

TOUGH Short Course

Lawrence Berkeley National Laboratory
Earth Sciences Division
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Selected Input and Output Files for Sample Problem 3

- Input for Part A: p3a.txt
- Output for Part A: p3a.out, SAVE_p3a
- Input for Part B: p3b.txt
- Output for Part B: p3b.out
- Input for Part C: p3c.txt
- Output for Part C: p3c.out
- Input for Part D: p3d.txt
- Output for Part D: p3d.out, SAVE_p3d

Input for Problem 3A (p3a.txt)

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NAPL Spill Experiment #1
ROCKS---1---*---2---*---3---*---4---*---5---*---6---*---7---*---8
S100% 1 2650. 0.400 1.0e-11 1.0e-11 1.e-11 3. 1000.
      0. 0. 2.85 0.0
TOPBC 1 2650. 0.400 1.0e-11 1.0e-11 1.e-11 3. 1000.
      0. 0. 2.85 0.0
SC30% 1 2650. 0.350 1.0e-12 1.0e-12 1.e-12 3. 1000.
      0. 0. 2.85 0.0
SC60% 1 2650. 0.350 5.0e-13 5.0e-13 5.e-13 3. 1000.
      0. 0. 2.85 0.0
C100% 1 2650. 0.050 1.0e-18 1.0e-18 1.e-18 3. 1000.
      0. 0. 2.85 0.0
PLAST 1 2650. 0.000 0.0e-11 0.0e-11 0.e-11 3. 1000.
      0. 0. 2.85 0.0

*****
***** Data block 'CHEMP' for VOC chemical parameters *****
*****
--TCRIT--1--PCRIT--2--ZCRIT--3--OMEGA--4--DIPOLM--5
--TBOIL--1--VPA--2--VPB--3--VPC--4--VPD--5
--AMO--1--CPA--2--CPB--3--CPC--4--CPD--5
--RHOREF--1--TDENRF--2--DIFV0--3--TDIFRF--4--TEXPO--5
--VLOA--1--VLOB--2--VLOC--3--VL0D--4--VOLCRT--5
--SOLA--1--SOLB--2--SOLC--3--SOLD--4
--OCK--1--FOX--2--ALAM--3
***** End of data block 'CHEMP' *****
CHEMP---1---Tetrachloroethylene---*---4---*---5---*---6---*---7---*---8
      620.2 47.6 0.250 0.000 0.0
      394.4 -7.36067 1.82732 -3.47735 -1.00033
      165.8340.4597E+020.2255E+00-.2294E-030.8382E-07
      1620. 293.00 0.736E-05 293.00 1.92
0.0000E+000.0000E+000.9000E+000.2931E+03 289.6
0.218E-04 0.000E+00 0.000E+00 0.000E+00
0.364E+00 0.001
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MULTI---1---*---2---*---3---*---4---*---5---*---6---*---7---*---8
      2   2   3   6
START---1---*---2---*---3---*---4---*---5---*---6---*---7---*---8
-----1 MOP: 123456789*123456789*1234-----5-----6-----7-----8
PARAM---1---*---2---*---3---*---4---*---5---*---6---*---7---*---8
      21000      1000000030000003000400003000
      0.0E00      1.0E1      1.0e9      9.81
      1.E-5
      1.013E5      1.0      19.0
RPCAP---1---*---2---*---3---*---4---*---5---*---6---*---7---*---8
      6      .100      .05      .01      3.
      8      0.000      1.84      5.E4      5.24
GENER
INDOM---1---*---2---*---3---*---4---*---5---*---6---*---7---*---8
TOPBC      0.4
      1.013E5      0.4      19.0
INCON
ELEMES -- 16      1 16      0 0.00000      0.601
2 1      12.011E-0040.0000E+00      0.2000E-01      -.2100E-01
2 2      16.032E-0040.0000E+00      0.6000E-01      -.2100E-01
2 3      11.005E-0030.0000E+00      0.1000E+00      -.2100E-01
2 4      11.407E-0030.0000E+00      0.1400E+00      -.2100E-01
2 5      11.810E-0030.0000E+00      0.1800E+00      -.2100E-01
2 6      12.212E-0030.0000E+00      0.2200E+00      -.2100E-01
2 7      12.614E-0030.0000E+00      0.2600E+00      -.2100E-01
2 8      13.016E-0030.0000E+00      0.3000E+00      -.2100E-01
2 9      13.418E-0030.0000E+00      0.3400E+00      -.2100E-01
210      13.820E-0030.0000E+00      0.3800E+00      -.2100E-01
211      14.222E-0030.0000E+00      0.4200E+00      -.2100E-01
212      14.624E-0030.0000E+00      0.4600E+00      -.2100E-01
213      15.027E-0030.0000E+00      0.5000E+00      -.2100E-01
214      15.429E-0030.0000E+00      0.5400E+00      -.2100E-01
215      15.831E-0030.0000E+00      0.5800E+00      -.2100E-01
216      61.509E-0040.0000E+00      0.6005E+00      -.2100E-01

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3 1      12.011E-0040.0000E+00      0.2000E-01      -.6100E-01
3 2      16.032E-0040.0000E+00      0.6000E-01      -.6100E-01
...
2915      15.831E-0030.0000E+00      0.5800E+00      -.1101E+01
2916      61.509E-0040.0000E+00      0.6005E+00      -.1101E+01
ina
1 1      21.000E+0500.5027E-02      0.2000E-01      -.5000E-03
1 2      21.000E+0500.1508E-01      0.6000E-01      -.5000E-03
1 3      21.000E+0500.2513E-01      0.1000E+00      -.5000E-03
1 4      21.000E+0500.3519E-01      0.1400E+00      -.5000E-03
1 5      21.000E+0500.4524E-01      0.1800E+00      -.5000E-03
1 6      21.000E+0500.5529E-01      0.2200E+00      -.5000E-03
1 7      21.000E+0500.6535E-01      0.2600E+00      -.5000E-03
1 8      21.000E+0500.7540E-01      0.3000E+00      -.5000E-03
1 9      21.000E+0500.8545E-01      0.3400E+00      -.5000E-03
110      21.000E+0500.9550E-01      0.3800E+00      -.5000E-03
111      21.000E+0500.1056E+00      0.4200E+00      -.5000E-03
112      21.000E+0500.1156E+00      0.4600E+00      -.5000E-03
113      21.000E+0500.1257E+00      0.5000E+00      -.5000E-03
114      21.000E+0500.1357E+00      0.5400E+00      -.5000E-03
115      21.000E+0500.1458E+00      0.5800E+00      -.5000E-03
116      61.000E+0500.3773E-02      0.6005E+00      -.5000E-03
30 1      61.000E+0500.5027E-02      0.2000E-01      -.1122E+01
30 2      61.000E+0500.1508E-01      0.6000E-01      -.1122E+01
30 3      61.000E+0500.2513E-01      0.1000E+00      -.1122E+01
30 4      61.000E+0500.3519E-01      0.1400E+00      -.1122E+01
30 5      61.000E+0500.4524E-01      0.1800E+00      -.1122E+01
30 6      61.000E+0500.5529E-01      0.2200E+00      -.1122E+01
30 7      61.000E+0500.6535E-01      0.2600E+00      -.1122E+01
30 8      61.000E+0500.7540E-01      0.3000E+00      -.1122E+01
30 9      61.000E+0500.8545E-01      0.3400E+00      -.1122E+01
3010      61.000E+0500.9550E-01      0.3800E+00      -.1122E+01
3011      61.000E+0500.1056E+00      0.4200E+00      -.1122E+01
3012      61.000E+0500.1156E+00      0.4600E+00      -.1122E+01
3013      61.000E+0500.1257E+00      0.5000E+00      -.1122E+01
3014      61.000E+0500.1357E+00      0.5400E+00      -.1122E+01
3015      61.000E+0500.1458E+00      0.5800E+00      -.1122E+01
3016      61.000E+0500.3773E-02      0.6005E+00      -.1122E+01

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PROPERTIES OF VOLATILE ORGANIC COMPOUND

TCRIT = 0.62020E+03 FCRIT = 0.47600E+02 ZCRIT = 0.25000E+00 OMEGA = 0.00000E+00 DIPOLM= 0.00000E+00
 TBOIL = 0.39440E+03 VFA = -0.73607E+01 VPB = 0.18273E+01 VPC = -0.34773E+01 VPD = -0.10003E+01
 AMO = 0.16583E+03 CPA = 0.45970E+02 CFB = 0.22550E+00 CPC = -0.22940E+03 CPD = 0.83820E+07
 RHORF= 0.16200E+04 TDENRF= 0.29300E+03 DIFVO = 0.73600E-05 TDIFRF= 0.29300E+03 TEXPO = 0.19200E+01
 VLOA = 0.00000E+00 VLOB = 0.00000E+00 VLOC = 0.90000E+00 VLOD = 0.29310E+03 VOLCRT= 0.28960E+03
 SOLA = 0.21800E-04 SOLB = 0.00000E+00 SOLC = 0.00000E+00 SOLD = 0.00000E+00
 OCK = 0.36400E+00 PCX = 0.10000E-02 ALAM = 0.00000E+00

VOLUME AND MASS-BALANCES

[KCYC,ITER] = [0, 0] ***** THE TIME IS 0.00000E+00 SECONDS, OR 0.00000E+00 DAYS

PHASES PRESENT				COMPONENT MASS IN PLACE (KG)			
PHASES	* GAS	AQUEOUS	NAPL	COMPONENTS	* WATER	AIR	VOC
VOLUME (M ³)	* 0.00000000E+00	0.44495787E+00	0.00000000E+00	GAS PHASE	* 0.00000000E+00	0.00000000E+00	0.00000000E+00
MASS (KG)	* 0.00000000E+00	0.44430119E+03	0.00000000E+00	AQUEOUS	* 0.44430119E+03	0.00000000E+00	0.00000000E+00
				NAPL	* 0.00000000E+00	0.00000000E+00	0.00000000E+00
				ADSORBED	* 0.00000000E+00	0.00000000E+00	0.00000000E+00
				TOTAL	* 0.44430119E+03	0.00000000E+00	0.00000000E+00

(7) GAS PHASE EVOLVES AT ELEMENT 2 1 ***** FX = 0.963633E+05 PBUB = 0.174159E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 2 2 ***** FX = 0.963633E+05 PBUB = 0.174176E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 2 3 ***** FX = 0.963633E+05 PBUB = 0.174211E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 2 4 ***** FX = 0.963633E+05 PBUB = 0.174251E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 2 5 ***** FX = 0.963633E+05 PBUB = 0.174137E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 2 6 ***** FX = 0.963633E+05 PBUB = 0.174145E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 2 7 ***** FX = 0.963633E+05 PBUB = 0.174176E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 2 8 ***** FX = 0.963633E+05 PBUB = 0.174177E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 2 9 ***** FX = 0.963633E+05 PBUB = 0.174177E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 210 ***** FX = 0.963633E+05 PBUB = 0.174177E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 211 ***** FX = 0.963633E+05 PBUB = 0.174261E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 212 ***** FX = 0.963633E+05 PBUB = 0.174178E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 213 ***** FX = 0.963633E+05 PBUB = 0.174213E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 214 ***** FX = 0.963633E+05 PBUB = 0.174146E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 215 ***** FX = 0.963633E+05 PBUB = 0.174209E+09
 (7) GAS PHASE EVOLVES AT ELEMENT 3 1 ***** FX = 0.100103E+06 PBUB = 0.356832E+07

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(7) GAS PHASE EVOLVES AT ELEMENT 313 ***** FX = 0.100102E+06 PBUB = 0.356951E+07
 (7) GAS PHASE EVOLVES AT ELEMENT 314 ***** FX = 0.100102E+06 PBUB = 0.356819E+07
 (7) GAS PHASE EVOLVES AT ELEMENT 315 ***** FX = 0.100102E+06 PBUB = 0.356962E+07
 ***** REDUCE TIME STEP AT (1 9) ***** NEW DELT 250000E-01
 (9) GAS PHASE DISAPPEARS AT ELEMENT 2 1 *** SW = 0.10000000E-01
 (9) GAS PHASE DISAPPEARS AT ELEMENT 2 2 *** SW = 0.10000000E-01
 (9) GAS PHASE DISAPPEARS AT ELEMENT 2 3 *** SW = 0.10000000E-01
 ..
 (7) GAS PHASE EVOLVES AT ELEMENT 14 9 ***** FX = 0.101230E+06 PBUB = 0.101300E+06
 (7) GAS PHASE EVOLVES AT ELEMENT 1410 ***** FX = 0.101230E+06 PBUB = 0.101300E+06
 (7) GAS PHASE EVOLVES AT ELEMENT 1411 ***** FX = 0.101230E+06 PBUB = 0.101300E+06
 14 9 (35, 8) ST = 0.130650E+05 DT = 0.256000E+04 DX1= -.248690E+02 DX2= -.490006E+02 T = 19.000 P = 101276. S = 0.610135E-03
 14 8 (36, 6) ST = 0.156250E+05 DT = 0.256000E+04 DX1= 0.242960E+01 DX2= -.149454E-02 T = 19.000 P = 101279. S = 0.210386E-02
 1411 (37, 5) ST = 0.181850E+05 DT = 0.256000E+04 DX1= 0.717268E+01 DX2= -.181114E-02 T = 19.000 P = 101286. S = 0.392027E-02
 1411 (38, 5) ST = 0.207450E+05 DT = 0.256000E+04 DX1= 0.636452E+01 DX2= -.166016E-02 T = 19.000 P = 101292. S = 0.558043E-02
 314 (39, 5) ST = 0.233050E+05 DT = 0.256000E+04 DX1= 0.208265E-01 DX2= -.448397E-03 T = 19.000 P = 101301. S = 0.562287E+00
 1413 (40, 4) ST = 0.258650E+05 DT = 0.256000E+04 DX1= 0.287595E+01 DX2= -.998700E-03 T = 19.000 P = 101300. S = 0.802837E-02
 210 (41, 5) ST = 0.309850E+05 DT = 0.512000E+04 DX1= 0.542897E-02 DX2= -.125924E-03 T = 19.000 P = 101300. S = 0.588154E+00
 1414 (42, 4) ST = 0.361050E+05 DT = 0.512000E+04 DX1= 0.141148E+01 DX2= -.671704E-03 T = 19.000 P = 101304. S = 0.986503E-02
 1414 (43, 4) ST = 0.463450E+05 DT = 0.102400E+05 DX1= 0.102363E+01 DX2= -.537358E-03 T = 19.000 P = 101305. S = 0.104024E-01
 1511 (44, 3) ST = 0.668250E+05 DT = 0.204800E+05 DX1= -.305487E+01 DX2= -.222177E-13 T = 19.000 P = 101454. S = 0.000000E+00
 210 (45, 4) ST = 0.107785E+06 DT = 0.409600E+05 DX1= 0.328893E-03 DX2= -.764991E-05 T = 19.000 P = 101300. S = 0.588314E+00
 214 (46, 4) ST = 0.189705E+06 DT = 0.819200E+05 DX1= 0.485134E-04 DX2= -.113697E-05 T = 19.000 P = 101300. S = 0.588316E+00
 14 1 (47, 2) ST = 0.353545E+06 DT = 0.163840E+06 DX1= 0.161606E-02 DX2= -.937150E-06 T = 19.000 P = 101306. S = 0.107572E-01
 10 1 (48, 1) ST = 0.681225E+06 DT = 0.327680E+06 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 101304. S = 0.261680E+00
 10 1 (49, 1) ST = 0.133658E+07 DT = 0.655360E+06 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 101304. S = 0.261680E+00
 27 7 (50, 2) ST = 0.264730E+07 DT = 0.131072E+07 DX1= -.418893E-03 DX2= 0.315627E-21 T = 19.000 P = 106155. S = 0.000000E+00
 27 7 (51, 1) ST = 0.526874E+07 DT = 0.262144E+07 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 106155. S = 0.000000E+00
 27 7 (52, 1) ST = 0.105114E+08 DT = 0.524288E+07 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 106155. S = 0.000000E+00
 27 7 (53, 1) ST = 0.209974E+08 DT = 0.104858E+08 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 106155. S = 0.000000E+00
 27 7 (54, 1) ST = 0.419689E+08 DT = 0.209715E+08 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 106155. S = 0.000000E+00
 27 7 (55, 1) ST = 0.839119E+08 DT = 0.419430E+08 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 106155. S = 0.000000E+00
 27 2 (56, 2) ST = 0.167798E+09 DT = 0.838861E+08 DX1= -.214585E-05 DX2= -.196199E-22 T = 19.000 P = 106155. S = 0.000000E+00
 27 2 (57, 1) ST = 0.335570E+09 DT = 0.167772E+09 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 106155. S = 0.000000E+00
 27 2 (58, 1) ST = 0.671115E+09 DT = 0.335544E+09 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 106155. S = 0.000000E+00
 211 (59, 2) ST = 0.134220E+10 DT = 0.671089E+09 DX1= 0.473028E-11 DX2= -.155812E-14 T = 19.000 P = 101300. S = 0.588316E+00
 211 (60, 1) ST = 0.234220E+10 DT = 0.100000E+10 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 101300. S = 0.588316E+00
 211 (61, 1) ST = 0.334220E+10 DT = 0.100000E+10 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 101300. S = 0.588316E+00
 211 (62, 1) ST = 0.434220E+10 DT = 0.100000E+10 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 101300. S = 0.588316E+00
 211 (63, 1) ST = 0.534220E+10 DT = 0.100000E+10 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 101300. S = 0.588316E+00
 211 (64, 1) ST = 0.634220E+10 DT = 0.100000E+10 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 101300. S = 0.588316E+00
 211 (65, 1) ST = 0.734220E+10 DT = 0.100000E+10 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 101300. S = 0.588316E+00
 211 (66, 1) ST = 0.834220E+10 DT = 0.100000E+10 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 101300. S = 0.588316E+00
 211 (67, 1) ST = 0.934220E+10 DT = 0.100000E+10 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 101300. S = 0.588316E+00
 211 (68, 1) ST = 0.103422E+11 DT = 0.100000E+10 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 101300. S = 0.588316E+00
 ***** FOR 10 CONSECUTIVE TIME STEPS HAVE CONVERGENCE ON ITER = 1
 WRITE OUT CURRENT DATA, THEN STOP EXECUTION
 211 (69, 1) ST = 0.113422E+11 DT = 0.100000E+10 DX1= 0.000000E+00 DX2= 0.000000E+00 T = 19.000 P = 101300. S = 0.588316E+00

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NAPL Spill Experiment #1											
OUTPUT DATA AFTER (69, 1)-2-TIME STEPS								THE TIME IS 0.13128E+06 DAYS			

TOTAL TIME	KCYC	ITER	ITERC	KON	DX1M	DX2M	DX3M	MAX. RES.	NER	KER	DELTEX
0.11342E+11	69	1	266	2	0.00000E+00	0.00000E+00	0.00000E+00	0.17443E-05	11	2	0.10000E+10

ELEM INDEX	P (PA)	T (DEG.C)	SO	SW	SG	PVOC (PA)	PAIR (PA)	PSATO (PA)	PSATW (PA)	PCO (PA)	PCW (PA)
2 1	1	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
2 2	2	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
2 3	3	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
2 4	4	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
2 5	5	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
2 6	6	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
2 7	7	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
2 8	8	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
2 9	9	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
210	10	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
211	11	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
212	12	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
213	13	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
214	14	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
215	15	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1. -4941.
216	16	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0. 0.
3 1	17	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
3 2	18	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
3 3	19	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
3 4	20	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
3 5	21	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
3 6	22	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
3 7	23	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
3 8	24	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
3 9	25	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
310	26	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
311	27	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
312	28	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
313	29	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
314	30	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
315	31	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	0.	99105.	1744.	2196.	0. -4550.
316	32	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0. 0.
4 1	33	101301.	19.000	0.0000E+00	0.4647E+00	0.5353E+00	0.	99105.	1744.	2196.	0. -4158.
4 2	34	101301.	19.000	0.0000E+00	0.4647E+00	0.5353E+00	0.	99105.	1744.	2196.	0. -4158.

