NIST HANDBOOK 146, Volume III

Example Cases for the HAZARD I Fire Hazard Assessment Method

Richard W. Bukowski
Richard D. Peacock

NIST United States Department of Commerce
National Institute of Standards and Technology

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[1]Headquarters and Laboratories at Gaithersburg, MD, unless otherwise noted; mailing address Gaithersburg, MD 20899.
[2]Some divisions within the center are located at Boulder, CO 80303.
[3] Located at Boulder, CO, with some elements at Gaithersburg, MD.

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DISCLAIMER

The Department of Commerce makes no warranty, express or implied, to users of the HAZARD I Fire Hazard Assessment Method and associated computer programs, and accepts no responsibility for its use. Users of HAZARD I assume sole responsibility under Federal and State law for determining the appropriateness of its use in any particular application; for any conclusions drawn from the results of its use; and for any actions taken or not taken as a result of analyses performed using HAZARD I.

Users are warned that HAZARD I is intended for use only by persons competent in the field of fire safety and is intended only to supplement the informed judgment of the qualified user. The HAZARD I software package, used outside of the broader HAZARD I Fire Hazard Assessment Method, is a computer model which may or may not have predictive value when applied to a specific set of factual circumstances and which could lead to erroneous conclusions if not properly evaluated by an informed user.

INTENT AND USE

The algorithms, procedures, and computer programs described in this report constitute a prototype version of a methodology for predicting the consequences to the occupants of a building resulting from the involvement of particular products in a specified fire. They have been compiled from the best knowledge and understanding currently available, but have important limitations which must be understood and considered by the user. The hazard analysis method is intended for use by persons competent in the field of fire safety, and with some familiarity with personal computers. It is intended as a decision-making tool, but the scope of its use is exploratory.

Acknowledgments

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The expertise of the Fire Services Panel and the Building Configuration Panel was key in providing an unbiased and representative set of example cases to test the HAZARD I methodology. The authors are indebted to the Joint Council of Fire Service Organizations, the American Institute of Architects, the Building Officials and Code Administrators International, the International Conference of Building Officials, the National Association of Home Builders, the National Fire Protection Association, the Southern Building Code Congress International, and the individual panel members who volunteered their time and effort which added to the success of the project.

Ninety-three organizations participated in the beta test of HAZARD I. Their interest, time, and careful critique of the pre-release version of HAZARD I led to many enhancements to the final version.

The authors wish to express their appreciation for the contributions of all those involved in the development effort.

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For technical support on the HAZARD I software, contact

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CHAPTER 1. OVERVIEW

This volume of the HAZARD I report contains the detailed documentation of the eight example cases discussed in chapter 5 of the **Technical Reference** volume. Each of the cases was analyzed with the complete HAZARD I software package on several MS-DOS compatible computers[1]. For each of the eight scenarios, the following information appears in this volume:

- Summary of scenario data
- Floor plan drawing
- Input file listing for the FAST model, generated using the MLTFUEL and FAST_in modules of HAZARD I
- Graphs of selected variables generated from the FAST dump files using the FASTplot module of HAZARD I (rate of heat release of the fire, upper layer temperature, lower layer temperature, layer interface position, smoke optical density, carbon monoxide concentration, carbon dioxide concentration, and concentration-time product)
- Printed output from the FAST model
- Input file listing for the EXITT module of HAZARD I
- Printed output from the EXITT module of HAZARD I
- Printed output from the TENAB module of HAZARD I

[1] The use of company names or trade names within this report is made only for the purpose of identifying those computer hardware or software products with which the compatibility of the programs of HAZARD I has been tested. Such use does not constitute any endorsement of those products by the National Institute of Standards and Technology.

The input files for the FAST model and for the EXITT module of HAZARD I are included on the HAZARD I system disks for each of the examples cases detailed in this volume. Several additional demonstration data files are included on the HAZARD I system disks which provide examples of the use of the graphics capabilities of the FAST model. These demonstration files are detailed in Appendix B of the **Technical Reference** volume.

Complete documentation of the three example houses used in the examples is given in Appendix A of this **Example Cases** volume.

CHAPTER 2. SCENARIO 1, SMOLDERING CIGARETTE IN SOFA

2.1 Summary of Fire Scenario 1

For scenario 1, a smoldering cigarette in the sofa in the living room of the ranch house is is as the fire source. The single occupant of the house is an intoxicated sleeping male.

BUILDING: Ranch house

OCCUPANT: Male aged 30, sleeping in master bedroom. He has a sleeping penalty (that is, it is difficult for him to wake up) because of alcohol in his blood.

DOORS: All interior doors are open. The only opening to the outdoors is a partially open window in the master bedroom.

FIRE: Smoldering cigarette in left corner of sofa. The smoldering fire is followed by a flaming fire.

FUEL: Flaming fire taken directly from HAZARD I fire property database. Material code UPS001, Upholstered sofa, F32, wood frame, polyurethane foam, olefin cover fabric. Smoldering fire adapted from cigarette ignition data discussed by Babrauskas and Krasny [1][2] as a ramp function fire which grows from 0 to 76 kW in 2700 seconds.

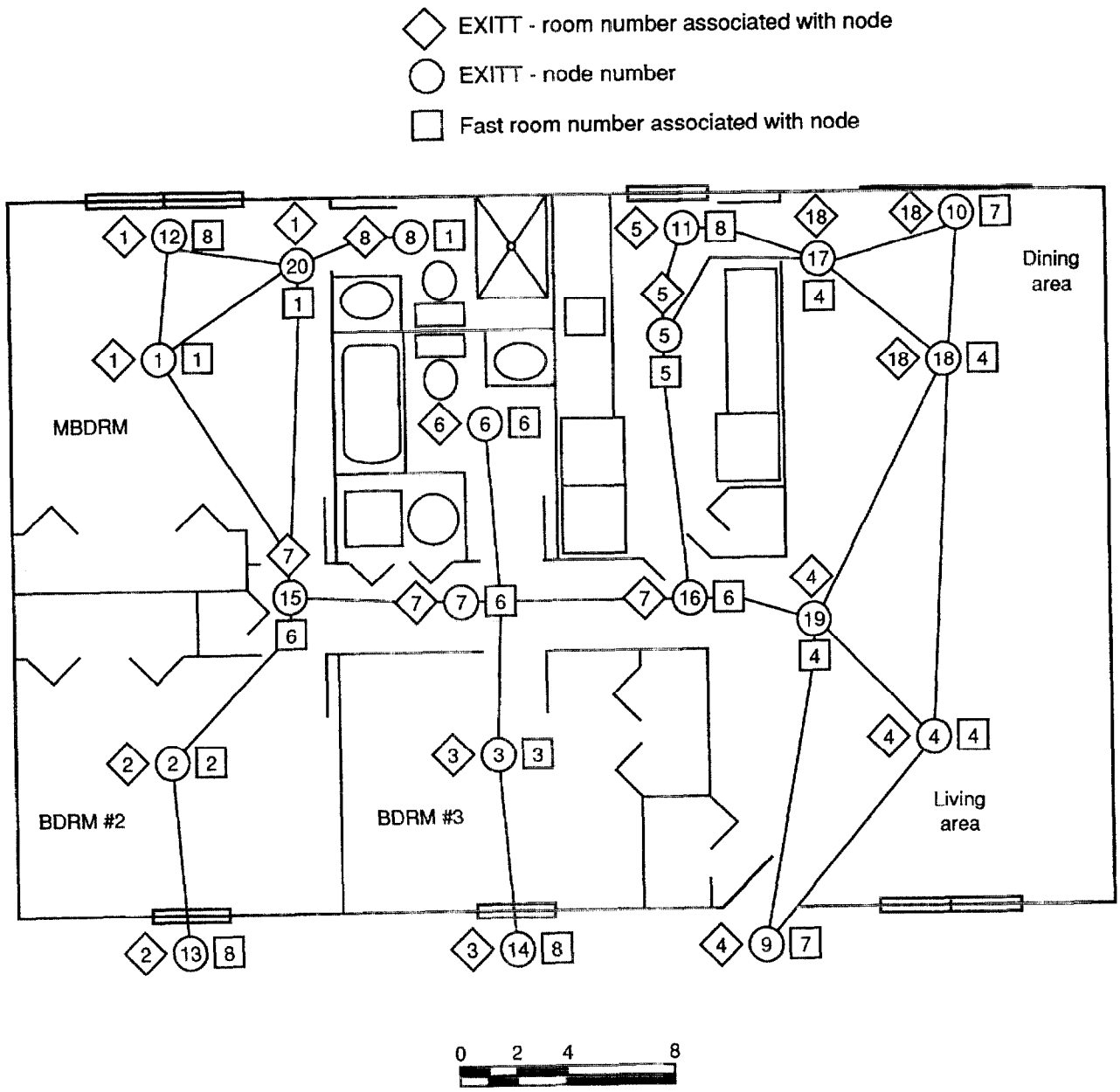
CEILINGS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

WALLS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

FLOORS: 0.15-m-thick concrete slab, taken directly from HAZARD I materials property database. Material code CNC001, Concrete, normal weight, Type I cement, Dolomite aggregate.

[2] Numbers in brackets refer to literature references listed in Chapter 10 at the end of this report.

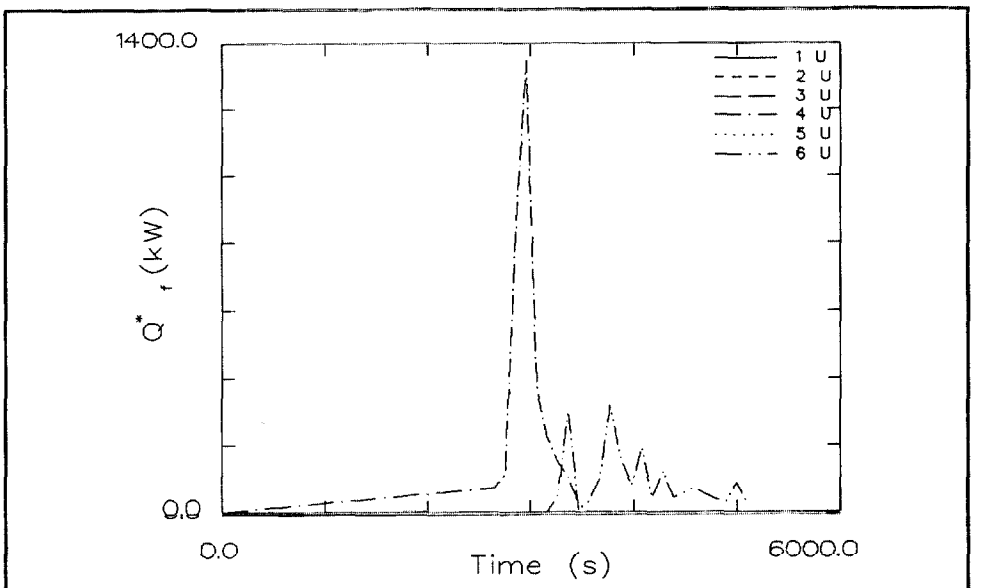
2.2 Floor Plan and EXITT Building Description for Scenario 1



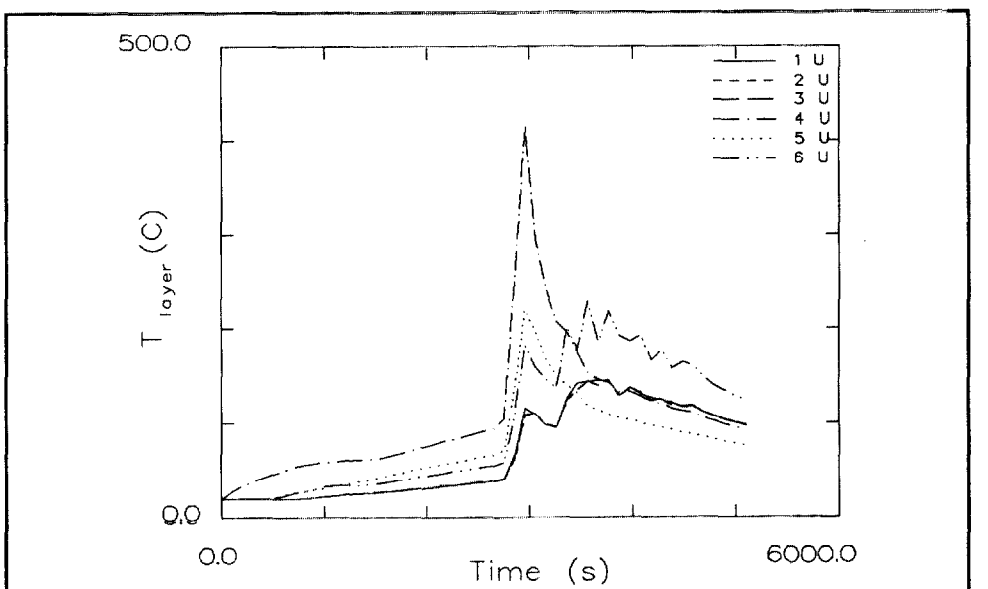
2.3 FAST Input Data for Scenario 1 (Example Data File SCEN-1.DAT)

```
VERSN   18 Scenario 1, Ranch House, Smoldering Cigarette
TIMES   5100 500  50   0   0
TAMB   293.  101300.      0.
EAMB   273.  101300.      0.
HI/F     0.00   0.00   0.00   0.00   0.00   0.00
WIDTH    3.60   3.00   3.00   4.50   2.70   1.92
DEPTH    3.80   3.60   3.40   8.10   3.80   8.79
HEIGH    2.40   2.40   2.40   2.40   2.40   2.40
HVENT   1  6  1   1.10   2.10   0.00
HVENT   1  7  1   0.81   1.22   0.91   0.00
HVENT   2  6  1   1.10   2.10   0.00
HVENT   3  6  1   1.10   2.10   0.00
HVENT   4  5  1   1.10   2.10   0.00
HVENT   4  6  1   1.10   2.10   0.00
CVENT   1  6  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   1  7  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   2  6  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   3  6  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   4  5  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   4  6  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CEILI GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
WALLS GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
FLOOR CONCRETE  CONCRETE  CONCRETE  CONCRETE  CONCRETE  CONCRETE
CHEMI     0.    0.   6.0    18900000.  300.
LFBO   4
LFBT   2
LFPOS  1
LFMAX  9
FTIME   2700.   100.    50.    65.    75.   110.   100.   700.  1200.
FMASS  0.0000 0.0040 0.0080 0.0320 0.1650 0.1480 0.0210 0.0120 0.0030 0.0000
FHIGH    0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00
FAREA    0.03   0.60   0.80   1.00   3.00   3.00   1.50   1.00   0.50   0.50
FQDOT  0.00     7.56E+04 1.51E+05 6.05E+05 3.12E+06 2.80E+06 3.97E+05 2.27E+05 5.67E+04 0.00
CT    1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000
HCR   0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080
CO    0.050 0.150 0.017 0.017 0.018 0.020 0.019 0.012 0.012 0.012
OD    0.000 0.012 0.016 0.011 0.027 0.036 0.007 0.007 0.007 0.007
DUMPR SCEN-1.DMP
```

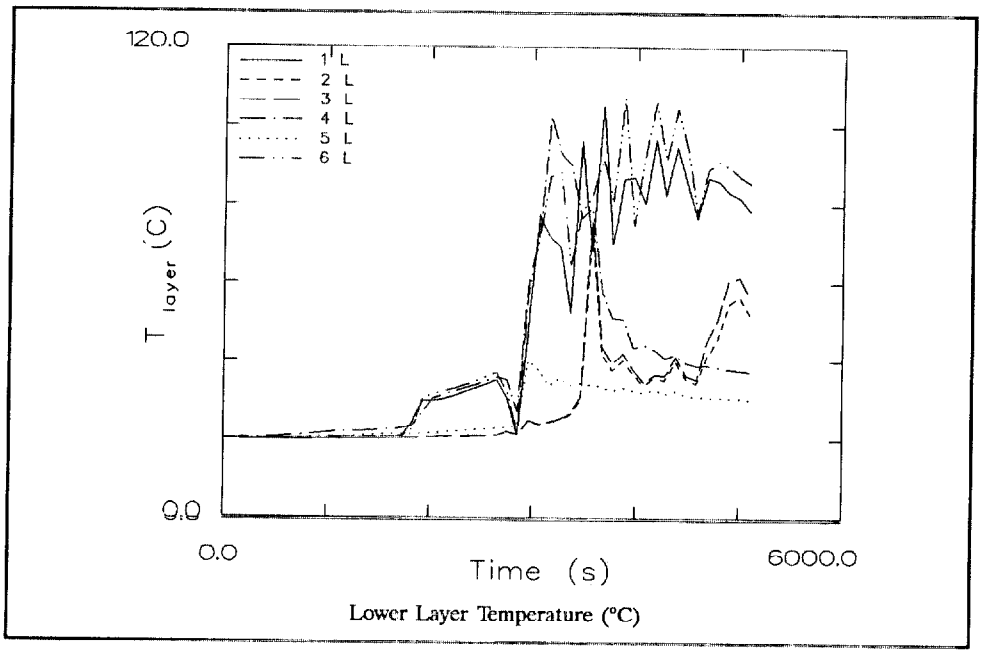
2.4 Selected Graphs from Scenario 1



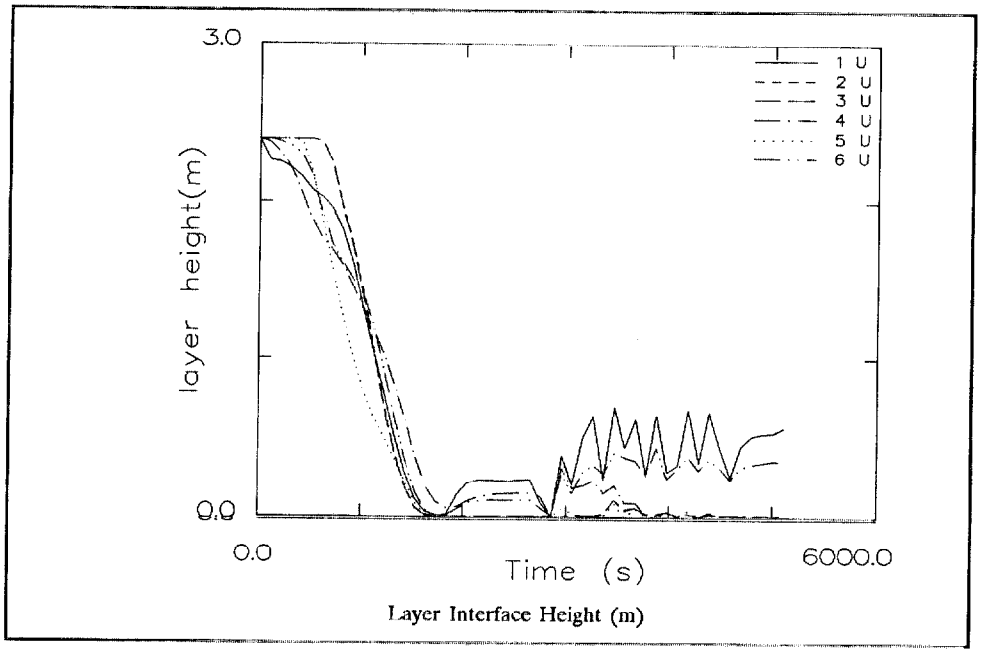
Heat Release Rate of Fire (kW)



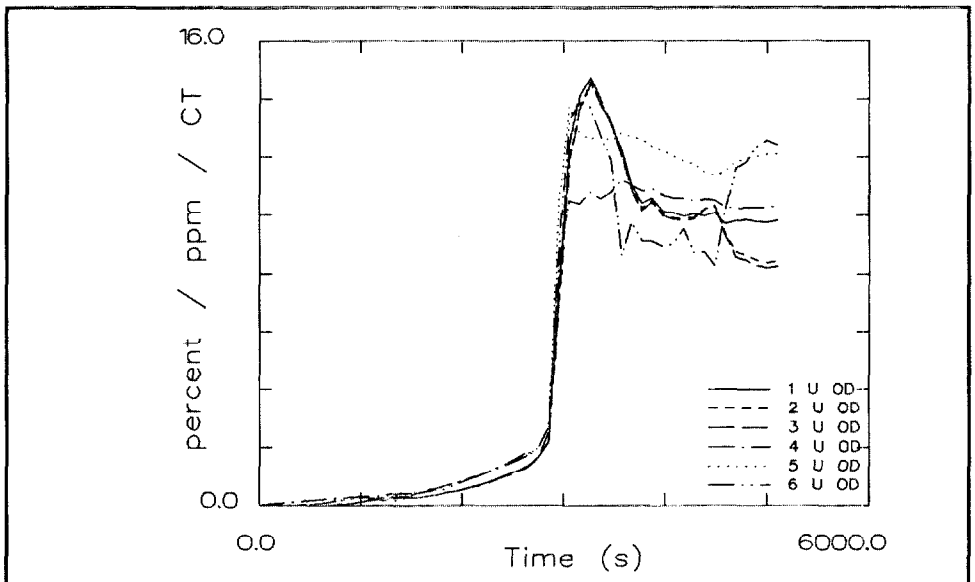
Upper Layer Temperature (°C)



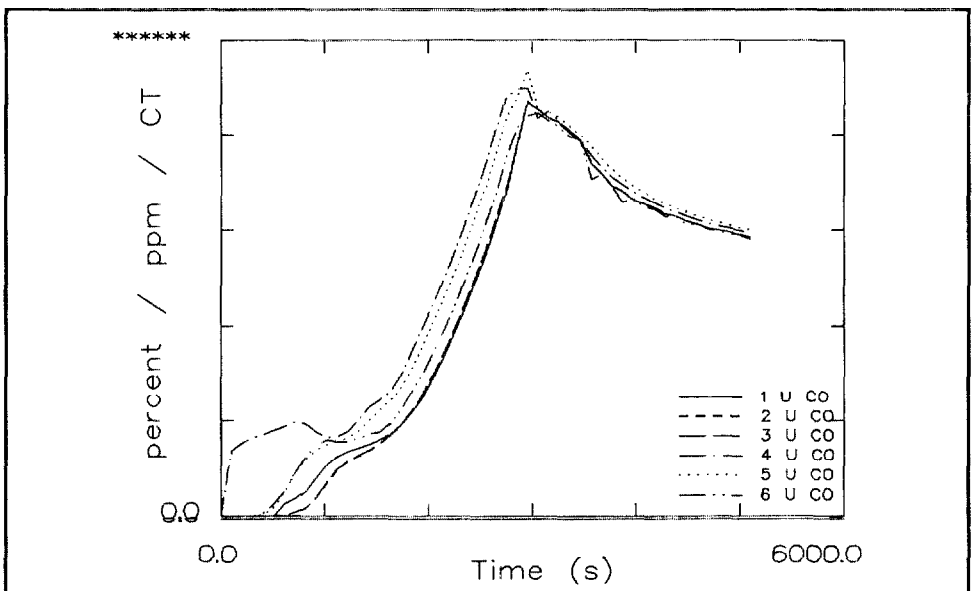
Lower Layer Temperature (°C)



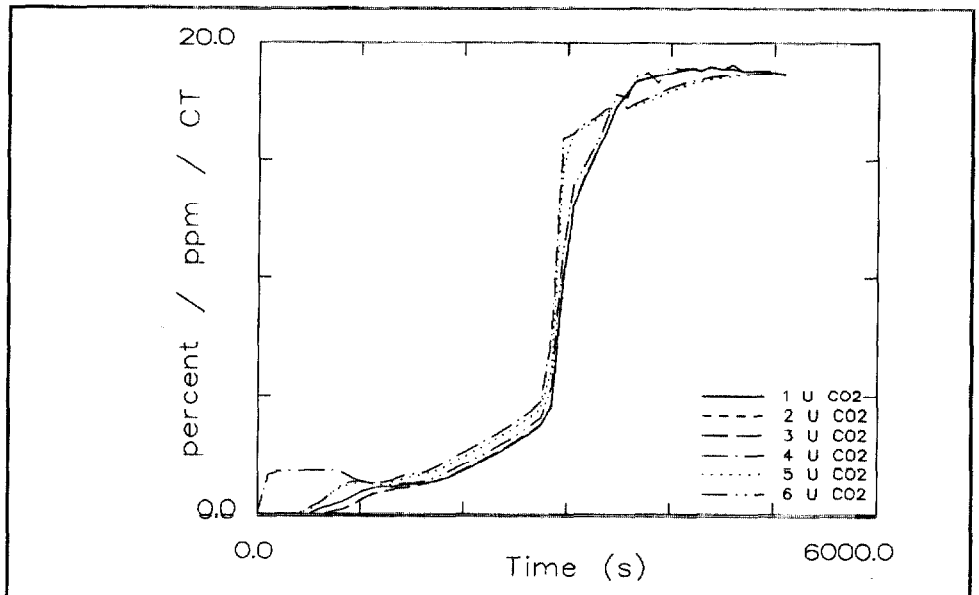
Layer Interface Height (m)



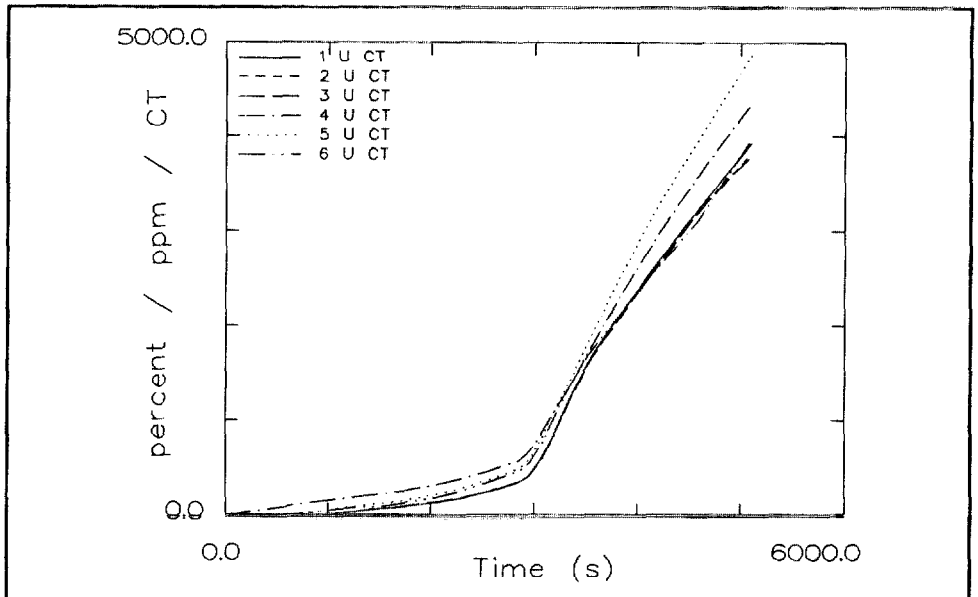
Smoke Optical Density (m^{-1})



Carbon Monoxide Concentration (ppm)



Carbon Dioxide Concentration (%)



Concentration-Time Product (ppm-min)

2.5 Printed Output from FAST for Scenario 1

FAST version 18.3.2 - created February 1, 1989 Scenario 1, Ranch House, Smoldering Cigarettte

Total compartments = 6

FLOOR PLAN

Width	3.6	3.0	3.0	4.5	2.7	1.9
Depth	3.8	3.6	3.4	8.1	3.8	8.8
Height	2.4	2.4	2.4	2.4	2.4	2.4
Area	13.7	10.8	10.2	36.5	10.3	16.9
Volume	32.8	25.9	24.5	87.5	24.6	40.5
Ceiling	2.4	2.4	2.4	2.4	2.4	2.4
Floor	0.0	0.0	0.0	0.0	0.0	0.0

CONNECTIONS

1 (1)	Width	0.00	0.00	0.00	0.00	0.00	1.10	0.81
	Soffit	0.00	0.00	0.00	0.00	0.00	2.10	1.22
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.91
	a.Soffit	0.00	0.00	0.00	0.00	0.00	2.10	1.22
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.91
2 (1)	Width	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	Soffit	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 (1)	Width	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	Soffit	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 (1)	Width	0.00	0.00	0.00	0.00	1.10	1.10	0.00
	Soffit	0.00	0.00	0.00	0.00	2.10	2.10	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	0.00	2.10	2.10	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 (1)	Width	0.00	0.00	0.00	1.10	0.00	0.00	0.00
	Soffit	0.00	0.00	0.00	2.10	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	2.10	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 (1)	Width	1.10	1.10	1.10	1.10	0.00	0.00	0.00
	Soffit	2.10	2.10	2.10	2.10	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	2.10	2.10	2.10	2.10	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Material names

Ceiling:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Walls:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Floor:	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE

```
Thermal data base used: THERMAL.TPF

 Name       Conductivity Specific heat   Density       Thickness   Emissivity     **Codes**

 CONCRETE       1.75        1.000E+03    2.200E+03    0.150        0.940          188    U
 GYPSUM        0.160         900.         800.        1.600E-02    0.900           38    U


Compartment of origin is                              4
Print interval (seconds)                            500
Number of fire specification intervals is             9
Total time (seconds)                               5100
Fire position                                         1
Limiting oxygen index (%) =                         6.0
Initial relative humidity (%) =                     0.0
Fire type is a SPECIFIED (CONSTRAINED)

Pyrolysis  temperature (K) =                     300.
Ambient air temperature (K) =                    293.
Ambient reference pressure (Pa) =               101300.
Reference elevation (m) =                          0.
External ambient temperature (K) =               273.
External reference pressure (Pa) =              101300.
Reference elevation (m) =                          0.

Fmass=  0.00      4.00E-03 8.00E-03 3.20E-02 0.17      0.15      2.10E-02 1.20E-02 3.00E-03 0.00

Hcomb=  1.89E+07 1.89E+07 1.89E+07 1.89E+07 1.89E+07 1.89E+07 1.89E+07 1.89E+07 1.89E+07 1.89E+07
Fqdot=  0.00      7.56E+04 1.51E+05 6.05E+05 3.12E+06 2.80E+06 3.97E+05 2.27E+05 5.67E+04 0.00
Fhigh=  0.00      0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
C/CO2=  0.00     1.20E-02 1.60E-02 1.10E-02 2.70E-02 3.60E-02 7.00E-03 7.00E-03 7.00E-03  7.00E-03
CO/CO2= 5.00E-02 0.15     1.70E-02 1.70E-02 1.80E-02 2.00E-02 1.90E-02 1.20E-02 1.20E-02 1.20E-02
H/C=    8.00E-02 8.00E-02 8.00E-02 8.00E-02 8.00E-02 8.00E-02 8.00E-02 8.00E-02 8.00E-02 8.00E-02
CT=     1.0      1.0      1.0      1.0      1.0      1.0      1.0      1.0      1.0      1.0
Ftime=   2.70E+03  1.00E+02   50.       65.       75.      1.10E+02  1.00E+02  7.00E+02  1.20E+03
Dump file = SCEN-1.DMP
```

Time = 0.0 seconds.

Upper temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Lower temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.0	0.0	0.0	0.1	0.0	0.0	
Layer depth(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pressure(Pa)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	

Upper layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 500.0 seconds.

Upper temp(K)	293.0	293.0	293.0	318.8	294.5	294.3	
Lower temp(K)	292.7	293.0	293.0	293.3	293.0	293.0	273.0
Upper vol(m**3)	4.4	0.0	0.0	18.0	1.8	3.5	
Layer depth(m)	0.3	0.0	0.0	0.5	0.2	0.2	
Ceiling temp(K)	293.0	293.0	293.0	301.0	293.1	293.1	
Up wall temp(K)	293.0	293.0	293.0	299.2	293.1	293.1	
Low wall temp(K)	293.0	293.0	293.0	294.8	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.3	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	8.165E-02	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	7.407E-04	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	1.400E+04	5.234E-08	7.106E-08	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	1.400E+04	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.234E-08	7.106E-08	0.000E+00
On target(W/m^2)	4.892E-26	0.000E+00	0.000E+00	2.491E-02	2.535E-07	1.455E-07	
Pressure(Pa)	-8.059E-01	-7.908E-01	-7.908E-01	-7.960E-01	-7.643E-01	-7.899E-01	

Upper layer species

N2 %	79.3	79.3	79.3	77.8	79.1	79.1
O2 %	20.7	20.7	20.7	19.2	20.6	20.5
CO2 %	0.000	0.000	0.000	1.82	0.169	0.246
CO ppm	0.000	0.000	0.000	1.780E+03	164.	238.
TUHC %	0.000	0.000	0.000	6.562E-11	1.138E-14	3.693E-15
H2O %	0.000	0.000	0.000	0.961	8.940E-02	0.130
OD 1/m	0.000	0.000	0.000	0.157	2.572E-02	1.939E-02
CT g-min/m^3	0.000	0.000	0.000	75.8	1.45	0.811

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 1000.0 seconds.

Upper temp(K)	295.2	295.2	295.2	331.1	304.2	305.8	
Lower temp(K)	292.9	293.0	293.0	294.5	293.1	293.4	273.0
Upper vol(m**3)	14.0	9.9	9.5	38.6	16.1	16.4	
Layer depth(m)	1.0	0.9	0.9	1.1	1.6	1.0	
Ceiling temp(K)	293.3	293.3	293.3	310.0	296.1	296.4	
Up wall temp(K)	293.3	293.3	293.3	306.7	295.5	295.7	
Low wall temp(K)	293.1	293.1	293.1	298.1	293.8	293.7	
Floor temp(K)	293.0	293.0	293.0	293.9	293.1	293.1	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	1.313E-01	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	1.481E-03	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	2.800E+04	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	2.800E+04	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.231E-06	1.209E-06	1.348E-06	1.188E-01	8.995E-04	1.519E-03	
Pressure(Pa)	-7.642E-01	-7.464E-01	-7.499E-01	-1.018E+00	-9.026E-01	-7.339E-01	

Upper layer species

N2 %	78.5	78.8	78.8	78.2	78.2	78.2
O2 %	19.9	20.2	20.2	19.5	19.6	19.5
CO2 %	0.916	0.554	0.576	1.35	1.30	1.37
CO ppm	1.012E+03	616.	640.	1.659E+03	1.476E+03	1.583E+03
TUHC %	6.663E-12	2.718E-12	3.305E-12	2.860E-11	2.654E-11	2.687E-11
H2O %	0.492	0.297	0.309	0.737	0.700	0.738
OD 1/m	0.109	0.108	0.111	0.285	0.241	0.250
CT g-min/m^3	10.3	9.44	9.72	154.	53.8	49.4

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.2
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	3.675E-04	1.698E-05	2.307E-05	2.559E-02	0.000	6.840E-02
CO ppm	0.390	1.834E-02	2.492E-02	28.3	0.000	74.2
TUHC %	0.000	0.000	0.000	4.166E-13	0.000	9.695E-13
H2O %	1.963E-04	9.089E-06	1.235E-05	1.374E-02	0.000	3.663E-02
OD 1/m	5.539E-05	2.237E-06	3.061E-06	3.138E-03	0.000	8.879E-03
CT g-min/m^3	5.542E-03	5.308E-05	7.194E-05	0.215	0.000	1.25

Time = 1500.0 seconds.

Upper temp(K)	299.2	299.3	299.5	335.2	314.5	309.0	
Lower temp(K)	293.2	293.3	293.3	295.2	294.0	293.4	273.0
Upper vol(m**3)	30.7	24.9	23.6	70.9	23.3	36.9	
Layer depth(m)	2.2	2.3	2.3	1.9	2.3	2.2	
Ceiling temp(K)	294.8	294.9	294.9	315.6	301.3	299.5	
Up wall temp(K)	294.5	294.5	294.5	312.0	299.7	298.3	
Low wall temp(K)	293.8	293.8	293.8	302.1	296.2	295.3	
Floor temp(K)	293.1	293.1	293.1	294.6	293.5	293.4	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	6.500E-02	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	2.222E-03	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	4.200E+04	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	4.200E+04	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	5.371E-08	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	8.596E-05	9.051E-05	9.791E-05	1.793E-01	1.208E-02	3.728E-03	
Pressure(Pa)	-9.312E-01	-9.407E-01	-9.515E-01	-1.670E+00	-1.381E+00	-1.016E+00	

Upper layer species

N2 %	78.3	78.4	78.4	77.9	78.0	78.2
O2 %	19.7	19.7	19.7	19.2	19.3	19.6
CO2 %	1.21	1.13	1.14	1.66	1.55	1.26
CO ppm	1.558E+03	1.447E+03	1.463E+03	2.415E+03	2.172E+03	1.710E+03
TUHC %	1.717E-11	1.590E-11	1.616E-11	1.695E-11	1.876E-11	1.596E-11
H2O %	0.664	0.617	0.623	0.929	0.859	0.697
OD 1/m	0.252	0.272	0.276	0.412	0.406	0.349
CT g-min/m^3	62.5	66.4	68.3	221.	122.	93.1

Lower layer species

N2 %	79.3	79.2	79.2	79.2	79.3	79.2
O2 %	20.7	20.7	20.6	20.7	20.7	20.7
CO2 %	2.751E-02	7.487E-02	9.709E-02	5.379E-02	3.290E-09	6.803E-02
CO ppm	32.4	90.3	117.	64.5	3.710E-06	82.7
TUHC %	4.349E-13	1.115E-12	1.449E-12	7.982E-13	0.000	1.006E-12
H2O %	1.489E-02	4.065E-02	5.272E-02	2.919E-02	1.771E-09	3.698E-02
OD 1/m	1.120E-02	3.481E-02	4.724E-02	5.029E-03	3.227E-10	2.845E-02
CT g-min/m^3	1.52	3.82	5.27	1.27	1.028E-07	3.37

Time = 2000.0 seconds.

Upper temp(K)	304.2	304.5	304.7	349.1	326.0	317.4	
Lower temp(K)	302.7	293.4	293.4	302.5	294.4	304.2	273.0
Upper vol(m**3)	30.1	25.9	24.4	84.3	24.6	39.1	
Layer depth(m)	2.2	2.4	2.4	2.3	2.4	2.3	
Ceiling temp(K)	297.1	297.2	297.3	323.5	308.1	304.0	
Up wall temp(K)	296.3	296.4	296.5	319.3	305.5	302.1	
Low wall temp(K)	295.8	295.2	295.2	309.1	300.4	298.9	
Floor temp(K)	293.3	293.4	293.4	295.9	294.3	293.9	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	3.620E-02	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	2.963E-03	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	5.600E+04	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	5.600E+04	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	4.378E-08	0.000E+00	0.000E+00	1.271E-08
On target(W/m^2)	8.973E-04	1.001E-03	1.060E-03	5.589E-01	6.693E-02	1.996E-02	
Pressure(Pa)	-1.277E+00	-1.307E+00	-1.317E+00	-2.659E+00	-2.030E+00	-1.609E+00	

Upper layer species

N2 %	77.8	77.7	77.7	77.1	77.2	77.5
O2 %	19.1	19.1	19.1	18.4	18.5	18.9
CO2 %	1.80	1.83	1.84	2.60	2.41	2.08
CO ppm	2.703E+03	2.758E+03	2.778E+03	4.222E+03	3.840E+03	3.220E+03
TUHC %	8.055E-12	7.757E-12	7.674E-12	6.470E-12	7.098E-12	6.327E-12
H2O %	1.01	1.03	1.03	1.48	1.36	1.17
OD 1/m	0.530	0.524	0.524	0.841	0.824	0.794
CT g-min/m^3	126.	131.	133.	307.	208.	177.

Lower layer species

N2 %	77.9	79.1	79.0	77.9	79.3	77.8
O2 %	19.2	20.5	20.4	19.3	20.7	19.1
CO2 %	1.70	0.272	0.390	1.63	5.258E-08	1.75
CO ppm	2.518E+03	379.	546.	2.410E+03	8.146E-04	2.621E+03
TUHC %	8.513E-12	1.312E-09	1.831E-09	8.633E-12	0.000	8.384E-12
H2O %	0.951	0.151	0.216	0.912	1.267E-07	0.984
OD 1/m	0.440	2.398E-04	2.518E-04	0.296	6.904E-11	0.477
CT g-min/m^3	26.7	6.84	9.21	8.81	1.363E-07	26.2

Time = 2500.0 seconds.

Upper temp(K)	309.6	310.0	310.2	363.0	336.2	325.2	
Lower temp(K)	306.5	293.7	293.8	307.3	295.5	308.3	273.0
Upper vol(m**3)	29.7	25.9	24.4	82.0	24.6	38.7	
Layer depth(m)	2.2	2.4	2.4	2.3	2.4	2.3	
Ceiling temp(K)	300.2	300.4	300.5	333.2	315.3	309.3	
Up wall temp(K)	299.0	299.1	299.2	328.4	312.0	306.8	
Low wall temp(K)	298.2	296.9	297.0	316.8	304.9	302.9	
Floor temp(K)	293.5	293.7	293.7	297.2	295.2	294.4	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	4.906E-02	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	3.704E-03	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	7.000E+04	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	7.000E+04	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	1.690E-08	0.000E+00	0.000E+00	8.326E-09
On target(W/m^2)	4.328E-03	4.738E-03	4.977E-03	1.351E+00	1.963E-01	6.086E-02	
Pressure(Pa)	-1.474E+00	-1.523E+00	-1.535E+00	-2.942E+00	-2.362E+00	-1.838E+00	

Upper layer species

N2 %	76.7	76.7	76.7	75.9	76.1	76.4
O2 %	18.0	17.9	17.9	17.1	17.3	17.7
CO2 %	3.02	3.06	3.07	3.88	3.67	3.31
CO ppm	5.162E+03	5.247E+03	5.274E+03	7.051E+03	6.572E+03	5.792E+03
TUHC %	4.747E-12	4.704E-12	4.676E-12	5.818E-12	5.879E-12	4.501E-12
H2O %	1.73	1.76	1.76	2.25	2.13	1.91
OD 1/m	1.14	1.09	1.09	1.50	1.54	1.57
CT g-min/m^3	233.	233.	234.	442.	348.	323.

Lower layer species

N2 %	76.9	10.8	4.52	76.9	2.270E-03	76.8
O2 %	18.1	2.81	1.17	18.2	5.931E-04	18.1
CO2 %	2.84	3.732E-02	2.229E-02	2.76	1.120E-05	2.90
CO ppm	4.809E+03	52.0	31.3	4.646E+03	0.173	4.944E+03
TUHC %	4.772E-12	5.568E-05	5.354E-05	5.095E-12	0.000	4.858E-12
H2O %	1.63	2.069E-02	1.237E-02	1.58	2.698E-05	1.67
OD 1/m	0.913	7.085E-10	4.640E-10	0.537	6.904E-11	0.907
CT g-min/m^3	113.	6.84	9.22	64.8	1.365E-07	112.

Time = 3000.0 seconds.

Upper temp(K)	402.7	395.6	396.6	642.5	503.2	460.8	
Lower temp(K)	309.5	296.2	296.3	327.9	308.5	309.4	273.0
Upper vol(m**3)	30.2	25.0	23.6	79.5	23.8	37.2	
Layer depth(m)	2.2	2.3	2.3	2.2	2.3	2.2	
Ceiling temp(K)	334.6	331.2	331.7	519.9	396.0	368.6	
Up wall temp(K)	326.9	324.1	324.5	500.7	381.6	356.7	
Low wall temp(K)	312.9	310.4	310.7	463.5	352.6	332.2	
Floor temp(K)	295.8	296.0	296.0	325.6	303.7	299.4	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	4.219E-01	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	1.365E-01	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	6.621E+05	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	6.621E+05	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.015E+05
On target(W/m^2)	8.162E+00	6.240E+00	6.490E+00	8.414E+02	1.101E+02	4.470E+01	
Pressure(Pa)	-8.539E-01	-7.045E-01	-7.311E-01	-3.229E+00	-2.395E+00	-1.611E+00	

Upper layer species

N2 %	62.7	63.5	63.3	46.5	50.7	58.7
O2 %	8.67	9.06	8.96	1.07	2.53	6.74
CO2 %	11.7	11.4	11.5	16.7	16.3	13.0
CO ppm	8.589E+03	8.604E+03	8.605E+03	8.719E+03	9.033E+03	8.628E+03
TUHC %	8.95	8.21	8.38	24.2	19.4	12.5
H2O %	6.38	6.23	6.27	9.16	8.88	7.13
OD 1/m	10.0	9.44	9.46	10.7	12.8	11.4
CT g-min/m^3	469.	460.	461.	730.	652.	608.

Lower layer species

N2 %	75.7	76.0	75.4	74.3	63.9	75.1
O2 %	17.0	17.2	16.7	16.0	7.36	16.7
CO2 %	4.13	3.82	4.37	5.08	14.3	4.43
CO ppm	4.216E+03	6.419E+03	6.477E+03	4.808E+03	9.820E+03	4.385E+03
TUHC %	0.267	5.957E-02	0.229	1.05	4.85	0.630
H2O %	2.28	2.19	2.48	2.79	7.73	2.44
OD 1/m	1.27	4.544E-08	5.355E-08	0.610	0.175	0.692
CT g-min/m^3	286.	14.2	17.4	130.	15.6	232.

Time = 3500.0 seconds.

Upper temp(K)	419.0	416.5	418.0	438.7	398.5	542.1	
Lower temp(K)	338.5	342.4	344.7	364.3	307.1	350.6	273.0
Upper vol(m**3)	27.5	25.7	24.3	83.4	24.6	33.7	
Layer depth(m)	2.0	2.4	2.4	2.3	2.4	2.0	
Ceiling temp(K)	354.2	352.3	353.0	422.8	373.4	406.4	
Up wall temp(K)	345.1	343.4	344.1	416.9	365.9	392.5	
Low wall temp(K)	329.4	326.7	327.3	401.8	346.2	361.1	
Floor temp(K)	297.8	299.1	299.2	315.6	304.5	303.7	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	8.415E-02	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	8.143E-03	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	2.129E+04	0.000E+00	6.393E+05	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	2.129E+04	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.393E+05	4.257E+05
On target(W/m^2)	1.422E+01	1.311E+01	1.376E+01	2.542E+01	6.982E+00	2.171E+02	
Pressure(Pa)	-3.897E-01	-8.018E-01	-8.304E-01	-1.219E+00	-5.938E-01	-1.611E+00	

Upper layer species

N2 %	56.4	56.2	56.2	51.6	51.1	57.9
O2 %	3.64	3.59	3.59	2.42	2.25	3.83
CO2 %	17.4	17.4	17.4	17.3	17.3	17.8
CO ppm	7.664E+03	7.697E+03	7.688E+03	7.782E+03	7.947E+03	7.419E+03
TUHC %	11.7	11.9	11.8	17.7	18.3	9.43
H2O %	9.18	9.19	9.19	9.15	9.19	9.35
OD 1/m	12.7	12.7	12.6	10.9	12.9	9.89
CT g-min/m^3	1.563E+03	1.543E+03	1.540E+03	1.665E+03	1.765E+03	1.644E+03

Lower layer species

N2 %	66.2	59.0	59.0	57.2	0.984	65.4
O2 %	11.2	5.93	5.94	5.84	0.113	10.7
CO2 %	9.50	14.8	14.8	14.2	0.220	10.0
CO ppm	4.319E+03	6.691E+03	6.682E+03	6.584E+03	151.	4.556E+03
TUHC %	7.10	10.8	10.8	13.7	7.462E-02	7.48
H2O %	5.04	7.86	7.85	7.54	0.119	5.32
OD 1/m	8.88	9.86	10.0	6.59	2.226E-08	3.99
CT g-min/m^3	1.078E+03	60.5	69.4	578.	16.8	765.

Time = 4000.0 seconds.

Upper temp(K)	404.1	400.7	401.3	402.6	375.8	450.8	
Lower temp(K)	369.1	311.8	313.2	318.4	306.2	381.1	273.0
Upper vol(m**3)	23.2	25.7	24.2	85.9	24.4	33.5	
Layer depth(m)	1.7	2.4	2.4	2.4	2.4	2.0	
Ceiling temp(K)	367.7	366.2	366.9	390.5	359.4	411.5	
Up wall temp(K)	359.4	358.1	358.8	392.3	356.6	402.2	
Low wall temp(K)	345.2	340.4	341.2	373.8	339.6	379.5	
Floor temp(K)	300.1	302.2	302.3	311.6	303.4	307.6	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	3.122E-03	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	2.750E-03	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.563E+04	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.563E+04	0.000E+00
On target(W/m^2)	8.596E+00	7.575E+00	7.770E+00	8.130E+00	2.653E+00	3.498E+01	
Pressure(Pa)	-4.515E+00	-4.932E+00	-4.946E+00	-4.990E+00	-4.425E+00	-5.549E+00	

Upper layer species

N2 %	60.5	60.5	60.5	57.7	57.0	60.7
O2 %	4.05	4.03	4.03	3.67	3.55	4.06
CO2 %	18.8	18.8	18.8	18.1	18.0	18.8
CO ppm	6.638E+03	6.647E+03	6.645E+03	6.782E+03	6.892E+03	6.599E+03
TUHC %	5.34	5.38	5.36	9.48	10.5	5.18
H2O %	9.74	9.75	9.75	9.44	9.39	9.76
OD 1/m	10.2	10.3	10.2	10.8	12.1	9.02
CT g-min/m^3	2.381E+03	2.355E+03	2.347E+03	2.613E+03	2.868E+03	2.353E+03

Lower layer species

N2 %	66.9	61.8	61.9	58.8	5.261E-04	65.1
O2 %	9.74	5.31	5.34	4.95	5.031E-05	8.09
CO2 %	12.4	17.3	17.2	16.5	1.430E-04	14.2
CO ppm	4.379E+03	6.165E+03	6.151E+03	6.402E+03	0.178	5.030E+03
TUHC %	3.55	5.18	5.15	9.57	1.231E-04	4.09
H2O %	6.41	8.98	8.96	8.63	8.558E-05	7.37
OD 1/m	8.10	0.691	0.835	0.139	6.944E-12	4.71
CT g-min/m^3	1.653E+03	329.	353.	716.	16.8	1.034E+03

Time = 4500.0 seconds.

Upper temp(K)	391.5	392.1	392.9	386.2	363.2	436.4	
Lower temp(K)	357.5	310.0	311.1	312.0	304.2	361.5	273.0
Upper vol(m**3)	28.1	25.8	24.4	87.3	24.6	35.9	
Layer depth(m)	2.1	2.4	2.4	2.4	2.4	2.1	
Ceiling temp(K)	364.4	363.7	364.4	371.4	349.9	402.4	
Up wall temp(K)	359.5	358.8	359.4	376.3	350.0	398.2	
Low wall temp(K)	348.3	342.0	342.8	359.1	334.5	380.2	
Floor temp(K)	300.4	303.0	303.1	310.0	302.8	307.5	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	1.900E-03	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	1.500E-03	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.281E+04	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.281E+04	1.474E+04
On target(W/m^2)	5.299E+00	5.435E+00	5.608E+00	4.264E+00	1.369E+00	2.387E+01	
Pressure(Pa)	-3.584E+00	-3.902E+00	-3.944E+00	-3.585E+00	-2.899E+00	-3.687E+00	

Upper layer species

N2 %	62.7	62.7	62.7	61.0	60.5	62.9
O2 %	4.58	4.57	4.57	4.30	4.19	4.57
CO2 %	18.9	18.9	18.9	18.6	18.6	19.0
CO ppm	6.175E+03	6.180E+03	6.178E+03	6.282E+03	6.362E+03	6.152E+03
TUHC %	2.59	2.62	2.61	4.97	5.65	2.25
H2O %	9.77	9.77	9.77	9.64	9.62	9.82
OD 1/m	10.0	10.3	10.4	10.5	11.3	8.18
CT g-min/m^3	3.109E+03	3.082E+03	3.071E+03	3.448E+03	3.813E+03	3.000E+03

Lower layer species

N2 %	65.8	63.6	63.7	62.0	2.525E-03	66.0
O2 %	7.67	5.63	5.64	5.18	2.125E-04	7.86
CO2 %	15.3	17.6	17.6	17.6	7.139E-04	15.0
CO ppm	5.002E+03	5.790E+03	5.784E+03	5.977E+03	0.392	4.932E+03
TUHC %	2.23	2.62	2.61	4.64	2.308E-04	2.20
H2O %	7.88	9.11	9.10	9.13	3.708E-04	7.77
OD 1/m	8.77	2.14	2.39	0.728	6.170E-11	3.76
CT g-min/m^3	2.239E+03	489.	536.	751.	16.8	1.316E+03

Time = 5000.0 seconds.

