111264

APPENDIX K

INPUT AND OUTPUT FILES FOR CALIBRATED FLOW AND TRANSPORT MODEL

DRAFT

MODFLOW INPUT FILES FOR CALIBRATION RUN

DELBAS.DAT
DELBCF.DAT
DELRCH.DAT
DELSIP.DAT
DELOC.DAT

DRAFT

```
DELTA QUARRIES FLOW MODEL CALIBRATION TO HIGH GROUND WATER TABLE CONDITIONS
JERRY SNYDER 2/15/90
          1          9          13          1          4
 11  0  0  0  0  0  0 18 19  0  0 22
          0          0
          1          1(40I2)                             2
 0 0 0 0 0-1 1 1 1 1 1 1-1
 0 0 0 0 0-1 1 1 1 1 1 1-1
 0 0 0 0 0-1 1 1 1 1 1 1-1
 0 0 0 0-1 1 1 1 1 1 1 1-1
 0 0 0-1 1 1 1 1 1 1 1 1 0
 0 0-1 1 1 1 1 1 1 1 1 1 0
 0-1 1 1 1 1 1 1 1 1 1-1 0
 0-1 1 1 1 1 1 1 1 1-1 0 0
-1 1 1 1 1 1 1 1 1-1 0 0 0
99.000
          1  .100E+01(7G11.4)                          12
  1100.      1100.      1100.      1100.      1100.      1067.      1100.
  1100.      1100.      1100.      1100.      1100.      1154.
  1100.      1100.      1100.      1100.      1100.      1068.      1100.
  1100.      1100.      1100.      1100.      1100.      1158.
  1100.      1100.      1100.      1100.      1100.      1069.      1100.
  1100.      1100.      1100.      1100.      1100.      1165.
  1100.      1100.      1100.      1100.      1070.      1100.      1100.
  1100.      1100.      1100.      1100.      1100.      1158.
  1100.      1100.      1100.      1071.      1100.      1100.      1100.
  1100.      1100.      1100.      1100.      1100.      1100.
  1100.      1100.      1072.      1100.      1100.      1100.      1100.
  1100.      1100.      1100.      1100.      1100.      1100.
  1100.      1073.      1100.      1100.      1100.      1100.      1100.
  1100.      1100.      1100.      1100.      1209.      1100.
  1100.      1074.      1100.      1100.      1100.      1100.      1100.
  1100.      1100.      1100.      1220.      1100.      1100.
  1075.      1100.      1100.      1100.      1100.      1100.      1100.
  1100.      1100.      1205.      1100.      1100.      1100.
365.00                11.0000
```

D

Canonie Environmental

AR303893

```
        1        -1
1
        0  .100E+01
       11  .100E+01(7G11.4)                          12
 250.0      250.0      250.0      250.0      250.0      250.0      500.0
 500.0      500.0      500.0      250.0      250.0      100.0
       11  .100E+01(7G11.4)                          12
 500.0      500.0      500.0      500.0      500.0      500.0      250.0
 250.0      500.0
       11  .100E+01(7G11.4)                          12
  .100E+02   .100E+02   .100E+02   .100E+02   .100E+02   .100E+02   .100E+02
  .100E+02   .100E+02   .500E+01   .050E+01   .005E+01   .005E+01
  .100E+02   .100E+02   .100E+02   .100E+02   .100E+02   .100E+02   .100E+02
  .100E+02   .500E+01   .100E+01   .010E+01   .005E+01   .005E+01
  .100E+02   .100E+02   .100E+02   .100E+02   .100E+02   .100E+02   .100E+02
  .100E+02   .500E+01   .100E+01   .050E+01   .005E+01   .005E+01
  .100E+02   .100E+02   .100E+02   .100E+02   .100E+02   .100E+02   .100E+02
  .100E+02   .500E+01   .100E+01   .050E+01   .005E+01   .005E+01
  .100E+02   .100E+02   .100E+02   .500E+01   .500E+01   .500E+01   .500E+01
  .100E+01   .100E+01   .100E+01   .010E+01   .050E+01   .050E+01
  .100E+02   .100E+02   .500E+01   .100E+01   .050E+01   .050E+01   .010E+01
  .010E+01   .050E+01   .050E+01   .050E+01   .050E+01   .050E+01
  .100E+02   .200E+01   .200E+01   .200E+01   .100E+01   .100E+01   .100E+01
  .100E+01   .100E+01   .100E+01   .100E+01   .100E+01   .100E+01
  .100E+02   .500E+01   .500E+01   .500E+01   .100E+02   .100E+02   .100E+02
  .050E+01   .100E+01   .100E+01   .100E+01   .100E+01   .100E+01
  .100E+02   .500E+01   .500E+01   .500E+01   .500E+01   .010E+01   .010E+01
  .010E+01   .010E+01   .010E+01   .010E+01   .005E+01   .005E+01
        0  .950E+03
```

DRAFT

```
1          -1
0           0
0   .230E-02
```

DRAFT

```
        50          5
1.0000    .10000E-01          1.00000          1
```

DRAFT

3	0	0	0
0	1	1	1
1	0	0	0

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MODFLOW OUTPUT FILE CALIBRATED TO
AUGUST 26, 1989 MEASURED GROUND WATER ELEVATIONS

DRAFT

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                    U.S. GEOLOGICAL SURVEY MODULAR FINITE-DIFFERENCE GROUND-WATER MODEL
DELTA QUARRIES FLOW MODEL CALIBRATION TO HIGH GROUND WATER TABLE CONDITIONS     JERRY SNYDER 2/15/90
   1 LAYERS          9 ROWS          13 COLUMNS
   1 STRESS PERIOD(S) IN SIMULATION
MODEL TIME UNIT IS DAYS
I/O UNITS:
ELEMENT OF IUNIT:  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
        I/O UNIT: 11  0  0  0  0  0  0 18 19  0  0 22  0  0  0  0  0  0  0  0  0  0  0  0
BAS -- BASIC MODEL PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT  1
BAS RHS AND BUFF WILL SHARE MEMORY.
START HEAD WILL NOT BE SAVED -- DRAWDOWN CANNOT BE CALCULATED
   962 ELEMENTS IN X ARRAY ARE USED BY BAS
   962 ELEMENTS OF X ARRAY USED OUT OF 100000
BCF1 -- BLOCK-CENTERED FLOW PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 11
STEADY-STATE SIMULATION
CONSTANT HEAD CELL-BY-CELL FLOWS WILL BE PRINTED
     LAYER  AQUIFER TYPE
     ------------------
       1        1
   235 ELEMENTS IN X ARRAY ARE USED BY BCF
  1197 ELEMENTS OF X ARRAY USED OUT OF 100000
RCH1 -- RECHARGE PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 18
OPTION 1 -- RECHARGE TO TOP LAYER
   117 ELEMENTS OF X ARRAY USED FOR RECHARGE
  1314 ELEMENTS OF X ARRAY USED OUT OF 100000
SIP1 -- STRONGLY IMPLICIT PROCEDURE SOLUTION PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 19
MAXIMUM OF  50 ITERATIONS ALLOWED FOR CLOSURE
 5 ITERATION PARAMETERS
   673 ELEMENTS IN X ARRAY ARE USED BY SIP
  1987 ELEMENTS OF X ARRAY USED OUT OF 100000
```

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BOUNDARY ARRAY FOR LAYER 1 WILL BE READ ON UNIT 1 USING FORMAT: (40I2)

	1	2	3	4	5	6	7	8	9	10	11	12	13
	0	0	0	0	0	-1	1	1	1	1	1	1	-1
	0	0	0	0	0	-1	1	1	1	1	1	1	-1
3	0	0	0	0	0	-1	1	1	1	1	1	1	-1
4	0	0	0	0	-1	1	1	1	1	1	1	1	-1
5	0	0	0	-1	1	1	1	1	1	1	1	1	0
6	0	0	-1	1	1	1	1	1	1	1	1	1	0
7	0	-1	1	1	1	1	1	1	1	1	1	-1	0
8	0	-1	1	1	1	1	1	1	1	1	-1	0	0
9	-1	1	1	1	1	1	1	1	1	-1	0	0	0

AQUIFER HEAD WILL BE SET TO 99.000 AT ALL NO-FLOW NODES (IBOUND=0).

INITIAL HEAD FOR LAYER 1 WILL BE READ ON UNIT 1 USING FORMAT: (7G11.4)

	1	2	3	4	5	6	7	8	9	10
	11	12	13							
1	1100.	1100.	1100.	1100.	1100.	1067.	1100.	1100.	1100.	1100.
	1100.	1100.	1154.							
2	1100.	1100.	1100.	1100.	1100.	1068.	1100.	1100.	1100.	1100.
	1100.	1100.	1158.							
3	1100.	1100.	1100.	1100.	1100.	1069.	1100.	1100.	1100.	1100.
	1100.	1100.	1165.							
4	1100.	1100.	1100.	1100.	1070.	1100.	1100.	1100.	1100.	1100.
	1100.	1100.	1158.							
5	1100.	1100.	1100.	1071.	1100.	1100.	1100.	1100.	1100.	1100.
	1100.	1100.	1100.							
6	1100.	1100.	1072.	1100.	1100.	1100.	1100.	1100.	1100.	1100.
	1100.	1100.	1100.							
7	1100.	1073.	1100.	1100.	1100.	1100.	1100.	1100.	1100.	1100.
	1100.	1209.	1100.							
8	1100.	1074.	1100.	1100.	1100.	1100.	1100.	1100.	1100.	1100.
	1220.	1100.	1100.							
9	1075.	1100.	1100.	1100.	1100.	1100.	1100.	1100.	1100.	1205.
	1100.	1100.	1100.							

H PRINT FORMAT IS FORMAT NUMBER 3 DRAWDOWN PRINT FORMAT IS FORMAT NUMBER 0
H. , WILL BE SAVED ON UNIT 0 DRAWDOWNS WILL BE SAVED ON UNIT 0
OUTPUT CONTROL IS SPECIFIED EVERY TIME STEP

COLUMN TO ROW ANISOTROPY = 1.000000

DELR WILL BE READ ON UNIT 11 USING FORMAT: (7G11.4)

250.00	250.00	250.00	250.00	250.00	250.00	500.00	500.00	500.00	500.00
250.00	250.00	100.00							

DELC WILL BE READ ON UNIT 11 USING FORMAT: (7G11.4)

500.00	500.00	500.00	500.00	500.00	500.00	250.00	250.00	500.00

HYD. COND. ALONG ROWS FOR LAYER 1 WILL BE READ ON UNIT 11 USING FORMAT: (7G11.4)

	1	2	3	4	5	6	7	8	9	10
	11	12	13							
1	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	5.000
	.5000	5.0000E-02	5.0000E-02							
2	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	5.000	1.000
	.1000	5.0000E-02	5.0000E-02							
3	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	5.000	1.000
	.5000	5.0000E-02	5.0000E-02							
4	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	5.000	1.000
	.5000	5.0000E-02	5.0000E-02							
5	10.00	10.00	10.00	5.000	5.000	5.000	5.000	1.000	1.000	1.000
	.1000	.5000	.5000							
	10.00	10.00	5.000	1.000	.5000	.5000	.1000	.1000	.5000	.5000
	.5000	.5000	.5000							
7	10.00	2.000	2.000	2.000	1.000	1.000	1.000	1.000	1.000	1.000
	1.000	1.000	1.000							
8	10.00	5.000	5.000	5.000	10.00	10.00	10.00	.5000	1.000	1.000
	1.000	1.000	1.000							

BOTTOM = 950.0000 FOR LAYER 1

SOLUTION BY THE STRONGLY IMPLICIT PROCEDURE

```
MAXIMUM ITERATIONS ALLOWED FOR CLOSURE =      50
              ACCELERATION PARAMETER =      1.0000
    HEAD CHANGE CRITERION FOR CLOSURE =     .10000E-01
    SIP HEAD CHANGE PRINTOUT INTERVAL =       1
    CALCULATE ITERATION PARAMETERS FROM MODEL CALCULATED WSEED
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```
                    STRESS PERIOD NO.   1, LENGTH =   365.0000
                    ---------------------------------------------

                    NUMBER OF TIME STEPS =     1

                     MULTIPLIER FOR DELT =     1.000

                   INITIAL TIME STEP SIZE =   365.0000
                                   RECHARGE =   .2300000E-02
    \GE SEED =  .00912854
    .MUM SEED =  .00060023

   5 ITERATION PARAMETERS CALCULATED FROM AVERAGE SEED:

          .0000000E+00   .6908990E+00   .9044566E+00   .9704674E+00   .9908714E+00

   9 ITERATIONS FOR TIME STEP   1 IN STRESS PERIOD  1
MAXIMUM HEAD CHANGE FOR EACH ITERATION:
 HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL
-------------------------------------------------------------------------------------------------------------------------------
   86.32     (  1,  7, 11)  40.20     (  1,  6, 11)  5.668     (  1,  6,  8) -1.592     (  1,  9,  9)  .4612     (  1,  6, 10)
   .2333     (  1,  3, 12) -.2779E-01 (  1,  4, 10) -.2323E-01 (  1,  1, 11)  .3112E-02 (  1,  4, 10)

HEAD/DRAWDOWN PRINTOUT FLAG = 1     TOTAL BUDGET PRINTOUT FLAG = 1     CELL-BY-CELL FLOW TERM FLAG = 1
OUTPUT FLAGS FOR ALL LAYERS ARE THE SAME:
  HEAD    DRAWDOWN  HEAD  DRAWDOWN
PRINTOUT  PRINTOUT  SAVE    SAVE
---------------------------------
   1         0       0       0
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   1   COL   6   RATE   -7161.213
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   1   COL  13   RATE    751.6257
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   2   COL   6   RATE   -6785.303
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   2   COL  13   RATE    549.5474
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   3   COL   6   RATE   -9318.675
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   3   COL  13   RATE    756.9727
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   4   COL   5   RATE   -6206.511
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   4   COL  13   RATE    449.2720
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   5   COL   4   RATE   -2343.537
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   6   COL   3   RATE   -2443.829
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   7   COL   2   RATE   -836.1542
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   7   COL  12   RATE    3071.107
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   8   COL   2   RATE   -3833.131
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   8   COL  11   RATE    8870.968
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   9   COL   1   RATE   -2616.242
   CONSTANT HEAD   PERIOD  1   STEP  1   LAYER  1   ROW   9   COL  10   RATE    1341.918
```

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HEAD IN LAYER 1 AT END OF TIME STEP 1 IN STRESS PERIOD 1

	1	2	3	4	5	6	7	8	9	10	11	12	13
1	99.0	99.0	99.0	99.0	99.0	1067.0	1071.5	1076.1	1079.6	1083.1	1089.9	1125.2	1154.0
2	99.0	99.0	99.0	99.0	99.0	1068.0	1072.2	1076.6	1080.5	1087.3	1104.9	1138.1	1158.0
3	99.0	99.0	99.0	99.0	99.0	1069.0	1073.6	1078.3	1083.5	1094.9	1106.0	1137.8	1165.0
	99.0	99.0	99.0	99.0	1070.0	1072.1	1075.6	1080.6	1088.2	1105.1	1114.4	1142.0	1158.0
	99.0	99.0	99.0	1071.0	1072.6	1074.4	1077.3	1088.6	1108.5	1127.7	1150.4	1168.3	99.0
	99.0	99.0	1072.0	1075.0	1079.5	1083.7	1098.8	1123.7	1144.5	1164.5	1183.8	1188.5	99.0
	99.0	1073.0	1076.4	1080.9	1085.9	1091.3	1101.0	1132.4	1159.4	1184.7	1204.8	1209.0	99.0
8	99.0	1074.0	1078.3	1082.9	1087.3	1091.6	1097.6	1132.2	1163.9	1190.7	1220.0	99.0	99.0
9	1075.0	1076.6	1079.2	1081.9	1084.0	1096.0	1117.9	1149.3	1178.1	1205.0	99.0	99.0	99.0

VOLUMETRIC BUDGET FOR ENTIRE MODEL AT END OF TIME STEP 1 IN STRESS PERIOD 1

CUMULATIVE VOLUMES	L**3	RATES FOR THIS TIME STEP	L**3/T
IN:		IN:	
STORAGE =	.00000	STORAGE =	.00000
CONSTANT HEAD =	.57639E+07	CONSTANT HEAD =	15791.
RECHARGE =	.93919E+07	RECHARGE =	25731.
TOTAL IN =	.15156E+08	TOTAL IN =	41523.
OUT:		OUT:	
STORAGE =	.00000	STORAGE =	.00000
CONSTANT HEAD =	.15156E+08	CONSTANT HEAD =	41525.
RECHARGE =	.00000	RECHARGE =	.00000
TOTAL OUT =	.15156E+08	TOTAL OUT =	41525.
IN - OUT =	-706.00	IN - OUT =	-1.9336
PERCENT DISCREPANCY =	.00	PERCENT DISCREPANCY =	.00

TIME SUMMARY AT END OF TIME STEP 1 IN STRESS PERIOD 1

	SECONDS	MINUTES	HOURS	DAYS	YEARS
TIME STEP LENGTH	.315360E+08	525600.	8760.00	365.000	.999316
RESS PERIOD TIME	.315360E+08	525600.	8760.00	365.000	.999316
SIMULATION TIME	.315360E+08	525600.	8760.00	365.000	.999316

DRAFT

AT123D INPUT FILE FOR
5 MAJOR VOCs CALIBRATION

(INACTIVE SOURCE)

DRAFT