9

9

NAPL Spill Experiment #1												

KCYC = 69 - ITER = 1 - TIME = 0.11342E+11												
ELEM INDEX	CVOCGAS (KG/M**3)	CVOCQAQ. (KG/M**3)	DGAS (KG/M**3)	DNAPL (KG/M**3)	VISGAS (KG/M*S)	VISNAPL (KG/M*S)	DIFFO (M**2/S)	DIFFW (M**2/S)	KRGAS	KRAQ.	KNAPL	
2 1	1	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
2 2	2	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
2 3	3	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
2 4	4	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
2 5	5	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
2 6	6	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
2 7	7	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
2 8	8	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
2 9	9	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
210	10	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
211	11	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
212	12	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
213	13	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
214	14	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
215	15	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
216	16	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
3 1	17	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
3 2	18	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
3 3	19	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
3 4	20	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
3 5	21	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
3 6	22	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
3 7	23	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
3 8	24	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
3 9	25	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
310	26	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
311	27	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
312	28	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
313	29	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
314	30	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
315	31	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2325E+00	0.5231E-01	0.0000E+00
316	32	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
4 1	33	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1988E+00	0.6653E-01	0.0000E+00
4 2	34	0.0000E+00	0.0000E+00	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1988E+00	0.6653E-01	0.0000E+00

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*****
NAPL Spill Experiment #1

KCYC = 69 - ITER = 1 - TIME = 0.11342E+11

ELEM1 ELEM2 INDEX FLOW FLO (GAS) FLO (AQ.) FLO (NAPL) FLO (VOC) GAS FLO (VOC) MAT VEL (GAS) VEL (AQ.) VEL (NAPL)
(W) (KG/S) (KG/S) (KG/S) (KG/S) (KG/S) (M/S) (M/S) (M/S)

1 1 1 2 1 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
2 1 2 2 2 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
3 1 3 2 3 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
4 1 4 2 4 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
5 1 5 2 5 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
6 1 6 2 6 -0.1973E-13 0.0000E+00 -0.2474E-18 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 -0.1156E-18 0.0000E+00
7 1 7 2 7 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
8 1 8 2 8 -0.3463E-13 0.0000E+00 -0.4341E-18 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 -0.1738E-18 0.0000E+00
9 1 9 2 9 -0.4664E-13 0.0000E+00 -0.5847E-18 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 -0.2153E-18 0.0000E+00
10 1 10 2 10 -0.1107E-12 0.0000E+00 -0.1388E-17 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 -0.4682E-18 0.0000E+00
11 1 11 2 11 -0.1499E-12 0.0000E+00 -0.1880E-17 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 -0.5808E-18 0.0000E+00
12 1 12 2 12 -0.2853E-12 0.0000E+00 -0.3576E-17 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 -0.1016E-17 0.0000E+00
13 1 13 2 13 -0.3639E-12 0.0000E+00 -0.4562E-17 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 -0.1206E-17 0.0000E+00
14 1 14 2 14 -0.7001E-12 0.0000E+00 -0.8777E-17 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 -0.2210E-17 0.0000E+00
15 1 15 2 15 0.2837E-12 0.0000E+00 0.3556E-17 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.1013E-17 0.0000E+00
16 1 16 2 16 0.5674E-12 0.0000E+00 0.7113E-17 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.2025E-17 0.0000E+00
17 1 17 2 17 0.2837E-12 0.0000E+00 0.3556E-17 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.1013E-17 0.0000E+00
18 1 18 2 18 0.2837E-12 0.0000E+00 0.3556E-17 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.1013E-17 0.0000E+00
19 1 19 2 19 0.2837E-12 0.0000E+00 0.3556E-17 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.1013E-17 0.0000E+00
20 1 20 2 20 0.2837E-12 0.0000E+00 0.3556E-17 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.1013E-17 0.0000E+00
21 1 21 2 21 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
22 1 22 2 22 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
23 1 23 2 23 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
24 1 24 2 24 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
25 1 25 2 25 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
26 1 26 2 26 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
27 1 27 2 27 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
28 1 28 2 28 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
29 1 29 2 29 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
30 1 30 2 30 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
1 2 1 3 31 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
2 2 2 3 32 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
3 2 3 3 33 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
4 2 4 3 34 -0.4721E-13 0.0000E+00 -0.5918E-18 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 -0.1586E-18 0.0000E+00

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*****
***** VOLUME- AND MASS-BALANCES *****
***** [KCVC,ITER] = [ 69, 1] ***** THE TIME IS 0.11342E+11 SECONDS, OR 0.13128E+06 DAYS

*****
PHASES PRESENT
*****
PHASES * GAS AQUEOUS NAPL
*****
VOLUME (M^3) * 0.76896530E-01 0.36806134E+00 0.00000000E+00
MASS (KG) * 0.92111228E-01 0.36752028E+03 0.00000000E+00
*****

COMPONENT MASS IN PLACE (KG)
*****
COMPONENTS * WATER AIR VOC
*****
PHASES *
GAS PHASE * 0.12535819E-02 0.90857646E-01 0.00000000E+00
AQUEOUS * 0.36751616E+03 0.58548942E-02 0.00000000E+00
NAPL * 0.00000000E+00 0.00000000E+00 0.00000000E+00
ADSORBED * 0.00000000E+00 0.00000000E+00 0.00000000E+00
TOTAL * 0.36751741E+03 0.96712540E-01 0.00000000E+00
*****

*****
WRITE FILE *SAVE* AFTER 69 TIME STEPS --- THE TIME IS 0.113422E+11 SECONDS
---
END OF TOUGH2 SIMULATION RUN --- ELAPSED TIME = 110.650 SEC-- CALCULATION TIME = 110.050 SEC-- DATA INPUT TIME = 0.600 SEC

```

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Output for Problem 3A (SAVE_p3a)

```
INCON -- INITIAL CONDITIONS FOR 481 ELEMENTS AT TIME 0.113422E+11
 2 1      0.40000000E+00
0.1013002408909E+06 0.4116843067589E+00 0.1900000000000E+02
 2 2      0.40000000E+00
0.1013002408909E+06 0.4116843067589E+00 0.1900000000000E+02
 2 3      0.40000000E+00
0.1013002408909E+06 0.4116843067589E+00 0.1900000000000E+02
 2 4      0.40000000E+00
0.1013002408909E+06 0.4116843067589E+00 0.1900000000000E+02
 2 5      0.40000000E+00
0.1013002408909E+06 0.4116843067589E+00 0.1900000000000E+02
 2 6      0.40000000E+00
0.1013002408909E+06 0.4116843067589E+00 0.1900000000000E+02
 2 7      0.40000000E+00
0.1013002408909E+06 0.4116843067589E+00 0.1900000000000E+02
 2 8      0.40000000E+00
0.1013002408909E+06 0.4116843067589E+00 0.1900000000000E+02
 2 9      0.40000000E+00
0.1013002408909E+06 0.4116843067589E+00 0.1900000000000E+02
210      0.40000000E+00
0.1013002408909E+06 0.4116843067589E+00 0.1900000000000E+02
211      0.40000000E+00
0.1013002408909E+06 0.4116843067589E+00 0.1900000000000E+02
212      0.40000000E+00
0.1013002408909E+06 0.4116843067589E+00 0.1900000000000E+02
...
216      0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.1900000000000E+02
 3 1      0.40000000E+00
0.1013007109236E+06 0.4365882961814E+00 0.1900000000000E+02
 3 2      0.40000000E+00
0.1013007109236E+06 0.4365882961814E+00 0.1900000000000E+02
 3 3      0.40000000E+00
0.1013007109236E+06 0.4365882961814E+00 0.1900000000000E+02
```

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...
 4 1      0.40000000E+00
0.1013011809585E+06 0.4646894354100E+00 0.1900000000000E+02
 4 2      0.40000000E+00
0.1013011809585E+06 0.4646894354100E+00 0.1900000000000E+02
...
 5 1      0.40000000E+00
0.1013016509957E+06 0.4965673806637E+00 0.1900000000000E+02
 5 2      0.40000000E+00
0.1013016509957E+06 0.4965673806637E+00 0.1900000000000E+02
...
 6 1      0.40000000E+00
0.1013021210350E+06 0.5329078570298E+00 0.1900000000000E+02
 6 2      0.40000000E+00
0.1013021210350E+06 0.5329078570298E+00 0.1900000000000E+02
...
 7 1      0.40000000E+00
0.1013025910765E+06 0.5744960115436E+00 0.1900000000000E+02
 7 2      0.40000000E+00
0.1013025910765E+06 0.5744960115436E+00 0.1900000000000E+02
...
 8 1      0.40000000E+00
0.1013030611202E+06 0.6221688754911E+00 0.1900000000000E+02
 8 2      0.40000000E+00
0.1013030611202E+06 0.6221688754911E+00 0.1900000000000E+02
...
 9 1      0.40000000E+00
0.1013035311661E+06 0.6766730991168E+00 0.1900000000000E+02
 9 2      0.40000000E+00
0.1013035311661E+06 0.6766730991168E+00 0.1900000000000E+02
...
10 1      0.40000000E+00
0.1013040012142E+06 0.7383197952200E+00 0.1900000000000E+02
10 2      0.40000000E+00
0.1013040012142E+06 0.7383197952200E+00 0.1900000000000E+02
...
```

14

```

...
11 1      0.40000000E+00
0.1013044712645E+06 0.8062452555335E+00 0.1900000000000E+02
11 2      0.40000000E+00
0.1013044712645E+06 0.8062452555335E+00 0.1900000000000E+02
...
12 1      0.40000000E+00
0.1013049413170E+06 0.8770342940664E+00 0.1900000000000E+02
12 2      0.40000000E+00
0.1013049413170E+06 0.8770342940664E+00 0.1900000000000E+02
...
13 1      0.40000000E+00
0.1013054113717E+06 0.9427184623243E+00 0.1900000000000E+02
13 2      0.40000000E+00
0.1013054113717E+06 0.9427184623243E+00 0.1900000000000E+02
...
14 1      0.40000000E+00
0.1013058814286E+06 0.9892427299190E+00 0.1900000000000E+02
14 2      0.40000000E+00
0.1013058814286E+06 0.9892427299190E+00 0.1900000000000E+02
...
15 1      0.35000000E+00
0.1014529417600E+06 0.5000001593050E+02 0.1900000000000E+02
15 2      0.35000000E+00
0.1014529417600E+06 0.5000001593050E+02 0.1900000000000E+02
...
16 1      0.35000000E+00
0.1018447689461E+06 0.5000001593051E+02 0.1900000000000E+02
16 2      0.35000000E+00
0.1018447689461E+06 0.5000001593051E+02 0.1900000000000E+02
...
2916     0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.1900000000000E+02
ina 0     0.40000000E+00
0.1013000000000E+06 0.1000000000000E+01 0.1900000000000E+02
1 1      0.40000000E+00
0.1013000000000E+06 0.4000000000000E+00 0.1900000000000E+02
...

```

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Input for Problem 3B (p3b.txt)

```

NAPL Spill Experiment #1
ROCKS---1---*---2---*---3---*---4---*---5---*---6---*---7---*---8
S100% 1 2650. 0.400 1.0e-11 1.0e-11 1.e-11 3. 1000.
0. 0. 2.85 0.0
TOPBC 1 2650. 0.400 1.0e-11 1.0e-11 1.e-11 3. 1000.
0. 0. 2.85 0.0
SC30% 1 2650. 0.350 1.0e-12 1.0e-12 1.e-12 3. 1000.
0. 0. 2.85 0.0
SC60% 1 2650. 0.350 5.0e-13 5.0e-13 5.e-13 3. 1000.
0. 0. 2.85 0.0
C100% 1 2650. 0.050 1.0e-18 1.0e-18 1.e-18 3. 1000.
0. 0. 2.85 0.0
PLAST 1 2650. 0.000 0.0e-11 0.0e-11 0.e-11 3. 1000.
0. 0. 2.85 0.0
*****
***** Data block 'CHEMP' for VOC chemical parameters *****
*****
--TCRIT--1--PCRIT--2--ZCRIT--3--OMEGA--4--DIPOLM-5
--TBOIL--1--VPA--2--VPB--3--VPC--4--VPD--5
--AMO--1--CPA--2--CPB--3--CPC--4--CPD--5
--RHOREF--1--TDENRF--2--DIFV0--3--TDIFRF--4--TEXPO--5
--VLOA--1--VLOB--2--VLOC--3--VL0D--4--VOLCRT-5
--SOLA--1--SOLB--2--SOLC--3--SOLD--4
--OCK--1--FOX--2--ALAM--3
***** End of data block 'CHEMP' *****
CHEMP---1--Tetrachloroethylene---4---*---5---*---6---*---7---*---8
620.2 47.6 0.250 0.000 0.0
394.4 -7.36067 1.82732 -3.47735 -1.00033
165.8340.4597E+020.2255E+00-.2294E-030.8382E-07
1620. 293.00 0.736E-05 293.00 1.92
0.0000E+000.0000E+000.9000E+000.2931E+03 289.6
0.218E-04 0.000E+00 0.000E+00 0.000E+00
0.364E+00 0.001

```

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[illegible]

TOUGH2 IS A PROGRAM FOR MULTIPHASE MULTICOMPONENT FLOW IN PERMEABLE MEDIA, INCLUDING HEAT FLOW. IT IS A MEMBER OF THE MULKOM FAMILY OF CODES, DEVELOPED AT LAWRENCE BERKELEY NATIONAL LABORATORY

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*****
*****
***** TOUGH2 - VERSION 2.0 (OCTOBER 1999) *****
***** T2CG2 Solver Package *****
*****
*****
*****