Upper temp(K)	373.9	373.8	374.4	368.6	351.5	402.1	
Lower temp(K)	354.6	329.7	334.6	310.6	303.5	360.3	273.0
Upper vol(m**3)	25.4	25.8	24.3	87.3	24.6	34.6	
Layer depth(m)	1.9	2.4	2.4	2.4	2.4	2.1	
Ceiling temp(K)	356.2	355.8	356.4	356.2	341.0	383.6	
Up wall temp(K)	354.5	354.0	354.6	362.4	342.9	384.4	
Low wall temp(K)	345.8	341.8	343.2	347.4	329.4	371.0	
Floor temp(K)	300.0	302.7	302.7	308.7	302.3	306.1	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	2.509E-04	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	2.500E-04	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.609E+04	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.609E+04	1.728E+03
On target(W/m^2)	2.419E+00	2.402E+00	2.480E+00	1.845E+00	6.614E-01	7.992E+00	
Pressure(Pa)	-3.396E+00	-3.619E+00	-3.628E+00	-3.529E+00	-3.084E+00	-4.199E+00	

Upper layer species

N2 %	63.9	63.9	63.9	63.0	62.6	64.0
O2 %	5.01	5.01	5.01	4.81	4.69	5.05
CO2 %	18.8	18.8	18.8	18.7	18.7	18.8
CO ppm	5.905E+03	5.902E+03	5.901E+03	5.988E+03	6.048E+03	5.877E+03
TUHC %	1.28	1.27	1.27	2.42	2.96	1.11
H2O %	9.67	9.67	9.67	9.65	9.65	9.66
OD 1/m	9.74	8.38	8.18	10.3	12.1	12.6
CT g-min/m^3	3.797E+03	3.708E+03	3.686E+03	4.210E+03	4.700E+03	3.810E+03

Lower layer species

N2 %	66.6	63.9	64.0	62.2	1.983E-05	65.9
O2 %	7.79	5.35	5.34	5.16	1.670E-05	7.14
CO2 %	15.4	18.2	18.3	17.7	1.262E-05	16.2
CO ppm	4.862E+03	5.814E+03	5.810E+03	5.965E+03	0.181	5.107E+03
TUHC %	1.11	1.72	1.63	4.33	3.908E-05	1.13
H2O %	7.95	9.40	9.42	9.18	2.968E-05	8.36
OD 1/m	7.33	4.958E-05	5.280E-05	7.962E-03	5.735E-11	4.05
CT g-min/m^3	2.770E+03	524.	575.	763.	16.8	1.600E+03

2.6 Input Data for EXITT for Scenario 1 (Example Data File SCEN-1.BLD)

```
6 20
1 2 3 4 5
 6 6 1 7 7
 8 8 8 8 6
 6 4 4 4 1
1 2 3 4 5
 6 7 8 4 18
 5 1 2 3 7
 7 18 18 4 1
2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
35 35 35 35 35
 35 35 35 35 35
 35 35 35 35 35
 35 35 35 35 35
1
-1.
7
83 83 83 83 83
 83 95 83 83 83
 83 83 83 83 95
 95 83 83 83 83
 27
  1  12      1.82880
  1  15      3.40729
  1  20      1.89277
  2  13      1.52400
  2  15      2.71167
  3   7      2.13360
  3  14      1.52400
  4   9      3.12699
  4  18      4.26720
  4  19      2.38056
  5  11      2.13360
  5  16      2.74320
  5  17      3.35280
  6   7      2.51035
  7  15      2.05740
  7  16      2.43840
  8  20      1.67640
  9  19      3.68606
 10  17      1.50097
 10  18      2.13360
 11  17      1.92772
 12  20      1.57090
 15  20      4.26799
 16  19      1.37160
 17  18      2.05033
 17  19      4.29162
 18  19      3.29692
1
30
1
0
1
0
40.
-1.
```

2.7 Printed Output from EXITT for Scenario 1

```
EXITT Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89
FAST DUMP FILE    :  SCEN-1.DMP
BUILDING/OCCUPANT FILE: SCEN-1.BLD
EXITT OUTPUT FILE      : SCEN-1.EXT
EXITT DUMP FILE        : SCEN-1.EVA

NO. OF ROOMS (RUN WITH FAST)        6
NO. OF DOORS                        2
NO. OF WINDOWS                      4
TOTAL NUMBER OF NODES              20
```

EXITT NODE NUMBER	EXITT ROOM NUMBER	FAST ROOM NUMBER	ROOM HEIGHT (M)	FLOOR HEIGHT (M)
1	1	1	2.4	0.0
2	2	2	2.4	0.0
3	3	3	2.4	0.0
4*	4	4	2.4	0.0
5	5	5	2.4	0.0
6	6	6	2.4	0.0
7	7	6	2.4	0.0
8	8	1	2.4	0.0
9	4	7	2.4	0.0
10	18	7	2.4	0.0
11	5	8	2.4	0.0
12	1	8	2.4	0.0
13	2	8	2.4	0.0
14	3	8	2.4	0.0
15	7	6	2.4	0.0
16	7	6	2.4	0.0
17*	18	4	2.4	0.0
18*	18	4	2.4	0.0
19*	4	4	2.4	0.0
20	1	1	2.4	0.0

* INDICATES NODE IS IN BURN ROOM

NODE NUMBER	NOISE LEVEL (DECIBELS)
1	35
2	35
3	35
4	35
5	35
6	35
7	35
8	35
9	35
10	35
11	35
12	35
13	35
14	35
15	35
16	35
17	35
18	35
19	35
20	35

NUMBER OF SMOKE DETECTORS: 1

SMOKE DET NO.	NODE	ACTIVATION TIME (SEC)
1	7	DETERMINED BY EXITT TO BE 0.0 SECONDS

EXITT NODE NUMBER	ALARM LEVEL (DECIBELS)
	1
1	83
2	83
3	83
4	83
5	83
6	83
7	95
8	83
9	83
10	83
11	83
12	83
13	83
14	83
15	95
16	95
17	83
18	83
19	83
20	83

EDGE LIST

FROM NODE	TO NODE	DISTANCE (M)
1 -	12	1.83
-	15	3.41
-	20	1.89
2 -	13	1.52
-	15	2.71
3 -	7	2.13
-	14	1.52
4 -	9	3.13
-	18	4.27
-	19	2.38
5 -	11	2.13
-	16	2.74
-	17	3.35
6 -	7	2.51
7 -	3	2.13
-	6	2.51
-	15	2.06
-	16	2.44
8 -	20	1.68
9 -	4	3.13
-	19	3.69
10 -	17	1.50
-	18	2.13
11 -	5	2.13
-	17	1.93
12 -	1	1.83
-	20	1.57
13 -	2	1.52
14 -	3	1.52
15 -	1	3.41
-	2	2.71
-	7	2.06
-	20	4.27
16 -	5	2.74
-	7	2.44
-	19	1.37
17 -	5	3.35
-	10	1.50
-	11	1.93
-	18	2.05

```
      -       19        4.29
   18 -        4        4.27
      -       10        2.13
      -       17        2.05
      -       19        3.30
   19 -        4        2.38
      -        9        3.69
      -       16        1.37
      -       17        4.29
      -       18        3.30
   20 -        1        1.89
      -        8        1.68
      -       12        1.57
      -       15        4.27

TOTAL NUMBER OF DIRECTED EDGES    54


NUMBER OF PEOPLE     1

PERSON     LOCATION     AGE     SEX     STATE    SLEEP     REQUIRE      TRAVEL
                                                PENALTY   ASSISTANCE    SPEED
   1           1         30    MALE     ASLEEP    40.0       NO          1.30


ACTIONS TAKEN BY PERSON   1
NODE ROOM  TIME  SAV- SAVED DESTI- ACTION
                 ING   BY   NATION
   1   1    0.0   --   --     --  INITIAL POSITION
   1   1 1180.0   --   --     --  LEAVE BUILDING
  15   6 1182.0   --   --      9  ARRIVE AT NEW NODE
   7   6 1183.2   --   --      9  ARRIVE AT NEW NODE
  16   6 1184.7   --   --      9  ARRIVE AT NEW NODE
  19   4 1186.4   --   --      9  ARRIVE AT NEW NODE
   9   7 1188.6   --   --      9  LEAVE BUILDING THROUGH DOOR
```

2.8 Printed Output from TENAB for Scenario 1

```
FAST  Version:  18.3
TENAB Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89

FAST DUMP FILE    :  SCEN-1.DMP
EXITT DUMP FILE   :  SCEN-1.EVA
TENAB OUTPUT FILE:  SCEN-1.TEN
TENAB DUMP FILE   :  SCEN-1.PLT


OCCUPANT     NODE NUMBER     ROOM NUMBER     FLOOR ELEVATION     ENTER TIME (S)
    1             1               1              0.00                 0.0
                 15               6              0.00              1182.0
                  7               6              0.00              1183.2
                 16               6              0.00              1184.7
                 19               4              0.00              1186.4
                  9            DOOR              0.00              1188.6

FACTORS          INCAPACITATION LEVEL     LETHAL LEVEL
FED1                          0.5               1.0
TEMP1 DEG C                  65.0             100.0
CT    (G-MIN/M3)            450.0             900.0
FED2                          1.0
TEMP2                         1.0
FED3                          1.0


PERSON  1
  TIME NODE  CONDITION      CAUSE   FED1        TEMP1       CT          FLUX
                                    FED2        TEMP2
                                    FED3
 (SEC)                                                   (G-MIN/M3) (KW-SEC/M2)
  1190.    9  ESCAPE               0.000E+00  0.218E+02  0.156E+02  0.340E-03
                                    0.162E+00  0.000E+00
                                    0.460E-01
  5110.    9  FINAL TIME           0.000E+00  0.218E+02  0.156E+02  0.340E-03
                                    0.162E+00  0.000E+00
                                    0.460E-01

FED1  - THE FRACTIONAL EFFECTIVE DOSE DUE TO
        CO,CO2,HCN AND O2 BASED ON THE HAZARD I
        TENAB FED PLUS AN OXYGEN TERM
FED2  - THE FRACTIONAL EFFECTIVE DOSE DUE TO
        CO,CO2,HCN AND O2 BASED ON PURSER'S
        EQUATIONS
FED3  - THE FRACTIONAL EFFECTIVE DOSE DUE TO
        CO2 BASED ON PURSER'S EQUATIONS
TEMP1 - THE AVERAGE TEMPERATURE OF THE
        LAYER OF THE ROOM TO WHICH THE
        PERSON IS EXPOSED - IT IS THE
        SAME AS TEMP USED IN THE HAZARD I TENAB
TEMP2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO
        CONVECTIVE HEAT BASED ON PURSER'S
        EQUATIONS

* IF PERSON IS WAITING AT A WINDOW, HE IS CONSIDERED TO BE
AT THE NODE (ROOM) FROM WHICH HE CAME PRIOR TO REACHING THE WINDOW
THIS ALLOWS HIM TO CONTINUE TO BE EXPOSED TO THE ROOM FIRE CONDITIONS
```

CHAPTER 3. SCENARIO 2, GREASE FIRE IN KITCHEN

3.1 Summary of Fire Scenario 2

For scenario 2, a pot of burning vegetable oil exposes overhead cabinets and spills over exposing lower cabinets. There are five occupants in the house ranging in age from 5 to 71.

BUILDING: Ranch house

OCCUPANTS: Father aged 30, fully capable and awake, in bathroom off master bedroom.

Mother, aged 30, fully capable and awake, in hallway near washer/dryer.

Daughter, aged 7, fully capable and awake, in living room watching television.

Son, aged 5, fully capable and awake, in living room watching television.

Grandmother, aged 71, fully capable and awake, in bedroom 3.

DOORS: The following doors are closed: bedroom 3; master bedroom; door to bathroom of master bedroom. The only opening to the outdoors is a partially open window in the master bedroom. Fire room window is closed.

FIRE: Pot of burning vegetable oil 12 inches in diameter exposes overhead cabinets and spills over exposing lower cabinets.

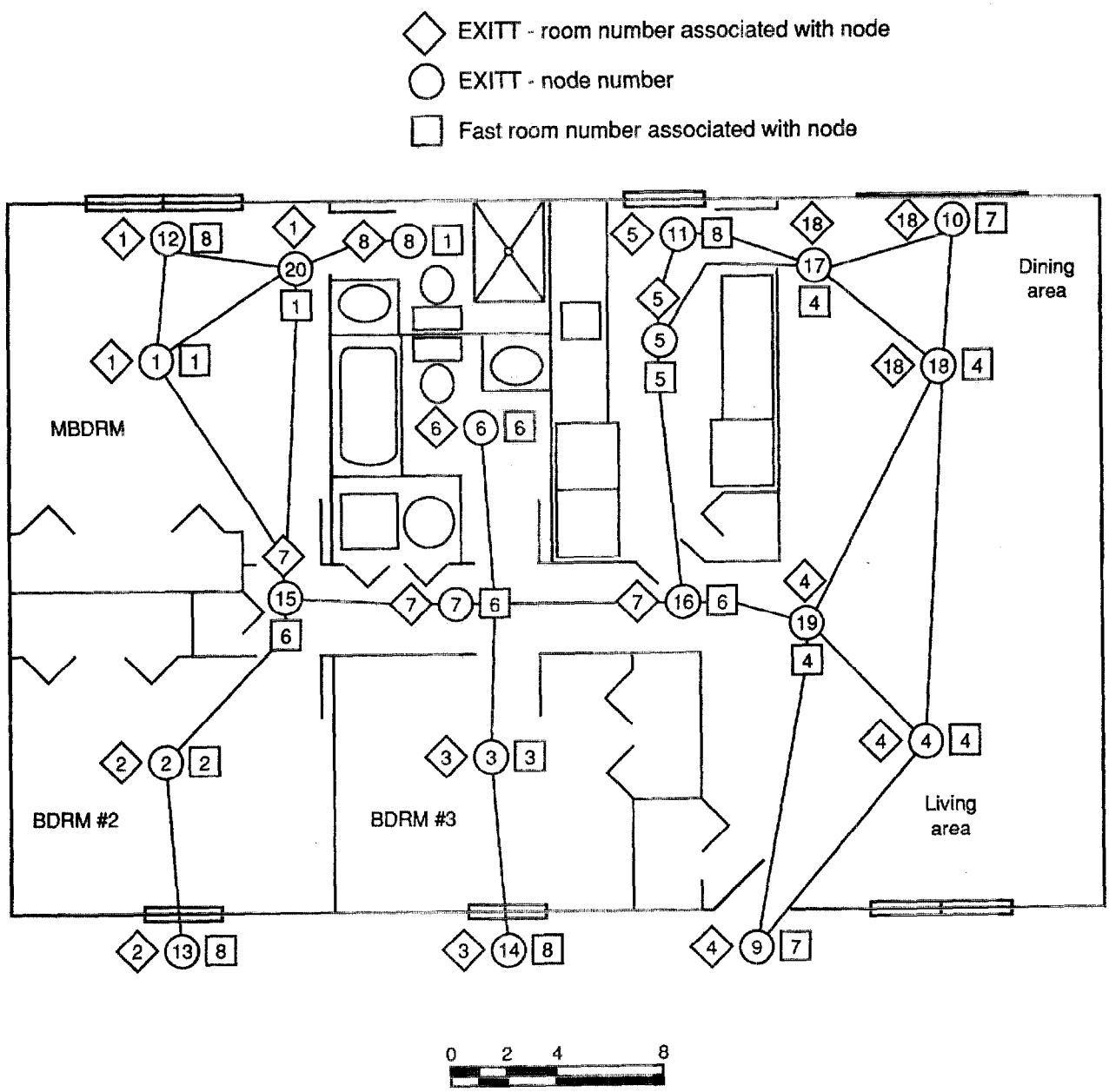
FUEL: Burning vegetable oil taken directly from HAZARD I fire property database. Material code CKG001, Cooking oil, corn; cottonseed; etc.; in 12-in pan. Kitchen cabinets use a modified wardrobe fire taken from HAZARD I fire property database. Material code CLT001, Wardrobe closet, plywood, FR paint. Peak mass loss rate reduced to accurately simulate kitchen cabinet fire.

CEILINGS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

WALLS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

FLOORS: 0.15-m-thick concrete slab, taken directly from HAZARD I materials property database. Material code CNC001, Concrete, normal weight, Type I cement, Dolomite aggregate.

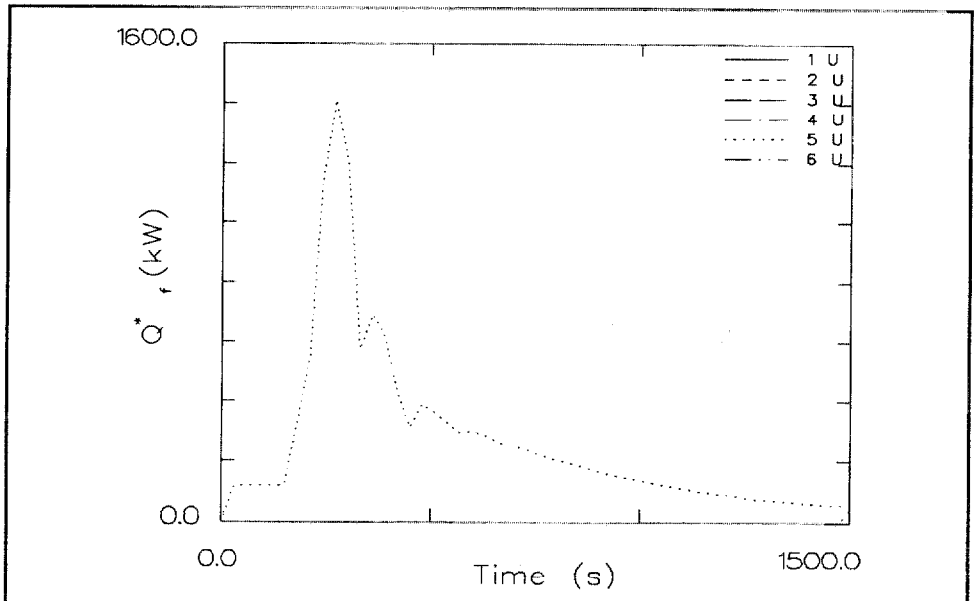
3.2 Floor Plan and EXITT Building Description for Scenario 2



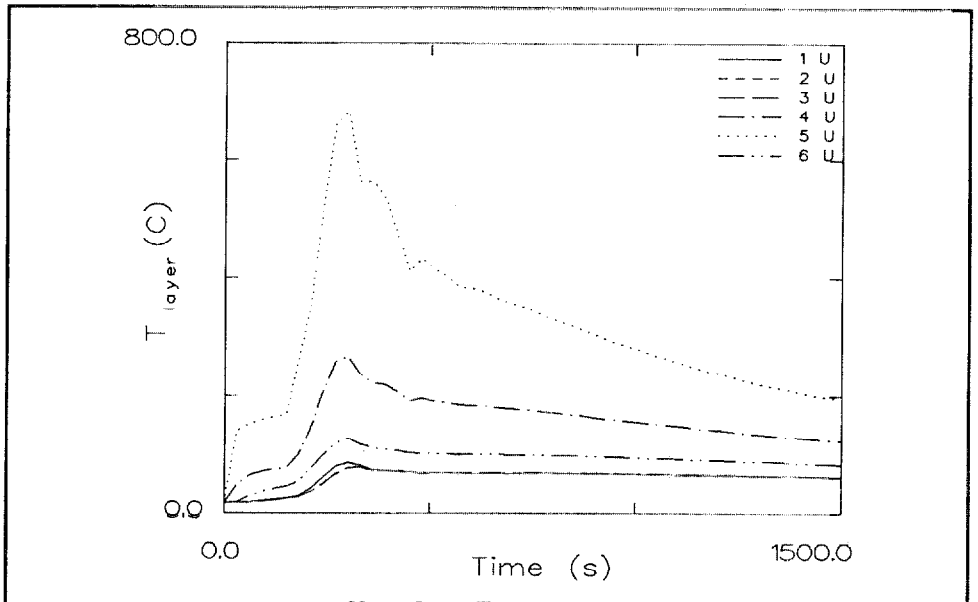
3.3 FAST Input Data for Scenario 2 (Example Data File SCEN-2.DAT)

```
VERSN   18        Scenario 2, Ranch House, Kitchen Greese Fire
TIMES   1500 100  30  30   0
TAMB   293.  101300.      0.
EAMB   273.  101300.      0.
HI/F     0.00   0.00   0.00   0.00   0.00   0.00
WIDTH    3.60   3.00   3.00   4.50   2.70   1.92
DEPTH    3.80   3.60   3.40   8.10   3.80   8.79
HEIGH    2.40   2.40   2.40   2.40   2.40   2.40
HVENT   1  6  1   1.10   2.10   0.00
HVENT   1  7  1   0.81   1.22   0.91   0.00
HVENT   2  6  1   1.10   2.10   0.00
HVENT   3  6  1   1.10   2.10   0.00
HVENT   4  5  1   1.10   2.10   0.00
HVENT   4  6  1   1.10   2.10   0.00
CVENT   1  6  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   1  7  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   2  6  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   3  6  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   4  5  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   4  6  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CEILI GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
WALLS GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
FLOOR CONCRETE  CONCRETE  CONCRETE  CONCRETE  CONCRETE  CONCRETE
CHEMI    16.    0.   6.0    27950000.  300.
LFBO   5
LFBT   2
LFPOS  1
LFMAX  9
FTIME      5.   145.    70.    30.    40.    50.    10.   140.   830.
FMASS  0.0000 0.0042 0.0042 0.0220 0.0506 0.0506 0.0131 0.0256 0.0131 0.0059
FHIGH    0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00
FAREA    1.00   1.00   1.00   1.50   2.00   3.00   3.00   3.00   3.00   3.00
FQDOT  0.00     1.17E+05 1.17E+05 6.15E+05 1.41E+06 1.41E+06 3.66E+05 7.16E+05 3.66E+05 1.65E+05
CT    1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000
HCR   0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080
CO    0.000 0.000 0.000 0.234 0.134 0.134 0.016 0.031 0.063 0.000
OD    0.000 0.000 0.000 0.050 0.031 0.031 0.000 0.000 0.000 0.000
DUMPR SCEN-2.DMP
```

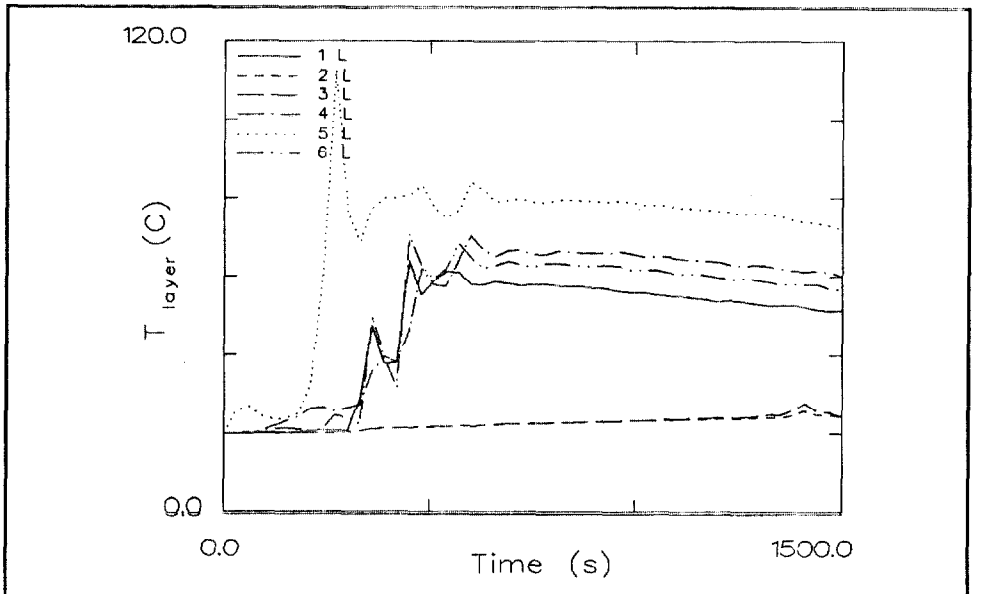
3.4 Selected Graphs from Scenario 2



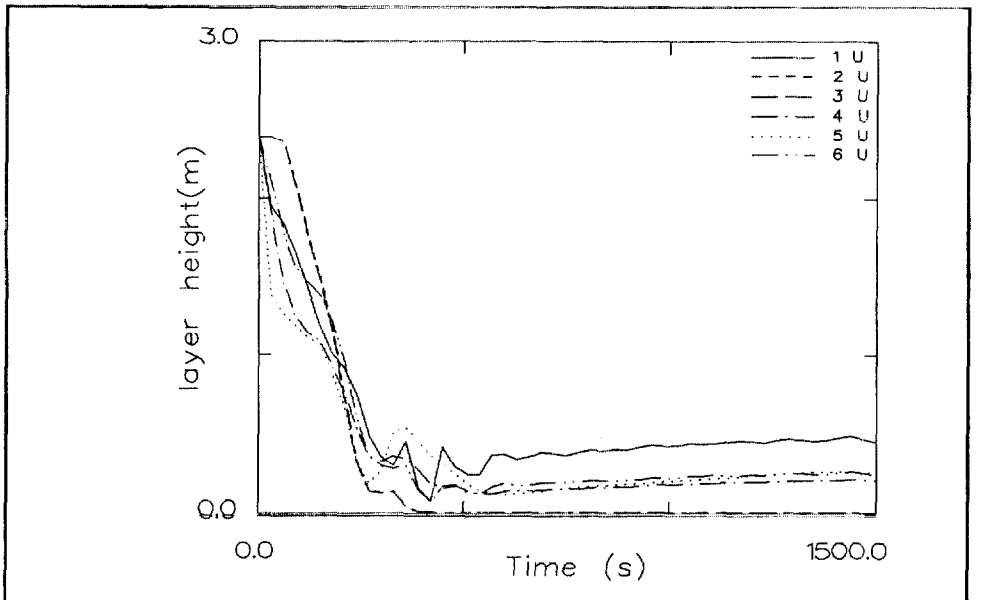
Heat Release Rate of Fire (kW)



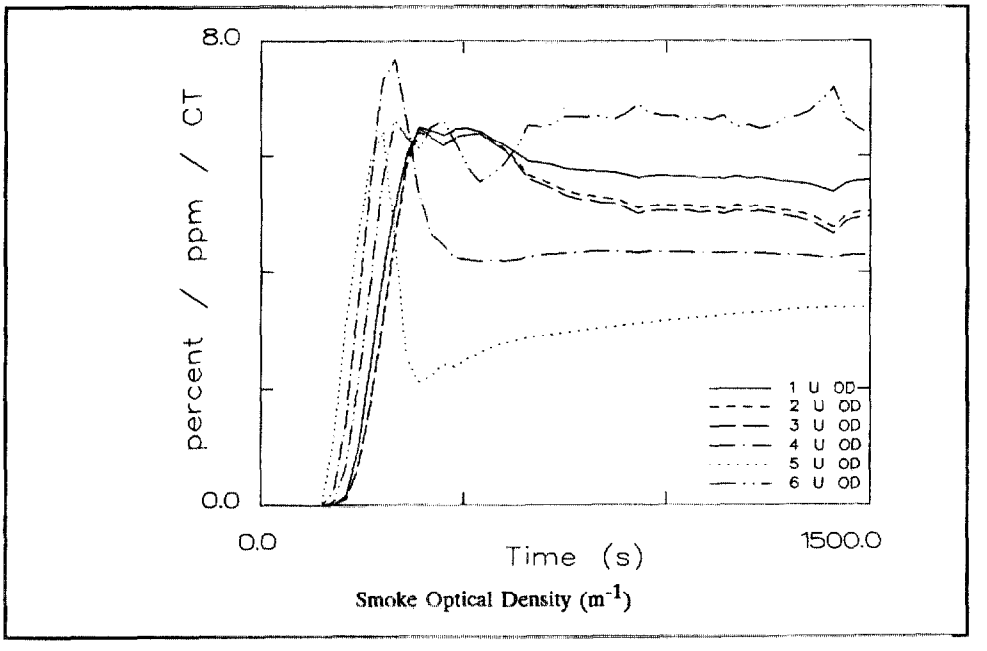
Upper Layer Temperature (°C)



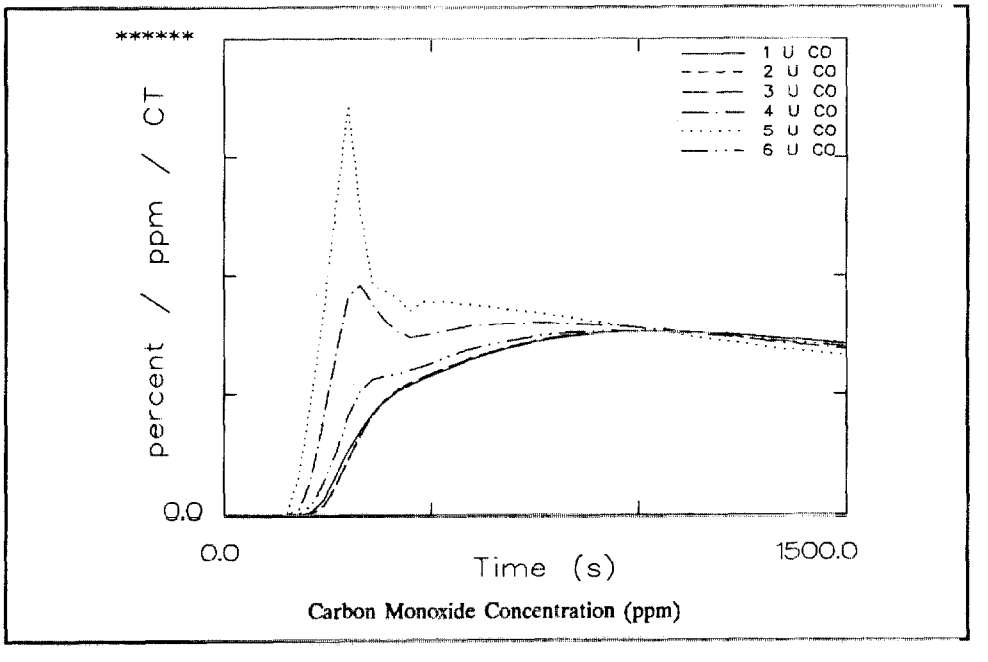
Lower Layer Temperature (°C)



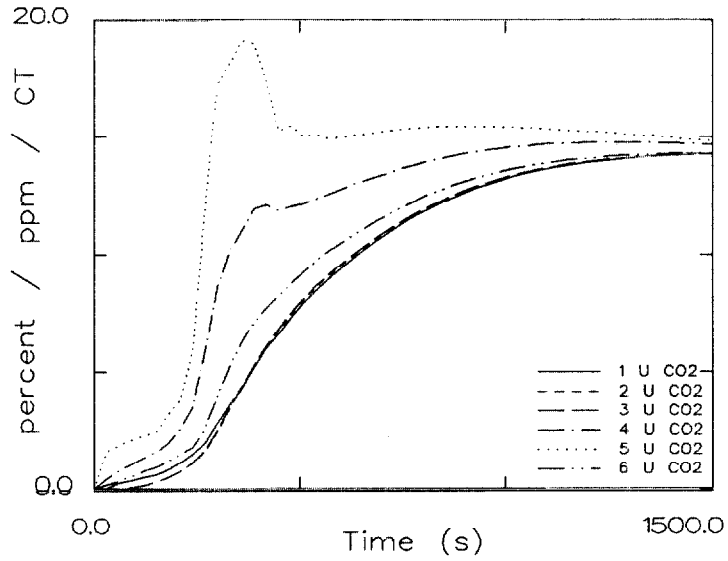
Layer Interface Height (m)



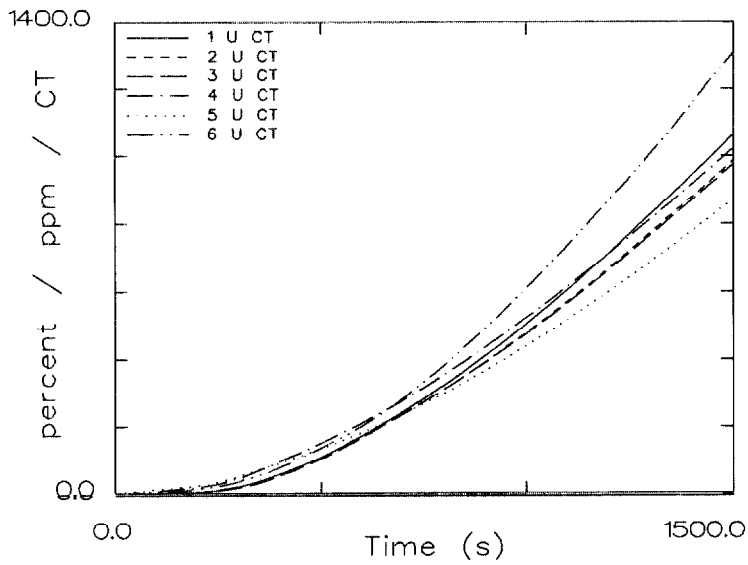
Smoke Optical Density (m^{-1})



Carbon Monoxide Concentration (ppm)



Carbon Dioxide Concentration (%)



Concentration-Time Product (ppm-min)

3.5 Printed Output from FAST for Scenario 2

FAST version 18.3.2 - created February 1, 1989 Scenario 2, Ranch House, Kitchen Greese Fire

Total compartments = 6

FLOOR PLAN

Width	3.6	3.0	3.0	4.5	2.7	1.9
Depth	3.8	3.6	3.4	8.1	3.8	8.8
Height	2.4	2.4	2.4	2.4	2.4	2.4
Area	13.7	10.8	10.2	36.5	10.3	16.9
Volume	32.8	25.9	24.5	87.5	24.6	40.5
Ceiling	2.4	2.4	2.4	2.4	2.4	2.4
Floor	0.0	0.0	0.0	0.0	0.0	0.0

CONNECTIONS

1 (1)	Width	0.00	0.00	0.00	0.00	0.00	1.10	0.81
	Soffit	0.00	0.00	0.00	0.00	0.00	2.10	1.22
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.91
	a.Soffit	0.00	0.00	0.00	0.00	0.00	2.10	1.22
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.91
2 (1)	Width	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	Soffit	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 (1)	Width	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	Soffit	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 (1)	Width	0.00	0.00	0.00	0.00	1.10	1.10	0.00
	Soffit	0.00	0.00	0.00	0.00	2.10	2.10	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	0.00	2.10	2.10	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 (1)	Width	0.00	0.00	0.00	1.10	0.00	0.00	0.00
	Soffit	0.00	0.00	0.00	2.10	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	2.10	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 (1)	Width	1.10	1.10	1.10	1.10	0.00	0.00	0.00
	Soffit	2.10	2.10	2.10	2.10	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	2.10	2.10	2.10	2.10	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Material names

Ceiling:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Walls:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Floor:	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE

Thermal data base used: THERMAL.TPF

Name	Conductivity	Specific heat	Density	Thickness	Emissivity	**Codes**	
CONCRETE	1.75	1.000E+03	2.200E+03	0.150	0.940	188	U
GYPSUM	0.160	900.	800.	1.600E-02	0.900	38	U

```
Compartment of origin is                              5
Print interval (seconds)                            100
Number of fire specification intervals is             9
Total time (seconds)                               1500
Fire position                                         1
Limiting oxygen index (%) =                         6.0
Initial relative humidity (%) =                     0.0
Fire type is a SPECIFIED (CONSTRAINED)

Pyrolysis  temperature (K) =                     300.
Ambient air temperature (K) =                    293.
Ambient reference pressure (Pa) =             101300.
Reference elevation (m) =                         0.
External ambient temperature (K) =               273.
External reference pressure (Pa) =            101300.
Reference elevation (m) =                         0.

Fmass=   0.00      4.20E-03  4.20E-03  2.20E-02  5.06E-02  5.06E-02  1.31E-02  2.56E-02  1.31E-02
         5.90E-03
Hcomb=   2.79E+07  2.79E+07  2.79E+07  2.80E+07  2.79E+07  2.79E+07  2.79E+07  2.80E+07  2.79E+07
         2.80E+07
Fqdot=   0.00      1.17E+05  1.17E+05  6.15E+05  1.41E+06  1.41E+06  3.66E+05  7.16E+05  3.66E+05
         1.65E+05
Fhigh=   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
         0.00
C/CO2=   0.00      0.00      0.00      5.00E-02  3.10E-02  3.10E-02  0.00      0.00      0.00
         0.00
CO/CO2=  0.00      0.00      0.00      0.23      0.13      0.13      1.60E-02  3.10E-02  6.30E-02
         0.00
H/C=     8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02
         8.00E-02
CT=      1.0       1.0       1.0       1.0       1.0       1.0       1.0       1.0       1.0
         1.0
Ftime=   5.0       1.45E+02  70.       30.       40.       50.       10.       1.40E+02  8.30E+02
Dump file = SCEN-2.DMP
```

Time = 0.0 seconds.

Upper temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Lower temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.0	0.0	0.0	0.1	0.0	0.0	
Layer depth(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pressure(Pa)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	

Upper layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 100.0 seconds.

Upper temp(K)	296.9	295.9	296.0	346.4	434.9	313.3	
Lower temp(K)	293.0	293.0	293.0	293.9	296.9	293.8	273.0
Upper vol(m**3)	11.2	4.6	4.5	43.5	12.7	14.9	
Layer depth(m)	0.8	0.4	0.4	1.2	1.2	0.9	
Ceiling temp(K)	293.3	293.2	293.2	304.8	337.1	295.8	
Up wall temp(K)	293.2	293.2	293.2	302.0	328.1	295.1	
Low wall temp(K)	293.1	293.0	293.0	295.5	302.2	293.4	
Floor temp(K)	293.0	293.0	293.0	293.4	294.4	293.1	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.994E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.200E-03	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.170E+05	7.010E-07	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.170E+05	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.010E-07	0.000E+00
On target(W/m^2)	1.279E-05	3.959E-06	4.410E-06	4.593E-01	2.290E+01	9.558E-03	
Pressure(Pa)	9.299E-02	2.631E-01	2.626E-01	-1.207E-01	-7.108E-01	1.151E-01	

Upper layer species

N2 %	79.1	79.2	79.2	78.7	78.2	79.0
O2 %	20.3	20.6	20.6	19.6	18.6	20.1
CO2 %	0.396	7.493E-02	7.656E-02	1.17	2.19	0.611
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	1.553E-11	7.501E-11	0.000
H2O %	0.190	3.594E-02	3.671E-02	0.559	1.05	0.293
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.280	0.251	0.254	5.97	9.87	2.11

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.2	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	9.752E-04	2.964E-09	4.980E-09	1.988E-02	6.082E-02	3.253E-02
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	1.292E-13	2.321E-12	0.000
H2O %	4.677E-04	1.421E-09	2.388E-09	9.532E-03	2.917E-02	1.560E-02
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	1.912E-03	1.463E-09	2.527E-09	2.165E-02	0.502	4.836E-02

Time = 200.0 seconds.

Upper temp(K)	311.7	307.6	307.7	403.7	596.6	343.8	
Lower temp(K)	293.5	293.0	293.0	298.5	301.4	293.7	273.0
Upper vol(m**3)	19.9	16.2	15.6	57.7	17.1	22.6	
Layer depth(m)	1.5	1.5	1.5	1.6	1.7	1.3	
Ceiling temp(K)	295.4	295.0	295.0	320.0	395.9	302.9	
Up wall temp(K)	294.8	294.5	294.5	314.0	379.2	300.5	
Low wall temp(K)	293.5	293.4	293.4	300.5	324.8	294.7	
Floor temp(K)	293.1	293.1	293.1	294.1	297.7	293.2	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.758E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.691E-02	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.724E+05	5.350E-06	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.724E+05	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.350E-06	0.000E+00
On target(W/m^2)	6.843E-03	2.531E-03	2.663E-03	8.479E+00	4.790E+02	3.744E-01	
Pressure(Pa)	3.569E+00	4.004E+00	3.997E+00	2.921E+00	1.665E+00	3.431E+00	

Upper layer species

N2 %	78.8	79.0	78.9	78.0	77.0	78.5
O2 %	19.7	20.1	20.1	18.1	16.1	19.3
CO2 %	1.02	0.649	0.658	2.37	3.63	1.41
CO ppm	87.2	41.9	42.8	1.660E+03	7.018E+03	392.
TUHC %	0.000	0.000	0.000	5.609E-11	7.838E-11	2.955E-15
H2O %	0.498	0.314	0.318	1.25	2.25	0.706
OD 1/m	6.130E-02	3.959E-02	3.982E-02	0.902	2.46	0.363
CT g-min/m^3	3.91	3.60	3.63	17.4	22.8	12.3

Lower layer species

N2 %	79.3	79.3	79.3	79.2	79.2	79.3
O2 %	20.7	20.7	20.7	20.6	20.5	20.7
CO2 %	1.705E-02	8.582E-08	1.559E-07	0.147	0.164	4.124E-02
CO ppm	0.141	2.927E-09	8.554E-09	22.7	70.9	1.824E-03
TUHC %	0.000	0.000	0.000	2.594E-12	2.997E-12	0.000
H2O %	8.185E-03	4.116E-08	7.479E-08	7.202E-02	8.350E-02	1.978E-02
OD 1/m	1.246E-04	1.892E-12	5.399E-12	1.603E-02	4.821E-02	1.661E-06
CT g-min/m^3	4.962E-02	3.992E-07	6.830E-07	0.594	1.07	0.569

Time = 300.0 seconds.

Upper temp(K)	360.9	350.8	351.6	540.5	954.5	401.3	
Lower temp(K)	293.6	293.4	293.4	299.5	349.3	297.1	273.0
Upper vol(m**3)	27.9	24.5	23.2	75.4	21.9	35.4	
Layer depth(m)	2.0	2.3	2.3	2.1	2.1	2.1	
Ceiling temp(K)	309.5	305.8	306.1	387.4	754.2	325.1	
Up wall temp(K)	305.7	302.8	303.0	371.7	728.2	318.3	
Low wall temp(K)	297.5	297.1	297.2	337.0	669.4	302.8	
Floor temp(K)	293.7	293.6	293.6	300.0	354.1	294.5	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.404E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.310E-02	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.202E+06	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.202E+06	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.243E-03
On target(W/m^2)	1.196E+00	6.303E-01	6.667E-01	2.117E+02	1.080E+04	7.767E+00	
Pressure(Pa)	3.912E+00	4.044E+00	4.018E+00	1.887E+00	-6.933E-01	3.205E+00	

Upper layer species

N2 %	77.5	77.7	77.7	73.5	66.7	76.7
O2 %	17.2	17.7	17.6	9.64	0.000	15.6
CO2 %	2.80	2.45	2.50	8.57	17.2	4.00
CO ppm	5.290E+03	4.405E+03	4.523E+03	1.834E+04	3.444E+04	8.126E+03
TUHC %	7.882E-08	6.537E-08	6.739E-08	3.144E-07	5.830E-07	1.333E-07
H2O %	1.73	1.50	1.53	5.45	10.8	2.51
OD 1/m	3.94	3.11	3.14	7.34	6.45	5.59
CT g-min/m^3	19.8	16.2	16.2	44.0	51.0	34.3

Lower layer species

N2 %	79.3	79.3	79.3	79.2	78.2	79.1
O2 %	20.7	20.7	20.7	20.5	18.8	20.4
CO2 %	1.753E-02	8.964E-08	1.859E-07	0.191	1.54	0.270
CO ppm	0.182	5.066E-06	4.284E-05	288.	3.090E+03	515.
TUHC %	1.009E-14	0.000	0.000	3.850E-09	5.036E-08	8.233E-09
H2O %	8.422E-03	4.336E-08	9.228E-08	0.112	0.967	0.167
OD 1/m	8.684E-05	5.883E-10	4.601E-09	9.375E-02	0.982	0.142
CT g-min/m^3	0.195	8.420E-07	1.485E-06	1.72	7.77	1.27

Time = 400.0 seconds.

Upper temp(K)	347.2	346.9	347.4	490.2	799.3	383.3	
Lower temp(K)	308.5	294.2	294.2	312.3	352.9	309.2	273.0
Upper vol(m**3)	31.3	25.8	24.4	78.7	20.3	38.6	
Layer depth(m)	2.3	2.4	2.4	2.2	2.0	2.3	
Ceiling temp(K)	312.9	311.3	311.6	392.6	685.9	330.2	
Up wall temp(K)	308.7	307.4	307.6	377.6	665.1	323.0	
Low wall temp(K)	301.3	300.3	300.4	345.9	604.7	308.2	
Floor temp(K)	294.2	294.2	294.2	302.6	356.8	295.4	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.473E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.114E-02	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.909E+05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.909E+05	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.483E+01
On target(W/m^2)	4.851E-01	4.761E-01	4.942E-01	8.534E+01	3.705E+03	3.753E+00	
Pressure(Pa)	-1.852E+00	-1.880E+00	-1.893E+00	-3.925E+00	-5.387E+00	-2.776E+00	

Upper layer species

N2 %	75.7	75.7	75.6	71.7	68.4	74.5
O2 %	14.0	14.0	13.9	6.98	0.255	12.1
CO2 %	5.48	5.48	5.56	12.1	18.7	7.30
CO ppm	9.809E+03	9.760E+03	9.893E+03	1.595E+04	1.873E+04	1.167E+04
TUHC %	8.283E-04	8.385E-04	8.673E-04	5.776E-03	5.190E-03	2.354E-03
H2O %	3.34	3.33	3.38	6.91	10.2	4.34
OD 1/m	6.46	6.35	6.40	5.00	2.11	6.44
CT g-min/m^3	57.6	51.9	52.3	95.5	90.8	77.2

Lower layer species

N2 %	77.7	79.1	79.1	77.8	77.9	77.6
O2 %	17.6	20.5	20.4	17.9	18.0	17.5
CO2 %	2.48	0.210	0.272	2.27	2.15	2.55
CO ppm	4.845E+03	406.	526.	4.385E+03	4.135E+03	4.966E+03
TUHC %	1.258E-07	6.529E-09	8.479E-09	2.351E-05	1.936E-05	2.619E-05
H2O %	1.54	0.130	0.169	1.41	1.33	1.59
OD 1/m	3.44	2.705E-02	3.418E-02	1.23	0.767	1.98
CT g-min/m^3	15.8	9.498E-02	0.118	5.69	10.3	10.4

Time = 500.0 seconds.

Upper temp(K)	342.9	343.4	343.9	467.2	691.0	376.1	
Lower temp(K)	330.5	294.6	294.6	332.0	352.5	331.0	273.0
Upper vol(m**3)	29.4	25.9	24.5	81.9	22.5	38.2	
Layer depth(m)	2.1	2.4	2.4	2.2	2.2	2.3	
Ceiling temp(K)	314.2	313.3	313.6	390.7	616.6	331.9	
Up wall temp(K)	310.0	309.2	309.4	376.7	599.6	324.8	
Low wall temp(K)	304.9	301.9	302.0	351.3	558.3	312.9	
Floor temp(K)	294.4	294.6	294.6	303.8	352.6	296.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.295E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.301E-02	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.636E+05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.636E+05	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.524E+02
On target(W/m^2)	3.499E-01	3.644E-01	3.774E-01	5.189E+01	1.415E+03	2.684E+00	
Pressure(Pa)	-2.448E+00	-2.531E+00	-2.540E+00	-4.862E+00	-6.740E+00	-3.454E+00	

Upper layer species

N2 %	74.3	74.2	74.1	71.4	69.9	73.4
O2 %	11.6	11.5	11.4	6.85	3.72	10.2
CO2 %	7.74	7.87	7.93	12.1	15.1	9.09
CO ppm	1.167E+04	1.177E+04	1.183E+04	1.515E+04	1.785E+04	1.270E+04
TUHC %	0.148	0.157	0.163	0.770	0.727	0.351
H2O %	4.53	4.60	4.63	6.81	8.33	5.23
OD 1/m	6.49	6.37	6.35	4.23	2.50	5.96
CT g-min/m^3	109.	103.	104.	151.	135.	137.

Lower layer species

N2 %	75.2	79.1	79.1	75.5	75.6	75.2
O2 %	13.2	20.5	20.4	13.8	14.0	13.2
CO2 %	6.32	0.210	0.273	5.79	5.67	6.35
CO ppm	9.938E+03	406.	529.	9.216E+03	9.061E+03	9.909E+03
TUHC %	6.714E-02	6.679E-09	2.846E-07	5.414E-02	4.972E-02	8.200E-02
H2O %	3.74	0.130	0.169	3.43	3.36	3.75
OD 1/m	5.84	1.028E-03	9.895E-04	4.02	3.29	4.24
CT g-min/m^3	54.1	0.132	0.161	24.7	21.9	39.9

Time = 600.0 seconds.

Upper temp(K)	342.1	342.6	343.0	458.9	656.9	374.4	
Lower temp(K)	331.1	294.9	294.9	343.2	357.1	337.8	273.0
Upper vol(m**3)	27.7	25.8	24.4	82.3	23.4	37.3	
Layer depth(m)	2.0	2.4	2.4	2.3	2.3	2.2	
Ceiling temp(K)	315.4	314.8	315.1	391.5	591.9	333.7	
Up wall temp(K)	311.1	310.6	310.8	378.1	576.9	326.7	
Low wall temp(K)	306.9	303.1	303.2	356.0	543.0	316.1	
Floor temp(K)	294.6	294.9	294.9	304.7	351.5	296.3	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.072E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.215E-02	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.014E+05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.014E+05	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.629E+02
On target(W/m^2)	3.270E-01	3.400E-01	3.522E-01	4.269E+01	9.887E+02	2.473E+00	
Pressure(Pa)	-2.581E+00	-2.715E+00	-2.727E+00	-5.042E+00	-7.127E+00	-3.465E+00	

Upper layer species

N2 %	73.2	73.1	73.1	71.1	69.6	72.5
O2 %	9.80	9.67	9.62	6.14	3.74	8.65
CO2 %	9.42	9.54	9.59	12.8	15.0	10.5
CO ppm	1.302E+04	1.312E+04	1.316E+04	1.584E+04	1.758E+04	1.389E+04
TUHC %	0.335	0.347	0.352	0.744	1.14	0.445
H2O %	5.40	5.46	5.49	7.14	8.27	5.95
OD 1/m	6.21	6.14	6.12	4.20	2.80	5.87
CT g-min/m^3	174.	168.	169.	212.	183.	202.

