = 9.84266+02

GCFR CASEY.

TIME = 3.30000+02

TPC0 = 6.62926+02	THW0 = 1.07506+03	TPH0 = 1.08537+03	TAW0 = 6.63910+02
THH01 = 9.26754+02	WFLOW = 4.27800+01	MARGIN = 4.40016+01	PPRG = 2.09573+03
PNSS = 1.42446+03	GCAA = 1.07656+01	GCCA = 1.00000-05	PRCD = 2.58333-02
POWFL0 = 1.19981-03	OCAERR = 9.93582+00	PROPN = 1.98716-01	ICAN = 7.59822+01
DNCAA = 1.98717-01	NCAA = 7.59822+01	TRC1 = 1.02765+03	TRF1 = 1.03094+03
TREH1 = 1.01042+03	TREH01 = 1.02340+03	THH01 = 9.26754+02	TRC2 = 1.29042+03
TRF2 = 1.31974+03	TREH2 = 1.13057+03	TREH02 = 1.20432+03	THH02 = 1.02798+03
TRC3 = 1.55383+03	TRF3 = 1.59393+03	TREH3 = 1.35719+03	TREH03 = 1.45727+03
THH03 = 1.15936+03	TRC4 = 1.81424+03	TRF4 = 1.85666+03	TREH4 = 1.62653+03
TREH04 = 1.73134+03	THH04 = 1.23138+03	TRC5 = 2.03314+03	TRF5 = 2.06890+03
TREH5 = 1.88361+03	TREH05 = 1.97330+03	THH05 = 1.55867+03	TRC6 = 2.17027+03
TRF6 = 2.18214+03	TREH6 = 2.11158+03	TREH06 = 2.16242+03	THH06 = 1.86202+03
THH16 = 2.27166+03	THH6 = 1.09077+03	TLPH = 2.25890+03	TUPH = 9.82759+02

TIME = 3.35000+02

TPC0 = 6.62744+02	THW0 = 1.07417+03	TPH0 = 1.08427+03	TAW0 = 6.65261+02
THH01 = 9.26732+02	WFLOW = 4.27800+01	MARGIN = 4.49016+01	PPRG = 2.09573+03
PNSS = 1.42100+03	GCAA = 1.08870+01	GCCA = 1.00000-05	PRCD = 2.53676-02
POWFL0 = 1.16504-03	OCAERR = 1.08264+01	PROPN = 2.16527-01	ICAN = 7.70229+01
DNCAA = 2.16528-01	NCAA = 7.70229+01	TRC1 = 1.02546+03	TRF1 = 1.02872+03
TREH1 = 1.00833+03	TREH01 = 1.02115+03	THH01 = 9.26732+02	TRC2 = 1.28408+03
TRF2 = 1.31301+03	TREH2 = 1.12565+03	TREH02 = 1.19793+03	THH02 = 1.02754+03
TRC3 = 1.54311+03	TRF3 = 1.58274+03	TREH3 = 1.34730+03	TREH03 = 1.44574+03
THH03 = 1.15813+03	TRC4 = 1.79905+03	TRF4 = 1.84104+03	TREH4 = 1.61143+03
TREH04 = 1.71488+03	THH04 = 1.32878+03	TRC5 = 2.01401+03	TRF5 = 2.04946+03
TREH5 = 1.86416+03	TREH05 = 1.95292+03	THH05 = 1.55379+03	TRC6 = 2.15064+03
TRF6 = 2.16266+03	TREH6 = 2.09080+03	TREH06 = 2.14229+03	THH06 = 1.85342+03
THH16 = 2.25706+03	THH6 = 1.09018+03	TLPH = 2.24368+03	TUPH = 9.81273+02

TIME = 3.40000+02

TPC0 = 6.62540+02	THW0 = 1.07355+03	TPH0 = 1.08350+03	TAW0 = 6.66598+02
THH01 = 9.26749+02	WFLOW = 4.27800+01	MARGIN = 4.55074+01	PPRG = 2.09573+03
PNSS = 1.41747+03	GCAA = 1.10171+01	GCCA = 1.00000-05	PRCD = 2.49020-02
POWFL0 = 1.13015-03	OCAERR = 1.14514+01	PROPN = 2.29027-01	ICAN = 7.81387+01
DNCAA = 2.29025-01	NCAA = 7.81387+01	TRC1 = 1.02326+03	TRF1 = 1.02649+03
TREH1 = 1.00625+03	TREH01 = 1.01890+03	THH01 = 9.26749+02	TRC2 = 1.27760+03
TRF2 = 1.30613+03	TREH2 = 1.12065+03	TREH02 = 1.19142+03	THH02 = 1.02713+03
TRC3 = 1.53209+03	TRF3 = 1.57124+03	TREH3 = 1.33717+03	TREH03 = 1.43390+03
THH03 = 1.15690+03	TRC4 = 1.78344+03	TRF4 = 1.82499+03	TREH4 = 1.59591+03
TREH04 = 1.69793+03	THH04 = 1.32611+03	TRC5 = 1.99446+03	TRF5 = 2.02962+03
TREH5 = 1.84420+03	TREH05 = 1.93202+03	THH05 = 1.54871+03	TRC6 = 2.13060+03
TRF6 = 2.14278+03	TREH6 = 2.06551+03	TREH06 = 2.12169+03	THH06 = 1.84441+03
THH16 = 2.24167+03	THH6 = 1.08975+03	TLPH = 2.22773+03	TUPH = 9.79808+02

GCFR CASV

TIME = 3.45000+02	TPC0 = 6.62321+02	THW0 = 1.07311+03	TPH0 = 1.08297+03	TAW0 = 6.67833+02
	THM01 = 9.26748+02	WFLOW = 4.27800+01	MARGIN = 4.59609+01	PPRG = 2.09573+03
	PNSS = 1.41387+03	GCAA = 1.11534+01	GCCA = 1.00000-05	PRCD = 2.44363-02
	POWFLO = 1.09546-03	OCAERR = 1.18931+01	PROPN = 2.37861-01	ICAN = 7.93071+01
	DNCAA = 2.37862-01	NCAA = 7.93071+01	TRC1 = 1.02106+03	TRF1 = 1.02426+03
	TREH1 = 1.00418+03	TREH01 = 1.01664+03	THH01 = 9.26748+02	TRC2 = 1.27100+03
	TRF2 = 1.25913+03	TREH2 = 1.11561+03	TREH02 = 1.18482+03	THH02 = 1.02669+03
	TRC3 = 1.52079+03	TRF3 = 1.55944+03	TREH3 = 1.32687+03	TREH03 = 1.42181+03
	THH03 = 1.15560+03	TRC4 = 1.76743+03	TRF4 = 1.80853+03	TREH4 = 1.58006+03
	TREH04 = 1.68057+03	THH04 = 1.32330+03	TRC5 = 1.97450+03	TRF5 = 2.00936+03
	TREH5 = 1.82381+03	TREH05 = 1.91066+03	THH05 = 1.54337+03	TRC6 = 2.11012+03
	TRF6 = 2.12247+03	TREH6 = 2.04772+03	TREH06 = 2.10061+03	THH06 = 1.83494+03
	THH16 = 2.22555+03	THH6 = 1.08938+03	TLPH = 2.21106+03	TUPH = 9.78364+02
TIME = 3.50000+02	TPC0 = 6.62096+02	THW0 = 1.07276+03	TPH0 = 1.08257+03	TAW0 = 6.68869+02
	THM01 = 9.26689+02	WFLOW = 4.27800+01	MARGIN = 4.64171+01	PPRG = 2.09573+03
	PNSS = 1.41020+03	GCAA = 1.12944+01	GCCA = 1.00000-05	PRCD = 2.39706-02
	POWFLO = 1.06117-03	OCAERR = 1.22430+01	PROPN = 2.44860-01	ICAN = 8.05143+01
	DNCAA = 2.44857-01	NCAA = 8.05143+01	TRC1 = 1.01886+03	TRF1 = 1.02203+03
	TREH1 = 1.00211+03	TREH01 = 1.01438+03	THH01 = 9.26689+02	TRC2 = 1.26430+03
	TRF2 = 1.29201+03	TREH2 = 1.11056+03	TREH02 = 1.17818+03	THH02 = 1.02617+03
	TRC3 = 1.50925+03	TRF3 = 1.54739+03	TREH3 = 1.31648+03	TREH03 = 1.40956+03
	THH03 = 1.15417+03	TRC4 = 1.75106+03	TRF4 = 1.79168+03	TREH4 = 1.56398+03
	TREH04 = 1.66259+03	THH04 = 1.32028+03	TRC5 = 1.95415+03	TRF5 = 1.98870+03
	TREH5 = 1.60306+03	TREH05 = 1.88869+03	THH05 = 1.53771+03	TRC6 = 2.08920+03
	TRF6 = 2.10172+03	TREH6 = 2.02545+03	TREH06 = 2.07906+03	THH06 = 1.82499+03
	THH16 = 2.20869+03	THH6 = 1.08900+03	TLPH = 2.19370+03	TUPH = 9.76940+02
TIME = 3.55000+02	TPC0 = 6.61876+02	THW0 = 1.07242+03	TPH0 = 1.08224+03	TAW0 = 6.69675+02
	THM01 = 9.26545+02	WFLOW = 4.27800+01	MARGIN = 4.69857+01	PPRG = 2.09573+03
	PNSS = 1.40646+03	GCAA = 1.14396+01	GCCA = 1.00000-05	PRCD = 2.35049-02
	POWFLO = 1.02734-03	OCAERR = 1.25843+01	PROPN = 2.51685-01	ICAN = 8.17554+01
	DNCAA = 2.51686-01	NCAA = 8.17554+01	TRC1 = 1.01667+03	TRF1 = 1.01979+03
	TREH1 = 1.00006+03	TREH01 = 1.01213+03	THH01 = 9.26545+02	TRC2 = 1.25752+03
	TRF2 = 1.28481+03	TREH2 = 1.10550+03	TREH02 = 1.17152+03	THH02 = 1.02551+03
	TRC3 = 1.49752+03	TRF3 = 1.53512+03	TREH3 = 1.30602+03	TREH03 = 1.39718+03
	THH03 = 1.15256+03	TRC4 = 1.73437+03	TRF4 = 1.77451+03	TREH4 = 1.54769+03
	TREH04 = 1.64494+03	THH04 = 1.31702+03	TRC5 = 1.93342+03	TRF5 = 1.96765+03
	TREH5 = 1.78199+03	TREH05 = 1.86674+03	THH05 = 1.53170+03	TRC6 = 2.06784+03
	TRF6 = 2.08053+03	TREH6 = 2.00272+03	TREH06 = 2.05701+03	THH06 = 1.81454+03
	THH16 = 2.19114+03	THH6 = 1.08853+03	TLPH = 2.17567+03	TUPH = 9.75534+02