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PARAMETERS FOR FLEXIBLE DIMENSIONING OF MAJOR ARRAYS (MAIN PROGRAM) ARE AS FOLLOWS

```

=====
MNEL = 12000   MNCON = 25000   MNEQ = 4   MNK = 3   MNPH = 3   MNB = 8   MNOGN = 300   MGTAB = 2000
=====

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[illegible]

PROPERTIES OF VOLATILE ORGANIC COMPOUND

TCRIT = 0.62020E+03 FCRIT = 0.47600E+02 ZCRIT = 0.25000E+00 OMEGA = 0.00000E+00 DIPOLM= 0.00000E+00
 TBOIL = 0.39440E+03 VFA = -0.73607E+01 VPB = 0.18273E+01 VPC = -0.34773E+01 VPD = -0.10003E+01
 AMO = 0.16583E+03 CPA = 0.45970E+02 CPB = 0.22550E+00 CPC = -0.22940E-03 CPD = 0.83820E-07
 RHORF= 0.16200E+04 TDENRF= 0.29300E+03 DIFVO = 0.73600E-05 TDIFRF= 0.29300E+03 TEXPO = 0.19200E+01
 VLGA = 0.00000E+00 VLOB = 0.00000E+00 VLOC = 0.90000E+00 VL0D = 0.29310E+03 VOLCRT= 0.28960E+03
 SOLA = 0.21800E-04 SOLB = 0.00000E+00 SOLC = 0.00000E+00 SOLD = 0.00000E+00
 OCK = 0.36400E+00 PCX = 0.10000E-02 ALAM = 0.00000E+00

VOLUME AND MASS-BALANCES
 [KCYC,ITER] = [0, 0] *****

THE TIME IS 0.00000E+00 SECONDS, OR 0.00000E+00 DAYS

PHASES PRESENT				COMPONENT MASS IN PLACE (KG)			
PHASES	* GAS	AQUEOUS	NAPL	COMPONENTS	* WATER	AIR	VOC
VOLUME (M ³) * 0.76896530E-01 0.36806134E+00 0.00000000E+00				GAS PHASE * 0.12535819E-02 0.90857646E-01 0.00000000E+00			
MASS (KG) * 0.92111228E-01 0.36752202E+03 0.00000000E+00				AQUEOUS * 0.36751616E+03 0.58548952E-02 0.00000000E+00			
				NAPL * 0.00000000E+00 0.00000000E+00 0.00000000E+00			
				ADSORBED * 0.00000000E+00 0.00000000E+00 0.00000000E+00			
				TOTAL * 0.36751741E+03 0.96712541E-01 0.00000000E+00			

>>>EXCESSIVE VOC MOLAR FRACTION INCREASE : XX(3)=0.445600E+01 ===(9)= NAPL APPEARS AT ELEMENT * 12 *

***** (9) GAS PHASE DISAPPEARS AT ELEMENT 14 1 *** SW = 0.1005109E+01
 \$\$\$\$\$\$ (7) GAS PHASE EVOLVES AT ELEMENT 15 1 ***** FX = 0.101198E+06 PSUB = 0.101299E+06
 \$\$\$\$\$\$ (7) GAS PHASE EVOLVES AT ELEMENT 15 2 ***** FX = 0.101239E+06 PSUB = 0.101298E+06
 \$\$\$\$\$\$ (7) GAS PHASE EVOLVES AT ELEMENT 15 3 ***** FX = 0.101286E+06 PSUB = 0.101299E+06
 \$\$\$\$\$\$ (7) GAS PHASE EVOLVES AT ELEMENT 14 1 ***** FX = 0.101088E+06 PSUB = 0.176400E+06
 \$\$\$\$\$\$ (9) GAS PHASE DISAPPEARS AT ELEMENT 15 2 *** SW = 0.10000241E+01
 \$\$\$\$\$\$ (9) GAS PHASE DISAPPEARS AT ELEMENT 15 3 *** SW = 0.10000236E+01
 \$\$\$\$\$\$ (9) GAS PHASE DISAPPEARS AT ELEMENT 15 1 *** SW = 0.10000281E+01
 15 1 (1, 7) ST = 0.100000E+02 DT = 0.100000E+02 DX1= 0.714475E+02 DX2= 0.111532E-10 T = 19.000 P = 101524. S = 0.000000E+00
 \$\$\$\$\$\$ (9) NAPL EVOLVES AT ELEMENT 13 1 ***** FVO = 0.468521E+04 PSATO = 0.174399E+04 XMOLOG = 0.461520E-01
 \$\$\$\$\$\$ (9) NAPL EVOLVES AT ELEMENT 12 2 ***** FVO = 0.298876E+04 PSATO = 0.174399E+04 XMOLOG = 0.294642E-01
 12 2 (2, 4) ST = 0.200000E+02 DT = 0.100000E+02 DX1= 0.204142E+02 DX2= -1.86254E-02 T = 19.000 P = 101425. S = 0.125730E+00
 \$\$\$\$\$\$ (9) NAPL EVOLVES AT ELEMENT 11 1 ***** FVO = 0.151716E+05 PSATO = 0.174399E+04 XMOLOG = 0.149575E+00
 11 1 (3, 5) ST = 0.400000E+02 DT = 0.200000E+02 DX1= -1.21692E+02 DX2= 0.113507E-02 T = 19.000 P = 101381. S = 0.181763E+00
 11 1 (4, 4) ST = 0.600000E+02 DT = 0.200000E+02 DX1= 0.114307E+02 DX2= -0.331356E-02 T = 19.000 P = 101393. S = 0.169974E+00

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***** (7) NAPL EVOLVES AT ELEMENT 24 8 ***** FVO = 0.365821E+04 PSATO = 0.174399E+04 XMOLOG = 0.457278E-04
 \$\$\$\$\$\$ (7) NAPL EVOLVES AT ELEMENT 26 8 ***** FVO = 0.258270E+04 PSATO = 0.174399E+04 XMOLOG = 0.322839E-04
 \$\$\$\$\$\$ (9) NAPL EVOLVES AT ELEMENT 7 4 ***** FVO = 0.278925E+04 PSATO = 0.174399E+04 XMOLOG = 0.269315E-01
 \$\$\$\$\$\$ (9) NAPL EVOLVES AT ELEMENT 8 4 ***** FVO = 0.303133E+05 PSATO = 0.174399E+04 XMOLOG = 0.299229E+00
 \$\$\$\$\$\$ (10) NAPL DISAPPEARS AT ELEMENT 7 4 *** SW = 0.59524535E+00 SG = 0.40493178E+00
 911 (74, 8) ST = 0.813800E+05 DT = 0.256000E+04 DX1= 0.105990E+03 DX2= -1.46651E-01 T = 19.000 P = 101433. S = 0.661834E-01
 \$\$\$\$\$\$ (7) NAPL EVOLVES AT ELEMENT 26 2 ***** FVO = 0.565669E+04 PSATO = 0.174399E+04 XMOLOG = 0.707090E-04
 \$\$\$\$\$\$ (7) NAPL EVOLVES AT ELEMENT 25 6 ***** FVO = 0.252348E+04 PSATO = 0.174399E+04 XMOLOG = 0.315437E-04
 8 4 (75, 8) ST = 0.839400E+05 DT = 0.256000E+04 DX1= 0.346561E+00 DX2= 0.148654E-02 T = 19.000 P = 101304. S = 0.294669E+00
 \$\$\$\$\$\$ (9) NAPL EVOLVES AT ELEMENT 8 5 ***** FVO = 0.243619E+04 PSATO = 0.174399E+04 XMOLOG = 0.240483E-01
 \$\$\$\$\$\$ (10) NAPL DISAPPEARS AT ELEMENT 8 5 *** SW = 0.64952871E+00 SG = 0.35093614E+00
 \$\$\$\$\$\$ (9) NAPL EVOLVES AT ELEMENT 7 5 ***** FVO = 0.209450E+04 PSATO = 0.174399E+04 XMOLOG = 0.206756E-01
 \$\$\$\$\$\$ (10) NAPL DISAPPEARS AT ELEMENT 7 5 *** SW = 0.59682062E+00 SG = 0.40321210E+00
 \$\$\$\$\$\$ (9) NAPL EVOLVES AT ELEMENT 8 5 ***** FVO = 0.274642E+05 PSATO = 0.174399E+04 XMOLOG = 0.271105E+00
 \$\$\$\$\$\$ (7) NAPL EVOLVES AT ELEMENT 24 9 ***** FVO = 0.558324E+04 PSATO = 0.174399E+04 XMOLOG = 0.697908E-04
 \$\$\$\$\$\$ (7) NAPL EVOLVES AT ELEMENT 26 3 ***** FVO = 0.339436E+04 PSATO = 0.174399E+04 XMOLOG = 0.424296E-04
 27 3 (76, 6) ST = 0.864000E+05 DT = 0.246000E+04 DX1= 0.831492E+02 DX2= 0.371553E-13 T = 19.000 P = 107763. S = 0.000000E+00

NAPL Spill Experiment #1

OUTPUT DATA AFTER (76, 6)-2-TIME STEPS

THE TIME IS 0.10000E+01 DAYS

TOTAL TIME	KCYC	ITER	ITERC	KON	DX1M	DX2M	DX3M	MAX. RES.	NER	KER	DELTEX
0.86400E+05	76	6	445	2	0.29975E+03	0.49001E+02	0.50000E+02	0.21300E-05	403	1	0.24600E+04

ELEM INDEX	P (PA)	T (DEG.C)	SO	SW	SG	PVOC (PA)	PAIR (PA)	PSATO (PA)	PSATW (PA)	PCO (PA)	PCW (PA)	
2 1	1	101300.	19.000	0.0000E+00	0.4137E+00	0.5863E+00	3.	99102.	1744.	2196.	-1.	-4908.
2 2	2	101300.	19.000	0.0000E+00	0.4137E+00	0.5863E+00	3.	99102.	1744.	2196.	-1.	-4908.
2 3	3	101300.	19.000	0.0000E+00	0.4137E+00	0.5863E+00	2.	99102.	1744.	2196.	-1.	-4908.
2 4	4	101300.	19.000	0.0000E+00	0.4137E+00	0.5863E+00	2.	99102.	1744.	2196.	-1.	-4908.
2 5	5	101300.	19.000	0.0000E+00	0.4136E+00	0.5864E+00	2.	99103.	1744.	2196.	-1.	-4908.
2 6	6	101300.	19.000	0.0000E+00	0.4136E+00	0.5864E+00	1.	99103.	1744.	2196.	-1.	-4909.
2 7	7	101300.	19.000	0.0000E+00	0.4136E+00	0.5864E+00	1.	99104.	1744.	2196.	-1.	-4910.
2 8	8	101300.	19.000	0.0000E+00	0.4135E+00	0.5865E+00	1.	99104.	1744.	2196.	-1.	-4911.
2 9	9	101300.	19.000	0.0000E+00	0.4134E+00	0.5866E+00	0.	99104.	1744.	2196.	-1.	-4912.
210	10	101300.	19.000	0.0000E+00	0.4133E+00	0.5867E+00	0.	99104.	1744.	2196.	-1.	-4914.
211	11	101300.	19.000	0.0000E+00	0.4131E+00	0.5869E+00	0.	99104.	1744.	2196.	-1.	-4917.
212	12	101300.	19.000	0.0000E+00	0.4130E+00	0.5870E+00	0.	99105.	1744.	2196.	-1.	-4920.
213	13	101300.	19.000	0.0000E+00	0.4128E+00	0.5872E+00	0.	99105.	1744.	2196.	-1.	-4922.
214	14	101300.	19.000	0.0000E+00	0.4127E+00	0.5873E+00	0.	99105.	1744.	2196.	-1.	-4924.
215	15	101300.	19.000	0.0000E+00	0.4127E+00	0.5873E+00	0.	99105.	1744.	2196.	-1.	-4925.
216	16	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.

20

11	1	145	103932.	19.000	0.5055E+00	0.4945E+00	0.0000E+00	0.	15.	1744.	2196.	0.	-3790.
11	2	146	103635.	19.000	0.4784E+00	0.5216E+00	0.0000E+00	0.	379.	1744.	2196.	0.	-3492.
11	3	147	103433.	19.000	0.4584E+00	0.5416E+00	0.0000E+00	0.	7113.	1744.	2196.	0.	-3289.
11	4	148	103294.	19.000	0.4435E+00	0.5561E+00	0.4256E-03	1744.	99355.	1744.	2196.	0.	-3150.
11	5	149	103194.	19.000	0.4188E+00	0.5671E+00	0.1405E-01	1744.	99255.	1744.	2196.	0.	-3050.
11	6	150	103114.	19.000	0.4093E+00	0.5762E+00	0.1454E-01	1744.	99174.	1744.	2196.	0.	-2969.
11	7	151	103051.	19.000	0.4020E+00	0.5835E+00	0.1454E-01	1744.	99111.	1744.	2196.	0.	-2906.
11	8	152	103003.	19.000	0.3963E+00	0.5891E+00	0.1459E-01	1744.	99063.	1744.	2196.	0.	-2858.
11	9	153	102968.	19.000	0.3920E+00	0.5933E+00	0.1472E-01	1744.	99028.	1744.	2196.	0.	-2823.
1110	154	102945.	19.000	0.3890E+00	0.5960E+00	0.1495E-01	1744.	99005.	1744.	2196.	0.	-2801.	
1111	155	102934.	19.000	0.3873E+00	0.5974E+00	0.1538E-01	1744.	98994.	1744.	2196.	0.	-2790.	
1112	156	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.	
ELEM INDEX P T SO SW SG PVOC PAIR PSATO PSATW PCO PCW													
				(PA)	(DEG.C)				(PA)	(PA)	(PA)	(PA)	(PA)
1113	157	101305.	19.000	0.0000E+00	0.8204E+00	0.1796E+00	0.	99109.	1744.	2196.	0.	-1340.	
1114	158	101305.	19.000	0.0000E+00	0.8204E+00	0.1796E+00	0.	99109.	1744.	2196.	0.	-1340.	
1115	159	101305.	19.000	0.0000E+00	0.8204E+00	0.1796E+00	0.	99109.	1744.	2196.	0.	-1341.	
1116	160	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.	
12	1	161	105194.	19.000	0.5689E+00	0.4311E+00	0.0000E+00	0.	11.	1744.	2196.	0.	-4632.
12	2	162	104407.	19.000	0.5104E+00	0.4896E+00	0.0000E+00	0.	501.	1744.	2196.	0.	-3847.
12	3	163	104099.	19.000	0.4803E+00	0.5170E+00	0.0000E+00	0.	8283.	1744.	2196.	0.	-3540.
12	4	164	103934.	19.000	0.4670E+00	0.5330E+00	0.0000E+00	0.	60511.	1744.	2196.	0.	-3375.
12	5	165	103825.	19.000	0.4434E+00	0.5440E+00	0.1268E-01	1744.	99886.	1744.	2196.	0.	-3266.
12	6	166	103742.	19.000	0.4333E+00	0.5527E+00	0.1394E-01	1744.	99802.	1744.	2196.	0.	-3182.
12	7	167	103678.	19.000	0.4266E+00	0.5595E+00	0.1386E-01	1744.	99738.	1744.	2196.	0.	-3119.
12	8	168	103631.	19.000	0.4214E+00	0.5648E+00	0.1386E-01	1744.	99691.	1744.	2196.	0.	-3071.
12	9	169	103596.	19.000	0.4175E+00	0.5686E+00	0.1394E-01	1744.	99656.	1744.	2196.	0.	-3036.
1210	170	103574.	19.000	0.4148E+00	0.5711E+00	0.1407E-01	1744.	99634.	1744.	2196.	0.	-3014.	
1211	171	103563.	19.000	0.4133E+00	0.5723E+00	0.1443E-01	1744.	99624.	1744.	2196.	0.	-3003.	
1212	172	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.	
1213	173	101305.	19.000	0.0000E+00	0.8909E+00	0.1091E+00	0.	99110.	1744.	2196.	0.	-949.	
1214	174	101305.	19.000	0.0000E+00	0.8909E+00	0.1091E+00	0.	99110.	1744.	2196.	0.	-949.	
1215	175	101305.	19.000	0.0000E+00	0.8909E+00	0.1091E+00	0.	99110.	1744.	2196.	0.	-949.	
1216	176	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.	
13	1	177	105138.	19.000	0.5354E+00	0.4646E+00	0.0000E+00	0.	653.	1744.	2196.	0.	-4160.
13	2	178	104655.	19.000	0.5138E+00	0.4862E+00	0.0000E+00	0.	4677.	1744.	2196.	0.	-3888.
13	3	179	104675.	19.000	0.4975E+00	0.5025E+00	0.0000E+00	0.	25284.	1744.	2196.	0.	-3699.
13	4	180	104541.	19.000	0.4829E+00	0.5146E+00	0.2475E-02	1744.	100602.	1744.	2196.	0.	-3566.
13	5	181	104441.	19.000	0.4625E+00	0.5241E+00	0.1340E-01	1744.	100502.	1744.	2196.	0.	-3466.
13	6	182	104361.	19.000	0.4549E+00	0.5319E+00	0.1317E-01	1744.	100421.	1744.	2196.	0.	-3385.
13	7	183	104299.	19.000	0.4489E+00	0.5382E+00	0.1293E-01	1744.	100360.	1744.	2196.	0.	-3323.
13	8	184	104252.	19.000	0.4441E+00	0.5430E+00	0.1292E-01	1744.	100313.	1744.	2196.	0.	-3276.
13	9	185	104219.	19.000	0.4406E+00	0.5465E+00	0.1297E-01	1744.	100279.	1744.	2196.	0.	-3242.
1310	186	104197.	19.000	0.4382E+00	0.5487E+00	0.1306E-01	1744.	100258.	1744.	2196.	0.	-3220.	
1311	187	104187.	19.000	0.4368E+00	0.5498E+00	0.1331E-01	1744.	100247.	1744.	2196.	0.	-3209.	
1312	188	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.	
1313	189	101307.	19.000	0.0000E+00	0.9539E+00	0.4609E-01	0.	99111.	1744.	2196.	0.	-559.	
1314	190	101307.	19.000	0.0000E+00	0.9539E+00	0.4609E-01	0.	99111.	1744.	2196.	0.	-559.	
1315	191	101307.	19.000	0.0000E+00	0.9539E+00	0.4609E-01	0.	99111.	1744.	2196.	0.	-559.	
1316	192	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.	

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24	1	353	108278.	19.000	0.2415E+00	0.7585E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-1690.	
			108229.	19.000	0.2333E+00	0.7667E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-1643.	
			108131.	19.000	0.2164E+00	0.7836E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-1546.	
			107974.	19.000	0.1889E+00	0.8111E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-1392.	
			107738.	19.000	0.1468E+00	0.8532E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-1159.	
			107417.	19.000	0.9062E-01	0.9094E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-843.	
			107069.	19.000	0.3824E-01	0.9618E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-502.	
			106785.	19.000	0.9109E-02	0.9909E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-223.	
			106608.	19.000	0.7091E-03	0.9993E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-51.	
	2410	362	106553.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2411	363	106552.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2412	364	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.	
	2413	365	105058.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2414	366	105058.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2415	367	105058.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2416	368	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.	
	25	1	369	107951.	19.000	0.1115E+00	0.8885E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-963.
	25	2	370	107864.	19.000	0.9664E-01	0.9034E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-878.
	25	3	371	107700.	19.000	0.6993E-01	0.9301E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-717.
	25	4	372	107479.	19.000	0.3819E-01	0.9618E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-501.
	25	5	373	107242.	19.000	0.1286E-01	0.9871E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-270.
	25	6	374	107050.	19.000	0.1659E-02	0.9983E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-85.
	25	7	375	106959.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
	25	8	376	106954.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
	25	9	377	106950.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
	2510	378	106947.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2511	379	106946.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2512	380	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.	
ELEM INDEX P T SO SW SG PVOC PAIR PSATO PSATW PCO PCW														
(PA) (DEG.C) (PA) (PA) (PA) (PA) (PA) (PA) (PA)														
	2513	381	105450.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2514	382	105450.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2515	383	105450.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2516	384	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.	
	26	1	385	107528.	19.000	0.4527E-02	0.9955E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-151.
	26	2	386	107479.	19.000	0.2337E-02	0.9977E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-104.
	26	3	387	107400.	19.000	0.3089E-03	0.9997E+00	0.0000E+00	0.	99108.	1744.	2196.	0.	-29.
	26	4	388	107367.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
	26	5	389	107362.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
	26	6	390	107356.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
	26	7	391	107351.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
	26	8	392	107346.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
	26	9	393	107343.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
	2610	394	107340.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2611	395	107339.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2612	396	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.	
	2613	397	105842.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2614	398	105842.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2615	399	105842.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	99104.	1744.	2196.	0.	0.	
	2616	400	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.	

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NAPL Spill Experiment #1											
KCYC = 76 - ITER = 6 - TIME = 0.86400E+05											
ELEM INDEX	CVOCGAS	CVOCQA.	DGAS	DNAPL	VISGAS	VISNAPL	DIFFO	DIFFW	KRGAS	KRAQ.	KRNAPL
	(KG/M**3)	(KG/M**3)	(KG/M**3)	(KG/M**3)	(KG/M*S)	(KG/M*S)	(M**2/S)	(M**2/S)			
2 1	1 0.1712E-03	0.2882E-03	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2626E+00	0.4234E-01	0.0000E+00
2 2	2 0.1763E-03	0.2967E-03	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2626E+00	0.4234E-01	0.0000E+00
11 1	145 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.8424E-01	0.1088E+00
11 2	146 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.1028E+00	0.9226E-01
11 3	147 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.1181E+00	0.8116E-01
11 4	148 0.1191E+00	0.2004E+00	0.1320E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.1302E+00	0.7352E-01
11 5	149 0.1191E+00	0.2004E+00	0.1319E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.9145E-07	0.1398E+00	0.6368E-01
11 6	150 0.1191E+00	0.2004E+00	0.1318E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.1285E-06	0.1481E+00	0.5953E-01
11 7	151 0.1191E+00	0.2004E+00	0.1317E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.1287E-06	0.1550E+00	0.5648E-01
11 8	152 0.1191E+00	0.2004E+00	0.1316E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.1329E-06	0.1605E+00	0.5417E-01
11 9	153 0.1191E+00	0.2004E+00	0.1316E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.1446E-06	0.1646E+00	0.5248E-01
1110	154 0.1191E+00	0.2004E+00	0.1316E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.1666E-06	0.1674E+00	0.5134E-01
1111	155 0.1191E+00	0.2004E+00	0.1316E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.2141E-06	0.1688E+00	0.5070E-01
1112	156 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
1113	157 0.5836E-14	0.9821E-14	0.1398E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.6696E-02	0.5128E+00	0.0000E+00
1114	158 0.1038E-16	0.1747E-16	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.6697E-02	0.5128E+00	0.0000E+00
1115	159 0.9034E-20	0.1520E-19	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.6697E-02	0.5128E+00	0.0000E+00