Lower layer species

N2 %	74.3	79.1	79.1	74.0	74.0	74.0
O2 %	11.7	20.5	20.4	11.3	11.3	11.2
CO2 %	7.72	0.210	0.273	8.14	8.14	8.16
CO ppm	1.086E+04	406.	529.	1.146E+04	1.149E+04	1.138E+04
TUHC %	0.253	7.171E-08	3.301E-07	0.265	0.265	0.280
H2O %	4.44	0.130	0.169	4.69	4.69	4.69
OD 1/m	5.71	5.591E-06	4.389E-06	4.93	4.74	4.71
CT g-min/m^3	112.	0.134	0.162	66.0	58.2	86.3

Time = 700.0 seconds.

Upper temp(K)	342.4	342.9	343.3	452.6	629.9	373.8	
Lower temp(K)	331.0	295.3	295.4	339.9	352.7	336.7	273.0
Upper vol(m**3)	27.5	25.9	24.4	82.0	23.1	37.2	
Layer depth(m)	2.0	2.4	2.4	2.2	2.3	2.2	
Ceiling temp(K)	316.7	316.3	316.6	392.6	576.0	335.7	
Up wall temp(K)	312.4	312.0	312.3	379.8	563.4	328.6	
Low wall temp(K)	308.3	304.2	304.3	359.1	530.1	318.1	
Floor temp(K)	294.7	295.1	295.1	305.3	350.1	296.6	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.018E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.128E-02	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.493E+05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.493E+05	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.925E+02
On target(W/m^2)	3.349E-01	3.492E-01	3.621E-01	3.659E+01	7.269E+02	2.401E+00	
Pressure(Pa)	-2.580E+00	-2.703E+00	-2.709E+00	-4.956E+00	-6.902E+00	-3.684E+00	

Upper layer species

N2 %	72.4	72.3	72.3	70.6	69.1	71.8
O2 %	8.35	8.25	8.21	5.48	3.44	7.48
CO2 %	10.8	10.9	10.9	13.4	15.2	11.6
CO ppm	1.408E+04	1.415E+04	1.418E+04	1.605E+04	1.719E+04	1.467E+04
TUHC %	0.494	0.505	0.510	1.04	1.68	0.618
H2O %	6.09	6.14	6.16	7.43	8.35	6.50
OD 1/m	5.89	5.57	5.50	4.31	2.93	6.53
CT g-min/m^3	245.	238.	238.	280.	239.	285.

Lower layer species

N2 %	73.6	79.1	79.0	73.3	73.3	73.2
O2 %	10.5	20.4	20.3	9.93	10.0	9.83
CO2 %	8.90	0.229	0.363	9.36	9.29	9.47
CO ppm	1.178E+04	431.	647.	1.242E+04	1.237E+04	1.244E+04
TUHC %	0.386	8.259E-04	3.845E-03	0.411	0.402	0.428
H2O %	5.05	0.141	0.221	5.32	5.28	5.36
OD 1/m	4.97	9.903E-08	7.508E-08	4.43	4.32	4.25
CT g-min/m^3	172.	0.134	0.162	118.	109.	138.

Time = 800.0 seconds.

Upper temp(K)	342.4	342.9	343.4	445.5	603.0	373.0	
Lower temp(K)	330.9	295.6	295.6	339.2	352.2	336.4	273.0
Upper vol(m**3)	27.4	25.8	24.4	81.7	22.9	37.0	
Layer depth(m)	2.0	2.4	2.4	2.2	2.2	2.2	
Ceiling temp(K)	318.0	317.7	318.0	392.6	559.7	337.3	
Up wall temp(K)	313.6	313.3	313.5	380.6	550.1	330.3	
Low wall temp(K)	309.5	305.2	305.3	361.0	516.5	319.9	
Floor temp(K)	294.8	295.3	295.3	305.6	348.1	296.9	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.989E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.041E-02	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.039E+05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.039E+05	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.098E+02
On target(W/m^2)	3.362E-01	3.502E-01	3.632E-01	3.054E+01	5.212E+02	2.304E+00	
Pressure(Pa)	-2.585E+00	-2.710E+00	-2.715E+00	-4.843E+00	-6.631E+00	-3.666E+00	

Upper layer species

N2 %	71.6	71.6	71.6	70.0	68.6	71.2
O2 %	7.20	7.11	7.08	4.87	3.18	6.52
CO2 %	11.8	11.9	11.9	13.9	15.4	12.4
CO ppm	1.479E+04	1.484E+04	1.486E+04	1.608E+04	1.673E+04	1.515E+04
TUHC %	0.708	0.724	0.730	1.46	2.32	0.873
H2O %	6.63	6.67	6.68	7.68	8.41	6.94
OD 1/m	5.74	5.31	5.23	4.35	3.03	6.74
CT g-min/m^3	324.	312.	312.	355.	300.	383.

Lower layer species

N2 %	73.0	8.86	3.91	72.6	72.7	72.5
O2 %	9.49	2.29	1.00	8.87	8.96	8.78
CO2 %	9.81	2.564E-02	1.793E-02	10.3	10.3	10.4
CO ppm	1.240E+04	48.2	32.0	1.309E+04	1.304E+04	1.309E+04
TUHC %	0.553	1.039E-04	1.933E-04	0.590	0.571	0.616
H2O %	5.51	1.580E-02	1.090E-02	5.81	5.77	5.85
OD 1/m	4.72	1.063E-09	6.784E-10	4.19	4.06	4.13
CT g-min/m^3	236.	0.134	0.162	174.	163.	194.

Time = 900.0 seconds.

Upper temp(K)	342.0	342.6	343.0	438.1	577.5	371.5	
Lower temp(K)	330.2	295.9	295.9	338.8	352.0	335.7	273.0
Upper vol(m**3)	27.3	25.8	24.4	81.3	22.7	37.0	
Layer depth(m)	2.0	2.4	2.4	2.2	2.2	2.2	
Ceiling temp(K)	319.0	318.8	319.1	391.6	543.1	338.5	
Up wall temp(K)	314.6	314.4	314.6	380.6	536.6	331.6	
Low wall temp(K)	310.5	306.1	306.2	362.1	502.9	321.4	
Floor temp(K)	294.9	295.5	295.5	305.8	345.7	297.1	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.958E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.543E-03	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.662E+05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.662E+05	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.135E+03
On target(W/m^2)	3.264E-01	3.403E-01	3.529E-01	2.502E+01	3.695E+02	2.138E+00	
Pressure(Pa)	-2.617E+00	-2.773E+00	-2.786E+00	-4.732E+00	-6.363E+00	-3.442E+00	

Upper layer species

N2 %	71.0	71.0	71.0	69.4	68.1	70.6
O2 %	6.32	6.24	6.22	4.40	3.04	5.79
CO2 %	12.6	12.7	12.7	14.3	15.5	13.1
CO ppm	1.518E+04	1.522E+04	1.523E+04	1.595E+04	1.620E+04	1.537E+04
TUHC %	0.987	1.01	1.02	1.95	2.95	1.19
H2O %	7.03	7.06	7.07	7.86	8.41	7.26
OD 1/m	5.68	5.19	5.10	4.35	3.11	6.75
CT g-min/m^3	411.	393.	391.	437.	367.	492.

Lower layer species

N2 %	72.4	0.187	7.124E-02	72.1	72.1	72.0
O2 %	8.73	4.823E-02	1.827E-02	8.12	8.19	8.04
CO2 %	10.5	5.423E-04	3.279E-04	11.0	11.0	11.1
CO ppm	1.275E+04	1.04	0.602	1.342E+04	1.339E+04	1.340E+04
TUHC %	0.771	3.587E-05	3.480E-05	0.817	0.793	0.855
H2O %	5.85	3.385E-04	2.012E-04	6.15	6.12	6.19
OD 1/m	4.59	4.017E-11	2.865E-11	4.06	3.93	4.08
CT g-min/m^3	305.	0.134	0.162	235.	221.	255.

Time = 1000.0 seconds.

Upper temp(K)	341.2	341.7	342.1	430.5	554.0	369.3	
Lower temp(K)	329.0	296.2	296.2	338.4	351.6	334.5	273.0
Upper vol(m**3)	27.1	25.8	24.4	80.9	22.6	36.7	
Layer depth(m)	2.0	2.4	2.4	2.2	2.2	2.2	
Ceiling temp(K)	319.8	319.6	319.9	389.8	526.6	339.1	
Up wall temp(K)	315.5	315.3	315.5	379.8	523.3	332.6	
Low wall temp(K)	311.3	306.9	307.0	362.3	489.5	322.5	
Floor temp(K)	295.0	295.7	295.7	305.8	343.1	297.2	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.928E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.676E-03	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.365E+05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.365E+05	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.383E+03
On target(W/m^2)	3.049E-01	3.165E-01	3.279E-01	2.015E+01	2.618E+02	1.909E+00	
Pressure(Pa)	-2.551E+00	-2.696E+00	-2.702E+00	-4.580E+00	-6.124E+00	-3.548E+00	

Upper layer species

N2 %	70.5	70.4	70.4	68.9	67.6	70.1
O2 %	5.66	5.60	5.58	4.09	3.01	5.26
CO2 %	13.2	13.3	13.3	14.5	15.4	13.6
CO ppm	1.533E+04	1.535E+04	1.535E+04	1.569E+04	1.564E+04	1.536E+04
TUHC %	1.31	1.34	1.35	2.46	3.54	1.56
H2O %	7.31	7.33	7.34	7.95	8.37	7.48
OD 1/m	5.66	5.14	5.05	4.35	3.18	6.72
CT g-min/m^3	505.	479.	476.	524.	440.	612.

Lower layer species

N2 %	72.0	4.825E-03	1.609E-03	71.6	71.7	71.6
O2 %	8.28	1.247E-03	4.133E-04	7.58	7.63	7.55
CO2 %	10.9	2.302E-05	1.514E-05	11.5	11.5	11.6
CO ppm	1.277E+04	0.178	0.171	1.350E+04	1.350E+04	1.343E+04
TUHC %	1.02	3.587E-05	3.480E-05	1.09	1.06	1.13
H2O %	6.04	2.814E-05	2.698E-05	6.38	6.36	6.39
OD 1/m	4.50	1.963E-11	1.882E-11	3.96	3.84	3.88
CT g-min/m^3	379.	0.134	0.162	300.	284.	321.

Time = 1100.0 seconds.

Upper temp(K)	340.2	340.6	341.0	422.8	531.4	366.9	
Lower temp(K)	328.1	296.4	296.5	337.5	350.5	333.8	273.0
Upper vol(m**3)	26.8	25.8	24.4	80.6	22.4	36.6	
Layer depth(m)	2.0	2.4	2.4	2.2	2.2	2.2	
Ceiling temp(K)	320.3	320.2	320.5	387.4	510.7	339.4	
Up wall temp(K)	316.2	316.0	316.2	378.6	510.5	333.2	
Low wall temp(K)	312.0	307.5	307.7	361.9	476.7	323.4	
Floor temp(K)	295.1	295.8	295.8	305.7	340.7	297.3	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.847E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.808E-03	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.097E+05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.097E+05	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.463E+03
On target(W/m^2)	2.807E-01	2.898E-01	3.002E-01	1.600E+01	1.822E+02	1.683E+00	
Pressure(Pa)	-2.578E+00	-2.747E+00	-2.758E+00	-4.482E+00	-5.879E+00	-3.348E+00	

Upper layer species

N2 %	70.0	70.0	69.9	68.5	67.3	69.7
O2 %	5.18	5.14	5.13	3.89	3.03	4.89
CO2 %	13.6	13.7	13.7	14.7	15.3	13.9
CO ppm	1.530E+04	1.536E+04	1.530E+04	1.536E+04	1.509E+04	1.522E+04
TUHC %	1.67	1.70	1.71	2.92	4.07	1.93
H2O %	7.50	7.52	7.53	8.00	8.30	7.62
OD 1/m	5.63	5.11	5.03	4.34	3.25	6.66
CT g-min/m^3	606.	571.	567.	616.	518.	738.

Lower layer species

N2 %	71.7	1.549E-04	3.88	71.2	71.3	71.2
O2 %	7.94	4.619E-05	0.371	7.17	7.21	7.16
CO2 %	11.2	1.183E-05	0.668	11.9	11.8	11.9
CO ppm	1.270E+04	0.181	755.	1.348E+04	1.349E+04	1.338E+04
TUHC %	1.30	3.587E-05	7.829E-02	1.38	1.35	1.44
H2O %	6.18	2.814E-05	0.368	6.55	6.53	6.55
OD 1/m	4.47	1.809E-11	1.046E-08	3.87	3.73	3.89
CT g-min/m^3	458.	0.134	0.162	369.	349.	390.

Time = 1200.0 seconds.

Upper temp(K)	339.0	339.3	339.7	415.5	511.9	365.0	
Lower temp(K)	326.7	296.7	297.0	336.9	349.7	332.9	273.0
Upper vol(m**3)	26.6	25.8	24.4	80.3	22.2	36.4	
Layer depth(m)	1.9	2.4	2.4	2.2	2.2	2.2	
Ceiling temp(K)	320.6	320.5	320.8	384.6	495.3	339.5	
Up wall temp(K)	316.6	316.5	316.7	377.0	498.0	333.7	
Low wall temp(K)	312.5	308.1	308.2	361.2	465.0	324.1	
Floor temp(K)	295.1	295.9	295.9	305.6	338.4	297.4	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.765E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.941E-03	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.950E+04	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.950E+04	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.360E+03
On target(W/m^2)	2.527E-01	2.601E-01	2.692E-01	1.270E+01	1.296E+02	1.518E+00	
Pressure(Pa)	-2.490E+00	-2.659E+00	-2.670E+00	-4.298E+00	-5.589E+00	-3.254E+00	

Upper layer species

N2 %	69.6	69.6	69.6	68.2	67.0	69.3
O2 %	4.85	4.82	4.81	3.78	3.11	4.64
CO2 %	13.9	13.9	14.0	14.8	15.2	14.1
CO ppm	1.514E+04	1.513E+04	1.513E+04	1.498E+04	1.457E+04	1.498E+04
TUHC %	2.02	2.05	2.06	3.36	4.51	2.29
H2O %	7.62	7.64	7.64	8.01	8.21	7.70
OD 1/m	5.62	5.12	5.04	4.32	3.31	6.55
CT g-min/m^3	714.	670.	664.	713.	601.	869.

Lower layer species

N2 %	71.4	0.260	2.60	70.9	70.9	70.9
O2 %	7.73	1.958E-02	0.208	6.89	6.91	6.98
CO2 %	11.4	5.041E-02	0.491	12.1	12.1	12.1
CO ppm	1.250E+04	55.1	543.	1.333E+04	1.337E+04	1.314E+04
TUHC %	1.58	7.127E-03	6.551E-02	1.69	1.65	1.73
H2O %	6.25	2.764E-02	0.270	6.65	6.65	6.60
OD 1/m	4.50	7.161E-10	7.026E-09	3.82	3.65	3.86
CT g-min/m^3	542.	0.134	0.162	441.	418.	463.

Time = 1300.0 seconds.

Upper temp(K)	338.0	338.2	338.6	408.6	493.9	362.3	
Lower temp(K)	326.0	296.9	297.5	335.8	348.9	332.0	273.0
Upper vol(m**3)	26.4	25.8	24.4	80.0	22.0	36.3	
Layer depth(m)	1.9	2.4	2.4	2.2	2.1	2.2	
Ceiling temp(K)	320.8	320.7	321.0	381.7	480.8	339.2	
Up wall temp(K)	317.0	316.9	317.1	375.2	486.0	333.9	
Low wall temp(K)	312.9	308.5	308.7	360.1	454.4	324.6	
Floor temp(K)	295.2	296.0	296.0	305.4	336.3	297.5	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.636E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.073E-03	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.096E+04	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.096E+04	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.878E+03
On target(W/m^2)	2.306E-01	2.359E-01	2.441E-01	1.008E+01	9.194E+01	1.304E+00	
Pressure(Pa)	-2.505E+00	-2.678E+00	-2.689E+00	-4.217E+00	-5.402E+00	-3.239E+00	

Upper layer species

N2 %	69.3	69.2	69.2	67.9	66.9	69.0
O2 %	4.63	4.61	4.60	3.74	3.21	4.48
CO2 %	14.1	14.1	14.1	14.8	15.1	14.2
CO ppm	1.491E+04	1.489E+04	1.488E+04	1.460E+04	1.408E+04	1.469E+04
TUHC %	2.35	2.38	2.39	3.71	4.86	2.61
H2O %	7.70	7.70	7.71	7.99	8.12	7.74
OD 1/m	5.57	5.05	4.96	4.31	3.37	6.63
CT g-min/m^3	827.	773.	766.	814.	687.	1.008E+03

Lower layer species

N2 %	71.1	0.340	13.4	70.6	70.6	70.6
O2 %	7.56	2.430E-02	0.997	6.65	6.67	6.72
CO2 %	11.5	6.742E-02	2.62	12.3	12.3	12.3
CO ppm	1.230E+04	71.7	2.779E+03	1.318E+04	1.321E+04	1.299E+04
TUHC %	1.85	1.095E-02	0.431	1.98	1.93	2.03
H2O %	6.30	3.682E-02	1.43	6.74	6.73	6.70
OD 1/m	4.40	9.656E-10	3.714E-08	3.75	3.53	3.78
CT g-min/m^3	631.	0.134	0.162	516.	488.	539.

Time = 1400.0 seconds.

Upper temp(K)	336.9	337.2	337.6	402.6	479.8	359.5	
Lower temp(K)	325.6	298.3	300.0	334.3	347.0	331.1	273.0
Upper vol(m**3)	26.4	25.8	24.4	79.9	21.9	36.3	
Layer depth(m)	1.9	2.4	2.4	2.2	2.1	2.2	
Ceiling temp(K)	320.9	320.8	321.1	378.6	467.8	338.7	
Up wall temp(K)	317.3	317.2	317.5	373.3	475.2	333.8	
Low wall temp(K)	313.3	309.0	309.3	358.8	444.9	324.9	
Floor temp(K)	295.2	296.1	296.1	305.1	334.5	297.5	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.584E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.900E-03	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.989E+04	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.989E+04	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.088E+03
On target(W/m^2)	2.099E-01	2.146E-01	2.224E-01	8.133E+00	6.869E+01	1.105E+00	
Pressure(Pa)	-2.474E+00	-2.641E+00	-2.654E+00	-4.087E+00	-5.201E+00	-3.158E+00	

Upper layer species

N2 %	69.0	69.0	69.0	67.7	66.6	68.8
O2 %	4.48	4.47	4.46	3.74	3.30	4.38
CO2 %	14.2	14.2	14.2	14.7	15.0	14.3
CO ppm	1.463E+04	1.461E+04	1.460E+04	1.422E+04	1.369E+04	1.439E+04
TUHC %	2.66	2.69	2.70	4.03	5.24	2.92
H2O %	7.73	7.74	7.74	7.95	8.04	7.76
OD 1/m	5.41	4.80	4.70	4.25	3.41	7.12
CT g-min/m^3	944.	878.	869.	917.	778.	1.157E+03

Lower layer species

N2 %	70.8	5.11	28.8	70.3	70.4	70.2
O2 %	7.29	0.352	2.07	6.45	6.50	6.42
CO2 %	11.8	1.03	5.74	12.5	12.5	12.5
CO ppm	1.220E+04	1.065E+03	5.940E+03	1.300E+04	1.302E+04	1.290E+04
TUHC %	2.13	0.192	1.05	2.25	2.20	2.33
H2O %	6.41	0.562	3.12	6.81	6.79	6.81
OD 1/m	4.18	1.362E-08	7.569E-08	3.63	3.39	3.83
CT g-min/m^3	721.	0.134	0.162	593.	559.	617.

Time = 1500.0 seconds.

Upper temp(K)	335.3	335.5	335.8	397.5	469.0	357.4	
Lower temp(K)	324.4	297.1	297.3	333.1	344.8	329.6	273.0
Upper vol(m**3)	26.7	25.9	24.4	79.9	22.0	36.4	
Layer depth(m)	2.0	2.4	2.4	2.2	2.1	2.2	
Ceiling temp(K)	320.7	320.7	321.0	375.7	456.0	338.1	
Up wall temp(K)	317.4	317.3	317.6	371.3	465.3	333.7	
Low wall temp(K)	313.5	309.2	309.5	357.4	436.2	325.1	
Floor temp(K)	295.2	296.1	296.1	304.9	332.8	297.5	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.592E-01	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.900E-03	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.484E+04	3.623E+04	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.484E+04	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.623E+04	4.436E+03
On target(W/m^2)	1.798E-01	1.836E-01	1.897E-01	6.723E+00	5.416E+01	9.695E-01	
Pressure(Pa)	-2.360E+00	-2.509E+00	-2.519E+00	-3.904E+00	-4.995E+00	-3.054E+00	

Upper layer species

N2 %	68.8	68.7	68.7	67.4	66.3	68.5
O2 %	4.40	4.39	4.39	3.75	3.38	4.34
CO2 %	14.3	14.3	14.3	14.7	14.8	14.3
CO ppm	1.434E+04	1.431E+04	1.430E+04	1.390E+04	1.336E+04	1.408E+04
TUHC %	2.96	2.99	3.00	4.44	5.76	3.23
H2O %	7.74	7.74	7.74	7.90	7.95	7.74
OD 1/m	5.58	5.04	4.96	4.29	3.41	6.38
CT g-min/m^3	1.066E+03	988.	977.	1.024E+03	872.	1.309E+03

Lower layer species

N2 %	70.5	1.10	3.37	70.1	70.1	70.0
O2 %	6.97	7.728E-02	0.241	6.38	6.39	6.36
CO2 %	12.0	0.220	0.671	12.5	12.5	12.6
CO ppm	1.218E+04	225.	689.	1.274E+04	1.278E+04	1.265E+04
TUHC %	2.41	4.225E-02	0.127	2.51	2.47	2.58
H2O %	6.53	0.120	0.365	6.81	6.81	6.82
OD 1/m	4.47	5.576E-09	1.730E-08	3.60	3.41	3.64
CT g-min/m^3	815.	0.134	0.162	672.	633.	698.

3.6 Input Data for EXITT for Scenario 2 (Example Data File SCEN-2.BLD)

```
6 20
1 2 3 4 5
 6 6 1 7 7
 8 8 8 8 6
 6 4 4 4 1
1 2 3 4 5
 6 7 8 4 18
 5 1 2 3 7
 7 18 18 4 1
2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
35 35 35 55 35
 35 35 35 55 55
 35 35 35 35 35
 35 55 55 55 35
1
-1.
7
71 83 71 83 83
 83 95 59 83 83
 83 71 83 71 95
 95 83 83 83 71
 27
  1  12      1.82880
  1  15      3.40729
  1  20      1.89277
  2  13      1.52400
  2  15      2.71167
  3   7      2.13360
  3  14      1.52400
  4   9      3.12699
  4  18      4.26720
  4  19      2.38056
  5  11      2.13360
  5  16      2.74320
  5  17      3.35280
  6   7      2.51035
  7  15      2.05740
  7  16      2.43840
  8  20      1.67640
  9  19      3.68606
 10  17      1.50097
 10  18      2.13360
 11  17      1.92772
 12  20      1.57090
 15  20      4.26799
 16  19      1.37160
 17  18      2.05033
 17  19      4.29162
 18  19      3.29692
5
30 30 71 7 5
1 0 0 0 1
1 1 1 1 1
8 7 3 4 4
0 0 0 0 0
0. 0. 0. 0. 0.
-1. -1. -1. -1. -1.
```

3.7 Printed Output from EXITT for Scenario 2

```
EXITT Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89
FAST DUMP FILE    :  SCEN-2.DMP
BUILDING/OCCUPANT FILE: SCEN-2.BLD
EXITT OUTPUT FILE      : SCEN-2.EXT
EXITT DUMP FILE        : SCEN-2.EVA

NO. OF ROOMS (RUN WITH FAST)        6
NO. OF DOORS                        2
NO. OF WINDOWS                      4
TOTAL NUMBER OF NODES              20
```

EXITT NODE NUMBER	EXITT ROOM NUMBER	FAST ROOM NUMBER	ROOM HEIGHT (M)	FLOOR HEIGHT (M)
1	1	1	2.4	0.0
2	2	2	2.4	0.0
3	3	3	2.4	0.0
4	4	4	2.4	0.0
5*	5	5	2.4	0.0
6	6	6	2.4	0.0
7	7	6	2.4	0.0
8	8	1	2.4	0.0
9	4	7	2.4	0.0
10	18	7	2.4	0.0
11	5	8	2.4	0.0
12	1	8	2.4	0.0
13	2	8	2.4	0.0
14	3	8	2.4	0.0
15	7	6	2.4	0.0
16	7	6	2.4	0.0
17	18	4	2.4	0.0
18	18	4	2.4	0.0
19	4	4	2.4	0.0
20	1	1	2.4	0.0

* INDICATES NODE IS IN BURN ROOM

NODE NUMBER	NOISE LEVEL (DECIBELS)
1	35
2	35
3	35
4	55
5	35
6	35
7	35
8	35
9	55
10	55
11	35
12	35
13	35
14	35
15	35
16	35
17	55
18	55
19	55
20	35

NUMBER OF SMOKE DETECTORS: 1

SMOKE DET NO.	NODE	ACTIVATION TIME (SEC)
1	7	DETERMINED BY EXITT TO BE 0.0 SECONDS

EXITT NODE NUMBER	ALARM LEVEL (DECIBELS) 1
1	71
2	83
3	71
4	83
5	83
6	83
7	95
8	59
9	83
10	83
11	83
12	71
13	83
14	71
15	95
16	95
17	83
18	83
19	83
20	71

EDGE LIST

FROM NODE	TO NODE	DISTANCE (M)
1 -	12	1.83
-	15	3.41
-	20	1.89
2 -	13	1.52
-	15	2.71
3 -	7	2.13
-	14	1.52
4 -	9	3.13
-	18	4.27
-	19	2.38
5 -	11	2.13
-	16	2.74
-	17	3.35
6 -	7	2.51
7 -	3	2.13
-	6	2.51
-	15	2.06
-	16	2.44
8 -	20	1.68
9 -	4	3.13
-	19	3.69
10 -	17	1.50
-	18	2.13
11 -	5	2.13
-	17	1.93
12 -	1	1.83
-	20	1.57
13 -	2	1.52
14 -	3	1.52
15 -	1	3.41
-	2	2.71
-	7	2.06
-	20	4.27
16 -	5	2.74
-	7	2.44
-	19	1.37
17 -	5	3.35
-	10	1.50
-	11	1.93
-	18	2.05

```
      -       19        4.29
   18 -        4        4.27
      -       10        2.13
      -       17        2.05
      -       19        3.30
   19 -        4        2.38
      -        9        3.69
      -       16        1.37
      -       17        4.29
      -       18        3.30
   20 -        1        1.89
      -        8        1.68
      -       12        1.57
      -       15        4.27

TOTAL NUMBER OF DIRECTED EDGES    54


NUMBER OF PEOPLE     5

PERSON     LOCATION     AGE     SEX     STATE    SLEEP     REQUIRE      TRAVEL
                                                PENALTY   ASSISTANCE    SPEED
   1           8         30    MALE     AWAKE      0.0       NO          1.30
   2           7         30    FEMALE   AWAKE      0.0       NO          1.30
   3           3         71    FEMALE   AWAKE      0.0       NO          1.30
   4           4          7    FEMALE   AWAKE      0.0       NO          1.30
   5           4          5    MALE     AWAKE      0.0       NO          1.30


ACTIONS TAKEN BY PERSON   1
NODE ROOM  TIME  SAV- SAVED DESTI- ACTION
                 ING   BY   NATION
   8   1    0.0   --   --     --  INITIAL POSITION
   8   1  166.0   --   --      5  INVESTIGATE FIRE
  20   1  167.3   --   --      5  ARRIVE AT NEW NODE
  15   6  170.6   --   --      5  ARRIVE AT NEW NODE
  15   6  171.6   --   --     --  ALERTED BY ANOTHER - END INVESTIGATION
  15   6  173.6   --   --     --  LEAVE BUILDING
   7   6  174.8   --   --      9  ARRIVE AT NEW NODE
  16   6  176.2   --   --      9  ARRIVE AT NEW NODE
  19   4  177.0   --   --      9  ARRIVE AT NEW NODE
   9   7  179.2   --   --      9  LEAVE BUILDING THROUGH DOOR


ACTIONS TAKEN BY PERSON   2
NODE ROOM  TIME  SAV- SAVED DESTI- ACTION
                 ING   BY   NATION
   7   6    0.0   --   --     --  INITIAL POSITION
   7   6  164.0   --   --      5  INVESTIGATE FIRE
  16   6  165.9   --   --      5  ARRIVE AT NEW NODE
  16   6  165.9   --   --      5  BAD SMOKE - CURRENT ACTION STOPPED
  16   6  168.9   --   --     --  LEAVE BUILDING
  19   4  169.7   --   --      9  ARRIVE AT NEW NODE
   9   7  171.9   --   --      9  LEAVE BUILDING THROUGH DOOR


ACTIONS TAKEN BY PERSON   3
NODE ROOM  TIME  SAV- SAVED DESTI- ACTION
                 ING   BY   NATION
   3   3    0.0   --   --     --  INITIAL POSITION
   3   3  166.0   --   --      5  INVESTIGATE FIRE
   7   6  167.6   --   --      5  ARRIVE AT NEW NODE
   7   6  168.6   --   --     --  ALERTED BY ANOTHER - END INVESTIGATION
   7   6  170.6   --   --     --  LEAVE BUILDING
  16   6  172.1   --   --      9  ARRIVE AT NEW NODE
  19   4  172.9   --   --      9  ARRIVE AT NEW NODE
   9   7  175.1   --   --      9  LEAVE BUILDING THROUGH DOOR
```

ACTIONS TAKEN BY PERSON 4

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
4	4	0.0	--	--	--	INITIAL POSITION
4	4	158.0	1	--	8	GO TO ALERT OTHER
19	4	159.8	1	--	8	ARRIVE AT NEW NODE
19	4	159.8	1	--	8	NO LONGER NEEDED FOR ASSISTANCE
19	4	162.8	--	--	--	LEAVE BUILDING
9	7	165.0	--	--	9	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 5

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
4	4	0.0	--	--	--	INITIAL POSITION
4	4	158.0	3	--	3	GO TO ALERT OTHER
19	4	159.8	3	--	3	ARRIVE AT NEW NODE
19	4	159.8	3	--	3	NO LONGER NEEDED FOR ASSISTANCE
19	4	162.8	--	--	--	LEAVE BUILDING
9	7	165.0	--	--	9	LEAVE BUILDING THROUGH DOOR

3.8 Printed Output from TENAB for Scenario 2

```
FAST  Version:  18.3
TENAB Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89

FAST DUMP FILE    :  SCEN-2.DMP
EXITT DUMP FILE   :  SCEN-2.EVA
TENAB OUTPUT FILE:  SCEN-2.TEN
TENAB DUMP FILE   :  SCEN-2.PLT
```

OCCUPANT	NODE NUMBER	ROOM NUMBER	FLOOR ELEVATION	ENTER TIME (S)
1	8	1	0.00	0.0
	20	1	0.00	167.3
	15	6	0.00	170.6
	7	6	0.00	174.8
	16	6	0.00	176.2
	19	4	0.00	177.0
	9	DOOR	0.00	179.2
2	7	6	0.00	0.0
	16	6	0.00	165.9
	19	4	0.00	169.7
	9	DOOR	0.00	171.9
3	3	3	0.00	0.0
	7	6	0.00	167.6
	16	6	0.00	172.1
	19	4	0.00	172.9
	9	DOOR	0.00	175.1
4	4	4	0.00	0.0
	19	4	0.00	159.8
	9	DOOR	0.00	165.0
5	4	4	0.00	0.0
	19	4	0.00	159.8
	9	DOOR	0.00	165.0

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED1	0.5	1.0
TEMP1 DEG C	65.0	100.0
CT (G-MIN/M3)	450.0	900.0
FED2	1.0	
TEMP2	1.0	
FED3	1.0	

PERSON 1

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
180.	9	ESCAPE		0.000E+00 0.148E-02 0.714E-02	0.239E+02 0.263E-02	0.235E+01	0.547E-02
1510.	9	FINAL TIME		0.000E+00 0.148E-02 0.714E-02	0.239E+02 0.263E-02	0.235E+01	0.547E-02

PERSON 2

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
180.	9	ESCAPE		0.000E+00 0.149E-02 0.713E-02	0.237E+02 0.168E-01	0.516E+01	0.619E-02
1510.	9	FINAL TIME		0.000E+00 0.149E-02 0.713E-02	0.237E+02 0.168E-01	0.516E+01	0.619E-02

PERSON 3

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
180.	9	ESCAPE		0.000E+00 0.128E-02 0.642E-02	0.238E+02 0.211E-02	0.133E+01	0.483E-02
1510.	9	FINAL TIME		0.000E+00 0.128E-02 0.642E-02	0.238E+02 0.211E-02	0.133E+01	0.483E-02

PERSON 4

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
170.	9	ESCAPE		0.000E+00 0.105E-02 0.587E-02	0.234E+02 0.000E+00	0.295E+00	0.635E-01
1510.	9	FINAL TIME		0.000E+00 0.105E-02 0.587E-02	0.234E+02 0.000E+00	0.295E+00	0.635E-01

PERSON 5

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
170.	9	ESCAPE		0.000E+00 0.105E-02 0.587E-02	0.234E+02 0.000E+00	0.295E+00	0.635E-01
1510.	9	FINAL TIME		0.000E+00 0.105E-02 0.587E-02	0.234E+02 0.000E+00	0.295E+00	0.635E-01

FED1 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO,CO2,HCN AND O2 BASED ON THE HAZARD I TENAB FED PLUS AN OXYGEN TERM

FED2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO,CO2,HCN AND O2 BASED ON PURSER'S EQUATIONS

FED3 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO2 BASED ON PURSER'S EQUATIONS

TEMP1 - THE AVERAGE TEMPERATURE OF THE LAYER OF THE ROOM TO WHICH THE PERSON IS EXPOSED - IT IS THE SAME AS TEMP USED IN THE HAZARD I TENAB

TEMP2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CONVECTIVE HEAT BASED ON PURSER'S EQUATIONS

* IF PERSON IS WAITING AT A WINDOW, HE IS CONSIDERED TO BE AT THE NODE (ROOM) FROM WHICH HE CAME PRIOR TO REACHING THE WINDOW THIS ALLOWS HIM TO CONTINUE TO BE EXPOSED TO THE ROOM FIRE CONDITIONS

CHAPTER 4. SCENARIO 3, MATTRESS FIRE

4.1 Summary of Fire Scenario 3

For scenario 3, an electric heater too close to combustible bed linens ignites the bedding of a double bed in a bedroom of the ranch house. Five occupants are in the house.

BUILDING: Ranch house

OCCUPANTS: Father aged 30, fully capable and awake, in master bedroom.

Mother, aged 30, fully capable and awake, in master bedroom.

Daughter, aged 7, fully capable and awake, in bathtub.

Son, aged 5, fully capable and awake, in living room watching television.

Grandmother, aged 71, fully capable and awake, in living room watching television.

DOORS: The bathroom, bedroom 2, and master bedroom doors are closed. The only opening to the outdoors is a partially open window in the master bedroom. Fire room window is closed.

FIRE: Electric heater too close to combustible bed linens.

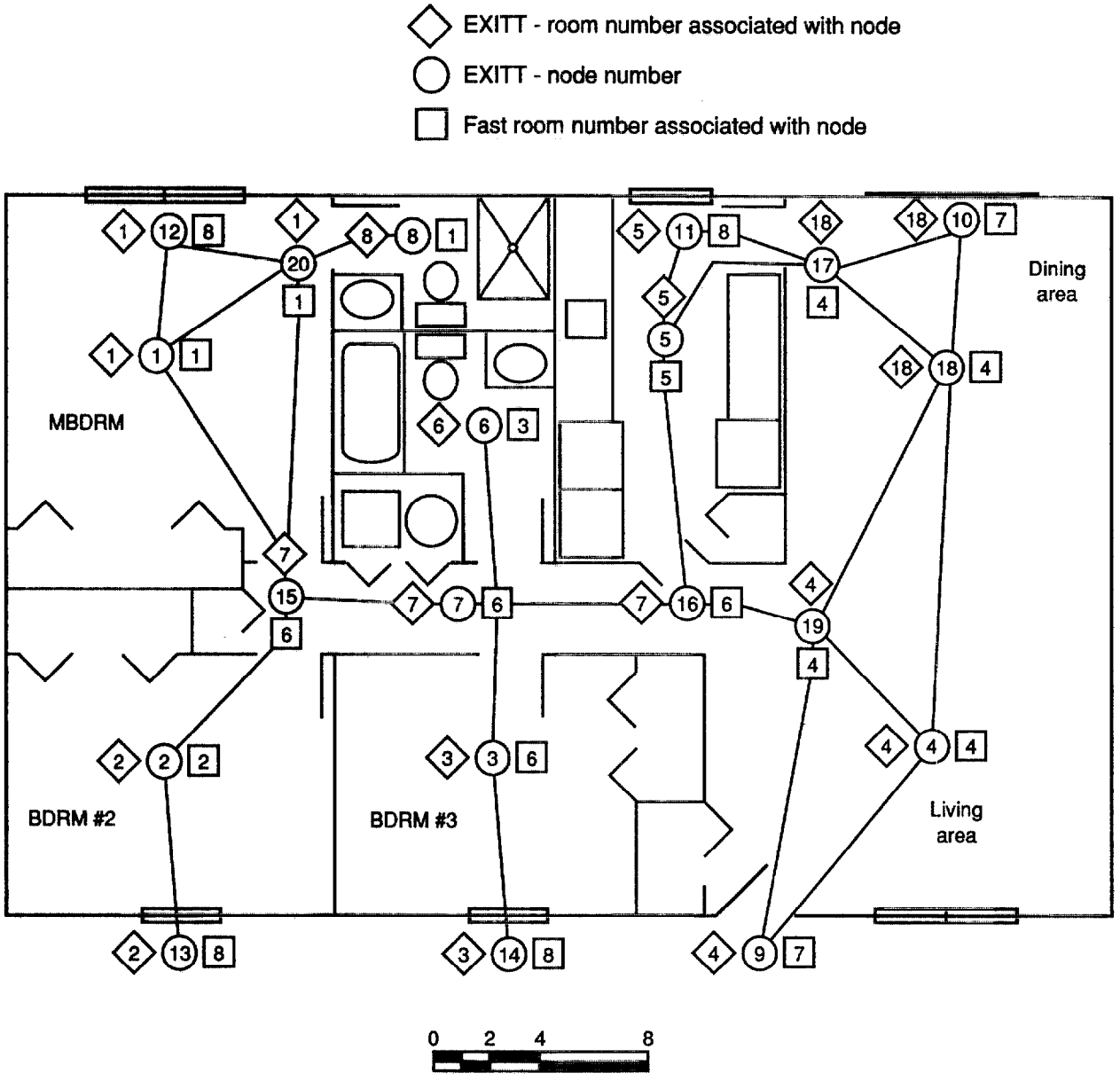
FUEL: Double bed, bedding, and night table taken directly from HAZARD I fire properties database, material code BED002.

CEILINGS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

WALLS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

FLOORS: 0.15-m-thick concrete slab, taken directly from HAZARD I materials property database. Material code CNC001, Concrete, normal weight, Type I cement, Dolomite aggregate.

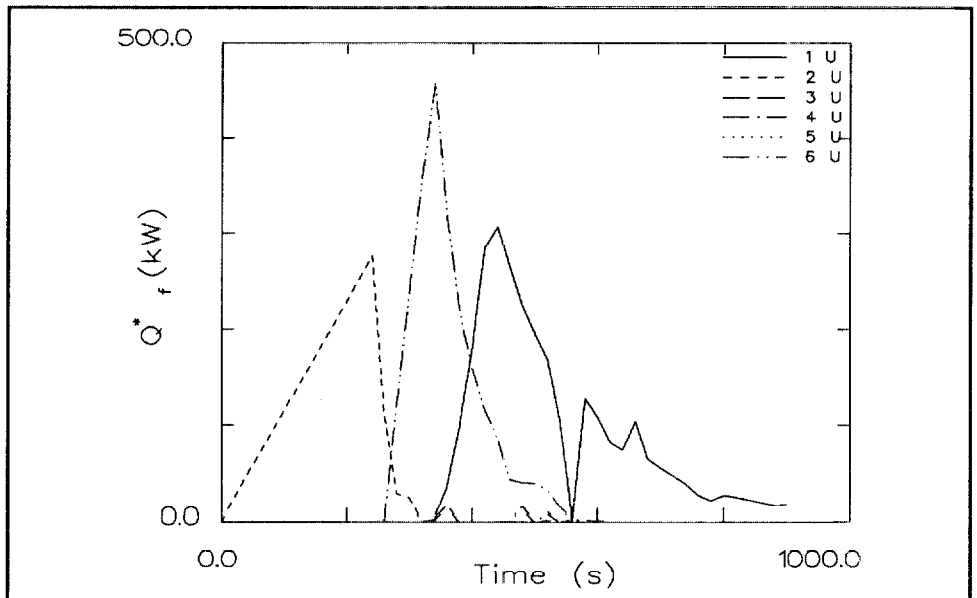
4.2 Floor Plan and EXITT Building Description for Scenario 3



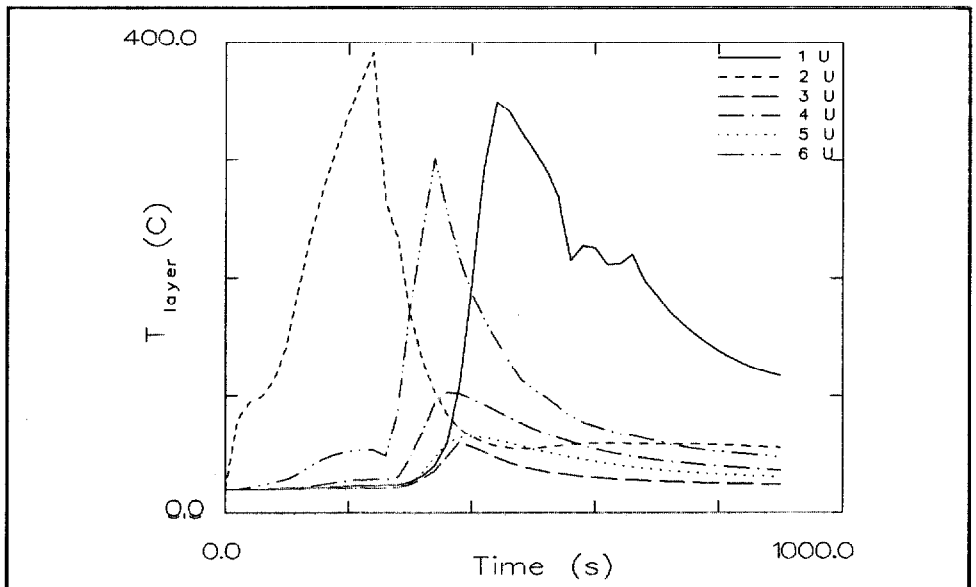
4.3 FAST Input Data for Scenario 3 (Example Data File SCEN-3.DAT)

```
VERSN   18 Scenario 3, Ranch House, Flaming Mattress
TIMES    900  50  20   0   0
TAMB   293.  101300.      0.
EAMB   273.  101300.      0.
HI/F     0.00   0.00   0.00   0.00   0.00   0.00
WIDTH    3.60   3.00   2.70   4.50   2.70   3.05
DEPTH    3.80   3.60   3.80   8.10   3.80   5.50
HEIGH    2.40   2.40   2.40   2.40   2.40   2.40
HVENT   1  6  1   0.01   2.10   0.00
HVENT   1  7  1   0.81   1.22   0.91   0.00
HVENT   2  6  1   0.01   2.10   0.00
HVENT   3  6  1   0.01   2.10   0.00
HVENT   4  5  1   1.10   2.10   0.00
HVENT   4  6  1   1.10   2.10   0.00
CVENT   1  6  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   1  7  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   2  6  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   3  6  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   4  5  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CVENT   4  6  1   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00   1.00
CEILI GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
WALLS GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
FLOOR CONCRETE  CONCRETE  CONCRETE  CONCRETE  CONCRETE  CONCRETE
CHEMI     0.    0.   6.0    18100000.  300.
LFBO   2
LFBT   2
LFPOS  1
LFMAX  8
FTIME    260.    20.    20.    60.    70.   120.   180.   770.
FMASS  0.0000 0.0165 0.1930 0.1770 0.3760 0.3760 0.1220 0.0410 0.0165
FHIGH    0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00
FAREA    0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50
FQDOT  0.00     2.99E+05 3.49E+06 3.20E+06 6.81E+06 6.81E+06 2.21E+06 7.42E+05 2.99E+05
CT    1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000
HCR   0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080
CO    0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013
OD    0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013
DUMPR SCEN-3.DMP
```

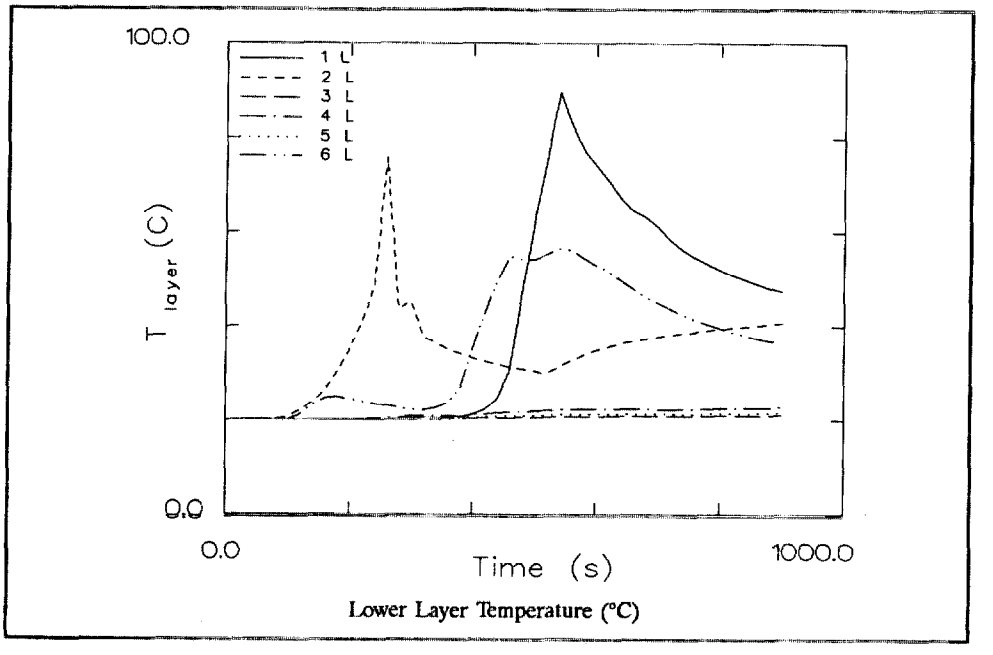
4.4 Selected Graphs from Scenario 3



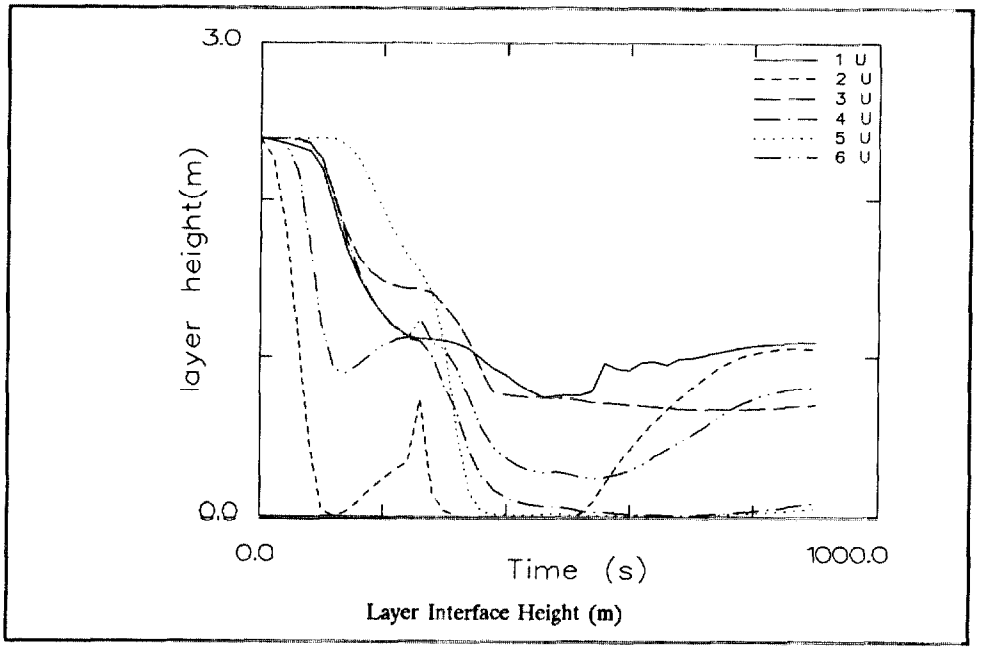
Heat Release Rate of Fire (kW)



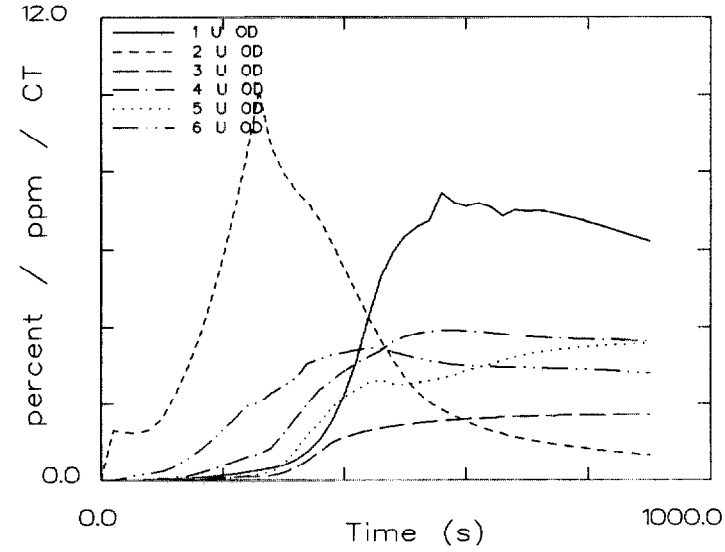
Upper Layer Temperature (°C)



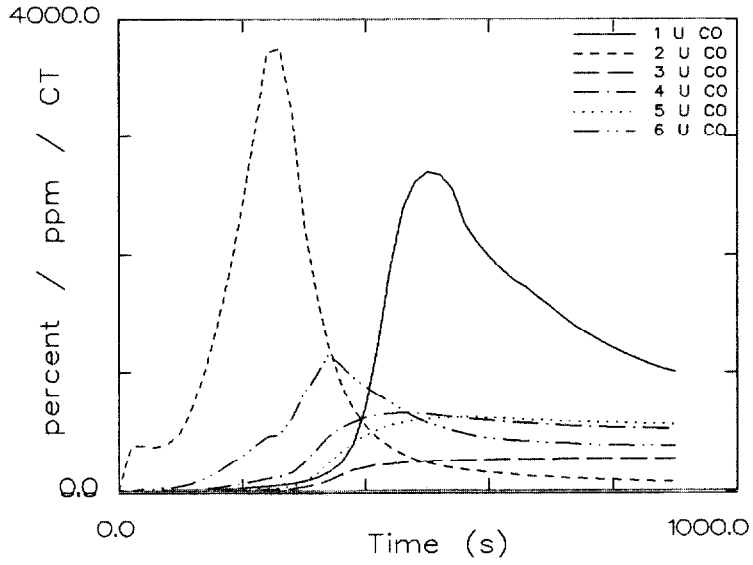
Lower Layer Temperature (°C)



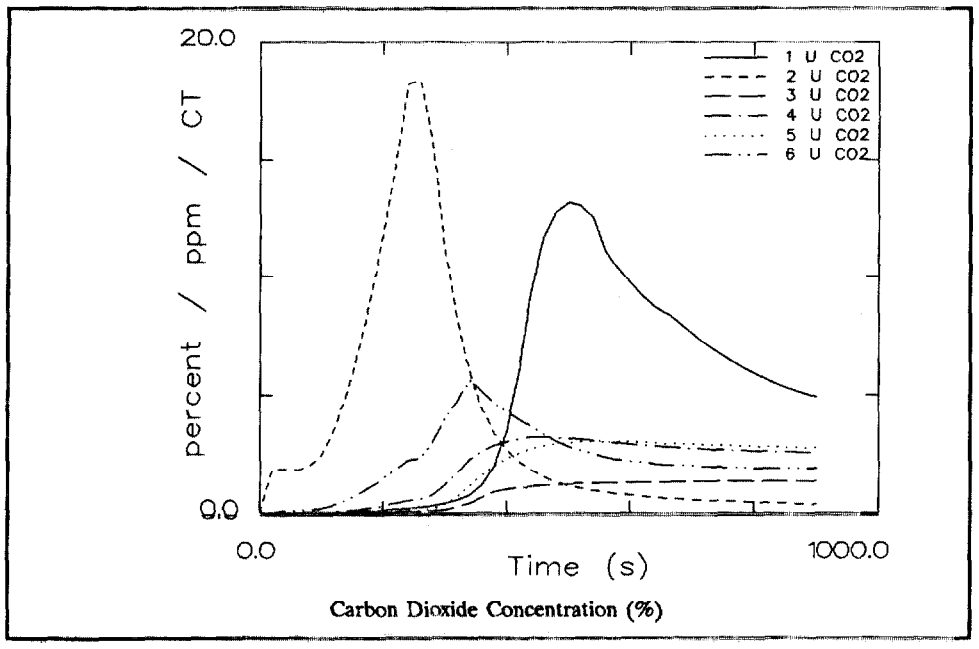
Layer Interface Height (m)



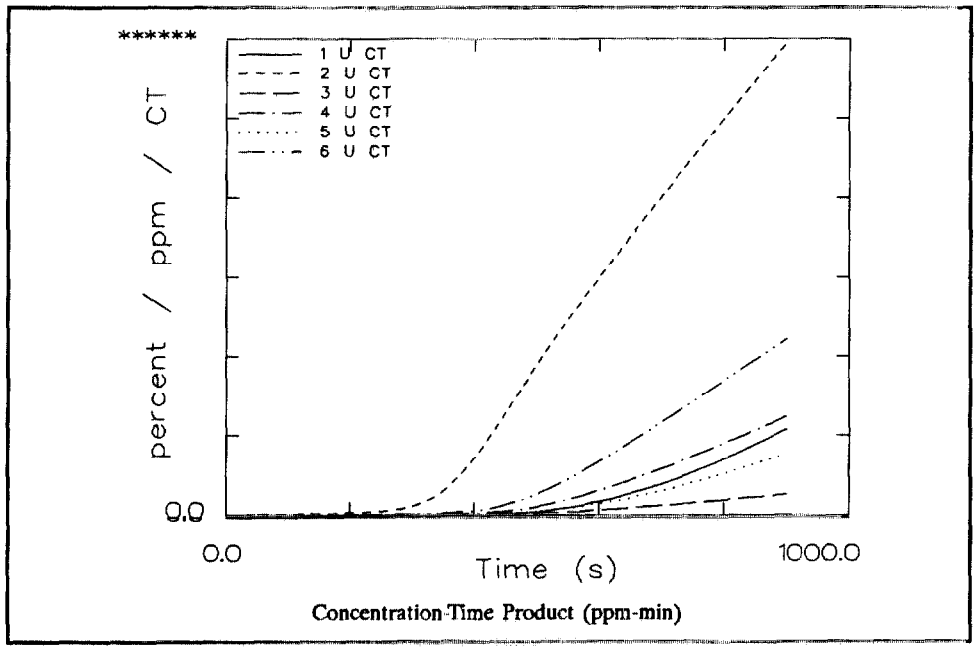
Smoke Optical Density (m^{-1})



Carbon Monoxide Concentration (ppm)



Carbon Dioxide Concentration (%)



Concentration-Time Product (ppm-min)

4.5 Printed Output from FAST for Scenario 3

FAST version 18.3.2 - created February 1, 1989 Scenario 3, Ranch House, Flaming Mattress

Total compartments = 6

FLOOR PLAN

Width	3.6	3.0	2.7	4.5	2.7	3.0
Depth	3.8	3.6	3.8	8.1	3.8	5.5
Height	2.4	2.4	2.4	2.4	2.4	2.4
Area	13.7	10.8	10.3	36.5	10.3	16.8
Volume	32.8	25.9	24.6	87.5	24.6	40.3
Ceiling	2.4	2.4	2.4	2.4	2.4	2.4
Floor	0.0	0.0	0.0	0.0	0.0	0.0

CONNECTIONS

1 (1)	Width	0.00	0.00	0.00	0.00	0.00	0.01	0.81
	Soffit	0.00	0.00	0.00	0.00	0.00	2.10	1.22
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.91
	a.Soffit	0.00	0.00	0.00	0.00	0.00	2.10	1.22
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.91
2 (1)	Width	0.00	0.00	0.00	0.00	0.00	0.01	0.00
	Soffit	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 (1)	Width	0.00	0.00	0.00	0.00	0.00	0.01	0.00
	Soffit	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 (1)	Width	0.00	0.00	0.00	0.00	1.10	1.10	0.00
	Soffit	0.00	0.00	0.00	0.00	2.10	2.10	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	0.00	2.10	2.10	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 (1)	Width	0.00	0.00	0.00	1.10	0.00	0.00	0.00
	Soffit	0.00	0.00	0.00	2.10	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	2.10	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 (1)	Width	0.01	0.01	0.01	1.10	0.00	0.00	0.00
	Soffit	2.10	2.10	2.10	2.10	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	2.10	2.10	2.10	2.10	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Material names

Ceiling:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Walls:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Floor:	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE

Thermal data base used: THERMAL.TPF

Name	Conductivity	Specific heat	Density	Thickness	Emissivity	**Codes**	
CONCRETE	1.75	1.000E+03	2.200E+03	0.150	0.940	188	U
GYPSUM	0.160	900.	800.	1.600E-02	0.900	38	U

Compartment of origin is	2
Print interval (seconds)	50
Number of fire specification intervals is	8
Total time (seconds)	900
Fire position	1
Limiting oxygen index (%) =	6.0
Initial relative humidity (%) =	0.0

Fire type is a SPECIFIED (CONSTRAINED)

Pyrolysis temperature (K) =	300.
Ambient air temperature (K) =	293.
Ambient reference pressure (Pa) =	101300.
Reference elevation (m) =	0.
External ambient temperature (K) =	273.
External reference pressure (Pa) =	101300.
Reference elevation (m) =	0.