```
DELTA QUARRIES CALIBRATION FOR 5 VOA'S K=2E4 W=0.0014KG/HR TW=10YRS
   13    11     1 1000     1  401   10     1     0     1     2     0     1     0
 5.        0.0        0.0        275.0     -457.5     457.5      0.0       15.0
.20        0.0072     0.057      10.0      1.0        1.0        0.0       0.0
0.0        0.0        1640.0     1000.0    0.01       2400.      8.76e+4   .0014
275.0      300.0      325.0      350.0     375.0      400.0      425.0     450.0
475.0      488.0      600.0      800.0     1000.0
-475.0     -457.5     -300.0     -200.0    -100.0     0.0        100.0     200.0
300.0      457.5      475.0
0.0
```

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AT123D OUTPUT FILE FOR
5 MAJOR VOCs CALIBRATION

(INACTIVE SOURCE)

DRAFT

DELTA QUARRIES CALIBRATION FOR 5 VOA'S K=2E4 W=0.0014KG/HR TW=10YRS

NO. OF POINTS IN X-DIRECTION	13
NO. OF POINTS IN Y-DIRECTION	11
NO. OF POINTS IN Z-DIRECTION	1
NO. OF ROOTS: NO. OF SERIES TERMS	1000
NO. OF BEGINNING TIME STEPS	1
NO. OF ENDING TIME STEP	401
NO. OF TIME INTERVALS FOR PRINTED OUT SOLUTION	10
INSTANTANEOUS SOURCE CONTROL = 0 FOR INSTANT SOURCE	1
SOURCE CONDITION CONTROL = 0 FOR STEADY SOURCE	0
INTERMITTENT OUTPUT CONTROL = 0 NO SUCH OUTPUT	1
CASE CONTROL =1 THERMAL, = 2 FOR CHEMICAL, = 3 RAD	2

AQUIFER DEPTH, = 0.0 FOR INFINITE DEEP (METERS) ...	0.1500E+02
AQUIFER WIDTH, = 0.0 FOR INFINITE WIDE (METERS) ...	0.0000E+00
BEGIN POINT OF X-SOURCE LOCATION (METERS)	0.0000E+00
END POINT OF X-SOURCE LOCATION (METERS)	0.2750E+03
BEGIN POINT OF Y-SOURCE LOCATION (METERS)	-0.4575E+03
END POINT OF Y-SOURCE LOCATION (METERS)	0.4575E+03
BEGIN POINT OF Z-SOURCE LOCATION (METERS)	0.0000E+00
END POINT OF Z-SOURCE LOCATION (METERS)	0.1500E+02

POROSITY	0.2000E+00
HYDRAULIC CONDUCTIVITY (METER/HOUR)	0.7200E-02
HYDRAULIC GRADIENT	0.5700E-01
LONGITIDUNAL DESPERSIVITY (METER)	0.1000E+02
LATERAL DISPERSIVITY (METER)	0.1000E+01
VERTICAL DISPERSIVITY (METER)	0.1000E+01
DISTRIBUTION COEFFICIENT, KD (M**3/KG)	0.0000E+00
HEAT EXCHANGE COEFFICIENT (KCAL/HR-M**2-DEGREE C)..	0.0000E+00

MOLECULAR DIFFUSION MULTIPLY BY TOROSITY (M**2/HR)	0.0000E+00
DECAY CONSTANT (PER HOUR)	0.0000E+00
BULK DENSITY OF THE SOIL (KG/M**3)	0.1640E+04
ACCURACY TOLERANCE FOR REACHING STEADY STATE	0.1000E-01
DENSITY OF WATER (KG/M**3)	0.1000E+04
TIME INTERVAL SIZE FOR THE DESIRED SOLUTION (HR) ..	0.2400E+04
DISCHARGE TIME (HR)	0.8760E+05

WASTE RELEASE RATE (KCAL/HR), (KG/HR), OR (CI/HR) . 0.1400E-02

RETARDATION FACTOR ..... 0.1000E+01
RETARDED DARCY VELOCITY (M/HR) 0.2052E-02
RETARDED LONGITUDINAL DISPERSION COEF. (M**2/HR) .. 0.2052E-01
RETARDED LATERAL DIEPSERSION COEFFICIENT (M**2/HR) 0.2052E-02
RETARDED VERTICAL DISPERSION COEFFICIENT (M**2/HR). 0.2052E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.0000E+00 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

Y	600.	800.	1000.	X
-475.	0.000E+00	0.000E+00	0.000E+00	
-457.	0.000E+00	0.000E+00	0.000E+00	
-300.	0.000E+00	0.000E+00	0.000E+00	
-200.	0.000E+00	0.000E+00	0.000E+00	
-100.	0.000E+00	0.000E+00	0.000E+00	
0.	0.000E+00	0.000E+00	0.000E+00	
100.	0.000E+00	0.000E+00	0.000E+00	
200.	0.000E+00	0.000E+00	0.000E+00	
300.	0.000E+00	0.000E+00	0.000E+00	
457.	0.000E+00	0.000E+00	0.000E+00	
475.	0.000E+00	0.000E+00	0.000E+00	

DISTRIBUTION OF CHEMICAL IN PPM AT 0.0000E+00 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.

-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.223E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.223E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.223E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.223E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.223E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.223E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.223E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.223E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.223E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

X

Y	600.	800.	1000.
-475.	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.2400E+05 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.462E-03	0.343E-03	0.174E-03	0.555E-04	0.107E-04	0.120E-05
-457.	0.182E-01	0.971E-02	0.380E-02	0.102E-02	0.176E-03	0.185E-04
-300.	0.364E-01	0.194E-01	0.760E-02	0.204E-02	0.352E-03	0.369E-04
-200.	0.364E-01	0.194E-01	0.760E-02	0.204E-02	0.352E-03	0.369E-04
-100.	0.364E-01	0.194E-01	0.760E-02	0.204E-02	0.352E-03	0.369E-04
0.	0.364E-01	0.194E-01	0.760E-02	0.204E-02	0.352E-03	0.369E-04
100.	0.364E-01	0.194E-01	0.760E-02	0.204E-02	0.352E-03	0.369E-04
200.	0.364E-01	0.194E-01	0.760E-02	0.204E-02	0.352E-03	0.369E-04
300.	0.364E-01	0.194E-01	0.760E-02	0.204E-02	0.352E-03	0.369E-04
457.	0.182E-01	0.971E-02	0.380E-02	0.102E-02	0.176E-03	0.185E-04
475.	0.462E-03	0.343E-03	0.174E-03	0.555E-04	0.107E-04	0.120E-05

CONTINUE

X

Y	600.	800.	1000.

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-475.	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.4800E+05 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.367E-02	0.331E-02	0.262E-02	0.175E-02	0.965E-03	0.429E-03
-457.	0.398E-01	0.295E-01	0.197E-01	0.116E-01	0.585E-02	0.244E-02
-300.	0.796E-01	0.589E-01	0.394E-01	0.232E-01	0.117E-01	0.489E-02
-200.	0.796E-01	0.589E-01	0.394E-01	0.232E-01	0.117E-01	0.489E-02
-100.	0.796E-01	0.589E-01	0.394E-01	0.232E-01	0.117E-01	0.489E-02
0.	0.796E-01	0.589E-01	0.394E-01	0.232E-01	0.117E-01	0.489E-02
100.	0.796E-01	0.589E-01	0.394E-01	0.232E-01	0.117E-01	0.489E-02
200.	0.796E-01	0.589E-01	0.394E-01	0.232E-01	0.117E-01	0.489E-02
300.	0.796E-01	0.589E-01	0.394E-01	0.232E-01	0.117E-01	0.489E-02
457.	0.398E-01	0.295E-01	0.197E-01	0.116E-01	0.585E-02	0.244E-02
475.	0.367E-02	0.331E-02	0.262E-02	0.175E-02	0.965E-03	0.429E-03

CONTINUE

X

Y	600.	800.	1000.
-475.	0.459E-10	0.000E+00	0.000E+00
-457.	0.221E-09	0.000E+00	0.000E+00
-300.	0.442E-09	0.000E+00	0.000E+00
-200.	0.442E-09	0.000E+00	0.000E+00
-100.	0.442E-09	0.000E+00	0.000E+00
0.	0.442E-09	0.000E+00	0.000E+00
100.	0.442E-09	0.000E+00	0.000E+00
200.	0.442E-09	0.000E+00	0.000E+00
300.	0.442E-09	0.000E+00	0.000E+00
457.	0.221E-09	0.000E+00	0.000E+00
475.	0.459E-10	0.000E+00	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.7200E+05 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
475.	0.948E-02	0.902E-02	0.806E-02	0.662E-02	0.494E-02	0.331E-02
-457.	0.618E-01	0.511E-01	0.403E-01	0.300E-01	0.207E-01	0.131E-01
-300.	0.124E+00	0.102E+00	0.805E-01	0.599E-01	0.415E-01	0.262E-01
-200.	0.124E+00	0.102E+00	0.805E-01	0.599E-01	0.415E-01	0.262E-01
-100.	0.124E+00	0.102E+00	0.805E-01	0.599E-01	0.415E-01	0.262E-01
0.	0.124E+00	0.102E+00	0.805E-01	0.599E-01	0.415E-01	0.262E-01
100.	0.124E+00	0.102E+00	0.805E-01	0.599E-01	0.415E-01	0.262E-01
200.	0.124E+00	0.102E+00	0.805E-01	0.599E-01	0.415E-01	0.262E-01
300.	0.124E+00	0.102E+00	0.805E-01	0.599E-01	0.415E-01	0.262E-01
457.	0.618E-01	0.511E-01	0.403E-01	0.300E-01	0.207E-01	0.131E-01
475.	0.948E-02	0.902E-02	0.806E-02	0.662E-02	0.494E-02	0.331E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.627E-06	0.000E+00	0.000E+00
-457.	0.212E-05	0.000E+00	0.000E+00
-300.	0.424E-05	0.000E+00	0.000E+00
-200.	0.424E-05	0.000E+00	0.000E+00
-100.	0.424E-05	0.000E+00	0.000E+00
0.	0.424E-05	0.000E+00	0.000E+00
100.	0.424E-05	0.000E+00	0.000E+00
200.	0.424E-05	0.000E+00	0.000E+00
300.	0.424E-05	0.000E+00	0.000E+00
457.	0.212E-05	0.000E+00	0.000E+00
475.	0.627E-06	0.000E+00	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.9600E+05 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.136E-01	0.136E-01	0.130E-01	0.119E-01	0.103E-01	0.827E-02
-457.	0.762E-01	0.711E-01	0.618E-01	0.510E-01	0.404E-01	0.305E-01
-300.	0.152E+00	0.142E+00	0.124E+00	0.102E+00	0.809E-01	0.611E-01
-200.	0.152E+00	0.142E+00	0.124E+00	0.102E+00	0.809E-01	0.611E-01
-100.	0.152E+00	0.142E+00	0.124E+00	0.102E+00	0.809E-01	0.611E-01
0.	0.152E+00	0.142E+00	0.124E+00	0.102E+00	0.809E-01	0.611E-01
100.	0.152E+00	0.142E+00	0.124E+00	0.102E+00	0.809E-01	0.611E-01
200.	0.152E+00	0.142E+00	0.124E+00	0.102E+00	0.809E-01	0.611E-01
300.	0.152E+00	0.142E+00	0.124E+00	0.102E+00	0.809E-01	0.611E-01
457.	0.762E-01	0.711E-01	0.618E-01	0.510E-01	0.404E-01	0.305E-01
475.	0.136E-01	0.136E-01	0.130E-01	0.119E-01	0.103E-01	0.827E-02

CONTINUE

DRAFT

X

Y	600.	800.	1000.
-475.	0.498E-04	0.690E-10	0.000E+00
-457.	0.150E-03	0.199E-09	0.000E+00
-300.	0.299E-03	0.398E-09	0.000E+00
-200.	0.299E-03	0.398E-09	0.000E+00
-100.	0.299E-03	0.398E-09	0.000E+00
0.	0.299E-03	0.398E-09	0.000E+00
100.	0.299E-03	0.398E-09	0.000E+00
200.	0.299E-03	0.398E-09	0.000E+00
300.	0.299E-03	0.398E-09	0.000E+00
457.	0.150E-03	0.199E-09	0.000E+00
475.	0.498E-04	0.690E-10	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.1200E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.123E-01	0.130E-01	0.133E-01	0.132E-01	0.126E-01	0.115E-01
-457.	0.730E-01	0.744E-01	0.729E-01	0.681E-01	0.602E-01	0.506E-01
-300.	0.146E+00	0.149E+00	0.146E+00	0.136E+00	0.120E+00	0.101E+00
-200.	0.146E+00	0.149E+00	0.146E+00	0.136E+00	0.120E+00	0.101E+00
-100.	0.146E+00	0.149E+00	0.146E+00	0.136E+00	0.120E+00	0.101E+00
0.	0.146E+00	0.149E+00	0.146E+00	0.136E+00	0.120E+00	0.101E+00
100.	0.146E+00	0.149E+00	0.146E+00	0.136E+00	0.120E+00	0.101E+00
200.	0.146E+00	0.149E+00	0.146E+00	0.136E+00	0.120E+00	0.101E+00
300.	0.146E+00	0.149E+00	0.146E+00	0.136E+00	0.120E+00	0.101E+00
457.	0.730E-01	0.744E-01	0.729E-01	0.681E-01	0.602E-01	0.506E-01
475.	0.123E-01	0.130E-01	0.133E-01	0.132E-01	0.126E-01	0.115E-01

CONTINUE

X

Y	600.	800.	1000.
-475.	0.512E-03	0.531E-07	0.000E+00
-457.	0.161E-02	0.156E-06	0.000E+00
-300.	0.321E-02	0.312E-06	0.000E+00
-200.	0.321E-02	0.312E-06	0.000E+00
-100.	0.321E-02	0.312E-06	0.000E+00
0.	0.321E-02	0.312E-06	0.000E+00
100.	0.321E-02	0.312E-06	0.000E+00
200.	0.321E-02	0.312E-06	0.000E+00
300.	0.321E-02	0.312E-06	0.000E+00
457.	0.161E-02	0.156E-06	0.000E+00
475.	0.512E-03	0.531E-07	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.1440E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.947E-02	0.109E-01	0.120E-01	0.127E-01	0.130E-01	0.128E-01
-457.	0.628E-01	0.680E-01	0.713E-01	0.722E-01	0.704E-01	0.657E-01
-300.	0.126E+00	0.136E+00	0.143E+00	0.144E+00	0.141E+00	0.131E+00
-200.	0.126E+00	0.136E+00	0.143E+00	0.144E+00	0.141E+00	0.131E+00
-100.	0.126E+00	0.136E+00	0.143E+00	0.144E+00	0.141E+00	0.131E+00
0.	0.126E+00	0.136E+00	0.143E+00	0.144E+00	0.141E+00	0.131E+00
100.	0.126E+00	0.136E+00	0.143E+00	0.144E+00	0.141E+00	0.131E+00
200.	0.126E+00	0.136E+00	0.143E+00	0.144E+00	0.141E+00	0.131E+00
300.	0.126E+00	0.136E+00	0.143E+00	0.144E+00	0.141E+00	0.131E+00
457.	0.628E-01	0.680E-01	0.713E-01	0.722E-01	0.704E-01	0.657E-01
475.	0.947E-02	0.109E-01	0.120E-01	0.127E-01	0.130E-01	0.128E-01

CONTINUE

Y	600.	800.	X 1000.
-475.	0.204E-02	0.317E-05	0.000E+00
-457.	0.682E-02	0.952E-05	0.000E+00
-300.	0.136E-01	0.190E-04	0.000E+00
-200.	0.136E-01	0.190E-04	0.000E+00
-100.	0.136E-01	0.190E-04	0.000E+00
0.	0.136E-01	0.190E-04	0.000E+00
100.	0.136E-01	0.190E-04	0.000E+00
200.	0.136E-01	0.190E-04	0.000E+00
300.	0.136E-01	0.190E-04	0.000E+00
457.	0.682E-02	0.952E-05	0.000E+00
475.	0.204E-02	0.317E-05	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.1680E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.616E-02	0.779E-02	0.934E-02	0.107E-01	0.117E-01	0.124E-01
-457.	0.473E-01	0.551E-01	0.617E-01	0.666E-01	0.695E-01	0.701E-01
-300.	0.946E-01	0.110E+00	0.123E+00	0.133E+00	0.139E+00	0.140E+00
-200.	0.946E-01	0.110E+00	0.123E+00	0.133E+00	0.139E+00	0.140E+00
-100.	0.946E-01	0.110E+00	0.123E+00	0.133E+00	0.139E+00	0.140E+00
0.	0.946E-01	0.110E+00	0.123E+00	0.133E+00	0.139E+00	0.140E+00
100.	0.946E-01	0.110E+00	0.123E+00	0.133E+00	0.139E+00	0.140E+00
200.	0.946E-01	0.110E+00	0.123E+00	0.133E+00	0.139E+00	0.140E+00
300.	0.946E-01	0.110E+00	0.123E+00	0.133E+00	0.139E+00	0.140E+00
457.	0.473E-01	0.551E-01	0.617E-01	0.666E-01	0.695E-01	0.701E-01
475.	0.616E-02	0.779E-02	0.934E-02	0.107E-01	0.117E-01	0.124E-01

DRAFT

CONTINUE

X

Y	600.	800.	1000.
-475.	0.473E-02	0.478E-04	0.367E-08
-457.	0.174E-01	0.148E-03	0.108E-07
-300.	0.347E-01	0.295E-03	0.217E-07
-200.	0.347E-01	0.295E-03	0.217E-07
-100.	0.347E-01	0.295E-03	0.217E-07
0.	0.347E-01	0.295E-03	0.217E-07
100.	0.347E-01	0.295E-03	0.217E-07
200.	0.347E-01	0.295E-03	0.217E-07
300.	0.347E-01	0.295E-03	0.217E-07
457.	0.174E-01	0.148E-03	0.108E-07
475.	0.473E-02	0.478E-04	0.367E-08

DISTRIBUTION OF CHEMICAL IN PPM AT 0.1920E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.341E-02	0.475E-02	0.624E-02	0.777E-02	0.922E-02	0.105E-01
-457.	0.305E-01	0.388E-01	0.469E-01	0.544E-01	0.606E-01	0.651E-01
-300.	0.609E-01	0.776E-01	0.939E-01	0.109E+00	0.121E+00	0.130E+00
-200.	0.609E-01	0.776E-01	0.939E-01	0.109E+00	0.121E+00	0.130E+00
-100.	0.609E-01	0.776E-01	0.939E-01	0.109E+00	0.121E+00	0.130E+00
0.	0.609E-01	0.776E-01	0.939E-01	0.109E+00	0.121E+00	0.130E+00
100.	0.609E-01	0.776E-01	0.939E-01	0.109E+00	0.121E+00	0.130E+00
200.	0.609E-01	0.776E-01	0.939E-01	0.109E+00	0.121E+00	0.130E+[illegible]
300.	0.609E-01	0.776E-01	0.939E-01	0.109E+00	0.121E+00	0.130E+[illegible]
457.	0.305E-01	0.388E-01	0.469E-01	0.544E-01	0.606E-01	0.651E-01
475.	0.341E-02	0.475E-02	0.624E-02	0.777E-02	0.922E-02	0.105E-01

CONTINUE

X

Y	600.	800.	1000.
-475.	0.781E-02	0.306E-03	0.208E-06
-457.	0.322E-01	0.983E-03	0.623E-06
-300.	0.645E-01	0.197E-02	0.125E-05
-200.	0.645E-01	0.197E-02	0.125E-05
-100.	0.645E-01	0.197E-02	0.125E-05
0.	0.645E-01	0.197E-02	0.125E-05
100.	0.645E-01	0.197E-02	0.125E-05
200.	0.645E-01	0.197E-02	0.125E-05
300.	0.645E-01	0.197E-02	0.125E-05
457.	0.322E-01	0.983E-03	0.623E-06
475.	0.781E-02	0.306E-03	0.208E-06

DISTRIBUTION OF CHEMICAL IN PPM AT 0.2160E+06 HRS

Z = 0.00

Y	X 275.	300.	325.	350.	375.	400.
-475.	0.165E-02	0.252E-02	0.361E-02	0.490E-02	0.631E-02	0.775E-02
-457.	0.168E-01	0.235E-01	0.310E-01	0.389E-01	0.466E-01	0.536E-01
-300.	0.335E-01	0.469E-01	0.620E-01	0.778E-01	0.932E-01	0.107E+00
-200.	0.335E-01	0.469E-01	0.620E-01	0.778E-01	0.932E-01	0.107E+00
-100.	0.335E-01	0.469E-01	0.620E-01	0.778E-01	0.932E-01	0.107E+00
0.	0.335E-01	0.469E-01	0.620E-01	0.778E-01	0.932E-01	0.107E+00
100.	0.335E-01	0.469E-01	0.620E-01	0.778E-01	0.932E-01	0.107E+00
200.	0.335E-01	0.469E-01	0.620E-01	0.778E-01	0.932E-01	0.107E+00
300.	0.335E-01	0.469E-01	0.620E-01	0.778E-01	0.932E-01	0.107E+00
457.	0.168E-01	0.235E-01	0.310E-01	0.389E-01	0.466E-01	0.536E-01
475.	0.165E-02	0.252E-02	0.361E-02	0.490E-02	0.631E-02	0.775E-02

CONTINUE

Y	X 600.	800.	1000.
-475.	0.103E-01	0.111E-02	0.394E-05
-457.	0.477E-01	0.377E-02	0.121E-04
-300.	0.954E-01	0.755E-02	0.242E-04
-200.	0.954E-01	0.755E-02	0.242E-04
-100.	0.954E-01	0.755E-02	0.242E-04
0.	0.954E-01	0.755E-02	0.242E-04
100.	0.954E-01	0.755E-02	0.242E-04
200.	0.954E-01	0.755E-02	0.242E-04
300.	0.954E-01	0.755E-02	0.242E-04
457.	0.477E-01	0.377E-02	0.121E-04
475.	0.103E-01	0.111E-02	0.394E-05

DISTRIBUTION OF CHEMICAL IN PPM AT 0.2400E+06 HRS

Z = 0.00

Y	X 275.	300.	325.	350.	375.	400.
-475.	0.722E-03	0.119E-02	0.185E-02	0.272E-02	0.379E-02	0.503E-02
-457.	0.809E-02	0.124E-01	0.178E-01	0.243E-01	0.315E-01	0.390E-01
-300.	0.162E-01	0.247E-01	0.356E-01	0.486E-01	0.630E-01	0.780E-01
-200.	0.162E-01	0.247E-01	0.356E-01	0.486E-01	0.630E-01	0.780E-01
-100.	0.162E-01	0.247E-01	0.356E-01	0.486E-01	0.630E-01	0.780E-01
0.	0.162E-01	0.247E-01	0.356E-01	0.486E-01	0.630E-01	0.780E-01
100.	0.162E-01	0.247E-01	0.356E-01	0.486E-01	0.630E-01	0.780E-01
200.	0.162E-01	0.247E-01	0.356E-01	0.486E-01	0.630E-01	0.780E-01
300.	0.162E-01	0.247E-01	0.356E-01	0.486E-01	0.630E-01	0.780E-01

457.	0.809E-02	0.124E-01	0.178E-01	0.243E-01	0.315E-01	0.390E-01