GCFR CASY

TIME = 3.60000+02
TPC0 = 6.61677+02 THW0 = 1.07201+03 TPO0 = 1.08188+03 TAW0 = 6.70225+02
THH01 = 9.26316+02 WFLOW = 4.27800+01 MARGIN = 4.77581+01 PPRG = 2.09573+03
PNSS = 1.40264+03 GCAA = 1.15896+01 GCCA = 1.00000-05 PRCD = 2.30392-02
POWFLO = 9.93956-04 OCAERR = 1.29934+01 PROPN = 2.59868-01 ICAN = 8.30334+01
DNCAA = 2.59868-01 NCA = 8.30334+01 TRC1 = 1.01447+03 TRF1 = 1.01756+03
TREH1 = 9.98020+02 TREH01 = 1.00988+03 THH01 = 9.26316+02 TRC2 = 1.25067+03
TRF2 = 1.27753+03 TREH2 = 1.10046+03 TREH02 = 1.16485+03 THH02 = 1.02474+03
TRC3 = 1.48561+03 TRF3 = 1.52267+03 TREH3 = 1.29552+03 TREH03 = 1.38472+03
THH03 = 1.15077+03 TRC4 = 1.71742+03 TRF4 = 1.75703+03 TREH4 = 1.53126+03
TREH04 = 1.62677+03 THH04 = 1.31350+03 TRC5 = 1.91235+03 TRF5 = 1.94625+03
TREH5 = 1.76065+03 TREH05 = 1.84426+03 THH05 = 1.52533+03 TRC6 = 2.04604+03
TRF6 = 2.05890+03 TREH6 = 1.97955+03 TREH06 = 2.03450+03 THH06 = 1.80360+03
THH16 = 2.17292+03 THM6 = 1.08792+03 TLPH = 2.15699+03 TUPH = 9.74143+02

TIME = 3.65000+02
TPC0 = 6.61513+02 THW0 = 1.07149+03 TPO0 = 1.08145+03 TAW0 = 6.70540+02
THH01 = 9.26008+02 WFLOW = 4.27800+01 MARGIN = 4.87327+01 PPRG = 2.09573+03
PNSS = 1.39874+03 GCAA = 1.17456+01 GCCA = 1.00000-05 PRCD = 2.25735-02
POWFLO = 9.60937-04 OCAERR = 1.35139+01 PROPN = 2.70278-01 ICAN = 8.43577+01
DNCAA = 2.70278-01 NCA = 8.43577+01 TRC1 = 1.01228+03 TRF1 = 1.01533+03
TREH1 = 9.95989+02 TREH01 = 1.00763+03 THH01 = 9.26008+02 TRC2 = 1.24378+03
TRF2 = 1.27020+03 TREH2 = 1.09542+03 TREH02 = 1.15817+03 THH02 = 1.02383+03
TRC3 = 1.47357+03 TRF3 = 1.51007+03 TREH3 = 1.28498+03 TREH03 = 1.37217+03
THH03 = 1.14680+03 TRC4 = 1.70022+03 TRF4 = 1.73931+03 TREH4 = 1.51469+03
TREH04 = 1.60839+03 THH04 = 1.30972+03 TRC5 = 1.89097+03 TRF5 = 1.92453+03
TREH5 = 1.73904+03 TREH05 = 1.82146+03 THH05 = 1.51861+03 TRC6 = 2.02382+03
TRF6 = 2.03684+03 TREH6 = 1.95593+03 TREH06 = 2.01151+03 THH06 = 1.79217+03
THH16 = 2.15405+03 THM6 = 1.08716+03 TLPH = 2.13769+03 TUPH = 9.72765+02

TIME = 3.70000+02
TPC0 = 6.61403+02 THW0 = 1.07083+03 TPO0 = 1.08092+03 TAW0 = 6.70632+02
THH01 = 9.25641+02 WFLOW = 4.27800+01 MARGIN = 4.99757+01 PPRG = 2.09573+03
PNSS = 1.39476+03 GCAA = 1.19085+01 GCCA = 1.00000-05 PRCD = 2.21078-02
POWFLO = 9.28233-04 OCAERR = 1.41732+01 PROPN = 2.83463-01 ICAN = 8.57407+01
DNCAA = 2.83463-01 NCA = 8.57407+01 TRC1 = 1.01010+03 TRF1 = 1.01311+03
TREH1 = 9.93968+02 TREH01 = 1.00540+03 THH01 = 9.25641+02 TRC2 = 1.23685+03
TRF2 = 1.26282+03 TREH2 = 1.09039+03 TREH02 = 1.15150+03 THH02 = 1.02283+03
TRC3 = 1.46142+03 TRF3 = 1.49734+03 TREH3 = 1.27444+03 TREH03 = 1.35956+03
THH03 = 1.14666+03 TRC4 = 1.68283+03 TRF4 = 1.72137+03 TREH4 = 1.49802+03
TREH04 = 1.58984+03 THH04 = 1.30570+03 TRC5 = 1.86931+03 TRF5 = 1.90250+03
TREH5 = 1.71722+03 TREH05 = 1.79837+03 THH05 = 1.51154+03 TRC6 = 2.00118+03
TRF6 = 2.01435+03 TREH6 = 1.93188+03 TREH06 = 1.98805+03 THH06 = 1.78026+03
THH16 = 2.13454+03 THM6 = 1.08624+03 TLPH = 2.11777+03 TUPH = 9.71397+02

GCFR CASY

TIME = 3.75000+02	TPC0 = 6.61362+02	THW0 = 1.07002+03	TPH0 = 1.08029+03	TAW0 = 6.70547+02
	THH01 = 5.25243+02	WFLOW = 4.27800+01	MARGIN = 5.14106+01	PPRG = 2.09573+03
	PNSS = 1.39068+03	GCAA = 1.20805+01	GCCA = 1.00000-05	PRCD = 2.16422-02
	POVFLO = 8.95743-04	OCAERR = 1.49769+01	PROP = 2.99538-01	ICAN = 8.71970+01
	DNCAA = 2.99538-01	NCAA = 8.71970+01	TRC1 = 1.00792+03	TRF1 = 1.01089+03
	TREH1 = 5.91955+02	TREH01 = 1.00316+03	THH01 = 9.25243+02	TRC2 = 1.22988+03
	TRF2 = 1.25541+03	TREH2 = 1.08538+03	TREH02 = 1.14481+03	THH02 = 1.02175+03
	TRC3 = 1.44917+03	TRF3 = 1.48451+03	TREH3 = 1.26387+03	TREH03 = 1.34690+03
	THH03 = 1.14439+03	TRC4 = 1.66525+03	TRF4 = 1.70323+03	TREH4 = 1.48125+03
	TREH04 = 1.57115+03	THH04 = 1.30146+03	TRC5 = 1.84738+03	TRF5 = 1.88020+03
	TREH5 = 1.69518+03	TREH05 = 1.77501+03	THH05 = 1.50415+03	TRC6 = 1.97812+03
	TRF6 = 1.99144+03	TREH6 = 1.90741+03	TREH06 = 1.96412+03	THH06 = 1.76790+03
	THH16 = 2.11440+03	THM6 = 1.08519+03	TLPH = 2.09724+03	TUPH = 9.70037+02
TIME = 3.80000+02	TPC0 = 6.61406+02	THW0 = 1.06910+03	TPH0 = 1.07958+03	TAW0 = 6.70331+02
	THH01 = 9.24834+02	WFLOW = 4.27800+01	MARGIN = 5.30034+01	PPRG = 2.09573+03
	PNSS = 1.38651+03	GCAA = 1.22629+01	GCCA = 1.00000-05	PRCD = 2.11765-02
	POVFLO = 8.63436-04	OCAERR = 1.59050+01	PROP = 3.18099-01	ICAN = 8.87401+01
	DNCAA = 3.18100-01	NCAA = 8.87401+01	TRC1 = 1.00575+03	TRF1 = 1.00868+03
	TREH1 = 9.89948+02	TREH01 = 1.00093+03	THH01 = 9.24834+02	TRC2 = 1.22288+03
	TRF2 = 1.24796+03	TREH2 = 1.08036+03	TREH02 = 1.13811+03	THH02 = 1.02061+03
	TRC3 = 1.43684+03	TRF3 = 1.47159+03	TREH3 = 1.25327+03	TREH03 = 1.33417+03
	THH03 = 1.14201+03	TRC4 = 1.64751+03	TRF4 = 1.68492+03	TREH4 = 1.46437+03
	TREH04 = 1.55228+03	THH04 = 1.29703+03	TRC5 = 1.82521+03	TRF5 = 1.85765+03
	TREH5 = 1.67291+03	TREH05 = 1.75136+03	THH05 = 1.49647+03	TRC6 = 1.95465+03
	TRF6 = 1.96813+03	TREH6 = 1.88250+03	TREH06 = 1.93971+03	THH06 = 1.75510+03
	THH16 = 2.09365+03	THM6 = 1.08404+03	TLPH = 2.07612+03	TUPH = 9.68684+02
TIME = 3.85000+02	TPC0 = 6.61544+02	THW0 = 1.06806+03	TPH0 = 1.07881+03	TAW0 = 6.70036+02
	THH01 = 9.24437+02	WFLOW = 4.27800+01	MARGIN = 5.47289+01	PPRG = 2.09573+03
	PNSS = 1.38224+03	GCAA = 1.24566+01	GCCA = 1.00000-05	PRCD = 2.07108-02
	POVFLO = 8.31318-04	OCAERR = 1.69397+01	PROP = 3.38794-01	ICAN = 9.03816+01
	DNCAA = 3.38795-01	NCAA = 9.03816+01	TRC1 = 1.00358+03	TRF1 = 1.00648+03
	TREH1 = 9.87948+02	TREH01 = 9.98710+02	THH01 = 9.24437+02	TRC2 = 1.21586+03
	TRF2 = 1.24049+03	TREH2 = 1.07536+03	TREH02 = 1.13142+03	THH02 = 1.01945+03
	TRC3 = 1.42443+03	TRF3 = 1.45860+03	TREH3 = 1.24266+03	TREH03 = 1.32140+03
	THH03 = 1.13953+03	TRC4 = 1.62963+03	TRF4 = 1.66647+03	TREH4 = 1.44744+03
	TREH04 = 1.53329+03	THH04 = 1.29243+03	TRC5 = 1.80281+03	TRF5 = 1.83486+03
	TREH5 = 1.65048+03	TREH05 = 1.72749+03	THH05 = 1.48849+03	TRC6 = 1.93078+03
	TRF6 = 1.94440+03	TREH6 = 1.85719+03	TREH06 = 1.91484+03	THH06 = 1.74188+03
	THH16 = 2.07229+03	THM6 = 1.08281+03	TLPH = 2.05441+03	TUPH = 9.67337+02