Fmass=	0.00	1.65E-02	0.19	0.18	0.38	0.38	0.12	4.10E-02	1.65E-02
Hcomb=	1.81E+07	1.81E+07	1.81E+07	1.81E+07	1.81E+07	1.81E+07	1.81E+07	1.81E+07	1.81E+07
Fqdot=	0.00	2.99E+05	3.49E+06	3.20E+06	6.81E+06	6.81E+06	2.21E+06	7.42E+05	2.99E+05
Fhigh=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C/CO2=	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02
CO/CO2=	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02
H/C=	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02
CT=	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Ftime=	2.60E+02	20.	20.	60.	70.	1.20E+02	1.80E+02	7.70E+02

Dump file = SCEN-3.DMP

Time = 0.0 seconds.

Upper temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Lower temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.0	0.0	0.0	0.1	0.0	0.0	
Layer depth(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pressure(Pa)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	

Upper layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 50.0 seconds.

Upper temp(K)	293.0	370.9	293.0	293.0	293.0	295.9	
Lower temp(K)	293.0	293.1	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.6	9.2	0.0	0.2	0.0	1.5	
Layer depth(m)	0.0	0.8	0.0	0.0	0.0	0.1	
Ceiling temp(K)	293.0	307.6	293.0	293.0	293.0	293.1	
Up wall temp(K)	293.0	304.1	293.0	293.0	293.0	293.1	
Low wall temp(K)	293.0	294.8	293.0	293.0	293.0	293.0	
Floor temp(K)	293.0	293.2	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	3.559E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	3.173E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	5.745E+04	0.000E+00	0.000E+00	0.000E+00	1.660E-07	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	5.745E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.660E-07	0.000E+00
On target(W/m^2)	3.962E-24	2.077E+00	4.892E-26	7.827E-25	0.000E+00	3.930E-06	
Pressure(Pa)	-8.028E-01	8.809E+00	1.358E-01	4.226E-01	4.021E-01	4.797E-01	

Upper layer species

N2 %	79.3	77.8	79.3	79.3	79.3	79.2
O2 %	20.7	19.3	20.7	20.7	20.7	20.6
CO2 %	0.000	1.84	0.000	0.000	0.000	9.838E-02
CO ppm	0.000	375.	0.000	0.000	0.000	20.1
TUHC %	0.000	1.272E-10	0.000	0.000	0.000	1.284E-15
H2O %	0.000	0.941	0.000	0.000	0.000	5.039E-02
OD 1/m	0.000	1.24	0.000	0.000	0.000	0.113
CT g-min/m^3	0.000	6.98	0.000	0.000	0.000	0.125

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 100.0 seconds.

Upper temp(K)	293.4	416.7	293.2	293.7	293.0	301.7	
Lower temp(K)	293.0	293.5	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	2.8	25.5	1.5	5.4	0.0	20.3	
Layer depth(m)	0.2	2.4	0.1	0.1	0.0	1.2	
Ceiling temp(K)	293.0	321.9	293.0	293.0	293.0	293.9	
Up wall temp(K)	293.0	315.5	293.0	293.0	293.0	293.7	
Low wall temp(K)	293.0	301.5	293.0	293.0	293.0	293.2	
Floor temp(K)	293.0	294.1	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	1.317E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	6.346E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.842E-13	1.149E+05	7.156E-14	8.918E-13	0.000E+00	4.590E-06	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	1.149E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	1.842E-13	0.000E+00	7.156E-14	8.918E-13	0.000E+00	4.590E-06	0.000E+00
On target(W/m^2)	8.655E-10	1.319E+01	1.165E-10	1.782E-08	0.000E+00	3.300E-04	
Pressure(Pa)	-6.851E-01	3.066E+01	1.667E+00	2.551E+00	2.515E+00	2.521E+00	

Upper layer species

N2 %	79.3	77.4	79.3	79.3	79.3	79.1
O2 %	20.7	18.8	20.7	20.7	20.7	20.6
CO2 %	1.721E-02	2.44	8.992E-03	3.248E-02	0.000	0.193
CO ppm	3.52	498.	1.84	6.64	0.000	39.4
TUHC %	0.000	4.736E-10	0.000	0.000	0.000	8.830E-17
H2O %	8.817E-03	1.25	4.606E-03	1.664E-02	0.000	9.867E-02
OD 1/m	1.555E-02	1.61	1.097E-02	3.716E-02	0.000	0.230
CT g-min/m^3	2.675E-02	14.6	2.454E-02	6.931E-02	0.000	1.07

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	2.826E-07	0.000	1.130E-07	0.000	0.000	1.088E-03
CO ppm	5.773E-05	0.000	2.308E-05	0.000	0.000	0.222
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	1.447E-07	0.000	5.787E-08	0.000	0.000	5.575E-04
OD 1/m	2.303E-07	0.000	9.261E-08	0.000	0.000	5.048E-04
CT g-min/m^3	2.988E-08	0.000	1.202E-08	0.000	0.000	7.695E-05

Time = 150.0 seconds.

Upper temp(K)	294.3	531.6	293.7	296.3	293.2	316.0	
Lower temp(K)	293.0	297.9	293.0	293.0	293.0	297.1	273.0
Upper vol(m**3)	11.1	25.3	7.2	27.9	0.9	24.9	
Layer depth(m)	0.8	2.3	0.7	0.8	0.1	1.5	
Ceiling temp(K)	293.1	362.9	293.0	293.3	293.0	296.3	
Up wall temp(K)	293.1	350.0	293.0	293.2	293.0	295.5	
Low wall temp(K)	293.0	325.8	293.0	293.1	293.0	293.8	
Floor temp(K)	293.0	297.8	293.0	293.0	293.0	293.1	
Plume flow(kg/s)	0.000E+00	1.005E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	9.519E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	2.821E-13	1.724E+05	9.860E-14	2.381E-12	0.000E+00	2.425E-05	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	1.708E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	1.612E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	2.821E-13	0.000E+00	9.860E-14	2.381E-12	0.000E+00	2.425E-05	0.000E+00
On target(W/m^2)	1.649E-07	1.828E+02	1.460E-08	7.099E-06	3.677E-11	1.589E-02	
Pressure(Pa)	-5.867E-01	3.275E+01	4.481E+00	5.479E+00	5.461E+00	5.090E+00	

Upper layer species

N2 %	79.2	74.7	79.3	79.2	79.3	78.8
O2 %	20.7	16.0	20.7	20.6	20.7	20.2
CO2 %	4.122E-02	5.91	2.100E-02	9.933E-02	1.455E-02	0.659
CO ppm	8.42	1.207E+03	4.29	20.3	2.97	135.
TUHC %	0.000	2.657E-09	0.000	0.000	0.000	8.911E-17
H2O %	2.111E-02	3.03	1.076E-02	5.088E-02	7.451E-03	0.337
OD 1/m	4.890E-02	3.23	2.865E-02	0.132	1.351E-02	0.637
CT g-min/m^3	0.198	28.3	0.130	0.491	3.019E-02	3.41

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.1
O2 %	20.7	20.7	20.7	20.7	20.7	20.6
CO2 %	2.299E-03	0.000	6.492E-04	0.000	0.000	0.205
CO ppm	0.470	0.000	0.133	0.000	0.000	41.8
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	1.178E-03	0.000	3.326E-04	0.000	0.000	0.105
OD 1/m	1.482E-03	0.000	4.301E-04	0.000	0.000	9.101E-02
CT g-min/m^3	2.415E-03	0.000	7.755E-04	0.000	0.000	0.240

Time = 200.0 seconds.

Upper temp(K)	295.6	612.7	294.1	300.3	293.6	325.2	
Lower temp(K)	293.0	307.8	293.0	293.1	293.0	297.5	273.0
Upper vol(m**3)	15.4	23.4	9.4	41.3	4.8	22.2	
Layer depth(m)	1.1	2.2	0.9	1.1	0.5	1.3	
Ceiling temp(K)	293.3	415.9	293.1	293.9	293.0	299.5	
Up wall temp(K)	293.2	397.6	293.1	293.7	293.0	298.0	
Low wall temp(K)	293.1	357.8	293.0	293.2	293.0	294.6	
Floor temp(K)	293.0	303.3	293.0	293.0	293.0	293.2	
Plume flow(kg/s)	0.000E+00	1.301E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	1.269E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	3.096E-13	2.299E+05	6.542E-14	0.000E+00	0.000E+00	2.027E-05	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	2.290E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	9.603E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	3.096E-13	0.000E+00	6.542E-14	0.000E+00	0.000E+00	2.027E-05	0.000E+00
On target(W/m^2)	2.528E-06	5.889E+02	8.625E-08	1.620E-04	7.037E-09	6.087E-02	
Pressure(Pa)	-5.518E-01	2.151E+01	6.512E+00	6.965E+00	7.028E+00	6.542E+00	

Upper layer species

N2 %	79.2	70.0	79.2	79.0	79.2	78.1
O2 %	20.6	11.3	20.7	20.5	20.7	19.6
CO2 %	0.113	11.8	4.623E-02	0.309	4.441E-02	1.46
CO ppm	23.1	2.418E+03	9.44	63.1	9.07	299.
TUHC %	0.000	3.232E-09	0.000	0.000	0.000	1.080E-16
H2O %	5.787E-02	6.06	2.368E-02	0.158	2.275E-02	0.749
OD 1/m	0.123	5.76	6.088E-02	0.378	4.504E-02	1.31
CT g-min/m^3	0.677	53.9	0.386	1.92	0.183	8.97

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.1
O2 %	20.7	20.7	20.7	20.7	20.7	20.5
CO2 %	1.223E-02	0.000	1.736E-03	6.259E-03	0.000	0.220
CO ppm	2.50	0.000	0.355	1.28	0.000	44.9
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	6.265E-03	0.000	8.892E-04	3.206E-03	0.000	0.113
OD 1/m	7.477E-03	0.000	1.069E-03	4.336E-03	0.000	9.569E-02
CT g-min/m^3	2.702E-02	0.000	5.516E-03	6.576E-03	0.000	0.836

Time = 250.0 seconds.

Upper temp(K)	296.3	577.1	294.1	301.5	294.3	324.8	
Lower temp(K)	293.0	336.1	293.0	293.3	293.0	296.2	273.0
Upper vol(m**3)	17.6	18.9	9.9	47.4	8.4	20.7	
Layer depth(m)	1.3	1.7	1.0	1.3	0.8	1.2	
Ceiling temp(K)	293.5	456.0	293.2	294.5	293.1	301.6	
Up wall temp(K)	293.4	435.8	293.1	294.2	293.1	299.6	
Low wall temp(K)	293.1	384.1	293.0	293.4	293.0	295.1	
Floor temp(K)	293.0	309.1	293.0	293.1	293.0	293.3	
Plume flow(kg/s)	0.000E+00	5.443E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	1.587E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	2.335E+04	0.000E+00	0.000E+00	9.647E-03	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	2.335E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.647E-03	0.000E+00	0.000E+00
On target(W/m^2)	6.537E-06	3.677E+02	7.415E-08	2.992E-04	1.511E-07	5.750E-02	
Pressure(Pa)	-5.335E-01	-1.868E+00	7.133E+00	6.831E+00	6.961E+00	6.464E+00	

Upper layer species

N2 %	79.1	63.6	79.2	78.8	79.2	77.4
O2 %	20.5	5.59	20.7	20.3	20.6	18.8
CO2 %	0.230	18.6	6.959E-02	0.560	0.108	2.35
CO ppm	47.1	3.797E+03	14.2	114.	22.0	481.
TUHC %	1.335E-06	1.48	9.881E-08	2.228E-06	0.000	5.275E-04
H2O %	0.118	9.52	3.564E-02	0.287	5.507E-02	1.20
OD 1/m	0.230	9.92	9.095E-02	0.653	0.129	2.04
CT g-min/m^3	1.68	97.3	0.831	4.92	0.665	18.7

Lower layer species

N2 %	79.3	65.6	79.3	79.3	79.3	79.2
O2 %	20.7	7.30	20.7	20.7	20.7	20.6
CO2 %	2.095E-02	16.6	1.782E-03	3.054E-02	0.000	0.127
CO ppm	4.28	3.386E+03	0.364	6.24	0.000	26.0
TUHC %	9.460E-10	0.946	0.000	3.566E-09	0.000	6.817E-07
H2O %	1.073E-02	8.49	9.128E-04	1.564E-02	0.000	6.508E-02
OD 1/m	1.335E-02	0.665	1.083E-03	2.163E-02	0.000	5.322E-02
CT g-min/m^3	8.874E-02	0.202	1.177E-02	7.697E-02	0.000	1.24

Time = 300.0 seconds.

Upper temp(K)	299.2	442.8	296.8	319.1	297.8	447.8	
Lower temp(K)	293.3	318.4	293.0	293.8	293.0	295.2	273.0
Upper vol(m**3)	17.7	25.5	11.0	58.0	13.6	22.7	
Layer depth(m)	1.3	2.4	1.1	1.6	1.3	1.4	
Ceiling temp(K)	293.8	415.1	293.3	296.2	293.4	320.6	
Up wall temp(K)	293.6	400.3	293.3	295.5	293.3	314.4	
Low wall temp(K)	293.2	367.4	293.1	293.9	293.1	299.1	
Floor temp(K)	293.0	307.5	293.0	293.1	293.0	293.8	
Plume flow(kg/s)	0.000E+00	2.064E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	1.770E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	3.404E+00	2.316E+04	2.049E+00	0.000E+00	0.000E+00	2.427E+05	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	2.316E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	3.404E+00	0.000E+00	2.049E+00	0.000E+00	0.000E+00	2.427E+05	0.000E+00
On target(W/m^2)	8.235E-05	2.841E+01	1.223E-05	2.598E-02	2.996E-05	3.243E+01	
Pressure(Pa)	-3.688E-01	1.768E+01	9.866E+00	1.407E+01	1.444E+01	1.336E+01	

Upper layer species

N2 %	79.0	33.3	79.2	78.4	79.0	76.1
O2 %	20.4	2.09	20.6	19.8	20.4	17.5
CO2 %	0.402	11.1	0.154	1.18	0.347	4.02
CO ppm	82.1	2.274E+03	31.4	240.	70.8	821.
TUHC %	2.831E-05	47.0	7.736E-07	2.762E-04	2.703E-05	1.013E-03
H2O %	0.206	5.70	7.880E-02	0.602	0.178	2.06
OD 1/m	0.396	7.96	0.194	1.22	0.411	2.47
CT g-min/m^3	3.41	215.	1.50	9.78	1.91	31.5

Lower layer species

N2 %	79.3	65.5	79.3	79.2	79.3	79.2
O2 %	20.7	7.87	20.7	20.7	20.7	20.6
CO2 %	2.825E-02	15.6	3.354E-03	6.710E-02	0.000	9.689E-02
CO ppm	5.77	3.180E+03	0.685	13.7	0.000	19.8
TUHC %	8.069E-05	2.06	2.405E-05	6.390E-06	0.000	1.260E-03
H2O %	1.447E-02	7.97	1.718E-03	3.437E-02	0.000	4.963E-02
OD 1/m	1.740E-02	0.476	2.071E-03	5.591E-02	0.000	4.151E-02
CT g-min/m^3	0.179	9.00	1.924E-02	0.270	0.000	1.55

Time = 350.0 seconds.

Upper temp(K)	320.1	366.0	313.8	373.7	326.9	551.9	
Lower temp(K)	293.5	308.7	293.2	293.7	293.1	296.1	273.0
Upper vol(m**3)	18.8	25.9	14.3	75.9	23.9	29.6	
Layer depth(m)	1.4	2.4	1.4	2.1	2.3	1.8	
Ceiling temp(K)	296.4	385.4	295.4	308.4	297.3	379.9	
Up wall temp(K)	295.6	373.6	294.8	304.8	296.3	365.1	
Low wall temp(K)	293.7	350.4	293.4	297.6	294.3	322.5	
Floor temp(K)	293.1	305.2	293.1	293.6	293.2	297.3	
Plume flow(kg/s)	0.000E+00	3.428E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	3.428E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.335E+04	0.000E+00	7.319E+03	0.000E+00	0.000E+00	3.832E+05	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	1.335E+04	0.000E+00	7.319E+03	0.000E+00	0.000E+00	3.832E+05	3.401E-01
On target(W/m^2)	3.027E-02	1.602E+00	1.049E-02	2.390E+00	7.420E-02	2.534E+02	
Pressure(Pa)	5.551E-02	4.565E+01	2.360E+01	3.077E+01	3.171E+01	2.998E+01	

Upper layer species

N2 %	78.5	15.3	78.9	77.3	78.2	73.5
O2 %	20.0	0.953	20.3	18.7	19.6	16.0
CO2 %	0.940	5.14	0.533	2.46	1.39	5.44
CO ppm	192.	1.051E+03	109.	503.	285.	1.111E+03
TUHC %	2.673E-05	75.6	2.770E-06	0.116	1.077E-02	1.87
H2O %	0.481	2.63	0.273	1.26	0.713	2.79
OD 1/m	0.871	7.00	0.624	2.18	1.41	3.15
CT g-min/m^3	6.84	611.	3.70	19.7	7.10	48.3

Lower layer species

N2 %	79.3	65.5	79.3	79.2	79.3	79.2
O2 %	20.7	7.87	20.7	20.7	20.7	20.7
CO2 %	3.332E-02	15.6	7.719E-03	5.586E-02	0.000	6.792E-02
CO ppm	6.81	3.180E+03	1.58	11.4	0.000	13.9
TUHC %	1.280E-04	2.06	5.496E-05	6.697E-06	0.000	2.603E-04
H2O %	1.707E-02	7.97	3.954E-03	2.861E-02	0.000	3.479E-02
OD 1/m	1.862E-02	2.66	5.427E-03	6.806E-02	0.000	3.671E-02
CT g-min/m^3	0.285	27.0	4.071E-02	0.653	0.000	1.78

Time = 400.0 seconds.

Upper temp(K)	467.5	337.7	329.5	370.7	338.2	460.9	
Lower temp(K)	294.1	306.2	293.3	294.0	293.5	308.2	273.0
Upper vol(m**3)	20.7	25.9	16.8	83.3	24.5	34.2	
Layer depth(m)	1.5	2.4	1.6	2.3	2.4	2.0	
Ceiling temp(K)	323.4	369.6	300.6	315.7	302.9	374.1	
Up wall temp(K)	316.6	358.1	298.8	310.7	300.5	360.9	
Low wall temp(K)	299.8	340.3	294.5	301.3	296.6	325.9	
Floor temp(K)	293.8	303.5	293.2	294.3	293.5	298.7	
Plume flow(kg/s)	0.000E+00	3.760E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	3.760E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.827E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.594E+05	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	1.827E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.594E+05	2.106E+01
On target(W/m^2)	5.232E+01	2.249E-01	9.965E-02	2.051E+00	2.361E-01	4.478E+01	
Pressure(Pa)	8.479E-01	8.939E+01	3.347E+01	3.278E+01	3.355E+01	3.191E+01	

Upper layer species

N2 %	76.6	8.01	78.3	74.1	76.6	61.9
O2 %	18.0	0.499	19.9	17.6	18.7	13.6
CO2 %	3.46	2.69	1.00	3.03	2.30	4.30
CO ppm	707.	550.	204.	619.	471.	879.
TUHC %	6.332E-04	87.2	0.224	3.60	1.06	17.7
H2O %	1.77	1.38	0.513	1.55	1.18	2.20
OD 1/m	2.20	5.54	1.12	2.85	2.17	3.34
CT g-min/m^3	15.2	1.428E+03	9.26	41.7	19.4	102.

Lower layer species

N2 %	79.2	65.5	79.3	79.2	79.3	77.3
O2 %	20.7	7.87	20.7	20.7	20.7	19.8
CO2 %	4.787E-02	15.6	8.468E-03	4.779E-02	0.000	0.624
CO ppm	9.78	3.180E+03	1.73	9.76	0.000	128.
TUHC %	3.274E-02	2.06	5.748E-05	5.730E-06	0.000	1.85
H2O %	2.452E-02	7.97	4.338E-03	2.448E-02	0.000	0.320
OD 1/m	1.771E-02	2.06	6.833E-03	4.955E-02	0.000	0.253
CT g-min/m^3	0.396	42.4	7.846E-02	0.995	0.000	3.23

Time = 450.0 seconds.

Upper temp(K)	620.8	328.6	317.6	357.7	333.6	411.9	
Lower temp(K)	299.2	304.6	293.4	294.5	293.7	325.3	273.0
Upper vol(m**3)	22.4	25.9	17.0	85.0	24.5	35.6	
Layer depth(m)	1.6	2.4	1.7	2.3	2.4	2.1	
Ceiling temp(K)	406.0	360.0	300.8	316.8	304.9	362.5	
Up wall temp(K)	388.9	348.7	299.0	311.8	302.2	351.6	
Low wall temp(K)	333.7	334.3	294.8	302.6	297.7	324.9	
Floor temp(K)	298.9	302.4	293.3	294.6	293.8	298.6	
Plume flow(kg/s)	0.000E+00	3.337E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	3.337E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	2.867E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.150E+04	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	2.867E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.150E+04	2.312E+04
On target(W/m^2)	6.510E+02	9.065E-02	2.056E-02	9.868E-01	1.534E-01	1.126E+01	
Pressure(Pa)	-1.918E+00	1.228E+02	3.222E+01	3.117E+01	3.206E+01	3.045E+01	

Upper layer species

N2 %	69.7	4.93	77.3	68.0	73.4	48.4
O2 %	11.9	0.307	19.5	15.9	17.5	10.6
CO2 %	10.7	1.65	1.15	3.22	2.78	3.50
CO ppm	2.182E+03	338.	235.	657.	569.	715.
TUHC %	1.54	92.2	1.39	11.1	4.69	35.6
H2O %	5.47	0.847	0.590	1.65	1.43	1.79
OD 1/m	4.80	3.96	1.34	3.30	2.63	3.46
CT g-min/m^3	35.7	2.555E+03	21.0	98.0	46.9	252.

Lower layer species

N2 %	78.6	65.5	79.3	79.2	79.3	67.2
O2 %	20.4	7.87	20.7	20.7	20.7	16.5
CO2 %	0.163	15.6	8.468E-03	4.514E-02	0.000	1.73
CO ppm	33.3	3.180E+03	1.73	9.22	0.000	353.
TUHC %	0.726	2.06	5.748E-05	5.412E-06	0.000	13.5
H2O %	8.352E-02	7.97	4.338E-03	2.312E-02	0.000	0.884
OD 1/m	3.476E-02	1.42	6.720E-03	2.891E-02	0.000	0.655
CT g-min/m^3	0.901	53.6	0.118	1.22	0.000	19.9

Time = 500.0 seconds.

Upper temp(K)	581.6	327.3	309.9	345.0	327.1	378.9	
Lower temp(K)	335.0	303.5	293.6	294.9	293.9	327.2	273.0
Upper vol(m**3)	22.5	25.9	17.1	85.6	24.5	35.8	
Layer depth(m)	1.6	2.4	1.7	2.3	2.4	2.1	
Ceiling temp(K)	426.6	353.8	299.9	315.8	305.2	351.8	
Up wall temp(K)	408.5	343.0	298.4	311.2	302.5	342.9	
Low wall temp(K)	350.1	330.5	294.8	302.7	298.1	322.3	
Floor temp(K)	302.3	301.6	293.3	294.7	293.9	298.3	
Plume flow(kg/s)	0.000E+00	2.278E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	2.278E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.960E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.874E+04	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	1.960E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.874E+04	1.494E+05
On target(W/m^2)	3.912E+02	7.851E-02	4.592E-03	4.110E-01	7.669E-02	3.064E+00	
Pressure(Pa)	-2.995E+00	1.353E+02	3.083E+01	2.963E+01	3.026E+01	2.907E+01	

Upper layer species

N2 %	59.4	3.47	76.1	61.7	69.2	37.3
O2 %	7.69	0.216	19.2	14.3	16.3	8.07
CO2 %	13.2	1.16	1.22	3.17	2.98	2.82
CO ppm	2.697E+03	238.	250.	647.	609.	576.
TUHC %	12.1	94.5	2.87	19.0	9.81	50.2
H2O %	6.76	0.596	0.626	1.62	1.53	1.44
OD 1/m	6.34	2.69	1.46	3.75	2.50	3.26
CT g-min/m^3	84.7	3.773E+03	42.7	210.	95.5	527.

Lower layer species

N2 %	70.9	65.5	79.3	79.2	79.3	53.4
O2 %	15.6	7.87	20.7	20.7	20.7	12.7
CO2 %	4.94	15.6	8.468E-03	4.422E-02	1.130E-10	2.20
CO ppm	1.010E+03	3.180E+03	1.73	9.03	5.687E-08	449.
TUHC %	5.63	2.06	5.748E-05	5.302E-06	0.000	30.5
H2O %	2.53	7.97	4.338E-03	2.265E-02	5.831E-11	1.13
OD 1/m	0.951	0.925	6.545E-03	1.886E-02	1.402E-11	0.931
CT g-min/m^3	6.36	61.0	0.156	1.34	5.507E-11	73.9

Time = 550.0 seconds.

Upper temp(K)	503.2	330.6	305.7	335.1	321.4	359.9	
Lower temp(K)	359.9	305.0	293.6	295.2	294.1	329.6	273.0
Upper vol(m**3)	20.2	24.4	17.3	86.4	24.5	36.3	
Layer depth(m)	1.5	2.3	1.7	2.4	2.4	2.2	
Ceiling temp(K)	418.9	349.7	299.1	314.1	304.7	344.6	
Up wall temp(K)	402.5	339.8	297.8	310.0	302.3	337.0	
Low wall temp(K)	352.4	328.2	294.7	302.5	298.1	320.4	
Floor temp(K)	303.2	301.0	293.3	294.8	293.9	297.9	
Plume flow(kg/s)	0.000E+00	1.226E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	1.220E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	4.799E+02	0.000E+00	3.247E+03	0.000E+00	7.308E+03	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	4.799E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	3.247E+03	0.000E+00	7.308E+03	7.205E+04
On target(W/m^2)	1.102E+02	1.121E-01	1.480E-03	1.773E-01	3.664E-02	1.126E+00	
Pressure(Pa)	-3.792E+00	1.281E+02	3.042E+01	2.919E+01	2.970E+01	2.865E+01	

Upper layer species

N2 %	49.8	2.73	74.7	56.2	64.1	32.2
O2 %	6.08	0.166	18.8	12.9	15.0	6.98
CO2 %	11.7	0.922	1.27	3.04	3.04	2.43
CO ppm	2.394E+03	188.	259.	621.	620.	497.
TUHC %	25.6	95.7	4.56	26.1	16.1	56.9
H2O %	6.00	0.472	0.650	1.56	1.56	1.25
OD 1/m	7.23	1.94	1.55	3.90	2.64	3.10
CT g-min/m^3	176.	4.910E+03	75.9	384.	170.	901.

Lower layer species

N2 %	64.0	65.5	79.3	79.2	79.3	43.9
O2 %	12.7	7.87	20.7	20.7	20.7	10.2
CO2 %	6.77	15.6	8.468E-03	4.392E-02	4.379E-06	2.17
CO ppm	1.383E+03	3.180E+03	1.73	8.97	8.947E-04	443.
TUHC %	12.6	2.06	5.748E-05	5.269E-06	4.678E-06	42.5
H2O %	3.47	7.97	4.338E-03	2.250E-02	2.243E-06	1.11
OD 1/m	2.13	5.669E-03	6.523E-03	1.917E-02	8.509E-08	1.11
CT g-min/m^3	26.5	62.4	0.194	1.45	5.509E-07	173.

Time = 600.0 seconds.

Upper temp(K)	498.1	331.8	302.9	327.3	316.6	347.2	
Lower temp(K)	347.1	307.8	293.7	295.4	294.2	326.0	273.0
Upper vol(m**3)	20.3	21.4	17.5	86.9	24.6	35.5	
Layer depth(m)	1.5	2.0	1.7	2.4	2.4	2.1	
Ceiling temp(K)	408.7	346.7	298.5	312.3	304.0	338.7	
Up wall temp(K)	393.8	337.7	297.4	308.7	301.8	332.2	
Low wall temp(K)	348.6	326.7	294.6	302.1	298.1	318.5	
Floor temp(K)	302.7	300.6	293.3	294.7	293.9	297.6	
Plume flow(kg/s)	0.000E+00	9.973E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	9.950E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.085E+05	1.800E+02	0.000E+00	7.577E+02	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	1.800E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	1.085E+05	0.000E+00	0.000E+00	7.577E+02	0.000E+00	0.000E+00	7.087E+05
On target(W/m^2)	9.989E+01	1.281E-01	5.480E-04	7.778E-02	1.754E-02	4.882E-01	
Pressure(Pa)	-2.310E+00	1.107E+02	2.976E+01	2.872E+01	2.922E+01	2.831E+01	

Upper layer species

N2 %	43.9	2.27	73.6	52.5	59.8	29.6
O2 %	5.71	0.137	18.5	12.0	13.8	6.45
CO2 %	9.74	0.770	1.29	2.92	3.01	2.19
CO ppm	1.990E+03	157.	264.	596.	615.	447.
TUHC %	35.0	96.4	5.84	30.9	21.7	60.5
H2O %	4.99	0.395	0.662	1.50	1.54	1.12
OD 1/m	7.10	1.54	1.60	3.90	2.86	3.00
CT g-min/m^3	334.	5.980E+03	120.	610.	279.	1.341E+03

Lower layer species

N2 %	61.2	65.5	79.3	79.2	79.3	38.7
O2 %	12.2	7.87	20.7	20.7	20.7	8.89
CO2 %	6.42	15.6	8.468E-03	4.380E-02	4.349E-05	2.05
CO ppm	1.311E+03	3.180E+03	1.73	8.95	8.884E-03	420.
TUHC %	16.5	2.06	5.748E-05	5.270E-06	6.562E-06	49.2
H2O %	3.29	7.97	4.338E-03	2.243E-02	2.228E-05	1.05
OD 1/m	2.04	1.295E-03	6.427E-03	2.208E-02	5.252E-07	1.06
CT g-min/m^3	64.5	62.4	0.231	1.56	3.139E-06	310.

Time = 650.0 seconds.

Upper temp(K)	474.5	331.7	301.1	321.8	312.5	338.3	
Lower temp(K)	338.1	309.6	293.8	295.3	294.2	321.8	273.0
Upper vol(m**3)	19.5	19.1	17.6	87.0	24.6	33.6	
Layer depth(m)	1.4	1.8	1.7	2.4	2.4	2.0	
Ceiling temp(K)	404.4	344.3	298.0	310.8	303.3	334.7	
Up wall temp(K)	390.2	336.0	297.0	307.5	301.3	328.9	
Low wall temp(K)	347.5	325.6	294.6	301.7	297.9	316.9	
Floor temp(K)	302.7	300.2	293.3	294.7	293.9	297.3	
Plume flow(kg/s)	0.000E+00	7.711E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	7.700E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	9.309E+04	8.684E+01	0.000E+00	3.419E+02	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	8.684E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	9.309E+04	0.000E+00	0.000E+00	3.419E+02	0.000E+00	0.000E+00	6.341E+05
On target(W/m^2)	6.121E+01	1.260E-01	2.433E-04	3.901E-02	8.228E-03	2.380E-01	
Pressure(Pa)	-2.128E+00	9.283E+01	2.933E+01	2.827E+01	2.875E+01	2.798E+01	

Upper layer species

N2 %	40.1	1.91	72.7	49.6	56.7	28.8
O2 %	5.45	0.114	18.2	11.3	13.1	6.31
CO2 %	8.46	0.650	1.31	2.81	2.96	2.06
CO ppm	1.728E+03	133.	268.	575.	604.	420.
TUHC %	41.1	96.9	6.98	34.6	25.5	61.6
H2O %	4.33	0.333	0.671	1.44	1.52	1.05
OD 1/m	7.17	1.25	1.64	3.83	3.08	2.96
CT g-min/m^3	537.	7.010E+03	172.	872.	424.	1.821E+03

Lower layer species

N2 %	58.3	65.5	79.3	79.2	79.3	35.2
O2 %	11.9	7.87	20.7	20.7	20.7	8.02
CO2 %	5.68	15.6	8.468E-03	4.372E-02	7.024E-05	1.98
CO ppm	1.161E+03	3.180E+03	1.73	8.93	1.435E-02	405.
TUHC %	20.8	2.06	5.748E-05	1.704E-05	6.562E-06	53.7
H2O %	2.91	7.97	4.338E-03	2.240E-02	3.598E-05	1.02
OD 1/m	1.96	5.937E-04	6.363E-03	2.076E-02	4.110E-07	0.971
CT g-min/m^3	109.	62.4	0.269	1.70	6.591E-06	457.

Time = 700.0 seconds.

Upper temp(K)	458.8	331.5	299.8	318.0	309.7	334.0	
Lower temp(K)	333.9	310.7	293.8	295.2	294.2	318.0	273.0
Upper vol(m**3)	19.2	17.3	17.7	87.2	24.6	31.7	
Layer depth(m)	1.4	1.6	1.7	2.4	2.4	1.9	
Ceiling temp(K)	400.7	342.3	297.6	309.6	302.6	331.7	
Up wall temp(K)	387.2	334.6	296.7	306.6	300.8	326.5	
Low wall temp(K)	346.4	324.7	294.5	301.4	297.7	315.5	
Floor temp(K)	302.6	299.8	293.3	294.6	293.9	297.0	
Plume flow(kg/s)	0.000E+00	5.456E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	5.450E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	5.460E+04	4.379E+01	0.000E+00	1.756E+02	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	4.379E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	5.460E+04	0.000E+00	0.000E+00	1.756E+02	0.000E+00	0.000E+00	4.860E+05
On target(W/m^2)	4.258E+01	1.233E-01	1.236E-04	2.206E-02	4.348E-03	1.586E-01	
Pressure(Pa)	-2.310E+00	7.526E+01	2.894E+01	2.799E+01	2.839E+01	2.771E+01	

Upper layer species

N2 %	37.5	1.65	72.0	47.5	54.3	28.7
O2 %	5.30	9.843E-02	18.0	10.8	12.5	6.31
CO2 %	7.61	0.562	1.32	2.73	2.90	1.99
CO ppm	1.554E+03	115.	270.	557.	593.	407.
TUHC %	45.1	97.4	7.92	37.4	28.6	61.9
H2O %	3.90	0.288	0.677	1.40	1.49	1.02
OD 1/m	6.97	1.06	1.67	3.75	3.29	2.95
CT g-min/m^3	776.	8.014E+03	233.	1.161E+03	602.	2.325E+03

Lower layer species

N2 %	55.5	65.5	79.3	79.2	79.3	33.4
O2 %	11.4	7.87	20.7	20.7	20.7	7.59
CO2 %	5.16	15.6	8.468E-03	4.368E-02	7.024E-05	1.93
CO ppm	1.054E+03	3.180E+03	1.73	8.92	1.435E-02	394.
TUHC %	25.0	2.06	5.748E-05	2.240E-05	6.562E-06	56.0
H2O %	2.64	7.97	4.338E-03	2.237E-02	3.598E-05	0.988
OD 1/m	1.74	3.377E-04	6.298E-03	2.244E-02	2.875E-07	0.836
CT g-min/m^3	161.	62.4	0.305	1.86	9.817E-06	599.

Time = 750.0 seconds.

Upper temp(K)	430.3	331.5	298.9	314.9	307.4	328.5	
Lower temp(K)	328.4	311.6	293.9	295.3	294.3	314.9	273.0
Upper vol(m**3)	18.6	15.7	17.8	86.8	24.5	29.5	
Layer depth(m)	1.4	1.5	1.7	2.4	2.4	1.8	
Ceiling temp(K)	391.2	340.6	297.3	308.6	302.0	329.2	
Up wall temp(K)	379.3	333.6	296.5	305.9	300.3	324.4	
Low wall temp(K)	342.9	324.0	294.5	301.1	297.6	314.3	
Floor temp(K)	302.2	299.6	293.3	294.6	293.9	296.8	
Plume flow(kg/s)	0.000E+00	4.040E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	4.036E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	3.702E+04	2.481E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	2.481E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	3.702E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.460E+05
On target(W/m^2)	2.003E+01	1.240E-01	6.626E-05	1.306E-02	2.442E-03	8.912E-02	
Pressure(Pa)	-1.912E+00	5.875E+01	2.809E+01	2.716E+01	2.743E+01	2.688E+01	

Upper layer species

N2 %	35.6	1.48	71.5	46.1	52.6	28.5
O2 %	5.36	8.770E-02	17.9	10.5	12.1	6.32
CO2 %	6.65	0.503	1.33	2.67	2.86	1.92
CO ppm	1.359E+03	103.	271.	545.	584.	393.
TUHC %	48.5	97.6	8.50	39.3	30.8	62.1
H2O %	3.41	0.257	0.681	1.37	1.46	0.986
OD 1/m	6.90	0.930	1.69	3.71	3.41	2.92
CT g-min/m^3	1.065E+03	9.001E+03	299.	1.469E+03	809.	2.844E+03

Lower layer species

N2 %	52.9	65.5	79.3	79.2	79.3	32.6
O2 %	11.0	7.87	20.7	20.7	20.7	7.41
CO2 %	4.71	15.6	8.468E-03	4.365E-02	7.024E-05	1.88
CO ppm	963.	3.180E+03	1.73	8.92	1.435E-02	384.
TUHC %	28.6	2.06	5.748E-05	2.239E-05	6.562E-06	57.0
H2O %	2.41	7.97	4.338E-03	2.236E-02	3.598E-05	0.962
OD 1/m	1.53	2.184E-04	6.132E-03	8.391E-03	4.942E-08	0.734
CT g-min/m^3	218.	62.4	0.341	1.94	1.054E-05	729.

Time = 800.0 seconds.

Upper temp(K)	411.7	330.7	298.1	312.6	305.7	325.1	
Lower temp(K)	325.1	312.4	293.9	295.4	294.3	312.5	273.0
Upper vol(m**3)	18.2	14.8	17.7	86.1	24.4	27.9	
Layer depth(m)	1.3	1.4	1.7	2.4	2.4	1.7	
Ceiling temp(K)	383.5	339.0	297.0	307.8	301.5	327.3	
Up wall temp(K)	372.8	332.6	296.3	305.2	300.0	322.8	
Low wall temp(K)	339.9	323.4	294.5	300.8	297.5	313.4	
Floor temp(K)	301.7	299.3	293.3	294.5	293.9	296.6	
Plume flow(kg/s)	0.000E+00	3.880E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	3.877E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	2.564E+04	1.873E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	1.873E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	2.564E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.079E+05
On target(W/m^2)	1.118E+01	1.139E-01	3.842E-05	8.256E-03	1.487E-03	5.982E-02	
Pressure(Pa)	-1.679E+00	4.604E+01	2.700E+01	2.606E+01	2.630E+01	2.581E+01	

Upper layer species

N2 %	34.2	1.32	71.2	45.1	51.3	28.7
O2 %	5.44	7.845E-02	17.8	10.2	11.7	6.38
CO2 %	5.92	0.451	1.33	2.62	2.82	1.89
CO ppm	1.209E+03	92.1	272.	535.	576.	386.
TUHC %	51.0	97.9	8.86	40.5	32.5	62.0
H2O %	3.03	0.231	0.683	1.34	1.44	0.968
OD 1/m	6.70	0.825	1.70	3.68	3.48	2.89
CT g-min/m^3	1.397E+03	9.976E+03	368.	1.792E+03	1.036E+03	3.372E+03

Lower layer species

N2 %	50.3	65.5	79.3	79.2	79.3	32.5
O2 %	10.6	7.87	20.7	20.7	20.7	7.41
CO2 %	4.35	15.6	8.468E-03	4.364E-02	7.024E-05	1.83
CO ppm	888.	3.180E+03	1.73	8.91	1.435E-02	374.
TUHC %	32.2	2.06	5.748E-05	2.238E-05	6.562E-06	57.2
H2O %	2.23	7.97	4.338E-03	2.235E-02	3.598E-05	0.938
OD 1/m	1.36	1.619E-04	5.914E-03	3.728E-03	1.614E-08	0.638
CT g-min/m^3	279.	62.4	0.376	1.98	1.072E-05	846.

Time = 850.0 seconds.

Upper temp(K)	398.4	329.5	297.5	310.7	304.5	322.5	
Lower temp(K)	322.5	313.1	293.9	295.6	294.4	310.7	273.0
Upper vol(m**3)	17.9	14.5	17.6	85.3	24.2	27.0	
Layer depth(m)	1.3	1.3	1.7	2.3	2.4	1.6	
Ceiling temp(K)	377.2	337.6	296.8	307.1	301.1	325.8	
Up wall temp(K)	367.7	331.6	296.1	304.7	299.7	321.5	
Low wall temp(K)	337.5	322.9	294.4	300.6	297.3	312.7	
Floor temp(K)	301.3	299.1	293.3	294.5	293.8	296.4	
Plume flow(kg/s)	0.000E+00	3.720E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	3.718E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.640E+04	1.510E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	1.510E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	1.640E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.967E+05
On target(W/m^2)	6.963E+00	1.002E-01	2.400E-05	5.581E-03	9.756E-04	4.269E-02	
Pressure(Pa)	-1.551E+00	3.717E+01	2.567E+01	2.471E+01	2.493E+01	2.447E+01	

Upper layer species

N2 %	33.3	1.19	71.1	44.4	50.3	29.1
O2 %	5.54	7.014E-02	17.8	10.1	11.5	6.50
CO2 %	5.35	0.404	1.33	2.58	2.78	1.88
CO ppm	1.092E+03	82.6	273.	528.	569.	383.
TUHC %	52.7	98.1	9.05	41.5	33.8	61.4
H2O %	2.74	0.207	0.684	1.32	1.43	0.961
OD 1/m	6.46	0.733	1.71	3.65	3.53	2.86
CT g-min/m^3	1.763E+03	1.094E+04	439.	2.125E+03	1.281E+03	3.897E+03

Lower layer species

N2 %	48.1	65.5	79.3	79.2	79.3	32.9
O2 %	10.2	7.87	20.7	20.7	20.7	7.54
CO2 %	4.03	15.6	8.468E-03	4.363E-02	7.024E-05	1.79
CO ppm	823.	3.180E+03	1.73	8.91	1.435E-02	365.
TUHC %	35.3	2.06	5.748E-05	2.238E-05	6.562E-06	56.7
H2O %	2.06	7.97	4.338E-03	2.235E-02	3.598E-05	0.916
OD 1/m	1.21	1.324E-04	5.657E-03	1.955E-03	6.459E-09	0.546
CT g-min/m^3	343.	62.4	0.410	1.99	1.079E-05	950.

Time = 900.0 seconds.