75.	0.722E-03	0.119E-02	0.185E-02	0.272E-02	0.379E-02	0.503E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.115E-01	0.272E-02	0.352E-04
-457.	0.589E-01	0.994E-02	0.111E-03
-300.	0.118E+00	0.199E-01	0.222E-03
-200.	0.118E+00	0.199E-01	0.222E-03
-100.	0.118E+00	0.199E-01	0.222E-03
0.	0.118E+00	0.199E-01	0.222E-03
100.	0.118E+00	0.199E-01	0.222E-03
200.	0.118E+00	0.199E-01	0.222E-03
300.	0.118E+00	0.199E-01	0.222E-03
457.	0.589E-01	0.994E-02	0.111E-03
475.	0.115E-01	0.272E-02	0.352E-04

DISTRIBUTION OF CHEMICAL IN PPM AT 0.2640E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.292E-03	0.514E-03	0.858E-03	0.136E-02	0.203E-02	0.290E-02
-457.	0.352E-02	0.582E-02	0.908E-02	0.134E-01	0.188E-01	0.250E-01
-300.	0.703E-02	0.116E-01	0.182E-01	0.268E-01	0.375E-01	0.501E-01
-200.	0.703E-02	0.116E-01	0.182E-01	0.268E-01	0.375E-01	0.501E-01
-100.	0.703E-02	0.116E-01	0.182E-01	0.268E-01	0.375E-01	0.501E-01
0.	0.703E-02	0.116E-01	0.182E-01	0.268E-01	0.375E-01	0.501E-01
100.	0.703E-02	0.116E-01	0.182E-01	0.268E-01	0.375E-01	0.501E-01
200.	0.703E-02	0.116E-01	0.182E-01	0.268E-01	0.375E-01	0.501E-01
300.	0.703E-02	0.116E-01	0.182E-01	0.268E-01	0.375E-01	0.501E-01
457.	0.352E-02	0.582E-02	0.908E-02	0.134E-01	0.188E-01	0.250E-01
475.	0.292E-03	0.514E-03	0.858E-03	0.136E-02	0.203E-02	0.290E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.112E-01	0.500E-02	0.182E-03
-457.	0.630E-01	0.200E-01	0.595E-03
-300.	0.126E+00	0.399E-01	0.119E-02
-200.	0.126E+00	0.399E-01	0.119E-02
-100.	0.126E+00	0.399E-01	0.119E-02
0.	0.126E+00	0.399E-01	0.119E-02
100.	0.126E+00	0.399E-01	0.119E-02
200.	0.126E+00	0.399E-01	0.119E-02

300.	0.126E+00	0.399E-01	0.119E-02
57.	0.630E-01	0.200E-01	0.595E-03
5.	0.112E-01	0.500E-02	0.182E-03

DISTRIBUTION OF CHEMICAL IN PPM AT 0.2880E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.111E-03	0.207E-03	0.367E-03	0.618E-03	0.990E-03	0.151E-02
-457.	0.141E-02	0.250E-02	0.419E-02	0.664E-02	0.100E-01	0.143E-01
-300.	0.283E-02	0.501E-02	0.838E-02	0.133E-01	0.200E-01	0.287E-01
-200.	0.283E-02	0.501E-02	0.838E-02	0.133E-01	0.200E-01	0.287E-01
-100.	0.283E-02	0.501E-02	0.838E-02	0.133E-01	0.200E-01	0.287E-01
0.	0.283E-02	0.501E-02	0.838E-02	0.133E-01	0.200E-01	0.287E-01
100.	0.283E-02	0.501E-02	0.838E-02	0.133E-01	0.200E-01	0.287E-01
200.	0.283E-02	0.501E-02	0.838E-02	0.133E-01	0.200E-01	0.287E-01
300.	0.283E-02	0.501E-02	0.838E-02	0.133E-01	0.200E-01	0.287E-01
457.	0.141E-02	0.250E-02	0.419E-02	0.664E-02	0.100E-01	0.143E-01
475.	0.111E-03	0.207E-03	0.367E-03	0.618E-03	0.990E-03	0.151E-02

CONTINUE

Y	600.	800.	X 1000.
-475.	0.978E-02	0.745E-02	0.626E-03
-457.	0.598E-01	0.326E-01	0.215E-02
-300.	0.120E+00	0.652E-01	0.430E-02
-200.	0.120E+00	0.652E-01	0.430E-02
-100.	0.120E+00	0.652E-01	0.430E-02
0.	0.120E+00	0.652E-01	0.430E-02
100.	0.120E+00	0.652E-01	0.430E-02
200.	0.120E+00	0.652E-01	0.430E-02
300.	0.120E+00	0.652E-01	0.430E-02
457.	0.598E-01	0.326E-01	0.215E-02
475.	0.978E-02	0.745E-02	0.626E-03

DISTRIBUTION OF CHEMICAL IN PPM AT 0.3120E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.402E-04	0.790E-04	0.148E-03	0.263E-03	0.446E-03	0.723E-03
-457.	0.536E-03	0.100E-02	0.179E-02	0.302E-02	0.485E-02	0.743E-02
-300.	0.107E-02	0.201E-02	0.357E-02	0.604E-02	0.970E-02	0.149E-01
-200.	0.107E-02	0.201E-02	0.357E-02	0.604E-02	0.970E-02	0.149E-01
-100.	0.107E-02	0.201E-02	0.357E-02	0.604E-02	0.970E-02	0.149E-01
0.	0.107E-02	0.201E-02	0.357E-02	0.604E-02	0.970E-02	0.149E-01

100.	0.107E-02	0.201E-02	0.357E-02	0.604E-02	0.970E-02	0.149E-01
0.	0.107E-02	0.201E-02	0.357E-02	0.604E-02	0.970E-02	0.149E-01
0.	0.107E-02	0.201E-02	0.357E-02	0.604E-02	0.970E-02	0.149E-01
57.	0.536E-03	0.100E-02	0.179E-02	0.302E-02	0.485E-02	0.743E-02
475.	0.402E-04	0.790E-04	0.148E-03	0.263E-03	0.446E-03	0.723E-03

CONTINUE

X

Y	600.	800.	1000.
-475.	0.764E-02	0.941E-02	0.158E-02
-457.	0.508E-01	0.450E-01	0.576E-02
-300.	0.102E+00	0.899E-01	0.115E-01
-200.	0.102E+00	0.899E-01	0.115E-01
-100.	0.102E+00	0.899E-01	0.115E-01
0.	0.102E+00	0.899E-01	0.115E-01
100.	0.102E+00	0.899E-01	0.115E-01
200.	0.102E+00	0.899E-01	0.115E-01
300.	0.102E+00	0.899E-01	0.115E-01
457.	0.508E-01	0.450E-01	0.576E-02
475.	0.764E-02	0.941E-02	0.158E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.3360E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.141E-04	0.289E-04	0.565E-04	0.106E-03	0.189E-03	0.322E-03
457.	0.194E-03	0.382E-03	0.716E-03	0.128E-02	0.218E-02	0.354E-02
300.	0.388E-03	0.764E-03	0.143E-02	0.256E-02	0.436E-02	0.708E-02
-200.	0.388E-03	0.764E-03	0.143E-02	0.256E-02	0.436E-02	0.708E-02
-100.	0.388E-03	0.764E-03	0.143E-02	0.256E-02	0.436E-02	0.708E-02
0.	0.388E-03	0.764E-03	0.143E-02	0.256E-02	0.436E-02	0.708E-02
100.	0.388E-03	0.764E-03	0.143E-02	0.256E-02	0.436E-02	0.708E-02
200.	0.388E-03	0.764E-03	0.143E-02	0.256E-02	0.436E-02	0.708E-02
300.	0.388E-03	0.764E-03	0.143E-02	0.256E-02	0.436E-02	0.708E-02
457.	0.194E-03	0.382E-03	0.716E-03	0.128E-02	0.218E-02	0.354E-02
475.	0.141E-04	0.289E-04	0.565E-04	0.106E-03	0.189E-03	0.322E-03

CONTINUE

X

Y	600.	800.	1000.
-475.	0.540E-02	0.104E-01	0.313E-02
-457.	0.391E-01	0.540E-01	0.122E-01
-300.	0.781E-01	0.108E+00	0.245E-01
-200.	0.781E-01	0.108E+00	0.245E-01
-100.	0.781E-01	0.108E+00	0.245E-01

0.	0.781E-01	0.108E+00	0.245E-01
00.	0.781E-01	0.108E+00	0.245E-01
00.	0.781E-01	0.108E+00	0.245E-01
00.	0.781E-01	0.108E+00	0.245E-01
457.	0.391E-01	0.540E-01	0.122E-01
475.	0.540E-02	0.104E-01	0.313E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.3600E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.478E-05	0.102E-04	0.208E-04	0.405E-04	0.757E-04	0.136E-03
-457.	0.677E-04	0.139E-03	0.273E-03	0.512E-03	0.918E-03	0.157E-02
-300.	0.135E-03	0.279E-03	0.547E-03	0.102E-02	0.184E-02	0.315E-02
-200.	0.135E-03	0.279E-03	0.547E-03	0.102E-02	0.184E-02	0.315E-02
-100.	0.135E-03	0.279E-03	0.547E-03	0.102E-02	0.184E-02	0.315E-02
0.	0.135E-03	0.279E-03	0.547E-03	0.102E-02	0.184E-02	0.315E-02
100.	0.135E-03	0.279E-03	0.547E-03	0.102E-02	0.184E-02	0.315E-02
200.	0.135E-03	0.279E-03	0.547E-03	0.102E-02	0.184E-02	0.315E-02
300.	0.135E-03	0.279E-03	0.547E-03	0.102E-02	0.184E-02	0.315E-02
457.	0.677E-04	0.139E-03	0.273E-03	0.512E-03	0.918E-03	0.157E-02
475.	0.478E-05	0.102E-04	0.208E-04	0.405E-04	0.757E-04	0.136E-03

CONTINUE

Y	600.	800.	X 1000.
475.	0.348E-02	0.103E-01	0.510E-02
457.	0.272E-01	0.576E-01	0.215E-01
-300.	0.545E-01	0.115E+00	0.430E-01
-200.	0.545E-01	0.115E+00	0.430E-01
-100.	0.545E-01	0.115E+00	0.430E-01
0.	0.545E-01	0.115E+00	0.430E-01
100.	0.545E-01	0.115E+00	0.430E-01
200.	0.545E-01	0.115E+00	0.430E-01
300.	0.545E-01	0.115E+00	0.430E-01
457.	0.272E-01	0.576E-01	0.215E-01
475.	0.348E-02	0.103E-01	0.510E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.3840E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.159E-05	0.350E-05	0.739E-05	0.150E-04	0.291E-04	0.544E-04
-457.	0.230E-04	0.491E-04	0.100E-03	0.196E-03	0.367E-03	0.660E-03
-300.	0.460E-04	0.982E-04	0.200E-03	0.392E-03	0.735E-03	0.132E-02

-200.	0.460E-04	0.982E-04	0.200E-03	0.392E-03	0.735E-03	0.132E-02
00.	0.460E-04	0.982E-04	0.200E-03	0.392E-03	0.735E-03	0.132E-
0.	0.460E-04	0.982E-04	0.200E-03	0.392E-03	0.735E-03	0.132E-
00.	0.460E-04	0.982E-04	0.200E-03	0.392E-03	0.735E-03	0.132E-02
200.	0.460E-04	0.982E-04	0.200E-03	0.392E-03	0.735E-03	0.132E-02
300.	0.460E-04	0.982E-04	0.200E-03	0.392E-03	0.735E-03	0.132E-02
457.	0.230E-04	0.491E-04	0.100E-03	0.196E-03	0.367E-03	0.660E-03
475.	0.159E-05	0.350E-05	0.739E-05	0.150E-04	0.291E-04	0.544E-04

CONTINUE

X

Y	600.	800.	1000.
-475.	0.206E-02	0.920E-02	0.712E-02
-457.	0.174E-01	0.553E-01	0.324E-01
-300.	0.348E-01	0.111E+00	0.647E-01
-200.	0.348E-01	0.111E+00	0.647E-01
-100.	0.348E-01	0.111E+00	0.647E-01
0.	0.348E-01	0.111E+00	0.647E-01
100.	0.348E-01	0.111E+00	0.647E-01
200.	0.348E-01	0.111E+00	0.647E-01
300.	0.348E-01	0.111E+00	0.647E-01
457.	0.174E-01	0.553E-01	0.324E-01
475.	0.206E-02	0.920E-02	0.712E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.4080E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400
-475.	0.519E-06	0.118E-05	0.256E-05	0.536E-05	0.108E-04	0.210E-04
-457.	0.763E-05	0.168E-04	0.356E-04	0.723E-04	0.141E-03	0.264E-03
-300.	0.153E-04	0.337E-04	0.712E-04	0.145E-03	0.282E-03	0.528E-03
-200.	0.153E-04	0.337E-04	0.712E-04	0.145E-03	0.282E-03	0.528E-03
-100.	0.153E-04	0.337E-04	0.712E-04	0.145E-03	0.282E-03	0.528E-03
0.	0.153E-04	0.337E-04	0.712E-04	0.145E-03	0.282E-03	0.528E-03
100.	0.153E-04	0.337E-04	0.712E-04	0.145E-03	0.282E-03	0.528E-03
200.	0.153E-04	0.337E-04	0.712E-04	0.145E-03	0.282E-03	0.528E-03
300.	0.153E-04	0.337E-04	0.712E-04	0.145E-03	0.282E-03	0.528E-03
457.	0.763E-05	0.168E-04	0.356E-04	0.723E-04	0.141E-03	0.264E-03
475.	0.519E-06	0.118E-05	0.256E-05	0.536E-05	0.108E-04	0.210E-04

CONTINUE

X

Y	600.	800.	1000.
-475.	0.113E-02	0.749E-02	0.874E-02
-457.	0.102E-01	0.484E-01	0.426E-01

-300.	0.204E-01	0.967E-01	0.853E-01
00.	0.204E-01	0.967E-01	0.853E-01
00.	0.204E-01	0.967E-01	0.853E-01
0.	0.204E-01	0.967E-01	0.853E-01
100.	0.204E-01	0.967E-01	0.853E-01
200.	0.204E-01	0.967E-01	0.853E-01
300.	0.204E-01	0.967E-01	0.853E-01
457.	0.102E-01	0.484E-01	0.426E-01
475.	0.113E-02	0.749E-02	0.874E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.4320E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.167E-06	0.388E-06	0.868E-06	0.187E-05	0.389E-05	0.781E-05
-457.	0.249E-05	0.564E-05	0.123E-04	0.258E-04	0.522E-04	0.101E-03
-300.	0.498E-05	0.113E-04	0.246E-04	0.517E-04	0.104E-03	0.203E-03
-200.	0.498E-05	0.113E-04	0.246E-04	0.517E-04	0.104E-03	0.203E-03
-100.	0.498E-05	0.113E-04	0.246E-04	0.517E-04	0.104E-03	0.203E-03
0.	0.498E-05	0.113E-04	0.246E-04	0.517E-04	0.104E-03	0.203E-03
100.	0.498E-05	0.113E-04	0.246E-04	0.517E-04	0.104E-03	0.203E-03
200.	0.498E-05	0.113E-04	0.246E-04	0.517E-04	0.104E-03	0.203E-03
300.	0.498E-05	0.113E-04	0.246E-04	0.517E-04	0.104E-03	0.203E-03
457.	0.249E-05	0.564E-05	0.123E-04	0.258E-04	0.522E-04	0.101E-03
475.	0.167E-06	0.388E-06	0.868E-06	0.187E-05	0.389E-05	0.781E-05

CONTINUE

Y	600.	800.	X 1000.
-475.	0.583E-03	0.560E-02	0.959E-02
-457.	0.559E-02	0.387E-01	0.501E-01
-300.	0.112E-01	0.775E-01	0.100E+00
-200.	0.112E-01	0.775E-01	0.100E+00
-100.	0.112E-01	0.775E-01	0.100E+00
0.	0.112E-01	0.775E-01	0.100E+00
100.	0.112E-01	0.775E-01	0.100E+00
200.	0.112E-01	0.775E-01	0.100E+00
300.	0.112E-01	0.775E-01	0.100E+00
457.	0.559E-02	0.387E-01	0.501E-01
475.	0.583E-03	0.560E-02	0.959E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.4560E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.

-475.	0.530E-07	0.126E-06	0.289E-06	0.640E-06	0.137E-05	0.283E-05
57.	0.799E-06	0.186E-05	0.417E-05	0.901E-05	0.188E-04	0.377E-04
00.	0.160E-05	0.372E-05	0.834E-05	0.180E-04	0.376E-04	0.755E-04
-200.	0.160E-05	0.372E-05	0.834E-05	0.180E-04	0.376E-04	0.755E-04
-100.	0.160E-05	0.372E-05	0.834E-05	0.180E-04	0.376E-04	0.755E-04
0.	0.160E-05	0.372E-05	0.834E-05	0.180E-04	0.376E-04	0.755E-04
100.	0.160E-05	0.372E-05	0.834E-05	0.180E-04	0.376E-04	0.755E-04
200.	0.160E-05	0.372E-05	0.834E-05	0.180E-04	0.376E-04	0.755E-04
300.	0.160E-05	0.372E-05	0.834E-05	0.180E-04	0.376E-04	0.755E-04
457.	0.799E-06	0.186E-05	0.417E-05	0.901E-05	0.188E-04	0.377E-04
475.	0.530E-07	0.126E-06	0.289E-06	0.640E-06	0.137E-05	0.283E-05

CONTINUE

X

Y	600.	800.	1000.
-475.	0.283E-03	0.387E-02	0.954E-02
-457.	0.287E-02	0.286E-01	0.532E-01
-300.	0.574E-02	0.572E-01	0.106E+00
-200.	0.574E-02	0.572E-01	0.106E+00
-100.	0.574E-02	0.572E-01	0.106E+00
0.	0.574E-02	0.572E-01	0.106E+00
100.	0.574E-02	0.572E-01	0.106E+00
200.	0.574E-02	0.572E-01	0.106E+00
300.	0.574E-02	0.572E-01	0.106E+00
457.	0.287E-02	0.286E-01	0.532E-01
475.	0.283E-03	0.387E-02	0.954E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.4800E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.166E-07	0.403E-07	0.946E-07	0.215E-06	0.471E-06	0.100E-05
-457.	0.253E-06	0.603E-06	0.139E-05	0.308E-05	0.659E-05	0.137E-04
-300.	0.507E-06	0.121E-05	0.277E-05	0.615E-05	0.132E-04	0.273E-04
-200.	0.507E-06	0.121E-05	0.277E-05	0.615E-05	0.132E-04	0.273E-04
-100.	0.507E-06	0.121E-05	0.277E-05	0.615E-05	0.132E-04	0.273E-04
0.	0.507E-06	0.121E-05	0.277E-05	0.615E-05	0.132E-04	0.273E-04
100.	0.507E-06	0.121E-05	0.277E-05	0.615E-05	0.132E-04	0.273E-04
200.	0.507E-06	0.121E-05	0.277E-05	0.615E-05	0.132E-04	0.273E-04
300.	0.507E-06	0.121E-05	0.277E-05	0.615E-05	0.132E-04	0.273E-04
457.	0.253E-06	0.603E-06	0.139E-05	0.308E-05	0.659E-05	0.137E-04
475.	0.166E-07	0.403E-07	0.946E-07	0.215E-06	0.471E-06	0.100E-05

CONTINUE

X

Y	600.	800.	1000.

-475.	0.131E-03	0.249E-02	0.870E-02
-457.	0.139E-02	0.196E-01	0.516E-01
-300.	0.278E-02	0.392E-01	0.103E+00
-200.	0.278E-02	0.392E-01	0.103E+00
-100.	0.278E-02	0.392E-01	0.103E+00
0.	0.278E-02	0.392E-01	0.103E+00
100.	0.278E-02	0.392E-01	0.103E+00
200.	0.278E-02	0.392E-01	0.103E+00
300.	0.278E-02	0.392E-01	0.103E+00
457.	0.139E-02	0.196E-01	0.516E-01
475.	0.131E-03	0.249E-02	0.870E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.5040E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.515E-08	0.128E-07	0.306E-07	0.710E-07	0.160E-06	0.347E-06
-457.	0.795E-07	0.193E-06	0.454E-06	0.103E-05	0.227E-05	0.483E-05
-300.	0.159E-06	0.386E-06	0.908E-06	0.206E-05	0.454E-05	0.965E-05
-200.	0.159E-06	0.386E-06	0.908E-06	0.206E-05	0.454E-05	0.965E-05
-100.	0.159E-06	0.386E-06	0.908E-06	0.206E-05	0.454E-05	0.965E-05
0.	0.159E-06	0.386E-06	0.908E-06	0.206E-05	0.454E-05	0.965E-05
100.	0.159E-06	0.386E-06	0.908E-06	0.206E-05	0.454E-05	0.965E-05
200.	0.159E-06	0.386E-06	0.908E-06	0.206E-05	0.454E-05	0.965E-05
300.	0.159E-06	0.386E-06	0.908E-06	0.206E-05	0.454E-05	0.965E-05
457.	0.795E-07	0.193E-06	0.454E-06	0.103E-05	0.227E-05	0.483E-05
475.	0.515E-08	0.128E-07	0.306E-07	0.710E-07	0.160E-06	0.347E-06

CONTINUE

X

Y	600.	800.	1000.
-475.	0.581E-04	0.150E-02	0.731E-02
-457.	0.641E-03	0.125E-01	0.461E-01
-300.	0.128E-02	0.250E-01	0.923E-01
-200.	0.128E-02	0.250E-01	0.923E-01
-100.	0.128E-02	0.250E-01	0.923E-01
0.	0.128E-02	0.250E-01	0.923E-01
100.	0.128E-02	0.250E-01	0.923E-01
200.	0.128E-02	0.250E-01	0.923E-01
300.	0.128E-02	0.250E-01	0.923E-01
457.	0.641E-03	0.125E-01	0.461E-01
475.	0.581E-04	0.150E-02	0.731E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.5280E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
475.	0.160E-08	0.402E-08	0.979E-08	0.232E-07	0.532E-07	0.118E-06
-457.	0.247E-07	0.612E-07	0.147E-06	0.341E-06	0.766E-06	0.167E-05
-300.	0.495E-07	0.122E-06	0.293E-06	0.681E-06	0.153E-05	0.334E-05
-200.	0.495E-07	0.122E-06	0.293E-06	0.681E-06	0.153E-05	0.334E-05
-100.	0.495E-07	0.122E-06	0.293E-06	0.681E-06	0.153E-05	0.334E-05
0.	0.495E-07	0.122E-06	0.293E-06	0.681E-06	0.153E-05	0.334E-05
100.	0.495E-07	0.122E-06	0.293E-06	0.681E-06	0.153E-05	0.334E-05
200.	0.495E-07	0.122E-06	0.293E-06	0.681E-06	0.153E-05	0.334E-05
300.	0.495E-07	0.122E-06	0.293E-06	0.681E-06	0.153E-05	0.334E-05
457.	0.247E-07	0.612E-07	0.147E-06	0.341E-06	0.766E-06	0.167E-05
475.	0.160E-08	0.402E-08	0.979E-08	0.232E-07	0.532E-07	0.118E-06

CONTINUE

X

Y	600.	800.	1000.
-475.	0.248E-04	0.854E-03	0.570E-02
-457.	0.283E-03	0.749E-02	0.382E-01
-300.	0.567E-03	0.150E-01	0.763E-01
-200.	0.567E-03	0.150E-01	0.763E-01
-100.	0.567E-03	0.150E-01	0.763E-01
0.	0.567E-03	0.150E-01	0.763E-01
100.	0.567E-03	0.150E-01	0.763E-01
200.	0.567E-03	0.150E-01	0.763E-01
300.	0.567E-03	0.150E-01	0.763E-01
457.	0.283E-03	0.749E-02	0.382E-01
475.	0.248E-04	0.854E-03	0.570E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.5520E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.460E-09	0.128E-08	0.311E-08	0.747E-08	0.175E-07	0.397E-07