GCFR CASY

TIME = 3.90000+02
TPC0 = 6.61783+02 THW0 = 1.06695+03 TPO0 = 1.07801+03 TAW0 = 6.69706+02
THH01 = 9.24064+02 WFLOW = 4.27800+01 MARGIN = 5.65299+01 PPRG = 2.09573+03
PNSS = 1.37787+03 GCAA = 1.26627+01 GCCA = 1.00000-05 PRCD = 2.02451-02
POWFLO = 7.99396-04 OCAERR = 1.80526+01 PROPN = 3.61052-01 ICAN = 9.21306+01
DNCAA = 3.61052-01 NCAA = 9.21306+01 TRC1 = 1.00142+03 TRF1 = 1.00428+03
TREH1 = 9.85954+02 TREH01 = 9.96489+02 THH01 = 9.24064+02 TRC2 = 1.20883+03
TRF2 = 1.23300+03 TREH2 = 1.07036+03 TREH02 = 1.12472+03 THH02 = 1.01826+03
TRC3 = 1.41198+03 TRF3 = 1.44555+03 TREH3 = 1.23205+03 TREH03 = 1.30860+03
THH03 = 1.13698+03 TRC4 = 1.61162+03 TRF4 = 1.64788+03 TREH4 = 1.43042+03
TREH04 = 1.51418+03 THH04 = 1.28766+03 TRC5 = 1.78020+03 TRF5 = 1.81186+03
TREH5 = 1.62788+03 TREH05 = 1.70338+03 THH05 = 1.48025+03 TRC6 = 1.90652+03
TRF6 = 1.92028+03 TREH6 = 1.83146+03 TREH06 = 1.88951+03 THH06 = 1.72823+03
THH16 = 2.05033+03 THP6 = 1.08152+03 TLPH = 2.03212+03 TUPH = 9.65997+02

TIME = 3.95000+02
TPC0 = 6.62121+02 THW0 = 1.06577+03 TPO0 = 1.07720+03 TAW0 = 6.69377+02
THH01 = 9.23723+02 WFLOW = 4.27800+01 MARGIN = 5.83965+01 PPRG = 2.09573+03
PNSS = 1.37339+03 GCAA = 1.28817+01 GCCA = 1.00000-05 PRCD = 1.97794-02
POWFLO = 7.67730-04 OCAERR = 1.92272+01 PROPN = 3.84544-01 ICAN = 9.39941+01
DNCAA = 3.84542-01 NCAA = 9.39941+01 TRC1 = 9.99272+02 TRF1 = 1.00209+03
TREH1 = 9.83968+02 TREH01 = 9.94272+02 THH01 = 9.23723+02 TRC2 = 1.20178+03
TRF2 = 1.22550+03 TREH2 = 1.06538+03 TREH02 = 1.11803+03 THH02 = 1.01706+03
TRC3 = 1.39946+03 TRF3 = 1.43243+03 TREH3 = 1.22146+03 TREH03 = 1.29578+03
THH03 = 1.13435+03 TRC4 = 1.59352+03 TRF4 = 1.62918+03 TREH4 = 1.41339+03
TREH04 = 1.49500+03 THH04 = 1.28274+03 TRC5 = 1.75741+03 TRF5 = 1.78866+03
TREH5 = 1.60515+03 TREH05 = 1.67908+03 THH05 = 1.47173+03 TRC6 = 1.88188+03
TRF6 = 1.89576+03 TREH6 = 1.80537+03 TREH06 = 1.86373+03 THH06 = 1.71417+03
THH16 = 2.02777+03 THM6 = 1.08019+03 TLPH = 2.00924+03 TUPH = 9.64662+02

TIME = 4.00000+02
TPC0 = 6.62552+02 THW0 = 1.06456+03 TPO0 = 1.07641+03 TAW0 = 6.69063+02
THH01 = 9.23416+02 WFLOW = 4.27800+01 MARGIN = 6.02722+01 PPRG = 2.09573+03
PNSS = 1.36680+03 GCAA = 1.31141+01 GCCA = 1.00000-05 PRCD = 1.93137-02
POWFLO = 7.36374-04 OCAERR = 2.04354+01 PROPN = 4.08708-01 ICAN = 9.59773+01
DNCAA = 4.08710-01 NCAA = 9.59773+01 TRC1 = 9.97126+02 TRF1 = 9.99902+02
TREH1 = 9.81989+02 TREH01 = 9.92061+02 THH01 = 9.23416+02 TRC2 = 1.19472+03
TRF2 = 1.21798+03 TREH2 = 1.06043+03 TREH02 = 1.11136+03 THH02 = 1.01586+03
TRC3 = 1.38691+03 TRF3 = 1.41928+03 TREH3 = 1.21090+03 TREH03 = 1.28298+03
THH03 = 1.13165+03 TRC4 = 1.57531+03 TRF4 = 1.61039+03 TREH4 = 1.39635+03
TREH04 = 1.47577+03 THH04 = 1.27766+03 TRC5 = 1.73446+03 TRF5 = 1.76529+03
TREH5 = 1.58234+03 TREH05 = 1.65464+03 THH05 = 1.46294+03 TRC6 = 1.85690+03
TRF6 = 1.87088+03 TREH6 = 1.77895+03 TREH06 = 1.83754+03 THH06 = 1.69969+03
THH16 = 2.00461+03 THM6 = 1.07885+03 TLPH = 1.98579+03 TUPH = 9.63334+02

GCFR CASY

TIME = 4.05000+02	TPCO = 6.63066+02	THW0 = 1.06332+03	TPH0 = 1.07564+03	YAW0 = 6.68799+02
	THH01 = 9.23132+02	WFLOW = 4.27800+01	MARGIN = 6.22480+01	PPRG = 2.09573+03
	PNSS = 1.36409+03	GCAA = 1.33597+01	GCCA = 1.00000-05	PRCD = 1.88480-02
	POWFLO = 7.05406-04	OCAERR = 2.16837+01	PROPN = 4.33674-01	ICAN = 9.80829+01
	DNCAA = 4.33676-01	NCAA = 9.80029+01	TRC1 = 9.94986+02	TRF1 = 9.97723+02
	TREH1 = 9.80021+02	TREH01 = 9.89855+02	THH01 = 9.23132+02	TRC2 = 1.18765+03
	TRF2 = 1.21045+03	TREH2 = 1.05550+03	TREH02 = 1.10472+03	THH02 = 1.01463+03
	TRC3 = 1.37434+03	TRF3 = 1.40610+03	TREH3 = 1.20038+03	TREH03 = 1.27019+03
	THH03 = 1.12886+03	TRC4 = 1.55706+03	TRF4 = 1.59152+03	TREH4 = 1.37934+03
	TREH04 = 1.45651+03	THH04 = 1.27240+03	TRC5 = 1.71139+03	TRF5 = 1.74178+03
	TREH5 = 1.55947+03	TREH05 = 1.63007+03	THH05 = 1.45386+03	TRC6 = 1.83156+03
	TRF6 = 1.84566+03	TREH6 = 1.75220+03	TREH06 = 1.81093+03	THH06 = 1.68478+03
	THH16 = 1.98087+03	THP6 = 1.07743+03	TLPH = 1.96177+03	TUPH = 9.62014+02
TIME = 4.10000+02	TPCO = 6.63644+02	THW0 = 1.06204+03	TPH0 = 1.07491+03	YAW0 = 6.68574+02
	THH01 = 9.22863+02	WFLOW = 4.27800+01	MARGIN = 6.42229+01	PPRG = 2.09573+03
	PNSS = 1.35927+03	GCAA = 1.36195+01	GCCA = 1.00000-05	PRCD = 1.83824-02
	POWFLO = 6.74855-04	OCAERR = 2.29567+01	PROPN = 4.59133-01	ICAN = 1.00315+02
	DNCAA = 4.59134-01	NCAA = 1.00315+02	TRC1 = 9.92855+02	TRF1 = 9.95551+02
	TREH1 = 9.78062+02	TREH01 = 9.87657+02	THH01 = 9.22663+02	TRC2 = 1.18058+03
	TRF2 = 1.20292+03	TREH2 = 1.05061+03	TREH02 = 1.09811+03	THH02 = 1.01337+03
	TRC3 = 1.36175+03	TRF3 = 1.39289+03	TREH3 = 1.18992+03	TREH03 = 1.25745+03
	THH03 = 1.12598+03	TRC4 = 1.53876+03	TRF4 = 1.57260+03	TREH4 = 1.36238+03
	TREH04 = 1.43727+03	THH04 = 1.26657+03	TRC5 = 1.68821+03	TRF5 = 1.71815+03
	TREH5 = 1.53658+03	TREH05 = 1.60543+03	THH05 = 1.44449+03	TRC6 = 1.80592+03
	TRF6 = 1.82011+03	TREH6 = 1.72518+03	TREH06 = 1.78395+03	THH06 = 1.66944+03
	THH16 = 1.95655+03	THP6 = 1.07599+03	TLPH = 1.93719+03	TUPH = 9.60700+02
TIME = 4.15000+02	TPCO = 6.64266+02	THW0 = 1.06074+03	TPH0 = 1.07419+03	YAW0 = 6.68400+02
	THH01 = 9.22596+02	WFLOW = 4.27800+01	MARGIN = 6.62561+01	PPRG = 2.09573+03
	PNSS = 1.35433+03	GCAA = 1.38933+01	GCCA = 1.00000-05	PRCD = 1.79167-02
	POWFLO = 6.44793-04	OCAERR = 2.42640+01	PROPN = 4.85279-01	ICAN = 1.02676+02
	DNCAA = 4.85284-01	NCAA = 1.02676+02	TRC1 = 9.90730+02	TRF1 = 9.93387+02
	TREH1 = 9.76150+02	TREH01 = 9.85502+02	THH01 = 9.22596+02	TRC2 = 1.17352+03
	TRF2 = 1.19539+03	TREH2 = 1.04579+03	TREH02 = 1.09157+03	THH02 = 1.01207+03
	TRC3 = 1.34917+03	TRF3 = 1.37968+03	TREH3 = 1.17957+03	TREH03 = 1.24480+03
	THH03 = 1.12300+03	TRC4 = 1.52045+03	TRF4 = 1.55366+03	TREH4 = 1.34553+03
	TREH04 = 1.41810+03	THH04 = 1.26134+03	TRC5 = 1.66496+03	TRF5 = 1.69444+03
	TREH5 = 1.51375+03	TREH05 = 1.58078+03	THH05 = 1.43483+03	TRC6 = 1.78000+03
	TRF6 = 1.79426+03	TREH6 = 1.69796+03	TREH06 = 1.75665+03	THH06 = 1.65368+03
	THH16 = 1.93166+03	THP6 = 1.07450+03	TLPH = 1.91208+03	TUPH = 9.59395+02

GCFR CASY.