1116	160 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
12 1	161 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.4979E-01	0.1551E+00
12 2	162 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.8115E-01	0.1120E+00
12 3	163 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.9946E-01	0.9493E-01
12 4	164 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.1113E+00	0.8582E-01
ELEM INDEX	CVOCGAS	CVOCQA.	DGAS	DNAPL	VISGAS	VISNAPL	DIFFO	DIFFW	KRGAS	KRAQ.	KRNAPL
	(KG/M**3)	(KG/M**3)	(KG/M**3)	(KG/M**3)	(KG/M*S)	(KG/M*S)	(M**2/S)	(M**2/S)			
12 5	165 0.1191E+00	0.2004E+00	0.1326E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.2654E-07	0.1200E+00	0.7511E-01
12 6	166 0.1191E+00	0.2004E+00	0.1325E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8367E-07	0.1273E+00	0.7037E-01
12 7	167 0.1191E+00	0.2004E+00	0.1324E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.7859E-07	0.1331E+00	0.6719E-01
12 8	168 0.1191E+00	0.2004E+00	0.1324E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.7916E-07	0.1377E+00	0.6478E-01
12 9	169 0.1191E+00	0.2004E+00	0.1323E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8364E-07	0.1411E+00	0.6305E-01
1210	170 0.1191E+00	0.2004E+00	0.1323E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.9278E-07	0.1434E+00	0.6190E-01
1211	171 0.1191E+00	0.2004E+00	0.1323E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.1189E-06	0.1445E+00	0.6126E-01
1212	172 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
1213	173 0.3035E-17	0.5107E-17	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1334E-02	0.6787E+00	0.0000E+00
1214	174 0.3934E-20	0.6621E-20	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1334E-02	0.6787E+00	0.0000E+00
1215	175 0.2870E-23	0.4829E-23	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1334E-02	0.6787E+00	0.0000E+00
1216	176 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00

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13 1	177 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.6646E-01	0.1293E+00
13 2	178 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.7904E-01	0.1142E+00
13 3	179 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.8944E-01	0.1037E+00
13 4	180 0.1191E+00	0.2004E+00	0.1335E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.9776E-01	0.9524E-01
13 5	181 0.1191E+00	0.2004E+00	0.1334E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.5371E-07	0.1046E+00	0.8520E-01
13 6	182 0.1191E+00	0.2004E+00	0.1333E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.4379E-07	0.1105E+00	0.8109E-01
13 7	183 0.1191E+00	0.2004E+00	0.1332E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3449E-07	0.1154E+00	0.7796E-01
13 8	184 0.1191E+00	0.2004E+00	0.1331E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3424E-07	0.1192E+00	0.7553E-01
13 9	185 0.1191E+00	0.2004E+00	0.1331E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3601E-07	0.1221E+00	0.7376E-01
1310	186 0.1191E+00	0.2004E+00	0.1331E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3942E-07	0.1240E+00	0.7261E-01
1311	187 0.1191E+00	0.2004E+00	0.1331E+01	0.1621E+04	0.1767E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.4991E-07	0.1249E+00	0.7198E-01
1312	188 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
1313	189 0.5373E-21	0.9042E-21	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.6447E-04	0.8541E+00	0.0000E+00
1314	190 0.4701E-24	0.7911E-24	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.6447E-04	0.8541E+00	0.0000E+00
1315	191 0.2478E-27	0.4170E-27	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.6448E-04	0.8541E+00	0.0000E+00
1316	192 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00

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*****
NAPL Spill Experiment #1

                                KCYC = 76 - ITER = 6 - TIME = 0.86400E+05

ELEM1  ELEM2  INDEX    FLOH      FLO(GAS)    FLO(AQ.)    FLO(NAPL)    FLO(VOC)GAS  FLO(VOC)WAT  VEL(GAS)    VEL(AQ.)    VEL(NAPL)
      (W)      (KG/S)    (KG/S)      (KG/S)      (KG/S)      (KG/S)      (KG/S)      (M/S)      (M/S)      (M/S)

1 1 1 2 1 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
2 1 2 2 2 -0.2816E-03 -0.6345E-11 -0.3519E-08 0.0000E+00 -0.9969E-15 -0.1016E-14 -0.2247E-08 -0.2119E-08 0.0000E+00
3 1 3 2 3 -0.7382E-03 -0.1149E-10 -0.9235E-08 0.0000E+00 -0.6665E-14 -0.1083E-13 -0.4274E-08 -0.5202E-08 0.0000E+00
4 1 4 2 4 -0.7966E-03 0.7342E-11 -0.9998E-08 0.0000E+00 0.1611E-13 -0.4316E-13 0.2894E-08 -0.5253E-08 0.0000E+00
5 1 5 2 5 0.1989E-03 0.7489E-10 0.2369E-08 0.0000E+00 0.5366E-12 0.3448E-13 0.1155E-07 0.1157E-08 0.0000E+00
6 1 6 2 6 0.3545E-02 0.2217E-09 0.4407E-07 0.0000E+00 0.4545E-11 0.1856E-11 0.1007E-06 0.1994E-07 0.0000E+00
7 1 7 2 7 0.1211E-01 0.4336E-09 0.1511E-06 0.0000E+00 0.2150E-10 0.1577E-10 0.2141E-06 0.6307E-07 0.0000E+00
8 1 8 2 8 -0.9397E-01 -0.1018E-10 0.1667E-06 -0.8344E-05 -0.9338E-12 0.3345E-10 -0.9959E-07 0.6621E-07 -0.3565E-05
9 1 9 2 9 -0.2091E+00 0.0000E+00 0.2230E-06 -0.1765E-04 0.0000E+00 0.4475E-10 0.0000E+00 0.9372E-07 -0.6524E-05
10 1 10 2 10 -0.5608E+00 0.0000E+00 0.1078E-06 -0.4553E-04 0.0000E+00 0.6175E-10 0.0000E+00 0.1376E-06 -0.1531E-04
11 1 11 2 11 -0.1827E+01 0.0000E+00 0.1074E-06 -0.1441E-03 0.0000E+00 0.6166E-10 0.0000E+00 0.1468E-06 -0.4373E-04
12 1 12 2 12 -0.7015E+01 0.0000E+00 -0.2750E-06 -0.5440E-03 0.0000E+00 -0.5518E-10 0.0000E+00 -0.1589E-06 -0.1467E-03
13 1 13 2 13 -0.2044E+01 0.0000E+00 -0.2350E-06 -0.1575E-03 0.0000E+00 -0.4714E-10 0.0000E+00 -0.1260E-06 -0.4514E-04
14 1 14 2 14 -0.8557E+00 0.0000E+00 -0.1207E-06 -0.6982E-04 0.0000E+00 -0.2421E-10 0.0000E+00 -0.6402E-07 -0.1904E-04
15 1 15 2 15 -0.7415E-01 0.0000E+00 -0.1764E-07 -0.9534E-05 0.0000E+00 -0.7552E-11 0.0000E+00 -0.2261E-07 -0.1845E-05
16 1 16 2 16 -0.3289E-01 0.0000E+00 -0.1557E-07 -0.2462E-05 0.0000E+00 -0.3123E-11 0.0000E+00 -0.8848E-08 -0.8651E-06
17 1 17 2 17 -0.1554E-01 0.0000E+00 0.1622E-07 -0.1310E-05 0.0000E+00 0.3255E-11 0.0000E+00 0.8775E-08 -0.4817E-06
18 1 18 2 18 -0.6981E-02 0.0000E+00 0.4588E-07 -0.8278E-06 0.0000E+00 0.9205E-11 0.0000E+00 0.2398E-07 -0.3171E-06
19 1 19 2 19 -0.2391E-02 0.0000E+00 0.6967E-07 -0.6184E-06 0.0000E+00 0.1398E-10 0.0000E+00 0.3537E-07 -0.2456E-06
20 1 20 2 20 -0.1608E-03 0.0000E+00 0.8505E-07 -0.5403E-06 0.0000E+00 0.1706E-10 0.0000E+00 0.4220E-07 -0.2211E-06
21 1 21 2 21 0.3876E-03 0.0000E+00 0.4599E-07 -0.2553E-06 0.0000E+00 0.9228E-11 0.0000E+00 0.2216E-07 -0.1087E-06
22 1 22 2 22 0.5746E-03 0.0000E+00 0.4324E-07 -0.2237E-06 0.0000E+00 0.8676E-11 0.0000E+00 0.1944E-07 -0.1060E-06
23 1 23 2 23 -0.7396E-03 0.0000E+00 0.2141E-07 -0.1904E-06 0.0000E+00 0.4295E-11 0.0000E+00 0.8864E-08 -0.1052E-06
24 1 24 2 24 -0.4383E-02 0.0000E+00 -0.3428E-07 -0.1283E-06 0.0000E+00 -0.6877E-11 0.0000E+00 -0.1287E-07 -0.9313E-07
25 1 25 2 25 -0.1287E-01 0.0000E+00 -0.1577E-06 -0.2258E-07 0.0000E+00 -0.3165E-10 0.0000E+00 -0.5054E-07 -0.3552E-07
26 1 26 2 26 -0.1818E-01 0.0000E+00 -0.1030E-06 0.0000E+00 -0.4621E-10 0.0000E+00 -0.6588E-07 0.0000E+00 -0.0000E+00
27 1 27 2 27 -0.3731E-07 0.0000E+00 -0.4677E-12 0.0000E+00 0.0000E+00 -0.6622E-21 0.0000E+00 -0.9321E-12 0.0000E+00
28 1 28 2 28 -0.7493E-05 0.0000E+00 -0.9393E-10 0.0000E+00 0.0000E+00 -0.6214E-24 0.0000E+00 -0.2340E-10 0.0000E+00
29 1 29 2 29 -0.7476E-05 0.0000E+00 -0.9371E-10 0.0000E+00 0.0000E+00 -0.1220E-29 0.0000E+00 -0.2335E-10 0.0000E+00
30 1 30 2 30 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
*****

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*****
NAPL Spill Experiment #1

                                KCYC = 56 - ITER = 4 - TIME = 0.86400E+05

ELEM1  ELEM2  INDEX    FLOH      FLO(GAS)    FLO(AQ.)    FLO(NAPL)    FLO(VOC)GAS  FLO(VOC)WAT  VEL(GAS)    VEL(AQ.)    VEL(NAPL)
      (W)      (KG/S)    (KG/S)      (KG/S)      (KG/S)      (KG/S)      (KG/S)      (M/S)      (M/S)      (M/S)

1 1 2 1 451 0.2671E+00 0.7877E-09 0.3347E-05 0.0000E+00 0.1126E-12 0.9659E-12 0.5577E-06 0.4029E-05 0.0000E+00
2 1 3 1 452 0.2675E+00 0.7924E-09 0.3352E-05 0.0000E+00 0.4599E-12 0.1929E-11 0.5896E-06 0.3778E-05 0.0000E+00
3 1 4 1 453 0.2686E+00 0.7996E-09 0.3368E-05 0.0000E+00 0.1707E-11 0.1483E-10 0.6302E-06 0.3935E-05 0.0000E+00
4 1 5 1 454 0.2699E+00 0.7867E-09 0.3383E-05 0.0000E+00 0.5528E-11 0.4826E-10 0.6626E-06 0.3304E-05 0.0000E+00
5 1 6 1 455 0.2705E+00 0.7072E-09 0.3390E-05 0.0000E+00 0.1435E-10 0.1412E-09 0.6423E-06 0.3067E-05 0.0000E+00
6 1 7 1 456 0.2680E+00 0.4803E-09 0.3358E-05 0.0000E+00 0.2371E-10 0.3489E-09 0.4742E-06 0.2803E-05 0.0000E+00
7 1 8 1 457 0.2571E+00 0.2334E-10 0.3223E-05 0.0000E+00 0.2140E-11 0.6465E-09 0.4562E-06 0.2583E-05 0.0000E+00
8 1 9 1 458 0.3440E+00 0.0000E+00 0.2911E-05 0.8696E-05 0.0000E+00 0.5841E-09 0.0000E+00 0.2478E-05 0.6428E-05
9 1 10 1 459 0.5454E+00 0.0000E+00 0.2558E-05 0.2655E-04 0.0000E+00 0.5131E-09 0.0000E+00 0.2343E-05 0.1785E-04
10 1 11 1 460 0.1100E+01 0.0000E+00 0.2137E-05 0.7227E-04 0.0000E+00 0.4288E-09 0.0000E+00 0.2153E-05 0.4386E-04
11 1 12 1 461 0.2922E+01 0.0000E+00 0.1743E-05 0.2165E-03 0.0000E+00 0.3497E-09 0.0000E+00 0.2014E-05 0.1167E-03
12 1 13 1 462 -0.2922E+01 0.0000E+00 0.1961E-05 -0.2394E-03 0.0000E+00 0.3915E-09 0.0000E+00 0.2102E-05 -0.1291E-03
13 1 14 1 463 -0.8830E+00 0.0000E+00 0.2112E-05 -0.8179E-04 0.0000E+00 0.4218E-09 0.0000E+00 0.2240E-05 -0.4686E-04
14 1 15 1 464 -0.3297E-01 0.0000E+00 0.2136E-05 -0.1582E-04 0.0000E+00 0.4286E-09 0.0000E+00 0.2566E-05 -0.9149E-05
15 1 16 1 465 0.3732E-01 0.0000E+00 0.2108E-05 -0.1018E-04 0.0000E+00 0.4230E-09 0.0000E+00 0.2395E-05 -0.6784E-05
16 1 17 1 466 0.6585E-01 0.0000E+00 0.2050E-05 -0.7599E-05 0.0000E+00 0.4113E-09 0.0000E+00 0.2230E-05 -0.5338E-05
17 1 18 1 467 0.7641E-01 0.0000E+00 0.1949E-05 -0.6151E-05 0.0000E+00 0.3910E-09 0.0000E+00 0.2046E-05 -0.4523E-05
18 1 19 1 468 0.7762E-01 0.0000E+00 0.1805E-05 -0.5165E-05 0.0000E+00 0.3622E-09 0.0000E+00 0.1840E-05 -0.3956E-05
19 1 20 1 469 0.7333E-01 0.0000E+00 0.1622E-05 -0.4362E-05 0.0000E+00 0.3254E-09 0.0000E+00 0.1615E-05 -0.3464E-05
20 1 21 1 470 0.6586E-01 0.0000E+00 0.1407E-05 -0.3612E-05 0.0000E+00 0.2824E-09 0.0000E+00 0.1362E-05 -0.2955E-05
21 1 22 1 471 0.5769E-01 0.0000E+00 0.1229E-05 -0.3142E-05 0.0000E+00 0.2466E-09 0.0000E+00 0.1111E-05 -0.2674E-05
22 1 23 1 472 0.4708E-01 0.0000E+00 0.1016E-05 -0.2642E-05 0.0000E+00 0.2038E-09 0.0000E+00 0.8470E-06 -0.2503E-05
23 1 24 1 473 0.3344E-01 0.0000E+00 0.7502E-06 -0.2055E-05 0.0000E+00 0.1505E-09 0.0000E+00 0.5629E-06 -0.2270E-05
24 1 25 1 474 0.1413E-01 0.0000E+00 0.3824E-06 -0.1274E-05 0.0000E+00 0.7671E-10 0.0000E+00 0.2449E-06 -0.1849E-05
25 1 26 1 475 -0.1339E-01 0.0000E+00 -0.1456E-06 -0.1379E-06 0.0000E+00 -0.2922E-10 0.0000E+00 -0.9328E-07 -0.4336E-06
26 1 27 1 476 -0.1503E-04 0.0000E+00 -0.1884E-09 0.0000E+00 0.0000E+00 -0.3779E-13 0.0000E+00 -0.1077E-09 0.0000E+00
27 1 28 1 477 -0.1497E-04 0.0000E+00 -0.1877E-09 0.0000E+00 0.0000E+00 -0.2658E-18 0.0000E+00 -0.7478E-09 0.0000E+00
28 1 29 1 478 -0.7478E-05 0.0000E+00 -0.9374E-10 0.0000E+00 0.0000E+00 -0.6201E-24 0.0000E+00 -0.4669E-10 0.0000E+00
29 1 30 1 479 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
*****

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***** VOLUME- AND MASS-BALANCES *****
***** [KCYC,ITER] = [ 76, 6] ***** THE TIME IS 0.86400E+05 SECONDS, OR 0.10000E+01 DAYS

*****
PHASES PRESENT
*****
PHASES * GAS AQUEOUS NAPL
*****
VOLUME (M^3) * 0.66267962E-01 0.32544100E+00 0.53248912E-01
MASS (KG) * 0.79873569E-01 0.32497180E+03 0.86329119E+02
*****

COMPONENT MASS IN PLACE (KG)
*****
COMPONENTS * WATER AIR VOC
*****
PHASES *
GAS PHASE * 0.10803130E-02 0.78215134E-01 0.57812178E-03
AQUEOUS * 0.32494716E+03 0.51470915E-02 0.19494471E-01
NAPL * 0.00000000E+00 0.14492538E-03 0.86328974E+02
ABSORBED * 0.00000000E+00 0.00000000E+00 0.50953212E-01
TOTAL * 0.32494824E+03 0.83507151E-01 0.86400000E+02
*****

*****

WRITE FILE *SAVE* AFTER 76 TIME STEPS --- THE TIME IS 0.86400E+05 SECONDS
...
END OF TOUGH2 SIMULATION RUN --- ELAPSED TIME = 401.570 SEC-- CALCULATION TIME = 401.070 SEC-- DATA INPUT TIME = 0.500 SEC

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Output for Problem 3B (SAVE_p3b.out)

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INCON -- INITIAL CONDITIONS FOR 481 ELEMENTS AT TIME 0.86400E+05
2 1 0.40000000E+00
0.1013002593853E+06 0.4136807631734E+00 0.2476032102206E-04 0.1900000000000E+02
2 2 0.40000000E+00
0.1013002592400E+06 0.4136787117420E+00 0.2549493878466E-04 0.1900000000000E+02
2 3 0.40000000E+00
0.1013002588426E+06 0.4136737085859E+00 0.2385242197381E-04 0.1900000000000E+02
2 4 0.40000000E+00
0.1013002580439E+06 0.4136640141165E+00 0.2104924403165E-04 0.1900000000000E+02
2 5 0.40000000E+00
0.1013002567911E+06 0.4136470824836E+00 0.1602829966418E-04 0.1900000000000E+02
2 6 0.40000000E+00
0.1013002552256E+06 0.4136194654426E+00 0.1029690574205E-04 0.1900000000000E+02
2 7 0.40000000E+00
0.1013002535586E+06 0.4135765359071E+00 0.7331231306002E-05 0.1900000000000E+02
2 8 0.40000000E+00
0.1013002519554E+06 0.4135123414720E+00 0.5004098289511E-05 0.1900000000000E+02
2 9 0.40000000E+00
0.1013002504888E+06 0.4134201004618E+00 0.3211397823540E-05 0.1900000000000E+02
210 0.40000000E+00
0.1013002491628E+06 0.4132944512592E+00 0.2069954415226E-05 0.1900000000000E+02
211 0.40000000E+00
0.1013002479702E+06 0.4131372488272E+00 0.1241283198607E-05 0.1900000000000E+02
212 0.40000000E+00
0.1013002469468E+06 0.4129668497048E+00 0.1794494451899E-06 0.1900000000000E+02...
...
216 0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.1900000000000E+02
3 1 0.40000000E+00
0.1013007717922E+06 0.4422586538244E+00 0.1005664179701E-03 0.1900000000000E+02
3 2 0.40000000E+00
0.1013007714860E+06 0.4422539164339E+00 0.1037225625355E-03 0.1900000000000E+02
3 3 0.40000000E+00
0.1013007704216E+06 0.4422418508220E+00 0.9904357800773E-04 0.1900000000000E+02
...

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...
11 1          0.40000000E+00
0.1039319605103E+06 0.4945252414622E+00 0.50000000000247E+02 0.19000000000000E+02
11 2          0.40000000E+00
0.1036350008248E+06 0.5215549868579E+00 0.50000000006098E+02 0.19000000000000E+02
11 3          0.40000000E+00
0.1034330305737E+06 0.5415640025864E+00 0.5000000114315E+02 0.19000000000000E+02
11 4          0.40000000E+00
0.1032944762069E+06 0.5561217170122E+00 0.1000042564017E+02 0.19000000000000E+02
11 5          0.40000000E+00
0.1031942922084E+06 0.5670997511199E+00 0.1001405479077E+02 0.19000000000000E+02
11 6          0.40000000E+00
0.1031136904888E+06 0.5762087241558E+00 0.1001454126199E+02 0.19000000000000E+02
11 7          0.40000000E+00
0.1030510286008E+06 0.5834606793465E+00 0.1001454349184E+02 0.19000000000000E+02
11 8          0.40000000E+00
0.1030030609990E+06 0.5891070510039E+00 0.1001459258714E+02 0.19000000000000E+02
11 9          0.40000000E+00
0.1029680677619E+06 0.5932724780530E+00 0.1001472398133E+02 0.19000000000000E+02
1110         0.40000000E+00
0.1029451880578E+06 0.5960134884282E+00 0.1001495208404E+02 0.19000000000000E+02
1111         0.40000000E+00
0.1029339630043E+06 0.5973620912002E+00 0.100153838882E+02 0.19000000000000E+02
1112         0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.19000000000000E+02
1113         0.40000000E+00
0.1013046420011E+06 0.8203640425672E+00 0.8437731800441E-15 0.19000000000000E+02
1114         0.40000000E+00
0.1013046419266E+06 0.8203608159360E+00 0.1500903721230E-17 0.19000000000000E+02
1115         0.40000000E+00
0.1013046418517E+06 0.8203577165976E+00 0.1306307011666E-20 0.19000000000000E+02
1116         0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.19000000000000E+02

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12 1          0.40000000E+00
0.1051938723669E+06 0.4310954853298E+00 0.5000000000184E+02 0.19000000000000E+02
12 2          0.40000000E+00
0.1044073438716E+06 0.4896468733917E+00 0.50000000008059E+02 0.19000000000000E+02
12 3          0.40000000E+00
0.1040994928410E+06 0.5169925749794E+00 0.5000000133117E+02 0.19000000000000E+02
12 4          0.40000000E+00
0.1039338044257E+06 0.5329600947601E+00 0.5000000972506E+02 0.19000000000000E+02
12 5          0.40000000E+00
0.1038252099888E+06 0.5439560282556E+00 0.1001268441210E+02 0.19000000000000E+02
12 6          0.40000000E+00
0.1037416449671E+06 0.5527148866111E+00 0.1001393632948E+02 0.19000000000000E+02
12 7          0.40000000E+00
0.1036782072246E+06 0.5595421044082E+00 0.1001385508045E+02 0.19000000000000E+02
12 8          0.40000000E+00
0.1036305045903E+06 0.5647769769943E+00 0.1001386432711E+02 0.19000000000000E+02
12 9          0.40000000E+00
0.1035961892782E+06 0.5685948672401E+00 0.1001393594854E+02 0.19000000000000E+02
1210         0.40000000E+00
0.1035740423531E+06 0.5710809273201E+00 0.1001407431130E+02 0.19000000000000E+02
1211         0.40000000E+00
0.1035633044349E+06 0.5722921174413E+00 0.1001442594171E+02 0.19000000000000E+02
1212         0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.19000000000000E+02
1213         0.40000000E+00
0.1013052802330E+06 0.8909159185815E+00 0.4387730232403E-18 0.19000000000000E+02
1214         0.40000000E+00
0.1013052802032E+06 0.8909149463447E+00 0.5688456499095E-21 0.19000000000000E+02
1215         0.40000000E+00
0.1013052801525E+06 0.8909140156677E+00 0.4149320950070E-24 0.19000000000000E+02
1216         0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.19000000000000E+02

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13 1      0.40000000E+00
0.1051379173743E+06 0.4645539718450E+00 0.5000000010490E+02 0.1900000000000E+02