Upper temp(K)	390.0	328.4	297.1	309.3	303.5	320.4	
Lower temp(K)	320.4	313.6	293.9	295.7	294.5	309.3	273.0
Upper vol(m**3)	17.9	14.6	17.5	84.4	24.1	26.7	
Layer depth(m)	1.3	1.3	1.7	2.3	2.3	1.6	
Ceiling temp(K)	372.5	336.2	296.7	306.5	300.8	324.5	
Up wall temp(K)	363.8	330.7	296.0	304.3	299.4	320.4	
Low wall temp(K)	335.6	322.4	294.4	300.4	297.2	312.1	
Floor temp(K)	300.9	298.9	293.2	294.4	293.8	296.3	
Plume flow(kg/s)	0.000E+00	3.561E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	3.559E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.599E+04	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	1.599E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.904E+05
On target(W/m^2)	4.994E+00	8.814E-02	1.612E-05	3.998E-03	6.808E-04	3.189E-02	
Pressure(Pa)	-1.466E+00	3.121E+01	2.415E+01	2.318E+01	2.339E+01	2.294E+01	

Upper layer species

N2 %	32.7	1.07	71.0	43.8	49.4	29.7
O2 %	5.64	6.291E-02	17.8	9.94	11.3	6.65
CO2 %	4.91	0.363	1.34	2.56	2.75	1.87
CO ppm	1.004E+03	74.2	273.	522.	562.	383.
TUHC %	53.9	98.3	9.15	42.2	35.0	60.7
H2O %	2.52	0.186	0.684	1.31	1.41	0.959
OD 1/m	6.21	0.654	1.71	3.63	3.57	2.81
CT g-min/m^3	2.156E+03	1.190E+04	512.	2.465E+03	1.540E+03	4.411E+03

Lower layer species

N2 %	46.4	65.5	79.3	79.2	79.3	33.7
O2 %	9.90	7.87	20.7	20.7	20.7	7.76
CO2 %	3.77	15.6	8.468E-03	4.362E-02	7.024E-05	1.75
CO ppm	770.	3.180E+03	1.73	8.91	1.435E-02	357.
TUHC %	37.7	2.06	5.748E-05	2.238E-05	6.562E-06	55.8
H2O %	1.93	7.97	4.338E-03	2.234E-02	3.598E-05	0.895
OD 1/m	1.07	1.157E-04	5.378E-03	1.164E-03	3.061E-09	0.464
CT g-min/m^3	407.	62.4	0.442	2.00	1.081E-05	1.039E+03

4.6 Input Data for EXITT for Scenario 3 (Example Data File SCEN-3.BLD)

```
6 20
1 2 6 4 5
 3 6 1 7 7
 8 8 8 8 6
 6 4 4 4 1
1 2 3 4 5
 6 7 8 4 18
 5 1 2 3 7
 7 18 18 4 1
2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
35 35 35 55 35
 55 35 35 55 55
 35 35 35 35 35
 35 55 55 55 35
1
-1.
7
71 71 83 83 83
 71 95 71 83 83
 83 71 71 83 95
 83 83 83 83 71
 27
  1  12       1.82880
  1  15       3.40729
  1  20       1.89277
  2  13       1.52400
  2  15       2.71167
  3   7       2.13360
  3  14       1.52400
  4   9       3.12699
  4  18       4.26720
  4  19       2.38056
  5  11       2.13360
  5  16       2.74320
  5  17       3.35280
  6   7       2.51035
  7  15       2.05740
  7  16       2.43840
  8  20       1.67640
  9  19       3.68606
 10  17       1.50097
 10  18       2.13360
 11  17       1.92772
 12  20       1.57090
 15  20       4.26799
 16  19       1.37160
 17  18       2.05033
 17  19       4.29162
 18  19       3.29692
5
71 30 30 7 5
0 1 0 0 1
1 1 1 1 1
4 1 1 6 4
0 0 0 0 0
0. 0. 0. 0. 0.
-1. -1. -1. -1. -1.
```

4.7 Printed Output from EXITT for Scenario 3

```
EXITT Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89
FAST DUMP FILE    :  SCEN-3.DMP
BUILDING/OCCUPANT FILE: SCEN-3.BLD
EXITT OUTPUT FILE      : SCEN-3.EXT
EXITT DUMP FILE        : SCEN-3.EVA

NO. OF ROOMS (RUN WITH FAST)       6
NO. OF DOORS                       2
NO. OF WINDOWS                     4
TOTAL NUMBER OF NODES             20
```

EXITT NODE NUMBER	EXITT ROOM NUMBER	FAST ROOM NUMBER	ROOM HEIGHT (M)	FLOOR HEIGHT (M)
1	1	1	2.4	0.0
2*	2	2	2.4	0.0
3	3	6	2.4	0.0
4	4	4	2.4	0.0
5	5	5	2.4	0.0
6	6	3	2.4	0.0
7	7	6	2.4	0.0
8	8	1	2.4	0.0
9	4	7	2.4	0.0
10	18	7	2.4	0.0
11	5	8	2.4	0.0
12	1	8	2.4	0.0
13	2	8	2.4	0.0
14	3	8	2.4	0.0
15	7	6	2.4	0.0
16	7	6	2.4	0.0
17	18	4	2.4	0.0
18	18	4	2.4	0.0
19	4	4	2.4	0.0
20	1	1	2.4	0.0

* INDICATES NODE IS IN BURN ROOM

NODE NUMBER	NOISE LEVEL (DECIBELS)
1	35
2	35
3	35
4	55
5	35
6	55
7	35
8	35
9	55
10	55
11	35
12	35
13	35
14	35
15	35
16	35
17	55
18	55
19	55
20	35

NUMBER OF SMOKE DETECTORS: 1

SMOKE DET NO.	NODE	ACTIVATION TIME (SEC)
1	7	DETERMINED BY EXITT TO BE 0.0 SECONDS

EXITT NODE NUMBER	ALARM LEVEL (DECIBELS)
	1
1	71
2	71
3	83
4	83
5	83
6	71
7	95
8	71
9	83
10	83
11	83
12	71
13	71
14	83
15	95
16	83
17	83
18	83
19	83
20	71

EDGE LIST

FROM NODE	TO NODE	DISTANCE (M)
1 -	12	1.83
-	15	3.41
-	20	1.89
2 -	13	1.52
-	15	2.71
3 -	7	2.13
-	14	1.52
4 -	9	3.13
-	18	4.27
-	19	2.38
5 -	11	2.13
-	16	2.74
-	17	3.35
6 -	7	2.51
7 -	3	2.13
-	6	2.51
-	15	2.06
-	16	2.44
8 -	20	1.68
9 -	4	3.13
-	19	3.69
10 -	17	1.50
-	18	2.13
11 -	5	2.13
-	17	1.93
12 -	1	1.83
-	20	1.57
13 -	2	1.52
14 -	3	1.52
15 -	1	3.41
-	2	2.71
-	7	2.06
-	20	4.27
16 -	5	2.74
-	7	2.44
-	19	1.37
17 -	5	3.35
-	10	1.50
-	11	1.93
-	18	2.05

	-	19	4.29
18	-	4	4.27
	-	10	2.13
	-	17	2.05
	-	19	3.30
19	-	4	2.38
	-	9	3.69
	-	16	1.37
	-	17	4.29
	-	18	3.30
20	-	1	1.89
	-	8	1.68
	-	12	1.57
	-	15	4.27

TOTAL NUMBER OF DIRECTED EDGES 54

NUMBER OF PEOPLE 5

PERSON	LOCATION	AGE	SEX	STATE	SLEEP PENALTY	REQUIRE ASSISTANCE	TRAVEL SPEED
1	4	71	FEMALE	AWAKE	0.0	NO	1.30
2	1	30	MALE	AWAKE	0.0	NO	1.30
3	1	30	FEMALE	AWAKE	0.0	NO	1.30
4	6	7	FEMALE	AWAKE	0.0	NO	1.30
5	4	5	MALE	AWAKE	0.0	NO	1.30

ACTIONS TAKEN BY PERSON 1

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
4	4	0.0	--	--	--	INITIAL POSITION
4	4	60.0	--	--	2	INVESTIGATE FIRE
19	4	61.8	--	--	2	ARRIVE AT NEW NODE
16	6	62.9	--	--	2	ARRIVE AT NEW NODE
16	6	63.9	--	--	--	ALERTED BY ANOTHER - END INVESTIGATION
16	6	65.9	--	--	--	LEAVE BUILDING
19	4	66.7	--	--	9	ARRIVE AT NEW NODE
9	7	68.9	--	--	9	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 2

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
1	1	0.0	--	--	--	INITIAL POSITION
1	1	60.0	--	--	2	INVESTIGATE FIRE
15	6	62.6	--	--	2	ARRIVE AT NEW NODE
15	6	62.6	--	--	2	BAD SMOKE - CURRENT ACTION STOPPED
15	6	65.6	--	--	--	LEAVE BUILDING
7	6	66.8	--	--	9	ARRIVE AT NEW NODE
16	6	68.3	--	--	9	ARRIVE AT NEW NODE
19	4	69.1	--	--	9	ARRIVE AT NEW NODE
9	7	71.3	--	--	9	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 3

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
1	1	0.0	--	--	--	INITIAL POSITION
1	1	60.0	--	--	2	INVESTIGATE FIRE
15	6	62.6	--	--	2	ARRIVE AT NEW NODE
15	6	62.6	--	--	2	BAD SMOKE - CURRENT ACTION STOPPED
15	6	65.6	--	--	--	LEAVE BUILDING
7	6	66.8	--	--	9	ARRIVE AT NEW NODE
16	6	68.3	--	--	9	ARRIVE AT NEW NODE
19	4	69.1	--	--	9	ARRIVE AT NEW NODE
9	7	71.3	--	--	9	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 4

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
6	3	0.0	--	--	--	INITIAL POSITION
6	3	60.0	--	--	--	LEAVE BUILDING
7	6	61.9	--	--	9	ARRIVE AT NEW NODE
16	6	63.4	--	--	9	ARRIVE AT NEW NODE
19	4	64.2	--	--	9	ARRIVE AT NEW NODE
9	7	66.4	--	--	9	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 5

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
4	4	0.0	--	--	--	INITIAL POSITION
4	4	60.0	--	--	--	LEAVE BUILDING
9	7	62.4	--	--	9	LEAVE BUILDING THROUGH DOOR

4.8 Printed Output from TENAB for Scenario 3

```
FAST  Version:  18.3
TENAB Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89

FAST DUMP FILE    :  SCEN-3.DMP
EXITT DUMP FILE   :  SCEN-3.EVA
TENAB OUTPUT FILE:  SCEN-3.TEN
TENAB DUMP FILE   :  SCEN-3.PLT
```

OCCUPANT	NODE NUMBER	ROOM NUMBER	FLOOR ELEVATION	ENTER TIME (S)
1	4	4	0.00	0.0
	19	4	0.00	61.8
	16	6	0.00	62.9
	19	4	0.00	66.7
	9	DOOR	0.00	68.9
2	1	1	0.00	0.0
	15	6	0.00	62.6
	7	6	0.00	66.8
	16	6	0.00	68.3
	19	4	0.00	69.1
	9	DOOR	0.00	71.3
3	1	1	0.00	0.0
	15	6	0.00	62.6
	7	6	0.00	66.8
	16	6	0.00	68.3
	19	4	0.00	69.1
	9	DOOR	0.00	71.3
4	6	3	0.00	0.0
	7	6	0.00	61.9
	16	6	0.00	63.4
	19	4	0.00	64.2
	9	DOOR	0.00	66.4
5	4	4	0.00	0.0
	9	DOOR	0.00	62.4

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED1	0.5	1.0
TEMP1 DEG C	65.0	100.0
CT (G-MIN/M3)	450.0	900.0
FED2	1.0	
TEMP2	1.0	
FED3	1.0	

PERSON 1

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
70.	9	ESCAPE		0.000E+00 0.432E-03 0.242E-02	0.200E+02 0.000E+00	0.000E+00	0.907E-07
910.	9	FINAL TIME		0.000E+00 0.432E-03 0.242E-02	0.200E+02 0.000E+00	0.000E+00	0.907E-07

PERSON 2

TIME	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT	FLUX
(SEC)						(G-MIN/M3)	(KW-SEC/M2)
80.	9	ESCAPE		0.000E+00 0.447E-03 0.250E-02	0.200E+02 0.000E+00	0.000E+00	0.171E-06
910.	9	FINAL TIME		0.000E+00 0.447E-03 0.250E-02	0.200E+02 0.000E+00	0.000E+00	0.171E-06

PERSON 3

TIME	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT	FLUX
(SEC)						(G-MIN/M3)	(KW-SEC/M2)
80.	9	ESCAPE		0.000E+00 0.447E-03 0.250E-02	0.200E+02 0.000E+00	0.000E+00	0.171E-06
910.	9	FINAL TIME		0.000E+00 0.447E-03 0.250E-02	0.200E+02 0.000E+00	0.000E+00	0.171E-06

PERSON 4

TIME	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT	FLUX
(SEC)						(G-MIN/M3)	(KW-SEC/M2)
70.	9	ESCAPE		0.000E+00 0.416E-03 0.233E-02	0.200E+02 0.000E+00	0.000E+00	0.458E-07
910.	9	FINAL TIME		0.000E+00 0.416E-03 0.233E-02	0.200E+02 0.000E+00	0.000E+00	0.458E-07

PERSON 5

TIME	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT	FLUX
(SEC)						(G-MIN/M3)	(KW-SEC/M2)
70.	9	ESCAPE		0.000E+00 0.391E-03 0.219E-02	0.200E+02 0.000E+00	0.000E+00	0.181E-13
910.	9	FINAL TIME		0.000E+00 0.391E-03 0.219E-02	0.200E+02 0.000E+00	0.000E+00	0.181E-13

FED1 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO,CO2,HCN AND O2 BASED ON THE HAZARD I TENAB FED PLUS AN OXYGEN TERM
FED2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO,CO2,HCN AND O2 BASED ON PURSER'S EQUATIONS
FED3 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO2 BASED ON PURSER'S EQUATIONS
TEMP1 - THE AVERAGE TEMPERATURE OF THE LAYER OF THE ROOM TO WHICH THE PERSON IS EXPOSED - IT IS THE SAME AS TEMP USED IN THE HAZARD I TENAB
TEMP2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CONVECTIVE HEAT BASED ON PURSER'S EQUATIONS

* IF PERSON IS WAITING AT A WINDOW, HE IS CONSIDERED TO BE AT THE NODE (ROOM) FROM WHICH HE CAME PRIOR TO REACHING THE WINDOW THIS ALLOWS HIM TO CONTINUE TO BE EXPOSED TO THE ROOM FIRE CONDITIONS

CHAPTER 5. SCENARIO 4, CLOSET FIRE

5.1 Summary of Fire Scenario 4

For scenario 4, household cleaning materials in a closet beneath the stairs are ignited by an electric arc from a malfunctioning hot water heater. Three occupants are in the house.

BUILDING: Townhouse

OCCUPANTS: Mother, aged 30, fully capable but asleep watching TV in living room.

Infant asleep in bedroom 3.

Boy aged 2 asleep in bedroom 2.

DOORS: All doors open except door to closet beneath stairs. The only opening to the outdoors is a partially opened window in the living room/dining room area.

FIRE: Originates in storage area under stairs. Fire caused by electric arc from hot water heater igniting household cleaning materials.

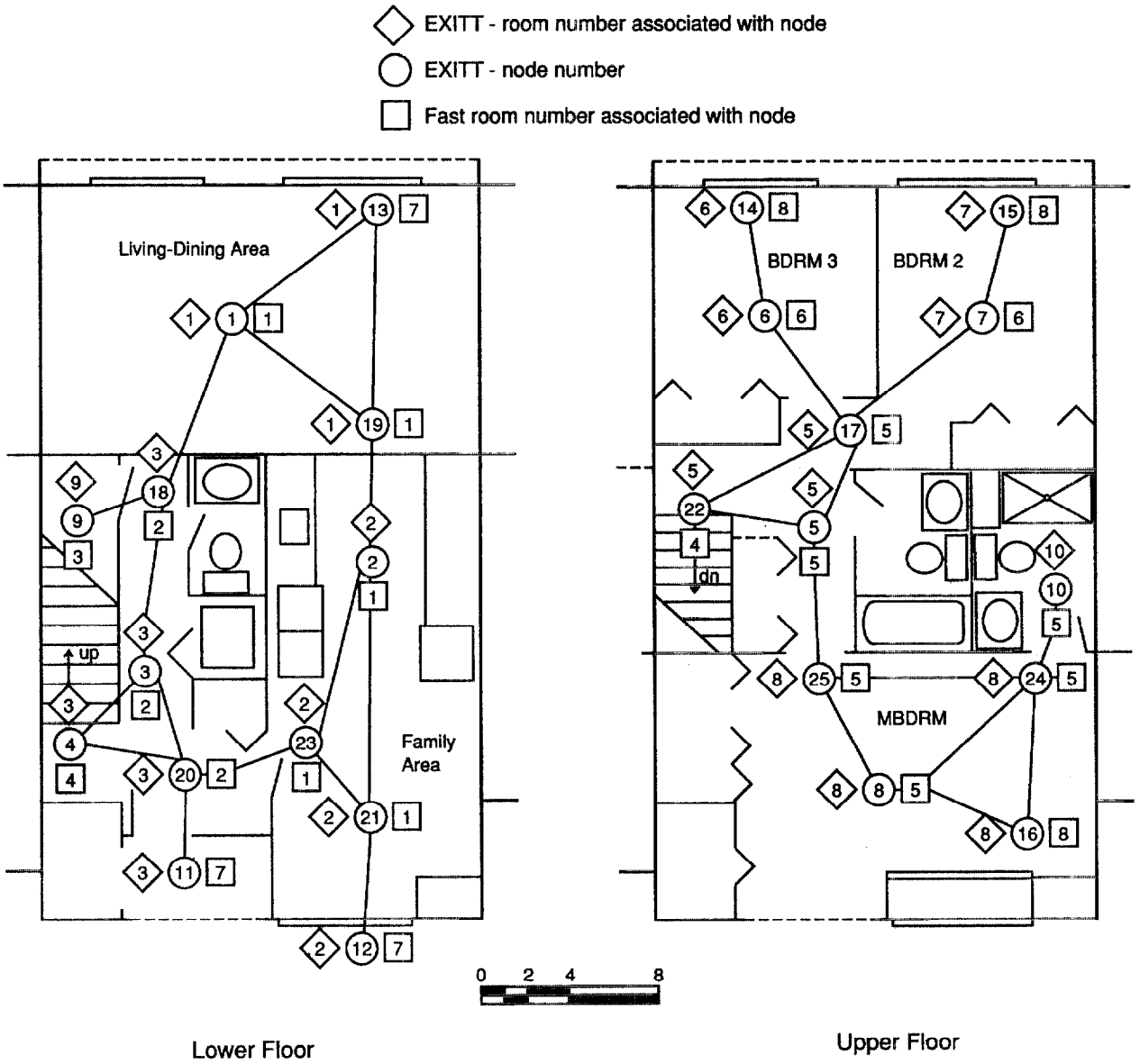
FUEL: Trash Bags and paper taken directly from HAZARD I fire properties database, material code TRB001.

CEILINGS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

WALLS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

FLOORS: First floor is 0.15-m-thick concrete slab, taken directly from HAZARD I materials property database. Material code CNC001, Concrete, normal weight, Type I cement, Dolomite aggregate. Second floor is Douglas fir plywood, taken directly from HAZARD I materials property database. Material code DFP001, Douglas fir plywood, 10% moisture.

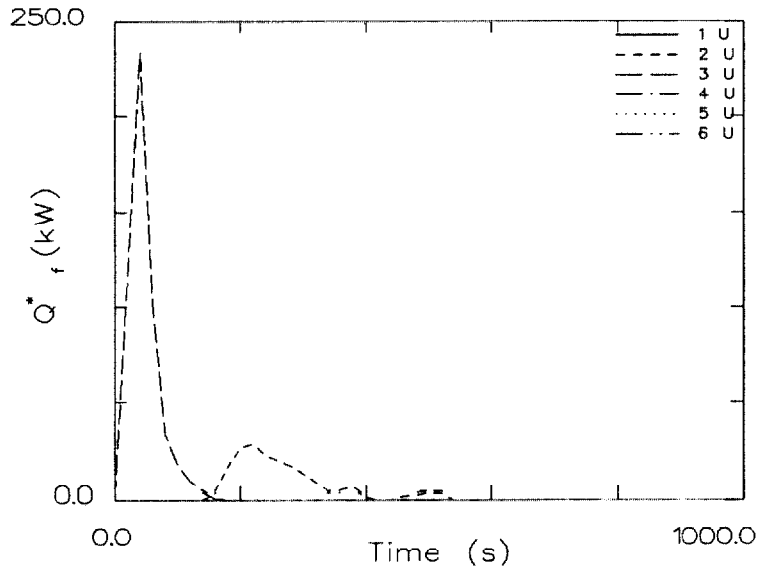
5.2 Floor Plan and EXITT Building Description for Scenario 4



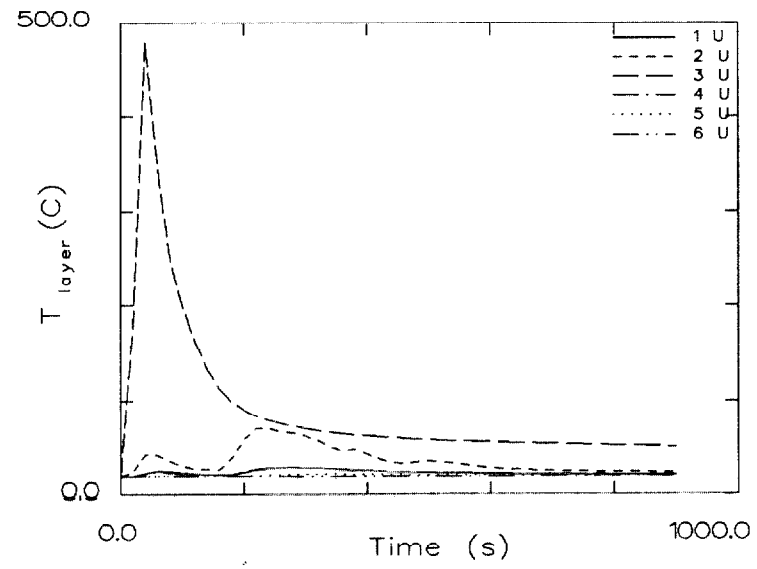
5.3 FAST Input Data for Scenario 4 (Example Data File SCEN-4.DAT)

```
VERSN   18   Scenario 4, Townhouse, Cleaning Materials in Clos
TIMES    900  50  20   0   0
TAMB   293.  101300.      0.
EAMB   273.  101300.      0.
HI/F     0.00   0.00   0.00   0.00   2.70   2.70
WIDTH    8.19   2.10   1.20   1.20   5.30   2.90
DEPTH    4.91   5.20   2.10   3.00   3.30   6.10
HEIGH    2.40   2.40   2.40   4.90   2.40   2.40
HVENT   1  2  1   1.10   2.10   0.00
HVENT   1  2  2   1.10   2.10   0.00
HVENT   1  7  1   1.10   0.20   0.00   0.00
HVENT   2  3  1   1.10   0.02   0.00
HVENT   2  4  1   1.10   2.10   0.00
HVENT   4  5  1   1.10   4.80   2.70
HVENT   5  6  1   1.10   2.10   0.00
CEILI GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
WALLS GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
FLOOR CONCRETE  CONCRETE  CONCRETE  CONCRETE  WOOD      WOOD
CHEMI     0.    0.   6.0    16029950.  300.
LFBO   3
LFBT   2
LFPOS  1
LFMAX  9
FTIME     60.    60.    60.    60.    60.    60.    60.    60.   120.
FMASS  0.0000 0.0218 0.0203 0.0130 0.0068 0.0037 0.0037 0.0012 0.0025 0.0000
FHIGH    0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00
FAREA    0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50
FQDOT  0.00     3.50E+05 3.25E+05 2.40E+05 1.10E+05 6.00E+04 6.00E+04 2.00E+04 4.00E+04 0.00
CT     1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000
HCR    0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080
CO     0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.109
OD     0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013
DUMPR SCEN-4.DMP
```

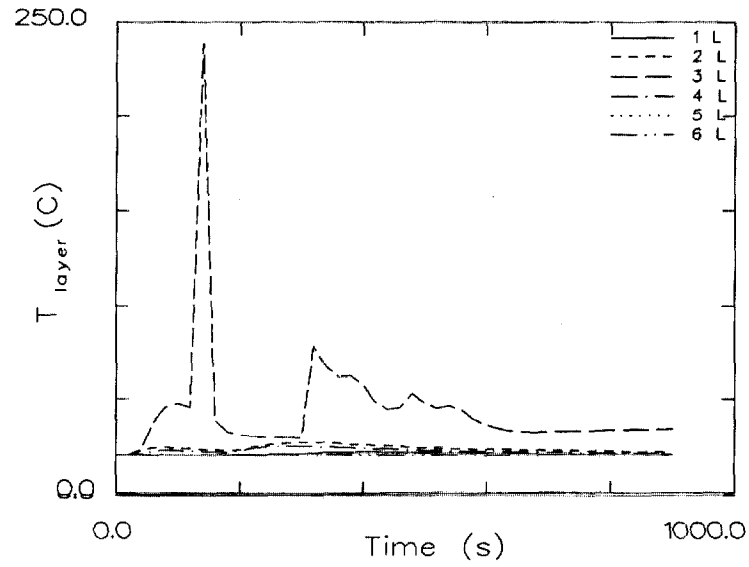
5.4 Selected Graphs from Scenario 4



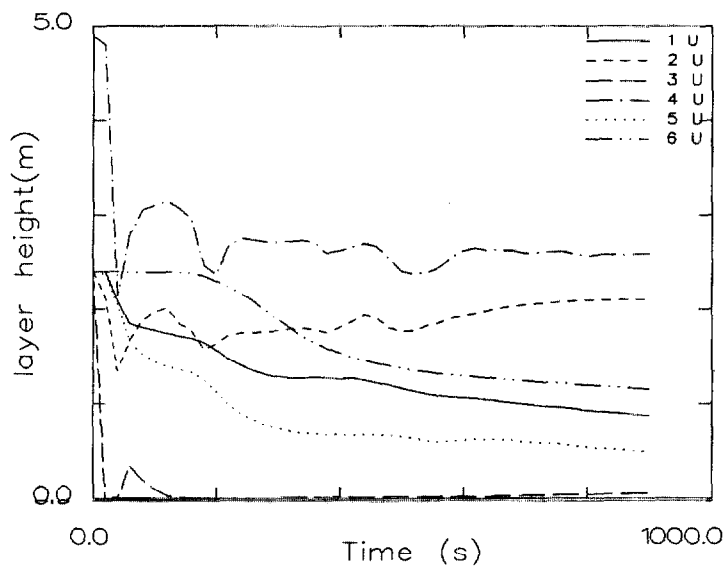
Heat release rate of fire (kW)



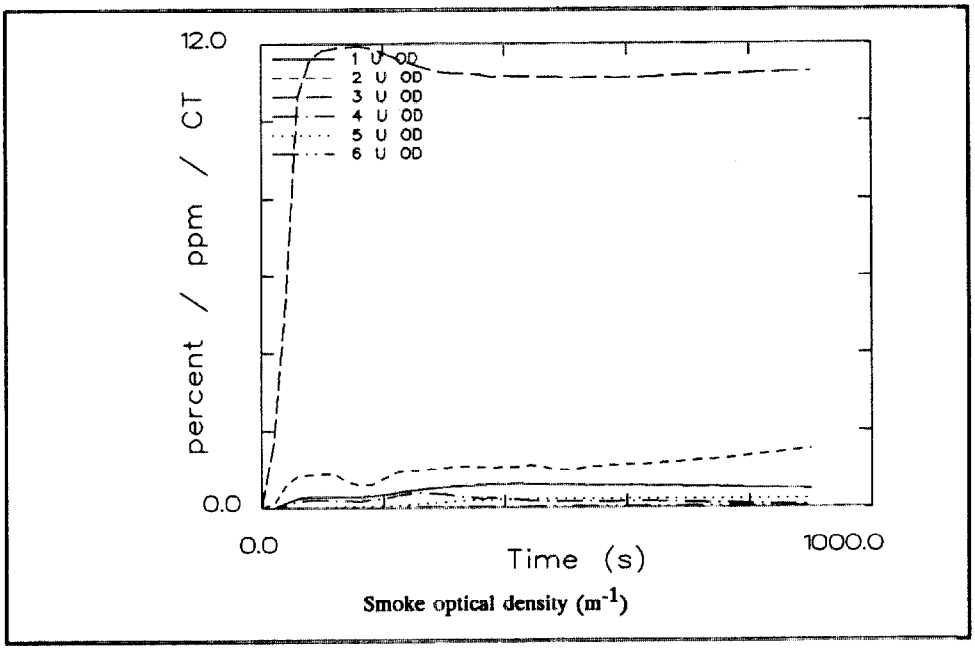
Upper layer temperature (°C)



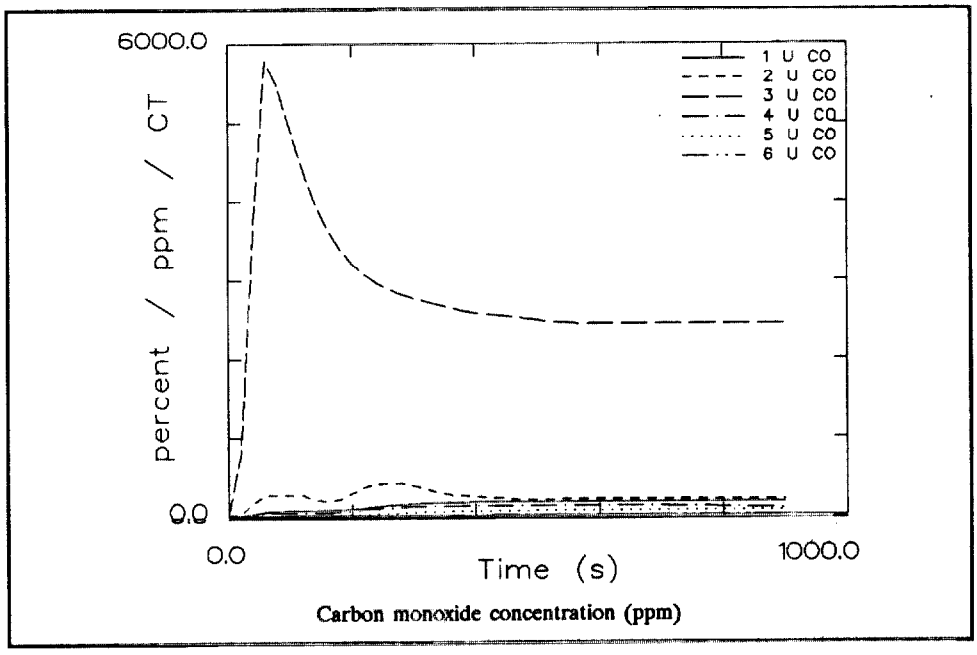
Lower layer temperature (°C)



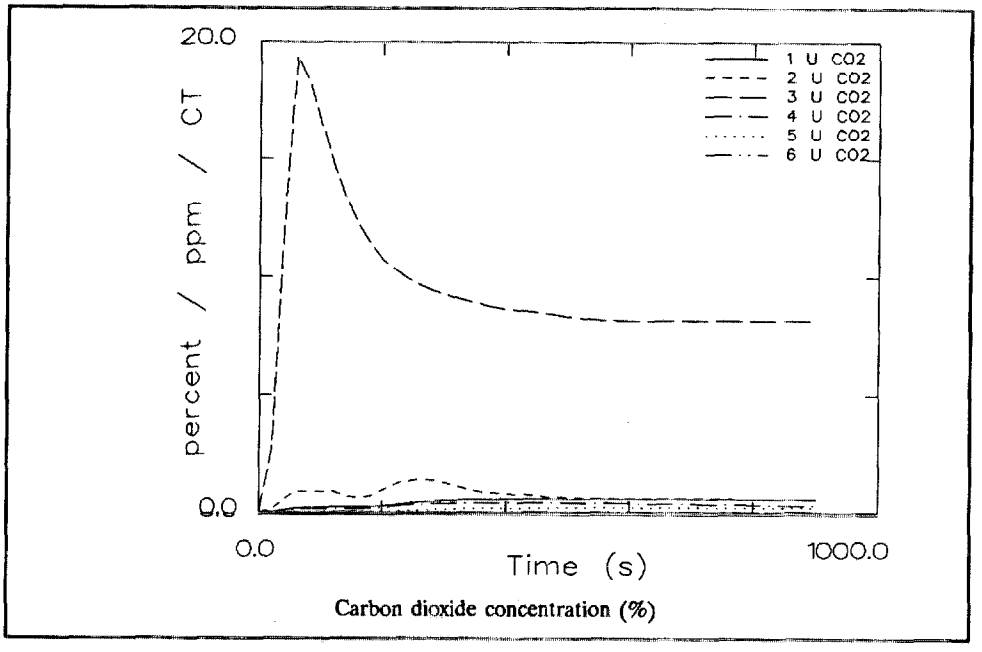
Layer interface height (m)



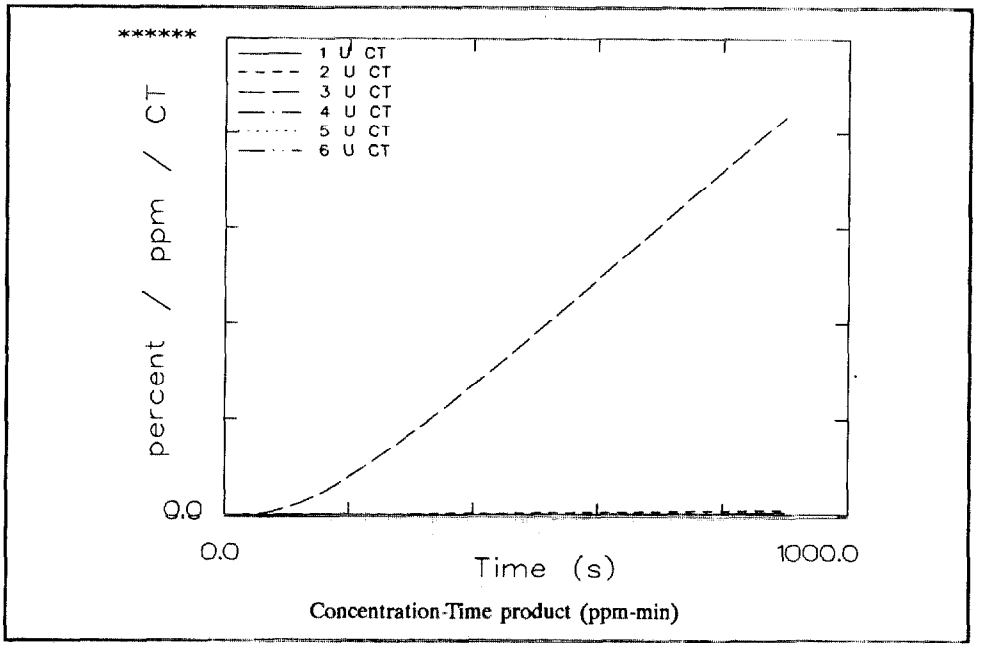
Smoke optical density (m^{-1})



Carbon monoxide concentration (ppm)



Carbon dioxide concentration (%)



Concentration-Time product (ppm-min)

5.5 Printed Output from FAST for Scenario 4

FAST version 18.3.2 - created February 1, 1989 Scenario 4, Townhouse, Cleaning Materials

Total compartments = 6

FLOOR PLAN

Width	8.2	2.1	1.2	1.2	5.3	2.9
Depth	4.9	5.2	2.1	3.0	3.3	6.1
Height	2.4	2.4	2.4	4.9	2.4	2.4
Area	40.2	10.9	2.5	3.6	17.5	17.7
Volume	96.5	26.2	6.0	17.6	42.0	42.5
Ceiling	2.4	2.4	2.4	4.9	5.1	5.1
Floor	0.0	0.0	0.0	0.0	2.7	2.7

CONNECTIONS

1 (1)	Width	0.00	1.10	0.00	0.00	0.00	0.00	1.10
	Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.20
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.20
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 (2)	Width	0.00	1.10	0.00	0.00	0.00	0.00	0.00
	Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 (1)	Width	1.10	0.00	1.10	1.10	0.00	0.00	0.00
	Soffit	2.10	0.00	0.02	2.10	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	2.10	0.00	0.02	2.10	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 (2)	Width	1.10	0.00	0.00	0.00	0.00	0.00	0.00
	Soffit	2.10	0.00	0.00	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	2.10	0.00	0.00	0.00	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 (1)	Width	0.00	1.10	0.00	0.00	0.00	0.00	0.00
	Soffit	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 (1)	Width	0.00	1.10	0.00	0.00	1.10	0.00	0.00
	Soffit	0.00	2.10	0.00	0.00	4.80	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	2.70	0.00	0.00
	a.Soffit	0.00	2.10	0.00	0.00	4.80	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	2.70	0.00	0.00
5 (1)	Width	0.00	0.00	0.00	1.10	0.00	1.10	0.00
	Soffit	0.00	0.00	0.00	2.10	0.00	2.10	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	4.80	0.00	4.80	0.00
	a.Sill	0.00	0.00	0.00	2.70	0.00	2.70	0.00

6 (1)	Width	0.00	0.00	0.00	0.00	1.10	0.00	0.00
	Soffit	0.00	0.00	0.00	0.00	2.10	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	0.00	4.80	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	2.70	0.00	0.00

Material names

Ceiling:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Walls:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Floor:	CONCRETE	CONCRETE	CONCRETE	CONCRETE	WOOD	WOOD

Thermal data base used: THERMAL.TPF

Name	Conductivity	Specific heat	Density	Thickness	Emissivity	**Codes**	
CONCRETE	1.75	1.000E+03	2.200E+03	0.150	0.940	188	U
GYPSUM	0.160	900.	800.	1.600E-02	0.900	38	U
WOOD	7.000E-02	1.000E+03	250.	1.600E-02	0.980		U

Compartment of origin is	3
Print interval (seconds)	50
Number of fire specification intervals is	9
Total time (seconds)	900
Fire position	1
Limiting oxygen index (%) =	6.0
Initial relative humidity (%) =	0.0

Fire type is a SPECIFIED (CONSTRAINED)

Pyrolysis temperature (K) =	300.
Ambient air temperature (K) =	293.
Ambient reference pressure (Pa) =	101300.
Reference elevation (m) =	0.
External ambient temperature (K) =	273.
External reference pressure (Pa) =	101300.
Reference elevation (m) =	0.

Fmass=	0.00	2.18E-02	2.03E-02	1.30E-02	6.80E-03	3.70E-03	3.70E-03	1.20E-03	2.50E-03	0.00
Hcomb=	1.60E+07	1.61E+07	1.60E+07	1.85E+07	1.62E+07	1.62E+07	1.62E+07	1.67E+07	1.60E+07	1.60E+07
Fqdot=	0.00	3.50E+05	3.25E+05	2.40E+05	1.10E+05	6.00E+04	6.00E+04	2.00E+04	4.00E+04	0.00
Fhigh=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C/CO2=	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02
CO/CO2=	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	0.11
H/C=	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02
CT=	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ftime=	60.	60.	60.	60.	60.	60.	60.	60.	1.20E+02	

Dump file = SCEN-4.DMP

Time = 0.0 seconds.

Upper temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Lower temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.1	0.0	0.0	0.0	0.0	0.0	
Layer depth(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pressure(Pa)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	

Upper layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 50.0 seconds.

Upper temp(K)	297.8	318.0	819.4	296.8	293.1	293.0	
Lower temp(K)	293.0	296.4	300.4	294.4	293.0	293.0	273.0
Upper vol(m**3)	19.7	11.2	6.0	9.4	11.0	0.1	
Layer depth(m)	0.5	1.0	2.4	2.6	0.6	0.0	
Ceiling temp(K)	293.3	295.9	475.0	293.2	293.0	293.0	
Up wall temp(K)	293.3	295.2	455.1	293.2	293.0	293.0	
Low wall temp(K)	293.1	293.5	420.5	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	308.3	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	1.817E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	1.817E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	3.290E+01	2.222E+05	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	2.222E+05	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	3.290E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	2.881E-05	2.201E-02	4.330E+03	1.192E-05	1.143E-11	4.222E-15	
Pressure(Pa)	9.575E-01	7.426E-01	2.962E+01	9.625E-01	1.532E+00	1.519E+00	

Upper layer species

N2 %	79.2	78.5	62.5	79.2	79.3	79.3
O2 %	20.6	20.1	5.84	20.6	20.7	20.7
CO2 %	0.138	0.882	19.8	0.113	4.259E-03	1.750E-04
CO ppm	41.1	263.	5.920E+03	33.7	1.27	5.226E-02
TUHC %	0.000	0.000	1.349E-02	0.000	0.000	0.000
H2O %	7.107E-02	0.456	10.2	5.836E-02	2.201E-03	9.046E-05
OD 1/m	0.194	0.827	8.29	0.129	3.354E-03	1.516E-04
CT g-min/m^3	0.335	1.64	19.1	0.161	5.027E-03	1.060E-04

Lower layer species

N2 %	79.3	79.2	2.478E-07	79.2	79.3	79.3
O2 %	20.7	20.6	2.168E-07	20.7	20.7	20.7
CO2 %	6.097E-06	0.152	0.000	6.224E-02	0.000	0.000
CO ppm	1.820E-03	45.3	0.000	18.6	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	3.151E-06	7.833E-02	0.000	3.216E-02	0.000	0.000
OD 1/m	4.401E-06	5.584E-02	0.000	4.084E-02	0.000	0.000
CT g-min/m^3	2.406E-06	0.100	0.000	3.048E-02	0.000	0.000

Time = 100.0 seconds.

Upper temp(K)	296.4	304.0	472.5	295.8	293.3	293.0	
Lower temp(K)	293.1	296.8	320.8	295.4	293.0	293.0	273.0
Upper vol(m**3)	25.2	4.7	5.8	6.5	16.8	0.1	
Layer depth(m)	0.6	0.4	2.3	1.8	1.0	0.0	
Ceiling temp(K)	293.6	296.2	403.2	293.5	293.0	293.0	
Up wall temp(K)	293.5	295.4	390.3	293.4	293.0	293.0	
Low wall temp(K)	293.1	293.7	357.8	293.1	293.0	293.0	
Floor temp(K)	293.0	293.1	304.7	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	2.671E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	2.080E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	1.773E+04	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	1.773E+04	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	7.794E-06	8.240E-04	5.849E+01	3.714E-06	2.927E-10	5.200E-15	
Pressure(Pa)	-4.166E-02	-1.329E-01	3.122E-01	-1.505E-01	4.913E-01	4.971E-01	

Upper layer species

N2 %	79.1	78.5	38.2	79.2	79.3	79.3
O2 %	20.6	20.1	1.24	20.6	20.7	20.7
CO2 %	0.215	0.879	16.5	0.150	1.849E-02	2.226E-04
CO ppm	64.3	262.	4.924E+03	44.7	5.52	6.645E-02
TUHC %	0.000	0.000	34.3	0.000	0.000	0.000
H2O %	0.111	0.454	8.52	7.741E-02	9.552E-03	1.150E-04
OD 1/m	0.282	0.861	11.8	0.187	1.517E-02	1.898E-04
CT g-min/m^3	1.86	6.53	152.	1.20	6.112E-02	1.037E-03

Lower layer species

N2 %	79.3	79.1	79.1	79.2	79.3	79.3
O2 %	20.7	20.6	20.6	20.6	20.7	20.7
CO2 %	4.556E-03	0.168	0.175	0.119	4.110E-04	2.893E-09
CO ppm	1.36	50.3	52.3	35.5	0.123	8.637E-07
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	2.354E-03	8.700E-02	9.049E-02	6.146E-02	2.124E-04	1.495E-09
OD 1/m	3.220E-03	7.832E-02	3.181E-03	8.846E-02	3.521E-04	2.415E-09
CT g-min/m^3	6.892E-03	0.556	2.517E-02	0.475	7.697E-04	2.456E-09

Time = 150.0 seconds.

Upper temp(K)	295.0	299.4	395.7	294.8	293.2	293.0	
Lower temp(K)	293.1	295.9	342.8	294.9	293.0	293.0	273.0
Upper vol(m**3)	28.2	6.1	6.0	6.8	18.5	0.2	
Layer depth(m)	0.7	0.6	2.4	1.9	1.1	0.0	
Ceiling temp(K)	293.5	295.5	374.9	293.4	293.0	293.0	
Up wall temp(K)	293.4	294.9	365.6	293.3	293.0	293.0	
Low wall temp(K)	293.1	293.6	346.0	293.2	293.0	293.0	
Floor temp(K)	293.0	293.1	302.9	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	1.726E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	1.665E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	1.845E+03	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	1.845E+03	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	9.615E-07	9.665E-05	6.280E+00	5.560E-07	1.754E-10	5.092E-15	
Pressure(Pa)	-1.060E-01	-2.171E-01	-2.497E-01	-1.703E-01	3.341E-01	3.426E-01	

Upper layer species

N2 %	79.1	78.7	28.1	79.2	79.3	79.3
O2 %	20.6	20.2	0.590	20.6	20.7	20.7
CO2 %	0.227	0.661	12.8	0.146	2.494E-02	3.559E-04
CO ppm	67.7	197.	3.810E+03	43.7	7.45	0.106
TUHC %	1.140E-05	2.665E-03	50.9	7.071E-06	2.075E-08	2.225E-11
H2O %	0.117	0.341	6.59	7.562E-02	1.289E-02	1.839E-04
OD 1/m	0.270	0.653	11.9	0.169	2.086E-02	2.801E-04
CT g-min/m^3	3.45	11.1	418.	2.23	0.170	2.357E-03

Lower layer species

N2 %	79.3	79.2	79.1	79.2	79.3	79.3
O2 %	20.7	20.6	20.6	20.6	20.7	20.7
CO2 %	8.147E-03	0.144	0.159	0.122	9.722E-04	4.847E-09
CO ppm	2.43	43.0	47.4	36.4	0.290	1.447E-06
TUHC %	2.938E-10	1.517E-07	2.925E-05	2.347E-07	6.015E-11	0.000
H2O %	4.210E-03	7.437E-02	8.206E-02	6.306E-02	5.024E-04	2.505E-09
OD 1/m	5.895E-03	6.537E-02	5.877E-03	9.130E-02	8.327E-04	4.042E-09
CT g-min/m^3	3.524E-02	0.985	4.907E-02	1.00	4.355E-03	2.088E-08

Time = 200.0 seconds.

Upper temp(K)	297.1	331.8	363.5	297.6	293.2	293.0	
Lower temp(K)	293.1	295.8	304.2	295.1	293.0	293.0	273.0
Upper vol(m**3)	33.8	8.4	6.0	9.1	22.3	1.8	
Layer depth(m)	0.8	0.8	2.4	2.5	1.3	0.1	
Ceiling temp(K)	293.6	298.9	358.6	293.6	293.0	293.0	
Up wall temp(K)	293.5	297.5	351.4	293.5	293.0	293.0	
Low wall temp(K)	293.2	294.1	335.7	293.2	293.0	293.0	
Floor temp(K)	293.0	293.1	301.5	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	1.096E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	1.093E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	2.637E+04	8.369E+01	8.655E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	8.369E+01	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	2.637E+04	0.000E+00	8.655E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.553E-05	1.281E-01	1.395E+00	2.602E-05	2.650E-10	4.160E-15	
Pressure(Pa)	2.646E-01	6.311E-02	3.825E-01	2.214E-01	8.641E-01	8.502E-01	

Upper layer species

N2 %	79.0	78.5	23.7	79.1	79.3	79.3
O2 %	20.5	20.0	0.477	20.6	20.7	20.7
CO2 %	0.286	0.949	10.8	0.207	3.225E-02	1.822E-03
CO ppm	85.3	283.	3.217E+03	61.7	9.63	0.544
TUHC %	1.370E-04	1.461E-03	58.7	1.528E-05	1.482E-06	5.422E-08
H2O %	0.148	0.491	5.57	0.107	1.667E-02	9.417E-04
OD 1/m	0.321	0.740	11.8	0.238	2.808E-02	1.490E-03
CT g-min/m^3	5.11	14.7	793.	3.31	0.302	7.361E-03

Lower layer species

N2 %	79.3	79.2	79.1	79.1	79.3	79.3
O2 %	20.7	20.6	20.6	20.6	20.7	20.7
CO2 %	8.717E-03	0.150	0.157	0.156	1.043E-03	2.460E-06
CO ppm	2.60	44.9	47.0	46.7	0.312	7.345E-04
TUHC %	1.209E-08	1.475E-04	2.677E-05	1.324E-05	1.677E-10	3.948E-13
H2O %	4.504E-03	7.770E-02	8.138E-02	8.085E-02	5.391E-04	1.271E-06
OD 1/m	6.330E-03	5.971E-02	3.315E-04	9.472E-02	8.944E-04	2.063E-06
CT g-min/m^3	7.166E-02	1.31	6.005E-02	1.51	9.542E-03	4.163E-06

Time = 250.0 seconds.

Upper temp(K)	301.7	341.8	350.7	302.0	294.3	293.0	
Lower temp(K)	293.2	298.8	302.8	297.8	293.1	293.0	273.0
Upper vol(m**3)	41.4	7.1	6.0	7.8	26.9	4.8	
Layer depth(m)	1.0	0.7	2.4	2.2	1.5	0.3	
Ceiling temp(K)	294.4	305.1	349.2	294.5	293.1	293.0	
Up wall temp(K)	294.1	302.3	343.2	294.1	293.1	293.0	
Low wall temp(K)	293.4	295.0	329.7	293.4	293.0	293.0	
Floor temp(K)	293.0	293.3	300.6	293.0	293.1	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	6.284E-03	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	6.283E-03	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	2.088E+04	2.493E+00	1.351E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	2.493E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	2.088E+04	0.000E+00	1.351E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	3.228E-04	3.203E-01	6.269E-01	3.632E-04	1.684E-07	2.471E-14	
Pressure(Pa)	1.380E-01	-1.034E-01	1.700E-01	3.607E-02	1.104E+00	1.134E+00	

Upper layer species

N2 %	78.9	78.1	21.5	79.0	79.2	79.3
O2 %	20.4	19.7	0.433	20.5	20.7	20.7
CO2 %	0.421	1.37	9.80	0.326	8.565E-02	3.006E-03
CO ppm	126.	410.	2.926E+03	97.5	25.6	0.897
TUHC %	2.314E-04	3.193E-04	62.4	5.501E-06	2.921E-06	1.147E-07
H2O %	0.218	0.709	5.06	0.169	4.426E-02	1.553E-03
OD 1/m	0.444	0.956	11.5	0.361	7.969E-02	2.476E-03
CT g-min/m^3	7.34	20.0	1.234E+03	5.09	0.609	1.819E-02

Lower layer species

N2 %	79.3	79.0	79.1	79.1	79.3	79.3
O2 %	20.7	20.5	20.6	20.5	20.7	20.7
CO2 %	1.773E-02	0.281	0.157	0.223	5.627E-03	3.424E-06
CO ppm	5.29	83.9	47.0	66.7	1.68	1.022E-03
TUHC %	5.475E-06	1.491E-04	2.676E-05	7.993E-06	1.756E-07	1.156E-11
H2O %	9.164E-03	0.145	8.138E-02	0.115	2.908E-03	1.769E-06
OD 1/m	1.271E-02	0.110	1.583E-05	0.129	4.815E-03	2.883E-06
CT g-min/m^3	0.118	1.84	6.059E-02	2.18	2.010E-02	1.898E-05

Time = 300.0 seconds.

Upper temp(K)	302.0	336.0	343.9	302.1	295.0	293.1	
Lower temp(K)	293.8	299.8	302.4	298.0	293.3	293.0	273.0
Upper vol(m**3)	45.0	6.9	6.0	7.9	29.1	9.1	
Layer depth(m)	1.1	0.6	2.4	2.2	1.7	0.5	
Ceiling temp(K)	294.9	306.5	343.3	294.9	293.2	293.0	
Up wall temp(K)	294.5	303.5	338.0	294.5	293.2	293.0	
Low wall temp(K)	293.5	295.5	326.0	293.5	293.1	293.0	
Floor temp(K)	293.1	293.3	300.0	293.0	293.2	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	3.700E-03	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	3.700E-03	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	1.292E+04	2.388E-01	3.969E-01	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	2.388E-01	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	1.292E+04	0.000E+00	3.969E-01	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	3.755E-04	1.927E-01	3.773E-01	3.820E-04	1.011E-06	1.195E-12	
Pressure(Pa)	1.434E-02	-3.469E-01	-6.479E-02	5.585E-02	9.438E-01	1.032E+00	

Upper layer species

N2 %	78.9	78.2	20.4	79.0	79.2	79.3
O2 %	20.3	19.8	0.411	20.4	20.6	20.7
CO2 %	0.509	1.27	9.29	0.382	0.143	6.369E-03
CO ppm	152.	379.	2.774E+03	114.	42.6	1.90
TUHC %	2.272E-04	9.722E-05	64.4	2.985E-06	2.885E-06	1.837E-07
H2O %	0.263	0.656	4.80	0.198	7.380E-02	3.291E-03
OD 1/m	0.520	1.03	11.3	0.336	0.141	5.039E-03
CT g-min/m^3	10.2	25.7	1.708E+03	7.19	1.25	3.976E-02

Lower layer species

N2 %	79.2	79.0	79.1	79.1	79.3	79.3
O2 %	20.7	20.5	20.6	20.5	20.7	20.7
CO2 %	4.332E-02	0.334	0.157	0.261	2.927E-02	4.381E-06
CO ppm	12.9	99.6	47.0	77.8	8.74	1.308E-03
TUHC %	1.760E-05	6.748E-05	2.687E-05	4.686E-06	7.605E-07	4.097E-11
H2O %	2.238E-02	0.172	8.138E-02	0.135	1.513E-02	2.264E-06
OD 1/m	2.977E-02	0.150	2.059E-06	0.115	2.672E-02	3.717E-06
CT g-min/m^3	0.242	2.58	6.063E-02	2.93	0.102	3.904E-05

Time = 350.0 seconds.