TIME = 4.20000+02	TPC0 = 6.64910+02	THW0 = 1.05939+03	TPH0 = 1.07349+03	TAW0 = 6.68263+02
	THM01 = 9.22310+02	WFLOW = 4.27800+01	MARGIN = 6.84012+01	PPRG = 2.09573+03
	PNSS = 1.34927+03	GCAA = 1.41819+01	GCCA = 1.00000-05	PRCD = 1.74510-02
	POWFLO = 6.15255-04	OCAERR = 2.56085+01	PROPN = 5.12170-01	ICAN = 1.05169+02
	DNCAA = 5.12172-01	NCAA = 1.05169+02	TRC1 = 9.88593+02	TRF1 = 9.91220+02
	TREH1 = 9.74363+02	TREH01 = 9.83464+02	THM01 = 9.22310+02	TRC2 = 1.16649+03
	TRF2 = 1.18789+03	TREH2 = 1.04111+03	TREH02 = 1.08515+03	THM02 = 1.01071+03
	TRC3 = 1.33661+03	TRF3 = 1.36649+03	TREH3 = 1.16937+03	TREH03 = 1.23229+03
	THM03 = 1.11989+03	TRC4 = 1.50215+03	TRF4 = 1.53472+03	TREH4 = 1.32883+03
	TREH04 = 1.39904+03	THM04 = 1.25551+03	TRC5 = 1.64169+03	TRF5 = 1.67069+03
	TREH5 = 1.49102+03	TREH05 = 1.55617+03	THM05 = 1.42485+03	TRC6 = 1.75385+03
	TRF6 = 1.76816+03	TREH6 = 1.67058+03	TREH06 = 1.72906+03	THM06 = 1.63749+03
	THM16 = 1.90622+03	THM6 = 1.07294+03	TLPH = 1.88645+03	TUPH = 9.58097+02
TIME = 4.25000+02	TPC0 = 6.65552+02	THW0 = 1.05798+03	TPH0 = 1.07278+03	TAW0 = 6.68152+02
	THM01 = 9.21986+02	WFLOW = 4.27800+01	MARGIN = 7.06508+01	PPRG = 2.09573+03
	PNSS = 1.34407+03	GCAA = 1.44859+01	GCCA = 1.00000-05	PRCD = 1.69853-02
	POWFLO = 5.86269-04	CCAERR = 2.70167+01	PROPN = 5.40334-01	ICAN = 1.07800+02
	DNCAA = 5.40336-01	NCAA = 1.07800+02	TRC1 = 9.86446+02	TRF1 = 9.89043+02
	TREH1 = 9.72574+02	TREH01 = 9.81419+02	THM01 = 9.21986+02	TRC2 = 1.15948+03
	TRF2 = 1.18041+03	TREH2 = 1.03664+03	TREH02 = 1.07906+03	THM02 = 1.00927+03
	TRC3 = 1.32410+03	TRF3 = 1.35334+03	TREH3 = 1.15947+03	TREH03 = 1.22001+03
	THM03 = 1.11664+03	TRC4 = 1.48390+03	TRF4 = 1.51581+03	TREH4 = 1.31237+03
	TREH04 = 1.38017+03	THM04 = 1.24945+03	TRC5 = 1.61842+03	TRF5 = 1.64693+03
	TREH5 = 1.46845+03	TREH05 = 1.53165+03	THM05 = 1.41455+03	TRC6 = 1.72750+03
	TRF6 = 1.74185+03	TREH6 = 1.64310+03	TREH06 = 1.70124+03	THM06 = 1.62087+03
	THM16 = 1.88027+03	THM6 = 1.07130+03	TLPH = 1.86033+03	TUPH = 9.56804+02
TIME = 4.30000+02	TPC0 = 6.66171+02	THW0 = 1.05650+03	TPH0 = 1.07206+03	TAW0 = 6.68051+02
	THM01 = 9.21602+02	WFLOW = 4.27800+01	MARGIN = 7.30450+01	PPRG = 2.09573+03
	PNSS = 1.33874+03	GCAA = 1.48055+01	GCCA = 1.00000-05	PRCD = 1.65196-02
	POWFLO = 5.57886-04	OCAERR = 2.84993+01	PROPN = 5.69985-01	ICAN = 1.10575+02
	DNCAA = 5.69984-01	NCAA = 1.10575+02	TRC1 = 9.84292+02	TRF1 = 9.86857+02
	TREH1 = 9.70784+02	TREH01 = 9.79371+02	THM01 = 9.21602+02	TRC2 = 1.15215+03
	TRF2 = 1.17276+03	TREH2 = 1.03274+03	TREH02 = 1.07380+03	THM02 = 1.00773+03
	TRC3 = 1.31181+03	TRF3 = 1.34032+03	TREH3 = 1.15030+03	TREH03 = 1.20834+03
	THM03 = 1.11323+03	TRC4 = 1.46580+03	TRF4 = 1.49701+03	TREH4 = 1.29646+03
	TREH04 = 1.36173+03	THM04 = 1.24316+03	TRC5 = 1.59524+03	TRF5 = 1.62322+03
	TREH5 = 1.44626+03	TREH05 = 1.50741+03	THM05 = 1.40392+03	TRC6 = 1.70102+03
	TRF6 = 1.71537+03	TREH6 = 1.61564+03	TREH06 = 1.67327+03	THM06 = 1.60383+03
	THM16 = 1.85381+03	THM6 = 1.06955+03	TLPH = 1.83374+03	TUPH = 9.55516+02

GCFR CASY

TIME = 4.35000+02	TPC0 = 6.66748+02	THW0 = 1.05492+03	TPH0 = 1.07132+03	TAW0 = 6.67957+02
	THH01 = 9.21143+02	WFLOW = 4.27800+01	MARGIN = 7.56163+01	PPRG = 2.09573+03
	PNSS = 1.33328+03	GCAA = 1.51428+01	GCCA = 1.00000-05	PRCD = 1.60539-02
	POWFLO = 5.30085-04	OCAERR = 3.00783+01	PROPN = 6.01566-01	ICAN = 1.13503+02
	DNCAA = 6.01567-01	NCAA = 1.13503+02	TRC1 = 9.82132+02	TRF1 = 9.84665+02
	TREH1 = 9.68293+02	TREH01 = 9.77319+02	THH01 = 9.21143+02	TRC2 = 1.14455+03
	TRF2 = 1.16462+03	TREH2 = 1.02877+03	TREH02 = 1.06840+03	THH02 = 1.00607+03
	TRC3 = 1.29967+03	TRF3 = 1.32749+03	TREH3 = 1.14117+03	TREH03 = 1.19679+03
	THH03 = 1.10965+03	TRC4 = 1.44736+03	TRF4 = 1.47836+03	TREH4 = 1.28076+03
	TREH04 = 1.34352+03	THH04 = 1.23662+03	TRC5 = 1.57219+03	TRF5 = 1.59962+03
	TREH5 = 1.42433+03	TREH05 = 1.48340+03	THH05 = 1.39297+03	TRC6 = 1.67446+03
	TRF6 = 1.68878+03	TREH6 = 1.58825+03	TREH06 = 1.64522+03	THH06 = 1.58638+03
	THH16 = 1.82689+03	THH6 = 1.06767+03	TLPH = 1.60672+03	TUPH = 9.54229+02
TIME = 4.40000+02	TPC0 = 6.67268+02	THW0 = 1.05325+03	TPH0 = 1.07053+03	TAW0 = 6.67852+02
	THH01 = 9.20590+02	WFLOW = 4.27800+01	MARGIN = 7.83526+01	PPRG = 2.09573+03
	PNSS = 1.32767+03	GCAA = 1.54988+01	GCCA = 1.00000-05	PRCD = 1.55882-02
	POWFLO = 5.02886-04	OCAERR = 3.17548+01	PROPN = 6.35096-01	ICAN = 1.16593+02
	DNCAA = 6.35094-01	NCAA = 1.16593+02	TRC1 = 9.79967+02	TRF1 = 9.82467+02
	TREH1 = 9.67200+02	TREH01 = 9.75264+02	THH01 = 9.20590+02	TRC2 = 1.13673+03
	TRF2 = 1.15664+03	TREH2 = 1.02474+03	TREH02 = 1.06290+03	THH02 = 1.00427+03
	TRC3 = 1.28756+03	TRF3 = 1.31478+03	TREH3 = 1.13256+03	TREH03 = 1.18607+03
	THH03 = 1.10587+03	TRC4 = 1.43012+03	TRF4 = 1.45988+03	TREH4 = 1.26579+03
	TREH04 = 1.32590+03	THH04 = 1.22983+03	TRC5 = 1.54932+03	TRF5 = 1.57617+03
	TREH5 = 1.40291+03	TREH05 = 1.45978+03	THH05 = 1.38169+03	TRC6 = 1.64788+03
	TRF6 = 1.66214+03	TREH6 = 1.56102+03	TREH06 = 1.61715+03	THH06 = 1.56853+03
	THH16 = 1.79954+03	THH6 = 1.06566+03	TLPH = 1.77932+03	TUPH = 9.52941+02
TIME = 4.45000+02	TPC0 = 6.67719+02	THW0 = 1.05143+03	TPH0 = 1.06970+03	TAW0 = 6.67733+02
	THH01 = 9.19930+02	WFLOW = 4.27800+01	MARGIN = 8.12433+01	PPRG = 2.09573+03
	PNSS = 1.32192+03	ECAA = 1.58747+01	GCCA = 1.00000-05	PRCD = 1.51225-02
	POWFLO = 4.76398-04	OCAERR = 3.35742+01	PROPN = 6.71484-01	ICAN = 1.19859+02
	DNCAA = 6.71485-01	NCAA = 1.19859+02	TRC1 = 9.77799+02	TRF1 = 9.80265+02
	TREH1 = 9.65404+02	TREH01 = 9.73206+02	THH01 = 9.19930+02	TRC2 = 1.12874+03
	TRF2 = 1.14826+03	TREH2 = 1.02066+03	TREH02 = 1.05732+03	THH02 = 1.00233+03
	TRC3 = 1.27498+03	TRF3 = 1.30178+03	TREH3 = 1.12450+03	TREH03 = 1.17619+03
	THH03 = 1.10190+03	TRC4 = 1.41280+03	TRF4 = 1.44175+03	TREH4 = 1.25163+03
	TREH04 = 1.30903+03	THH04 = 1.22278+03	TRC5 = 1.52678+03	TRF5 = 1.55299+03
	TREH5 = 1.38219+03	TREH05 = 1.43677+03	THH05 = 1.37008+03	TRC6 = 1.62138+03
	TRF6 = 1.63554+03	TREH6 = 1.53414+03	TREH06 = 1.58922+03	THH06 = 1.55031+03
	THH16 = 1.77181+03	THH6 = 1.06348+03	TLPH = 1.75159+03	TUPH = 9.51646+02