13 2      0.40000000E+00
0.1048647589123E+06 0.4862365017293E+00 0.5000000075171E+02 0.1900000000000E+02
13 3      0.40000000E+00
0.1046751494740E+06 0.5024840328775E+00 0.5000000406361E+02 0.1900000000000E+02
13 4      0.40000000E+00
0.1045414516845E+06 0.5146062634883E+00 0.1000247530671E+02 0.1900000000000E+02
13 5      0.40000000E+00
0.1044412411816E+06 0.5240907431090E+00 0.1001339572194E+02 0.1900000000000E+02
13 6      0.40000000E+00
0.1043610265018E+06 0.5319408999654E+00 0.1001317226793E+02 0.1900000000000E+02
13 7      0.40000000E+00
0.1042992266011E+06 0.5381548285367E+00 0.1001292954278E+02 0.1900000000000E+02
13 8      0.40000000E+00
0.1042524941424E+06 0.5429530457649E+00 0.1001292238966E+02 0.1900000000000E+02
13 9      0.40000000E+00
0.1042188706455E+06 0.5464591693036E+00 0.1001297188600E+02 0.1900000000000E+02
1310     0.40000000E+00
0.1041972258990E+06 0.5487401663719E+00 0.1001306309072E+02 0.1900000000000E+02
1311     0.40000000E+00
0.1041867659627E+06 0.5498491755454E+00 0.1001331367775E+02 0.1900000000000E+02
1312     0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.1900000000000E+02
...
3016     0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.1900000000000E+02
+++
76 445 6 0.00000000E+00 0.86400000E+05

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Input for Problem 3C (p3c.txt)

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NAPL Spill Experiment #1
ROCKS---1---*---2---*---3---*---4---*---5---*---6---*---7---*---8
S100% 1 2650. 0.400 1.0e-11 1.0e-11 1.e-11 3. 1000.
0. 0. 2.85 0.0
TOPBC 1 2650. 0.400 1.0e-11 1.0e-11 1.e-11 3. 1000.
0. 0. 2.85 0.0
SC30% 1 2650. 0.350 1.0e-12 1.0e-12 1.e-12 3. 1000.
0. 0. 2.85 0.0
SC60% 1 2650. 0.350 5.0e-13 5.0e-13 5.e-13 3. 1000.
0. 0. 2.85 0.0
C100% 1 2650. 0.050 1.0e-18 1.0e-18 1.e-18 3. 1000.
0. 0. 2.85 0.0
PLAST 1 2650. 0.000 0.0e-11 0.0e-11 0.e-11 3. 1000.
0. 0. 2.85 0.0
*****
***** Data block 'CHEMP' for VOC chemical parameters *****
*****
--TCRIT--1--PCRIT--2--ZCRIT--3--OMEGA--4--DIPOLM-5
--TBOIL--1--VPA--2--VPB--3--VPC--4--VPD--5
--AMO--1--CPA--2--CPB--3--CPC--4--CPD--5
--RHOREF--1--TDENRF--2--DIFV0--3--TDIFRF--4--TEXPO--5
--VLOA--1--VLOB--2--VLOC--3--VL0D--4--VOLCRT-5
--SOLA--1--SOLB--2--SOLC--3--SOLD--4
--OCK--1--FOX--2--ALAM--3
***** End of data block 'CHEMP' *****
CHEMP---1---Tetrachloroethylene---4---*---5---*---6---*---7---*---8
620.2 47.6 0.250 0.000 0.0
394.4 -7.36067 1.82732 -3.47735 -1.00033
165.8340.4597E+020.2255E+00-.2294E-030.8382E-07
1620. 293.00 0.736E-05 293.00 1.92
0.0000E+000.0000E+000.9000E+000.2931E+03 289.6
0.218E-04 0.000E+00 0.000E+00 0.000E+00
0.364E+00 0.001

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PROPERTIES OF VOLATILE ORGANIC COMPOUND

TCRIT = 0.62020E+03 FCRIT = 0.47600E+02 ZCRIT = 0.25000E+00 OMEGA = 0.00000E+00 DIPOLM= 0.00000E+00
 TBOIL = 0.39440E+03 VFA = -0.73607E+01 VPB = 0.18273E+01 VPC = -0.34773E+01 VPD = -0.10003E+01
 AMO = 0.16583E+03 CPA = 0.45970E+02 CFB = 0.22550E+00 CPC = -0.22940E+03 CPD = 0.83620E+07
 RHORF= 0.16200E+04 TDENRF= 0.29300E+03 DIFVO = 0.73600E-05 TDIFRF= 0.29300E+03 TEXPO = 0.19200E+01
 VLOA = 0.00000E+00 VLOB = 0.00000E+00 VL0C = 0.90000E+00 VL0D = 0.29310E+03 VOLCRT= 0.28960E+03
 SOLA = 0.21800E-04 SOLB = 0.00000E+00 SOLC = 0.00000E+00 SOLD = 0.00000E+00
 OCK = 0.36400E+00 PCX = 0.10000E-02 ALAM = 0.00000E+00

***** VOLUME- AND MASS-BALANCES *****
 ***** [KCYC,ITER] = [76, 0] ***** THE TIME IS 0.86400E+05 SECONDS, OR 0.10000E+01 DAYS

PHASES PRESENT				COMPONENT MASS IN PLACE (KG)			
PHASES	* GAS	AQUEOUS	NAPL	COMPONENTS	* WATER	AIR	VOC
VOLUME (M ³)	* 0.66267962E-01	0.32544100E+00	0.53248912E-01	GAS PHASE	* 0.10803110E-02	0.78215134E-01	0.57812178E-03
MASS (KG)	* 0.79873569E-01	0.32497180E+03	0.86329119E+02	AQUEOUS	* 0.32494716E+03	0.51470915E-02	0.19494471E-01
				NAPL	* 0.00000000E+00	0.14492538E-03	0.86328974E+02
				ADSORBED	* 0.00000000E+00	0.00000000E+00	0.50953212E-01
				TOTAL	* 0.32494824E+03	0.83507151E-01	0.86400000E+02

12 1 (77, 4) ST = 0.864100E+05 DT = 0.100000E+02 DX1= -.984494E+03 DX2= 0.165323E-01 T = 19.000 P = 104209. S = 0.000000E+00
 12 1 (78, 3) ST = 0.864300E+05 DT = 0.200000E+02 DX1= -.961441E+02 DX2= 0.197316E-01 T = 19.000 P = 104113. S = 0.000000E+00
 11 1 (79, 4) ST = 0.864700E+05 DT = 0.400000E+02 DX1= -.640150E+02 DX2= 0.109614E-01 T = 19.000 P = 103375. S = 0.000000E+00
 10 1 (80, 4) ST = 0.865500E+05 DT = 0.800000E+02 DX1= -.561209E+02 DX2= 0.780294E-02 T = 19.000 P = 102656. S = 0.000000E+00
 8 3 (81, 4) ST = 0.867100E+05 DT = 0.160000E+03 DX1= -.172754E+02 DX2= 0.317066E-03 T = 19.000 P = 101302. S = 0.460205E-01
 9 2 (82, 4) ST = 0.870300E+05 DT = 0.320000E+03 DX1= -.583843E+02 DX2= 0.693922E-02 T = 19.000 P = 101878. S = 0.000000E+00
 1315 (83, 4) ST = 0.876700E+05 DT = 0.640000E+03 DX1= -.155475E+01 DX2= -.332093E-03 T = 19.000 P = 101304. S = 0.463887E-01
 \$\$\$\$\$\$ (7) NAPL EVOLVES AT ELEMENT 2410 ***** FVO = 0.194214E-04 PSATO = 0.174399E-04 XMOLOW = 0.242769E-04
 2410 (84, 5) ST = 0.889500E+05 DT = 0.128000E+04 DX1= -.477763E+02 DX2= -.490001E+02 T = 19.000 P = 106299. S = 0.000000E+00
 \$\$\$\$\$\$ (7) NAPL EVOLVES AT ELEMENT 25 7 ***** FVO = 0.313469E+04 PSATO = 0.174399E-04 XMOLOW = 0.391838E-04
 \$\$\$\$\$\$ (7) NAPL EVOLVES AT ELEMENT 26 4 ***** FVO = 0.246516E+04 PSATO = 0.174399E-04 XMOLOW = 0.308146E-04
 27 4 (85, 5) ST = 0.902300E+05 DT = 0.128000E+04 DX1= -.397485E+02 DX2= 0.180932E-13 T = 19.000 P = 107454. S = 0.000000E+00
 \$\$\$\$\$\$ (7) NAPL EVOLVES AT ELEMENT 2411 ***** FVO = 0.421428E+04 PSATO = 0.174399E-04 XMOLOW = 0.526788E-04
 2411 (86, 5) ST = 0.915100E+05 DT = 0.128000E+04 DX1= 0.125269E+02 DX2= -.490006E+02 T = 19.000 P = 106267. S = 0.000000E+00
 @@@@@@ (10) GAS PHASE DISAPPEARS AT ELEMENT 11 4 *** SW = 0.60920549E+00 SO = 0.39085350E+00

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11 5 (121, 6) ST = 0.280950E+06 DT = 0.204800E+05 DX1= 0.120724E+00 DX2= -.502674E-03 T = 19.000 P = 101305. S = 0.140879E+00
 11 1 (122, 4) ST = 0.301430E+06 DT = 0.204800E+05 DX1= 0.381822E-01 DX2= -.171826E-03 T = 19.000 P = 101305. S = 0.142255E+00
 2 2 (123, 4) ST = 0.342390E+06 DT = 0.409600E+05 DX1= 0.310530E-02 DX2= -.412806E-04 T = 19.000 P = 101303. S = 0.327793E+00
 3 9 (124, 4) ST = 0.424310E+06 DT = 0.819200E+05 DX1= 0.899697E-04 DX2= -.193902E-05 T = 19.000 P = 101301. S = 0.563412E+00
 11 5 (125, 4) ST = 0.588150E+06 DT = 0.163840E+06 DX1= 0.718553E-03 DX2= -.327556E-05 T = 19.000 P = 101305. S = 0.143599E+00
 11 5 (126, 4) ST = 0.915830E+06 DT = 0.327680E+06 DX1= -.111477E-03 DX2= 0.398025E-06 T = 19.000 P = 101305. S = 0.143684E+00
 2 5 (127, 4) ST = 0.120960E+07 DT = 0.293770E+06 DX1= 0.149213E-05 DX2= 0.217476E-07 T = 19.000 P = 101300. S = 0.588316E+00

NAPL Spill Experiment #1

OUTPUT DATA AFTER (127, 4)-2-TIME STEPS THE TIME IS 0.14000E+02 DAYS

 TOTAL TIME KCYC ITER ITERC KON DX1M DX2M DX3M MAX. RES. NER KER DELTEX
 0.12096E+07 127 4 723 2 0.10856E+03 0.25757E-01 0.23289E-03 0.16659E-08 5 2 0.29377E+06

ELEM INDEX	P (PA)	T (DEG.C)	SO	SW	SG	PVOC (PA)	PAIR (PA)	PSATO (PA)	PSATW (PA)	PCO (PA)	PCW (PA)	
2 1	1	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	4.	99100.	1744.	2196.	-1.	-4941.
2 2	2	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	4.	99100.	1744.	2196.	-1.	-4941.
2 3	3	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	4.	99101.	1744.	2196.	-1.	-4941.
2 4	4	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	4.	99101.	1744.	2196.	-1.	-4941.
2 5	5	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	3.	99102.	1744.	2196.	-1.	-4941.
2 6	6	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	2.	99102.	1744.	2196.	-1.	-4941.
2 7	7	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	2.	99103.	1744.	2196.	-1.	-4941.
2 8	8	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	1.	99103.	1744.	2196.	-1.	-4941.
2 9	9	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	1.	99104.	1744.	2196.	-1.	-4941.
210	10	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	1.	99104.	1744.	2196.	-1.	-4941.
211	11	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99104.	1744.	2196.	-1.	-4941.
212	12	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99104.	1744.	2196.	-1.	-4941.
213	13	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1.	-4941.
214	14	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1.	-4941.
215	15	101300.	19.000	0.0000E+00	0.4117E+00	0.5883E+00	0.	99105.	1744.	2196.	-1.	-4941.
216	16	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.
3 1	17	101301.	19.000	0.0000E+00	0.4366E+00	0.5634E+00	16.	99089.	1744.	2196.	0.	-4550.

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NAPL Spill Experiment #1											
KCYC = 127 - ITER = 4 - TIME = 0.12096E+07											
ELEM INDEX	CVOCGAS (KG/M**3)	CVOCQAQ. (KG/M**3)	DGAS (KG/M**3)	DNAPL (KG/M**3)	VISGAS (KG/M*S)	VISNAPL (KG/M*S)	DIFFO (M**2/S)	DIFFW (M**2/S)	KRGAS	KRAQ.	KRNAPL
2 1	1 0.2764E-03	0.4652E-03	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
2 2	2 0.2852E-03	0.4799E-03	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2653E+00	0.4154E-01	0.0000E+00
...											
11 1	145 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3279E-02	0.4832E+00	0.2509E-07
11 2	146 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3279E-02	0.4832E+00	0.2505E-07
11 3	147 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3279E-02	0.4832E+00	0.2498E-07
11 4	148 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3279E-02	0.4832E+00	0.2482E-07
11 5	149 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3279E-02	0.4832E+00	0.2146E-07
11 6	150 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3279E-02	0.4832E+00	0.2140E-07
11 7	151 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3279E-02	0.4832E+00	0.2138E-07
11 8	152 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3279E-02	0.4832E+00	0.2136E-07
11 9	153 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3279E-02	0.4832E+00	0.2135E-07
1110	154 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3279E-02	0.4832E+00	0.2133E-07
1111	155 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.3279E-02	0.4832E+00	0.2131E-07
1112	156 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
1113	157 0.8288E-12	0.1395E-11	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.8511E-02	0.4832E+00	0.0000E+00
1114	158 0.9580E-14	0.1612E-13	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.8511E-02	0.4832E+00	0.0000E+00
1115	159 0.9516E-16	0.1601E-15	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.8511E-02	0.4832E+00	0.0000E+00
1116	160 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
12 1	161 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.5512E+00	0.3586E-02
12 2	162 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.5512E+00	0.3586E-02
12 3	163 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.5512E+00	0.3586E-02
12 4	164 0.0000E+00	0.2004E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.5512E+00	0.3586E-02
...											
12 5	165 0.1191E+00	0.2004E+00	0.1299E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.9374E-08	0.5512E+00	0.3116E-02
12 6	166 0.1191E+00	0.2004E+00	0.1299E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8515E-08	0.5512E+00	0.3118E-02
12 7	167 0.1191E+00	0.2004E+00	0.1299E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.6103E-08	0.5512E+00	0.3126E-02
12 8	168 0.1191E+00	0.2004E+00	0.1299E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.5950E-08	0.5512E+00	0.3126E-02
12 9	169 0.1191E+00	0.2004E+00	0.1299E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.5975E-08	0.5512E+00	0.3126E-02
1210	170 0.1191E+00	0.2004E+00	0.1299E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.6018E-08	0.5512E+00	0.3126E-02
1211	171 0.1191E+00	0.2004E+00	0.1299E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.6127E-08	0.5512E+00	0.3125E-02
1212	172 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
1213	173 0.2112E-14	0.3554E-14	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1977E-02	0.6436E+00	0.0000E+00
1214	174 0.2030E-16	0.3416E-16	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1977E-02	0.6436E+00	0.0000E+00
1215	175 0.1821E-18	0.3065E-18	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1977E-02	0.6436E+00	0.0000E+00
1216	176 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00

13 1	177 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.4583E+00	0.7374E-02
13 2	178 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.4583E+00	0.7374E-02
13 3	179 0.0000E+00	0.2004E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.4583E+00	0.7374E-02
13 4	180 0.1191E+00	0.2004E+00	0.1306E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.4583E+00	0.7195E-02
13 5	181 0.1191E+00	0.2004E+00	0.1306E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.1764E-08	0.4583E+00	0.6675E-02
13 6	182 0.1191E+00	0.2004E+00	0.1306E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.1588E-08	0.4583E+00	0.6675E-02
13 7	183 0.1191E+00	0.2004E+00	0.1306E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8999E-09	0.4583E+00	0.6668E-02
13 8	184 0.1191E+00	0.2004E+00	0.1306E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8367E-09	0.4583E+00	0.6668E-02
13 9	185 0.1191E+00	0.2004E+00	0.1306E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8396E-09	0.4583E+00	0.6668E-02
1310	186 0.1191E+00	0.2004E+00	0.1306E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8440E-09	0.4583E+00	0.6667E-02
1311	187 0.1191E+00	0.2004E+00	0.1306E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8565E-09	0.4583E+00	0.6667E-02
1312	188 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
1313	189 0.1983E-17	0.3337E-17	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1450E-03	0.8210E+00	0.0000E+00
1314	190 0.1618E-19	0.2724E-19	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1450E-03	0.8210E+00	0.0000E+00
1315	191 0.1314E-21	0.2214E-21	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1450E-03	0.8210E+00	0.0000E+00
1316	192 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00

NAPL Spill Experiment #1											
KCYC = 127 - ITER = 4 - TIME = 0.12096E+07											
ELEM1	ELEM2	INDEX	FLOH (W)	FLO(GAS) (KG/S)	FLO(AQ.) (KG/S)	FLO(NAPL) (KG/S)	FLO(VOC)GAS (KG/S)	FLO(VOC)WAT (KG/S)	VEL(GAS) (M/S)	VEL(AQ.) (M/S)	VEL(NAPL) (M/S)
1	1	1	2	1	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
2	1	2	2	2	0.8919E-06	0.2486E-12	0.1077E-10	0.0000E+00	0.5917E-16	0.5177E-17	0.8773E-10
3	1	3	2	3	0.3067E-05	0.5118E-12	0.3760E-10	0.0000E+00	0.4667E-15	0.6928E-16	0.1885E-09
4	1	4	2	4	0.5839E-05	0.2686E-12	0.7275E-10	0.0000E+00	0.8152E-15	0.4468E-15	0.1040E-09
5	1	5	2	5	0.9157E-05	0.6649E-12	0.1159E-09	0.0000E+00	0.5886E-14	0.2120E-14	-0.2723E-09
6	1	6	2	6	0.1215E-04	-0.2397E-11	0.1564E-09	0.0000E+00	-0.5553E-13	0.7514E-14	-0.1045E-08
7	1	7	2	7	0.1222E-04	-0.4392E-11	0.1608E-09	0.0000E+00	-0.2253E-12	0.1742E-13	-0.2053E-08
8	1	8	2	8	0.5714E-05	-0.3131E-11	0.7723E-10	-0.1696E-17	-0.2876E-12	0.1549E-13	-0.1833E-08
9	1	9	2	9	-0.6812E-05	-0.2354E-11	-0.8118E-10	-0.7045E-17	-0.2162E-12	-0.1629E-13	-0.1653E-08
10	1	10	2	10	-0.2119E-04	-0.1194E-11	-0.2635E-09	-0.1663E-16	-0.1097E-12	-0.5286E-13	-0.1082E-08
11	1	11	2	11	-0.4219E-04	-0.3649E-12	-0.5282E-09	-0.6750E-16	-0.3352E-13	-0.1060E-12	-0.4874E-09
12	1	12	2	12	-0.3287E-04	0.0000E+00	-0.4088E-09	-0.2071E-10	0.0000E+00	-0.8201E-13	0.0000E+00
13	1	13	2	13	0.1075E-04	0.0000E+00	0.1405E-09	-0.3542E-10	0.0000E+00	0.2818E-13	0.0000E+00
14	1	14	2	14	0.3711E-04	0.0000E+00	0.4746E-09	-0.5858E-10	0.0000E+00	0.9523E-13	0.0000E+00
15	1	15	2	15	0.5957E-05	0.0000E+00	0.7608E-10	-0.8783E-11	0.0000E+00	0.1526E-13	0.0000E+00
16	1	16	2	16	0.2833E-05	0.0000E+00	0.3665E-10	-0.7827E-11	0.0000E+00	0.7352E-14	0.0000E+00
17	1	17	2	17	0.1160E-05	0.0000E+00	0.1557E-10	-0.6411E-11	0.0000E+00	0.3123E-14	0.0000E+00
18	1	18	2	18	0.4361E-06	0.0000E+00	0.6357E-11	-0.5524E-11	0.0000E+00	0.1275E-14	0.0000E+00
19	1	19	2	19	0.1274E-06	0.0000E+00	0.2468E-11	-0.5402E-11	0.0000E+00	0.4951E-15	0.0000E+00
20	1	20	2	20	-0.7654E-08	0.0000E+00	0.8788E-12	-0.6049E-11	0.0000E+00	0.1763E-15	0.0000E+00
21	1	21	2	21	-0.5308E-07	0.0000E+00	-0.6476E-13	-0.3727E-11	0.0000E+00	0.1299E-16	0.0000E+00
22	1	22	2	22	-0.9015E-07	0.0000E+00	-0.3270E-12	-0.4984E-11	0.0000E+00	-0.6560E-16	0.0000E+00
23	1	23	2	23	-0.1211E-06	0.0000E+00	-0.4580E-12	-0.6576E-11	0.0000E+00	-0.9188E-16	0.0000E+00
24	1	24	2	24	-0.1471E-06	0.0000E+00	-0.4884E-12	-0.8414E-11	0.0000E+00	-0.9800E-16	0.0000E+00
25	1	25	2	25	-0.1668E-06	0.0000E+00	-0.4167E-12	-0.1039E-10	0.0000E+00	-0.8359E-16	0.0000E+00
26	1	26	2	26	-0.1778E-06	0.0000E+00	-0.2259E-12	-0.1241E-10	0.0000E+00	-0.4533E-16	0.0000E+00
27	1	27	2	27	-0.7307E-08	0.0000E+00	0.9159E-13	-0.1147E-18	0.0000E+00	0.1838E-16	0.0000E+00
28	1	28	2	28	-0.1426E-04	0.0000E+00	-0.1788E-09	0.0000E+00	0.0000E+00	-0.3926E-15	0.0000E+00
29	1	29	2	29	-0.1435E-04	0.0000E+00	-0.1798E-09	0.0000E+00	0.0000E+00	-0.1780E-18	0.0000E+00
30	1	30	2	30	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

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NAPL Spill Experiment #1											
KCYC = 127 - ITER = 4 - TIME = 0.12096E+07											
ELEM1	ELEM2	INDEX	FLOH (W)	FLO(GAS) (KG/S)	FLO(AQ.) (KG/S)	FLO(NAPL) (KG/S)	FLO(VOC)GAS (KG/S)	FLO(VOC)WAT (KG/S)	VEL(GAS) (M/S)	VEL(AQ.) (M/S)	VEL(NAPL) (M/S)
1	1	2	1	451	-0.3103E-04	-0.1256E-10	-0.3683E-09	0.0000E+00	0.0000E+00	0.0000E+00	-0.8695E-08
2	1	3	1	452	-0.3192E-04	-0.1282E-10	-0.3791E-09	0.0000E+00	-0.2957E-14	-0.1766E-15	-0.9043E-08
3	1	4	1	453	-0.3499E-04	-0.1334E-10	-0.4167E-09	0.0000E+00	-0.1182E-13	-0.7457E-15	-0.9820E-08