Upper temp(K)	300.6	320.0	339.3	300.2	295.3	293.1	
Lower temp(K)	294.4	299.5	329.5	297.4	293.7	293.0	273.0
Upper vol(m**3)	45.4	6.6	6.0	7.8	29.9	12.8	
Layer depth(m)	1.1	0.6	2.4	2.2	1.7	0.7	
Ceiling temp(K)	295.0	305.3	339.3	295.1	293.4	293.0	
Up wall temp(K)	294.6	302.7	334.5	294.6	293.3	293.0	
Low wall temp(K)	293.6	295.6	325.7	293.6	293.1	293.0	
Floor temp(K)	293.1	293.4	299.5	293.0	293.3	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	3.700E-03	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	3.700E-03	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	5.928E+03	4.822E-02	7.138E-01	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	4.822E-02	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	5.928E+03	0.000E+00	7.138E-01	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.922E-04	3.009E-02	2.595E-01	1.536E-04	1.609E-06	9.551E-12	
Pressure(Pa)	-1.677E-01	-4.916E-01	-1.957E-01	-9.079E-02	6.406E-01	7.404E-01	

Upper layer species

N2 %	78.8	78.5	19.7	78.9	79.1	79.3
O2 %	20.3	20.0	0.395	20.4	20.6	20.7
CO2 %	0.547	0.899	8.94	0.407	0.180	1.150E-02
CO ppm	163.	268.	2.669E+03	121.	53.6	3.43
TUHC %	2.193E-04	2.857E-04	65.7	2.004E-06	2.529E-06	2.474E-07
H2O %	0.283	0.464	4.62	0.210	9.280E-02	5.944E-03
OD 1/m	0.564	1.04	11.2	0.248	0.187	8.621E-03
CT g-min/m^3	13.3	31.8	2.206E+03	8.87	2.23	7.909E-02

Lower layer species

N2 %	79.2	79.0	78.6	79.1	79.2	79.3
O2 %	20.7	20.5	20.4	20.5	20.7	20.7
CO2 %	7.257E-02	0.353	0.303	0.267	6.181E-02	4.406E-06
CO ppm	21.7	105.	90.4	79.8	18.5	1.316E-03
TUHC %	2.853E-05	4.986E-05	0.511	3.852E-06	1.203E-06	4.162E-11
H2O %	3.750E-02	0.182	0.157	0.138	3.194E-02	2.277E-06
OD 1/m	4.520E-02	0.191	1.984E-07	7.827E-02	6.310E-02	3.783E-06
CT g-min/m^3	0.461	3.59	6.063E-02	3.48	0.365	6.088E-05

Time = 400.0 seconds.

Upper temp(K)	299.3	316.5	336.1	299.0	295.1	293.1	
Lower temp(K)	294.7	298.8	330.7	296.9	293.8	293.0	273.0
Upper vol(m**3)	46.1	6.5	6.0	8.2	30.3	15.4	
Layer depth(m)	1.1	0.6	2.4	2.3	1.7	0.9	
Ceiling temp(K)	295.0	304.4	336.4	295.0	293.4	293.0	
Up wall temp(K)	294.6	302.0	332.0	294.6	293.3	293.0	
Low wall temp(K)	293.7	295.6	324.5	293.6	293.2	293.0	
Floor temp(K)	293.1	293.4	299.1	293.0	293.3	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	2.033E-03	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	2.033E-03	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	1.719E+03	7.757E-03	1.124E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	7.757E-03	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	1.719E+03	0.000E+00	1.124E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	8.635E-05	1.728E-02	1.946E-01	7.541E-05	1.068E-06	1.972E-11	
Pressure(Pa)	-1.555E-01	-6.777E-01	-2.339E-01	1.850E-01	5.159E-01	6.714E-01	

Upper layer species

N2 %	78.8	78.6	19.1	78.9	79.1	79.3
O2 %	20.3	20.1	0.383	20.4	20.6	20.7
CO2 %	0.567	0.802	8.67	0.430	0.197	1.788E-02
CO ppm	169.	240.	2.589E+03	128.	58.8	5.34
TUHC %	2.297E-04	2.554E-03	66.7	1.772E-06	2.427E-06	3.154E-07
H2O %	0.293	0.415	4.48	0.222	0.102	9.239E-03
OD 1/m	0.594	1.05	11.2	0.234	0.205	1.322E-02
CT g-min/m^3	16.7	37.8	2.725E+03	10.2	3.38	0.143

Lower layer species

N2 %	79.2	79.0	76.8	79.0	79.2	79.3
O2 %	20.6	20.5	19.7	20.5	20.7	20.7
CO2 %	9.482E-02	0.348	0.595	0.286	8.187E-02	4.414E-06
CO ppm	28.3	104.	178.	85.4	24.4	1.318E-03
TUHC %	3.644E-05	7.733E-05	2.54	4.498E-06	1.373E-06	4.176E-11
H2O %	4.900E-02	0.180	0.307	0.148	4.231E-02	2.281E-06
OD 1/m	5.546E-02	0.188	7.940E-08	7.476E-02	9.165E-02	3.823E-06
CT g-min/m^3	0.756	4.69	6.064E-02	3.90	0.822	8.301E-05

Time = 450.0 seconds.

Upper temp(K)	297.6	306.3	333.8	297.2	294.7	293.1	
Lower temp(K)	294.5	298.0	314.3	296.2	293.9	293.0	273.0
Upper vol(m**3)	46.9	5.2	6.0	7.9	30.2	17.0	
Layer depth(m)	1.2	0.5	2.4	2.2	1.7	1.0	
Ceiling temp(K)	294.8	302.5	334.2	294.8	293.4	293.0	
Up wall temp(K)	294.5	300.6	330.2	294.5	293.3	293.0	
Low wall temp(K)	293.7	295.4	323.0	293.6	293.2	293.0	
Floor temp(K)	293.1	293.3	298.8	293.0	293.4	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	1.850E-03	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	1.850E-03	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	1.503E+03	4.801E-01	7.026E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	4.801E-01	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	1.503E+03	0.000E+00	7.026E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	2.629E-05	1.746E-03	1.562E-01	1.828E-05	5.273E-07	1.752E-11	
Pressure(Pa)	-2.131E-01	-3.397E-01	-2.697E-01	-2.491E-01	4.299E-01	4.877E-01	

Upper layer species

N2 %	78.8	78.7	18.8	78.9	79.1	79.3
O2 %	20.3	20.2	0.377	20.4	20.6	20.7
CO2 %	0.571	0.725	8.54	0.414	0.207	2.293E-02
CO ppm	170.	216.	2.549E+03	124.	61.7	6.85
TUHC %	3.472E-04	1.251E-02	67.2	2.683E-06	2.379E-06	3.663E-07
H2O %	0.295	0.375	4.41	0.214	0.107	1.185E-02
OD 1/m	0.591	1.08	11.1	0.173	0.216	1.678E-02
CT g-min/m^3	20.2	44.1	3.259E+03	11.4	4.61	0.230

Lower layer species

N2 %	79.2	79.0	79.0	79.0	79.2	79.3
O2 %	20.6	20.5	20.5	20.5	20.6	20.7
CO2 %	0.105	0.336	0.345	0.288	9.452E-02	4.414E-06
CO ppm	31.4	100.	103.	85.9	28.2	1.318E-03
TUHC %	4.505E-05	6.134E-04	3.847E-02	2.541E-05	1.451E-06	4.177E-11
H2O %	5.439E-02	0.174	0.178	0.149	4.884E-02	2.281E-06
OD 1/m	5.994E-02	0.215	3.592E-06	7.849E-02	0.112	3.838E-06
CT g-min/m^3	1.10	5.89	6.064E-02	4.34	1.42	1.053E-04

Time = 500.0 seconds.

Upper temp(K)	296.7	309.3	331.8	296.6	294.4	293.1	
Lower temp(K)	294.3	297.1	321.0	295.5	293.9	293.0	273.0
Upper vol(m**3)	49.9	7.0	6.0	9.0	30.6	18.2	
Layer depth(m)	1.2	0.6	2.4	2.5	1.8	1.0	
Ceiling temp(K)	294.7	301.9	332.5	294.7	293.4	293.0	
Up wall temp(K)	294.4	300.1	328.8	294.4	293.3	293.0	
Low wall temp(K)	293.7	295.3	322.3	293.6	293.2	293.0	
Floor temp(K)	293.1	293.3	298.5	293.0	293.4	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	2.083E-03	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	2.083E-03	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	4.080E+03	3.146E-01	5.770E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	3.146E-01	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	4.080E+03	0.000E+00	5.770E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.065E-05	4.025E-03	1.279E-01	9.890E-06	2.388E-07	1.178E-11	
Pressure(Pa)	-9.268E-02	-2.330E-01	-7.907E-02	-8.362E-02	4.814E-01	5.369E-01	

Upper layer species

N2 %	78.8	78.7	18.4	78.9	79.1	79.3
O2 %	20.3	20.2	0.369	20.4	20.6	20.7
CO2 %	0.574	0.638	8.35	0.406	0.209	2.732E-02
CO ppm	171.	197.	2.494E+03	122.	62.5	8.16
TUHC %	6.311E-04	7.487E-03	67.9	1.422E-05	2.534E-06	4.108E-07
H2O %	0.296	0.330	4.32	0.210	0.108	1.412E-02
OD 1/m	0.572	0.984	11.1	0.164	0.218	1.993E-02
CT g-min/m^3	23.6	50.1	3.805E+03	12.4	5.87	0.338

Lower layer species

N2 %	79.2	79.0	78.9	79.0	79.2	79.3
O2 %	20.6	20.5	20.4	20.5	20.6	20.7
CO2 %	0.108	0.330	0.348	0.291	0.102	4.443E-06
CO ppm	32.3	98.8	104.	87.0	30.3	1.326E-03
TUHC %	5.976E-05	1.413E-03	9.049E-02	1.137E-04	1.491E-06	4.219E-11
H2O %	5.586E-02	0.171	0.180	0.151	5.251E-02	2.296E-06
OD 1/m	6.178E-02	0.188	2.162E-06	7.508E-02	0.123	3.884E-06
CT g-min/m^3	1.45	7.05	6.066E-02	4.80	2.11	1.276E-04

Time = 550.0 seconds.

Upper temp(K)	296.1	306.0	330.4	296.4	294.2	293.1	
Lower temp(K)	294.1	296.5	315.2	295.2	293.8	293.0	273.0
Upper vol(m**3)	52.6	6.3	6.0	8.9	31.4	19.1	
Layer depth(m)	1.3	0.6	2.4	2.5	1.8	1.1	
Ceiling temp(K)	294.6	301.4	331.0	294.6	293.4	293.0	
Up wall temp(K)	294.3	299.8	327.7	294.3	293.3	293.0	
Low wall temp(K)	293.7	295.3	321.6	293.6	293.2	293.0	
Floor temp(K)	293.1	293.3	298.3	293.0	293.4	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	1.042E-03	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	1.042E-03	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	9.962E+02	1.199E-01	1.502E+01	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	1.199E-01	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	9.962E+02	0.000E+00	1.502E+01	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	5.531E-06	1.611E-03	1.100E-01	7.312E-06	1.327E-07	6.971E-12	
Pressure(Pa)	-1.401E-01	-2.552E-01	-1.674E-01	-1.275E-01	4.001E-01	4.537E-01	

Upper layer species

N2 %	78.8	78.8	18.1	78.9	79.1	79.3
O2 %	20.3	20.3	0.364	20.4	20.6	20.7
CO2 %	0.575	0.595	8.23	0.411	0.211	3.027E-02
CO ppm	172.	204.	2.457E+03	127.	63.2	9.04
TUHC %	8.765E-04	1.177E-02	68.4	2.361E-05	3.101E-06	4.484E-07
H2O %	0.297	0.309	4.25	0.212	0.109	1.564E-02
OD 1/m	0.556	1.05	11.1	0.151	0.224	2.175E-02
CT g-min/m^3	26.8	56.1	4.363E+03	13.3	7.15	0.459

Lower layer species

N2 %	79.2	79.0	78.9	79.0	79.2	79.3
O2 %	20.6	20.5	20.4	20.5	20.6	20.7
CO2 %	0.109	0.333	0.348	0.301	0.109	4.462E-06
CO ppm	32.6	102.	105.	90.7	32.4	1.332E-03
TUHC %	7.106E-05	2.114E-03	0.116	1.816E-04	1.566E-06	4.248E-11
H2O %	5.633E-02	0.172	0.180	0.156	5.607E-02	2.306E-06
OD 1/m	6.133E-02	0.198	1.306E-06	6.760E-02	0.135	3.924E-06
CT g-min/m^3	1.81	8.16	6.067E-02	5.21	2.86	1.503E-04

Time = 600.0 seconds.

Upper temp(K)	295.6	302.0	329.4	295.7	294.0	293.1	
Lower temp(K)	293.9	296.2	309.4	295.0	293.8	293.0	273.0
Upper vol(m**3)	53.9	5.2	6.0	8.2	31.2	19.7	
Layer depth(m)	1.3	0.5	2.4	2.3	1.8	1.1	
Ceiling temp(K)	294.5	300.7	329.8	294.5	293.4	293.0	
Up wall temp(K)	294.2	299.2	326.9	294.2	293.3	293.0	
Low wall temp(K)	293.6	295.2	320.7	293.6	293.2	293.0	
Floor temp(K)	293.1	293.3	298.1	293.0	293.4	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	1.041E+01	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	1.041E+01	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	2.597E-06	3.735E-04	9.895E-02	2.902E-06	6.685E-08	3.680E-12	
Pressure(Pa)	-1.535E-01	-2.315E-01	-2.785E-01	-1.786E-01	3.423E-01	3.825E-01	

Upper layer species

N2 %	78.8	78.8	18.0	78.9	79.1	79.3
O2 %	20.3	20.3	0.362	20.4	20.6	20.7
CO2 %	0.575	0.591	8.19	0.404	0.213	3.296E-02
CO ppm	173.	205.	2.446E+03	128.	63.7	9.84
TUHC %	1.084E-03	1.601E-02	68.6	3.658E-05	3.468E-06	4.915E-07
H2O %	0.297	0.307	4.23	0.209	0.110	1.703E-02
OD 1/m	0.549	1.11	11.1	0.153	0.225	2.362E-02
CT g-min/m^3	30.0	62.6	4.929E+03	14.1	8.46	0.591

Lower layer species

N2 %	79.2	79.0	79.0	79.0	79.2	79.3
O2 %	20.6	20.5	20.5	20.5	20.6	20.7
CO2 %	0.110	0.328	0.329	0.298	0.114	4.462E-06
CO ppm	32.9	102.	102.	91.1	34.0	1.332E-03
TUHC %	9.528E-05	2.458E-03	2.493E-03	2.169E-04	1.665E-06	4.248E-11
H2O %	5.692E-02	0.169	0.170	0.154	5.889E-02	2.306E-06
OD 1/m	6.227E-02	0.208	6.824E-03	7.328E-02	0.143	3.933E-06
CT g-min/m^3	2.17	9.38	6.618E-02	5.60	3.67	1.732E-04

Time = 650.0 seconds.

Upper temp(K)	295.2	300.0	328.4	295.2	293.9	293.1	
Lower temp(K)	293.8	295.9	306.0	294.8	293.7	293.0	273.0
Upper vol(m**3)	55.1	4.5	6.0	8.2	31.2	20.1	
Layer depth(m)	1.4	0.4	2.4	2.3	1.8	1.1	
Ceiling temp(K)	294.4	300.0	328.8	294.4	293.4	293.0	
Up wall temp(K)	294.1	298.7	326.1	294.2	293.3	293.0	
Low wall temp(K)	293.6	295.1	319.7	293.5	293.2	293.0	
Floor temp(K)	293.1	293.3	297.9	293.0	293.3	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.307E-06	1.386E-04	8.848E-02	1.353E-06	3.444E-08	1.848E-12	
Pressure(Pa)	-1.319E-01	-2.663E-01	-2.971E-01	-9.402E-02	3.041E-01	3.514E-01	

Upper layer species

N2 %	78.8	78.8	18.0	79.0	79.1	79.2
O2 %	20.3	20.3	0.362	20.4	20.6	20.7
CO2 %	0.575	0.590	8.19	0.386	0.214	3.531E-02
CO ppm	173.	204.	2.446E+03	124.	64.1	10.5
TUHC %	1.214E-03	1.579E-02	68.6	5.438E-05	3.978E-06	5.334E-07
H2O %	0.297	0.306	4.23	0.200	0.111	1.824E-02
OD 1/m	0.540	1.15	11.1	0.151	0.224	2.537E-02
CT g-min/m^3	33.2	69.3	5.496E+03	15.0	9.76	0.734

Lower layer species

N2 %	79.2	79.0	79.0	79.0	79.2	79.3
O2 %	20.6	20.5	20.5	20.5	20.6	20.7
CO2 %	0.114	0.322	0.324	0.294	0.117	4.975E-06
CO ppm	34.1	101.	101.	91.1	35.0	1.485E-03
TUHC %	1.463E-04	2.713E-03	2.510E-03	4.692E-04	1.739E-06	5.003E-11
H2O %	5.874E-02	0.167	0.168	0.152	6.055E-02	2.571E-06
OD 1/m	6.572E-02	0.210	7.394E-02	8.794E-02	0.146	4.391E-06
CT g-min/m^3	2.54	10.6	0.323	6.08	4.51	1.970E-04

Time = 700.0 seconds.

Upper temp(K)	294.9	298.9	327.5	294.9	293.8	293.0	
Lower temp(K)	293.7	295.6	305.8	294.5	293.7	293.0	273.0
Upper vol(m**3)	56.6	3.9	6.0	8.3	31.5	20.6	
Layer depth(m)	1.4	0.4	2.4	2.3	1.8	1.2	
Ceiling temp(K)	294.3	299.6	327.8	294.4	293.3	293.0	
Up wall temp(K)	294.1	298.3	325.4	294.1	293.3	293.0	
Low wall temp(K)	293.6	295.0	319.0	293.5	293.2	293.0	
Floor temp(K)	293.1	293.3	297.8	293.0	293.3	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	7.303E-07	6.835E-05	7.950E-02	8.029E-07	2.018E-08	1.077E-12	
Pressure(Pa)	-1.237E-01	-2.081E-01	-2.679E-01	-1.241E-01	2.924E-01	3.275E-01	

Upper layer species

N2 %	78.8	78.8	18.0	79.0	79.1	79.2
O2 %	20.3	20.3	0.362	20.4	20.6	20.7
CO2 %	0.575	0.590	8.19	0.375	0.214	3.696E-02
CO ppm	173.	203.	2.446E+03	120.	64.3	11.0
TUHC %	1.261E-03	1.517E-02	68.6	5.744E-04	9.922E-06	5.843E-07
H2O %	0.297	0.306	4.23	0.194	0.111	1.910E-02
OD 1/m	0.524	1.21	11.2	0.126	0.224	2.645E-02
CT g-min/m^3	36.3	76.4	6.065E+03	15.9	11.1	0.884

Lower layer species

N2 %	79.2	79.0	79.0	79.0	79.2	79.3
O2 %	20.6	20.5	20.5	20.5	20.6	20.7
CO2 %	0.117	0.318	0.322	0.292	0.120	6.617E-06
CO ppm	35.3	99.9	100.	90.9	35.9	1.976E-03
TUHC %	2.050E-04	3.000E-03	2.661E-03	7.687E-04	1.917E-06	7.525E-11
H2O %	6.065E-02	0.164	0.167	0.151	6.203E-02	3.419E-06
OD 1/m	6.892E-02	0.227	0.106	9.622E-02	0.151	5.860E-06
CT g-min/m^3	2.93	11.9	0.867	6.62	5.37	2.256E-04

Time = 750.0 seconds.

Upper temp(K)	294.7	298.1	326.6	294.7	293.7	293.0	
Lower temp(K)	293.5	295.3	306.3	294.3	293.6	293.0	273.0
Upper vol(m**3)	57.8	3.6	6.0	8.3	31.9	21.0	
Layer depth(m)	1.4	0.3	2.4	2.3	1.8	1.2	
Ceiling temp(K)	294.3	299.2	326.9	294.3	293.3	293.0	
Up wall temp(K)	294.0	298.0	324.8	294.1	293.3	293.0	
Low wall temp(K)	293.6	295.0	318.5	293.5	293.2	293.0	
Floor temp(K)	293.1	293.3	297.7	293.0	293.3	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	4.438E-07	3.956E-05	7.189E-02	5.090E-07	1.231E-08	6.538E-13	
Pressure(Pa)	-1.078E-01	-2.482E-01	-2.507E-01	-4.120E-02	2.673E-01	3.118E-01	

Upper layer species

N2 %	78.8	78.8	18.0	79.0	79.1	79.2
O2 %	20.3	20.3	0.362	20.4	20.6	20.7
CO2 %	0.575	0.589	8.19	0.363	0.214	3.823E-02
CO ppm	173.	202.	2.446E+03	116.	64.3	11.4
TUHC %	1.275E-03	1.473E-02	68.6	7.447E-04	1.782E-05	6.926E-07
H2O %	0.297	0.306	4.23	0.188	0.110	1.976E-02
OD 1/m	0.511	1.26	11.2	0.108	0.223	2.723E-02
CT g-min/m^3	39.3	83.8	6.636E+03	16.5	12.4	1.04

Lower layer species

N2 %	79.2	79.0	79.0	79.0	79.2	79.3
O2 %	20.6	20.5	20.5	20.5	20.6	20.7
CO2 %	0.120	0.312	0.320	0.290	0.123	7.109E-06
CO ppm	36.3	98.6	100.	90.6	36.7	2.123E-03
TUHC %	2.572E-04	3.075E-03	2.775E-03	1.034E-03	2.451E-06	8.322E-11
H2O %	6.219E-02	0.162	0.166	0.150	6.343E-02	3.674E-06
OD 1/m	7.151E-02	0.238	0.125	9.916E-02	0.156	6.322E-06
CT g-min/m^3	3.34	13.2	1.55	7.20	6.26	2.621E-04

Time = 800.0 seconds.

Upper temp(K)	294.5	297.7	325.8	294.6	293.6	293.0	
Lower temp(K)	293.5	295.0	306.6	294.1	293.6	293.0	273.0
Upper vol(m**3)	59.2	3.4	5.9	8.4	32.5	21.4	
Layer depth(m)	1.5	0.3	2.4	2.3	1.9	1.2	
Ceiling temp(K)	294.2	299.0	326.1	294.3	293.3	293.0	
Up wall temp(K)	294.0	297.8	324.2	294.0	293.3	293.0	
Low wall temp(K)	293.6	294.9	318.0	293.5	293.2	293.0	
Floor temp(K)	293.1	293.3	297.5	293.0	293.3	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	2.933E-07	2.720E-05	6.536E-02	3.736E-07	8.673E-09	3.953E-13	
Pressure(Pa)	-1.026E-01	-2.245E-01	-2.255E-01	-3.839E-02	2.548E-01	2.962E-01	

Upper layer species

N2 %	78.8	78.8	18.0	79.0	79.1	79.2
O2 %	20.3	20.3	0.362	20.5	20.6	20.7
CO2 %	0.576	0.588	8.19	0.341	0.213	3.924E-02
CO ppm	173.	200.	2.446E+03	109.	64.0	11.7
TUHC %	1.282E-03	1.379E-02	68.6	7.630E-04	2.796E-05	8.525E-07
H2O %	0.297	0.305	4.23	0.176	0.110	2.028E-02
OD 1/m	0.494	1.35	11.2	8.910E-02	0.221	2.781E-02
CT g-min/m^3	42.3	91.5	7.208E+03	17.1	13.6	1.20

Lower layer species

N2 %	79.2	79.0	79.0	79.0	79.2	79.3
O2 %	20.6	20.5	20.5	20.5	20.6	20.7
CO2 %	0.125	0.306	0.318	0.285	0.125	8.907E-06
CO ppm	37.8	97.0	99.6	89.3	37.5	2.661E-03
TUHC %	3.344E-04	3.066E-03	2.843E-03	1.377E-03	3.358E-06	1.283E-10
H2O %	6.458E-02	0.159	0.164	0.147	6.469E-02	4.603E-06
OD 1/m	7.584E-02	0.247	0.138	0.105	0.161	7.953E-06
CT g-min/m^3	3.77	14.7	2.32	7.79	7.19	3.009E-04

Time = 850.0 seconds.

Upper temp(K)	294.4	297.4	325.1	294.5	293.6	293.0	
Lower temp(K)	293.4	294.8	306.9	294.0	293.6	293.0	273.0
Upper vol(m**3)	60.3	3.3	5.9	8.4	33.0	21.8	
Layer depth(m)	1.5	0.3	2.4	2.3	1.9	1.2	
Ceiling temp(K)	294.2	298.7	325.3	294.2	293.3	293.0	
Up wall temp(K)	294.0	297.6	323.7	294.0	293.3	293.0	
Low wall temp(K)	293.6	294.9	317.7	293.5	293.2	293.0	
Floor temp(K)	293.1	293.3	297.4	293.0	293.3	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	2.054E-07	2.050E-05	5.968E-02	2.670E-07	6.228E-09	2.470E-13	
Pressure(Pa)	-9.625E-02	-2.291E-01	-2.127E-01	-7.202E-03	2.400E-01	2.843E-01	

Upper layer species

N2 %	78.8	78.8	18.0	79.0	79.1	79.2
O2 %	20.3	20.3	0.362	20.5	20.6	20.7
CO2 %	0.576	0.588	8.19	0.319	0.211	4.013E-02
CO ppm	173.	199.	2.446E+03	101.	63.7	12.0
TUHC %	1.283E-03	1.307E-02	68.6	6.820E-04	3.490E-05	1.060E-06
H2O %	0.297	0.305	4.23	0.165	0.109	2.074E-02
OD 1/m	0.481	1.43	11.3	7.836E-02	0.219	2.835E-02
CT g-min/m^3	45.1	99.8	7.782E+03	17.6	14.9	1.36

Lower layer species

N2 %	79.2	79.0	79.0	79.0	79.2	79.3
O2 %	20.6	20.5	20.5	20.5	20.6	20.7
CO2 %	0.129	0.300	0.315	0.280	0.128	9.796E-06
CO ppm	39.2	94.8	98.9	87.9	38.2	2.927E-03
TUHC %	4.051E-04	2.948E-03	2.874E-03	1.584E-03	4.642E-06	1.582E-10
H2O %	6.675E-02	0.155	0.163	0.145	6.598E-02	5.062E-06
OD 1/m	8.024E-02	0.247	0.149	0.112	0.165	8.779E-06
CT g-min/m^3	4.22	16.1	3.16	8.42	8.14	3.485E-04

Time = 900.0 seconds.

Upper temp(K)	294.3	297.2	324.4	294.4	293.5	293.0	
Lower temp(K)	293.3	294.6	307.2	293.9	293.5	293.0	273.0
Upper vol(m**3)	61.3	3.3	5.9	8.3	33.4	22.2	
Layer depth(m)	1.5	0.3	2.3	2.3	1.9	1.3	
Ceiling temp(K)	294.1	298.6	324.5	294.2	293.3	293.0	
Up wall temp(K)	293.9	297.4	323.2	294.0	293.3	293.0	
Low wall temp(K)	293.6	294.9	317.3	293.5	293.2	293.0	
Floor temp(K)	293.1	293.3	297.3	293.0	293.3	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.518E-07	1.686E-05	5.466E-02	1.980E-07	4.792E-09	1.749E-13	
Pressure(Pa)	-9.845E-02	-1.696E-01	-2.019E-01	-6.833E-02	2.412E-01	2.724E-01	

Upper layer species

N2 %	78.8	78.8	18.0	79.0	79.1	79.2
O2 %	20.3	20.3	0.362	20.5	20.6	20.7
CO2 %	0.576	0.587	8.19	0.297	0.210	4.091E-02
CO ppm	173.	197.	2.446E+03	93.4	63.4	12.2
TUHC %	1.283E-03	1.235E-02	68.6	5.601E-04	4.048E-05	1.295E-06
H2O %	0.297	0.304	4.23	0.154	0.109	2.114E-02
OD 1/m	0.468	1.52	11.3	7.033E-02	0.216	2.882E-02
CT g-min/m^3	47.9	109.	8.357E+03	18.0	16.2	1.53

Lower layer species

N2 %	79.2	79.0	79.0	79.0	79.2	79.3
O2 %	20.6	20.5	20.5	20.5	20.6	20.7
CO2 %	0.133	0.292	0.312	0.275	0.130	1.195E-05
CO ppm	40.5	92.4	98.1	86.3	39.0	3.571E-03
TUHC %	4.726E-04	2.793E-03	2.873E-03	1.714E-03	6.198E-06	2.477E-10
H2O %	6.888E-02	0.151	0.161	0.142	6.723E-02	6.174E-06
OD 1/m	8.492E-02	0.245	0.157	0.119	0.169	1.074E-05
CT g-min/m^3	4.70	17.5	4.06	9.10	9.11	4.057E-04

5.6 Input Data for EXITT for Scenario 4 (Example Data File SCEN-4.BLD)

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  4  20      1.70857
  4  22      4.55663
  5  17      1.82880
  5  22      1.73763
  5  25      1.61465
  6  14      1.37160
  6  17      2.07185
  7  15      1.37160
  7  17      3.28570
  8  16      1.95167
  8  24      2.32629
  8  25      1.90500
  9  18      1.06680
 10  24      1.21920
```

```
 11  20      1.02233
 12  21      1.70388
 13  19      3.35626
 16  24      2.84707
 17  22      1.56905
 20  23      1.44579
 21  23      1.06680
 24  25      3.13903
3
30 2 0
0 1 1
0 0 0
1 7 6
0 1 1
0. 0. 0.
-1. -1. -1.
```

5.7 Printed Output from EXITT for Scenario 4

```
EXITT Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89
FAST DUMP FILE    :  SCEN-4.DMP
BUILDING/OCCUPANT FILE: SCEN-4.BLD
EXITT OUTPUT FILE      : SCEN-4.EXT
EXITT DUMP FILE        : SCEN-4.EVA

NO. OF ROOMS (RUN WITH FAST)        6
NO. OF DOORS                        3
NO. OF WINDOWS                      3
TOTAL NUMBER OF NODES              25
```

EXITT NODE NUMBER	EXITT ROOM NUMBER	FAST ROOM NUMBER	ROOM HEIGHT (M)	FLOOR HEIGHT (M)
1	1	1	2.4	0.0
2	2	1	2.4	0.0
3	3	2	2.4	0.0
4	3	4	4.9	0.0
5	5	5	2.4	0.0
6	6	6	2.4	0.0
7	7	6	2.4	0.0
8	8	5	2.4	0.0
9*	9	3	2.4	0.0
10	10	5	2.4	0.0
11	3	7	2.4	0.0
12	2	7	2.4	0.0
13	1	7	2.4	0.0
14	6	8	2.4	0.0
15	7	8	2.4	0.0
16	8	8	2.4	0.0
17	5	5	2.4	0.0
18	3	2	2.4	0.0
19	1	1	2.4	0.0
20	3	2	2.4	0.0
21	2	1	2.4	0.0
22	5	4	2.4	2.5
23	2	1	2.4	0.0
24	8	5	2.4	0.0
25	8	5	2.4	0.0

* INDICATES NODE IS IN BURN ROOM

NODE NUMBER	NOISE LEVEL (DECIBELS)
1	55
2	35
3	35
4	35
5	35
6	35
7	35
8	35
9	35
10	35
11	35
12	35
13	55
14	35
15	35
16	35
17	35

18	35
19	55
20	35
21	35
22	35
23	35
24	35
25	35

NUMBER OF SMOKE DETECTORS: 2

SMOKE DET NO.	NODE	ACTIVATION TIME (SEC)	
1	3	DETERMINED BY EXITT TO BE	0.0 SECONDS
2	5	DETERMINED BY EXITT TO BE	0.0 SECONDS

EXITT NODE NUMBER	ALARM LEVEL (DECIBELS) 1	2
1	83	71
2	83	71
3	95	71
4	83	71
5	71	95
6	71	83
7	71	83
8	71	83
9	71	59
10	71	83
11	83	71
12	83	71
13	83	71
14	71	83
15	71	83
16	71	83
17	71	95
18	95	71
19	83	71
20	95	71
21	83	71
22	71	83
23	83	71
24	71	83
25	71	83

EDGE LIST

FROM NODE	TO NODE	DISTANCE (M)
1 -	13	2.81
-	18	2.59
-	19	2.50
2 -	19	2.13
-	21	2.61
-	23	2.93
3 -	4	2.20
-	18	2.29
-	20	2.18
4 -	3	2.20
-	20	1.71
-	22	4.56
5 -	17	1.83
-	22	1.74
-	25	1.61
6 -	14	1.37
-	17	2.07
7 -	15	1.37
-	17	3.29
8 -	16	1.95
-	24	2.33
-	25	1.90
9 -	18	1.07
10 -	24	1.22

11	-	20	1.02
12	-	21	1.70
13	-	1	2.81
	-	19	3.36
14	-	6	1.37
15	-	7	1.37
16	-	8	1.95
	-	24	2.85
17	-	5	1.83
	-	6	2.07
	-	7	3.29
	-	22	1.57
18	-	1	2.59
	-	3	2.29
	-	9	1.07
19	-	1	2.50
	-	2	2.13
	-	13	3.36
20	-	3	2.18
	-	4	1.71
	-	11	1.02
	-	23	1.45
21	-	2	2.61
	-	12	1.70
	-	23	1.07
22	-	4	4.56
	-	5	1.74
	-	17	1.57
23	-	2	2.93
	-	20	1.45
	-	21	1.07
24	-	8	2.33
	-	10	1.22
	-	16	2.85
	-	25	3.14
25	-	5	1.61
	-	8	1.90
	-	24	3.14

TOTAL NUMBER OF DIRECTED EDGES 62

NUMBER OF PEOPLE 3

PERSON	LOCATION	AGE	SEX	STATE	SLEEP PENALTY	REQUIRE ASSISTANCE	TRAVEL SPEED
1	1	30	FEMALE	ASLEEP	0.0	NO	1.30
2	7	2	MALE	ASLEEP	0.0	YES	1.30
3	6	0	MALE	ASLEEP	0.0	YES	1.30

ACTIONS TAKEN BY PERSON 1

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
1	1	0.0	--	--	--	INITIAL POSITION
1	1	50.0	3	--	6	GO TO RESCUE OTHER
18	2	52.0	3	--	6	ARRIVE AT NEW NODE
3	2	53.3	3	--	6	ARRIVE AT NEW NODE
4	4	54.6	3	--	6	ARRIVE AT NEW NODE
22	4	57.3	3	--	6	ARRIVE AT NEW NODE
17	5	58.3	3	--	6	ARRIVE AT NEW NODE
6	6	59.5	3	--	6	ARRIVE AT NEW NODE
6	6	59.5	3	--	--	PREPARE ANOTHER TO LEAVE BUILDING
6	6	61.5	2	--	7	GO TO RESCUE OTHER
17	5	62.7	2	--	7	ARRIVE AT NEW NODE
7	6	64.7	2	--	7	ARRIVE AT NEW NODE
7	6	64.7	2	--	--	PREPARE ANOTHER TO LEAVE BUILDING
7	6	67.7	--	--	--	ASSIST OTHER(S) OUT OF BUILDING
17	5	71.6	2	--	11	ARRIVE AT NEW NODE
22	4	73.4	2	--	11	ARRIVE AT NEW NODE
4	4	78.8	2	--	11	ARRIVE AT NEW NODE
20	2	80.8	2	--	11	ARRIVE AT NEW NODE
11	7	82.0	2	--	11	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 2

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
7	6	0.0	--	--	--	INITIAL POSITION
7	6	64.7	--	1	--	RECEIVING ASSISTANCE
7	6	67.7	--	1	--	LEAVE BUILDING WITH ASSISTANCE
17	5	71.6	--	1	11	ARRIVE AT NEW NODE WITH ASSISTANCE
22	4	73.4	--	1	11	ARRIVE AT NEW NODE WITH ASSISTANCE
4	4	78.8	--	1	11	ARRIVE AT NEW NODE WITH ASSISTANCE
20	2	80.8	--	1	11	ARRIVE AT NEW NODE WITH ASSISTANCE
11	7	82.0	--	1	11	LEAVE BUILDING THROUGH DOOR WITH ASSISTANCE

ACTIONS TAKEN BY PERSON 3

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
6	6	0.0	--	--	--	INITIAL POSITION
6	6	59.5	--	1	--	RECEIVING ASSISTANCE
17	5	62.7	--	1	7	ARRIVE AT NEW NODE WITH ASSISTANCE
7	6	64.7	--	1	7	ARRIVE AT NEW NODE WITH ASSISTANCE
7	6	67.7	--	1	--	LEAVE BUILDING WITH ASSISTANCE
17	5	71.6	--	1	11	ARRIVE AT NEW NODE WITH ASSISTANCE
22	4	73.4	--	1	11	ARRIVE AT NEW NODE WITH ASSISTANCE
4	4	78.8	--	1	11	ARRIVE AT NEW NODE WITH ASSISTANCE
20	2	80.8	--	1	11	ARRIVE AT NEW NODE WITH ASSISTANCE
11	7	82.0	--	1	11	LEAVE BUILDING THROUGH DOOR WITH ASSISTANCE

5.8 Printed Output from TENAB for Scenario 4

```
FAST  Version:  18.3
TENAB Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89

FAST DUMP FILE   :  SCEN-4.DMP
EXITT DUMP FILE  :  SCEN-4.EVA
TENAB OUTPUT FILE:  SCEN-4.TEN
TENAB DUMP FILE  :  SCEN-4.PLT
```

OCCUPANT	NODE NUMBER	ROOM NUMBER	FLOOR ELEVATION	ENTER TIME (S)
1	1	1	0.00	0.0
	18	2	0.00	52.0
	3	2	0.00	53.3
	4	4	0.00	54.6
	22	4	2.50	57.3
	17	5	0.00	58.3
	6	6	0.00	59.5
	17	5	0.00	62.7
	7	6	0.00	64.7
	17	5	0.00	71.6
	22	4	2.50	73.4
	4	4	0.00	78.8
	20	2	0.00	80.8
	11	DOOR	0.00	82.0
2	7	6	0.00	0.0
	17	5	0.00	71.6
	22	4	2.50	73.4
	4	4	0.00	78.8
	20	2	0.00	80.8
	11	DOOR	0.00	82.0
3	6	6	0.00	0.0
	17	5	0.00	62.7
	7	6	0.00	64.7
	17	5	0.00	71.6
	22	4	2.50	73.4
	4	4	0.00	78.8
	20	2	0.00	80.8
	11	DOOR	0.00	82.0

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED1	0.5	1.0
TEMP1 DEG C	65.0	100.0
CT (G-MIN/M3)	450.0	900.0
FED2	1.0	
TEMP2	1.0	
FED3	1.0	

PERSON 1

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
90.	11	ESCAPE		0.000E+00 0.118E-02 0.295E-02	0.241E+02 0.000E+00	0.402E+00	0.435E-04
910.	11	FINAL TIME		0.000E+00 0.118E-02 0.295E-02	0.241E+02 0.000E+00	0.402E+00	0.435E-04

```
PERSON  2
  TIME NODE  CONDITION     CAUSE   FED1        TEMP1       CT          FLUX
                                   FED2        TEMP2
                                   FED3
 (SEC)                                                   (G-MIN/M3) (KW-SEC/M2)
    90.  11  ESCAPE               0.000E+00  0.241E+02  0.143E+00  0.415E-05
                                  0.717E-03  0.000E+00
                                  0.290E-02
   910.  11  FINAL TIME           0.000E+00  0.241E+02  0.143E+00  0.415E-05
                                  0.717E-03  0.000E+00
                                  0.290E-02


PERSON  3
  TIME NODE  CONDITION     CAUSE   FED1        TEMP1       CT          FLUX
                                   FED2        TEMP2
                                   FED3
 (SEC)                                                   (G-MIN/M3) (KW-SEC/M2)
    90.  11  ESCAPE               0.000E+00  0.241E+02  0.143E+00  0.415E-05
                                  0.717E-03  0.000E+00
                                  0.290E-02
   910.  11  FINAL TIME           0.000E+00  0.241E+02  0.143E+00  0.415E-05
                                  0.717E-03  0.000E+00
                                  0.290E-02


FED1  - THE FRACTIONAL EFFECTIVE DOSE DUE TO
        CO,CO2,HCN AND O2 BASED ON THE HAZARD I
        TENAB FED PLUS AN OXYGEN TERM
FED2  - THE FRACTIONAL EFFECTIVE DOSE DUE TO
        CO,CO2,HCN AND O2 BASED ON PURSER'S
        EQUATIONS
FED3  - THE FRACTIONAL EFFECTIVE DOSE DUE TO
        CO2 BASED ON PURSER'S EQUATIONS
TEMP1 - THE AVERAGE TEMPERATURE OF THE
        LAYER OF THE ROOM TO WHICH THE
        PERSON IS EXPOSED - IT IS THE
        SAME AS TEMP USED IN THE HAZARD I TENAB
TEMP2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO
        CONVECTIVE HEAT BASED ON PURSER'S
        EQUATIONS

* IF PERSON IS WAITING AT A WINDOW, HE IS CONSIDERED TO BE
AT THE NODE (ROOM) FROM WHICH HE CAME PRIOR TO REACHING THE WINDOW
THIS ALLOWS HIM TO CONTINUE TO BE EXPOSED TO THE ROOM FIRE CONDITIONS
```

CHAPTER 6. SCENARIO 5, CHRISTMAS TREE FIRE

6.1 Summary of Fire Scenario 5

For scenario 5, an electrical fire in the living room ignites a natural Christmas tree. Four occupants are in the house.

BUILDING: Townhouse

OCCUPANTS: Father, aged 25, fully capable but asleep in bedroom 1.

Mother, aged 23, fully capable but asleep in bedroom 1.

Infant asleep in bedroom 3.

Boy aged 2 asleep in bedroom 2.

DOORS: All bedroom doors closed.

FIRE: Electrical fire in living room ignites natural Christmas tree in living room. Bean bag chair is second item to ignite.

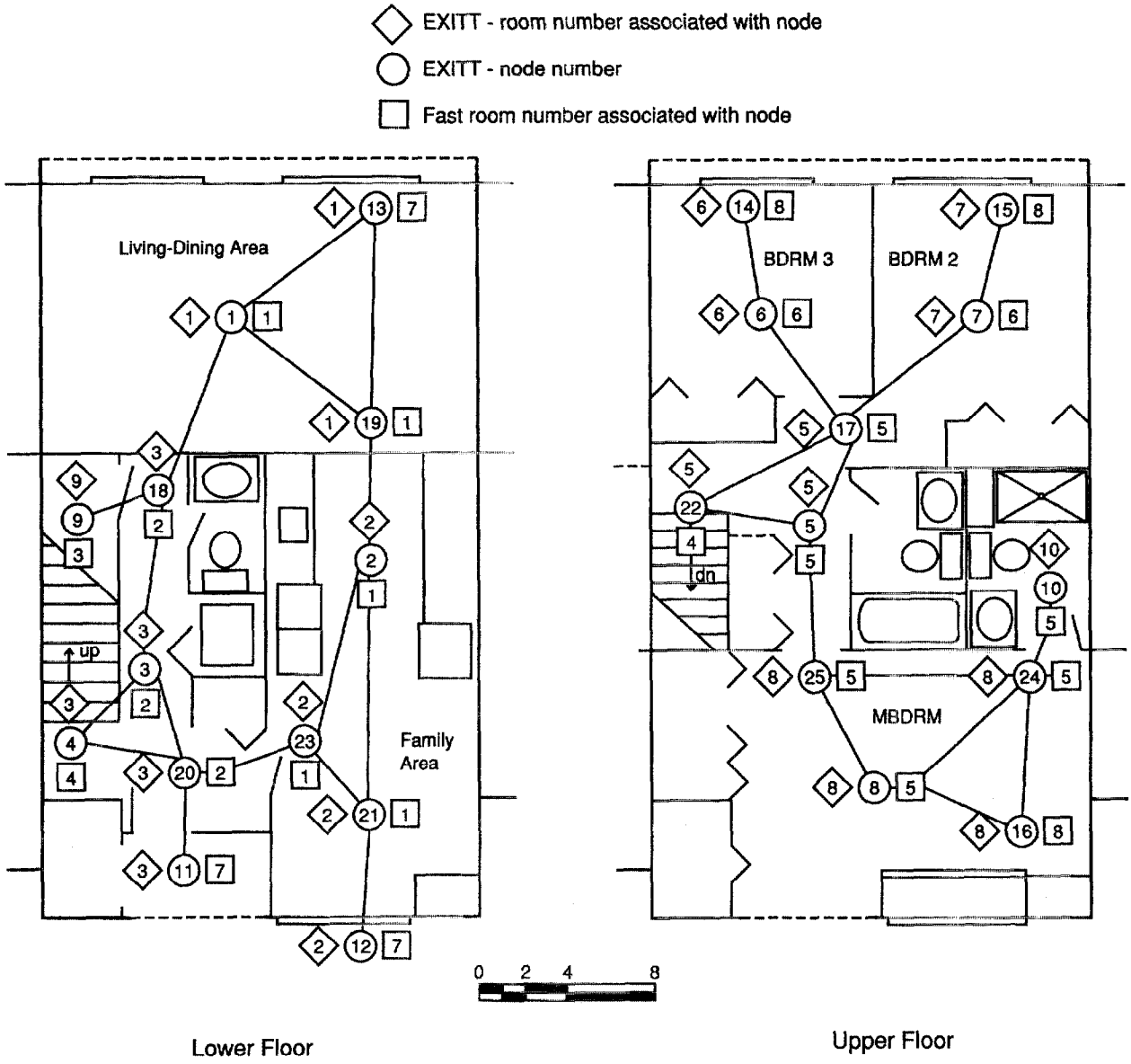
FUEL: Christmas tree and bean bag chair taken directly from HAZARD I fire properties database, material code CTR001 for Christmas tree (Christmas tree, spruce, dry) and CHR001 for bean bag chair (bean bag, vinyl PS foam beads). Species (CO_2, CO, and OD) were not available for the Christmas tree. Approximate values for the species have been used.

CEILINGS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

WALLS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

FLOORS: First floor is 0.15-m-thick concrete slab, taken directly from HAZARD I materials property database. Material code CNC001, Concrete, normal weight, Type I cement, Dolomite aggregate. Second floor is Douglas fir plywood, taken directly from HAZARD I materials property database. Material code DFP001, Douglas fir plywood, 10% moisture.

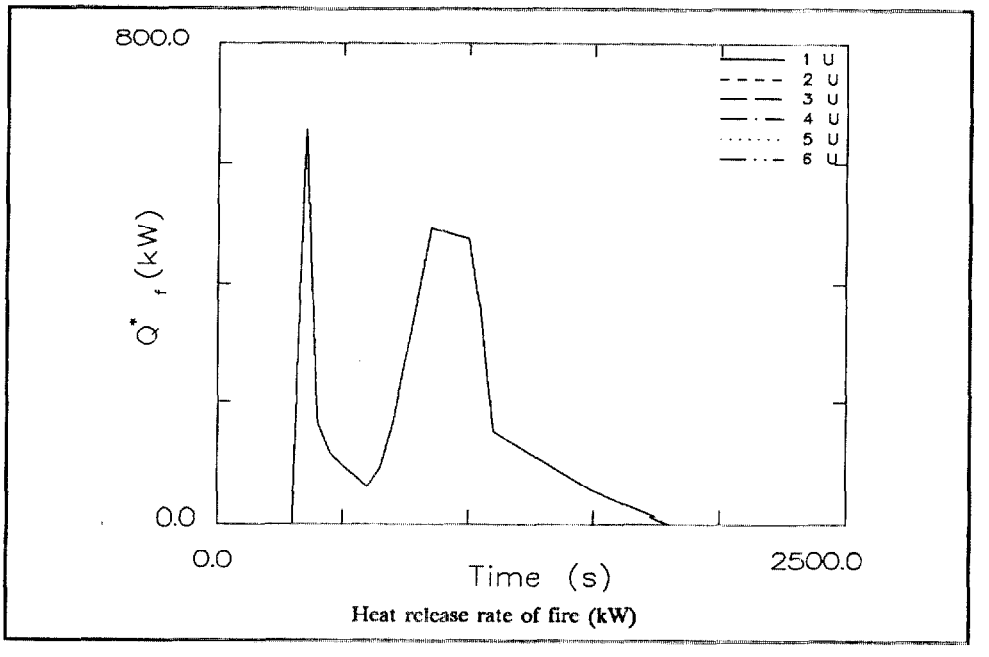
6.2 Floor Plan and EXITT Building Description for Scenario 5



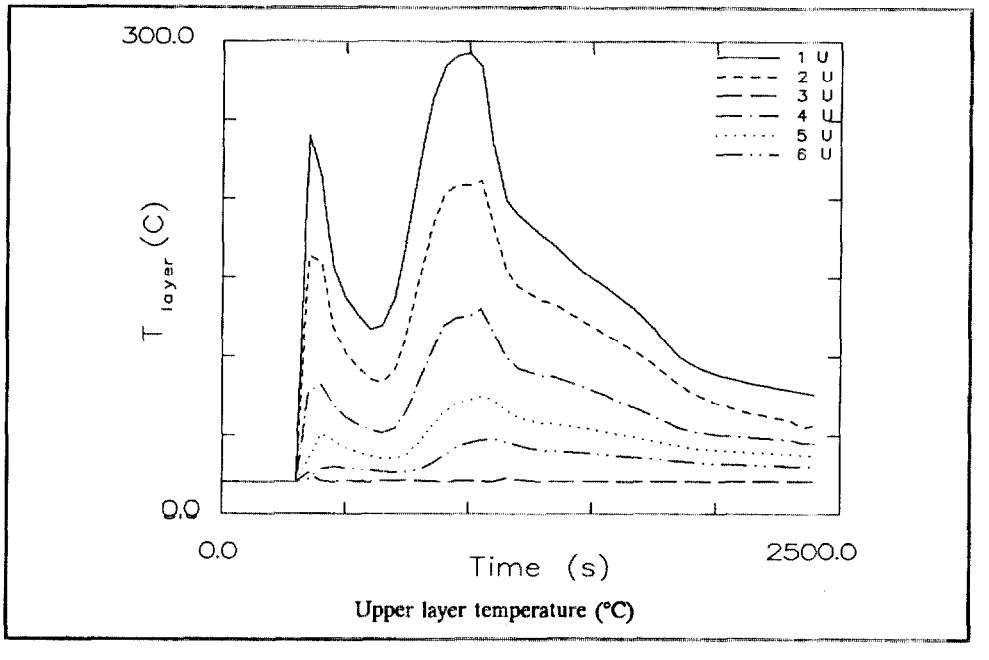
6.3 FAST Input Data for Scenario 5 (Example Data File SCEN-5.DAT)