-457.	0.752E-08	0.193E-07	0.468E-07	0.111E-06	0.255E-06	0.569E-06
-300.	0.150E-07	0.387E-07	0.937E-07	0.222E-06	0.510E-06	0.114E-05
-200.	0.150E-07	0.387E-07	0.937E-07	0.222E-06	0.510E-06	0.114E-05
-100.	0.150E-07	0.387E-07	0.937E-07	0.222E-06	0.510E-06	0.114E-05
0.	0.150E-07	0.387E-07	0.937E-07	0.222E-06	0.510E-06	0.114E-05
100.	0.150E-07	0.387E-07	0.937E-07	0.222E-06	0.510E-06	0.114E-05
200.	0.150E-07	0.387E-07	0.937E-07	0.222E-06	0.510E-06	0.114E-05
300.	0.150E-07	0.387E-07	0.937E-07	0.222E-06	0.510E-06	0.114E-05
457.	0.752E-08	0.193E-07	0.468E-07	0.111E-06	0.255E-06	0.569E-06
475.	0.460E-09	0.128E-08	0.311E-08	0.747E-08	0.175E-07	0.397E-07

CONTINUE

X

Y	600.	800.	1000.
-475.	0.102E-04	0.460E-03	0.415E-02
-457.	0.121E-03	0.424E-02	0.294E-01
-300.	0.241E-03	0.847E-02	0.588E-01
-200.	0.241E-03	0.847E-02	0.588E-01
-100.	0.241E-03	0.847E-02	0.588E-01
0.	0.241E-03	0.847E-02	0.588E-01
100.	0.241E-03	0.847E-02	0.588E-01
200.	0.241E-03	0.847E-02	0.588E-01
300.	0.241E-03	0.847E-02	0.588E-01
457.	0.121E-03	0.424E-02	0.294E-01
475.	0.102E-04	0.460E-03	0.415E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.5760E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.105E-09	0.351E-09	0.992E-09	0.236E-08	0.570E-08	0.132E-07
-457.	0.217E-08	0.588E-08	0.149E-07	0.357E-07	0.839E-07	0.191E-06
-300.	0.433E-08	0.118E-07	0.297E-07	0.714E-07	0.168E-06	0.382E-06
-200.	0.433E-08	0.118E-07	0.297E-07	0.714E-07	0.168E-06	0.382E-06
-100.	0.433E-08	0.118E-07	0.297E-07	0.714E-07	0.168E-06	0.382E-06
0.	0.433E-08	0.118E-07	0.297E-07	0.714E-07	0.168E-06	0.382E-06
100.	0.433E-08	0.118E-07	0.297E-07	0.714E-07	0.168E-06	0.382E-06
200.	0.433E-08	0.118E-07	0.297E-07	0.714E-07	0.168E-06	0.382E-06
300.	0.433E-08	0.118E-07	0.297E-07	0.714E-07	0.168E-06	0.382E-06
457.	0.217E-08	0.588E-08	0.149E-07	0.357E-07	0.839E-07	0.191E-06
475.	0.105E-09	0.351E-09	0.992E-09	0.236E-08	0.570E-08	0.132E-07

CONTINUE

X

Y	600.	800.	1000.
-475.	0.408E-05	0.236E-03	0.284E-02
-457.	0.496E-04	0.227E-02	0.212E-01
-300.	0.992E-04	0.454E-02	0.424E-01
-200.	0.992E-04	0.454E-02	0.424E-01
-100.	0.992E-04	0.454E-02	0.424E-01
0.	0.992E-04	0.454E-02	0.424E-01
100.	0.992E-04	0.454E-02	0.424E-01
200.	0.992E-04	0.454E-02	0.424E-01
300.	0.992E-04	0.454E-02	0.424E-01
457.	0.496E-04	0.227E-02	0.212E-01
475.	0.408E-05	0.236E-03	0.284E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.6000E+06 HRS

Z = 0.00

Y	X 275.	300.	325.	350.	375.	400.
-475.	0.773E-11	0.726E-10	0.265E-09	0.739E-09	0.183E-08	0.429E-08
-457.	0.531E-09	0.168E-08	0.455E-08	0.114E-07	0.272E-07	0.631E-07
-300.	0.106E-08	0.336E-08	0.911E-08	0.228E-07	0.544E-07	0.126E-06
-200.	0.106E-08	0.336E-08	0.911E-08	0.228E-07	0.544E-07	0.126E-06
-100.	0.106E-08	0.336E-08	0.911E-08	0.228E-07	0.544E-07	0.126E-06
0.	0.106E-08	0.336E-08	0.911E-08	0.228E-07	0.544E-07	0.126E-06
100.	0.106E-08	0.336E-08	0.911E-08	0.228E-07	0.544E-07	0.126E-06
200.	0.106E-08	0.336E-08	0.911E-08	0.228E-07	0.544E-07	0.126E-06
300.	0.106E-08	0.336E-08	0.911E-08	0.228E-07	0.544E-07	0.126E-06
457.	0.531E-09	0.168E-08	0.455E-08	0.114E-07	0.272E-07	0.631E-07
475.	0.773E-11	0.726E-10	0.265E-09	0.739E-09	0.183E-08	0.429E-08

CONTINUE

Y	X 600.	800.	1000.
-475.	0.159E-05	0.116E-03	0.183E-02
-457.	0.198E-04	0.116E-02	0.144E-01
-300.	0.396E-04	0.232E-02	0.287E-01
-200.	0.396E-04	0.232E-02	0.287E-01
-100.	0.396E-04	0.232E-02	0.287E-01
0.	0.396E-04	0.232E-02	0.287E-01
100.	0.396E-04	0.232E-02	0.287E-01
200.	0.396E-04	0.232E-02	0.287E-01
300.	0.396E-04	0.232E-02	0.287E-01
457.	0.198E-04	0.116E-02	0.144E-01
475.	0.159E-05	0.116E-03	0.183E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.6240E+06 HRS

Z = 0.00

Y	X 275.	300.	325.	350.	375.	400.
-475.	0.000E+00	0.248E-11	0.480E-10	0.187E-09	0.569E-09	0.139E-08
-457.	0.000E+00	0.398E-09	0.128E-08	0.345E-08	0.871E-08	0.207E-07
-300.	0.000E+00	0.796E-09	0.256E-08	0.690E-08	0.174E-07	0.413E-07
-200.	0.000E+00	0.796E-09	0.256E-08	0.690E-08	0.174E-07	0.413E-07
-100.	0.000E+00	0.796E-09	0.256E-08	0.690E-08	0.174E-07	0.413E-07
0.	0.000E+00	0.796E-09	0.256E-08	0.690E-08	0.174E-07	0.413E-07
100.	0.000E+00	0.796E-09	0.256E-08	0.690E-08	0.174E-07	0.413E-07
200.	0.000E+00	0.796E-09	0.256E-08	0.690E-08	0.174E-07	0.413E-07
300.	0.000E+00	0.796E-09	0.256E-08	0.690E-08	0.174E-07	0.413E-07
457.	0.000E+00	0.398E-09	0.128E-08	0.345E-08	0.871E-08	0.207E-07
475.	0.000E+00	0.248E-11	0.480E-10	0.187E-09	0.569E-09	0.139E-08

DRAFT

CONTINUE

X

Y	600.	800.	1000.
-475.	0.606E-06	0.548E-04	0.112E-02
-457.	0.771E-05	0.570E-03	0.919E-02
-300.	0.154E-04	0.114E-02	0.184E-01
-200.	0.154E-04	0.114E-02	0.184E-01
-100.	0.154E-04	0.114E-02	0.184E-01
0.	0.154E-04	0.114E-02	0.184E-01
100.	0.154E-04	0.114E-02	0.184E-01
200.	0.154E-04	0.114E-02	0.184E-01
300.	0.154E-04	0.114E-02	0.184E-01
457.	0.771E-05	0.570E-03	0.919E-02
475.	0.606E-06	0.548E-04	0.112E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.6480E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.000E+00	0.000E+00	0.352E-12	0.297E-10	0.137E-09	0.415E-09
-457.	0.000E+00	0.000E+00	0.265E-09	0.929E-09	0.270E-08	0.659E-08
-300.	0.000E+00	0.000E+00	0.531E-09	0.186E-08	0.539E-08	0.132E-07
-200.	0.000E+00	0.000E+00	0.531E-09	0.186E-08	0.539E-08	0.132E-07
-100.	0.000E+00	0.000E+00	0.531E-09	0.186E-08	0.539E-08	0.132E-07
0.	0.000E+00	0.000E+00	0.531E-09	0.186E-08	0.539E-08	0.132E-07
100.	0.000E+00	0.000E+00	0.531E-09	0.186E-08	0.539E-08	0.132E-07
200.	0.000E+00	0.000E+00	0.531E-09	0.186E-08	0.539E-08	0.132E-07
300.	0.000E+00	0.000E+00	0.531E-09	0.186E-08	0.539E-08	0.132E-07
457.	0.000E+00	0.000E+00	0.265E-09	0.929E-09	0.270E-08	0.659E-08
475.	0.000E+00	0.000E+00	0.352E-12	0.297E-10	0.137E-09	0.415E-09

CONTINUE

X

Y	600.	800.	1000.
-475.	0.226E-06	0.250E-04	0.648E-03
-457.	0.293E-05	0.269E-03	0.558E-02
-300.	0.587E-05	0.537E-03	0.112E-01
-200.	0.587E-05	0.537E-03	0.112E-01
-100.	0.587E-05	0.537E-03	0.112E-01
0.	0.587E-05	0.537E-03	0.112E-01
100.	0.587E-05	0.537E-03	0.112E-01
200.	0.587E-05	0.537E-03	0.112E-01
300.	0.587E-05	0.537E-03	0.112E-01
457.	0.293E-05	0.269E-03	0.558E-02
475.	0.226E-06	0.250E-04	0.648E-03

DISTRIBUTION OF CHEMICAL IN PPM AT 0.6720E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.356E-14	0.168E-10	0.988E-10
-457.	0.000E+00	0.000E+00	0.000E+00	0.133E-09	0.663E-09	0.195E-08
-300.	0.000E+00	0.000E+00	0.000E+00	0.265E-09	0.133E-08	0.389E-08
-200.	0.000E+00	0.000E+00	0.000E+00	0.265E-09	0.133E-08	0.389E-08
-100.	0.000E+00	0.000E+00	0.000E+00	0.265E-09	0.133E-08	0.389E-08
0.	0.000E+00	0.000E+00	0.000E+00	0.265E-09	0.133E-08	0.389E-08
100.	0.000E+00	0.000E+00	0.000E+00	0.265E-09	0.133E-08	0.389E-08
200.	0.000E+00	0.000E+00	0.000E+00	0.265E-09	0.133E-08	0.389E-08
300.	0.000E+00	0.000E+00	0.000E+00	0.265E-09	0.133E-08	0.389E-08
457.	0.000E+00	0.000E+00	0.000E+00	0.133E-09	0.663E-09	0.195E-08
475.	0.000E+00	0.000E+00	0.000E+00	0.356E-14	0.168E-10	0.988E-10

CONTINUE

Y	600.	800.	1000.	X
-475.	0.828E-07	0.111E-04	0.360E-03	
-457.	0.109E-05	0.122E-03	0.323E-02	
-300.	0.219E-05	0.245E-03	0.646E-02	
-200.	0.219E-05	0.245E-03	0.646E-02	
-100.	0.219E-05	0.245E-03	0.646E-02	
0.	0.219E-05	0.245E-03	0.646E-02	
100.	0.219E-05	0.245E-03	0.646E-02	
200.	0.219E-05	0.245E-03	0.646E-02	
300.	0.219E-05	0.245E-03	0.646E-02	
457.	0.109E-05	0.122E-03	0.323E-02	
475.	0.828E-07	0.111E-04	0.360E-03	

DISTRIBUTION OF CHEMICAL IN PPM AT 0.6960E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.773E-11
-457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.531E-09
-300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.106E-08
-200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.106E-08
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.106E-08
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.106E-08
100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.106E-08
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.106E-08
300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.106E-08

457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.531E-09
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.773E-11

CONTINUE

X

Y	600.	800.	1000.
-475.	0.298E-07	0.475E-05	0.192E-03
-457.	0.400E-06	0.540E-04	0.179E-02
-300.	0.799E-06	0.108E-03	0.357E-02
-200.	0.799E-06	0.108E-03	0.357E-02
-100.	0.799E-06	0.108E-03	0.357E-02
0.	0.799E-06	0.108E-03	0.357E-02
100.	0.799E-06	0.108E-03	0.357E-02
200.	0.799E-06	0.108E-03	0.357E-02
300.	0.799E-06	0.108E-03	0.357E-02
457.	0.400E-06	0.540E-04	0.179E-02
475.	0.298E-07	0.475E-05	0.192E-03

DISTRIBUTION OF CHEMICAL IN PPM AT 0.7200E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

X

Y	600.	800.	1000.
-475.	0.106E-07	0.199E-05	0.983E-04
-457.	0.144E-06	0.231E-04	0.948E-03
-300.	0.288E-06	0.463E-04	0.190E-02
-200.	0.288E-06	0.463E-04	0.190E-02
-100.	0.288E-06	0.463E-04	0.190E-02
0.	0.288E-06	0.463E-04	0.190E-02
100.	0.288E-06	0.463E-04	0.190E-02
200.	0.288E-06	0.463E-04	0.190E-02

300.	0.288E-06	0.463E-04	0.190E-02
457.	0.144E-06	0.231E-04	0.948E-03
475.	0.106E-07	0.199E-05	0.983E-04

DISTRIBUTION OF CHEMICAL IN PPM AT 0.7440E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

Y	600.	800.	X 1000.
-475.	0.370E-08	0.812E-06	0.486E-04
-457.	0.509E-07	0.967E-05	0.485E-03
-300.	0.102E-06	0.193E-04	0.969E-03
-200.	0.102E-06	0.193E-04	0.969E-03
-100.	0.102E-06	0.193E-04	0.969E-03
0.	0.102E-06	0.193E-04	0.969E-03
100.	0.102E-06	0.193E-04	0.969E-03
200.	0.102E-06	0.193E-04	0.969E-03
300.	0.102E-06	0.193E-04	0.969E-03
457.	0.509E-07	0.967E-05	0.485E-03
475.	0.370E-08	0.812E-06	0.486E-04

DISTRIBUTION OF CHEMICAL IN PPM AT 0.7680E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

X

Y	600.	800.	1000.
-475.	0.130E-08	0.325E-06	0.233E-04
-457.	0.179E-07	0.395E-05	0.239E-03
-300.	0.358E-07	0.790E-05	0.478E-03
-200.	0.358E-07	0.790E-05	0.478E-03
-100.	0.358E-07	0.790E-05	0.478E-03
0.	0.358E-07	0.790E-05	0.478E-03
100.	0.358E-07	0.790E-05	0.478E-03
200.	0.358E-07	0.790E-05	0.478E-03
300.	0.358E-07	0.790E-05	0.478E-03
457.	0.179E-07	0.395E-05	0.239E-03
475.	0.130E-08	0.325E-06	0.233E-04

DISTRIBUTION OF CHEMICAL IN PPM AT 0.7920E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
00.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

X

Y	600.	800.	1000.
-475.	0.411E-09	0.128E-06	0.108E-04
-457.	0.610E-08	0.158E-05	0.114E-03
-300.	0.122E-07	0.316E-05	0.229E-03
-200.	0.122E-07	0.316E-05	0.229E-03
-100.	0.122E-07	0.316E-05	0.229E-03

0.	0.122E-07	0.316E-05	0.229E-03
0.	0.122E-07	0.316E-05	0.229E-03
0.	0.122E-07	0.316E-05	0.229E-03
300.	0.122E-07	0.316E-05	0.229E-03
457.	0.610E-08	0.158E-05	0.114E-03
475.	0.411E-09	0.128E-06	0.108E-04

DISTRIBUTION OF CHEMICAL IN PPM AT 0.8160E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

Y	600.	800.	X 1000.
475.	0.988E-10	0.492E-07	0.491E-05
457.	0.195E-08	0.619E-06	0.531E-04
-300.	0.389E-08	0.124E-05	0.106E-03
-200.	0.389E-08	0.124E-05	0.106E-03
-100.	0.389E-08	0.124E-05	0.106E-03
0.	0.389E-08	0.124E-05	0.106E-03
100.	0.389E-08	0.124E-05	0.106E-03
200.	0.389E-08	0.124E-05	0.106E-03
300.	0.389E-08	0.124E-05	0.106E-03
457.	0.195E-08	0.619E-06	0.531E-04
475.	0.988E-10	0.492E-07	0.491E-05

DISTRIBUTION OF CHEMICAL IN PPM AT 0.8400E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

		0.000E+00	0.000E+00	0.	[illegible]	
	[illegible]	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	[illegible]0E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
[illegible]	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
[illegible]7.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
75.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

X

Y	600.	800.	1000.
-475.	0.773E-11	0.187E-07	0.217E-05
-457.	0.531E-09	0.238E-06	0.240E-04
-300.	0.106E-08	0.476E-06	0.481E-04
-200.	0.106E-08	0.476E-06	0.481E-04
-100.	0.106E-08	0.476E-06	0.481E-04
0.	0.106E-08	0.476E-06	0.481E-04
100.	0.106E-08	0.476E-06	0.481E-04
200.	0.106E-08	0.476E-06	0.481E-04
300.	0.106E-08	0.476E-06	0.481E-04
457.	0.531E-09	0.238E-06	0.240E-04
475.	0.773E-11	0.187E-07	0.217E-05

DISTRIBUTION OF CHEMICAL IN PPM AT 0.8640E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

X

Y	600.	800.	1000.
-475.	0.000E+00	0.694E-08	0.937E-06
-457.	0.000E+00	0.902E-07	0.106E-04

-00.	0.000E+00	0.180E-06	0.212E-04
0.	0.000E+00	0.180E-06	0.212E-04
00.	0.000E+00	0.180E-06	0.212E-04
0.	0.000E+00	0.180E-06	0.212E-04
100.	0.000E+00	0.180E-06	0.212E-04
200.	0.000E+00	0.180E-06	0.212E-04
300.	0.000E+00	0.180E-06	0.212E-04
457.	0.000E+00	0.902E-07	0.106E-04
475.	0.000E+00	0.694E-08	0.937E-06

DISTRIBUTION OF CHEMICAL IN PPM AT 0.8880E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

Y	600.	800.	X 1000.
-475.	0.000E+00	0.256E-08	0.396E-06
-457.	0.000E+00	0.337E-07	0.457E-05
-300.	0.000E+00	0.673E-07	0.914E-05
-200.	0.000E+00	0.673E-07	0.914E-05
-100.	0.000E+00	0.673E-07	0.914E-05
0.	0.000E+00	0.673E-07	0.914E-05
100.	0.000E+00	0.673E-07	0.914E-05
200.	0.000E+00	0.673E-07	0.914E-05
300.	0.000E+00	0.673E-07	0.914E-05
457.	0.000E+00	0.337E-07	0.457E-05
475.	0.000E+00	0.256E-08	0.396E-06

DISTRIBUTION OF CHEMICAL IN PPM AT 0.9120E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.

-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
57.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
50.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
00.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

X

Y	600.	800.	1000.
-475.	0.000E+00	0.957E-09	0.164E-06
-457.	0.000E+00	0.124E-07	0.193E-05
-300.	0.000E+00	0.248E-07	0.386E-05
-200.	0.000E+00	0.248E-07	0.386E-05
-100.	0.000E+00	0.248E-07	0.386E-05
0.	0.000E+00	0.248E-07	0.386E-05
100.	0.000E+00	0.248E-07	0.386E-05
200.	0.000E+00	0.248E-07	0.386E-05
300.	0.000E+00	0.248E-07	0.386E-05
457.	0.000E+00	0.124E-07	0.193E-05
475.	0.000E+00	0.957E-09	0.164E-06

DISTRIBUTION OF CHEMICAL IN PPM AT 0.9360E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

X

Y	600.	800.	1000.

DRAFT

-475.	0.000E+00	0.299E-09	0.668E-07
57.	0.000E+00	0.438E-08	0.798E-06
30.	0.000E+00	0.876E-08	0.160E-05
200.	0.000E+00	0.876E-08	0.160E-05
-100.	0.000E+00	0.876E-08	0.160E-05
0.	0.000E+00	0.876E-08	0.160E-05
100.	0.000E+00	0.876E-08	0.160E-05
200.	0.000E+00	0.876E-08	0.160E-05
300.	0.000E+00	0.876E-08	0.160E-05
457.	0.000E+00	0.438E-08	0.798E-06
475.	0.000E+00	0.299E-09	0.668E-07

STEADY STATE SOLUTION HAS NOT BEEN REACHED BEFORE FINAL SIMULATING TIME

DISTRIBUTION OF CHEMICAL IN PPM AT 0.9600E+06 HRS

Z = 0.00

Y \ X	275.	300.	325.	350.	375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+
300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

Y \ X	600.	800.	1000.
-475.	0.000E+00	0.685E-10	0.267E-07
-457.	0.000E+00	0.141E-08	0.324E-06
-300.	0.000E+00	0.283E-08	0.649E-06
-200.	0.000E+00	0.283E-08	0.649E-06
-100.	0.000E+00	0.283E-08	0.649E-06
0.	0.000E+00	0.283E-08	0.649E-06
100.	0.000E+00	0.283E-08	0.649E-06
200.	0.000E+00	0.283E-08	0.649E-06
300.	0.000E+00	0.283E-08	0.649E-06
457.	0.000E+00	0.141E-08	0.324E-06
475.	0.000E+00	0.685E-10	0.267E-07

INPUT FILE FOR AT123D MODEL
1,1-DCA CALIBRATION

(ACTIVE SOURCE)

DRAFT

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 LTA QUARRIES CALIBRATION FOR 1,1DCA K=2E4 W=0.00025KG/HR TW=100YRS
  13   11    1 1000    1  101   10    1    0    1    2    0    1    0
15.        0.0        0.0        275.0      -457.5     457.5      0.0        15.0
0.20       0.0072     0.057      10.0       1.0        1.0        0.0        0.0
0.0        0.0        1640.0     1000.0     0.01       2400.      8.76e+5    .00025
275.0      300.0      325.0      350.0      375.0      400.0      425.0      450.0
475.0      488.0      600.0      800.0      1000.0
-475.0     -457.5     -300.0     -200.0     -100.0     0.0        100.0      200.0
300.0      457.5      475.0
0.0
```