4	1	5	1	454	-0.4083E-04	-0.1363E-10	-0.4894E-09	0.0000E+00	-0.4040E-13	-0.2935E-14	-0.1055E-07
5	1	6	1	455	-0.5000E-04	-0.1305E-10	-0.6052E-09	0.0000E+00	-0.1155E-12	-0.1090E-13	-0.1068E-07
6	1	7	1	456	-0.6220E-04	-0.1084E-10	-0.7615E-09	0.0000E+00	-0.2511E-12	-0.3631E-13	-0.9448E-08
7	1	8	1	457	-0.7449E-04	-0.6759E-11	-0.9221E-09	0.0000E+00	-0.3467E-12	-0.9970E-13	-0.6315E-08
8	1	9	1	458	-0.8030E-04	-0.3930E-11	-0.9903E-09	0.0000E+00	-0.1399E-11	-0.3610E-12	-0.2005E-12
9	1	10	1	459	-0.7351E-04	-0.1574E-11	-0.9180E-09	-0.4395E-11	-0.1445E-12	-0.1842E-12	-0.2209E-08
10	1	11	1	460	-0.5237E-04	-0.3761E-12	-0.6544E-09	-0.9191E-11	-0.3455E-13	-0.1333E-12	-0.6818E-09
11	1	12	1	461	-0.1035E-04	0.0000E+00	-0.1260E-09	-0.2348E-10	0.0000E+00	-0.2528E-13	0.0000E+00
12	1	13	1	462	0.2934E-04	0.0000E+00	0.3986E-09	-0.1908E-09	0.0000E+00	0.7997E-13	0.0000E+00
13	1	14	1	463	0.2517E-04	0.0000E+00	0.3698E-09	-0.3367E-09	0.0000E+00	0.7420E-13	0.0000E+00
14	1	15	1	464	-0.5744E-05	0.0000E+00	0.3043E-12	-0.4488E-09	0.0000E+00	0.6106E-16	0.0000E+00
15	1	16	1	465	-0.6688E-05	0.0000E+00	0.9319E-11	-0.5781E-09	0.0000E+00	0.1870E-14	0.0000E+00
16	1	17	1	466	-0.5256E-05	0.0000E+00	0.4492E-10	-0.6876E-09	0.0000E+00	0.9012E-14	0.0000E+00
17	1	18	1	467	-0.2783E-05	0.0000E+00	0.9101E-10	-0.7813E-09	0.0000E+00	0.1826E-13	0.0000E+00
18	1	19	1	468	-0.1003E-06	0.0000E+00	0.1376E-09	-0.8617E-09	0.0000E+00	0.2761E-13	0.0000E+00
19	1	20	1	469	0.2466E-05	0.0000E+00	0.1809E-09	-0.9305E-09	0.0000E+00	0.3628E-13	0.0000E+00
20	1	21	1	470	0.4811E-05	0.0000E+00	0.2197E-09	-0.9889E-09	0.0000E+00	0.4407E-13	0.0000E+00
21	1	22	1	471	0.6856E-05	0.0000E+00	0.2535E-09	-0.1040E-08	0.0000E+00	0.5087E-13	0.0000E+00
22	1	23	1	472	0.8599E-05	0.0000E+00	0.2819E-09	-0.1081E-08	0.0000E+00	0.5656E-13	0.0000E+00
23	1	24	1	473	0.1010E-04	0.0000E+00	0.3058E-09	-0.1122E-08	0.0000E+00	0.6135E-13	0.0000E+00
24	1	25	1	474	0.1141E-04	0.0000E+00	0.3260E-09	-0.1136E-08	0.0000E+00	0.6541E-13	0.0000E+00
25	1	26	1	475	0.1257E-04	0.0000E+00	0.3433E-09	-0.1153E-08	0.0000E+00	0.6888E-13	0.0000E+00
26	1	27	1	476	0.1362E-04	0.0000E+00	0.3584E-09	-0.1164E-08	0.0000E+00	0.7190E-13	0.0000E+00
27	1	28	1	477	-0.2861E-04	0.0000E+00	-0.3585E-09	-0.7594E-12	0.0000E+00	-0.7192E-13	0.0000E+00
28	1	29	1	478	-0.1435E-04	0.0000E+00	-0.1798E-09	0.0000E+00	0.0000E+00	-0.3950E-15	0.0000E+00
29	1	30	1	479	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

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***** VOLUME- AND MASS-BALANCES *****
***** [KCYC,ITER] = [ 127,  4] *****          THE TIME IS  0.12096E+07 SECONDS, OR  0.14000E+02 DAYS

      PHASES PRESENT
*****
      PHASES      *      GAS      AQUEOUS      NAPL
*****
      VOLUME (M^3) * 0.73797139E-01 0.31792070E+00 0.53240035E-01
      MASS (KG)   * 0.89558205E-01 0.31746336E+03 0.86314727E+02
*****

      COMPONENT MASS IN PLACE (KG)
*****
      COMPONENTS *      WATER      AIR      VOC
*****
      PHASES      *
      GAS PHASE   * 0.12030551E-02 0.86953578E-01 0.14015720E-02
      AQUEOUS     * 0.31743626E+03 0.50353394E-02 0.22067146E-01
      NAPL        * 0.00000000E+00 0.14876251E-03 0.86314578E+02
      ADSORBED    * 0.00000000E+00 0.00000000E+00 0.61952770E-01
      TOTAL       * 0.31743746E+03 0.92137680E-01 0.86400000E+02
*****

      WRITE FILE *SAVE* AFTER 127 TIME STEPS --- THE TIME IS 0.120960E+07 SECONDS
      --
      END OF TOUGH2 SIMULATION RUN --- ELAPSED TIME = 238.740 SEC-- CALCULATION TIME = 238.140 SEC-- DATA INPUT TIME = 0.600 SEC

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Input for Problem 3D (p3d_0.txt)

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NAPL Spill Experiment #1
ROCKS---1---*---2---*---3---*---4---*---5---*---6---*---7---*---8
S100%  1  2650.  0.400  1.0e-11  1.0e-11  1.e-11  3.  1000.
      0.  0.  2.85  0.0
TOPBC  1  2650.  0.400  1.0e-11  1.0e-11  1.e-11  3.  1000.
      0.  0.  2.85  0.0
SC30%  1  2650.  0.350  1.0e-12  1.0e-12  1.e-12  3.  1000.
      0.  0.  2.85  0.0
SC60%  1  2650.  0.350  5.0e-13  5.0e-13  5.e-13  3.  1000.
      0.  0.  2.85  0.0
C100%  1  2650.  0.050  1.0e-18  1.0e-18  1.e-18  3.  1000.
      0.  0.  2.85  0.0
PLAST  1  2650.  0.000  0.0e-11  0.0e-11  0.e-11  3.  1000.
      0.  0.  2.85  0.0
*****
***** Data block 'CHEMP' for VOC chemical parameters *****
*****
--TCRIT--1--PCRIT--2--ZCRIT--3--OMEGA--4--DIPOLM--5
--TBOIL--1--VPA--2--VPB--3--VPC--4--VPD--5
--AMO--1--CPA--2--CPB--3--CPC--4--CPD--5
--RHOREF--1--TDENRF--2--DIFV0--3--TDIFRF--4--TEXPO--5
--VLOA--1--VLOB--2--VLOC--3--VL0D--4--VOLCRT--5
--SOLA--1--SOLB--2--SOLC--3--SOLD--4
--OCK--1--FOX--2--ALAM--3
*****
***** End of data block 'CHEMP' *****
CHEMP---1--Tetrachloroethylene---*---4---*---5---*---6---*---7---*---8
      620.2  47.6  0.250  0.000  0.0
      394.4 -7.36067 1.82732 -3.47735 -1.00033
      165.8340.4597E+020.2255E+00-.2294E-030.8382E-07
      1620. 293.00 0.736E-05 293.00 1.92
0.0000E+000.0000E+000.9000E+000.2931E+03 289.6
0.218E-04 0.000E+00 0.000E+00 0.000E+00
0.364E+00 0.001

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PROPERTIES OF VOLATILE ORGANIC COMPOUND

TCRIT = 0.62020E+03 FCRIT = 0.47600E+02 ZCRIT = 0.25000E+00 OMEGA = 0.00000E+00 DIPOLM= 0.00000E+00
 TBOIL = 0.39440E+03 VFA = -0.73607E+01 VPB = 0.18273E+01 VPC = -0.34773E+01 VPD = -0.10003E+01
 AMO = 0.16583E+03 CPA = 0.45970E+02 CFB = 0.22550E+00 CPC = -0.22940E+03 CPD = 0.83820E+07
 RHORF= 0.16200E+04 TDENRF= 0.29300E+03 DIFVO = 0.73600E-05 TDIFRF= 0.29300E+03 TEXPO = 0.19200E+01
 VLQA = 0.00000E+00 VLOB = 0.00000E+00 VLOC = 0.90000E+00 VLQD = 0.29310E+03 VOLCRT= 0.28960E+03
 SOLA = 0.21800E-04 SOLB = 0.00000E+00 SOLC = 0.00000E+00 SOLD = 0.00000E+00
 OCK = 0.36400E+00 PCX = 0.10000E-02 ALAM = 0.00000E+00

VOLUME AND MASS-BALANCES

THE TIME IS 0.12096E+07 SECONDS, OR 0.14000E+02 DAYS

PHASES PRESENT

COMPONENT MASS IN PLACE (KG)

PHASES	* GAS	AQUEOUS	NAPL	COMPONENTS	* WATER	AIR	VOC
VOLUME (M ³)	* 0.73797139E-01	0.31792070E+00	0.53240035E-01	GAS PHASE	* 0.12030551E-02	0.86953578E-01	0.14015720E-02
MASS (KG)	* 0.89558205E-01	0.31746136E+03	0.86314727E+02	AQUEOUS	* 0.31743626E+03	0.50353394E-02	0.22067146E-01
				NAPL	* 0.00000000E+00	0.14876251E-03	0.86314578E+02
				ADSORBED	* 0.00000000E+00	0.00000000E+00	0.61952770E-01
				TOTAL	* 0.31743746E+03	0.92137680E-01	0.86400000E+02

24 1 (128, 4) ST = 0.120961E+07 DT = 0.100000E+02 DX1= 0.113848E+05 DX2= 0.122993E-01 T = 26.091 P = 120539. S = 0.000000E+00
 24 1 (129, 3) ST = 0.120963E+07 DT = 0.200000E+02 DX1= -.918879E+03 DX2= 0.199706E-01 T = 39.348 P = 119620. S = 0.000000E+00
 1114 (130, 4) ST = 0.120967E+07 DT = 0.400000E+02 DX1= 0.173648E-01 DX2= 0.940800E-07 T = 19.000 P = 101305. S = 0.193751E+00
 \$\$\$\$\$\$ (8) GAS PHASE EVOLVES AT ELEMENT 24 1 ***** FX = 0.116679E+06 PHUB = 0.218969E+06
 \$\$\$\$\$\$ (8) GAS PHASE EVOLVES AT ELEMENT 25 1 ***** FX = 0.118119E+06 PHUB = 0.243169E+06
 \$\$\$\$\$\$ (8) GAS PHASE EVOLVES AT ELEMENT 26 1 ***** FX = 0.119182E+06 PHUB = 0.220567E+06
 \$\$\$\$\$\$ (10) GAS PHASE DISAPPEARS AT ELEMENT 15 3 *** SW = 0.71025463E+00 SO = 0.28974720E+00
 \$\$\$\$\$\$ (8) GAS PHASE EVOLVES AT ELEMENT 22 1 ***** FX = 0.118980E+06 PHUB = 0.120610E+06
 \$\$\$\$\$\$ (8) GAS PHASE EVOLVES AT ELEMENT 23 1 ***** FX = 0.125480E+06 PHUB = 0.297068E+06
 \$\$\$\$\$\$ (8) GAS PHASE EVOLVES AT ELEMENT 25 2 ***** FX = 0.130530E+06 PHUB = 0.166848E+06
 \$\$\$\$\$\$ (10) GAS PHASE DISAPPEARS AT ELEMENT 22 1 *** SW = 0.50657008E+00 SO = 0.49449660E+00
 \$\$\$\$\$\$ (10) GAS PHASE DISAPPEARS AT ELEMENT 25 2 *** SW = 0.48095837E+00 SO = 0.52075181E+00
 \$\$\$\$\$\$ (10) GAS PHASE DISAPPEARS AT ELEMENT 23 1 *** SW = 0.50973603E+00 SO = 0.49139826E+00
 26 1 (131, 8) ST = 0.120975E+07 DT = 0.800000E+02 DX1= 0.292646E+05 DX2= -.108131E+00 T = 99.154 P = 150821. S = 0.330218E+00
 \$\$\$\$\$\$ (10) NAPL DISAPPEARS AT ELEMENT 24 1 *** SW = 0.16257327E+00 SG = 0.89991774E+00
 \$\$\$\$\$\$ (10) NAPL DISAPPEARS AT ELEMENT 26 1 *** SW = 0.10726818E+00 SG = 0.10187994E+01
 \$\$\$\$\$\$ (8) GAS PHASE EVOLVES AT ELEMENT 15 3 ***** FX = 0.103879E+06 PHUB = 0.103901E+06

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\$\$\$\$\$ (10) NAPL DISAPPEARS AT ELEMENT 24 3 *** SW = 0.34389193E+00 SG = 0.72810948E+00
 24 3 (164, 6) ST = 0.121255E+07 DT = 0.160000E+03 DX1= -.333958E+04 DX2= 0.437666E-01 T = 99.398 P = 115184. S = 0.619536E+00
 \$\$\$\$\$\$ (10) NAPL DISAPPEARS AT ELEMENT 26 3 *** SW = 0.34171340E+00 SG = 0.68180787E+00
 25 3 (165, 5) ST = 0.121271E+07 DT = 0.160000E+03 DX1= -.545575E+03 DX2= -.240776E-02 T = 104.071 P = 118390. S = 0.669514E+00
 26 3 (166, 7) ST = 0.121287E+07 DT = 0.160000E+03 DX1= -.358096E+04 DX2= 0.669426E-01 T = 102.519 P = 115205. S = 0.580906E+00
 \$\$\$\$\$\$ (8) GAS PHASE EVOLVES AT ELEMENT 21 2 ***** FX = 0.111200E+06 PHUB = 0.119210E+06
 \$\$\$\$\$\$ (8) GAS PHASE EVOLVES AT ELEMENT 22 3 ***** FX = 0.112487E+06 PHUB = 0.126074E+06
 \$\$\$\$\$\$ (7) GAS PHASE EVOLVES AT ELEMENT 28 1 ***** FX = 0.106582E+06 PHUB = 0.106715E+06
 \$\$\$\$\$\$ (8) GAS PHASE EVOLVES AT ELEMENT 23 4 ***** FX = 0.113309E+06 PHUB = 0.113881E+06
 \$\$\$\$\$\$ (10) GAS PHASE DISAPPEARS AT ELEMENT 23 4 *** SW = 0.52566577E+00 SO = 0.47437164E+00
 24 3 (167, 5) ST = 0.121303E+07 DT = 0.160000E+03 DX1= 0.203994E+04 DX2= -.123572E-01 T = 104.368 P = 118182. S = 0.639254E+00
 \$\$\$\$\$\$ (10) GAS PHASE DISAPPEARS AT ELEMENT 21 2 *** SW = 0.53663121E+00 SO = 0.46366823E+00
 \$\$\$\$\$\$ (8) GAS PHASE EVOLVES AT ELEMENT 23 4 ***** FX = 0.113946E+06 PHUB = 0.124446E+06
 23 2 (168, 6) ST = 0.121319E+07 DT = 0.160000E+03 DX1= 0.147708E+04 DX2= -.594945E-02 T = 105.252 P = 121858. S = 0.717356E+00
 23 3 (169, 3) ST = 0.121320E+07 DT = 0.100000E+02 DX1= 0.132085E+03 DX2= -.352112E-02 T = 91.987 P = 117103. S = 0.333219E+00

NAPL Spill Experiment #1

OUTPUT DATA AFTER (169, 3)-2-TIME STEPS

THE TIME IS 0.14042E+02 DAYS

 TOTAL TIME KVCY ITER ITERC KON DX1M DX2M DX3M MAX. RES. NER KER DELTEX
 0.12132E+07 169 3 972 2 0.35027E+03 0.35211E-02 0.84599E-02 0.38708E-09 339 2 0.10000E+02

ELEM INDEX	P (PA)	T (DEG.C)	SO	SW	SG	PVOC (PA)	PAIR (PA)	PSATO (PA)	PSATW (PA)	PCO (PA)	PCW (PA)	
2 1	1	101300.	19.000	0.0000E+00	0.4139E+00	0.5861E+00	5.	99099.	1744.	2196.	-1.	-4904.
2 2	2	101300.	19.000	0.0000E+00	0.4139E+00	0.5861E+00	5.	99099.	1744.	2196.	-1.	-4904.
2 3	3	101300.	19.000	0.0000E+00	0.4139E+00	0.5861E+00	5.	99099.	1744.	2196.	-1.	-4905.
2 4	4	101300.	19.000	0.0000E+00	0.4138E+00	0.5862E+00	5.	99100.	1744.	2196.	-1.	-4905.
2 5	5	101300.	19.000	0.0000E+00	0.4138E+00	0.5862E+00	4.	99101.	1744.	2196.	-1.	-4906.
2 6	6	101300.	19.000	0.0000E+00	0.4138E+00	0.5862E+00	3.	99102.	1744.	2196.	-1.	-4906.
2 7	7	101300.	19.000	0.0000E+00	0.4137E+00	0.5863E+00	2.	99103.	1744.	2196.	-1.	-4908.
2 8	8	101300.	19.000	0.0000E+00	0.4136E+00	0.5864E+00	2.	99103.	1744.	2196.	-1.	-4909.
2 9	9	101300.	19.000	0.0000E+00	0.4135E+00	0.5865E+00	1.	99103.	1744.	2196.	-1.	-4911.
2 10	10	101300.	19.000	0.0000E+00	0.4133E+00	0.5867E+00	1.	99104.	1744.	2196.	-1.	-4914.
2 11	11	101300.	19.000	0.0000E+00	0.4131E+00	0.5869E+00	1.	99104.	1744.	2196.	-1.	-4918.
2 12	12	101300.	19.000	0.0000E+00	0.4128E+00	0.5872E+00	0.	99105.	1744.	2196.	-1.	-4922.
2 13	13	101300.	19.000	0.0000E+00	0.4126E+00	0.5874E+00	0.	99105.	1744.	2196.	-1.	-4926.
2 14	14	101300.	19.000	0.0000E+00	0.4125E+00	0.5875E+00	0.	99105.	1744.	2196.	-1.	-4928.
2 15	15	101300.	19.000	0.0000E+00	0.4124E+00	0.5876E+00	0.	99105.	1744.	2196.	-1.	-4929.
2 16	16	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.
2 17	17	101301.	19.000	0.0000E+00	0.4429E+00	0.5571E+00	20.	99086.	1744.	2196.	0.	-4458.

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...	11 1	145	101320.	19.000	0.5007E-01	0.8536E+00	0.9636E-01	1744.	97380.	1744.	2196.	0.	-1157.
	11 2	146	101320.	19.000	0.5007E-01	0.8535E+00	0.9645E-01	1744.	97380.	1744.	2196.	0.	-1158.
	11 3	147	101320.	19.000	0.5007E-01	0.8533E+00	0.9662E-01	1744.	97380.	1744.	2196.	0.	-1159.
	11 4	148	101320.	19.000	0.5006E-01	0.8531E+00	0.9685E-01	1744.	97380.	1744.	2196.	0.	-1160.
	11 5	149	101320.	19.000	0.5006E-01	0.8528E+00	0.9709E-01	1744.	97380.	1744.	2196.	0.	-1161.
	11 6	150	101320.	19.000	0.5006E-01	0.8526E+00	0.9734E-01	1744.	97380.	1744.	2196.	0.	-1163.
	11 7	151	101320.	19.000	0.5006E-01	0.8523E+00	0.9760E-01	1744.	97380.	1744.	2196.	0.	-1164.
	11 8	152	101320.	19.000	0.5006E-01	0.8521E+00	0.9784E-01	1744.	97380.	1744.	2196.	0.	-1166.
	11 9	153	101319.	19.000	0.5006E-01	0.8519E+00	0.9806E-01	1744.	97380.	1744.	2196.	0.	-1167.
	1110	154	101319.	19.000	0.5006E-01	0.8517E+00	0.9822E-01	1744.	97380.	1744.	2196.	0.	-1168.
	1111	155	101319.	19.000	0.5006E-01	0.8516E+00	0.9831E-01	1744.	97380.	1744.	2196.	0.	-1168.
	1112	156	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.
ELEM INDEX P T SO SW SG PVOC PAIR PSATO PSATW PCO PCW													
			(PA)	(DEG.C)			(PA)	(PA)	(PA)	(PA)	(PA)	(PA)	(PA)
	1113	157	101307.	19.000	0.0000E+00	0.8122E+00	0.1878E+00	0.	99112.	1744.	2196.	0.	-1386.
	1114	158	101307.	19.000	0.0000E+00	0.8122E+00	0.1878E+00	0.	99112.	1744.	2196.	0.	-1386.
	1115	159	101307.	19.000	0.0000E+00	0.8122E+00	0.1878E+00	0.	99112.	1744.	2196.	0.	-1386.
	1116	160	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.
	12 1	161	101881.	19.001	0.1747E+00	0.8253E+00	0.0000E+00	0.	31361.	1744.	2196.	0.	-1313.
	12 2	162	101879.	19.001	0.1744E+00	0.8256E+00	0.0000E+00	0.	42330.	1744.	2196.	0.	-1312.
	12 3	163	101876.	19.000	0.1740E+00	0.8260E+00	0.0000E+00	0.	63731.	1744.	2196.	0.	-1309.
	12 4	164	101871.	19.000	0.1734E+00	0.8266E+00	0.0000E+00	0.	93920.	1744.	2196.	0.	-1306.
	12 5	165	101866.	19.000	0.1609E+00	0.8273E+00	0.1182E-01	1744.	97926.	1744.	2196.	0.	-1302.
	12 6	166	101861.	19.000	0.1604E+00	0.8278E+00	0.1178E-01	1744.	97922.	1744.	2196.	0.	-1299.
	12 7	167	101857.	19.000	0.1602E+00	0.8282E+00	0.1159E-01	1744.	97918.	1744.	2196.	0.	-1297.
	12 8	168	101854.	19.000	0.1598E+00	0.8286E+00	0.1158E-01	1744.	97914.	1744.	2196.	0.	-1295.
	12 9	169	101851.	19.000	0.1596E+00	0.8288E+00	0.1158E-01	1744.	97911.	1744.	2196.	0.	-1294.
	1210	170	101849.	19.000	0.1594E+00	0.8290E+00	0.1159E-01	1744.	97909.	1744.	2196.	0.	-1293.
	1211	171	101848.	19.000	0.1593E+00	0.8291E+00	0.1159E-01	1744.	97908.	1744.	2196.	0.	-1292.
	1212	172	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.
	1213	173	101310.	19.000	0.0000E+00	0.8824E+00	0.1176E+00	0.	99115.	1744.	2196.	0.	-998.
	1214	174	101310.	19.000	0.0000E+00	0.8824E+00	0.1176E+00	0.	99115.	1744.	2196.	0.	-998.
	1215	175	101310.	19.000	0.0000E+00	0.8824E+00	0.1176E+00	0.	99115.	1744.	2196.	0.	-998.
	1216	176	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.
	13 1	177	102553.	19.003	0.2215E+00	0.7785E+00	0.0000E+00	0.	52832.	1744.	2196.	0.	-1575.
	13 2	178	102551.	19.003	0.2212E+00	0.7788E+00	0.0000E+00	0.	64971.	1744.	2196.	0.	-1573.
	13 3	179	102546.	19.002	0.2207E+00	0.7793E+00	0.0000E+00	0.	83487.	1744.	2196.	0.	-1570.
	13 4	180	102540.	19.001	0.2172E+00	0.7801E+00	0.2704E-02	1744.	98600.	1744.	2196.	0.	-1566.
	13 5	181	102534.	19.001	0.2082E+00	0.7808E+00	0.1104E-01	1744.	98594.	1744.	2196.	0.	-1562.
	13 6	182	102528.	19.000	0.2075E+00	0.7815E+00	0.1100E-01	1744.	98588.	1744.	2196.	0.	-1558.
	13 7	183	102522.	19.000	0.2070E+00	0.7822E+00	0.1082E-01	1744.	98582.	1744.	2196.	0.	-1554.
	13 8	184	102517.	19.000	0.2065E+00	0.7827E+00	0.1080E-01	1744.	98577.	1744.	2196.	0.	-1551.
	13 9	185	102513.	19.000	0.2063E+00	0.7831E+00	0.1080E-01	1744.	98573.	1744.	2196.	0.	-1549.
	1310	186	102511.	19.000	0.2059E+00	0.7833E+00	0.1080E-01	1744.	98571.	1744.	2196.	0.	-1548.
	1311	187	102509.	19.000	0.2057E+00	0.7835E+00	0.1080E-01	1744.	98570.	1744.	2196.	0.	-1547.
	1312	188	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.
	1313	189	101325.	19.000	0.0000E+00	0.9451E+00	0.5491E-01	0.	99129.	1744.	2196.	0.	-620.
	1314	190	101325.	19.000	0.0000E+00	0.9451E+00	0.5491E-01	0.	99129.	1744.	2196.	0.	-620.
	1315	191	101325.	19.000	0.0000E+00	0.9451E+00	0.5491E-01	0.	99129.	1744.	2196.	0.	-620.
	1316	192	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.	0.	1744.	2196.	0.	0.

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24	1	353	145150.	110.389	0.0000E+00	0.1644E+00	0.8356E+00	0.	0.	74086.	145150.	-2.	-15089.
24	2	354	128339.	106.757	0.0000E+00	0.2095E+00	0.7905E+00	0.	0.	66426.	128339.	-1.	-11255.
24	3	355	119511.	104.695	0.0000E+00	0.1472E+00	0.6528E+00	0.	0.	62366.	119511.	-1.	-5948.
24	4	356	114294.	70.137	0.4576E+00	0.5424E+00	0.0000E+00	0.	60375.	18953.	31348.	0.	-3212.
24	5	357	113949.	39.329	0.4819E+00	0.5181E+00	0.0000E+00	0.	90580.	5024.	7115.	0.	-3508.
24	6	358	113488.	26.309	0.5048E+00	0.4952E+00	0.0000E+00	0.	97952.	2601.	3422.	0.	-3776.
24	7	359	113063.	21.386	0.5240E+00	0.4760E+00	0.0000E+00	0.	99018.	1992.	2545.	0.	-4011.
24	8	360	112728.	19.713	0.5356E+00	0.4644E+00	0.0000E+00	0.	99104.	1815.	2295.	0.	-4161.
24	9	361	112487.	19.197	0.5405E+00	0.4595E+00	0.0000E+00	0.	99108.	1763.	2223.	0.	-4227.
2410	362	112335.	19.051	0.5421E+00	0.4579E+00	0.0000E+00	0.0000E+00	0.	99108.	1749.	2203.	0.	-4247.
2411	363	112262.	19.012	0.5424E+00	0.4576E+00	0.0000E+00	0.0000E+00	0.	99108.	1745.	2197.	0.	-4251.
2412	364	101300.	19.003	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	0.	1744.	2196.	0.	0.
2413	365	105015.	19.001	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
2414	366	105015.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
2415	367	105015.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
2416	368	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	0.	1744.	2196.	0.	0.