GCFR CASH

TIME = 4.50000+02	TPCO = 6.68096+02	THW0 = 1.04996+03	TPH0 = 1.06882+03	TAW0 = 6.67606+02
	THM01 = 9.19155+02	WFLOW = 4.27800+01	MARGIN = 8.40567+01	PPRG = 2.09573+03
	PNSS = 1.31602+03	GCAA = 1.62726+01	GCCA = 1.00000-05	PRCD = 1.46569-02
	POWFLOW = 4.50353-04	OCAERR = 3.55424+01	PROPN = 7.10848-01	ICAN = 1.23313+02
	DNCAA = 7.10847-01	NCAA = 1.23313+02	TRC1 = 9.75627+02	TRF1 = 9.78059+02
	TREH1 = 9.63603+02	TREH01 = 9.71145+02	THM01 = 9.19155+02	TRC2 = 1.12062+03
	TRF2 = 1.13974+03	TREH2 = 1.01655+03	TREH02 = 1.05168+03	THM02 = 1.00024+03
	TRC3 = 1.26204+03	TRF3 = 1.28838+03	TREH3 = 1.11630+03	TREH03 = 1.16610+03
	THM03 = 1.09773+03	TRC4 = 1.39577+03	TRF4 = 1.42396+03	TREH4 = 1.23752+03
	TREH04 = 1.29234+03	THM04 = 1.21547+03	TRC5 = 1.50453+03	TRF5 = 1.53012+03
	TREH5 = 1.36178+03	TREH05 = 1.41411+03	THM05 = 1.35817+03	TRC6 = 1.59502+03
	TRF6 = 1.60905+03	TREH6 = 1.50753+03	TREH06 = 1.56143+03	THM06 = 1.53175+03
	THM16 = 1.74375+03	THP6 = 1.06113+03	TLPH = 1.72358+03	TUPH = 9.50341+02
TIME = 4.55000+02	TPCO = 6.68397+02	THW0 = 1.04733+03	TPH0 = 1.06788+03	TAW0 = 6.67469+02
	THM01 = 9.18256+02	WFLOW = 4.27800+01	MARGIN = 8.71012+01	PPRG = 2.09573+03
	PNSS = 1.30997+03	GCAA = 1.66944+01	GCCA = 1.00000-05	PRCD = 1.41912-02
	POWFLOW = 4.25028-04	OCAERR = 3.76688+01	PROPN = 7.53376-01	ICAN = 1.26972+02
	DNCAA = 7.53375-01	NCAA = 1.26972+02	TRC1 = 9.73451+02	TRF1 = 9.75849+02
	TREH1 = 9.61793+02	TREH01 = 9.69079+02	THM01 = 9.18256+02	TRC2 = 1.11240+03
	TRF2 = 1.13110+03	TREH2 = 1.01242+03	TREH02 = 1.04600+03	THM02 = 9.97990+02
	TRC3 = 1.24879+03	TRF3 = 1.27466+03	TREH3 = 1.10799+03	TREH03 = 1.15584+03
	THM03 = 1.09336+03	TRC4 = 1.37848+03	TRF4 = 1.40619+03	TREH4 = 1.22470+03
	TREH04 = 1.27765+03	THM04 = 1.20791+03	TRC5 = 1.48282+03	TRF5 = 1.50766+03
	TREH5 = 1.34301+03	TREH05 = 1.39276+03	THM05 = 1.34596+03	TRC6 = 1.56892+03
	TRF6 = 1.58275+03	TREH6 = 1.48175+03	TREH06 = 1.53411+03	THM06 = 1.51287+03
	THM16 = 1.71541+03	THM6 = 1.05860+03	TLPH = 1.69535+03	TUPH = 9.49020+02
TIME = 4.60000+02	TPCO = 6.68623+02	THW0 = 1.04504+03	TPH0 = 1.06689+03	TAW0 = 6.67323+02
	THM01 = 9.17235+02	WFLOW = 4.27800+01	MARGIN = 9.03771+01	PPRG = 2.09573+03
	PNSS = 1.30377+03	GCAA = 1.71417+01	GCCA = 1.00000-05	PRCD = 1.37255-02
	POWFLOW = 4.00354-04	OCAERR = 3.99648+01	PROPN = 7.99296-01	ICAN = 1.30852+02
	DNCAA = 7.99295-01	NCAA = 1.30852+02	TRC1 = 9.71269+02	TRF1 = 9.73635+02
	TREH1 = 9.59971+02	TREH01 = 9.67006+02	THM01 = 9.17235+02	TRC2 = 1.10412+03
	TRF2 = 1.12238+03	TREH2 = 1.00828+03	TREH02 = 1.04030+03	THM02 = 9.95583+02
	TRC3 = 1.23531+03	TRF3 = 1.26067+03	TREH3 = 1.09961+03	TREH03 = 1.14547+03
	THM03 = 1.08879+03	TRC4 = 1.36072+03	TRF4 = 1.38800+03	TREH4 = 1.21169+03
	TREH04 = 1.26270+03	THM04 = 1.20011+03	TRC5 = 1.46160+03	TRF5 = 1.48573+03
	TREH5 = 1.32453+03	TREH05 = 1.37199+03	THM05 = 1.33348+03	TRC6 = 1.54315+03
	TRF6 = 1.55676+03	TREH6 = 1.45650+03	TREH06 = 1.50720+03	THM06 = 1.49373+03
	THM16 = 1.68688+03	THM6 = 1.05588+03	TLPH = 1.66700+03	TUPH = 9.47677+02

GCFR CASY

TIME = 4.65000+02	TPC0 = 6.68781+02	THW0 = 1.04256+03	TPH0 = 1.06585+03	TAW0 = 6.67172+02
	THH01 = 9.16096+02	WFLOW = 4.27800+01	MARGIN = 9.39004+01	PPRG = 2.09573+03
	PNSS = 1.29743+03	GCAA = 1.76171+01	GCCA = 1.00000-05	PRCD = 1.32598-02
	POWFLO = 3.76333-04	OCAERR = 4.24367+01	PROPN = 8.48734-01	ICAN = 1.34971+02
	DNCAA = 8.48728-01	NCAA = 1.34971+02	TRC1 = 9.69080+02	TRF1 = 9.71414+02
	TREH1 = 9.58134+02	TREH01 = 9.64923+02	THH01 = 9.16096+02	TRC2 = 1.09581+03
	TRF2 = 1.11362+03	TREH2 = 1.00413+03	TREH02 = 1.03460+03	THH02 = 9.93024+02
	TRC3 = 1.22165+03	TRF3 = 1.24647+03	TREH3 = 1.09119+03	TREH03 = 1.13502+03
	THH03 = 1.08403+03	TRC4 = 1.34263+03	TRF4 = 1.36944+03	TREH4 = 1.19854+03
	TREH04 = 1.24755+03	THH04 = 1.19210+03	TPC5 = 1.44011+03	TRF5 = 1.46390+03
	TREH5 = 1.30706+03	TREH05 = 1.35283+03	THH05 = 1.32077+03	TRC6 = 1.51795+03
	TRF6 = 1.53123+03	TREH6 = 1.43246+03	TREH06 = 1.48113+03	THH06 = 1.47437+03
	THH16 = 1.65824+03	THM6 = 1.05298+03	TLPH = 1.63862+03	TUPH = 9.46306+02
TIME = 4.70000+02	TPC0 = 6.68876+02	THW0 = 1.03992+03	TPH0 = 1.06475+03	TAW0 = 6.67021+02
	THH01 = 9.14891+02	WFLOW = 4.27800+01	MARGIN = 9.76570+01	PPRG = 2.09573+03
	PNSS = 1.29096+03	GCAA = 1.81212+01	GCCA = 1.00000-05	PRCD = 1.27941-02
	POWFLO = 3.53016-04	OCAERR = 4.50788+01	PROPN = 9.01576-01	ICAN = 1.39345+02
	DNCAA = 9.01573-01	NCAA = 1.39345+02	TRC1 = 9.66882+02	TRF1 = 9.69185+02
	TREH1 = 9.56278+02	TREH01 = 9.62828+02	THH01 = 9.14841+02	TRC2 = 1.08748+03
	TRF2 = 1.10483+03	TREH2 = 9.99985+02	TREH02 = 1.02890+03	THH02 = 9.90321+02
	TRC3 = 1.20787+03	TRF3 = 1.25213+03	TREH3 = 1.08276+03	TREH03 = 1.12454+03
	THH03 = 1.07910+03	TRC4 = 1.32427+03	TRF4 = 1.35058+03	TREH4 = 1.18529+03
	TREH04 = 1.23227+03	THH04 = 1.18389+03	TRC5 = 1.41836+03	TRF5 = 1.44179+03
	TREH5 = 1.28943+03	TREH05 = 1.33349+03	THH05 = 1.30786+03	TRC6 = 1.49317+03
	TRF6 = 1.50620+03	TREH6 = 1.40930+03	TREH06 = 1.45620+03	THH06 = 1.45487+03
	THH16 = 1.62959+03	THM6 = 1.04991+03	TLPH = 1.61031+03	TUPH = 9.44902+02
TIME = 4.75000+02	TPC0 = 6.68918+02	THW0 = 1.03710+03	TPH0 = 1.06359+03	TAW0 = 6.66868+02
	THH01 = 9.13497+02	WFLOW = 4.27800+01	MARGIN = 1.01623+02	PPRG = 2.09573+03
	PNSS = 1.28438+03	GCAA = 1.86572+01	GCCA = 1.00000-05	PRCD = 1.23284-02
	POWFLO = 3.30392-04	OCAERR = 4.78991+01	PROPN = 9.57983-01	ICAN = 1.43993+02
	DNCAA = 9.57983-01	NCAA = 1.43993+02	TRC1 = 9.64671+02	TRF1 = 9.66945+02
	TREH1 = 9.54397+02	TREH01 = 9.60717+02	THH01 = 9.13497+02	TRC2 = 1.07917+03
	TRF2 = 1.09604+03	TREH2 = 9.95844+02	TREH02 = 1.02323+03	THH02 = 9.87508+02
	TRC3 = 1.19401+03	TRF3 = 1.21769+03	TREH3 = 1.07434+03	TREH03 = 1.11406+03
	THH03 = 1.07404+03	TRC4 = 1.30571+03	TRF4 = 1.33149+03	TREH4 = 1.17201+03
	TREH04 = 1.21690+03	THH04 = 1.17554+03	TRC5 = 1.39637+03	TRF5 = 1.41944+03
	TREH5 = 1.27169+03	TREH05 = 1.31401+03	THH05 = 1.29485+03	TRC6 = 1.46845+03
	TRF6 = 1.48137+03	TREH6 = 1.38695+03	TREH06 = 1.43226+03	THH06 = 1.43534+03
	THH16 = 1.60159+03	THM6 = 1.04667+03	TLPH = 1.58228+03	TUPH = 9.43458+02

GCFR CASY

TIME = 4.80000+02
TPCO = 6.68915+02 THW0 = 1.03412+03 TPH0 = 1.06238+03 TAW0 = 6.66718+02
THH01 = 9.12076+02 WFLOW = 4.27300+01 MARGIN = 1.05776+02 PPRG = 2.09573+03
PNSS = 1.27768+03 GCAA = 1.92260+01 GCCA = 1.00000-05 PRCD = 1.18627-02
POWFLO = 3.08507-04 QCAERR = 5.08761+01 PROPN = 1.01752+00 ICAN = 1.48930+02
DNCAA = 1.01753+00 NCA = 1.48930+02 TRC1 = 9.62445+02 TRF1 = 9.64691+02
TREH1 = 9.52489+02 TREH01 = 9.58587+02 THH01 = 9.12076+02 TRC2 = 1.07089+03
TRF2 = 1.08728+03 TREH2 = 9.91715+02 TREH02 = 1.01758+03 THH02 = 9.84599+02
TRC3 = 1.18013+03 TRF3 = 1.20320+03 TREH3 = 1.06595+03 TREH03 = 1.10362+03
THH03 = 1.06887+03 TRC4 = 1.28702+03 TRF4 = 1.31223+03 TREH4 = 1.15873+03
TREH04 = 1.20152+03 THH04 = 1.16710+03 TRC5 = 1.37422+03 TRF5 = 1.39689+03
TREH5 = 1.25390+03 TREH05 = 1.29445+03 THH05 = 1.28177+03 TRC6 = 1.44380+03
TRF6 = 1.45663+03 TREH6 = 1.36461+03 TREH06 = 1.40636+03 THH06 = 1.41584+03
THH16 = 1.57284+03 THM6 = 1.04329+03 TLPH = 1.55451+03 TUPH = 9.41971+02