DRAFT

AT123D OUTPUT FILE FOR 1,1 DCA CALIBRATION

(ACTIVE SOURCE)

DRAFT

DELTA QUARRIES FINAL RUN DQDCA.DAT STEADY STATE FOR 1,1 DCA @ 45 PPB

NO. OF POINTS IN X-DIRECTION	13
NO. OF POINTS IN Y-DIRECTION	11
NO. OF POINTS IN Z-DIRECTION	1
NO. OF ROOTS: NO. OF SERIES TERMS	1000
NO. OF BEGINNING TIME STEPS	1
NO. OF ENDING TIME STEP	401
NO. OF TIME INTERVALS FOR PRINTED OUT SOLUTION	10
INSTANTANEOUS SOURCE CONTROL = 0 FOR INSTANT SOURCE	1
SOURCE CONDITION CONTROL = 0 FOR STEADY SOURCE	0
INTERMITTENT OUTPUT CONTROL = 0 NO SUCH OUTPUT	1
CASE CONTROL =1 THERMAL, = 2 FOR CHEMICAL, = 3 RAD	2

AQUIFER DEPTH, = 0.0 FOR INFINITE DEEP (METERS) ...	0.1500E+02
AQUIFER WIDTH, = 0.0 FOR INFINITE WIDE (METERS) ...	0.0000E+00
BEGIN POINT OF X-SOURCE LOCATION (METERS)	0.0000E+00
END POINT OF X-SOURCE LOCATION (METERS)	0.2750E+03
BEGIN POINT OF Y-SOURCE LOCATION (METERS)	-0.4575E+03
END POINT OF Y-SOURCE LOCATION (METERS)	0.4575E+03
BEGIN POINT OF Z-SOURCE LOCATION (METERS)	0.0000E+00
END POINT OF Z-SOURCE LOCATION (METERS)	0.1500E+02

POROSITY	0.2000E+00
HYDRAULIC CONDUCTIVITY (METER/HOUR)	0.7200E-02
HYDRAULIC GRADIENT	0.5700E-01
LONGITIDUNAL DESPERSIVITY (METER)	0.1000E+02
LATERAL DISPERSIVITY (METER)	0.1000E+01
VERTICAL DISPERSIVITY (METER)	0.1000E+01
DISTRIBUTION COEFFICIENT, KD (M**3/KG)	0.0000E+00
HEAT EXCHANGE COEFFICIENT (KCAL/HR-M**2-DEGREE C)..	0.0000E+00

MOLECULAR DIFFUSION MULTIPLY BY TOROSITY (M**2/HR)	0.0000E+00
DECAY CONSTANT (PER HOUR)	0.0000E+00
BULK DENSITY OF THE SOIL (KG/M**3)	0.1640E+04
ACCURACY TOLERANCE FOR REACHING STEADY STATE	0.1000E-01
DENSITY OF WATER (KG/M**3)	0.1000E+04
TIME INTERVAL SIZE FOR THE DESIRED SOLUTION (HR) ..	0.2400E+04
DISCHARGE TIME (HR)	0.8760E+06

WASTE RELEASE RATE (KCAL/HR), (KG/HR), OR (CI/HR) . 0.2500E-03

RETARDATION FACTOR ..... 0.1000E+01
RETARDED DARCY VELOCITY (M/HR) 0.2052E-02
RETARDED LONGITUDINAL DISPERSION COEF. (M**2/HR) .. 0.2052E-01
RETARDED LATERAL DIEPSERSION COEFFICIENT (M**2/HR) 0.2052E-02
RETARDED VERTICAL DISPERSION COEFFICIENT (M**2/HR). 0.2052E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.0000E+00 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

Y	600.	800.	X 1000.
-475.	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.0000E+00 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.

-475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-457.	0.397E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.397E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-200.	0.397E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-100.	0.397E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.	0.397E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
100.	0.397E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
200.	0.397E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
300.	0.397E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
457.	0.397E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

CONTINUE

X

Y	600.	800.	1000.
-475.	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.2400E+05 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.825E-04	0.612E-04	0.311E-04	0.991E-05	0.190E-05	0.214E-06
-457.	0.325E-02	0.173E-02	0.678E-03	0.182E-03	0.314E-04	0.330E-05
-300.	0.650E-02	0.347E-02	0.136E-02	0.365E-03	0.628E-04	0.659E-05
-200.	0.650E-02	0.347E-02	0.136E-02	0.365E-03	0.628E-04	0.659E-05
-100.	0.650E-02	0.347E-02	0.136E-02	0.365E-03	0.628E-04	0.659E-05
0.	0.650E-02	0.347E-02	0.136E-02	0.365E-03	0.628E-04	0.659E-05
100.	0.650E-02	0.347E-02	0.136E-02	0.365E-03	0.628E-04	0.659E-05
200.	0.650E-02	0.347E-02	0.136E-02	0.365E-03	0.628E-04	0.659E-05
300.	0.650E-02	0.347E-02	0.136E-02	0.365E-03	0.628E-04	0.659E-05
457.	0.325E-02	0.173E-02	0.678E-03	0.182E-03	0.314E-04	0.330E-05
475.	0.825E-04	0.612E-04	0.311E-04	0.991E-05	0.190E-05	0.214E-06

CONTINUE

X

Y	600.	800.	1000.