25	1	369	151366.	111.645	0.0000E+00	0.1672E+00	0.8328E+00	0.	0.	76891.	151366.	-2.	-14768.
25	2	370	131789.	107.534	0.0000E+00	0.2058E+00	0.7942E+00	0.	0.	68007.	131789.	-1.	-11496.
25	3	371	121393.	105.141	0.0000E+00	0.3167E+00	0.6833E+00	0.	0.	63227.	121393.	-1.	-6705.
25	4	372	114966.	76.263	0.4582E+00	0.5418E+00	0.0000E+00	0.	48245.	23888.	40633.	0.	-3207.
25	5	373	114688.	41.610	0.4848E+00	0.5152E+00	0.0000E+00	0.	85136.	5602.	8032.	0.	-3534.
25	6	374	114263.	27.082	0.5106E+00	0.4894E+00	0.0000E+00	0.	96921.	2710.	3581.	0.	-3843.
25	7	375	113851.	21.626	0.5333E+00	0.4667E+00	0.0000E+00	0.	98918.	2019.	2582.	0.	-4130.
25	8	376	113516.	19.782	0.5480E+00	0.4520E+00	0.0000E+00	0.	99099.	1822.	2305.	0.	-4327.
25	9	377	113271.	19.215	0.5547E+00	0.4453E+00	0.0000E+00	0.	99108.	1765.	2225.	0.	-4422.
2510	378	113114.	19.055	0.5569E+00	0.4431E+00	0.0000E+00	0.0000E+00	0.	99108.	1749.	2203.	0.	-4455.
2511	379	113040.	19.013	0.5575E+00	0.4425E+00	0.0000E+00	0.0000E+00	0.	99108.	1745.	2198.	0.	-4463.
2512	380	101300.	19.003	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	0.	1744.	2196.	0.	0.
ELEM INDEX P T SO SW SG PVOC PAIR PSATO PSATW PCO PCW													
(PA) (DEG.C) (PA) (PA) (PA) (PA) (PA) (PA)													
2513	381	105407.	19.001	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
2514	382	105407.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
2515	383	105407.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
2516	384	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	0.	1744.	2196.	0.	0.
26	1	385	153546.	112.075	0.0000E+00	0.1915E+00	0.8085E+00	0.	0.	77872.	153546.	-1.	-12515.
26	2	386	132374.	107.663	0.0000E+00	0.2417E+00	0.7583E+00	0.	0.	66275.	132374.	-1.	-9425.
26	3	387	120693.	104.974	0.0000E+00	0.3857E+00	0.6143E+00	3.	0.	62902.	120690.	-1.	-5165.
26	4	388	115456.	69.078	0.4692E+00	0.5308E+00	0.0000E+00	3.	5236.	2683.	16559.	2683.	-326.
26	5	389	115392.	37.850	0.4944E+00	0.5056E+00	0.0000E+00	0.	87271.	4678.	6571.	0.	-3645.
26	6	390	114958.	25.782	0.5220E+00	0.4780E+00	0.0000E+00	0.	97155.	2529.	3317.	0.	-3981.
26	7	391	114552.	21.220	0.5459E+00	0.4541E+00	0.0000E+00	0.	98923.	1974.	2519.	0.	-4297.
26	8	392	114222.	19.665	0.5616E+00	0.4384E+00	0.0000E+00	0.	99100.	1810.	2289.	0.	-4522.
26	9	393	113978.	19.184	0.5691E+00	0.4309E+00	0.0000E+00	0.	99102.	1753.	2298.	0.	-4534.
2610	394	113820.	19.047	0.5717E+00	0.4283E+00	0.0000E+00	0.0000E+00	0.	99107.	1749.	2202.	0.	-4674.
2611	395	113745.	19.011	0.5723E+00	0.4277E+00	0.0000E+00	0.0000E+00	0.	99108.	1745.	2197.	0.	-4684.
2612	396	101300.	19.003	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	0.	1744.	2196.	0.	0.
2613	397	105799.	19.001	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
2614	398	105799.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
2615	399	105799.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	99104.	1744.	2196.	0.	0.
2616	400	101300.	19.000	0.0000E+00	0.1000E+01	0.0000E+00	0.0000E+00	0.	0.	1744.	2196.	0.	0.

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NAPL Spill Experiment #1											
KCYC = 169 - ITER = 3 - TIME = 0.12132E+07											
ELEM INDEX	CVOCGAS (KG/M**3)	CVOCQAQ. (KG/M**3)	DGAS (KG/M**3)	DNAPL (KG/M**3)	VISGAS (KG/M*S)	VISNAPL (KG/M*S)	DIFFO (M**2/S)	DIFFW (M**2/S)	KRGAS	KRAQ.	KRNAPL
2 1	1 0.3646E-03	0.6135E-03	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2623E+00	0.4242E-01	0.0000E+00
12 2	2 0.3754E-03	0.6318E-03	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.2623E+00	0.4242E-01	0.0000E+00
...											
11 1	145 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8834E-03	0.5870E+00	0.1852E-07
11 2	146 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8863E-03	0.5868E+00	0.1848E-07
11 3	147 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8916E-03	0.5864E+00	0.1839E-07
11 4	148 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8987E-03	0.5859E+00	0.1823E-07
11 5	149 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.9062E-03	0.5853E+00	0.1576E-07
11 6	150 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.9140E-03	0.5847E+00	0.1575E-07
11 7	151 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.9220E-03	0.5841E+00	0.1576E-07
11 8	152 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.9298E-03	0.5836E+00	0.1577E-07
11 9	153 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.9367E-03	0.5831E+00	0.1579E-07
1110	154 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.9419E-03	0.5827E+00	0.1580E-07
1111	155 0.1191E+00	0.2004E+00	0.1296E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.9447E-03	0.5825E+00	0.1578E-07
1112	156 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
1113	157 0.2515E-11	0.4266E-11	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.7710E-02	0.4955E+00	0.0000E+00
1114	158 0.3630E-13	0.6108E-13	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.7711E-02	0.4955E+00	0.0000E+00
1115	159 0.3928E-15	0.6611E-15	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.7711E-02	0.4955E+00	0.0000E+00
1116	160 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
12 1	161 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.5235E+00	0.4488E-02
12 2	162 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.5239E+00	0.4472E-02
12 3	163 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.5248E+00	0.4441E-02
12 4	164 0.0000E+00	0.2004E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.5262E+00	0.4393E-02
...											
12 5	165 0.1191E+00	0.2004E+00	0.1303E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.8294E-08	0.5277E+00	0.3815E-02
12 6	166 0.1191E+00	0.2004E+00	0.1303E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.7769E-08	0.5288E+00	0.3779E-02
12 7	167 0.1191E+00	0.2004E+00	0.1303E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.5535E-08	0.5298E+00	0.3758E-02
12 8	168 0.1191E+00	0.2004E+00	0.1303E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.5396E-08	0.5305E+00	0.3734E-02
12 9	169 0.1191E+00	0.2004E+00	0.1303E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.5420E-08	0.5311E+00	0.3717E-02
1210	170 0.1191E+00	0.2004E+00	0.1303E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.5463E-08	0.5315E+00	0.3706E-02
1211	171 0.1191E+00	0.2004E+00	0.1303E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.5564E-08	0.5316E+00	0.3700E-02
1212	172 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
1213	173 0.6651E-14	0.1119E-13	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1710E-02	0.6569E+00	0.0000E+00
1214	174 0.7848E-16	0.1321E-15	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1710E-02	0.6569E+00	0.0000E+00
1215	175 0.7696E-18	0.1295E-17	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1710E-02	0.6569E+00	0.0000E+00
1216	176 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00

13 1	177 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.4284E+00	0.9157E-02
13 2	178 0.0000E+00	0.2003E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.4290E+00	0.9121E-02
13 3	179 0.0000E+00	0.2004E+00	0.0000E+00	0.1621E+04	0.1000E+01	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.4300E+00	0.9054E-02
13 4	180 0.1191E+00	0.2004E+00	0.1311E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.0000E+00	0.4315E+00	0.8759E-02
13 5	181 0.1191E+00	0.2004E+00	0.1311E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.1524E-08	0.4328E+00	0.8698E-02
13 6	182 0.1191E+00	0.2004E+00	0.1311E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.1366E-08	0.4342E+00	0.8600E-02
13 7	183 0.1191E+00	0.2004E+00	0.1311E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.7525E-09	0.4355E+00	0.7941E-02
13 8	184 0.1191E+00	0.2004E+00	0.1311E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.6969E-09	0.4365E+00	0.7883E-02
13 9	185 0.1191E+00	0.2004E+00	0.1311E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.6996E-09	0.4372E+00	0.7840E-02
1310	186 0.1191E+00	0.2004E+00	0.1311E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.7036E-09	0.4377E+00	0.7811E-02
1311	187 0.1191E+00	0.2004E+00	0.1311E+01	0.1621E+04	0.1766E-04	0.9135E-03	0.0000E+00	0.0000E+00	0.7147E-09	0.4379E+00	0.7797E-02
1312	188 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00
1313	189 0.4354E-17	0.7327E-17	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1242E-03	0.8279E+00	0.0000E+00
1314	190 0.4072E-19	0.6853E-19	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1242E-03	0.8279E+00	0.0000E+00
1315	191 0.3493E-21	0.5879E-21	0.1198E+01	0.0000E+00	0.1810E-04	0.1000E+01	0.0000E+00	0.0000E+00	0.1242E-03	0.8279E+00	0.0000E+00
1316	192 0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.1000E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.1000E+01	0.0000E+00

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NAPL Spill Experiment #1

                                KCYC = 169  -  ITER = 3  -  TIME = 0.12132E+07

ELEM1  ELEM2  INDEX    FLOH      FLO (GAS)    FLO (AQ.)    FLO (NAPL)    FLO (VOC) GAS    FLO (VOC) WAT    VEL (GAS)    VEL (AQ.)    VEL (NAPL)
      (W)      (KG/S)      (KG/S)      (KG/S)      (KG/S)      (KG/S)      (M/S)      (M/S)      (M/S)

1 1 1 2 1 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
2 1 2 2 2 -0.9245E-03 -0.8596E-11 -0.1157E-07 0.0000E+00 -0.2616E-14 -0.7111E-14 -0.3045E-08 -0.6966E-08 0.0000E+00
3 1 3 2 3 -0.2850E-02 -0.2330E-10 -0.3568E-07 0.0000E+00 -0.2609E-13 -0.8074E-13 -0.8676E-08 -0.2007E-07 0.0000E+00
4 1 4 2 4 -0.5035E-02 -0.3272E-10 -0.6305E-07 0.0000E+00 -0.1190E-12 -0.4642E-12 -0.1291E-07 -0.3305E-07 0.0000E+00
5 1 5 2 5 -0.7435E-02 -0.3771E-10 -0.9314E-07 0.0000E+00 -0.3969E-12 -0.1996E-11 -0.1599E-07 -0.4535E-07 0.0000E+00
6 1 6 2 6 -0.1030E-01 -0.4459E-10 -0.1265E-06 0.0000E+00 -0.1184E-11 -0.6931E-11 -0.2027E-07 -0.5697E-07 0.0000E+00
7 1 7 2 7 -0.1324E-01 -0.6570E-10 -0.1658E-06 0.0000E+00 -0.3683E-11 -0.1968E-10 -0.3255E-07 -0.6882E-07 0.0000E+00
8 1 8 2 8 -0.1737E-01 -0.8518E-10 -0.2175E-06 -0.6019E-16 -0.7824E-11 -0.4364E-10 -0.5524E-07 -0.8285E-07 -0.1847E-15
9 1 9 2 9 -0.2336E-01 -0.5317E-10 -0.2927E-06 -0.2298E-15 -0.4884E-11 -0.5873E-10 -0.4344E-07 -0.1020E-06 -0.7049E-15
10 1 10 2 10 -0.3266E-01 -0.1141E-10 -0.4093E-06 -0.2761E-15 -0.1048E-11 -0.8211E-10 -0.1308E-07 -0.1303E-06 -0.8468E-15
11 1 11 2 11 -0.4713E-01 0.1562E-10 -0.5906E-06 0.7864E-14 0.1434E-11 -0.1185E-09 0.3107E-07 -0.1723E-06 0.2410E-13
12 1 12 2 12 -0.5236E-01 0.0000E+00 -0.6496E-06 -0.3333E-07 0.0000E+00 -0.1303E-09 0.0000E+00 -0.1961E-06 -0.2928E-07
13 1 13 2 13 -0.5915E-01 0.0000E+00 -0.7197E-06 -0.9491E-07 0.0000E+00 -0.1444E-09 0.0000E+00 -0.2303E-06 -0.6574E-07
14 1 14 2 14 -0.7413E-01 0.0000E+00 -0.8609E-06 -0.2388E-06 0.0000E+00 -0.1727E-09 0.0000E+00 -0.2926E-06 -0.1372E-06
15 1 15 2 15 -0.5414E-01 0.0000E+00 -0.5226E-06 -0.1948E-06 0.0000E+00 -0.1048E-09 0.0000E+00 -0.2207E-06 -0.1048E-06
16 1 16 2 16 -0.1232E+00 0.0000E+00 -0.9631E-06 -0.5306E-06 0.0000E+00 -0.1932E-09 0.0000E+00 -0.4368E-06 -0.2453E-06
17 1 17 2 17 -0.2852E+00 0.0000E+00 -0.1547E-05 -0.1037E-05 0.0000E+00 -0.3103E-09 0.0000E+00 -0.7427E-06 -0.4471E-06
18 1 18 2 18 -0.7367E+00 0.0000E+00 -0.2450E-05 -0.1735E-05 0.0000E+00 -0.4916E-09 0.0000E+00 -0.1226E-05 -0.7084E-06
19 1 19 2 19 -0.2024E+01 0.0000E+00 -0.3833E-05 -0.2336E-05 0.0000E+00 -0.7690E-09 0.0000E+00 -0.1965E-05 -0.9305E-06
20 1 20 2 20 -0.5501E+01 0.0000E+00 -0.5407E-05 -0.1243E-05 0.0000E+00 -0.1085E-08 0.0000E+00 -0.2815E-05 -0.4952E-06
21 1 21 2 21 -0.1209E+02 0.0000E+00 0.1257E-05 0.9130E-05 0.0000E+00 0.2522E-09 0.0000E+00 0.6761E-06 0.7573E-05
22 1 22 2 22 -0.2560E+02 -0.5451E-05 -0.3835E-05 0.0000E+00 -0.5048E-14 -0.1509E-18 -0.3319E-02 -0.3515E-05 0.0000E+00
23 1 23 2 23 -0.8493E+02 -0.3107E-04 -0.9650E-06 0.0000E+00 -0.1821E-13 -0.2426E-19 -0.1481E-01 -0.1457E-05 0.0000E+00
24 1 24 2 24 -0.2991E+03 -0.1097E-03 -0.2260E-05 0.0000E+00 -0.6386E-13 -0.5731E-19 -0.4462E-01 -0.4111E-05 0.0000E+00
25 1 25 2 25 -0.3575E+03 -0.1310E-03 -0.3260E-05 0.0000E+00 -0.6081E-12 -0.6628E-18 -0.5140E-01 -0.5838E-05 0.0000E+00
26 1 26 2 26 -0.3648E+03 -0.1311E-03 -0.5159E-05 0.0000E+00 -0.1368E-10 -0.4195E-16 -0.3227E-01 -0.4333E-04 0.0000E+00
27 1 27 2 27 -0.2985E+01 0.0000E+00 0.2961E-08 0.4515E-11 0.0000E+00 0.5941E-12 0.0000E+00 0.6651E-08 0.6014E-10
28 1 28 2 28 -0.1855E+01 0.0000E+00 -0.4121E-06 0.0000E+00 -0.1345E-11 0.0000E+00 -0.1034E-06 0.0000E+00 0.0000E+00
29 1 29 2 29 -0.5318E+00 0.0000E+00 0.2049E-06 0.0000E+00 0.0000E+00 0.2650E-15 0.0000E+00 0.5110E-07 0.0000E+00
30 1 30 2 30 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
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NAPL Spill Experiment #1

                                KCYC = 127  -  ITER = 4  -  TIME = 0.12096E+07

ELEM1  ELEM2  INDEX    FLOH      FLO (GAS)    FLO (AQ.)    FLO (NAPL)    FLO (VOC) GAS    FLO (VOC) WAT    VEL (GAS)    VEL (AQ.)    VEL (NAPL)
      (W)      (KG/S)      (KG/S)      (KG/S)      (KG/S)      (KG/S)      (M/S)      (M/S)      (M/S)

1 1 2 1 451 0.2966E+00 0.3522E-08 0.3712E-05 0.0000E+00 0.1072E-11 0.2281E-11 0.2494E-05 0.4467E-05 0.0000E+00
2 1 3 1 452 0.2992E+00 0.3508E-08 0.3745E-05 0.0000E+00 0.3928E-11 0.8475E-11 0.2612E-05 0.4212E-05 0.0000E+00
3 1 4 1 453 0.3070E+00 0.3446E-08 0.3843E-05 0.0000E+00 0.1260E-10 0.2829E-10 0.2733E-05 0.4028E-05 0.0000E+00
4 1 5 1 454 0.3209E+00 0.3385E-08 0.4017E-05 0.0000E+00 0.3563E-10 0.8610E-10 0.2853E-05 0.3910E-05 0.0000E+00
5 1 6 1 455 0.3422E+00 0.3261E-08 0.4284E-05 0.0000E+00 0.8659E-10 0.2348E-09 0.2963E-05 0.3858E-05 0.0000E+00
6 1 7 1 456 0.3727E+00 0.3077E-08 0.4667E-05 0.0000E+00 0.1725E-09 0.5539E-09 0.3048E-05 0.3873E-05 0.0000E+00
7 1 8 1 457 0.4147E+00 0.2786E-08 0.5193E-05 0.0000E+00 0.2559E-09 0.1042E-08 0.3613E-05 0.3954E-05 0.0000E+00
8 1 9 1 458 0.4702E+00 0.2250E-08 0.5890E-05 -0.1322E-11 0.2057E-09 0.1182E-08 0.3674E-05 0.4102E-05 -0.810E-11
9 1 10 1 459 0.5413E+00 0.1525E-08 0.6783E-05 -0.3930E-11 0.1401E-09 0.1361E-08 0.3495E-05 0.4316E-05 -0.2410E-10
10 1 11 1 460 0.6284E+00 0.6496E-09 0.7875E-05 -0.7470E-11 0.5966E-10 0.1580E-08 0.2586E-05 0.4595E-05 -0.4580E-10
11 1 12 1 461 0.7212E+00 0.0000E+00 0.9038E-05 -0.3086E-11 0.0000E+00 0.1813E-08 0.0000E+00 0.5453E-05 -0.1891E-10
12 1 13 1 462 0.7492E+00 0.0000E+00 0.9260E-05 0.7268E-06 0.0000E+00 0.1858E-08 0.0000E+00 0.5924E-05 0.1006E-05
13 1 14 1 463 0.7822E+00 0.0000E+00 0.9480E-05 0.1633E-05 0.0000E+00 0.1902E-08 0.0000E+00 0.6441E-05 0.1876E-05
14 1 15 1 464 0.8332E+00 0.0000E+00 0.9729E-05 0.2863E-05 0.0000E+00 0.1952E-08 0.0000E+00 0.8217E-05 0.3079E-05
15 1 16 1 465 0.8800E+00 0.0000E+00 0.9362E-05 0.4500E-05 0.0000E+00 0.1878E-08 0.0000E+00 0.8487E-05 0.4239E-05
16 1 17 1 466 0.1101E+01 0.0000E+00 0.9493E-05 0.6357E-05 0.0000E+00 0.1904E-08 0.0000E+00 0.9113E-05 0.5479E-05
17 1 18 1 467 0.1792E+01 0.0000E+00 0.1051E-04 0.8202E-05 0.0000E+00 0.2109E-08 0.0000E+00 0.1051E-04 0.6695E-05
18 1 19 1 468 0.3697E+01 0.0000E+00 0.1287E-04 0.9962E-05 0.0000E+00 0.2582E-08 0.0000E+00 0.1139E-04 0.7934E-05
19 1 20 1 469 0.8535E+01 0.0000E+00 0.1698E-04 0.1153E-04 0.0000E+00 0.3406E-08 0.0000E+00 0.1767E-04 0.9182E-05
20 1 21 1 470 0.1993E+02 0.0000E+00 0.2273E-04 0.1145E-04 0.0000E+00 0.4559E-08 0.0000E+00 0.2366E-04 0.9609E-05
21 1 22 1 471 0.4374E+02 0.1023E-04 0.1154E-04 0.0000E+00 0.9471E-14 0.4540E-18 0.1245E-01 0.2115E-04 0.0000E+00
22 1 23 1 472 0.6771E+02 0.2473E-04 0.1033E-05 0.0000E+00 0.1449E-13 0.2598E-19 0.2355E-01 0.3120E-05 0.0000E+00
23 1 24 1 473 0.1532E+03 0.5619E-04 0.1207E-05 0.0000E+00 0.3271E-13 0.3061E-19 0.4568E-01 0.4389E-05 0.0000E+00
24 1 25 1 474 0.5680E+02 0.2081E-04 0.6163E-06 0.0000E+00 0.9657E-13 0.1253E-18 0.1632E-01 0.2207E-05 0.0000E+00
25 1 26 1 475 0.1884E+02 0.6752E-05 0.1029E-05 0.0000E+00 0.7047E-12 0.4714E-17 0.5383E-02 0.3218E-05 0.0000E+00
26 1 27 1 476 -0.1587E+02 0.0000E+00 0.1053E-07 0.1227E-10 0.0000E+00 0.2113E-11 0.0000E+00 0.4742E-07 0.3264E-09
27 1 28 1 477 -0.1063E+02 0.0000E+00 -0.1814E-07 -0.2832E-10 0.0000E+00 -0.3640E-11 0.0000E+00 -0.8169E-07 -0.7533E-09
28 1 29 1 478 -0.6044E+01 0.0000E+00 0.2397E-06 0.0000E+00 0.0000E+00 0.2747E-15 0.0000E+00 0.1196E-06 0.0000E+00
29 1 30 1 479 -0.4415E+01 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
*****

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*****
NAPL Spill Experiment #1

KCYC = 169 - ITER = 3 - TIME = 0.12132E+07

ELEMENT SOURCE INDEX GENERATION RATE ENTHALPY FF(GAS) FF(AQ. ) FF(NAPL) FF(VOCG) FF(VOCAQ) P(WB)
(KG/S) OR (W) (J/KG) (FA)

24 1 INJ 1 1 0.14800E-03 0.26760E+07
25 1 INJ 2 2 0.14800E-03 0.26760E+07
26 1 INJ 3 3 0.14800E-03 0.26760E+07

***** VOLUME- AND MASS-BALANCES *****
***** [KCYC,ITER] = [ 169, 3] ***** THE TIME IS 0.12132E+07 SECONDS, OR 0.14042E+02 DAYS

*****
PHASES PRESENT
*****
COMPONENT MASS IN PLACE (KG)
*****
PHASES * GAS AQUEOUS NAPL
*****
PHASES *
*****
VOLUME (M^3) * 0.73006461E-01 0.31858790E+00 0.53363516E-01
MASS (KG) * 0.88086321E-01 0.31803894E+03 0.86314913E+02
*****
*****
COMPONENTS * WATER AIR VOC
*****
PHASES *
*****
GAS PHASE * 0.24447379E-02 0.83896912E-01 0.17446706E-02
AQUEOUS * 0.31801191E+03 0.50235378E-02 0.22008889E-01
NAPL * 0.00000000E+00 0.14689625E-03 0.86314766E+02
ADSORBED * 0.00000000E+00 0.00000000E+00 0.61479756E-01
TOTAL * 0.31801435E+03 0.89067346E-01 0.86400000E+02
*****
*****

WRITE FILE *SAVE* AFTER 169 TIME STEPS --- THE TIME IS 0.121320E+07 SECONDS

--

END OF TOUGH2 SIMULATION RUN --- ELAPSED TIME = 316.250 SEC-- CALCULATION TIME = 315.450 SEC-- DATA INPUT TIME = 0.800 SEC

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Output for Problem 3D (SAVE_p3d.out)