TIME = 4.85000+02
TPCO = 6.68876+02 THW0 = 1.03101+03 TPH0 = 1.06110+03 TAW0 = 6.66572+02
THH01 = 9.10574+02 WFLOW = 4.27800+01 MARGIN = 1.10087+02 PPRG = 2.09573+03
PNSS = 1.27086+03 GCAA = 1.98288+01 GCCA = 1.00000-05 PRCD = 1.13971-02
POWFLO = 2.87386-04 QCAERR = 5.39908+01 PROPN = 1.07982+00 ICAN = 1.54172+02
DNCAA = 1.07981+00 NCA = 1.54172+02 TRC1 = 9.60199+02 TRF1 = 9.62421+02
TREH1 = 9.50550+02 TREH01 = 9.56434+02 THH01 = 9.10574+02 TRC2 = 1.06266+03
TRF2 = 1.07856+03 TREH2 = 9.87601+02 TREH02 = 1.01198+03 THH02 = 9.81592+02
TRC3 = 1.16628+03 TRF3 = 1.18871+03 TREH3 = 1.05762+03 TREH03 = 1.09324+03
THH03 = 1.06360+03 TRC4 = 1.26825+03 TRF4 = 1.29288+03 TREH4 = 1.14550+03
TREH04 = 1.18616+03 THH04 = 1.15854+03 TRC5 = 1.35194+03 TRF5 = 1.37419+03
TREH5 = 1.23612+03 TREH05 = 1.27486+03 THH05 = 1.26863+03 TRC6 = 1.41922+03
TRF6 = 1.43196+03 TREH6 = 1.34231+03 TREH06 = 1.38453+03 THH06 = 1.39639+03
THH16 = 1.54483+03 THM6 = 1.03979+03 TLPH = 1.52698+03 TUPH = 9.40436+02

TIME = 4.90000+02
TPCO = 6.68809+02 THW0 = 1.02777+03 TPH0 = 1.05975+03 TAW0 = 6.66428+02
THH01 = 9.08980+02 WFLOW = 4.27800+01 MARGIN = 1.14570+02 PPRG = 2.09573+03
PNSS = 1.26391+03 GCAA = 2.04675+01 GCCA = 1.00000-05 PRCD = 1.09314-02
POWFLO = 2.67042-04 QCAERR = 5.72328+01 PROPN = 1.14466+00 ICAN = 1.59733+02
DNCAA = 1.14465+00 NCA = 1.59733+02 TRC1 = 9.57931+02 TRF1 = 9.60130+02
TREH1 = 9.48575+02 TREH01 = 9.54254+02 THH01 = 9.08980+02 TRC2 = 1.05451+03
TRF2 = 1.06991+03 TREH2 = 9.83506+02 TREH02 = 1.00643+03 THH02 = 9.78473+02
TRC3 = 1.15250+03 TRF3 = 1.17428+03 TREH3 = 1.04938+03 TREH03 = 1.08295+03
THH03 = 1.05820+03 TRC4 = 1.24949+03 TRF4 = 1.27349+03 TREH4 = 1.13237+03
TREH04 = 1.17089+03 THH04 = 1.14987+03 TRC5 = 1.32961+03 TRF5 = 1.35141+03
TREH5 = 1.21840+03 TREH05 = 1.25532+03 THH05 = 1.25540+03 TRC6 = 1.39471+03
TRF6 = 1.40736+03 TREH6 = 1.32008+03 TREH06 = 1.36078+03 THH06 = 1.37695+03
THH16 = 1.51704+03 THM6 = 1.03616+03 TLPH = 1.49966+03 TUPH = 9.38847+02

GCFR CASY

TIME = 4.95000+02

TPCO = 6.68721+02	THWO = 1.02439+03	TPHO = 1.05833+03	TAWO = 6.66286+02
THH01 = 9.07276+02	WFLOW = 4.27800+01	MARGIN = 1.19242+02	PPRG = 2.09573+03
PNSS = 1.25681+03	GCAA = 2.11414+01	GCCA = 1.00000-05	PRCD = 1.04657-02
POWFLO = 2.47516-04	CCAERR = 6.06109+01	PROP = 1.21222+00	ICAN = 1.65624+02
DNCAA = 1.21222+00	NCAA = 1.65624+02	TRC1 = 9.55637+02	TRF1 = 9.57814+02
TREH1 = 9.46560+02	TREH01 = 9.52044+02	THH01 = 9.07276+02	TRC2 = 1.04645+03
TRF2 = 1.06133+03	TREH2 = 9.79431+02	TREH02 = 1.00093+03	THH02 = 9.75217+02
TRC3 = 1.13884+03	TRF3 = 1.15994+03	TREH3 = 1.04123+03	TREH03 = 1.07280+03
THH03 = 1.05264+03	TRC4 = 1.23079+03	TRF4 = 1.25414+03	TREH4 = 1.11937+03
TREH04 = 1.15575+03	THH04 = 1.14104+03	TRC5 = 1.30729+03	TRF5 = 1.32862+03
TREH5 = 1.20080+03	TREH05 = 1.23589+03	THH05 = 1.24205+03	TRC6 = 1.37028+03
TRF6 = 1.38283+03	TREH6 = 1.29797+03	TREH06 = 1.33715+03	THH06 = 1.35750+03
THH16 = 1.48945+03	THH6 = 1.03236+03	TLPH = 1.47253+03	TUPH = 9.37200+02

TIME = 5.00000+02

TPCO = 6.68618+02	THWO = 1.02087+03	TPHO = 1.05682+03	TAWO = 6.66143+02
THH01 = 9.05451+02	WFLOW = 4.27800+01	MARGIN = 1.24152+02	PPRG = 2.09573+03
PNSS = 1.24956+03	GCAA = 2.18544+01	GCCA = 1.00000-05	PRCD = 1.00000-02
POWFLO = 2.28787-04	CCAERR = 6.41321+01	PROP = 1.28264+00	ICAN = 1.71859+02
DNCAA = 1.28264+00	NCAA = 1.71859+02	TRC1 = 9.53313+02	TRF1 = 9.55471+02
TREH1 = 9.44499+02	TREH01 = 9.49798+02	THH01 = 9.05451+02	TRC2 = 1.03849+03
TRF2 = 1.05285+03	TREH2 = 9.75378+02	TREH02 = 9.95492+02	THH02 = 9.71812+02
TRC3 = 1.12533+03	TRF3 = 1.14574+03	TREH3 = 1.03320+03	TREH03 = 1.06279+03
THH03 = 1.04691+03	TRC4 = 1.21224+03	TRF4 = 1.23490+03	TREH4 = 1.10656+03
TREH04 = 1.14081+03	THH04 = 1.13205+03	TRC5 = 1.28506+03	TRF5 = 1.30587+03
TREH5 = 1.18339+03	TREH05 = 1.21663+03	THH05 = 1.22859+03	TRC6 = 1.34597+03
TRF6 = 1.35841+03	TREH6 = 1.27602+03	TREH06 = 1.31366+03	THH06 = 1.33802+03
THH16 = 1.46204+03	THH6 = 1.02838+03	TLPH = 1.44558+03	TUPH = 9.35488+02

DEBUG OUTPUT AT TIME = 5.00000+02

AHEFLO 1.05000+03	APS 6.73100-01	BAW1 6.64084-02	BAW0 2.08918-03	BAVT 2.54031-01	BAW1 6.08638-02
BAW10 2.76918-03	BAW2 3.93188-02	BAW3 2.55792-02	BAW4 1.82150-02	BAW5 1.32532-02	BAW6 9.60772-03
BAW7 6.97389-03	BAW8 5.15303-03	BAW9 3.79989-03	BHW1 1.62509-03	BHW0 1.93671-01	BHW2 2.61823-01
BHW1 -1.14982-03	BHW2 -4.36639-03	BHW3 -4.69247-03	BHW4 7.58240-04	BHW5 1.70511-02	BHW6 5.89259-02
BPC1 2.72274-02	BPC1 2.84953-03	BPC2 2.18425-03	BPC2 2.88222-03	BPC3 2.88575-03	BPC4 2.84691-03
BPC5 2.79081-03	BPC6 2.75303-03	BPC7 2.74273-03	BPC8 2.71682-03	BPC9 2.57532-03	BPH1 1.41020+00
BPH1 1.90544-01	BPH10 9.52993-02	BPH2 1.80169-01	BPH3 1.69189-01	BPH4 1.57525-01	BPH5 1.45533-01
BPH6 1.33720-01	BPH7 1.22557-01	BPH8 1.12370-01	BPH9 1.03290-01	DELGR 5.00000+00	DELMAX 1.00000+36
DELMI 1.00000-06	DELPP 5.00000+02	DELPR 5.00000+00	DELS 0.00000	DELT 5.78867-01	DICAN 1.28264+00
DNCAA 1.28264+00	DTAM1 -2.54005-01	DTAM10 -3.27834-02	DTAM2 -2.03755-01	DTAM3 -1.61416-01	DTAM4 -1.29550-01
DTAM5 -1.02679-01	DTAM6 -8.21475-02	DTAM7 -6.44587-02	DTAM8 -5.24018-02	DTAM9 -4.02213-02	DTAW1 -2.92275-01
DTAW0 -2.86103-02	DTAW1 -2.63659-01	DTAW10 -3.29803-02	DTAW2 -2.09774-01	DTAW3 -1.67174-01	DTAW4 -1.33139-01
DTAW5 -1.06840-01	DTAW6 -8.46409-02	DTAW7 -6.66815-02	DTAW8 -5.31089-02	DTAW9 -4.21448-02	DTCAHA -3.63670-01
DTGPM 0.00000	DTHH16 -5.46216+00	DTHH1 9.35051-02	DTHH2 9.92857-02	DTHH3 3.77443-02	DTHH4 -1.12838-01
DTHM5 -3.86447-01	DTHM6 -8.21906-01	DTHW1 -1.69169-02	DTHW0 -7.22300-01	DTHW1 2.42233-02	DTHW2 8.06690-02
DTHW3 7.62015-02	DTHW4 -1.07386-02	DTHW5 -2.07761-01	DTHW6 -5.49072-01	DTLPH -5.37241+00	DTPCQM -1.29395-02
DTPC1 -2.87369-02	DTPC10 -2.18529-02	DTPC2 -2.90390-02	DTPC3 -2.90470-02	DTPC4 -2.86293-02	DTPC5 -2.80394-02
DTPC6 -2.76350-02	DTPC7 -2.75070-02	DTPC8 -2.72231-02	DTPC9 -2.57837-02	DTPHM -6.16136-01	DTPH1 -6.73097-01
DTPH10 -3.10767-01	DTPH2 -6.28233-01	DTPH3 -5.82988-01	DTPH4 -5.36986-01	DTPH5 -4.91312-01	DTPH6 -4.47502-01
DTPH7 -4.06932-01	DTPH8 -3.70473-01	DTPH9 -3.38360-01	DTRC1 -4.68318-01	DTRC2 -1.58044+00	DTRC3 -2.68094+00
DTRC4 -3.69157+00	DTRC5 -4.43225+00	DTRC6 -4.84890+00	DTRF1 -4.71777-01	DTRF2 -1.68555+00	DTRF3 -2.82342+00
DTRF4 -3.83378+00	DTRF5 -4.53942+00	DTRF6 -4.87187+00	DTUPH -3.49463-01	DUMMY 1.00000-02	01 3.00000-01
D2 6.00000+01	EAC 0.00000	EAE1 0.00000	FCON 9.43000+02	FINTIM 5.00000+02	FSPH 8.97000+02
FVIS 9.18000+02	GAA 7.60500+02	GBPH 2.18544+01	GCAA 2.18544+01	GCAAS 1.00000-05	GCCA 1.00000-05
GPRI 0.00000	GPRO 0.00000	GREH 1.34667-03	GRETOT 4.37088+01	HEFLOW 1.03503+03	HSATP 9.68000+02