DRAFT

-475.	0.000E+00	0.000E+00	0.000E+00
-457.	0.000E+00	0.000E+00	0.000E+00
-300.	0.000E+00	0.000E+00	0.000E+00
-200.	0.000E+00	0.000E+00	0.000E+00
-100.	0.000E+00	0.000E+00	0.000E+00
0.	0.000E+00	0.000E+00	0.000E+00
100.	0.000E+00	0.000E+00	0.000E+00
200.	0.000E+00	0.000E+00	0.000E+00
300.	0.000E+00	0.000E+00	0.000E+00
457.	0.000E+00	0.000E+00	0.000E+00
475.	0.000E+00	0.000E+00	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.4800E+05 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.656E-03	0.592E-03	0.468E-03	0.313E-03	0.172E-03	0.766E-04
-457.	0.711E-02	0.526E-02	0.352E-02	0.207E-02	0.105E-02	0.436E-03
-300.	0.142E-01	0.105E-01	0.703E-02	0.415E-02	0.209E-02	0.873E-03
-200.	0.142E-01	0.105E-01	0.703E-02	0.415E-02	0.209E-02	0.873E-03
-100.	0.142E-01	0.105E-01	0.703E-02	0.415E-02	0.209E-02	0.873E-03
0.	0.142E-01	0.105E-01	0.703E-02	0.415E-02	0.209E-02	0.873E-03
100.	0.142E-01	0.105E-01	0.703E-02	0.415E-02	0.209E-02	0.873E-03
200.	0.142E-01	0.105E-01	0.703E-02	0.415E-02	0.209E-02	0.873E-03
300.	0.142E-01	0.105E-01	0.703E-02	0.415E-02	0.209E-02	0.873E-03
457.	0.711E-02	0.526E-02	0.352E-02	0.207E-02	0.105E-02	0.436E-03
475.	0.656E-03	0.592E-03	0.468E-03	0.313E-03	0.172E-03	0.766E-04

CONTINUE

X

Y	600.	800.	1000.
-475.	0.820E-11	0.000E+00	0.000E+00
-457.	0.395E-10	0.000E+00	0.000E+00
-300.	0.790E-10	0.000E+00	0.000E+00
-200.	0.790E-10	0.000E+00	0.000E+00
-100.	0.790E-10	0.000E+00	0.000E+00
0.	0.790E-10	0.000E+00	0.000E+00
100.	0.790E-10	0.000E+00	0.000E+00
200.	0.790E-10	0.000E+00	0.000E+00
300.	0.790E-10	0.000E+00	0.000E+00
457.	0.395E-10	0.000E+00	0.000E+00
475.	0.820E-11	0.000E+00	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.7200E+05 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.169E-02	0.161E-02	0.144E-02	0.118E-02	0.883E-03	0.591E-03
-457.	0.110E-01	0.913E-02	0.719E-02	0.535E-02	0.370E-02	0.234E-02
-300.	0.221E-01	0.183E-01	0.144E-01	0.107E-01	0.741E-02	0.468E-02
-200.	0.221E-01	0.183E-01	0.144E-01	0.107E-01	0.741E-02	0.468E-02
-100.	0.221E-01	0.183E-01	0.144E-01	0.107E-01	0.741E-02	0.468E-02
0.	0.221E-01	0.183E-01	0.144E-01	0.107E-01	0.741E-02	0.468E-02
100.	0.221E-01	0.183E-01	0.144E-01	0.107E-01	0.741E-02	0.468E-02
200.	0.221E-01	0.183E-01	0.144E-01	0.107E-01	0.741E-02	0.468E-02
300.	0.221E-01	0.183E-01	0.144E-01	0.107E-01	0.741E-02	0.468E-02
457.	0.110E-01	0.913E-02	0.719E-02	0.535E-02	0.370E-02	0.234E-02
475.	0.169E-02	0.161E-02	0.144E-02	0.118E-02	0.883E-03	0.591E-03

CONTINUE

X

Y	600.	800.	1000.
-475.	0.112E-06	0.000E+00	0.000E+00
-457.	0.379E-06	0.000E+00	0.000E+00
-300.	0.757E-06	0.000E+00	0.000E+00
-200.	0.757E-06	0.000E+00	0.000E+00
-100.	0.757E-06	0.000E+00	0.000E+00
0.	0.757E-06	0.000E+00	0.000E+00
100.	0.757E-06	0.000E+00	0.000E+00
200.	0.757E-06	0.000E+00	0.000E+00
300.	0.757E-06	0.000E+00	0.000E+00
457.	0.379E-06	0.000E+00	0.000E+00
475.	0.112E-06	0.000E+00	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.9600E+05 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.300E-02	0.295E-02	0.277E-02	0.248E-02	0.210E-02	0.167E-02
-457.	0.148E-01	0.130E-01	0.111E-01	0.911E-02	0.722E-02	0.545E-02
-300.	0.297E-01	0.260E-01	0.221E-01	0.182E-01	0.144E-01	0.109E-01
-200.	0.297E-01	0.260E-01	0.221E-01	0.182E-01	0.144E-01	0.109E-01
-100.	0.297E-01	0.260E-01	0.221E-01	0.182E-01	0.144E-01	0.109E-01
0.	0.297E-01	0.260E-01	0.221E-01	0.182E-01	0.144E-01	0.109E-01
100.	0.297E-01	0.260E-01	0.221E-01	0.182E-01	0.144E-01	0.109E-01
200.	0.297E-01	0.260E-01	0.221E-01	0.182E-01	0.144E-01	0.109E-01
300.	0.297E-01	0.260E-01	0.221E-01	0.182E-01	0.144E-01	0.109E-01
457.	0.148E-01	0.130E-01	0.111E-01	0.911E-02	0.722E-02	0.545E-02
475.	0.300E-02	0.295E-02	0.277E-02	0.248E-02	0.210E-02	0.167E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.963E-05	0.132E-10	0.000E+00
-457.	0.267E-04	0.355E-10	0.000E+00
-300.	0.535E-04	0.711E-10	0.000E+00
-200.	0.535E-04	0.711E-10	0.000E+00
-100.	0.535E-04	0.711E-10	0.000E+00
0.	0.535E-04	0.711E-10	0.000E+00
100.	0.535E-04	0.711E-10	0.000E+00
200.	0.535E-04	0.711E-10	0.000E+00
300.	0.535E-04	0.711E-10	0.000E+00
457.	0.267E-04	0.355E-10	0.000E+00
475.	0.963E-05	0.132E-10	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.1200E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.425E-02	0.435E-02	0.427E-02	0.402E-02	0.363E-02	0.315E-02
-457.	0.179E-01	0.165E-01	0.148E-01	0.129E-01	0.110E-01	0.910E-02
-300.	0.359E-01	0.329E-01	0.295E-01	0.258E-01	0.220E-01	0.182E-01
-200.	0.359E-01	0.329E-01	0.295E-01	0.258E-01	0.220E-01	0.182E-01
-100.	0.359E-01	0.329E-01	0.295E-01	0.258E-01	0.220E-01	0.182E-01
0.	0.359E-01	0.329E-01	0.295E-01	0.258E-01	0.220E-01	0.182E-01
100.	0.359E-01	0.329E-01	0.295E-01	0.258E-01	0.220E-01	0.182E-01
200.	0.359E-01	0.329E-01	0.295E-01	0.258E-01	0.220E-01	0.182E-01
300.	0.359E-01	0.329E-01	0.295E-01	0.258E-01	0.220E-01	0.182E-01
457.	0.179E-01	0.165E-01	0.148E-01	0.129E-01	0.110E-01	0.910E-02
475.	0.425E-02	0.435E-02	0.427E-02	0.402E-02	0.363E-02	0.315E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.117E-03	0.118E-07	0.000E+00
-457.	0.287E-03	0.279E-07	0.000E+00
-300.	0.574E-03	0.558E-07	0.000E+00
-200.	0.574E-03	0.558E-07	0.000E+00
-100.	0.574E-03	0.558E-07	0.000E+00
0.	0.574E-03	0.558E-07	0.000E+00
100.	0.574E-03	0.558E-07	0.000E+00
200.	0.574E-03	0.558E-07	0.000E+00
300.	0.574E-03	0.558E-07	0.000E+00
457.	0.287E-03	0.279E-07	0.000E+00
475.	0.117E-03	0.118E-07	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.1440E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.519E-02	0.552E-02	0.564E-02	0.554E-02	0.526E-02	0.482E-02
-457.	0.200E-01	0.191E-01	0.178E-01	0.163E-01	0.146E-01	0.128E-01
-300.	0.400E-01	0.381E-01	0.356E-01	0.326E-01	0.292E-01	0.256E-01
-200.	0.400E-01	0.381E-01	0.356E-01	0.326E-01	0.292E-01	0.256E-01
-100.	0.400E-01	0.381E-01	0.356E-01	0.326E-01	0.292E-01	0.256E-01
0.	0.400E-01	0.381E-01	0.356E-01	0.326E-01	0.292E-01	0.256E-01
100.	0.400E-01	0.381E-01	0.356E-01	0.326E-01	0.292E-01	0.256E-01
200.	0.400E-01	0.381E-01	0.356E-01	0.326E-01	0.292E-01	0.256E-01
300.	0.400E-01	0.381E-01	0.356E-01	0.326E-01	0.292E-01	0.256E-01
457.	0.200E-01	0.191E-01	0.178E-01	0.163E-01	0.146E-01	0.128E-01
475.	0.519E-02	0.552E-02	0.564E-02	0.554E-02	0.526E-02	0.482E-02

CONTINUE

Y	600.	800.	X 1000.
-475.	0.541E-03	0.784E-06	0.000E+00
-457.	0.122E-02	0.170E-05	0.000E+00
-300.	0.244E-02	0.340E-05	0.000E+00
-200.	0.244E-02	0.340E-05	0.000E+00
-100.	0.244E-02	0.340E-05	0.000E+00
0.	0.244E-02	0.340E-05	0.000E+00
100.	0.244E-02	0.340E-05	0.000E+00
200.	0.244E-02	0.340E-05	0.000E+00
300.	0.244E-02	0.340E-05	0.000E+00
457.	0.122E-02	0.170E-05	0.000E+00
475.	0.541E-03	0.784E-06	0.000E+00

DISTRIBUTION OF CHEMICAL IN PPM AT 0.1680E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.575E-02	0.630E-02	0.666E-02	0.679E-02	0.671E-02	0.643E-02
-457.	0.212E-01	0.207E-01	0.199E-01	0.188E-01	0.176E-01	0.161E-01
-300.	0.424E-01	0.413E-01	0.397E-01	0.377E-01	0.351E-01	0.322E-01
-200.	0.424E-01	0.413E-01	0.397E-01	0.377E-01	0.351E-01	0.322E-01
-100.	0.424E-01	0.413E-01	0.397E-01	0.377E-01	0.351E-01	0.322E-01
0.	0.424E-01	0.413E-01	0.397E-01	0.377E-01	0.351E-01	0.322E-01
100.	0.424E-01	0.413E-01	0.397E-01	0.377E-01	0.351E-01	0.322E-01
200.	0.424E-01	0.413E-01	0.397E-01	0.377E-01	0.351E-01	0.322E-01
300.	0.424E-01	0.413E-01	0.397E-01	0.377E-01	0.351E-01	0.322E-01
457.	0.212E-01	0.207E-01	0.199E-01	0.188E-01	0.176E-01	0.161E-01
475.	0.575E-02	0.630E-02	0.666E-02	0.679E-02	0.671E-02	0.643E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.146E-02	0.130E-04	0.965E-09
-457.	0.310E-02	0.264E-04	0.193E-08
-300.	0.620E-02	0.527E-04	0.387E-08
-200.	0.620E-02	0.527E-04	0.387E-08
-100.	0.620E-02	0.527E-04	0.387E-08
0.	0.620E-02	0.527E-04	0.387E-08
100.	0.620E-02	0.527E-04	0.387E-08
200.	0.620E-02	0.527E-04	0.387E-08
300.	0.620E-02	0.527E-04	0.387E-08
457.	0.310E-02	0.264E-04	0.193E-08
475.	0.146E-02	0.130E-04	0.965E-09

DISTRIBUTION OF CHEMICAL IN PPM AT 0.1920E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.604E-02	0.674E-02	0.729E-02	0.764E-02	0.779E-02	0.774E-02
-457.	0.217E-01	0.215E-01	0.211E-01	0.205E-01	0.197E-01	0.186E-01
-300.	0.435E-01	0.430E-01	0.422E-01	0.410E-01	0.393E-01	0.373E-01
-200.	0.435E-01	0.430E-01	0.422E-01	0.410E-01	0.393E-01	0.373E-01
-100.	0.435E-01	0.430E-01	0.422E-01	0.410E-01	0.393E-01	0.373E-01
0.	0.435E-01	0.430E-01	0.422E-01	0.410E-01	0.393E-01	0.373E-01
100.	0.435E-01	0.430E-01	0.422E-01	0.410E-01	0.393E-01	0.373E-01
200.	0.435E-01	0.430E-01	0.422E-01	0.410E-01	0.393E-01	0.373E-01
300.	0.435E-01	0.430E-01	0.422E-01	0.410E-01	0.393E-01	0.373E-01
457.	0.217E-01	0.215E-01	0.211E-01	0.205E-01	0.197E-01	0.186E-01
475.	0.604E-02	0.674E-02	0.729E-02	0.764E-02	0.779E-02	0.774E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.289E-02	0.910E-04	0.585E-07
-457.	0.584E-02	0.176E-03	0.111E-06
-300.	0.117E-01	0.351E-03	0.222E-06
-200.	0.117E-01	0.351E-03	0.222E-06
-100.	0.117E-01	0.351E-03	0.222E-06
0.	0.117E-01	0.351E-03	0.222E-06
100.	0.117E-01	0.351E-03	0.222E-06
200.	0.117E-01	0.351E-03	0.222E-06
300.	0.117E-01	0.351E-03	0.222E-06
457.	0.584E-02	0.176E-03	0.111E-06
475.	0.289E-02	0.910E-04	0.585E-07

DISTRIBUTION OF CHEMICAL IN PPM AT 0.2160E+06 HRS

Z = 0.00

Y	X 275.	300.	325.	350.	375.	400.
-475.	0.617E-02	0.695E-02	0.762E-02	0.814E-02	0.848E-02	0.865E-02
-457.	0.220E-01	0.219E-01	0.217E-01	0.214E-01	0.209E-01	0.203E-01
-300.	0.439E-01	0.438E-01	0.434E-01	0.428E-01	0.419E-01	0.406E-01
-200.	0.439E-01	0.438E-01	0.434E-01	0.428E-01	0.419E-01	0.406E-01
-100.	0.439E-01	0.438E-01	0.434E-01	0.428E-01	0.419E-01	0.406E-01
0.	0.439E-01	0.438E-01	0.434E-01	0.428E-01	0.419E-01	0.406E-01
100.	0.439E-01	0.438E-01	0.434E-01	0.428E-01	0.419E-01	0.406E-01
200.	0.439E-01	0.438E-01	0.434E-01	0.428E-01	0.419E-01	0.406E-01
300.	0.439E-01	0.438E-01	0.434E-01	0.428E-01	0.419E-01	0.406E-01
457.	0.220E-01	0.219E-01	0.217E-01	0.214E-01	0.209E-01	0.203E-01
475.	0.617E-02	0.695E-02	0.762E-02	0.814E-02	0.848E-02	0.865E-02

CONTINUE

Y	X 600.	800.	1000.
-475.	0.466E-02	0.364E-03	0.118E-05
-457.	0.910E-02	0.674E-03	0.216E-05
-300.	0.182E-01	0.135E-02	0.431E-05
-200.	0.182E-01	0.135E-02	0.431E-05
-100.	0.182E-01	0.135E-02	0.431E-05
0.	0.182E-01	0.135E-02	0.431E-05
100.	0.182E-01	0.135E-02	0.431E-05
200.	0.182E-01	0.135E-02	0.431E-05
300.	0.182E-01	0.135E-02	0.431E-05
457.	0.910E-02	0.674E-03	0.216E-05
475.	0.466E-02	0.364E-03	0.118E-05

DISTRIBUTION OF CHEMICAL IN PPM AT 0.2400E+06 HRS

Z = 0.00

Y	X 275.	300.	325.	350.	375.	400.
-475.	0.622E-02	0.705E-02	0.778E-02	0.839E-02	0.887E-02	0.920E-02
-457.	0.221E-01	0.221E-01	0.220E-01	0.218E-01	0.216E-01	0.213E-01
-300.	0.441E-01	0.442E-01	0.440E-01	0.437E-01	0.432E-01	0.425E-01
-200.	0.441E-01	0.442E-01	0.440E-01	0.437E-01	0.432E-01	0.425E-01
-100.	0.441E-01	0.442E-01	0.440E-01	0.437E-01	0.432E-01	0.425E-01
0.	0.441E-01	0.442E-01	0.440E-01	0.437E-01	0.432E-01	0.425E-01
100.	0.441E-01	0.442E-01	0.440E-01	0.437E-01	0.432E-01	0.425E-01
200.	0.441E-01	0.442E-01	0.440E-01	0.437E-01	0.432E-01	0.425E-01
300.	0.441E-01	0.442E-01	0.440E-01	0.437E-01	0.432E-01	0.425E-01

457.	0.221E-01	0.221E-01	0.220E-01	0.218E-01	0.216E-01	0.213E-01
475.	0.622E-02	0.705E-02	0.778E-02	0.839E-02	0.887E-02	0.920E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.656E-02	0.993E-03	0.112E-04
-457.	0.124E-01	0.178E-02	0.198E-04
-300.	0.249E-01	0.356E-02	0.396E-04
-200.	0.249E-01	0.356E-02	0.396E-04
-100.	0.249E-01	0.356E-02	0.396E-04
0.	0.249E-01	0.356E-02	0.396E-04
100.	0.249E-01	0.356E-02	0.396E-04
200.	0.249E-01	0.356E-02	0.396E-04
300.	0.249E-01	0.356E-02	0.396E-04
457.	0.124E-01	0.178E-02	0.198E-04
475.	0.656E-02	0.993E-03	0.112E-04

DISTRIBUTION OF CHEMICAL IN PPM AT 0.2640E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.624E-02	0.709E-02	0.785E-02	0.851E-02	0.906E-02	0.950E-02
-457.	0.221E-01	0.222E-01	0.221E-01	0.221E-01	0.219E-01	0.218E-01
-300.	0.442E-01	0.443E-01	0.442E-01	0.441E-01	0.439E-01	0.435E-01
-200.	0.442E-01	0.443E-01	0.442E-01	0.441E-01	0.439E-01	0.435E-01
100.	0.442E-01	0.443E-01	0.442E-01	0.441E-01	0.439E-01	0.435E-01
0.	0.442E-01	0.443E-01	0.442E-01	0.441E-01	0.439E-01	0.435E-01
100.	0.442E-01	0.443E-01	0.442E-01	0.441E-01	0.439E-01	0.435E-01
200.	0.442E-01	0.443E-01	0.442E-01	0.441E-01	0.439E-01	0.435E-01
300.	0.442E-01	0.443E-01	0.442E-01	0.441E-01	0.439E-01	0.435E-01
457.	0.221E-01	0.222E-01	0.221E-01	0.221E-01	0.219E-01	0.218E-01
475.	0.624E-02	0.709E-02	0.785E-02	0.851E-02	0.906E-02	0.950E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.833E-02	0.208E-02	0.621E-04
-457.	0.155E-01	0.363E-02	0.106E-03
-300.	0.309E-01	0.726E-02	0.213E-03
-200.	0.309E-01	0.726E-02	0.213E-03
-100.	0.309E-01	0.726E-02	0.213E-03
0.	0.309E-01	0.726E-02	0.213E-03
100.	0.309E-01	0.726E-02	0.213E-03
200.	0.309E-01	0.726E-02	0.213E-03

300.	0.309E-01	0.726E-02	0.213E-03
457.	0.155E-01	0.363E-02	0.106E-03
475.	0.833E-02	0.208E-02	0.621E-04

DISTRIBUTION OF CHEMICAL IN PPM AT 0.2880E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.625E-02	0.710E-02	0.788E-02	0.856E-02	0.915E-02	0.964E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.221E-01	0.221E-01	0.220E-01
-300.	0.442E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01	0.440E-01
-200.	0.442E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01	0.440E-01
-100.	0.442E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01	0.440E-01
0.	0.442E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01	0.440E-01
100.	0.442E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01	0.440E-01
200.	0.442E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01	0.440E-01
300.	0.442E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01	0.440E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.221E-01	0.221E-01	0.220E-01
475.	0.625E-02	0.710E-02	0.788E-02	0.856E-02	0.915E-02	0.964E-02

CONTINUE

Y	600.	800.	X 1000.
-475.	0.979E-02	0.360E-02	0.230E-03
-457.	0.179E-01	0.615E-02	0.384E-03
-300.	0.358E-01	0.123E-01	0.769E-03
-200.	0.358E-01	0.123E-01	0.769E-03
100.	0.358E-01	0.123E-01	0.769E-03
0.	0.358E-01	0.123E-01	0.769E-03
100.	0.358E-01	0.123E-01	0.769E-03
200.	0.358E-01	0.123E-01	0.769E-03
300.	0.358E-01	0.123E-01	0.769E-03
457.	0.179E-01	0.615E-02	0.384E-03
475.	0.979E-02	0.360E-02	0.230E-03

DISTRIBUTION OF CHEMICAL IN PPM AT 0.3120E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.625E-02	0.711E-02	0.789E-02	0.859E-02	0.919E-02	0.971E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.221E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01

100.	0.442E-01	0.444E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.443E-01	0.443E-01	0.442E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.221E-01
475.	0.625E-02	0.711E-02	0.789E-02	0.859E-02	0.919E-02	0.971E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.109E-01	0.542E-02	0.633E-03
-457.	0.196E-01	0.910E-02	0.103E-02
-300.	0.393E-01	0.182E-01	0.207E-02
-200.	0.393E-01	0.182E-01	0.207E-02
-100.	0.393E-01	0.182E-01	0.207E-02
0.	0.393E-01	0.182E-01	0.207E-02
100.	0.393E-01	0.182E-01	0.207E-02
200.	0.393E-01	0.182E-01	0.207E-02
300.	0.393E-01	0.182E-01	0.207E-02
457.	0.196E-01	0.910E-02	0.103E-02
475.	0.109E-01	0.542E-02	0.633E-03

DISTRIBUTION OF CHEMICAL IN PPM AT 0.3360E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.626E-02	0.711E-02	0.790E-02	0.859E-02	0.920E-02	0.973E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.443E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.443E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.443E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.443E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.443E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.443E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.443E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.859E-02	0.920E-02	0.973E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.116E-01	0.733E-02	0.139E-02
-457.	0.208E-01	0.121E-01	0.223E-02
-300.	0.416E-01	0.243E-01	0.445E-02
-200.	0.416E-01	0.243E-01	0.445E-02
-100.	0.416E-01	0.243E-01	0.445E-02

0.	0.416E-01	0.243E-01	0.445E-02
100.	0.416E-01	0.243E-01	0.445E-02
200.	0.416E-01	0.243E-01	0.445E-02
300.	0.416E-01	0.243E-01	0.445E-02
457.	0.208E-01	0.121E-01	0.223E-02
475.	0.116E-01	0.733E-02	0.139E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.3600E+06 HRS

Z = 0.00

Y	X 275.	300.	325.	350.	375.	400.
-475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.974E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.974E-02

CONTINUE

Y	X 600.	800.	1000.
-475.	0.120E-01	0.914E-02	0.255E-02
457.	0.215E-01	0.149E-01	0.403E-02
-300.	0.429E-01	0.299E-01	0.807E-02
-200.	0.429E-01	0.299E-01	0.807E-02
-100.	0.429E-01	0.299E-01	0.807E-02
0.	0.429E-01	0.299E-01	0.807E-02
100.	0.429E-01	0.299E-01	0.807E-02
200.	0.429E-01	0.299E-01	0.807E-02
300.	0.429E-01	0.299E-01	0.807E-02
457.	0.215E-01	0.149E-01	0.403E-02
475.	0.120E-01	0.914E-02	0.255E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.3840E+06 HRS

Z = 0.00

Y	X 275.	300.	325.	350.	375.	400.
-475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01

-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.123E-01	0.107E-01	0.409E-02
-457.	0.218E-01	0.173E-01	0.639E-02
-300.	0.437E-01	0.345E-01	0.128E-01
-200.	0.437E-01	0.345E-01	0.128E-01
-100.	0.437E-01	0.345E-01	0.128E-01
0.	0.437E-01	0.345E-01	0.128E-01
100.	0.437E-01	0.345E-01	0.128E-01
200.	0.437E-01	0.345E-01	0.128E-01
300.	0.437E-01	0.345E-01	0.128E-01
457.	0.218E-01	0.173E-01	0.639E-02
475.	0.123E-01	0.107E-01	0.409E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.4080E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.124E-01	0.119E-01	0.588E-02
-457.	0.220E-01	0.191E-01	0.909E-02

-300.	0.440E-01	0.381E-01	0.182E-01
200.	0.440E-01	0.381E-01	0.182E-01
100.	0.440E-01	0.381E-01	0.182E-01
0.	0.440E-01	0.381E-01	0.182E-01
100.	0.440E-01	0.381E-01	0.182E-01
200.	0.440E-01	0.381E-01	0.182E-01
300.	0.440E-01	0.381E-01	0.182E-01
457.	0.220E-01	0.191E-01	0.909E-02
475.	0.124E-01	0.119E-01	0.588E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.4320E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02

CONTINUE

Y	600.	800.	X 1000.
-475.	0.125E-01	0.127E-01	0.776E-02
-457.	0.221E-01	0.203E-01	0.119E-01
-300.	0.442E-01	0.406E-01	0.238E-01
-200.	0.442E-01	0.406E-01	0.238E-01
-100.	0.442E-01	0.406E-01	0.238E-01
0.	0.442E-01	0.406E-01	0.238E-01
100.	0.442E-01	0.406E-01	0.238E-01
200.	0.442E-01	0.406E-01	0.238E-01
300.	0.442E-01	0.406E-01	0.238E-01
457.	0.221E-01	0.203E-01	0.119E-01
475.	0.125E-01	0.127E-01	0.776E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.4560E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.