```
VERSN   18          Scenario 5, Townhouse, Christmas Tree in Li
TIMES   2400 200  50   0   0
TAMB   293.  101300.      0.
EAMB   273.  101300.      0.
HI/F     0.00   0.00   0.00   0.00   2.70   2.70
WIDTH    8.19   2.10   1.20   1.20   5.30   2.90
DEPTH    4.91   5.20   2.10   3.00   3.30   6.10
HEIGH    2.40   2.40   2.40   4.90   2.40   2.40
HVENT   1  2  1   1.10   2.10   0.00
HVENT   1  2  2   1.10   2.10   0.00
HVENT   1  7  1   1.10   0.20   0.00   0.00
HVENT   2  3  1   1.10   0.02   0.00
HVENT   2  4  1   1.10   2.10   0.00
HVENT   4  5  1   1.10   4.80   2.70
HVENT   5  6  1   1.10   2.10   0.00
CVENT   1  2  1   1.00   1.00   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
CVENT   1  2  2   1.00   1.00   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
CVENT   1  7  1   1.00   1.00   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
CVENT   2  3  1   1.00   1.00   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
CVENT   2  4  1   1.00   1.00   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
CVENT   4  5  1   1.00   1.00   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
CVENT   5  6  1   1.00   1.00   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
CEILI GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
WALLS GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
FLOOR CONCRETE  CONCRETE  CONCRETE  CONCRETE  WOOD      WOOD
CHEMI     0.    0.   6.0    32800000.  300.
LFBO   1
LFBT   2
LFPOS  1
LFMAX 12
FTIME    300.    20.    30.    50.    50.   150.    75.   175.   170.    80.   400.   300.
FMASS  0.0000 0.0000 0.0200 0.0200 0.0050 0.0035 0.0018 0.0033 0.0150 0.0144 0.0046 0.0016 0.0000
FHIGH    0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00
FAREA    0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50
FQDOT  0.00      0.00      6.56E+05 6.56E+05 1.64E+05 1.15E+05 5.90E+04 1.08E+05 4.92E+05 4.72E+05
   1.51E+05 5.25E+04 0.00
CT    1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000
HCR   0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080
CO    0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019
OD    0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013
DUMPR SCEN-5.DMP
```

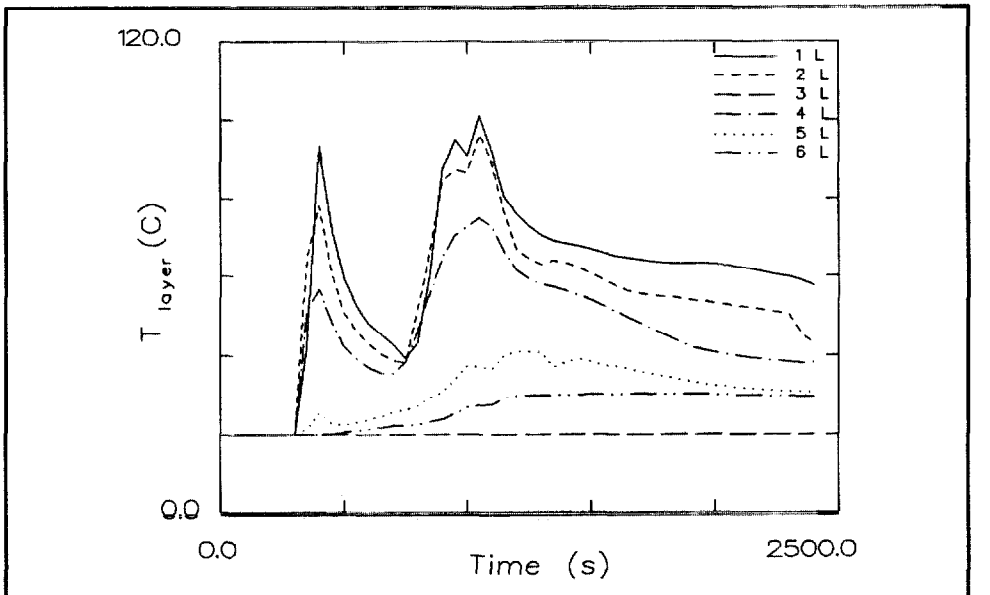
6.4 Selected Graphs from Scenario 5



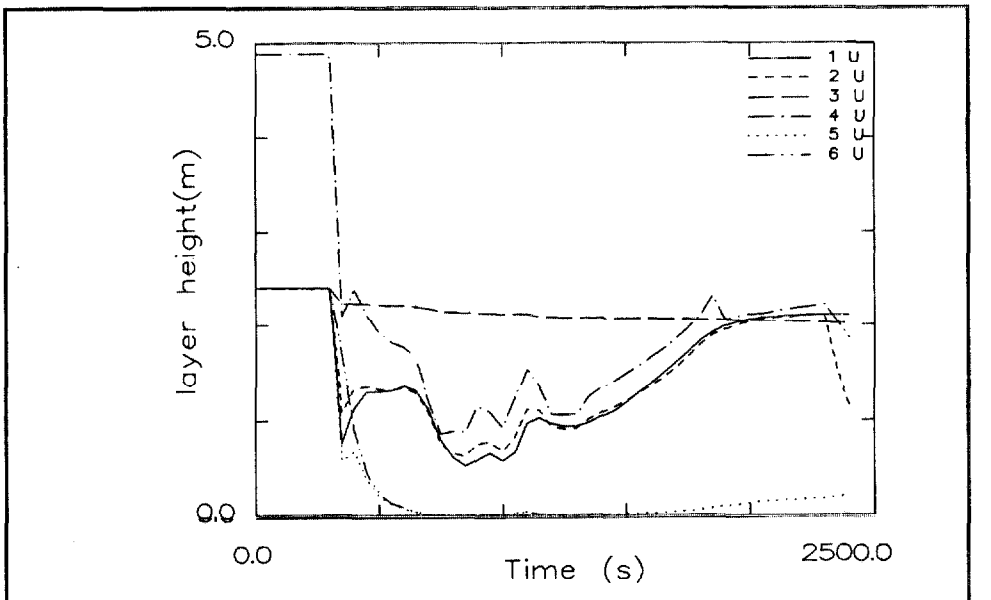
Heat release rate of fire (kW)



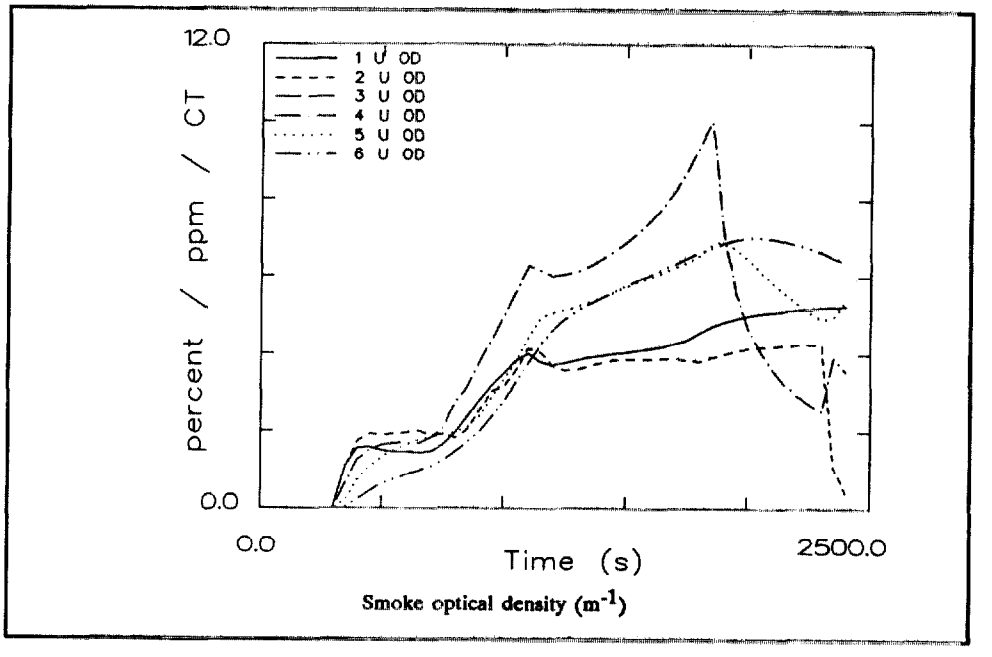
Upper layer temperature (°C)



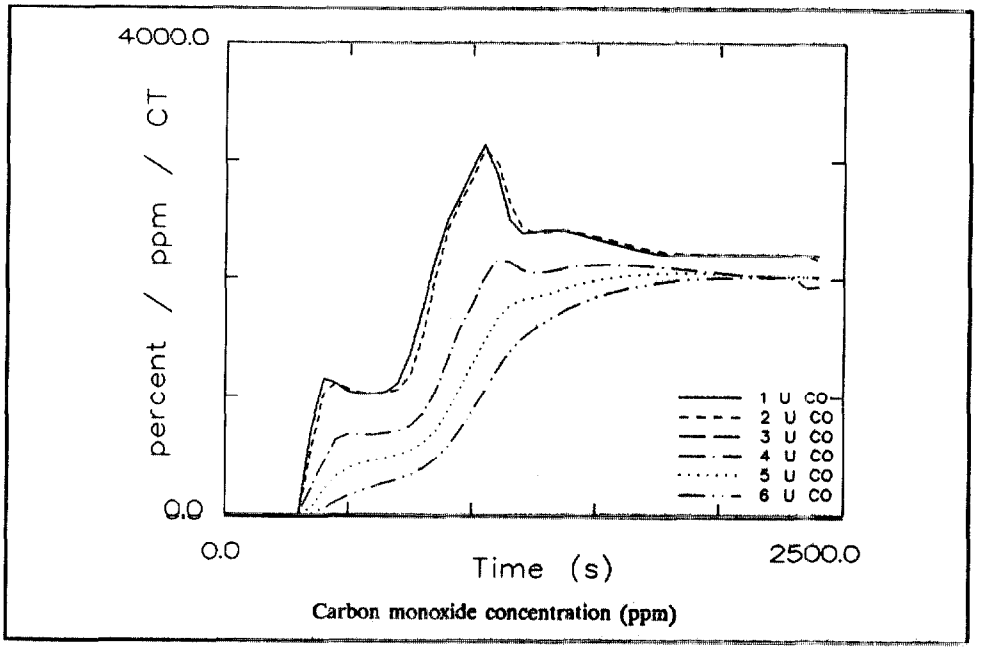
Lower layer temperature (°C)



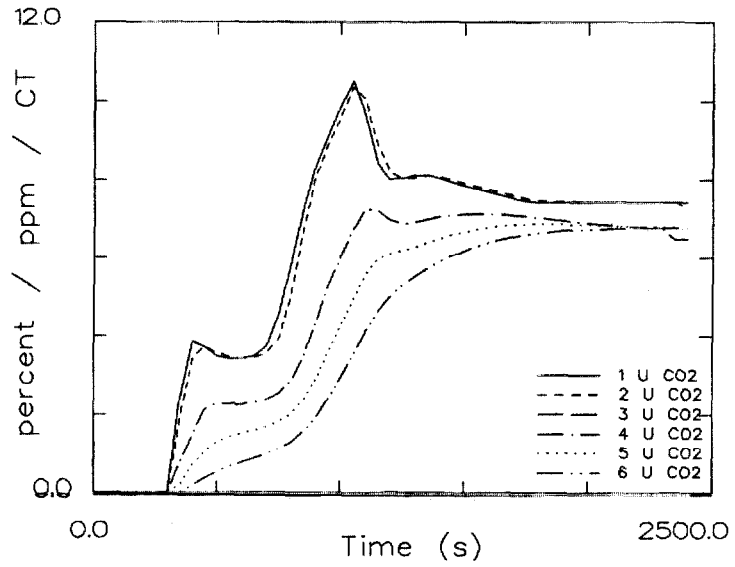
Layer interface height (m)



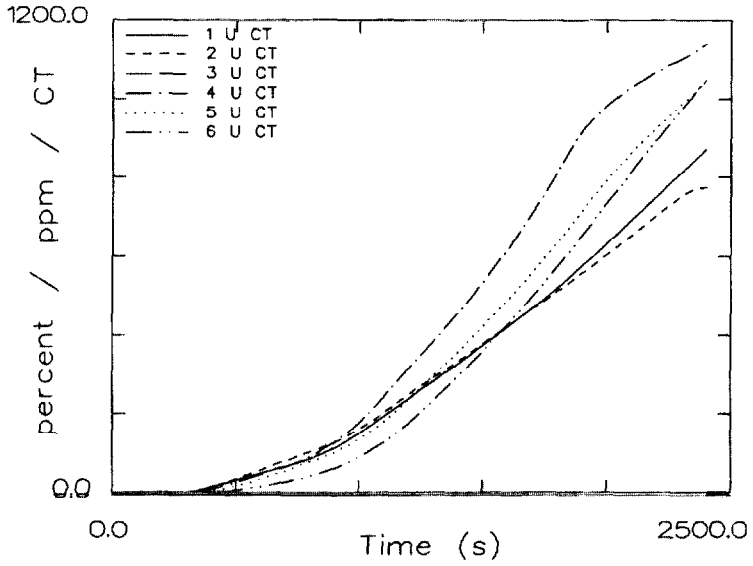
Smoke optical density (m^{-1})



Carbon monoxide concentration (ppm)



Carbon dioxide concentration (%)



Concentration-Time product (ppm-min)

6.5 Printed Output from FAST for Scenario 5

FAST version 18.3.2 - created February 1, 1989 Scenario 5, Townhouse, Christmas Tree in

Total compartments = 6

FLOOR PLAN

Width	8.2	2.1	1.2	1.2	5.3	2.9
Depth	4.9	5.2	2.1	3.0	3.3	6.1
Height	2.4	2.4	2.4	4.9	2.4	2.4
Area	40.2	10.9	2.5	3.6	17.5	17.7
Volume	96.5	26.2	6.0	17.6	42.0	42.5
Ceiling	2.4	2.4	2.4	4.9	5.1	5.1
Floor	0.0	0.0	0.0	0.0	2.7	2.7

CONNECTIONS

1 (1)	Width	0.00	1.10	0.00	0.00	0.00	0.00	1.10
	Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.20
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.20
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 (2)	Width	0.00	1.10	0.00	0.00	0.00	0.00	0.00
	Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 (1)	Width	1.10	0.00	1.10	1.10	0.00	0.00	0.00
	Soffit	2.10	0.00	0.02	2.10	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	2.10	0.00	0.02	2.10	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 (2)	Width	1.10	0.00	0.00	0.00	0.00	0.00	0.00
	Soffit	2.10	0.00	0.00	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	2.10	0.00	0.00	0.00	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 (1)	Width	0.00	1.10	0.00	0.00	0.00	0.00	0.00
	Soffit	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.02	0.00	0.00	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 (1)	Width	0.00	1.10	0.00	0.00	1.10	0.00	0.00
	Soffit	0.00	2.10	0.00	0.00	4.80	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	2.70	0.00	0.00
	a.Soffit	0.00	2.10	0.00	0.00	4.80	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	2.70	0.00	0.00
5 (1)	Width	0.00	0.00	0.00	1.10	0.00	1.10	0.00
	Soffit	0.00	0.00	0.00	2.10	0.00	2.10	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	4.80	0.00	4.80	0.00
	a.Sill	0.00	0.00	0.00	2.70	0.00	2.70	0.00

```
6 ( 1)  Width       0.00   0.00   0.00   0.00   1.10   0.00   0.00
        Soffit      0.00   0.00   0.00   0.00   2.10   0.00   0.00
        Sill        0.00   0.00   0.00   0.00   0.00   0.00   0.00
        a.Soffit    0.00   0.00   0.00   0.00   4.80   0.00   0.00
        a.Sill      0.00   0.00   0.00   0.00   2.70   0.00   0.00

Material names

 Ceiling:    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
 Walls:      GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
 Floor:      CONCRETE  CONCRETE  CONCRETE  CONCRETE  WOOD      WOOD

Thermal data base used: THERMAL.TPF

 Name      Conductivity Specific heat   Density      Thickness   Emissivity     **Codes**

 CONCRETE      1.75        1.000E+03    2.200E+03    0.150        0.940          188    U

 GYPSUM       0.160         900.         800.        1.600E-02    0.900           38    U

 WOOD         7.000E-02    1.000E+03     250.        1.600E-02    0.980                 U

Compartment of origin is                          1
Print interval (seconds)                         10
Number of fire specification intervals is        12
Total time (seconds)                           2400
Fire position                                     1
Limiting oxygen index (%) =                     6.0
Initial relative humidity (%) =                 0.0
Fire type is a SPECIFIED (CONSTRAINED)

Pyrolysis  temperature (K) =                 300.
Ambient air temperature (K) =                293.
Ambient reference pressure (Pa) =         101300.
Reference elevation (m) =                      0.
External ambient temperature (K) =           273.
External reference pressure (Pa) =        101300.
Reference elevation (m) =                      0.

Fmass=  0.00      0.00      2.00E-02  2.00E-02  5.00E-03  3.50E-03  1.80E-03  3.30E-03  1.50E-02
        1.44E-02  4.60E-03
        1.60E-03  0.00
Hcomb=  3.28E+07  3.28E+07  3.28E+07  3.28E+07  3.28E+07  3.29E+07  3.28E+07  3.27E+07  3.28E+07
        3.28E+07  3.28E+07
        3.28E+07  3.28E+07
Fqdot=  0.00      0.00      6.56E+05  6.56E+05  1.64E+05  1.15E+05  5.90E+04  1.08E+05  4.92E+05
        4.72E+05  1.51E+05
        5.25E+04  0.00
Fhigh=  0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
        0.00      0.00      0.00      0.00
C/CO2=  1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02
        1.30E-02  1.30E-02  1.30E-02  1.30E-02
CO/CO2= 1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02
        1.90E-02  1.90E-02  1.90E-02  1.90E-02
H/C=    8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02
        8.00E-02  8.00E-02  8.00E-02  8.00E-02
CT=     1.0       1.0       1.0       1.0       1.0       1.0       1.0       1.0       1.0
        1.0       1.0       1.0       1.0
Ftime=  3.00E+02  20.       30.       50.       50.       1.50E+02  75.       1.75E+02  1.70E+02
        80.       4.00E+02  3.00E+02
Dump file = SCEN-5.DMP
```

Time = 0.0 seconds.

Upper temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Lower temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.1	0.0	0.0	0.0	0.0	0.0	
Layer depth(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pressure(Pa)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	

Upper layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 100.0 seconds.

Upper temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Lower temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.1	0.1	0.0	0.0	0.2	0.0	
Layer depth(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	4.892E-26	0.000E+00	4.892E-26	5.200E-15	5.310E-15	
Pressure(Pa)	-8.817E-02	-8.960E-02	-8.588E-02	-9.064E-02	1.364E-01	1.358E-01	

Upper layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 200.0 seconds.

Upper temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Lower temp(K)	292.9	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.1	0.1	0.0	0.0	0.2	0.0	
Layer depth(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	4.892E-26	0.000E+00	4.892E-26	5.200E-15	5.310E-15	
Pressure(Pa)	-8.752E-02	-9.006E-02	-8.633E-02	-9.073E-02	1.364E-01	1.358E-01	

Upper layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 300.0 seconds.

Upper temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Lower temp(K)	292.9	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.1	0.1	0.0	0.0	0.2	0.0	
Layer depth(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	7.827E-25	4.892E-26	0.000E+00	4.892E-26	5.200E-15	5.310E-15	
Pressure(Pa)	-8.688E-02	-9.070E-02	-8.694E-02	-9.085E-02	1.364E-01	1.358E-01	

Upper layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 400.0 seconds.

Upper temp(K)	486.3	433.2	293.8	355.2	323.9	301.6	
Lower temp(K)	366.2	351.0	293.0	329.6	298.4	293.0	273.0
Upper vol(m**3)	50.8	11.6	0.4	9.1	30.1	26.6	
Layer depth(m)	1.3	1.1	0.2	2.5	1.7	1.5	
Ceiling temp(K)	368.5	338.2	293.3	308.7	298.4	294.0	
Up wall temp(K)	355.3	329.0	293.2	305.1	297.1	293.7	
Low wall temp(K)	325.8	307.8	293.0	297.9	294.5	293.2	
Floor temp(K)	297.6	294.5	293.0	293.2	296.2	293.5	
Plume flow(kg/s)	5.334E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	5.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.640E+05	7.238E-03	0.000E+00	1.319E-04	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.640E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	7.238E-03	0.000E+00	1.319E-04	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	7.881E+01	2.179E+01	2.298E-08	8.468E-01	5.133E-02	3.145E-04	
Pressure(Pa)	9.546E-01	1.602E+00	3.200E+00	2.962E+00	8.473E+00	9.187E+00	

Upper layer species

N2 %	77.7	77.9	79.3	78.7	79.0	79.2
O2 %	16.1	16.6	20.7	19.0	19.9	20.5
CO2 %	3.86	3.44	0.000	1.47	0.690	0.177
CO ppm	1.153E+03	1.026E+03	0.000	439.	206.	52.8
TUHC %	9.722E-08	2.272E-09	0.000	1.130E-13	6.540E-13	1.595E-13
H2O %	2.00	1.78	0.000	0.760	0.356	9.140E-02
OD 1/m	1.57	1.75	0.000	1.26	0.732	0.224
CT g-min/m^3	12.6	11.6	0.000	7.13	3.11	0.753

Lower layer species

N2 %	78.7	78.7	79.3	78.8	79.2	79.3
O2 %	19.0	18.9	20.7	19.5	20.5	20.7
CO2 %	1.46	1.54	9.993E-03	1.06	0.147	2.173E-08
CO ppm	436.	461.	2.98	317.	43.8	6.488E-06
TUHC %	2.322E-08	2.102E-09	2.563E-10	1.620E-13	2.431E-13	0.000
H2O %	0.754	0.798	5.164E-03	0.549	7.573E-02	1.123E-08
OD 1/m	0.686	0.809	8.948E-03	0.509	9.457E-02	1.336E-08
CT g-min/m^3	3.27	4.60	6.508E-02	2.80	0.551	1.271E-07

Time = 500.0 seconds.

Upper temp(K)	410.1	375.1	293.9	334.9	315.2	302.6	
Lower temp(K)	332.2	323.8	293.0	315.3	295.4	293.5	273.0
Upper vol(m**3)	44.2	11.7	0.5	10.7	38.3	38.3	
Layer depth(m)	1.1	1.1	0.2	3.0	2.2	2.2	
Ceiling temp(K)	353.9	332.0	293.2	309.3	300.1	295.2	
Up wall temp(K)	343.8	324.7	293.2	305.9	298.6	294.7	
Low wall temp(K)	321.4	307.1	293.0	298.5	295.3	293.7	
Floor temp(K)	297.4	294.6	293.0	293.3	298.0	294.6	
Plume flow(kg/s)	4.269E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	2.933E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	9.630E+04	2.725E-03	0.000E+00	1.830E-04	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	9.630E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	2.725E-03	0.000E+00	1.830E-04	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.062E+01	2.564E+00	3.934E-08	1.733E-01	1.373E-02	4.913E-04	
Pressure(Pa)	-6.549E-01	-5.795E-01	-3.674E-01	5.317E-01	3.900E+00	4.405E+00	

Upper layer species

N2 %	77.9	77.8	79.3	78.4	78.8	79.1
O2 %	16.6	16.5	20.7	18.0	19.2	20.1
CO2 %	3.49	3.58	0.000	2.28	1.30	0.534
CO ppm	1.042E+03	1.069E+03	0.000	680.	387.	159.
TUHC %	5.911E-08	4.784E-09	0.000	1.334E-13	3.116E-13	2.748E-13
H2O %	1.80	1.85	0.000	1.18	0.670	0.276
OD 1/m	1.50	1.91	0.000	1.64	1.33	0.621
CT g-min/m^3	30.9	33.6	0.000	24.5	15.6	5.85

Lower layer species

N2 %	78.7	78.4	79.3	78.5	79.2	79.3
O2 %	19.1	18.2	20.7	18.4	20.6	20.7
CO2 %	1.36	2.08	1.402E-02	1.92	9.513E-02	2.173E-08
CO ppm	406.	622.	4.18	572.	28.4	6.488E-06
TUHC %	7.061E-09	5.914E-10	2.567E-10	2.201E-13	1.144E-13	0.000
H2O %	0.703	1.08	7.243E-03	0.990	4.916E-02	1.123E-08
OD 1/m	0.742	1.11	1.208E-02	0.695	5.276E-02	1.062E-08
CT g-min/m^3	11.6	15.9	0.175	9.82	1.37	2.596E-07

Time = 600.0 seconds.

Upper temp(K)	390.2	358.6	293.3	326.4	310.1	300.6	
Lower temp(K)	321.2	316.0	293.0	310.0	296.8	294.4	273.0
Upper vol(m**3)	41.9	11.5	0.5	11.3	40.5	40.9	
Layer depth(m)	1.0	1.1	0.2	3.1	2.3	2.3	
Ceiling temp(K)	348.2	328.2	293.2	308.5	299.9	295.4	
Up wall temp(K)	339.4	322.0	293.1	305.4	298.4	294.9	
Low wall temp(K)	319.2	306.1	293.0	298.4	295.5	293.9	
Floor temp(K)	297.2	294.6	293.0	293.3	298.5	295.0	
Plume flow(kg/s)	2.541E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.800E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	5.900E+04	0.000E+00	0.000E+00	1.498E-03	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	5.900E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	1.498E-03	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	5.028E+00	1.042E+00	5.141E-10	6.979E-02	4.806E-03	1.873E-04	
Pressure(Pa)	-5.817E-01	-4.453E-01	-3.106E-01	1.872E-01	3.124E+00	3.515E+00	

Upper layer species

N2 %	77.9	77.9	79.3	78.4	78.7	79.0
O2 %	16.6	16.6	20.7	18.0	18.9	19.8
CO2 %	3.44	3.44	0.000	2.26	1.53	0.783
CO ppm	1.027E+03	1.028E+03	0.000	675.	456.	234.
TUHC %	5.591E-08	5.167E-08	0.000	1.327E-11	1.689E-12	3.827E-13
H2O %	1.78	1.78	0.000	1.17	0.789	0.405
OD 1/m	1.47	1.97	0.000	1.71	1.64	0.873
CT g-min/m^3	48.0	55.9	0.000	44.2	33.0	14.6

Lower layer species

N2 %	78.7	78.4	79.3	78.4	79.3	79.3
O2 %	18.9	18.0	20.7	18.2	20.7	20.7
CO2 %	1.50	2.25	1.594E-02	2.08	5.869E-02	2.173E-08
CO ppm	447.	672.	4.76	621.	17.5	6.488E-06
TUHC %	4.928E-09	6.247E-09	2.583E-10	1.339E-11	1.711E-13	0.000
H2O %	0.773	1.16	8.236E-03	1.07	3.033E-02	1.123E-08
OD 1/m	0.822	1.33	1.376E-02	0.771	2.903E-02	8.927E-09
CT g-min/m^3	20.7	30.1	0.329	18.5	1.83	3.742E-07

Time = 700.0 seconds.

Upper temp(K)	409.8	364.9	294.1	327.3	308.6	299.3	
Lower temp(K)	315.7	311.7	293.0	308.5	298.7	295.1	273.0
Upper vol(m**3)	51.3	14.3	0.6	13.3	41.9	42.4	
Layer depth(m)	1.3	1.3	0.2	3.7	2.4	2.4	
Ceiling temp(K)	350.8	328.3	293.2	308.5	299.7	295.3	
Up wall temp(K)	341.7	322.2	293.2	305.6	298.4	294.9	
Low wall temp(K)	320.2	306.1	293.0	298.4	295.7	294.0	
Floor temp(K)	297.4	294.7	293.0	293.4	298.9	295.2	
Plume flow(kg/s)	5.131E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	4.971E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.628E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.628E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.051E+01	1.506E+00	7.440E-08	7.789E-02	3.314E-03	9.134E-05	
Pressure(Pa)	8.639E-01	1.106E+00	1.010E+00	1.756E+00	5.013E+00	5.389E+00	

Upper layer species

N2 %	77.8	77.8	79.3	78.3	78.6	78.9
O2 %	16.3	16.5	20.7	17.9	18.7	19.5
CO2 %	3.73	3.56	0.000	2.37	1.69	0.991
CO ppm	1.114E+03	1.062E+03	0.000	706.	504.	296.
TUHC %	4.727E-08	5.040E-08	0.000	3.415E-09	1.012E-10	4.183E-12
H2O %	1.93	1.84	0.000	1.22	0.872	0.512
OD 1/m	1.47	1.89	0.000	1.83	1.84	1.08
CT g-min/m^3	64.8	78.9	0.000	64.2	53.5	26.0

Lower layer species

N2 %	78.6	78.3	79.3	78.4	79.3	79.3
O2 %	18.6	17.9	20.7	18.1	20.7	20.7
CO2 %	1.79	2.34	3.383E-02	2.22	3.293E-02	2.173E-08
CO ppm	534.	699.	10.1	662.	9.83	6.487E-06
TUHC %	5.973E-09	7.756E-09	3.174E-10	6.275E-10	4.310E-13	0.000
H2O %	0.925	1.21	1.748E-02	1.15	1.702E-02	1.123E-08
OD 1/m	0.952	1.39	2.984E-02	0.990	0.192	1.273E-07
CT g-min/m^3	30.9	46.3	0.557	27.9	2.30	5.845E-07

Time = 800.0 seconds.

Upper temp(K)	495.9	423.6	293.8	358.5	319.2	301.4	
Lower temp(K)	316.1	324.6	293.0	319.0	300.3	295.5	273.0
Upper vol(m**3)	71.9	19.0	0.7	14.4	41.9	42.4	
Layer depth(m)	1.8	1.7	0.3	4.0	2.4	2.4	
Ceiling temp(K)	381.3	344.7	293.3	315.4	301.5	295.6	
Up wall temp(K)	367.7	335.7	293.2	311.1	299.8	295.1	
Low wall temp(K)	335.6	312.2	293.0	300.7	296.6	294.1	
Floor temp(K)	299.8	295.6	293.0	293.6	300.8	295.6	
Plume flow(kg/s)	5.395E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.166E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	3.821E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	3.821E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	9.554E+01	1.640E+01	2.221E-08	1.038E+00	2.655E-02	2.859E-04	
Pressure(Pa)	2.107E+00	3.205E+00	2.791E+00	3.221E+00	1.016E+01	1.068E+01	

Upper layer species

N2 %	76.9	77.2	79.3	78.1	78.5	78.8
O2 %	13.7	14.7	20.7	17.3	18.3	19.2
CO2 %	5.89	5.06	0.000	2.86	2.02	1.30
CO ppm	1.757E+03	1.509E+03	0.000	855.	603.	389.
TUHC %	3.975E-08	3.790E-08	0.000	1.612E-08	7.904E-09	1.653E-09
H2O %	3.04	2.61	0.000	1.48	1.04	0.673
OD 1/m	1.96	1.82	0.000	2.77	1.96	1.46
CT g-min/m^3	84.2	101.	0.000	88.8	75.8	40.5

Lower layer species

N2 %	78.3	78.1	79.3	78.1	79.3	79.3
O2 %	17.8	17.3	20.6	17.4	20.7	20.7
CO2 %	2.43	2.85	6.219E-02	2.80	7.046E-03	2.173E-08
CO ppm	726.	851.	18.6	835.	2.10	6.487E-06
TUHC %	1.322E-08	1.806E-08	4.334E-10	1.632E-08	1.157E-12	0.000
H2O %	1.26	1.47	3.214E-02	1.44	3.641E-03	1.123E-08
OD 1/m	1.20	1.52	5.663E-02	1.89	8.139E-03	2.768E-08
CT g-min/m^3	42.8	62.3	1.10	42.8	3.11	1.437E-06

Time = 900.0 seconds.

Upper temp(K)	558.1	476.7	293.5	393.2	337.9	311.0	
Lower temp(K)	360.4	357.4	293.0	337.9	303.7	296.9	273.0
Upper vol(m**3)	72.7	17.9	0.7	13.5	41.7	42.2	
Layer depth(m)	1.8	1.6	0.3	3.8	2.4	2.4	
Ceiling temp(K)	425.6	373.2	293.2	329.8	307.2	297.6	
Up wall temp(K)	407.7	360.3	293.2	322.9	304.3	296.6	
Low wall temp(K)	369.0	326.7	293.0	305.8	298.8	294.9	
Floor temp(K)	305.2	297.6	293.0	294.1	306.0	297.4	
Plume flow(kg/s)	7.578E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.482E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	4.861E+05	0.000E+00	0.000E+00	2.521E-03	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	4.861E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	2.521E-03	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	2.787E+02	6.416E+01	4.029E-09	5.686E+00	2.301E-01	5.989E-03	
Pressure(Pa)	4.446E-01	1.765E+00	1.611E+00	2.174E+00	1.109E+01	1.186E+01	

Upper layer species

N2 %	75.9	76.0	79.3	77.5	78.1	78.5
O2 %	10.8	11.1	20.7	15.5	17.3	18.4
CO2 %	8.37	8.08	0.000	4.37	2.89	1.91
CO ppm	2.499E+03	2.414E+03	0.000	1.305E+03	864.	570.
TUHC %	3.890E-08	3.845E-08	0.000	9.870E-09	1.037E-08	5.993E-09
H2O %	4.32	4.18	0.000	2.26	1.50	0.987
OD 1/m	2.82	2.55	0.000	3.78	2.40	2.00
CT g-min/m^3	112.	126.	0.000	126.	101.	60.6

Lower layer species

N2 %	77.5	77.4	79.2	77.6	79.3	79.3
O2 %	15.6	15.3	20.6	15.7	20.7	20.7
CO2 %	4.27	4.54	7.293E-02	4.26	7.499E-04	2.173E-08
CO ppm	1.274E+03	1.354E+03	21.8	1.273E+03	0.224	6.479E-06
TUHC %	1.885E-08	1.661E-08	4.887E-10	1.160E-08	1.163E-11	0.000
H2O %	2.21	2.34	3.769E-02	2.20	3.875E-04	1.123E-08
OD 1/m	2.20	2.25	6.614E-02	2.69	9.987E-06	2.730E-10
CT g-min/m^3	62.5	84.5	1.82	69.8	3.12	1.547E-06

Time = 1000.0 seconds.

Upper temp(K)	565.9	481.6	294.1	398.3	345.6	318.5	
Lower temp(K)	363.8	359.6	293.0	345.6	310.3	300.0	273.0
Upper vol(m**3)	73.2	18.7	0.7	14.3	41.9	42.4	
Layer depth(m)	1.8	1.7	0.3	4.0	2.4	2.4	
Ceiling temp(K)	449.3	389.7	293.3	339.5	312.6	300.5	
Up wall temp(K)	430.6	375.4	293.2	331.3	308.8	298.9	
Low wall temp(K)	391.7	337.5	293.0	310.7	301.4	296.1	
Floor temp(K)	309.5	299.3	293.0	294.5	311.4	300.1	
Plume flow(kg/s)	7.330E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.447E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	4.744E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	4.744E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	3.127E+02	7.137E+01	7.728E-08	6.946E+00	4.334E-01	2.391E-02	
Pressure(Pa)	4.207E-01	1.284E+00	1.294E+00	2.422E+00	1.119E+01	1.206E+01	

Upper layer species

N2 %	75.3	75.4	79.3	76.8	77.6	78.1
O2 %	8.97	9.29	20.7	13.6	15.7	17.2
CO2 %	9.88	9.61	0.000	6.00	4.26	2.93
CO ppm	2.950E+03	2.871E+03	0.000	1.791E+03	1.273E+03	874.
TUHC %	3.681E-08	3.725E-08	0.000	1.600E-08	9.994E-09	7.421E-09
H2O %	5.11	4.97	0.000	3.10	2.20	1.51
OD 1/m	3.49	3.15	0.000	4.97	3.34	2.81
CT g-min/m^3	149.	160.	0.000	177.	134.	88.3

Lower layer species

N2 %	76.9	76.8	79.2	76.9	79.3	79.3
O2 %	13.8	13.4	20.6	13.7	20.7	20.7
CO2 %	5.84	6.14	9.518E-02	5.92	4.861E-02	2.172E-08
CO ppm	1.744E+03	1.834E+03	28.4	1.769E+03	14.5	8.952E-06
TUHC %	1.433E-08	1.664E-08	5.379E-10	1.558E-08	2.471E-10	0.000
H2O %	3.02	3.17	4.918E-02	3.06	2.512E-02	1.132E-08
OD 1/m	2.98	3.07	8.673E-02	3.89	9.371E-05	1.272E-10
CT g-min/m^3	92.7	116.	2.68	107.	3.12	1.548E-06

Time = 1100.0 seconds.

Upper temp(K)	504.6	455.1	293.3	388.6	345.7	320.8	
Lower temp(K)	364.6	361.9	293.0	345.6	309.6	300.6	273.0
Upper vol(m**3)	57.3	14.0	0.7	12.1	41.1	41.7	
Layer depth(m)	1.4	1.3	0.3	3.4	2.4	2.4	
Ceiling temp(K)	444.2	393.2	293.2	343.9	315.9	302.7	
Up wall temp(K)	427.6	379.5	293.2	335.5	311.6	300.7	
Low wall temp(K)	393.7	341.5	293.0	313.1	303.0	297.1	
Floor temp(K)	310.8	300.1	293.0	294.8	314.2	302.1	
Plume flow(kg/s)	5.315E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	4.600E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.510E+05	0.000E+00	0.000E+00	2.253E-03	7.246E-05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.510E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	2.253E-03	7.246E-05	0.000E+00	0.000E+00
On target(W/m^2)	1.130E+02	3.890E+01	7.965E-10	4.715E+00	4.343E-01	3.396E-02	
Pressure(Pa)	-1.977E+00	-1.528E+00	-1.360E+00	-7.303E-01	6.838E+00	7.630E+00	

Upper layer species

N2 %	75.4	75.2	79.3	76.3	77.0	77.6
O2 %	9.22	8.78	20.7	12.1	14.1	15.8
CO2 %	9.67	10.0	0.000	7.24	5.57	4.11
CO ppm	2.889E+03	2.997E+03	0.000	2.161E+03	1.664E+03	1.226E+03
TUHC %	4.007E-08	3.764E-08	0.000	5.333E-09	8.587E-09	9.213E-09
H2O %	5.00	5.19	0.000	3.74	2.88	2.12
OD 1/m	4.01	4.13	0.000	6.28	4.44	3.76
CT g-min/m^3	193.	202.	0.000	242.	179.	126.

Lower layer species

N2 %	77.0	76.3	79.2	76.4	79.3	79.3
O2 %	14.1	11.9	20.6	12.2	20.7	20.7
CO2 %	5.55	7.40	0.104	7.20	5.837E-02	2.181E-08
CO ppm	1.657E+03	2.208E+03	31.1	2.149E+03	17.4	5.518E-05
TUHC %	1.241E-08	1.033E-08	5.614E-10	5.663E-09	5.138E-09	0.000
H2O %	2.87	3.82	5.374E-02	3.72	3.016E-02	2.242E-08
OD 1/m	3.15	3.37	9.266E-02	3.84	6.677E-07	2.486E-12
CT g-min/m^3	130.	154.	3.75	153.	3.12	1.548E-06

Time = 1200.0 seconds.

Upper temp(K)	462.3	417.0	294.6	365.7	334.6	316.6	
Lower temp(K)	349.1	339.7	293.0	334.6	314.0	302.8	273.0
Upper vol(m**3)	57.8	16.0	0.8	13.8	41.9	42.4	
Layer depth(m)	1.4	1.5	0.3	3.8	2.4	2.4	
Ceiling temp(K)	422.3	380.4	293.4	338.9	315.2	303.2	
Up wall temp(K)	409.0	369.3	293.4	331.9	311.3	301.3	
Low wall temp(K)	380.6	337.4	293.0	312.8	303.5	297.6	
Floor temp(K)	309.0	299.7	293.0	294.8	314.6	302.9	
Plume flow(kg/s)	4.515E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	3.850E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.264E+05	0.000E+00	0.000E+00	0.000E+00	8.842E-06	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.264E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.842E-06	0.000E+00	0.000E+00
On target(W/m^2)	4.639E+01	1.334E+01	3.905E-07	1.579E+00	1.695E-01	1.746E-02	
Pressure(Pa)	-3.354E-01	9.949E-02	6.464E-02	6.651E-01	7.180E+00	7.784E+00	

Upper layer species

N2 %	76.0	76.0	79.3	76.5	76.8	77.2
O2 %	11.2	11.0	20.7	12.4	13.5	14.8
CO2 %	8.01	8.19	0.000	6.96	6.11	5.01
CO ppm	2.393E+03	2.446E+03	0.000	2.078E+03	1.824E+03	1.497E+03
TUHC %	3.564E-08	3.612E-08	0.000	1.474E-08	8.025E-09	8.205E-09
H2O %	4.14	4.23	0.000	3.60	3.16	2.59
OD 1/m	3.71	3.70	0.000	5.99	5.07	4.63
CT g-min/m^3	237.	248.	0.000	314.	235.	175.

Lower layer species

N2 %	76.9	76.4	79.2	76.4	79.2	79.3
O2 %	13.9	12.2	20.5	12.4	20.6	20.7
CO2 %	5.77	7.19	0.187	7.01	0.125	5.592E-08
CO ppm	1.723E+03	2.146E+03	55.8	2.094E+03	37.4	5.366E-04
TUHC %	8.482E-09	9.347E-09	6.445E-10	1.233E-08	4.352E-08	0.000
H2O %	2.98	3.71	9.658E-02	3.62	6.471E-02	1.117E-07
OD 1/m	3.28	3.82	0.171	4.62	2.129E-06	4.519E-11
CT g-min/m^3	166.	195.	5.30	202.	3.12	1.548E-06

Time = 1300.0 seconds.

Upper temp(K)	449.1	408.5	293.5	360.9	331.0	313.8	
Lower temp(K)	343.4	335.8	293.0	330.9	313.7	302.9	273.0
Upper vol(m**3)	58.7	16.2	0.8	13.8	41.9	42.4	
Layer depth(m)	1.5	1.5	0.3	3.8	2.4	2.4	
Ceiling temp(K)	413.5	375.5	293.3	337.0	314.6	303.1	
Up wall temp(K)	402.2	365.7	293.3	330.7	311.0	301.3	
Low wall temp(K)	375.6	336.3	293.0	312.8	303.6	297.7	
Floor temp(K)	308.2	299.5	293.0	294.8	314.5	303.1	
Plume flow(kg/s)	3.860E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	3.100E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.017E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.017E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	3.348E+01	1.004E+01	4.379E-09	1.196E+00	1.178E-01	1.062E-02	
Pressure(Pa)	-4.085E-01	4.761E-03	2.359E-02	5.770E-01	6.751E+00	7.341E+00	

Upper layer species

N2 %	76.0	76.0	79.3	76.5	76.7	77.0
O2 %	11.1	11.2	20.7	12.5	13.3	14.1
CO2 %	8.10	8.05	0.000	6.91	6.28	5.54
CO ppm	2.420E+03	2.403E+03	0.000	2.062E+03	1.875E+03	1.653E+03
TUHC %	3.427E-08	3.410E-08	0.000	1.896E-08	1.329E-08	9.516E-09
H2O %	4.19	4.16	0.000	3.57	3.24	2.86
OD 1/m	3.84	3.61	0.000	6.12	5.22	5.12
CT g-min/m^3	281.	290.	0.000	384.	295.	232.

Lower layer species

N2 %	76.7	76.5	79.2	76.5	78.9	79.3
O2 %	13.3	12.5	20.5	12.5	19.7	20.7
CO2 %	6.27	6.95	0.200	6.90	0.818	3.821E-07
CO ppm	1.871E+03	2.075E+03	59.7	2.059E+03	244.	3.873E-03
TUHC %	1.263E-08	1.849E-08	6.701E-10	1.866E-08	3.002E-07	0.000
H2O %	3.24	3.59	0.103	3.56	0.423	8.059E-07
OD 1/m	3.64	3.85	0.184	4.55	1.929E-06	3.665E-11
CT g-min/m^3	207.	240.	7.38	255.	3.12	1.548E-06

Time = 1400.0 seconds.

Upper temp(K)	435.7	401.6	293.4	357.7	329.4	312.7	
Lower temp(K)	341.4	336.3	293.0	329.4	311.3	303.0	273.0
Upper vol(m**3)	54.7	14.4	0.8	12.8	41.8	42.4	
Layer depth(m)	1.4	1.3	0.3	3.6	2.4	2.4	
Ceiling temp(K)	406.5	372.3	293.3	336.1	314.5	303.1	
Up wall temp(K)	397.0	363.7	293.2	330.3	311.1	301.4	
Low wall temp(K)	372.0	335.5	293.0	312.8	303.7	297.9	
Floor temp(K)	307.5	299.4	293.0	294.8	314.5	303.3	
Plume flow(kg/s)	3.633E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	2.350E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	7.712E+04	0.000E+00	0.000E+00	1.491E-03	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	7.712E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	1.491E-03	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	2.336E+01	7.852E+00	1.481E-09	9.909E-01	9.902E-02	8.557E-03	
Pressure(Pa)	-4.897E-01	-1.229E-01	-1.073E-01	4.038E-01	6.141E+00	6.715E+00	

Upper layer species

N2 %	76.0	76.0	79.3	76.4	76.6	76.9
O2 %	11.2	11.1	20.7	12.3	13.0	13.7
CO2 %	8.04	8.08	0.000	7.05	6.49	5.90
CO ppm	2.400E+03	2.411E+03	0.000	2.105E+03	1.938E+03	1.763E+03
TUHC %	3.530E-08	3.494E-08	0.000	9.166E-09	1.224E-08	1.123E-08
H2O %	4.15	4.17	0.000	3.64	3.35	3.05
OD 1/m	3.97	3.78	0.000	6.45	5.46	5.45
CT g-min/m^3	327.	333.	0.000	457.	357.	294.

Lower layer species

N2 %	76.7	76.4	79.2	76.4	79.2	79.3
O2 %	13.3	12.3	20.5	12.4	20.5	20.7
CO2 %	6.25	7.07	0.208	7.03	0.219	2.636E-06
CO ppm	1.866E+03	2.112E+03	62.0	2.100E+03	65.3	2.673E-02
TUHC %	1.471E-08	1.453E-08	6.889E-10	1.011E-08	2.487E-06	0.000
H2O %	3.23	3.65	0.107	3.63	0.113	5.561E-06
OD 1/m	3.74	3.81	0.191	4.62	2.020E-08	1.822E-11
CT g-min/m^3	250.	285.	9.55	308.	3.12	1.548E-06

Time = 1500.0 seconds.

Upper temp(K)	423.0	392.5	293.4	352.1	327.0	311.7	
Lower temp(K)	339.8	333.7	293.0	326.9	311.5	303.1	273.0
Upper vol(m**3)	48.9	13.1	0.8	12.3	41.7	42.3	
Layer depth(m)	1.2	1.2	0.3	3.4	2.4	2.4	
Ceiling temp(K)	399.7	368.7	293.3	334.8	314.3	303.2	
Up wall temp(K)	391.9	361.2	293.2	329.6	311.1	301.5	
Low wall temp(K)	368.5	334.7	293.0	312.6	303.8	298.0	
Floor temp(K)	306.8	299.2	293.0	294.8	314.4	303.5	
Plume flow(kg/s)	2.610E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.600E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	5.250E+04	0.000E+00	0.000E+00	1.359E-03	7.350E-05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	5.250E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	1.359E-03	7.350E-05	0.000E+00	0.000E+00
On target(W/m^2)	1.611E+01	5.523E+00	8.870E-10	6.864E-01	7.511E-02	6.916E-03	
Pressure(Pa)	-5.578E-01	-2.419E-01	-2.149E-01	2.038E-01	5.438E+00	5.968E+00	

Upper layer species

N2 %	76.1	76.1	79.3	76.4	76.6	76.8
O2 %	11.4	11.3	20.7	12.3	12.8	13.4
CO2 %	7.85	7.91	0.000	7.11	6.67	6.19
CO ppm	2.345E+03	2.361E+03	0.000	2.122E+03	1.992E+03	1.847E+03
TUHC %	3.523E-08	3.533E-08	0.000	5.913E-09	8.922E-09	1.088E-08
H2O %	4.06	4.09	0.000	3.67	3.45	3.20
OD 1/m	4.05	3.86	0.000	6.87	5.73	5.76
CT g-min/m^3	373.	378.	0.000	535.	422.	359.

Lower layer species

N2 %	76.8	76.4	79.2	76.4	79.3	79.3
O2 %	13.4	12.2	20.5	12.3	20.7	20.7
CO2 %	6.13	7.14	0.215	7.10	5.655E-02	1.587E-05
CO ppm	1.832E+03	2.133E+03	64.1	2.121E+03	16.9	0.161
TUHC %	1.190E-08	9.397E-09	7.004E-10	6.262E-09	1.572E-05	0.000
H2O %	3.17	3.69	0.111	3.67	2.923E-02	3.348E-05
OD 1/m	3.70	3.70	0.198	4.61	5.656E-10	1.300E-11
CT g-min/m^3	293.	328.	11.8	362.	3.12	1.548E-06

Time = 1600.0 seconds.

Upper temp(K)	412.1	383.5	293.4	345.6	324.1	310.5	
Lower temp(K)	338.2	330.6	293.0	324.1	310.4	303.3	273.0
Upper vol(m**3)	40.7	11.3	0.8	11.7	41.5	42.3	
Layer depth(m)	1.0	1.0	0.3	3.2	2.4	2.4	
Ceiling temp(K)	393.4	364.8	293.3	332.9	313.8	303.2	
Up wall temp(K)	387.3	358.5	293.2	328.4	310.9	301.6	
Low wall temp(K)	365.2	333.6	293.0	312.3	303.7	298.1	
Floor temp(K)	306.1	299.0	293.0	294.7	313.9	303.6	
Plume flow(kg/s)	1.762E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.067E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	3.500E+04	0.000E+00	0.000E+00	1.124E-03	1.080E-04	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	3.500E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	1.124E-03	1.080E-04	0.000E+00	0.000E+00
On target(W/m^2)	1.135E+01	3.781E+00	1.145E-09	4.309E-01	5.320E-02	5.273E-03	
Pressure(Pa)	-5.742E-01	-2.887E-01	-2.802E-01	6.534E-02	4.735E+00	5.213E+00	

Upper layer species

N2 %	76.2	76.1	79.3	76.4	76.5	76.7
O2 %	11.6	11.5	20.7	12.3	12.7	13.1
CO2 %	7.67	7.74	0.000	7.11	6.78	6.40
CO ppm	2.291E+03	2.312E+03	0.000	2.123E+03	2.025E+03	1.910E+03
TUHC %	3.998E-08	3.808E-08	0.000	4.448E-09	6.735E-09	9.655E-09
H2O %	3.97	4.00	0.000	3.67	3.50	3.31
OD 1/m	4.15	3.86	0.000	7.45	5.98	6.05
CT g-min/m^3	421.	422.	0.000	618.	490.	428.

Lower layer species

N2 %	76.9	76.4	79.2	76.4	24.8	19.8
O2 %	13.7	12.2	20.5	12.3	6.47	5.18
CO2 %	5.86	7.14	0.223	7.11	5.076E-03	1.956E-05
CO ppm	1.750E+03	2.132E+03	66.5	2.123E+03	1.63	0.198
TUHC %	9.411E-09	7.111E-09	7.088E-10	4.705E-09	2.516E-05	0.000
H2O %	3.03	3.69	0.115	3.67	2.641E-03	4.125E-05
OD 1/m	3.60	3.41	0.205	4.69	2.477E-11	1.235E-11
CT g-min/m^3	336.	370.	14.1	415.	3.12	1.548E-06

Time = 1700.0 seconds.

Upper temp(K)	399.4	373.7	293.4	338.8	321.2	309.1	
Lower temp(K)	337.1	328.5	293.0	321.2	308.9	303.3	273.0
Upper vol(m**3)	32.1	9.3	0.9	11.0	41.3	42.3	
Layer depth(m)	0.8	0.8	0.3	3.1	2.4	2.4	
Ceiling temp(K)	386.8	360.4	293.3	330.6	313.1	303.0	
Up wall temp(K)	382.4	355.4	293.2	326.8	310.6	301.5	
Low wall temp(K)	361.8	332.3	293.0	311.9	303.6	298.2	
Floor temp(K)	305.5	298.7	293.0	294.7	313.3	303.6	
Plume flow(kg/s)	8.883E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	5.333E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.750E+04	0.000E+00	0.000E+00	8.228E-04	8.661E-05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.750E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	8.228E-04	8.661E-05	0.000E+00	0.000E+00
On target(W/m^2)	7.220E+00	2.390E+00	1.176E-09	2.479E-01	3.560E-02	3.828E-03	
Pressure(Pa)	-5.894E-01	-3.039E-01	-3.024E-01	-1.846E-02	4.089E+00	4.507E+00	

Upper layer species

N2 %	76.2	76.2	79.3	76.4	76.5	76.6
O2 %	11.8	11.7	20.7	12.3	12.6	12.9
CO2 %	7.50	7.58	0.000	7.08	6.84	6.54
CO ppm	2.239E+03	2.262E+03	0.000	2.114E+03	2.044E+03	1.953E+03
TUHC %	3.577E-08	3.608E-08	0.000	3.557E-09	5.361E-09	8.382E-09
H2O %	3.87	3.92	0.000	3.66	3.54	3.38
OD 1/m	4.27	3.88	0.000	8.22	6.23	6.33
CT g-min/m^3	470.	468.	0.000	708.	561.	500.

Lower layer species

N2 %	77.0	76.5	79.2	76.4	6.03	5.01
O2 %	14.1	12.4	20.4	12.3	1.58	1.31
CO2 %	5.58	6.98	0.231	7.09	4.122E-04	1.956E-05
CO ppm	1.665E+03	2.083E+03	68.9	2.116E+03	0.411	0.198
TUHC %	7.789E-09	5.771E-09	7.155E-10	3.829E-09	2.516E-05	0.000
H2O %	2.88	3.60	0.119	3.66	2.378E-04	4.125E-05
OD 1/m	3.47	3.06	0.213	4.75	5.103E-12	1.174E-11
CT g-min/m^3	377.	408.	16.6	470.	3.12	1.548E-06

Time = 1800.0 seconds.

Upper temp(K)	381.5	362.0	293.4	331.7	318.1	307.7	
Lower temp(K)	336.3	327.8	293.0	318.1	307.7	303.2	273.0
Upper vol(m**3)	22.8	6.6	0.9	10.1	40.9	42.3	
Layer depth(m)	0.6	0.6	0.3	2.8	2.3	2.4	
Ceiling temp(K)	379.1	355.4	293.3	328.1	312.3	302.8	
Up wall temp(K)	376.4	351.7	293.2	325.0	310.1	301.4	
Low wall temp(K)	358.2	330.9	293.0	311.3	303.3	298.2	
Floor temp(K)	304.8	298.4	293.0	294.6	312.4	303.5	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	4.398E-04	6.473E-05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	4.398E-04	6.473E-05	0.000E+00	0.000E+00
On target(W/m^2)	3.462E+00	1.280E+00	1.683E-09	1.266E-01	2.259E-02	2.682E-03	
Pressure(Pa)	-5.970E-01	-3.143E-01	-3.202E-01	-1.730E-02	3.498E+00	3.855E+00	

Upper layer species

N2 %	76.3	76.3	79.3	76.4	76.5	76.6
O2 %	11.9	11.9	20.7	12.4	12.6	12.8
CO2 %	7.40	7.46	0.000	7.03	6.87	6.64
CO ppm	2.211E+03	2.226E+03	0.000	2.098E+03	2.052E+03	1.982E+03
TUHC %	2.956E-08	3.214E-08	0.000	3.055E-09	4.503E-09	7.315E-09
H2O %	3.83	3.85	0.000	3.63	3.55	3.43
OD 1/m	4.55	3.81	0.000	9.42	6.54	6.61
CT g-min/m^3	520.	512.	0.000	811.	635.	575.

Lower layer species

N2 %	77.1	76.6	79.2	76.5	1.87	1.60
O2 %	14.4	13.0	20.4	12.4	0.489	0.417
CO2 %	5.29	6.53	0.239	6.97	6.781E-05	1.956E-05
CO ppm	1.578E+03	1.949E+03	71.5	2.082E+03	0.379	0.198
TUHC %	6.706E-09	5.466E-09	7.219E-10	3.581E-09	2.516E-05	0.000
H2O %	2.73	3.37	0.124	3.60	7.941E-05	4.125E-05
OD 1/m	3.34	2.59	0.222	4.20	3.257E-12	1.114E-11
CT g-min/m^3	416.	440.	19.1	523.	3.12	1.548E-06

Time = 1900.0 seconds.

Upper temp(K)	368.5	350.8	293.5	325.9	315.3	306.4	
Lower temp(K)	336.1	327.0	293.0	315.3	306.4	303.3	273.0
Upper vol(m**3)	16.6	4.9	0.9	10.3	40.2	42.4	
Layer depth(m)	0.4	0.4	0.4	2.8	2.3	2.4	
Ceiling temp(K)	371.8	350.2	293.3	325.6	311.4	302.5	
Up wall temp(K)	370.6	347.6	293.2	323.2	309.5	301.3	
Low wall temp(K)	354.7	329.4	293.0	310.6	303.0	298.2	
Floor temp(K)	304.1	298.1	293.0	294.5	311.4	303.4	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	1.809E-04	3.640E-05	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	1.809E-04	3.640E-05	0.000E+00	0.000E+00
On target(W/m^2)	1.831E+00	6.291E-01	4.566E-09	6.626E-02	1.394E-02	1.839E-03	
Pressure(Pa)	-3.663E-01	-5.756E-02	-8.350E-02	3.060E-01	3.431E+00	3.729E+00	

Upper layer species

N2 %	76.3	76.3	79.3	76.5	76.5	76.6
O2 %	11.9	11.9	20.7	12.5	12.6	12.8
CO2 %	7.40	7.42	0.000	6.95	6.87	6.70
CO ppm	2.211E+03	2.216E+03	0.000	2.076E+03	2.050E+03	2.001E+03
TUHC %	2.956E-08	3.045E-08	0.000	3.053E-09	4.094E-09	6.508E-09
H2O %	3.83	3.84	0.000	3.59	3.55	3.46
OD 1/m	4.84	4.00	0.000	7.10	6.93	6.87
CT g-min/m^3	575.	558.	0.000	918.	714.	653.

Lower layer species

N2 %	77.2	76.8	79.2	76.6	0.774	0.639
O2 %	14.6	13.5	20.4	12.8	0.202	0.167
CO2 %	5.14	6.04	0.253	6.69	3.564E-05	1.956E-05
CO ppm	1.535E+03	1.802E+03	75.4	1.997E+03	0.379	0.198
TUHC %	6.138E-09	5.297E-09	7.321E-10	3.786E-09	2.516E-05	0.000
H2O %	2.66	3.12	0.130	3.46	7.440E-05	4.125E-05
OD 1/m	3.23	2.56	0.235	5.92	2.072E-12	4.519E-11
CT g-min/m^3	455.	469.	21.8	570.	3.12	1.548E-06

Time = 2000.0 seconds.

Upper temp(K)	362.1	343.9	293.5	323.9	313.8	305.4	
Lower temp(K)	336.0	326.2	293.0	313.8	305.4	303.1	273.0
Upper vol(m**3)	13.9	4.0	0.9	10.0	39.7	42.4	
Layer depth(m)	0.3	0.4	0.4	2.8	2.3	2.4	
Ceiling temp(K)	366.2	346.0	293.3	323.7	310.6	302.3	
Up wall temp(K)	366.1	344.3	293.2	321.9	309.0	301.2	
Low wall temp(K)	351.9	328.1	293.0	310.2	302.7	298.1	
Floor temp(K)	303.5	297.9	293.0	294.5	310.6	303.2	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	9.018E-05	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	9.018E-05	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.283E+00	3.790E-01	2.802E-09	5.115E-02	1.052E-02	1.352E-03	
Pressure(Pa)	-2.762E-01	6.097E-02	4.935E-02	4.574E-01	3.405E+00	3.681E+00	

Upper layer species

N2 %	76.3	76.3	79.3	76.5	76.5	76.6
O2 %	11.9	11.9	20.7	12.5	12.6	12.7
CO2 %	7.40	7.41	0.000	6.88	6.85	6.73
CO ppm	2.211E+03	2.213E+03	0.000	2.055E+03	2.044E+03	2.011E+03
TUHC %	2.956E-08	3.004E-08	0.000	3.485E-09	4.349E-09	5.998E-09
H2O %	3.83	3.83	0.000	3.56	3.54	3.48
OD 1/m	5.00	4.16	0.000	4.68	6.45	7.01
CT g-min/m^3	632.	605.	0.000	983.	792.	734.

Lower layer species

N2 %	77.2	76.9	79.2	76.7	0.322	0.298
O2 %	14.5	13.6	20.4	13.0	8.422E-02	7.788E-02
CO2 %	5.23	5.98	0.265	6.46	3.406E-05	1.956E-05
CO ppm	1.562E+03	1.785E+03	79.3	1.929E+03	0.379	0.198
TUHC %	5.784E-09	4.950E-09	7.419E-10	4.155E-09	2.516E-05	0.000
H2O %	2.70	3.09	0.137	3.34	7.440E-05	4.125E-05
OD 1/m	3.36	3.45	0.249	7.57	1.573E-12	4.518E-11
CT g-min/m^3	493.	505.	24.6	651.	3.12	1.548E-06

Time = 2100.0 seconds.

Upper temp(K)	357.8	338.9	293.5	322.4	312.8	304.8	
Lower temp(K)	335.1	325.3	293.0	312.8	304.8	302.9	273.0
Upper vol(m**3)	12.7	3.6	0.9	9.9	39.3	42.4	
Layer depth(m)	0.3	0.3	0.4	2.8	2.2	2.4	
Ceiling temp(K)	361.3	342.4	293.3	322.2	310.0	302.0	
Up wall temp(K)	362.3	341.5	293.2	320.8	308.6	301.0	
Low wall temp(K)	349.5	327.0	293.0	309.8	302.5	298.1	
Floor temp(K)	303.0	297.7	293.0	294.4	309.9	303.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	3.397E-05	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	3.397E-05	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	9.965E-01	2.497E-01	2.520E-09	4.217E-02	8.664E-03	1.090E-03	
Pressure(Pa)	-2.391E-01	9.735E-02	9.570E-02	5.188E-01	3.335E+00	3.598E+00	

Upper layer species

N2 %	76.3	76.3	79.3	76.5	76.5	76.5
O2 %	11.9	11.9	20.7	12.6	12.6	12.7
CO2 %	7.40	7.41	0.000	6.83	6.82	6.75
CO ppm	2.211E+03	2.213E+03	0.000	2.038E+03	2.038E+03	2.017E+03
TUHC %	2.956E-08	2.992E-08	0.000	3.982E-09	4.587E-09	5.705E-09
H2O %	3.83	3.83	0.000	3.53	3.53	3.49
OD 1/m	5.09	4.21	0.000	3.62	5.82	6.98
CT g-min/m^3	691.	654.	0.000	1.031E+03	863.	815.

Lower layer species

N2 %	77.1	76.9	79.2	76.7	0.144	0.148
O2 %	14.3	13.7	20.4	13.2	3.773E-02	3.879E-02
CO2 %	5.36	5.92	0.280	6.29	3.359E-05	1.956E-05
CO ppm	1.601E+03	1.769E+03	83.5	1.877E+03	0.379	0.198
TUHC %	5.494E-09	4.912E-09	7.525E-10	4.479E-09	2.516E-05	0.000
H2O %	2.77	3.06	0.145	3.25	7.440E-05	4.125E-05
OD 1/m	3.67	3.72	0.264	8.19	1.344E-12	4.519E-11
CT g-min/m^3	533.	547.	27.5	744.	3.12	1.548E-06

Time = 2200.0 seconds.

Upper temp(K)	354.6	335.4	293.4	321.3	312.0	304.3	
Lower temp(K)	334.0	324.4	293.0	312.0	304.3	302.8	273.0
Upper vol(m**3)	12.3	3.4	0.9	9.8	39.0	42.4	
Layer depth(m)	0.3	0.3	0.4	2.7	2.2	2.4	
Ceiling temp(K)	357.0	339.3	293.3	320.9	309.4	301.8	
Up wall temp(K)	358.9	339.1	293.2	319.9	308.3	300.9	
Low wall temp(K)	347.3	325.9	293.0	309.4	302.3	298.1	
Floor temp(K)	302.6	297.5	293.0	294.4	309.4	302.9	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	1.568E-05	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	1.568E-05	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	8.119E-01	1.823E-01	2.091E-09	3.631E-02	7.431E-03	9.277E-04	
Pressure(Pa)	-2.255E-01	1.206E-01	1.093E-01	5.121E-01	3.252E+00	3.502E+00	

Upper layer species

N2 %	76.3	76.3	79.3	76.5	76.5	76.5
O2 %	11.9	11.9	20.7	12.7	12.6	12.7
CO2 %	7.40	7.41	0.000	6.79	6.81	6.76
CO ppm	2.211E+03	2.213E+03	0.000	2.026E+03	2.032E+03	2.020E+03
TUHC %	2.956E-08	2.988E-08	0.000	4.352E-09	4.771E-09	5.532E-09
H2O %	3.83	3.83	0.000	3.51	3.52	3.50
OD 1/m	5.15	4.24	0.000	2.96	5.31	6.84
CT g-min/m^3	751.	703.	0.000	1.069E+03	928.	896.

Lower layer species

N2 %	77.1	76.9	79.2	76.8	6.966E-02	7.725E-02
O2 %	14.2	13.7	20.4	13.4	1.821E-02	2.019E-02
CO2 %	5.46	5.88	0.294	6.18	3.296E-05	1.956E-05
CO ppm	1.631E+03	1.757E+03	87.7	1.844E+03	0.379	0.198
TUHC %	5.299E-09	4.942E-09	7.629E-10	4.694E-09	2.516E-05	0.000
H2O %	2.82	3.04	0.152	3.19	7.440E-05	4.125E-05
OD 1/m	3.99	3.92	0.278	8.13	1.226E-12	4.504E-11
CT g-min/m^3	578.	591.	30.7	839.	3.12	1.549E-06

Time = 2300.0 seconds.

Upper temp(K)	351.8	332.9	293.4	320.4	311.4	303.9	
Lower temp(K)	332.8	323.4	293.0	311.4	303.9	302.7	273.0
Upper vol(m**3)	12.1	3.3	1.0	9.7	38.8	42.4	
Layer depth(m)	0.3	0.3	0.4	2.7	2.2	2.4	
Ceiling temp(K)	353.1	336.5	293.3	319.7	308.9	301.6	
Up wall temp(K)	355.8	336.9	293.2	319.1	308.0	300.9	
Low wall temp(K)	345.2	324.9	293.0	309.1	302.2	298.1	
Floor temp(K)	302.3	297.3	293.0	294.4	308.9	302.7	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	4.793E-06	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	4.793E-06	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	6.742E-01	1.435E-01	1.772E-09	3.174E-02	6.516E-03	8.141E-04	
Pressure(Pa)	-2.176E-01	1.167E-01	1.104E-01	5.106E-01	3.160E+00	3.402E+00	

Upper layer species

N2 %	76.3	76.3	79.3	76.5	76.5	76.5
O2 %	11.9	11.9	20.7	12.7	12.6	12.7
CO2 %	7.40	7.41	0.000	6.76	6.79	6.77
CO ppm	2.211E+03	2.212E+03	0.000	2.019E+03	2.029E+03	2.021E+03
TUHC %	2.956E-08	2.987E-08	0.000	4.628E-09	4.906E-09	5.426E-09
H2O %	3.83	3.83	0.000	3.50	3.51	3.50
OD 1/m	5.20	4.27	0.000	2.54	4.90	6.64
CT g-min/m^3	811.	752.	0.000	1.101E+03	987.	974.

Lower layer species

N2 %	77.0	76.9	79.2	76.8	3.532E-02	4.165E-02
O2 %	14.1	13.8	20.4	13.5	9.225E-03	1.089E-02
CO2 %	5.53	5.86	0.308	6.10	3.296E-05	1.956E-05
CO ppm	1.650E+03	1.749E+03	91.9	1.822E+03	0.379	0.198
TUHC %	5.175E-09	4.973E-09	7.733E-10	4.833E-09	2.516E-05	0.000
H2O %	2.86	3.03	0.159	3.15	7.440E-05	4.125E-05
OD 1/m	4.27	4.03	0.293	8.04	1.150E-12	4.397E-11
CT g-min/m^3	626.	637.	34.0	934.	3.12	1.549E-06

Time = 2400.0 seconds.

Upper temp(K)	349.3	329.8	293.4	318.3	310.6	303.6	
Lower temp(K)	330.5	315.9	293.0	311.2	303.6	302.6	273.0
Upper vol(m**3)	12.0	13.8	1.0	11.0	38.2	42.4	
Layer depth(m)	0.3	1.3	0.4	3.0	2.2	2.4	
Ceiling temp(K)	349.5	334.0	293.3	318.4	308.4	301.5	
Up wall temp(K)	353.0	334.8	293.2	318.2	307.7	300.8	
Low wall temp(K)	343.2	323.7	293.0	308.8	302.0	298.0	
Floor temp(K)	302.0	297.2	293.0	294.3	308.4	302.6	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	9.563E-05	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	9.563E-05	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	5.651E-01	1.038E-01	1.678E-09	2.324E-02	5.461E-03	7.159E-04	
Pressure(Pa)	-1.387E-01	2.518E-01	2.596E-01	4.944E-01	3.144E+00	3.363E+00	

Upper layer species

N2 %	76.3	76.3	79.3	76.6	76.5	76.5
O2 %	11.9	12.1	20.7	13.0	12.7	12.7
CO2 %	7.40	7.28	0.000	6.50	6.74	6.77
CO ppm	2.211E+03	2.172E+03	0.000	1.940E+03	2.012E+03	2.021E+03
TUHC %	2.956E-08	2.610E-08	0.000	2.790E-09	4.732E-09	5.344E-09
H2O %	3.83	3.76	0.000	3.36	3.48	3.50
OD 1/m	5.24	0.429	0.000	3.56	5.39	6.36
CT g-min/m^3	871.	773.	0.000	1.140E+03	1.045E+03	1.049E+03

Lower layer species

N2 %	77.0	76.9	79.1	76.7	1.616E-02	2.311E-02
O2 %	14.1	13.9	20.3	13.1	4.221E-03	6.046E-03
CO2 %	5.61	5.77	0.331	6.41	1.877E-05	1.956E-05
CO ppm	1.674E+03	1.722E+03	98.9	1.915E+03	0.285	0.198
TUHC %	5.111E-09	5.071E-09	7.916E-10	3.095E-09	2.516E-05	0.000
H2O %	2.90	2.98	0.171	3.31	4.510E-05	4.125E-05
OD 1/m	4.71	7.42	0.316	1.59	7.437E-13	4.519E-11
CT g-min/m^3	677.	708.	37.6	988.	3.12	1.549E-06

6.6 Input Data for EXITT for Scenario 5 (Example Data File SCEN-5.BLD)