```

INCON -- INITIAL CONDITIONS FOR 481 ELEMENTS AT TIME 0.121320E+07
2 1 0.40000000E+00
0.1013003236291E+06 0.4138917016658E+00 0.5271459445400E-04 0.1900001517234E+02
2 2 0.40000000E+00
0.1013003234321E+06 0.4138849454133E+00 0.5428289931855E-04 0.1900001500992E+02
2 3 0.40000000E+00
0.1013003230214E+06 0.4138708319322E+00 0.5202343317347E-04 0.1900001462407E+02
2 4 0.40000000E+00
0.1013003223465E+06 0.4138480187760E+00 0.4773629268998E-04 0.1900001398579E+02
2 5 0.40000000E+00
0.1013003213186E+06 0.4138141857805E+00 0.3897918431135E-04 0.1900001307848E+02
2 6 0.40000000E+00
0.1013003198135E+06 0.4137656824339E+00 0.2740929713112E-04 0.1900001198327E+02
2 7 0.40000000E+00
0.1013003177064E+06 0.4136969928599E+00 0.2055717356474E-04 0.1900001089250E+02
2 8 0.40000000E+00
0.1013003148982E+06 0.4136004530406E+00 0.1521361069293E-04 0.1900000984905E+02
2 9 0.40000000E+00
0.1013003113314E+06 0.4134668141874E+00 0.1083233721989E-04 0.1900000876361E+02
210 0.40000000E+00
0.1013003070562E+06 0.4132882017919E+00 0.7776714603226E-05 0.1900000746159E+02
211 0.40000000E+00
0.1013003023612E+06 0.4130660450717E+00 0.5309719488367E-05 0.1900000577606E+02
212 0.40000000E+00
0.1013002978881E+06 0.4128241822040E+00 0.9551774480420E-06 0.1900000380184E+02
...
216 0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.1900000064038E+02
3 1 0.40000000E+00
0.1013009814179E+06 0.4428748093556E+00 0.1941405279877E-03 0.1900004716690E+02
3 2 0.40000000E+00
0.1013009807951E+06 0.4428565159897E+00 0.1993501695652E-03 0.1900004671017E+02
3 3 0.40000000E+00
0.1013009795019E+06 0.4428183670321E+00 0.1931978890406E-03 0.1900004563600E+02
...

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...
23 1 0.35000000E+00
0.1279373057605E+06 0.1974755379037E+00 0.6486549408480E-10 0.1066659774280E+03
23 2 0.35000000E+00
0.1219490696400E+06 0.2822642158502E+00 0.5168618919700E-09 0.1052735498010E+03
23 3 0.35000000E+00
0.1171025196273E+06 0.4153185946975E+00 0.1033321890583E+02 0.9198668452776E+02
23 4 0.35000000E+00
0.1137474997375E+06 0.5260336599875E+00 0.1000020202228E+02 0.5475241839516E+02
23 5 0.35000000E+00
0.1131175007587E+06 0.5159597497086E+00 0.5000001541118E+02 0.3358697400243E+02
23 6 0.35000000E+00
0.1125940269121E+06 0.4989515274932E+00 0.5000001586649E+02 0.2431033817057E+02
23 7 0.35000000E+00
0.1121710358265E+06 0.4847959452491E+00 0.5000001592444E+02 0.2075000901028E+02
23 8 0.35000000E+00
0.1118498606068E+06 0.4770227774289E+00 0.5000001592816E+02 0.1952754499613E+02
23 9 0.35000000E+00
0.1116230243519E+06 0.4741572034985E+00 0.5000001592828E+02 0.1914693679546E+02
2310 0.35000000E+00
0.1114806943985E+06 0.4735583168575E+00 0.5000001592828E+02 0.1903818451754E+02
2311 0.35000000E+00
0.1114134236661E+06 0.4735711648265E+00 0.5000001592827E+02 0.1900935002049E+02
2312 0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.1900215634564E+02
2313 0.40000000E+00
0.1046233152172E+06 0.5000001593051E+02 0.4358536399629E-21 0.1900043576767E+02
2314 0.40000000E+00
0.1046233150176E+06 0.5000001593051E+02 0.1998870487533E-24 0.1900009103892E+02
2315 0.40000000E+00
0.1046233148359E+06 0.5000001593051E+02 0.4595708281501E-28 0.1900002415216E+02
2316 0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.1900002350739E+02

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...
24 1 0.35000000E+00
0.1451504584930E+06 0.1644062562875E+00 0.6451877283754E-10 0.1103893369990E+03
24 2 0.35000000E+00
0.1283386627852E+06 0.2095239969871E+00 0.6465054553239E-09 0.1067573677783E+03
24 3 0.35000000E+00
0.1195311900417E+06 0.3471878903686E+00 0.4799904610307E-07 0.1046952970423E+03
24 4 0.35000000E+00
0.1142936510042E+06 0.5424120696772E+00 0.5000000970328E+02 0.7013728439007E+02
24 5 0.35000000E+00
0.1139486691901E+06 0.5180510000418E+00 0.5000001455772E+02 0.3932882597639E+02
24 6 0.35000000E+00
0.1134875774159E+06 0.4951799860782E+00 0.5000001574241E+02 0.2630918447803E+02
24 7 0.35000000E+00
0.1130634159897E+06 0.4760484845484E+00 0.5000001591375E+02 0.2138570563663E+02
24 8 0.35000000E+00
0.1127280948589E+06 0.4644384615593E+00 0.5000001592768E+02 0.1971283127587E+02
24 9 0.35000000E+00
0.1124872364912E+06 0.4594543169711E+00 0.5000001592827E+02 0.1919685546274E+02
2410 0.35000000E+00
0.1123347051530E+06 0.4579448553892E+00 0.5000001592828E+02 0.1905072403109E+02
2411 0.35000000E+00
0.1122622549448E+06 0.4576476268999E+00 0.5000001592828E+02 0.1901230276447E+02
2412 0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.1900279968259E+02
2413 0.40000000E+00
0.1050151820446E+06 0.5000001593051E+02 0.3515547169898E-18 0.1900055616797E+02
2414 0.40000000E+00
0.1050151815304E+06 0.5000001593051E+02 0.1642137382162E-21 0.1900011275854E+02
2415 0.40000000E+00
0.1050151810719E+06 0.5000001593051E+02 0.3827711408040E-25 0.1900002853827E+02
2416 0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.1900002772355E+02

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...
25 1 0.35000000E+00
0.1513658120978E+06 0.1671983851427E+00 0.5147423842772E-09 0.1116446368925E+03
25 2 0.35000000E+00
0.1317892921751E+06 0.2058454394847E+00 0.3014841386417E-08 0.1075335199251E+03
25 3 0.35000000E+00
0.1213928972036E+06 0.3166920290838E+00 0.1496981790536E-07 0.1051413807038E+03
25 4 0.35000000E+00
0.1149659077104E+06 0.5417546475771E+00 0.5000000775377E+02 0.7626343548444E+02
25 5 0.35000000E+00
0.1146880250106E+06 0.5152484145255E+00 0.5000001368280E+02 0.4161016894877E+02
25 6 0.35000000E+00
0.1142631082224E+06 0.4894267385828E+00 0.5000001557676E+02 0.2708229257875E+02
25 7 0.35000000E+00
0.1138510456271E+06 0.4666684016950E+00 0.5000001589770E+02 0.2162591078207E+02
25 8 0.35000000E+00
0.1135160718337E+06 0.4520357017560E+00 0.5000001592690E+02 0.1978157389160E+02
25 9 0.35000000E+00
0.1132712334767E+06 0.4453265285956E+00 0.5000001592826E+02 0.1921508844726E+02
2510 0.35000000E+00
0.1131144703129E+06 0.4430666671456E+00 0.5000001592828E+02 0.1905523722532E+02
2511 0.35000000E+00
0.1130395560571E+06 0.4425126771304E+00 0.5000001592828E+02 0.1901334694795E+02
2512 0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.1900301492519E+02
2513 0.40000000E+00
0.1054070494592E+06 0.5000001593051E+02 0.2690240328638E-15 0.1900059355306E+02
2514 0.40000000E+00
0.1054070480905E+06 0.5000001593051E+02 0.1283576536483E-18 0.1900011845311E+02
2515 0.40000000E+00
0.1054070469352E+06 0.5000001593051E+02 0.3036352221930E-22 0.1900002921191E+02
2516 0.00000000E+00
0.1013000000000E+06 0.5000000000000E+02 0.0000000000000E+00 0.1900002834709E+02
...

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