-475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.125E-01	0.132E-01	0.955E-02
-457.	0.222E-01	0.211E-01	0.145E-01
-300.	0.443E-01	0.422E-01	0.290E-01
-200.	0.443E-01	0.422E-01	0.290E-01
-100.	0.443E-01	0.422E-01	0.290E-01
0.	0.443E-01	0.422E-01	0.290E-01
100.	0.443E-01	0.422E-01	0.290E-01
200.	0.443E-01	0.422E-01	0.290E-01
300.	0.443E-01	0.422E-01	0.290E-01
457.	0.222E-01	0.211E-01	0.145E-01
475.	0.125E-01	0.132E-01	0.955E-02

DISTRIBUTION OF CHEMICAL IN PPM AT 0.4800E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02

CONTINUE

X

Y	600.	800.	1000.

-475.	0.125E-01	0.136E-01	0.111E-01
-457.	0.222E-01	0.216E-01	0.168E-01
-300.	0.444E-01	0.432E-01	0.335E-01
-200.	0.444E-01	0.432E-01	0.335E-01
-100.	0.444E-01	0.432E-01	0.335E-01
0.	0.444E-01	0.432E-01	0.335E-01
100.	0.444E-01	0.432E-01	0.335E-01
200.	0.444E-01	0.432E-01	0.335E-01
300.	0.444E-01	0.432E-01	0.335E-01
457.	0.222E-01	0.216E-01	0.168E-01
475.	0.125E-01	0.136E-01	0.111E-01

DISTRIBUTION OF CHEMICAL IN PPM AT 0.5040E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.125E-01	0.138E-01	0.123E-01
-457.	0.222E-01	0.219E-01	0.185E-01
-300.	0.444E-01	0.438E-01	0.371E-01
-200.	0.444E-01	0.438E-01	0.371E-01
-100.	0.444E-01	0.438E-01	0.371E-01
0.	0.444E-01	0.438E-01	0.371E-01
100.	0.444E-01	0.438E-01	0.371E-01
200.	0.444E-01	0.438E-01	0.371E-01
300.	0.444E-01	0.438E-01	0.371E-01
457.	0.222E-01	0.219E-01	0.185E-01
475.	0.125E-01	0.138E-01	0.123E-01

DISTRIBUTION OF CHEMICAL IN PPM AT 0.5280E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.125E-01	0.139E-01	0.133E-01
-457.	0.222E-01	0.220E-01	0.199E-01
-300.	0.444E-01	0.441E-01	0.397E-01
-200.	0.444E-01	0.441E-01	0.397E-01
-100.	0.444E-01	0.441E-01	0.397E-01
0.	0.444E-01	0.441E-01	0.397E-01
100.	0.444E-01	0.441E-01	0.397E-01
200.	0.444E-01	0.441E-01	0.397E-01
300.	0.444E-01	0.441E-01	0.397E-01
457.	0.222E-01	0.220E-01	0.199E-01
475.	0.125E-01	0.139E-01	0.133E-01

DISTRIBUTION OF CHEMICAL IN PPM AT 0.5520E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.125E-01	0.139E-01	0.139E-01
-457.	0.222E-01	0.221E-01	0.208E-01
-300.	0.444E-01	0.442E-01	0.416E-01
-200.	0.444E-01	0.442E-01	0.416E-01
-100.	0.444E-01	0.442E-01	0.416E-01
0.	0.444E-01	0.442E-01	0.416E-01
100.	0.444E-01	0.442E-01	0.416E-01
200.	0.444E-01	0.442E-01	0.416E-01
300.	0.444E-01	0.442E-01	0.416E-01
457.	0.222E-01	0.221E-01	0.208E-01
475.	0.125E-01	0.139E-01	0.139E-01

DISTRIBUTION OF CHEMICAL IN PPM AT 0.5760E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.125E-01	0.140E-01	0.144E-01
-457.	0.222E-01	0.222E-01	0.214E-01
-300.	0.444E-01	0.443E-01	0.427E-01
-200.	0.444E-01	0.443E-01	0.427E-01
-100.	0.444E-01	0.443E-01	0.427E-01
0.	0.444E-01	0.443E-01	0.427E-01
100.	0.444E-01	0.443E-01	0.427E-01
200.	0.444E-01	0.443E-01	0.427E-01
300.	0.444E-01	0.443E-01	0.427E-01
457.	0.222E-01	0.222E-01	0.214E-01
475.	0.125E-01	0.140E-01	0.144E-01

DISTRIBUTION OF CHEMICAL IN PPM AT 0.6000E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02

CONTINUE

Y	600.	800.	X 1000.
-475.	0.125E-01	0.140E-01	0.146E-01
-457.	0.222E-01	0.222E-01	0.217E-01
-300.	0.444E-01	0.444E-01	0.435E-01
-200.	0.444E-01	0.444E-01	0.435E-01
-100.	0.444E-01	0.444E-01	0.435E-01
0.	0.444E-01	0.444E-01	0.435E-01
100.	0.444E-01	0.444E-01	0.435E-01
200.	0.444E-01	0.444E-01	0.435E-01
300.	0.444E-01	0.444E-01	0.435E-01
457.	0.222E-01	0.222E-01	0.217E-01
475.	0.125E-01	0.140E-01	0.146E-01

DISTRIBUTION OF CHEMICAL IN PPM AT 0.6240E+06 HRS

Z = 0.00

Y	275.	300.	325.	350.	X 375.	400.
-475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.125E-01	0.140E-01	0.148E-01
-457.	0.222E-01	0.222E-01	0.219E-01
-300.	0.444E-01	0.444E-01	0.439E-01
-200.	0.444E-01	0.444E-01	0.439E-01
-100.	0.444E-01	0.444E-01	0.439E-01
0.	0.444E-01	0.444E-01	0.439E-01
100.	0.444E-01	0.444E-01	0.439E-01
200.	0.444E-01	0.444E-01	0.439E-01
300.	0.444E-01	0.444E-01	0.439E-01
457.	0.222E-01	0.222E-01	0.219E-01
475.	0.125E-01	0.140E-01	0.148E-01

STEADY STATE SOLUTION HAS BEEN OBTAINED BEFORE FINAL SIMULATING TIME

DISTRIBUTION OF CHEMICAL IN PPM AT 0.6480E+06 HRS

Z = 0.00

X

Y	275.	300.	325.	350.	375.	400.
-475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02
-457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
-300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
-200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
0.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
100.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
200.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
300.	0.442E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01	0.444E-01
457.	0.221E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01	0.222E-01
475.	0.626E-02	0.711E-02	0.790E-02	0.860E-02	0.921E-02	0.975E-02

CONTINUE

X

Y	600.	800.	1000.
-475.	0.125E-01	0.140E-01	0.149E-01
-457.	0.222E-01	0.222E-01	0.221E-01
-300.	0.444E-01	0.444E-01	0.441E-01
-200.	0.444E-01	0.444E-01	0.441E-01
-100.	0.444E-01	0.444E-01	0.441E-01
0.	0.444E-01	0.444E-01	0.441E-01
100.	0.444E-01	0.444E-01	0.441E-01

200.	0.444E-01	0.444E-01	0.441E-01
300.	0.444E-01	0.444E-01	0.441E-01
457.	0.222E-01	0.222E-01	0.221E-01
475.	0.125E-01	0.140E-01	0.149E-01

DRAFT

SOURCE CODE LISTING
AT123D MODEL

DRAFT

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C                                                                       MAIN 005
C        ************************************************************ MAIN 010
C        *                                                          * MAIN 015
C        *  YEH G. T. 1979. ANALYTICAL SIMULATION OF WASTE TRANSPORT * MAIN 020
C        *                                                          * MAIN 025
C        *    IN THE AQUIFER SYSTEM.  ORNL-    , OAK RIDGE NATIONAL  * MAIN 030
C        *                                                          * MAIN 035
C        *    LABORATORY, OAK RIDGE, TENNESSEE 37830                * MAIN 040
C        *                                                          * MAIN 045
C        ************************************************************ MAIN 050
C                                                                       MAIN 055
C                                                                       MAIN 060
C  TO SIMULATE THE WASTE (INCLUDING THERMAL, CHEMICAL, OR RADIOACTIVE)  MAIN 065
C  TRANSPORT IN SATURATED AQUIFER BY ANALYTICAL METHOD                 MAIN 070
C  FOR ANY QUESTION ON THE PROGRAM CONTACT DR. G. T. YEH OF ORNL       MAIN 075
C  AT (615) 574-7285                                                   MAIN 080
C                                                                       MAIN 085
      IMPLICIT REAL*8(A-H,O-Z)                                          MAIN 090
C                                                                       MAIN 095
      DIMENSION TITLE(20), XDIM(25),YDIM(15),ZDIM(10)                   MAIN 100
      DIMENSION TEMP(25,15,10),TEMPO(25,15,10)                          MAIN 105
      DIMENSION RTY(1000),AIY(1000),PSIS(1000),FCTY(15,1201)            MAIN 110
      DIMENSION RTZ(1000),AIZ(1000),PHIS(1000),FCTZ(10,1201)            MAIN 115
      DIMENSION QS(1201)                                                MAIN 120
C                                                                       MAIN 125
      DATA MAXNX,MAXNY,MAXNZ,MAXNTI,MAXRUT /25,15,10,1201,1000/         MAIN 130
C                                                                       MAIN 135
C                                                                       MAIN 140
C ------- ALL UNITS IN THIS PROGRAM ARE THE SI SYSTEM                   MAIN 145
C                                                                       MAIN 150
C                                                                       MAIN 155
C                                                                       MAIN 160
      DO 100 I=1,MAXNX                                                  MAIN 165
         DO 100 J=1,MAXNY                                               MAIN 170
            DO 100 K=1,MAXNZ                                            MAIN 175
               TEMPO(I,J,K)=0.0                                         MAIN 180
  100          TEMP(I,J,K)=0.0                                          MAIN 185
C                                                                       MAIN 190
      DO 210 I=1,MAXNX                                                  MAIN 195
  210    XDIM(I)=0.0                                                    MAIN 200
C                                                                       MAIN 205
      DO 220 I=1,MAXNY                                                  MAIN 210
         YDIM(I)=0.0                                                    MAIN 215
         DO 220 J=1,MAXNTI                                              MAIN 220
  220       FCTY(I,J)=0.0                                               MAIN 225
C                                                                       MAIN 230
      DO 230 I=1,MAXNZ                                                  MAIN 235
         ZDIM(I)=0.0                                                    MAIN 240
         DO 230 J=1,MAXNTI                                              MAIN 245
  230       FCTZ(I,J)=0.0                                               MAIN 250
C                                                                       MAIN 255
      DO 300 I=1,MAXNTI                                                 MAIN 260
  300    QS(I)=1.000                                                    MAIN 265
                                                                        MAIN 270
C                                                                       MAIN 275
      DO 400 I=1,MAXRUT                                                 MAIN 280
         RTY(I)=0.0                                                     MAIN 285
         AIY(I)=0.0                                                     MAIN 290
         RTZ(I)=0.0                                                     MAIN 295
  400    AIZ(I)=0.0                                                     MAIN 300
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C                                                                       MAIN 305
C                                                                       MAIN 310
C ------- PASS THE PROGRAM TO AT123D                                    MAIN 315
C                                                                       MAIN 320
      CALL AT123D(TEMP,TEMPO,XDIM,YDIM,ZDIM,RTY,AIY,PSIS,FCTY,          MAIN 325
     > RTZ,AIZ,PHIS,FCTZ,QS,TITLE,MAXNX,MAXNY,MAXNZ,MAXNTI,MAXRUT)      MAIN 330
C                                                                       MAIN 335
      STOP                                                              MAIN 340
      END                                                               MAIN 345
      SUBROUTINE AT123D(TEMP,TEMPO,XDIM,YDIM,ZDIM,RTY,AIY,PSIS,FCTY,    AT   005
     > RTZ,AIZ,PHIS,FCTZ,QS,TITLE,MAXNX,MAXNY,MAXNZ,MAXNTI,MAXRUT)      AT   010
C                                                                       AT   015
      IMPLICIT REAL*8(A-H,O-Z)                                          AT   020
C                                                                       AT   025
      DIMENSION TITLE(20),XDIM(MAXNX),YDIM(MAXNY),ZDIM(MAXNZ)           AT   030
      DIMENSION TEMP(MAXNX,MAXNY,MAXNZ),TEMPO(MAXNX,MAXNY,MAXNZ)        AT   035
      DIMENSION RTY(MAXRUT),AIY(MAXRUT),PSIS(MAXRUT),FCTY(MAXNY,MAXNTI) AT   040
      DIMENSION RTZ(MAXRUT),AIZ(MAXRUT),PHIS(MAXRUT),FCTZ(MAXNZ,MAXNTI) AT   045
      DIMENSION QS(MAXNTI)                                              AT   050
C                                                                       AT   055
      DATA CP,PAI/1.0D0,3.14159265358979D0/                             AT   060
      data ichn,irec/9,1/
C                                                                       AT   065
C ------- READ IN TITLE, SYSTEM PARAMETERS, AND CONTROL INPUTS          AT   070
C                                                                       AT   075
C                                                                       AT   080
      open(ichn,file='at123d.otp',access='direct',recl=16)
  999 READ(5,10,END=9999) TITLE                                         AT   085
      READ(5,20) NX,NY,NZ,NROOT,NBGTI,NEDTI,NPRINT,INSTAN,NSOURS,INTER, AT   090
     1 ICASE,IWID,IDEP,IBUG,IBUGPR                                      AT   095
      READ(5,30) DEPTH,WIDTH,RL1,RL2,RB1,RB2,RH1,RH2                    AT   100
      READ(5,30) POR,HCOND,HGRAD,AELONG,ATRANV,AVERTI,AKD,AKE           AT   105
      READ(5,30) AMTAU,RAMADA,RHOB,RHOW,ACCU,DT,TDISP,Q                 AT   110
      READ(5,30) (XDIM(I),I=1,NX)                                       AT   115
      READ(5,30) (YDIM(I),I=1,NY)                                       AT   120
      READ(5,30) (ZDIM(I),I=1,NZ)                                       AT   125
      IF(NSOURS.NE.0) READ(5,30) (QS(I),I=1,NSOURS)                     AT   130
      IF(IWID.EQ.0) WIDTH=0.0                                           AT   135
      IF(IDEP.EQ.0) DEPTH=0.0                                           AT   140
C                                                                       AT   145
C                                                                       AT   150
C ------- PRINT TITLE, SYSTEM PARAMETERS AND CONTROL INPUTS             AT   155
C                                                                       AT   160
      WRITE(6,1000) (TITLE(I),I=1,20)                                   AT   165
      WRITE(6,1100) NX,NY,NZ,NROOT,NBGTI,NEDTI,NPRINT,INSTAN,NSOURS,    AT   170
     > INTER,ICASE                                                      AT   175
      WRITE(6,1200) DEPTH,WIDTH,RL1,RL2,RB1,RB2,RH1,RH2                 AT   180
      WRITE(6,1300) POR,HCOND,HGRAD,AELONG,ATRANV,AVERTI,AKD,AKE        AT   185
      WRITE(6,1400) AMTAU,RAMADA,RHOB,ACCU,RHOW,DT,TDISP,Q              AT   190
      IF(NSOURS.NE.0) WRITE(6,2000) (QS(I),I=1,NSOURS)                  AT   195
C                                                                       AT   200
C                                                                       AT   205
C ------- MAKE SOME PRELIMINARY COMPUTATIONS                            AT   210
C                                                                       AT   215
      NTDISP=TDISP/DT + 1.0001D0                                        AT   220
      XS=0.0                                                            AT   225
      YS=0.0                                                            AT   230
      ZS=0.0                                                            AT   235
      IF(RL1.EQ.RL2) XS=RL1                                             AT   240
      IF(RB1.EQ.RB2) YS=RB1                                             AT   245
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      IF(RH1.EQ.RH2) ZS=RH1                                    AT  250
      QTOTAL=Q                                                 AT  255
      IF(NSOURS.NE.0) Q=1.0D0                                  AT  260
C                                                              AT  265
      FACTOR=1.0D0/(CP*RHOW)                                   AT  270
      IF(ICASE.EQ.2) FACTOR=1.0D3                              AT  275
      IF(ICASE.EQ.3) FACTOR=1.0D6                              AT  280
      RATIO=1.0D0                                              AT  285
      IF(RL1.NE.RL2) RATIO=RATIO/(RL2-RL1)                     AT  290
      IF(RB1.NE.RB2) RATIO=RATIO/(RB2-RB1)                     AT  295
      IF(RH1.NE.RH2) RATIO=RATIO/(RH2-RH1)                     AT  300
C                                                              AT  305
C                                                              AT  310
C ------- COMPUTE RETARDED VELOCITY, DISPERSION COEFFICIENTS, AND  AT  315
C ------- OTHER PARAMETERS                                     AT  320
C                                                              AT  325
      RETARD=1.0D0 + RHOB*AKD/POR                              AT  330
      UF=HCOND*HGRAD/(POR*RETARD)                              AT  335
      AKX=AELONG*UF+AMTAU/RETARD                               AT  340
      AKY=ATRANV*UF+AMTAU/RETARD                               AT  345
      AKZ=AVERTI*UF+AMTAU/RETARD                               AT  350
      RKE=(AKE/RETARD)/AKZ                                     AT  355
      ROTPAR=1.0D50                                            AT  360
      IF(IDEP.NE.0) ROTPAR=RKE*DEPTH                           AT  365
C                                                              AT  370
      WRITE(6,1500) RETARD,UF,AKX,AKY,AKZ                      AT  375
C                                                              AT  380
C                                                              AT  385
C ------- COMPUTE RTY(I) AND AIY(I) FOR FINITE WIDTH CASE      AT  390
C                                                              AT  395
      IF(IWID.EQ.0) GO TO 180                                  AT  400
      DO 130 I=1,NROOT                                         AT  405
      RTY(I)=DFLOAT(I)*PAI/WIDTH                               AT  410
  130 AIY(I)=2.0D0/WIDTH                                       AT  415
C                                                              AT  420
C ------- WRITE OUT Y-EIGENVALUES AND Z-COEFFICIENTS           AT  425
C                                                              AT  430
      IF(IBUG.EQ.0) GO TO 180                                  AT  435
      WRITE(6,3100) (RTY(I),I=1,NROOT)                         AT  440
      WRITE(6,3200) (AIY(I),I=1,NROOT)                         AT  445
C                                                              AT  450
C                                                              AT  455
C ------- COMPUTE RTZ(I) AND AIZ(I) FOR FINITE DEPTH CASE      AT  460
C                                                              AT  465
  180 IF(IDEP.EQ.0) GO TO 290                                  AT  470
C                                                              AT  475
C ------- FOR THE THERMAL CASE, I.E. AKE NOT EQUAL TO 0.0      AT  480
C                                                              AT  485
      IF(ICASE.NE.1) GO TO 250                                 AT  490
      DO 200 I=1,NROOT                                         AT  495
  200 CALL ROOT(RTZ,I,ROTPAR,MAXRUT)                           AT  500
      DO 210 I=1,NROOT                                         AT  505
      RTZ(I) = RTZ(I)/DEPTH                                    AT  510
      DENOMT=DEPTH*(1.0D0+RKE**2/RTZ(I)**2) + RKE/RTZ(I)**2    AT  515
  210 AIZ(I)=2.0D0/DENOMT                                      AT  520
      GO TO 285                                                AT  525
C                                                              AT  530
C ------- FOR THE NON-THERMAL CASES                            AT  535
C                                                              AT  540
  250 DO 260 I=1,NROOT                                         AT  545
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      RTZ(I)=DFLOAT(I)*PAI/DEPTH                                        AT   550
  260 AIZ(I)=2.000/DEPTH                                                AT   555
C                                                                       AT   560
C ------ WRITE OUT Z-EIGENVALUES AND Z-COEFFICIENTS                     AT   565
                                                                        AT   570
      IF(IBUG.EQ.0) GO TO 290                                           AT   575
      WRITE(6,3300) (RTZ(I),I=1,NROOT)                                  AT   580
      WRITE(6,3400) (AIZ(I),I=1,NROOT)                                  AT   585
C                                                                       AT   590
C                                                                       AT   595
C ------- COMPUTE SOURCE PART OF EACH OF THE SERIES TERMS               AT   600
C                                                                       AT   605
C                                                                       AT   610
C ------- COMPUTE SOURCE PART OF EACH OF Y-SERIES                       AT   615
C                                                                       AT   620
  290 IF(IWID.EQ.0) GO TO 310                                           AT   625
      DO 300 I=1,NROOT                                                  AT   630
         IF(RB1.EQ.RB2) PSIS(I)=DCOS(RTY(I)*YS)                         AT   635
       IF(RB1.NE.RB2) PSIS(I)=(WIDTH/(DFLOAT(I)*PAI))*(DSIN(RTY(I)*RB2) AT   640
     > -  DSIN(RTY(I)*RB1))                                             AT   645
  300 CONTINUE                                                          AT   650
C                                                                       AT   655
C ------- COMPUTE SOURCE PART OF EACH OF Z-SERIES                       AT   660
C                                                                       AT   665
  310 IF(IDEP.EQ.0) GO TO 330                                           AT   670
      DO 320 I=1,NROOT                                                  AT   675
      IF(RH1.EQ.RH2) PHIS(I)=DCOS(RTZ(I)*ZS)+RKE/RTZ(I)*DSIN(RTZ(I)*ZS) AT   680
      IF(RH1.NE.RH2) PHIS(I)=(DSIN(RTZ(I)*RH2)-DSIN(RTZ(I)*RH1) -       AT   685
     >  RKE/RTZ(I)*(DCOS(RTZ(I)*RH2)-DCOS(RTZ(I)*RH1)))/RTZ(I)          AT   690
  320 CONTINUE                                                          AT   695
C                                                                       AT   700
C ------- WRITE OUT THE YS-SERIES AND ZS-SERIES                         AT   705
C                                                                       AT   710
  330 IF(IBUG.EQ.0) GO TO 350                                           AT   715
      IF(IWID.NE.0) WRITE(6,3500) (PSIS(I),I=1,NROOT)                   AT   720
      IF(IDEP.NE.0) WRITE(6,3600) (PHIS(I),I=1,NROOT)                   AT   725
C                                                                       AT   730
C                                                                       AT   735
C ------- COMPUTE THE Y- AND Z-PART OF THE INTEGRAND                    AT   740
C ------- FOR EACH SERIES TERM                                          AT   745
C                                                                       AT   750
  350 DO 490 IT=1,NEDTI                                                 AT   755
      TIMED=(DFLOAT(IT)-1.000)*DT                                       AT   760
      IF(IT.EQ.1) TIMED=DT                                              AT   765
C                                                                       AT   770
      DO 440 IY=1,NY                                                    AT   775
      Y=YDIM(IY)                                                        AT   780
C                                                                       AT   785
C ------- TO EVALUATE THE FUNCTION Y1(Y,T;TAU) OR Y2(Y,T;TAU)           AT   790
C                                                                       AT   795
      IF(IWID.EQ.0) GO TO 420                                           AT   800
      IF(IT.NE.1) GO TO 410                                             AT   805
      FCTY(IY,IT)=0.0                                                   AT   810
      IF(RB1.EQ.RB2 .AND. Y.EQ.YS) FCTY(IY,IT)=1.000                    AT   815
      IF((RB1.NE.RB2) .AND. (Y.GE.RB1 .AND. Y.LE.RB2)) FCTY(IY,IT)=1.000AT   820
      GO TO 440                                                         AT   825
  410 CALL SERIEY(SERY,Y,YS,RB1,RB2,WIDTH,TIMED,AKY,RTY,AIY,            AT   830
     1        PSIS,MAXRUT,NROOT,NYBUG1,NYBUG2,IY)                       AT   835
      IF(RB1.EQ.RB2) FCTY(IY,IT)=1.000/WIDTH+SERY                       AT   840
      IF(RB1.NE.RB2) FCTY(IY,IT)=(RB2-RB1)/WIDTH+SERY                   AT   845
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      IF(RB1.EQ.0.0 .AND. RB2.EQ.WIDTH) FCTY(IY,IT)=1.0D0
      IF(FCTY(IY,IT).LT.0.0) FCTY(IY,IT)=0.0
      GO TO 440
C
C     --- TO EVALUATE THE FUNCTION Y3(Y,T;TAU) OR Y4(Y,T;TAU)