RAW1	4.25146+01	RAW0	5.99403+01	RAW1	4.48885+01	RAW10	5.96887+01	RAW2	4.89303+01	RAW3	5.16694+01
RAW4	5.37629+01	RAW5	5.53447+01	RAW6	5.66054+01	RAW7	5.76371+01	RAW8	5.84666+01	RAW9	5.91393+01
RFTSL	8.47000+02	RHWAV	5.47084+01	RHW1	5.98729+01	RHW0	4.51392+01	RHW1	5.93404+01	RHW2	5.81156+01
RHW3	5.65445+01	RHW4	5.45149+01	RHW5	5.18042+01	RHW6	4.79308+01	RPCAV	5.99037+01	RPC1	5.99335+01
RPC10	5.98759+01	RPC2	5.99267+01	RPC3	5.99198+01	RPC4	5.99131+01	RPC5	5.99065+01	RPC6	5.99000+01
RPC7	5.98935+01	RPC8	5.98871+01	RPC9	5.98811+01	RPHAV	4.35703+01	RPH1	4.47806+01	RPH10	4.26224+01
RPH2	4.44473+01	RPH3	4.41392+01	RPH4	4.38564+01	RPH5	4.35985+01	RPH6	4.33643+01	RPH7	4.31519+01
RPH8	4.29591+01	RPH9	4.27833+01	SCAV	0.00000	SPL	1.00000+00	SPS	1.00000+00	TAA110	5.59000+02
TAA01	6.54544+02	TAA010	5.63769+02	TAA02	6.37968+02	TAA03	6.23601+02	TAA04	6.11130+02	TAA05	6.00290+02
TAA06	5.90856+02	TAA07	5.82639+02	TAA08	5.75476+02	TAA09	5.69226+02	TAA1	6.46256+02	TAA10	5.61384+02
TAA2	6.30785+02	TAA3	6.17366+02	TAA4	6.05710+02	TAA5	5.95573+02	TAA6	5.86748+02	TAA7	5.79058+02
TAA8	5.72351+02	TAA9	5.66497+02	TAM1	1.01170+03	TAM10	6.71317+02	TAM2	9.49960+02	TAM3	8.96315+02
TAM4	8.49655+02	TAM5	8.09007+02	TAM6	7.73535+02	TAM7	7.42583+02	TAM8	7.15555+02	TAM9	6.91946+02
TAM1	1.05836+03	TAM0	6.66143+02	TAM01	9.90537+02	TAM010	6.65957+02	TAM02	9.31711+02	TAM03	8.80590+02
TAM04	8.36100+02	TAM05	7.97334+02	TAM06	7.63524+02	TAM07	7.34004+02	TAM08	7.08221+02	TAM09	6.85677+02
TAM1	1.02445+03	TAM10	6.75817+02	TAM2	9.61124+02	TAM3	9.06150+02	TAM4	8.58345+02	TAM5	8.16717+02
TAM6	7.80429+02	TAM7	7.48764+02	TAM8	7.21113+02	TAM9	6.96949+02	TAM0	1.08034+03	TAM0A	9.05814+02
TCH0A	1.07400+03	TFLAG	1.00000+00	TGPM	0.00000	TMM16	1.46208+03	TMM01	9.05451+02	TMM02	9.71812+02
TMM03	1.04691+03	TMM04	1.13205+03	TMM05	1.22859+03	TMM06	1.33802+03	TMM1	9.38631+02	TMM2	1.00936+03
TMM3	1.08948+03	TMM4	1.18032+03	TMM5	1.28330+03	TMM6	1.40003+03	TMM10	0.00000	TMM1	7.25538+02
TMM2	7.71170+02	TMM3	8.22976+02	TMM4	8.82278+02	TMM5	9.50314+02	TMM6	1.02838+03	TMM1	6.68733+02
TMM0	1.02087+03	TMM05	1.08500+03	TMM05S	1.08500+03	TMM01	7.09695+02	TMM02	7.55932+02	TMM03	8.08509+02
TMM04	8.68604+02	TMM05	9.37567+02	TMM06	1.01692+03	TMM1	6.89214+02	TMM2	7.32813+02	TMM3	7.82221+02
TMM4	8.38557+02	TMM5	9.03085+02	TMM6	9.77246+02	TMM	5.00000+02	TINLET	1.09300+03	TLPH	1.44558+03
TLPH0	1.06000+03	TPC0	6.68618+02	TPC0M	6.68748+02	TPC1	6.66403+02	TPC10	6.68618+02	TPC2	6.66666+02
TPC3	6.66929+02	TPC4	6.67188+02	TPC5	6.67442+02	TPC6	6.67692+02	TPC7	6.67991+02	TPC8	6.68187+02
TPC9	6.68421+02	TPHM	1.03215+03	TPH0	1.05682+03	TPH1	1.02599+03	TPH10	1.05682+03	TPH2	1.03075+03
TPH3	1.03515+03	TPH4	1.03919+03	TPH5	1.04288+03	TPH6	1.04622+03	TPH7	1.04926+03	TPH8	1.05201+03
TPH9	1.05452+03	TPR1	5.30000+02	TPRW	5.38657+02	TRC1	9.53313+02	TRC2	1.03849+03	TRC3	1.12533+03
TRC4	1.21224+03	TRC5	1.28506+03	TRC6	1.34597+03	TREH01	9.49798+02	TREH02	9.95492+02	TREH03	1.06279+03
TREH04	1.14081+03	TREH05	1.21663+03	TREH06	1.31366+03	TREH1	9.44499+02	TREH2	9.75378+02	TREH3	1.03320+03
TREH4	1.10656+03	TREH5	1.18339+03	TREH6	1.27602+03	TRF1	9.55471+02	TRF2	1.05285+03	TRF3	1.14574+03
TRF4	1.23490+03	TRF5	1.30587+03	TRF6	1.35841+03	TSCRAM	3.00000+01	TSEC	1.20000+02	TSTART	1.20000+02
TUPH	9.35488+02	TWARN	2.50000+01	VPRW	2.01657+02	WFLOW	4.27800+01	WPLR	0.00000	WPLS	5.17000+00
WPLS0	5.17000+00	WPR1	0.00000	WPRO	0.00000	WPSR	0.00000	WPSS	5.17000+00	Z8000	3.01655+01
Z8002	1.07811+00	Z8003	3.94633+01	Z8004	6.84537+01	Z8005	1.00316+00	Z8006	5.85549+01	Z8007	3.00744+01
Z8009	1.08319+00	Z8010	3.95478+01	Z8011	6.13112+01	Z8012	1.00739+00	Z8013	5.54608+01	Z8014	2.99714+01
Z8016	1.08906+00	Z8017	3.95778+01	Z8018	5.43441+01	Z8019	1.01444+00	Z8020	5.22748+01	Z8021	2.98551+01
Z8023	1.09586+00	Z8024	3.95225+01	Z8025	4.79843+01	Z8026	1.02551+00	Z8027	4.91911+01	Z8028	2.97239+01
Z8030	1.10376+00	Z8031	3.93366+01	Z8032	4.22948+01	Z8033	1.03817+00	Z8034	4.63318+01	Z8035	2.95760+01
Z8037	1.11294+00	Z8038	3.89657+01	Z8039	3.71283+01	Z8040	1.05403+00	Z8041	4.36523+01	Z8042	2.94097+01
Z8044	1.12366+00	Z8045	3.81331+01	Z8046	3.29655+01	Z8047	1.07901+00	Z8048	4.15680+01	Z8049	2.92229+01
Z8051	1.13622+00	Z8052	3.68078+01	Z8053	2.91080+01	Z8054	1.11692+00	Z8055	3.96982+01	Z8056	2.90135+01
Z8058	1.15101+00	Z8059	3.48461+01	Z8060	2.55416+01	Z8061	1.19270+00	Z8062	3.78995+01	Z8063	2.87793+01
Z8065	1.16852+00	Z8066	3.15463+01	Z8067	2.23931+01	Z8068	1.36780+00	Z8069	3.63861+01	Z8070	1.94945+01
Z8075	3.00125+00	Z8076	3.40722+01	Z8077	2.47032+01	Z8078	1.23139+00	Z8079	1.04335+00	Z8080	1.97451+01
Z8085	3.14529+00	Z8086	3.68936+01	Z8087	2.93532+01	Z8088	1.11447+00	Z8089	1.10864+00	Z8090	1.99890+01
Z8095	3.28258+00	Z8096	3.85289+01	Z8097	3.49943+01	Z8098	1.06713+00	Z8099	1.18541+00	Z8100	2.02253+01
Z8105	3.41241+00	Z8106	3.93222+01	Z8107	4.20224+01	Z8108	1.03889+00	Z8109	1.28603+00	Z8110	2.04532+01
Z8115	3.53454+00	Z8116	3.95544+01	Z8117	5.16529+01	Z8118	1.01913+00	Z8119	1.41963+00	Z8120	2.06724+01
Z8125	3.64959+00	Z8126	3.95169+01	Z8127	6.39257+01	Z8128	1.00584+00	Z8129	1.57609+00	Z8130	1.62354+00
Z8135	3.70299+01	Z8136	2.39344+02	Z8137	4.35714+01	Z8138	6.35842+01	Z8139	2.41409+02	Z8140	1.27679+02
Z8141	1.79549+02	Z8142	7.24029+01	Z8143	4.40185+01	Z8144	7.64265+02	Z8145	4.44286+01	Z8146	6.45754+01
Z8147	1.09057+02	Z8148	5.74484+03	Z8149	6.73471+02	Z8150	7.30480+01	Z8151	4.39661+01	Z8152	1.12563+01
Z8153	4.51658+01	Z8154	6.54178+01	Z8155	1.10867+02	Z8156	5.81979+03	Z8157	9.69605+02	Z8158	7.38202+01
Z8159	4.39035+01	Z8160	1.30487+01	Z8161	4.58054+01	Z8162	6.61443+01	Z8163	1.12437+02	Z8164	5.88442+03
Z8165	1.08764+01	Z8166	7.45814+01	Z8167	4.38417+01	Z8168	1.26824+01	Z8169	4.62702+01	Z8170	6.67025+01