C
C ------- TO COMPUTE FUNCTION Y3
C
  420 IF(RB1.NE.RB2) GO TO 430
      IF(IT.NE.1) GO TO 425
      FCTY(IY,IT)=0.0
      IF(Y.EQ.YS) FCTY(IY,IT)=1.0D0
      GO TO 440
  425 Y1=DSQRT(4.0D0*PAI*AKY*TIMED)
      EARG=(Y-YS)*(Y-YS)/(4.0D0*AKY*TIMED)
      IF(DABS(EARG).GT.100.0D0) EARG=170.0D0
      FCTY(IY,IT)=(1.0D0/Y1)*(DEXP(-EARG))
      GO TO 440
C
C ------- TO COMPUTE FUNCTION Y4
C
  430 IF(IT.NE.1) GO TO 435
      FCTY(IY,IT)=0.0
      IF(Y.GE.RB1 .AND. Y.LE.RB2) FCTY(IY,IT)=1.0D0
      GO TO 440
  435 SRT=DSQRT(4.0D0*AKY*TIMED)
      FCTY(IY,IT)=(DERF((Y-RB1)/SRT)-DERF((Y-RB2)/SRT))/2.0D0
  440 TIMETOL=0.0
      CONTINUE

      DO 480 IZ=1,NZ
      Z=ZDIM(IZ)
C
C ------- TO EVALUATE THE FUNCTION Z1(Z,T;TAU) OR Z2(Z,T;TAU)
C
      IF(IDEP.EQ.0) GO TO 460
      IF(IT.NE.1) GO TO 450
      FCTZ(IZ,IT)=0.0
      IF(RH1.EQ.RH2 .AND. Z.EQ.ZS) FCTZ(IZ,IT)=1.0D0
      IF((RH1.NE.RH2) .AND. (Z.GE.RH1 .AND. Z.LE.RH2)) FCTZ(IZ,IT)=1.0D0
      GO TO 480
  450 CALL SERIEZ(SERZ,Z,TIMED,AKZ,RKE,RTZ,AIZ,PHIS,MAXRUT,NROOT,
     > NZBUG1,NZBUG2,IZ)
      FCTZ(IZ,IT)=SERZ
      IF(AKE.EQ.0. .AND. RH1.EQ.RH2) FCTZ(IZ,IT)=1.0D0/DEPTH+SERZ
      IF(AKE.EQ.0. .AND. RH1.NE.RH2) FCTZ(IZ,IT)=(RH2-RH1)/DEPTH+SERZ
      IF(RH1.EQ.0.0 .AND. RH2.EQ.DEPTH) FCTZ(IZ,IT)=1.0D0
      GO TO 480
C
C ------- TO EVALUATE THE FUNCTION Z3(Z,T;TAU) OR Z4(Z,T;TAU)
C
C
C ------- TO COMPUTE FUNCTION Z3
C
      IF(RH1.NE.RH2) GO TO 470
      IF(IT.NE.1) GO TO 465
      FCTZ(IZ,IT)=0.0
      IF(Z.EQ.ZS) FCTZ(IZ,IT)=1.0D0
      GO TO 480
```

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C                                                                       AT  1140
  465 AKZT=4.000*AKZ*TIMED                                              AT  1145
      AKZTPI=AKZT*PAI                                                   AT  1150
      AKZT4S=AKZT/4.000                                                 AT  1155
      EARG1=(Z-ZS)*(Z-ZS)/AKZT                                          AT  1160
      EARG2=(Z+ZS)*(Z+ZS)/AKZT                                          AT  1165
      EARG3=AKZ*RKE*RKE*TIMED+RKE*(Z+ZS)                                AT  1170
      ARG=(Z+ZS)/DSQRT(AKZT) + RKE*DSQRT(AKZT4S)                        AT  1175
      TERM1=0.0                                                         AT  1180
      IF(EARG1.LT.100.000) TERM1=DEXP(-EARG1)/DSQRT(AKZTPI)             AT  1185
      TERM2=0.0                                                         AT  1190
      IF(EARG2.LE.100.000) TERM2=DEXP(-EARG2)/DSQRT(AKZTPI)             AT  1195
      TERM3=0.0                                                         AT  1200
      IF(EARG3.LT.100.000) TERM3=-RKE*DEXP(EARG3)*(1.000-DERF(ARG))     AT  1205
      FCTZ(IZ,IT)=TERM1+TERM2+TERM3                                     AT  1210
      GO TO 480                                                         AT  1215
C                                                                       AT  1220
C ------- TO COMPUTE FUNCTION Z4                                        AT  1225
C                                                                       AT  1230
  470 IF(IT.NE.1) GO TO 475                                             AT  1235
      FCTZ(IZ,IT)=0.0                                                   AT  1240
      IF(Z.GE.RH1 .AND. Z.LE.RH2) FCTZ(IZ,IT)=1.000                     AT  1245
      GO TO 480                                                         AT  1250
C                                                                       AT  1255
  475 AKZT1=DSQRT(4.000*AKZ*TIMED)                                      AT  1260
      AKZT2=AKZT1/2.000                                                 AT  1265
      ARG1=(Z+RH2)/AKZT1                                                AT  1270
      ARG2=(Z+RH1)/AKZT1                                                AT  1275
      ARG3=(Z-RH2)/AKZT1                                                AT  1280
      ARG4=(Z-RH1)/AKZT1                                                AT  1285
      ARG5=AKZ*RKE*RKE*TIMED + RKE*(Z+RH2)                              AT  1290
      ARG6=AKZ*RKE*RKE*TIMED + RKE*(Z+RH1)                              AT  1295
      TERMS4=0.5D0*(DERF(ARG1)-DERF(ARG2)-DERF(ARG3)+DERF(ARG4))        AT  1300
      TERM5=0.0                                                         AT  1305
      IF(ARG5.LT.100.000) TERM5=-DEXP(ARG5)*(1.000-DERF(ARG1+RKE*AKZT2))AT  1310
      TERM6=0.0                                                         AT  1315
      IF(ARG6.LT.100.000) TERM6=DEXP(ARG6)*(1.000-DERF(ARG2+RKE*AKZT2)) AT  1320
      TERM78=-(DERF(ARG1)-DERF(ARG2))                                   AT  1325
      FCTZ(IZ,IT)=TERMS4+TERM5+TERM6+TERM78                             AT  1330
C                                                                       AT  1335
  480 TIMETOL=0.0                                                       AT  1340
  490 CONTINUE                                                          AT  1345
C                                                                       AT  1350
C                                                                       AT  1355
C ------- START TRANSIENT LOOP COMPUTATION                              AT  1360
C                                                                       AT  1365
      TIME=0.0                                                          AT  1370
      DO 800 ITT=NBGTI,NEDTI,NPRINT                                     AT  1375
      open (91,file='lcddev')
      write(91,'(f7.2,a4)') time/24./365.,' YRS'
      close(91)
C                                                                       AT  1380
      DO 710 IX=1,NX                                                    AT  1385
      DO 710 IY=1,NY                                                    AT  1390
      DO 710 IZ=1,NZ                                                    AT  1395
      TEMPO(IX,IY,IZ)=TEMP(IX,IY,IZ)                                    AT  1400
C                                                                       AT  1405
      IF(INTER.EQ.0) GO TO 725                                          AT  1410
C                                                                       AT  1415
      IF(ICASE.EQ.1) WRITE(6,5100) TIME                                 AT  1420
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      IF(ICASE.EQ.2) WRITE(6,5200) TIME                                 AT  1425
      IF(ICASE.EQ.3) WRITE(6,5300) TIME                                 AT  1430
C                                                                       AT  1435
      DO 720 IZOUT=1,NZ                                                 AT  1440
      WRITE(6,6000) ZDIM(IZOUT)                                         AT  1445
      CALL ALLOUT(TEMP,XDIM,YDIM,ZDIM,IZOUT,NX,NY,NZ,                   AT  1450
C    >       MAXNX,MAXNY,MAXNZ)                                         AT  1455
      CALL ALLOUT(TEMP,XDIM,YDIM,ZDIM,IZOUT,NX,NY,NZ,                   AT  1450
     >       MAXNX,MAXNY,MAXNZ)                                         AT  1455
      write(ichn,rec=irec) itt-nprint
      irec=irec+1
      write(ichn,rec=irec) 1
      irec=irec+1
      write(ichn,rec=irec) dt
      irec=irec+1
      write(ichn,rec=irec) time
      irec=irec+1
      write(ichn,rec=irec) title(1)
      irec=irec+1
      write(ichn,rec=irec) title(2)
      irec=irec+1
      write(ichn,rec=irec) title(3)
      irec=irec+1
      write(ichn,rec=irec) title(4)
      irec=irec+1
      write(ichn,rec=irec) nx
      irec=irec+1
      write(ichn,rec=irec) ny
      irec=irec+1
      write(ichn,rec=irec) izout
      irec=irec+1
      do 718 i=1,nx
        do 718 j=1,ny
          write(ichn,rec=irec) temp(i,j,izout)
          irec=irec+1
  718 continue
  720 continue
C                                                                       AT  1460
  725 TIME=(DFLOAT(ITT-1))*DT                                           AT  1465
C                                                                       AT  1470
      DO 760 IXX=1,NX                                                   AT  1475
      X=XDIM(IXX)                                                       AT  1480
      DO 750 IYY=1,NY                                                   AT  1485
      Y=YDIM(IYY)                                                       AT  1490
      DO 740 IZZ=1,NZ                                                   AT  1495
      Z=ZDIM(IZZ)                                                       AT  1500
C                                                                       AT  1505
C ------- BRANCH TO INSTANTANEOUS SOURCE OR CONTINUOUS SOURCE           AT  1510
C                                                                       AT  1515
      IF(INSTAN) 731,732,731                                            AT  1520
C                                                                       AT  1525
C ------- FOR THE CASE OF CONTINUOUS SOURCE FOR THE DURATION OF NTDISP  AT  1530
C                                                                       AT  1535
  731 IF(ITT.LE.NTDISP) CALL TINTEG(S,X,XS,RL1,RL2,                     AT  1540
     >      FCTY,FCTZ,TIME,IYY,IZZ,ITT,UF,DT,AKX,RAMADA,QS,             AT  1545
     >            MAXNY,MAXNZ,MAXNTI,INSTAN,TIMEPR)                     AT  1550
      IF(ITT.GT.NTDISP) CALL TINTEG(S,X,XS,RL1,RL2,                     AT  1555
     >     FCTY,FCTZ,TIME,IYY,IZZ,NTDISP,UF,DT,AKX,RAMADA,QS,           AT  1560
     >            MAXNY,MAXNZ,MAXNTI,INSTAN,TIMEPR)                     AT  1565
      GO TO 733                                                         AT  1570
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C                                                                       AT  1575
C ------- FOR THE CASE OF INSTANTANEOUS SOURCE RELEASE                   AT  1580
C                                                                       AT  1585
   `2 CALL TINTEG(S,X,XS,RL1,RL2,FCTY,FCTZ,TIME,IYY,IZZ,ITT,            AT  1590
     >     UF,DT,AKX,RAMADA,QS,MAXNY,MAXNZ,MAXNTI,INSTAN,TIMEPR)        AT  1595
      S=S*2.0D0/DT                                                      AT  1600
  733 TEMP(IXX,IYY,IZZ)=S*Q*RATIO*FACTOR/(POR*RETARD)                   AT  1605
  740 CONTINUE                                                          AT  1610
  750 CONTINUE                                                          AT  1615
  760 CONTINUE                                                          AT  1620
C                                                                       AT  1625
      IF(ITT.EQ.NBGTI) GO TO 800                                        AT  1630
      IF(NSOURS.NE.0) GO TO 800                                         AT  1635
C                                                                       AT  1640
C ------- CHECK IF STEADY STATE SOLUTION HAS BEEN OBTAINED              AT  1645
C ------- BEFORE THE FINIAL SIMULATING TIME                             AT  1650
C                                                                       AT  1655
      DIFMAX=0.0                                                        AT  1660
      DO 770 IX=1,NX                                                    AT  1665
      DO 770 IY=1,NY                                                    AT  1670
      DO 770 IZ=1,NZ                                                    AT  1675
      IF(TEMPO(IX,IY,IZ).EQ.0.0) GO TO 770                              AT  1680
      DIF=DABS(TEMP(IX,IY,IZ)/TEMPO(IX,IY,IZ)-1.0D0)                    AT  1685
      IF(DIF.LE.DIFMAX) GO TO 770                                       AT  1690
      DIFMAX=DIF                                                        AT  1695
  770 CONTINUE                                                          AT  1700
C                                                                       AT  1705
      IF(DIFMAX.LE.ACCU) GO TO 910                                      AT  1710
C                                                                       AT  1715
      CONTINUE                                                          AT  1720
C                                                                       AT  1725
      WRITE(6,7000)                                                     AT  1730
      GO TO 920                                                         AT  1735
  910 WRITE(6,8000)                                                     AT  1740
  920 CONTINUE                                                          AT  1745
      IF(ICASE.EQ.1) WRITE(6,5100) TIME                                 AT  1750
      IF(ICASE.EQ.2) WRITE(6,5200) TIME                                 AT  1755
      IF(ICASE.EQ.3) WRITE(6,5300) TIME                                 AT  1760
      DO 930 IZOUT=1,NZ                                                 AT  1765
      WRITE(6,6000) ZDIM(IZOUT)                                         AT  1770
c 930 CALL ALLOUT(TEMP,XDIM,YDIM,ZDIM,IZOUT,NX,NY,NZ,                   AT  1775
c    >    MAXNX,MAXNY,MAXNZ)                                            AT  1780
      CALL ALLOUT(TEMP,XDIM,YDIM,ZDIM,IZOUT,NX,NY,NZ,                   AT  1775
     >    MAXNX,MAXNY,MAXNZ)                                            AT  1780
      write(ichn,rec=irec) itt
      irec=irec+1
      write(ichn,rec=irec) 1
      irec=irec+1
      write(ichn,rec=irec) dt
      irec=irec+1
      write(ichn,rec=irec) time
      irec=irec+1
      write(ichn,rec=irec) title(1)
      irec=irec+1
      write(ichn,rec=irec) title(2)
      irec=irec+1
      write(ichn,rec=irec) title(3)
      irec=irec+1
      write(ichn,rec=irec) title(4)
      irec=irec+1
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      write(ichn,rec=irec) nx
      irec=irec+1
      write(ichn,rec=irec) ny
      irec=irec+1
      write(ichn,rec=irec) izout
      irec=irec+1
      do 928 i=1,nx
        do 928 j=1,ny
          write(ichn,rec=irec) temp(i,j,izout)
          irec=irec+1
  928 continue
  930 continue
C                                                                     AT  1785
      DO 950 IX=1,NX                                                  AT  1790
      DO 950 IY=1,NY                                                  AT  1795
      DO 950 IZ=1,NZ                                                  AT  1800
  950 TEMP(IX,IY,IZ)=0.0                                              AT  1805
      GO TO 999                                                       AT  1810
C                                                                     AT  1815
 9999 CONTINUE                                                        AT  1820
C                                                                     AT  1825
   10 FORMAT(20A4)                                                    AT  1830
   20 FORMAT(16I5)                                                    AT  1835
   30 FORMAT(8D10.3)                                                  AT  1840
   31 FORMAT(6I10,1D10.3,2I5)
 1000 FORMAT(1H1,////,5X,20A4,//)                                     AT  1845
 1100 FORMAT(1H ,/5X,                                                 AT  1850
     > 'NO. OF POINTS IN X-DIRECTION .......................',I5/5X,  AT  1855
     > 'NO. OF POINTS IN Y-DIRECTION .......................',I5/5X,  AT  1860
     > 'NO. OF POINTS IN Z-DIRECTION .......................',I5/5X,  AT  1865
     > 'NO. OF ROOTS: NO. OF SERIES TERMS ..................',I5/5X,  AT  1870
     > 'NO. OF BEGINNING TIME STEPS ........................',I5/5X,  AT  1875
     > 'NO. OF ENDING TIME STEP ............................',I5/5X,  AT  1880
     > 'NO. OF TIME INTERVALS FOR PRINTED OUT SOLUTION ....',I5/5X,  AT  1885
     > 'INSTANTANEOUS SOURCE CONTROL = 0 FOR INSTANT SOURCE',I5/5X,  AT  1890
     > 'SOURCE CONDITION CONTROL = 0 FOR STEADY SOURCE ....',I5/5X,  AT  1895
     > 'INTERMITTENT OUTPUT CONTROL = 0 NO SUCH OUTPUT ....',I5/5X,  AT  1900
     > 'CASE CONTROL =1 THERMAL, = 2 FOR CHEMICAL, = 3 RAD ',I5/)    AT  1905
 1200 FORMAT(1H ,/5X,                                                 AT  1910
     > 'AQUIFER DEPTH, = 0.0 FOR INFINITE DEEP (METERS) ...',E12.4/5X, AT  1915
     > 'AQUIFER WIDTH, = 0.0 FOR INFINITE WIDE (METERS) ...',E12.4/5X, AT  1920
     > 'BEGIN POINT OF X-SOURCE LOCATION (METERS) .........',E12.4/5X, AT  1925
     > 'END POINT OF X-SOURCE LOCATION (METERS) ...........',E12.4/5X, AT  1930
     > 'BEGIN POINT OF Y-SOURCE LOCATION (METERS) .........',E12.4/5X, AT  1935
     > 'END POINT OF Y-SOURCE LOCATION (METERS) ...........',E12.4/5X, AT  1940
     > 'BEGIN POINT OF Z-SOURCE LOCATION (METERS) .........',E12.4/5X, AT  1945
     > 'END POINT OF Z-SOURCE LOCATION (METERS) ...........',E12.4/)  AT  1950
 1300 FORMAT(1H ,/5X,                                                 AT  1955
     > 'POROSITY ...........................................',E12.4/5X, AT  1960
     > 'HYDRAULIC CONDUCTIVITY (METER/HOUR) ................',E12.4/5X, AT  1965
     > 'HYDRAULIC GRADIENT .................................',E12.4/5X, AT  1970
     > 'LONGITIDUNAL DESPERSIVITY (METER) ..................',E12.4/5X, AT  1975
     > 'LATERAL DISPERSIVITY (METER) .......................',E12.4/5X, AT  1980
     > 'VERTICAL DISPERSIVITY (METER) ......................',E12.4/5X, AT  1985
     > 'DISTRIBUTION COEFFICIENT, KD (M**3/KG) .............',E12.4/5X, AT  1990
     > 'HEAT EXCHANGE COEFFICIENT (KCAL/HR-M**2-DEGREE C)..',E12.4/)  AT  1995
      FORMAT(1H ,/5X,                                                 AT  2000
     > 'MOLECULAR DIFFUSION MULTIPLY BY TOROSITY (M**2/HR) ',E12.4/5X, AT  2005
     > 'DECAY CONSTANT (PER HOUR) ..........................',E12.4/5X, AT  2010
     > 'BULK DENSITY OF THE SOIL (KG/M**3) .................',E12.4/5X, AT  2015
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     > 'ACCURACY TOLERANCE FOR REACHING STEADY STATE ......',E12.4/5X,  AT  2020
     > 'DENSITY OF WATER (KG/M**3) .......................',E12.4/5X,  AT  2025
     > 'TIME INTERVAL SIZE FOR THE DESIRED SOLUTION (HR) ..',E12.4/5X,  AT  2030
     > 'DISCHARGE TIME (HR) ..............................',E12.4/5X,  AT  2035
     > 'WASTE RELEASE (KG/HR) FOR CONT. OR (KG) FOR INST...',E12.4/)   AT  2040
 1500 FORMAT(1H0,/5X,                                                   AT  2045
     > 'RETARDATION FACTOR ...............................',E12.4/5X,  AT  2050
     > 'RETARDED DARCY VELOCITY (M/HR) ...................',E12.4/5X,  AT  2055
     > 'RETARDED LONGITUDINAL DISPERSION COEF. (M**2/HR) ..',E12.4/5X,  AT  2060
     > 'RETARDED LATERAL DIEPSERSION COEFFICIENT (M**2/HR) ',E12.4/5X,  AT  2065
     > 'RETARDED VERTICAL DISPERSION COEFFICIENT (M**2/HR).',E12.4/)   AT  2070
 2000 FORMAT(1H0,4X,'LIST OF TRANSIENT SOURCE RELEASE RATE'/(5X,10E12.3)AT  2075
     >)                                                                 AT  2080
 3100 FORMAT(1H1,4X,'LIST OF Y-EIGENVALUES'/(5X,10E12.4))               AT  2085
 3200 FORMAT(1H0,4X,'LIST OF Y-COEFFICIENT'/(5X,10E12.4))               AT  2090
 3300 FORMAT(1H1,4X,'LIST OF Z-EIGENVALUES'/(5X,10E12.4))               AT  2095
 3400 FORMAT(1H0,4X,'LIST OF Z-COEFFICIENTS'/(5X,10E12.4))              AT  2100
 3500 FORMAT(1H1,4X,'LIST OF YS-SERIES'/(5X,10E12.4))                   AT  2105
 3600 FORMAT(1H0,4X,'LIST OF ZS-SERIES'/(5X,10E12.4))                   AT  2110
 5100 FORMAT(1H1,4X,'TEMPERATURE DISTRIBUTION IN DEGREE C AT ',E12.4,'  AT  2115
     > HOURS')                                                          AT  2120
 5200 FORMAT(1H1,4X,'DISTRIBUTION OF CHEMICAL IN PPM AT',E12.4,' HRS')  AT  2125
 5300 FORMAT(1H1,4X,'DISTRI. OF RAD WASTE IN PCI/ML AT ',E12.4,' HRS')  AT  2130
 6000 FORMAT(1H0,20X,'Z = ',F10.2)                                      AT  2135
 7000 FORMAT(1H0,'STEADY STATE SOLUTION HAS NOT BEEN REACHED BEFORE FINAAT  2140
     >L SIMULATING TIME'//)                                             AT  2145
 8000 FORMAT(1H0,'STEADY STATE SOLUTION HAS BEEN OBTAINED BEFORE FINAL  AT  2150
     > SIMULATING TIME'//)                                              AT  2155
      RETURN                                                            AT  2160
      END                                                               AT  2165
      SUBROUTINE ROOT(RTZ,I,ROTPAR,MAXRUT)                              ROOT 005
C                                                                       ROOT 010
      IMPLICIT REAL*8(A-H,O-Z)                                          ROOT 015
C                                                                       ROOT 020
      DIMENSION RTZ(MAXRUT)                                             ROOT 025
C                                                                       ROOT 030
      ZL=RTZ(I)                                                         ROOT 035
      IF(I.GT.1) ZL=RTZ(I-1)+0.01D0                                     ROOT 040
  100 ZL=ZL+0.01D0                                                      ROOT 045
      FZL=ZL*DSIN(ZL)-ROTPAR*DCOS(ZL)                                   ROOT 050
      ZR=ZL+0.01D0                                                      ROOT 055
      FZR=ZR*DSIN(ZR)-ROTPAR*DCOS(ZR)                                   ROOT 060
      IF(FZL*FZR.LT.0.0) GO TO 200                                      ROOT 065
      GO TO 100                                                         ROOT 070
  200 FZL=ZL*DSIN(ZL)-ROTPAR*DCOS(ZL)                                   ROOT 075
      DO 300 J=1,6                                                      ROOT 080
      ZH=(ZL+ZR)/2.000                                                  ROOT 085
      FZH=ZH*DSIN(ZH)-ROTPAR*DCOS(ZH)                                   ROOT 090
      IF(FZH*FZL.LE.0.0) GO TO 400                                      ROOT 095
      ZL=ZH                                                             ROOT 100
      FZL=FZH                                                           ROOT 105
      GO TO 300                                                         ROOT 110
  400 ZR=ZH                                                             ROOT 115
  300 CONTINUE                                                          ROOT 120
      RTZ(I)=(ZL+ZR)/2.000                                              ROOT 125
      RETURN                                                            ROOT 130
      END                                                               ROOT 135
      SUBROUTINE SERIEY(SER,Y,YS,RB1,RB2,B,TIMED,AKY,RTY,AIY,           SERY 005
     > PSIS,MAXRUT,NROOT,NYBUG1,NYBUG2,IY)
C                                                                       SERY 015
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      IMPLICIT REAL*8(A-H,O-Z)                                          SERY 020
C                                                                       SERY 025
      DIMENSION RTY(MAXRUT),AIY(MAXRUT),PSIS(MAXRUT)                    SERY 030
      DIMENSION YTEUL(15)                                               SERY 035
                                                                        SERY 040
      EPS=0.0001D0                                                      SERY 045
      IER=1                                                             SERY 050
      I=1                                                               SERY 055
      M=1                                                               SERY 060
      N=1                                                               SERY 065
C     ASSIGN 100 TO IFC                                                 SERY 070
      ifc=100
      GO TO 500                                                         SERY 075
  100 YTEUL(1)=FCT                                                      SERY 080
      SUM=YTEUL(1)*0.5D0                                                SERY 085
    3 J=0                                                               SERY 090
    4 I=I+1                                                             SERY 095
      IF(I-NROOT) 5,5,12                                                SERY 100
    5 N=I                                                               SERY 105
C     ASSIGN 200 TO IFC                                                 SERY 110
      ifc=200
      GO TO 500                                                         SERY 115
  200 AMN=FCT                                                           SERY 120
      DO 6 K=1,M                                                        SERY 125
      AMP=(AMN+YTEUL(K))*0.5D0                                          SERY 130
      YTEUL(K)=AMN                                                      SERY 135
    6 AMN=AMP                                                           SERY 140
      IF(DABS(AMN)-DABS(YTEUL(M))) 7,9,9                                SERY 145
    7 IF(M-15) 8,9,9                                                    SERY 150
      M=M+1                                                             SERY 155
      YTEUL(M)=AMN                                                      SERY 160
      AMN=0.5D0*AMN                                                     SERY 165
    9 SUM=SUM+AMN                                                       SERY 170
      IF(DABS(AMN)-EPS*DABS(SUM)) 10,10,3                               SERY 175
   10 J=J+1                                                             SERY 180
      IF(J-5) 4,11,11                                                   SERY 185
   11 IER=0                                                             SERY 190
   12 SER=SUM                                                           SERY 195
      IF(IER.NE.0) WRITE(6,1000) Y,TIMED                                SERY 200
      RETURN                                                            SERY 205
C                                                                       SERY 210
C ------- TO EVALUATE N-TH TERM OF Y1(Y,T;TAU) OR Y2(Y,T;TAU)           SERY 215
C                                                                       SERY 220
  500 AKYTB=AKY*TIMED/(B*B)                                             SERY 225
      IF(AKYTB.LE.0.0000014D0) GO TO 510                                SERY 230
      EARG=RTY(N)*RTY(N)*AKY*TIMED                                      SERY 235
      IF(EARG.GT.100.0D0) FCT=0.0                                       SERY 240
      IF(EARG.LE.100.D0) FCT=AIY(N)*(DCOS(RTY(N)*Y))*PSIS(N)*DEXP(-EARG)SERY 245
      GO TO 590                                                         SERY 250
  510 IF(RB1.NE.RB2) GO TO 520                                          SERY 255
      AKYTPI=4.0D0*3.141592653589790D0*AKY*TIMED                        SERY 260
      AKYT=4.0D0*AKY*TIMED                                              SERY 265
      EARG1=((Y-YS)-2.0D0*DFLOAT(N)*B)*((Y-YS)-2.0D0*DFLOAT(N)*B)/AKYT  SERY 270
      EARG2=((Y-YS)-2.0D0*DFLOAT(N-1)*B)*((Y-YS)-2.0D0*DFLOAT(N-1)*B)/  SERY 275
     > AKYT                                                             SERY 280
      EARG3=((Y+YS)-2.0D0*DFLOAT(N+1)*B)*((Y+YS)-2.0D0*DFLOAT(N+1)*B)/  SERY 285
     > AKYT                                                             SERY 290
      EARG4=((Y+YS)-2.0D0*DFLOAT(N)*B)*((Y+YS)-2.0D0*DFLOAT(N)*B)/AKYT  SERY 295
      FCT=(DEXP(-EARG1)+DEXP(-EARG2)+DEXP(-EARG3)+DEXP(-EARG4))/        SERY 300
    1 DSQRT(AKYTPI)                                                     SERY 305
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      GO TO 590                                                 SERY 310
  520 AKY=DSQRT(4.0D0*AKY*TIMED)                                SERY 315
      ARG1=(Y-RB1-2.0D0*DFLOAT(N)*B)/AKY                        SERY 320
      ARG2=(Y-RB2-2.0D0*DFLOAT(N)*B)/AKY                        SERY 325
      ARG3=(Y-RB1-2.0D0*DFLOAT(N-1)*B)/AKY                      SERY 330
      ARG4=(Y-RB2-2.0D0*DFLOAT(N-1)*B)/AKY                      SERY 335
      ARG5=(Y+RB1-2.0D0*DFLOAT(N+1)*B)/AKY                      SERY 340
      ARG6=(Y+RB2-2.0D0*DFLOAT(N+1)*B)/AKY                      SERY 345
      ARG7=(Y+RB1-2.0D0*DFLOAT(N)*B)/AKY                        SERY 350
      ARG8=(Y+RB2-2.0D0*DFLOAT(N)*B)/AKY                        SERY 355
      FCT=0.5D0*(DERF(ARG1)-DERF(ARG2)+DERF(ARG3)-DERF(ARG4)    SERY 360
     > -DERF(ARG5)+DERF(ARG6)-DERF(ARG7)+DERF(ARG8))            SERY 365
c 590 GO TO IFC, (100,200)                                      SERY 370
  590 if (ifc.eq.100) goto 100
      if (ifc.eq.200) goto 200
C                                                               SERY 375
 1000 FORMAT(1H0,10X,'WARNING: SERIESY AT Y =',F8.2,'  TIMED=',F8.2,'  SERY 380
     1NEEDS MORE TERMS')                                        SERY 385
      END                                                       SERY 390
      SUBROUTINE SERIEZ(SER,Z,TIMED,AKZ,RKE,RTZ,AIZ,PHIS,MAXRUT,NROOT,  SERZ 005
     > NZBUG1,NZBUG2,IZ)
C                                                               SERZ 010
      IMPLICIT REAL*8(A-H,O-Z)                                  SERZ 015
C                                                               SERZ 020
      DIMENSION RTZ(MAXRUT),AIZ(MAXRUT),PHIS(MAXRUT)            SERZ 025
      DIMENSION YTEUL(15)                                       SERZ 030
C                                                               SERZ 035
      EPS=0.0001D0                                              SERZ 040
      IER=1                                                     SERZ 045
      I=1                                                       SERZ 050
      M=1                                                       SERZ 055
      N=1                                                       SERZ 060
c     ASSIGN 100 TO IFC                                         SERZ 065
      ifc=100
      GO TO 500                                                 SERZ 070
  100 YTEUL(1)=FCT                                              SERZ 075
      SUM=YTEUL(1)*0.5D0                                        SERZ 080
    3 J=0                                                       SERZ 085
    4 I=I+1                                                     SERZ 090
      IF(I-NROOT) 5,5,12                                        SERZ 095
    5 N=I                                                       SERZ 100
c     ASSIGN 200 TO IFC                                         SERZ 105
      ifc=200
      GO TO 500                                                 SERZ 110
  200 AMN=FCT                                                   SERZ 115
      DO 6 K=1,M                                                SERZ 120
      AMP=(AMN+YTEUL(K))*0.5D0                                  SERZ 125
      YTEUL(K)=AMN                                              SERZ 130
    6 AMN=AMP                                                   SERZ 135
      IF(DABS(AMN)-DABS(YTEUL(M))) 7,9,9                        SERZ 140
    7 IF(M-15) 8,9,9                                            SERZ 145
    8 M=M+1                                                     SERZ 150
      YTEUL(M)=AMN                                              SERZ 155
      AMN=0.5D0*AMN                                             SERZ 160
    9 SUM=SUM+AMN                                               SERZ 165
      IF(DABS(AMN)-EPS*DABS(SUM)) 10,10,3                       SERZ 170
   10 J=J+1                                                     SERZ 175
      IF(J-5) 4,11,11                                           SERZ 180
   11 IER=0                                                     SERZ 185
   12 SER=SUM                                                   SERZ 190
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      IF(IER.NE.0) WRITE(6,1000) Z,TIMED                                SERZ 195
      RETURN                                                            SERZ 200
C                                                                       SERZ 205
C ------- TO EVALUATE THE N-TH TERM OF Z1(Z,T;TAU) OR Z2(Z,T;TAU)       SERZ 210
                                                                        SERZ 215
      EARG=RTZ(N)**2*AKZ*TIMED                                          SERZ 220
      IF(EARG.GT.100.0D0) FCT=0.0                                       SERZ 225
      IF(EARG.LE.100.D0) FCT=AIZ(N)*(DCOS(RTZ(N)*Z)+RKE/RTZ(N)*         SERZ 230
     1 DSIN(RTZ(N)*Z))*PHIS(N)*DEXP(-EARG)                              SERZ 235
c     GO TO IFC, (100,200)                                              SERZ 240
      if (ifc.eq.100) goto 100
      if (ifc.eq.200) goto 200
C                                                                       SERZ 245
 1000 FORMAT(1H0,10X,'WARNING: SERIESZ AT Z =',F8.2,'  TIMED=',F8.2,'   SERZ 250
     1NEEDS MORE TERMS')                                                SERZ 255
      END                                                               SERZ 260
      SUBROUTINE TINTEG(S,X,XS,RL1,RL2,FCTY,FCTZ,TIME,IYY,IZZ,ITT,      TINT 005
     > UF,DT,AKX,RAMADA,QS, MAXNY,MAXNZ,MAXNTI,INSTAN,TIMEPR)           TINT 010
C                                                                       TINT 015
      IMPLICIT REAL*8(A-H,O-Z)                                          TINT 020
C                                                                       TINT 025
      DIMENSION FCTY(MAXNY,MAXNTI),FCTZ(MAXNZ,MAXNTI),QS(MAXNTI)        TINT 030
C                                                                       TINT 035
      PAI=3.141592653589790D0                                           TINT 040
      ITTM1=ITT-1                                                       TINT 045
      N=ITTM1/2                                                         TINT 050
      SUMEND=0.0                                                        TINT 055
      SUMMID=0.0                                                        TINT 060
      S=0.0                                                             TINT 065
      ITAU=1                                                            TINT 070
      ASSIGN 100 TO M                                                   TINT 075
c     GO TO 800                                                         TINT 080
c 100 FIT1=FIT                                                          TINT 085
      FIT1=FIT                                                          TINT 085
C                                                                       TINT 090
C ------- IF N .LT. 1, THEN THERE IS ONLY ONE INTERVAL                  TINT 095
C                                                                       TINT 100
      IF(INSTAN.EQ.0) GO TO 700                                         TINT 105
      IF(N.LT.1) GO TO 700                                              TINT 110
      DO 400 K=1,N                                                      TINT 115
c     ASSIGN 200 TO M                                                   TINT 120
      ITAU=K+K-1                                                        TINT 125
c     GO TO 800                                                         TINT 130
c 200 SUMEND=SUMEND+FIT                                                 TINT 135
      SUMEND=SUMEND+FIT                                                 TINT 135
c     ASSIGN 300 TO M                                                   TINT 140
      ITAU=K+K                                                          TINT 145
c     GO TO 800                                                         TINT 150
c 300 SUMMID=SUMMID+FIT                                                 TINT 155
      SUMMID=SUMMID+FIT                                                 TINT 155
  400 CONTINUE                                                          TINT 160
C                                                                       TINT 165
C ------- IF N*2 .NE. ITTM1, THEN THERE ARE ODD NUMBERS OF INTERVALS    TINT 170
C                                                                       TINT 175
      IF(N*2 .NE. ITTM1) GO TO 500                                      TINT 180
      S=(2.0D0*SUMEND+4.0D0*SUMMID-FIT1)*DT/3.0D0                       TINT 185
      GO TO 900                                                         TINT 190
c 500 ASSIGN 600 TO M                                                   TINT 195
c     ITAU=ITTM1                                                        TINT 200
  500 ITAU=ITTM1                                                        TINT 200
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c     GO TO 800                                                TINT 205
c 600 S=(2.000*SUMEND+4.000*SUMMID-FIT1+FIT)*DT/3.000          TINT 210
      S=(2.000*SUMEND+4.000*SUMMID-FIT1+FIT)*DT/3.000          TINT 210
  700 S=S+(FIT)*DT/2.000                                       TINT 215
      RETURN                                                   TINT 430
      END                                                      TINT 435
      SUBROUTINE ALLOUT(FTV,XDIM,YDIM,ZDIM,IZ,NX,NY,NZ,        ALLO 005
     > MAXNX,MAXNY,MAXNZ)                                      ALLO 010
C                                                              ALLO 015
       IMPLICIT REAL*8(A-H,O-Z)                                ALLO 020
C                                                              ALLO 025
      DIMENSION FTV(MAXNX,MAXNY,MAXNZ)                         ALLO 030
      DIMENSION XDIM(MAXNX),YDIM(MAXNY),ZDIM(MAXNZ)            ALLO 035
C                                                              ALLO 040
      JOUT=(NX-1)/10+1                                         ALLO 045
      DO 96 MM=1,JOUT                                          ALLO 050
      JAA=10*(MM-1)+1                                          ALLO 055
      JZZ=10*MM                                                ALLO 060
      IF(MM.EQ.JOUT) JZZ=NX                                    ALLO 065
      IF(MM.GT.1) WRITE(6,225)                                 ALLO 070
  225 FORMAT(1H0,50X,'CONTINUE')                               ALLO 075
      WRITE(6,222) (XDIM(J),J=JAA,JZZ)                         ALLO 080
  222 FORMAT(1H ,60X,'X'/1X,'  Y ',10F12.0)                    ALLO 085
      WRITE(6,223)                                             ALLO 090
  223 FORMAT(1H ,'    ',10(4X,'        '))                     ALLO 095
      DO 97 NN=1,NY                                            ALLO 100
      Y=YDIM(NN)                                               ALLO 105
      WRITE(6,224) Y, (FTV(J,NN,IZ),J=JAA,JZZ)                 ALLO 110
  224 FORMAT(1H ,F5.0,10E12.3)                                 ALLO 115
   97 CONTINUE                                                 ALLO 120
      CONTINUE                                                 ALLO 125
      RETURN                                                   ALLO 130
      END                                                      ALLO 135

      function derf(x)
      real*8 derf,x
      derf=erf(sngl(x))
      return
      end
      FUNCTION ERF(X)
      IF(X.LT.0.)THEN
        ERF=-GAMMP(.5,X**2)
      ELSE
        ERF=GAMMP(.5,X**2)
      ENDIF
      RETURN
      END
      FUNCTION GAMMP(A,X)
      IF(X.LT.0..OR.A.LE.0.)PAUSE
      IF(X.LT.A+1.)THEN
        CALL GSER(GAMSER,A,X,GLN)
        GAMMP=GAMSER
      ELSE
        CALL GCF(GAMMCF,A,X,GLN)
        GAMMP=1.-GAMMCF
      ENDIF
      RETURN
      END
      FUNCTION GAMMLN(XX)
      REAL*8 COF(6),STP,HALF,ONE,FPF,X,TMP,SER
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      DATA COF,STP/76.18009173D0,-86.50532033D0,24.01409822D0,
     *    -1.2317395160D0,.120858003D-2,-.536382D-5,2.50662827465D0/
      DATA HALF,ONE,FPF/0.5D0,1.0D0,5.5D0/
      X=XX-ONE
      TMP=X+FPF
      TMP=(X+HALF)*LOG(TMP)-TMP
      SER=ONE
      DO 11 J=1,6
        X=X+ONE
        SER=SER+COF(J)/X
11    CONTINUE
      GAMMLN=TMP+LOG(STP*SER)
      RETURN
      END
      SUBROUTINE GCF(GAMMCF,A,X,GLN)
      PARAMETER (ITMAX=100,EPS=3.E-7)
      GLN=GAMMLN(A)
      GOLD=0.
      A0=1.
      A1=X
      B0=0.
      B1=1.
      FAC=1.
      DO 11 N=1,ITMAX
        AN=FLOAT(N)
        ANA=AN-A
        A0=(A1+A0*ANA)*FAC
        B0=(B1+B0*ANA)*FAC
        ANF=AN*FAC
        A1=X*A0+ANF*A1
        B1=X*B0+ANF*B1
        IF(A1.NE.0.)THEN
          FAC=1./A1
          G=B1*FAC
          IF(ABS((G-GOLD)/G).LT.EPS)GO TO 1
          GOLD=G
        ENDIF
11    CONTINUE
      PAUSE 'A too large, ITMAX too small'
1     xxx=-X+A*ALOG(X)-GLN
      if (xxx.lt.-87.) xxx=-87
      GAMMCF=EXP(xxx)*G
      RETURN
      END
      SUBROUTINE GSER(GAMSER,A,X,GLN)
      PARAMETER (ITMAX=100,EPS=3.E-7)
      GLN=GAMMLN(A)
      IF(X.LE.0.)THEN
        IF(X.LT.0.)PAUSE
        GAMSER=0.
        RETURN
      ENDIF
      AP=A
      SUM=1./A
      DEL=SUM
      DO 11 N=1,ITMAX
        AP=AP+1.
        DEL=DEL*X/AP
        SUM=SUM+DEL
        IF(ABS(DEL).LT.ABS(SUM)*EPS)GO TO 1
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11    CONTINUE
      PAUSE 'A too large, ITMAX too small'
1     xxx=-X+A*LOG(X)-GLN
      if (xxx.lt.-87) xxx=-87
      GAMSER=SUM*EXP(xxx)
      RETURN
      END
```

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