ZZ8221 1.13578-02 ZZ8222 5.93408-03 ZZ8223 1.00523-01 ZZ8224 1.38711+00 ZZ8225 3.87952-01 ZZ8226 1.62287-01
ZZ8227 4.65908+01 ZZ8228 6.71585+01 ZZ8229 2.10292-02 ZZ8230 1.09861-02 ZZ8231 1.09017-01
KEEP 1 NALARM 0

SIMULATION TIME = 76.503 SECONDS

GCPR CASY

LEGEND FOR GRAPH 1	DEP VAR	SYMBOL	VAR MIN	VAR MAX	SCALE (UNITS/INCH)	PLOT MIN	PLOT MAX
	TPCO	A	6.61362+02	1.06000+03	5.00000+01	6.50000+02	1.15000+03
	THWO	B	1.02087+03	1.12198+03	1.50000+01	1.02000+03	1.17000+03
	TPHO	C	1.09061+03	1.09914+03	8.00000+00	1.04000+03	1.12000+03
	TAWO	D	6.59672+02	1.06000+03	5.00000+01	6.50000+02	1.15000+03
	THHO1	E	9.05451+02	1.06000+03	2.00000+01	9.00000+02	1.10000+03

TIME	0	1	2	3	4	5	6	7	8	9	10
0.0000											
0.9900+00											
1.0000+01											
1.5000+01											
2.0000+01											
2.5000+01											
3.0000+01											
3.5000+01											
4.0000+01											
4.5000+01											
5.0000+01											
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9.0000+01											
9.5000+01											
1.0000+02											
1.0500+02											
1.1000+02											
1.1500+02											
1.2000+02											
1.2500+02											
1.3000+02											
1.3500+02											
1.4000+02											
1.4500+02											
1.5000+02											
1.5500+02											
1.6000+02											
1.6500+02											
1.7000+02											
1.7500+02											
1.8000+02											
1.8500+02											
1.9000+02											
1.9500+02											
2.0000+02											
2.0500+02											
2.1000+02											
2.1500+02											
2.2000+02											
2.2500+02											
2.3000+02											
2.3500+02											
2.4000+02											

GCPR_CASY

LEGEND FOR	DEP VAR	SYMBOL	VAR MIN	VAR MAX	SCALE	PLOT MIN	PLOT MAX				
GRAPH 2	WFLOW	A	1.00000-04	4.27800+01	(UNITS/INCH) 5.00000+00	0.00000	5.00000+01				
	PPRG	B	2.09573+03	2.09573+03	5.00000+01	1.85000+03	2.35000+03				
TIME	0	1	2	3	4	5	6	7	8	9	10
0.0000	A										
0.9900+00	A										
1.0000+01	A										
1.5000+01	A										
2.0000+01	A										
2.5000+01	A										
3.0000+01									A		
3.5000+01									A		
4.0000+01									A		
4.5000+01									A		
5.0000+01		*	*	*	*		*	*	A	*	
5.5000+01									A		
6.0000+01									A		
6.5000+01									A		
7.0000+01									A		
7.5000+01									A		
8.0000+01									A		
8.5000+01									A		
9.0000+01									A		
9.5000+01									A		
1.0000+02		*	*	*	*		*	*	A	*	
1.0500+02									A		
1.1000+02									A		
1.1500+02									A		
1.2000+02									A		
1.2500+02									A		
1.3000+02									A		
1.3500+02									A		
1.4000+02									A		
1.4500+02									A		
1.5000+02		*	*	*	*		*	*	A	*	
1.5500+02									A		
1.6000+02									A		
1.6500+02									A		
1.7000+02									A		
1.7500+02									A		
1.8000+02									A		
1.8500+02									A		
1.9000+02									A		
1.9500+02									A		
2.0000+02		*	*	*	*		*	*	A	*	
2.0500+02									A		
2.1000+02									A		
2.1500+02									A		
2.2000+02									A		
2.2500+02									A		
2.3000+02									A		
2.3500+02									A		
2.4000+02									A		
2.4500+02									A		
2.5000+02		*	*	*	*		*	*	A	*	
2.5500+02									A		
2.6000+02									A		
2.6500+02									A		
2.7000+02									A		

2.7500+02	.	B	A	.	
2.8000+02	.	B	A	.	
2.8500+02	.	B	A	.	
2.9000+02	.	B	A	.	
2.9500+02	.	B	A	.	
3.0000+02	.	B	A	.	
3.0500+02	.	B	A	.	
3.1000+02	.	B	A	.	
3.1500+02	.	B	A	.	
3.2000+02	.	B	A	.	
3.2500+02	.	B	A	.	
3.3000+02	.	B	A	.	
3.3500+02	.	B	A	.	
3.4000+02	.	B	A	.	
3.4500+02	.	B	A	.	
3.5000+02	.	B	A	.	
3.5500+02	.	B	A	.	
3.6000+02	.	B	A	.	
3.6500+02	.	B	A	.	
3.7000+02	.	B	A	.	
3.7500+02	.	B	A	.	
3.8000+02	.	B	A	.	
3.8500+02	.	B	A	.	
3.9000+02	.	B	A	.	
3.9500+02	.	B	A	.	
4.0000+02	.	B	A	.	
4.0500+02	.	B	A	.	
4.1000+02	.	B	A	.	
4.1500+02	.	B	A	.	
4.2000+02	.	B	A	.	
4.2500+02	.	B	A	.	
4.3000+02	.	B	A	.	
4.3500+02	.	B	A	.	
4.4000+02	.	B	A	.	
4.4500+02	.	B	A	.	
4.5000+02	.	B	A	.	
4.5500+02	.	B	A	.	
4.6000+02	.	B	A	.	
4.6500+02	.	B	A	.	
4.7000+02	.	B	A	.	
4.7500+02	.	B	A	.	
4.8000+02	.	B	A	.	
4.8500+02	.	B	A	.	
4.9000+02	.	B	A	.	
4.9500+02	.	B	A	.	
5.0000+02	.	B	A	.	
.....					
0	.	1	.	2	.
3	.	4	.	5	.
6	.	7	.	8	.
9	.	10	.		

GCPR CASY

GCFR CASY

GCFR CASY

GCPR CASY

LEGEND FOR GRAPH 6	DEP VAR	SYMBOL	VAR_MIN	VAR_MAX	SCALE (UNITS/INCH)	PLOT_MIN	PLOT_MAX
	GCAA	A	1.19118-03	2.18544-01	2.50000+00	0.00000	2.50000+01
	GCCA	B	1.00000-05	5.13800+02	6.00000+01	0.00000	6.00000+02
	PNSS	C	1.24956+03	1.47225+03	2.50000+01	1.22500+03	1.47500+03
	PRCO	D	1.00000-02	1.00000+00	1.00000-01	0.00000	1.00000+00
	POVFLO	E	1.43833-04	8.91694-02	1.00000-02	0.00000	1.00000-01

TIME	0	1	2	3	4	5	6	7	8	9	10
0.0000	AE										D
0.9900+00	AE									B	D
1.0000+01	AE									B	D
1.5000+01	AE									B	D
2.0000+01	AE									B	D
2.5000+01	AE									B	D
3.0000+01	AE									B	D
3.5000+01	E				B						
4.0000+01	E		D B								
4.5000+01	AE	B D									
5.0000+01	AE	B D									
5.5000+01	AE	B D									
6.0000+01	AE	B D									
6.5000+01	BA	D									
7.0000+01	BA	D									
7.5000+01	B	AD									
8.0000+01	B	D									
8.5000+01	B	DA									
9.0000+01	B	DA									
9.5000+01	B	D									
1.0000+02	B	D									
1.0500+02	B	D									
1.1000+02	B	D									
1.1500+02	B	D									
1.2000+02	B	DE									
1.2500+02	B	DE									
1.3000+02	B	E									
1.3500+02	B	E									
1.4000+02	B	ED									
1.4500+02	B	ED									
1.5000+02	B	ED									
1.5500+02	B	E									
1.6000+02	B	E									
1.6500+02	B	E									
1.7000+02	B	E									
1.7500+02	B	E									
1.8000+02	B	E									
1.8500+02	B	E									
1.9000+02	B	E									
1.9500+02	B	E									
2.0000+02	B	E									
2.0500+02	B	E									
2.1000+02	B	E									
2.1500+02	B	E									
2.2000+02	B	ED									
2.2500+02	B	ED									
2.3000+02	B	ED									
2.3500+02	B	ED									
2.4000+02	B	ED

GRAPH PREPARATION TIME = 8.583 SECONDS

-----SYSL/RIIO SIMULATION DATA-----

STOP

TOTAL RUN TIME = 85.086 SECONDS

EXIT LOC097397

BPMD,BDER,CURVAL,UPDATE

M1 BLOCK SIZE : 43 MERGE POWER : 116

M2 BLOCK SIZE : 0 MERGE POWER : 0

SORT: T/R= 58.0MS, IC= 2, OC= 2, BIA=XEQ

* * * R U N N O . S T 0 9 5 2 . * * *

REQUESTED FACILITIES

MEMORY CATEGORIES

DRUM USAGE 7.6 TRACK HRS. \$ 0.99

TOTAL COST \$ 34.68

		USER		TOTAL	
		TAPE	DRUM/DISC	TAPE	DRUM/DISC
ACCESSES(X10)		0	304	0	424
WORDS TRANSFERRED(X1000)		0	898	0	1592

TASK	REFS.	MEMCRY	SUPS(SEC)	TAPE UNITS	DISC PACKS	DRUM/DISC TRACKS
CNTRL CARDS	-	1024	13.35	-	-	-
FURPUR	2	13312	4.45	0.00	0.00	133
FOR	2	57856	19.07	0.00	0.00	109
DATA	1	11264	2.59	0.00	0.00	0
MAP	1	29696	26.01	0.00	0.00	134
SYSLTRAN	1	58368	113.70	0.00	0.00	30
INDEXR	1	29184	4.50	0.00	0.00	121
INDEX	1	28672	39.74	0.00	0.00	123
SYSLSTM	1	54272	88.17	0.00	0.00	128

[illegible]

GENERAL ATOMIC

GENERAL ATOMIC COMPANY
P. O. BOX 81608
SAN DIEGO, CALIFORNIA 92138