```
6 25
1 1 2 4 5
 6 6 5 3 5
 7 7 7 8 8
 8 5 2 1 2
 1 4 1 5 5
1 2 3 3 5
 6 7 8 9 10
 3 2 1 6 7
 8 5 3 1 3
 2 5 2 8 8
2.4 2.4 2.4 4.9 2.4
 2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
 0.  2.5 0.  0.  0.
35 35 35 35 35
 35 35 35 35 35
 35 35 35 35 35
 35 35 35 35 35
 35 35 35 35 35
2
-1. -1.
3 5
83 83 95 83 71
 59 59 59 83 59
 83 83 83 59 59
 59 71 95 83 95
 83 71 83 59 59
71 71 71 71 95
 71 71 71 71 71
 71 71 71 71 71
 71 95 71 71 71
 71 71 71 71 71
 31
  1  13      2.81012
  1  18      2.59080
  1  19      2.49955
  2  19      2.13360
  2  21      2.60867
  2  23      2.93147
  3  18      2.28600
  3  20      2.18204
  4   3      2.20070
  4  20      1.70857
  4  22      4.55663
  5  17      1.82880
  5  22      1.73763
  5  25      1.61465
  6  14      1.37160
  6  17      2.07185
  7  15      1.37160
  7  17      3.28570
  8  16      1.95167
  8  24      2.32629
  8  25      1.90500
  9  18      1.06680
 10  24      1.21920
```

```
 11  20      1.02233
 12  21      1.70388
 13  19      3.35626
 16  24      2.84707
 17  22      1.56905
 20  23      1.44579
 21  23      1.06680
 24  25      3.13903
4
25 23 2 0
1 0 1 1
0 0 0 0
8 8 7 6
0 0 1 1
0. 0. 0. 0.
-1. -1. -1. -1.
```

6.7 Printed Output from EXITT for Scenario 5

```
EXITT Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89
FAST DUMP FILE    :  SCEN-5.DMP
BUILDING/OCCUPANT FILE: SCEN-5.BLD
EXITT OUTPUT FILE      : SCEN-5.EXT
EXITT DUMP FILE        : SCEN-5.EVA

NO. OF ROOMS (RUN WITH FAST)        6
NO. OF DOORS                        3
NO. OF WINDOWS                      3
TOTAL NUMBER OF NODES              25
```

EXITT NODE NUMBER	EXITT ROOM NUMBER	FAST ROOM NUMBER	ROOM HEIGHT (M)	FLOOR HEIGHT (M)
1*	1	1	2.4	0.0
2*	2	1	2.4	0.0
3	3	2	2.4	0.0
4	3	4	4.9	0.0
5	5	5	2.4	0.0
6	6	6	2.4	0.0
7	7	6	2.4	0.0
8	8	5	2.4	0.0
9	9	3	2.4	0.0
10	10	5	2.4	0.0
11	3	7	2.4	0.0
12	2	7	2.4	0.0
13	1	7	2.4	0.0
14	6	8	2.4	0.0
15	7	8	2.4	0.0
16	8	8	2.4	0.0
17	5	5	2.4	0.0
18	3	2	2.4	0.0
19*	1	1	2.4	0.0
20	3	2	2.4	0.0
21*	2	1	2.4	0.0
22	5	4	2.4	2.5
23*	2	1	2.4	0.0
24	8	5	2.4	0.0
25	8	5	2.4	0.0

* INDICATES NODE IS IN BURN ROOM

NODE NUMBER	NOISE LEVEL (DECIBELS)
1	35
2	35
3	35
4	35
5	35
6	35
7	35
8	35
9	35
10	35
11	35
12	35
13	35
14	35
15	35
16	35
17	35

18	35
19	35
20	35
21	35
22	35
23	35
24	35
25	35

NUMBER OF SMOKE DETECTORS: 2

SMOKE DET NO.	NODE	ACTIVATION TIME (SEC)	
1	3	DETERMINED BY EXITT TO BE	0.0 SECONDS
2	5	DETERMINED BY EXITT TO BE	0.0 SECONDS

EXITT NODE NUMBER	ALARM LEVEL (DECIBELS) 1	2
1	83	71
2	83	71
3	95	71
4	83	71
5	71	95
6	59	71
7	59	71
8	59	71
9	83	71
10	59	71
11	83	71
12	83	71
13	83	71
14	59	71
15	59	71
16	59	71
17	71	95
18	95	71
19	83	71
20	95	71
21	83	71
22	71	71
23	83	71
24	59	71
25	59	71

EDGE LIST

FROM NODE	TO NODE	DISTANCE (M)
1 -	13	2.81
-	18	2.59
-	19	2.50
2 -	19	2.13
-	21	2.61
-	23	2.93
3 -	4	2.20
-	18	2.29
-	20	2.18
4 -	3	2.20
-	20	1.71
-	22	4.56
5 -	17	1.83
-	22	1.74
-	25	1.61
6 -	14	1.37
-	17	2.07
7 -	15	1.37
-	17	3.29
8 -	16	1.95
-	24	2.33
-	25	1.90
9 -	18	1.07
10 -	24	1.22

11	-	20	1.02
12	-	21	1.70
13	-	1	2.81
	-	19	3.36
14	-	6	1.37
15	-	7	1.37
16	-	8	1.95
	-	24	2.85
17	-	5	1.83
	-	6	2.07
	-	7	3.29
	-	22	1.57
18	-	1	2.59
	-	3	2.29
	-	9	1.07
19	-	1	2.50
	-	2	2.13
	-	13	3.36
20	-	3	2.18
	-	4	1.71
	-	11	1.02
	-	23	1.45
21	-	2	2.61
	-	12	1.70
	-	23	1.07
22	-	4	4.56
	-	5	1.74
	-	17	1.57
23	-	2	2.93
	-	20	1.45
	-	21	1.07
24	-	8	2.33
	-	10	1.22
	-	16	2.85
	-	25	3.14
25	-	5	1.61
	-	8	1.90
	-	24	3.14

TOTAL NUMBER OF DIRECTED EDGES 62

NUMBER OF PEOPLE 4

PERSON	LOCATION	AGE	SEX	STATE	SLEEP PENALTY	REQUIRE ASSISTANCE	TRAVEL SPEED
1	8	25	MALE	ASLEEP	0.0	NO	1.30
2	8	23	FEMALE	ASLEEP	0.0	NO	1.30
3	7	2	MALE	ASLEEP	0.0	YES	1.30
4	6	0	MALE	ASLEEP	0.0	YES	1.30

ACTIONS TAKEN BY PERSON 1

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
8	5	0.0	--	--	--	INITIAL POSITION
8	5	314.0	--	--	23	INVESTIGATE FIRE
25	5	315.5	--	--	23	ARRIVE AT NEW NODE
5	5	316.7	--	--	23	ARRIVE AT NEW NODE
5	5	316.7	--	--	23	BAD SMOKE - CURRENT ACTION STOPPED
5	5	319.7	3	--	7	GO TO RESCUE OTHER
17	5	320.8	3	--	7	ARRIVE AT NEW NODE
7	6	322.7	3	--	7	ARRIVE AT NEW NODE
7	6	322.7	3	--	--	PREPARE ANOTHER TO LEAVE BUILDING
7	6	325.7	--	--	--	ASSIST OTHER(S) OUT OF BUILDING
17	5	327.7	3	--	11	ARRIVE AT NEW NODE
22	4	328.6	3	--	11	ARRIVE AT NEW NODE
4	4	331.3	3	--	11	ARRIVE AT NEW NODE
20	2	332.3	3	--	11	ARRIVE AT NEW NODE
11	7	332.9	3	--	11	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 2

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
8	5	0.0	--	--	--	INITIAL POSITION
8	5	314.0	4	--	6	GO TO RESCUE OTHER
25	5	315.5	4	--	6	ARRIVE AT NEW NODE
5	5	316.7	4	--	6	ARRIVE AT NEW NODE
17	5	317.8	4	--	6	ARRIVE AT NEW NODE
6	6	319.0	4	--	6	ARRIVE AT NEW NODE
6	6	319.0	4	--	--	PREPARE ANOTHER TO LEAVE BUILDING
6	6	321.0	--	--	--	ASSIST OTHER(S) OUT OF BUILDING
17	5	322.2	4	--	11	ARRIVE AT NEW NODE
22	4	323.2	4	--	11	ARRIVE AT NEW NODE
4	4	325.9	4	--	11	ARRIVE AT NEW NODE
20	2	326.9	4	--	11	ARRIVE AT NEW NODE
11	7	327.5	4	--	11	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 3

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
7	6	0.0	--	--	--	INITIAL POSITION
7	6	322.7	--	1	--	RECEIVING ASSISTANCE
7	6	325.7	--	1	--	LEAVE BUILDING WITH ASSISTANCE
17	5	327.7	--	1	11	ARRIVE AT NEW NODE WITH ASSISTANCE
22	4	328.6	--	1	11	ARRIVE AT NEW NODE WITH ASSISTANCE
4	4	331.3	--	1	11	ARRIVE AT NEW NODE WITH ASSISTANCE
20	2	332.3	--	1	11	ARRIVE AT NEW NODE WITH ASSISTANCE
11	7	332.9	--	1	11	LEAVE BUILDING THROUGH DOOR WITH ASSISTANCE

ACTIONS TAKEN BY PERSON 4

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
6	6	0.0	--	--	--	INITIAL POSITION
6	6	319.0	--	2	--	RECEIVING ASSISTANCE
6	6	321.0	--	2	--	LEAVE BUILDING WITH ASSISTANCE
17	5	322.2	--	2	11	ARRIVE AT NEW NODE WITH ASSISTANCE
22	4	323.2	--	2	11	ARRIVE AT NEW NODE WITH ASSISTANCE
4	4	325.9	--	2	11	ARRIVE AT NEW NODE WITH ASSISTANCE
20	2	326.9	--	2	11	ARRIVE AT NEW NODE WITH ASSISTANCE
11	7	327.5	--	2	11	LEAVE BUILDING THROUGH DOOR WITH ASSISTANCE

6.8 Printed Output from TENAB for Scenario 5

```
FAST  Version:  18.3
TENAB Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89

FAST DUMP FILE   :  SCEN-5.DMP
EXITT DUMP FILE  :  SCEN-5.EVA
TENAB OUTPUT FILE:  SCEN-5.TEN
TENAB DUMP FILE  :  SCEN-5.PLT
```

OCCUPANT	NODE NUMBER	ROOM NUMBER	FLOOR ELEVATION	ENTER TIME (S)
1	8	5	0.00	0.0
	25	5	0.00	315.5
	5	5	0.00	316.7
	17	5	0.00	320.8
	7	6	0.00	322.7
	17	5	0.00	327.7
	22	4	2.50	328.6
	4	4	0.00	331.3
	20	2	0.00	332.3
	11	DOOR	0.00	332.9
2	8	5	0.00	0.0
	25	5	0.00	315.5
	5	5	0.00	316.7
	17	5	0.00	317.8
	6	6	0.00	319.0
	17	5	0.00	322.2
	22	4	2.50	323.2
	4	4	0.00	325.9
	20	2	0.00	326.9
	11	DOOR	0.00	327.5
3	7	6	0.00	0.0
	17	5	0.00	327.7
	22	4	2.50	328.6
	4	4	0.00	331.3
	20	2	0.00	332.3
	11	DOOR	0.00	332.9
4	6	6	0.00	0.0
	17	5	0.00	322.2
	22	4	2.50	323.2
	4	4	0.00	325.9
	20	2	0.00	326.9
	11	DOOR	0.00	327.5

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED1	0.5	1.0
TEMP1 DEG C	65.0	100.0
CT (G-MIN/M3)	450.0	900.0
FED2	1.0	
TEMP2	1.0	
FED3	1.0	

```
PERSON  1
  TIME NODE  CONDITION     CAUSE   FED1        TEMP1       CT          FLUX
                                   FED2        TEMP2
                                   FED3
 (SEC)                                                   (G-MIN/M3) (KW-SEC/M2)
   340.  11  ESCAPE               0.000E+00  0.493E+02  0.392E-01  0.109E-01
                                  0.236E-02  0.215E-03
                                  0.117E-01
  2410.  11  FINAL TIME           0.000E+00  0.493E+02  0.392E-01  0.109E-01
                                  0.236E-02  0.215E-03
                                  0.117E-01

PERSON  2
  TIME NODE  CONDITION     CAUSE   FED1        TEMP1       CT          FLUX
                                   FED2        TEMP2
                                   FED3
 (SEC)                                                   (G-MIN/M3) (KW-SEC/M2)
   330.  11  ESCAPE               0.000E+00  0.444E+02  0.385E-01  0.904E-02
                                  0.227E-02  0.188E-03
                                  0.115E-01
  2410.  11  FINAL TIME           0.000E+00  0.444E+02  0.385E-01  0.904E-02
                                  0.227E-02  0.188E-03
                                  0.115E-01

PERSON  3
  TIME NODE  CONDITION     CAUSE   FED1        TEMP1       CT          FLUX
                                   FED2        TEMP2
                                   FED3
 (SEC)                                                   (G-MIN/M3) (KW-SEC/M2)
   340.  11  ESCAPE               0.000E+00  0.493E+02  0.349E-01  0.108E-01
                                  0.234E-02  0.215E-03
                                  0.117E-01
  2410.  11  FINAL TIME           0.000E+00  0.493E+02  0.349E-01  0.108E-01
                                  0.234E-02  0.215E-03
                                  0.117E-01

PERSON  4
  TIME NODE  CONDITION     CAUSE   FED1        TEMP1       CT          FLUX
                                   FED2        TEMP2
                                   FED3
 (SEC)                                                   (G-MIN/M3) (KW-SEC/M2)
   330.  11  ESCAPE               0.000E+00  0.444E+02  0.349E-01  0.903E-02
                                  0.226E-02  0.188E-03
                                  0.115E-01
  2410.  11  FINAL TIME           0.000E+00  0.444E+02  0.349E-01  0.903E-02
                                  0.226E-02  0.188E-03
                                  0.115E-01

FED1  - THE FRACTIONAL EFFECTIVE DOSE DUE TO
        CO,CO2,HCN AND O2 BASED ON THE HAZARD I
        TENAB FED PLUS AN OXYGEN TERM
FED2  - THE FRACTIONAL EFFECTIVE DOSE DUE TO
        CO,CO2,HCN AND O2 BASED ON PURSER'S
        EQUATIONS
FED3  - THE FRACTIONAL EFFECTIVE DOSE DUE TO
        CO2 BASED ON PURSER'S EQUATIONS
TEMP1 - THE AVERAGE TEMPERATURE OF THE
        LAYER OF THE ROOM TO WHICH THE
        PERSON IS EXPOSED - IT IS THE
        SAME AS TEMP USED IN THE HAZARD I TENAB
TEMP2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO
        CONVECTIVE HEAT BASED ON PURSER'S
        EQUATIONS

* IF PERSON IS WAITING AT A WINDOW, HE IS CONSIDERED TO BE
AT THE NODE (ROOM) FROM WHICH HE CAME PRIOR TO REACHING THE WINDOW
THIS ALLOWS HIM TO CONTINUE TO BE EXPOSED TO THE ROOM FIRE CONDITIONS
```

CHAPTER 7. SCENARIO 6, FAMILY ROOM FIRE WITH DOORS OPEN

7.1 Summary of Fire Scenario 6

For scenario 6, a cigarette fire in the sofa in the family room spreads to the panelling in the room. Four occupants are in the house.

BUILDING: Two-story detached house

OCCUPANTS: Father, aged 45, fully capable but asleep in bedroom 1.

Mother, aged 40, fully capable but asleep in bedroom 1.

Boy, aged 16, asleep in bedroom 2, sleeping penalty 15.

Girl, aged 14, asleep in bedroom 3.

DOORS: All doors downstairs open; all bedroom doors closed.

FIRE: Cigarette fire in family room sofa spreads to panelling.

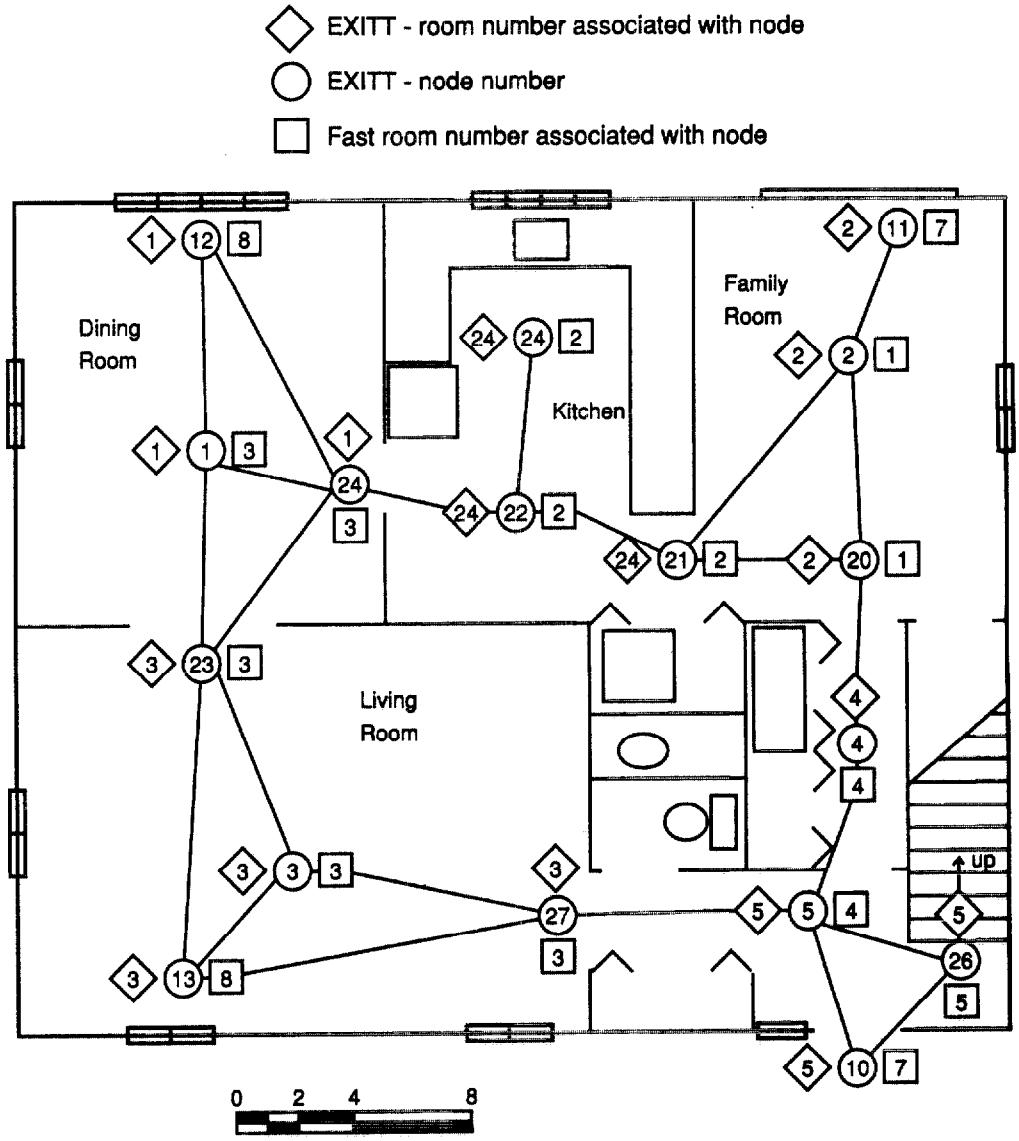
FUEL: Sofa taken directly from HAZARD I fire properties database, material code UPS001 (Upholstered sofa, F32, wood frame, PU foam, FR olefin). Data for panelling taken from test R1 and R5 in reference [2].

CEILINGS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

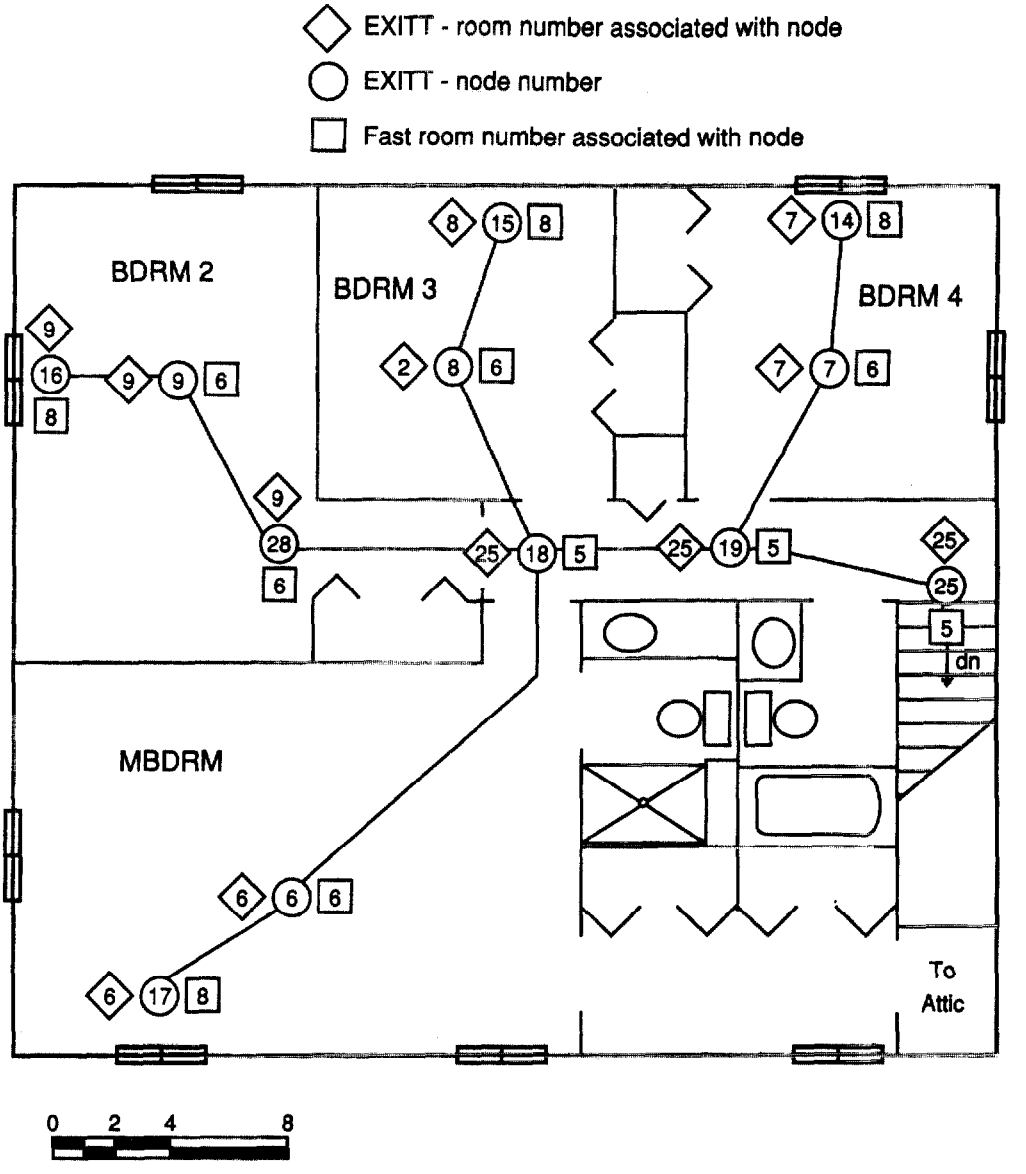
WALLS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

FLOORS: First floor is 0.15-m-thick concrete slab, taken directly from HAZARD I materials property database. Material code CNC001, Concrete, normal weight, Type I cement, Dolomite aggregate. Second floor is Douglas fir plywood, taken directly from HAZARD I materials property database. Material code DFP001, Douglas fir plywood, 10% moisture.

7.2 Floor Plan and EXITT Building Description for Scenario 6



Lower Floor

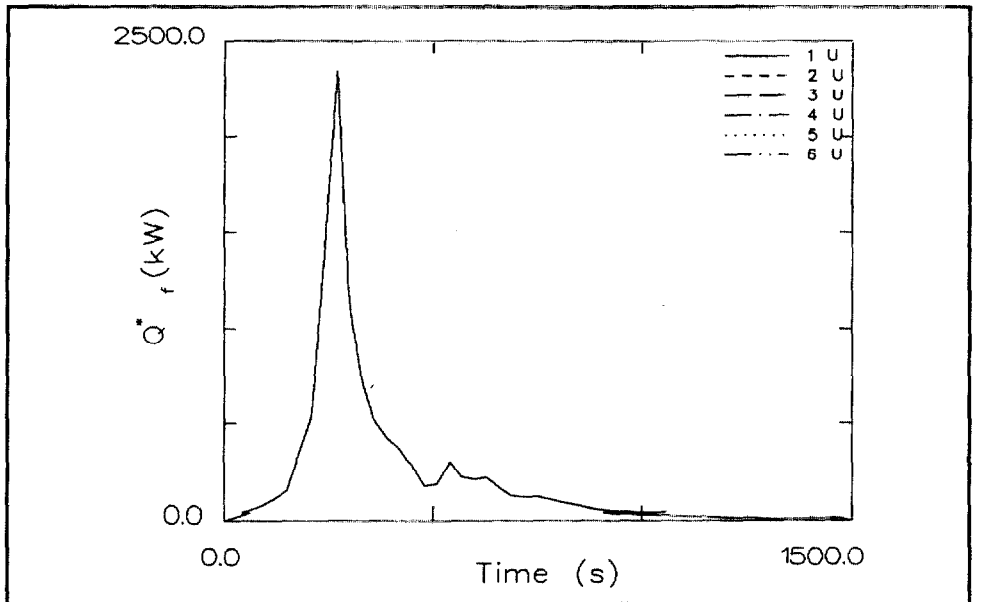

EXITT - room number associated with node
EXITT - node number
Fast room number associated with node
BDRM 2
BDRM 3
BDRM 4
MBDRM
dn
To
Attic
0 2 4 8

Upper Floor

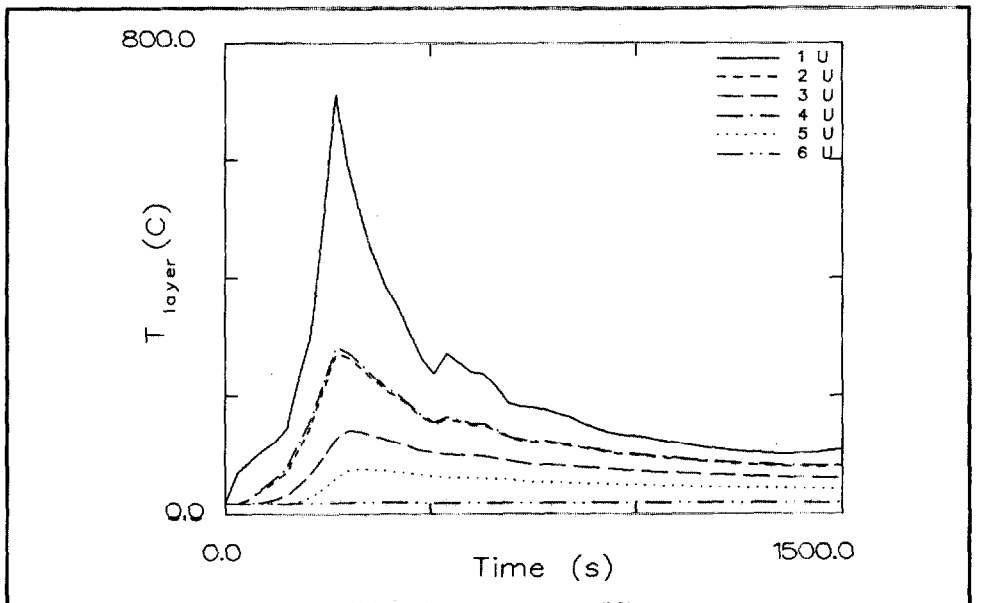
7.3 FAST Input Data for Scenario 6 (Example Data File SCEN-6.DAT)

```
VERSN   18   Scenario 6, Sofa and Paneling in Family Room
TIMES   1500 100  30   0   0
TAMB   293.  101300.      0.
EAMB   273.  101300.      0.
HI/F     0.00   0.00   0.00   0.00   0.00   2.70
WIDTH    3.20   3.00   7.40   3.09   1.00   6.00
DEPTH    4.30   4.30   5.20   3.09   7.90   9.50
HEIGH    2.40   2.40   2.40   2.40   4.90   2.40
HVENT   1  2  1   1.10   2.10   0.00
HVENT   1  4  1   1.10   2.10   0.00
HVENT   1  7  1   1.10   0.20   0.00   0.00
HVENT   2  3  1   1.10   2.10   0.00
HVENT   3  4  1   1.10   2.10   0.00
HVENT   3  5  1   1.10   2.10   0.00
HVENT   5  6  1   0.01   4.80   2.70
CEILI GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
WALLS GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
FLOOR CONCRETE  CONCRETE  CONCRETE  CONCRETE  CONCRETE  WOOD
CHEMI     0.    0.   6.0    18100000.  300.
LFBO   1
LFBT   2
LFPOS  1
LFMAX 13
FTIME   100.   50.   65.   75.  110.   30.   50.  120.   40.   40.  150.  180.  490.
FMASS  0.000 0.004 0.008 0.032 0.165 0.153 0.224 0.245 0.199 0.376 0.376 0.122 0.041 0.000
FHIGH  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00
FAREA  0.50  0.50  0.50  0.50  0.50  0.50  0.50  0.50  0.50  0.50  0.50  0.50  0.50  0.00
FQDOT  0.00  7.24E+04 1.45E+05 5.79E+05 2.99E+06 2.77E+06 4.05E+06 4.43E+06 3.60E+06 6.81E+06 6.81E+06
       2.21E+06 7.42E+05 0.00
CT     1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000
HCR    0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080
CO     0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019
OD     0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013
DUMPR SCEN-6.DMP
```

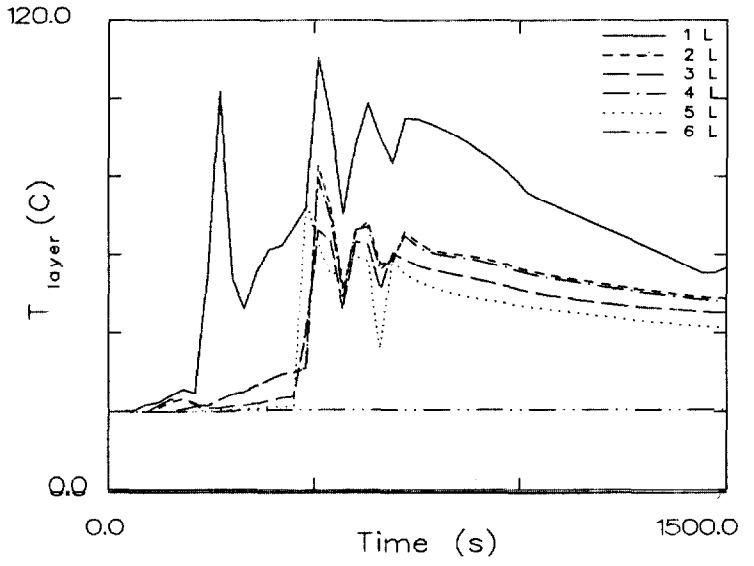
7.4 Selected Graphs from Scenario 6



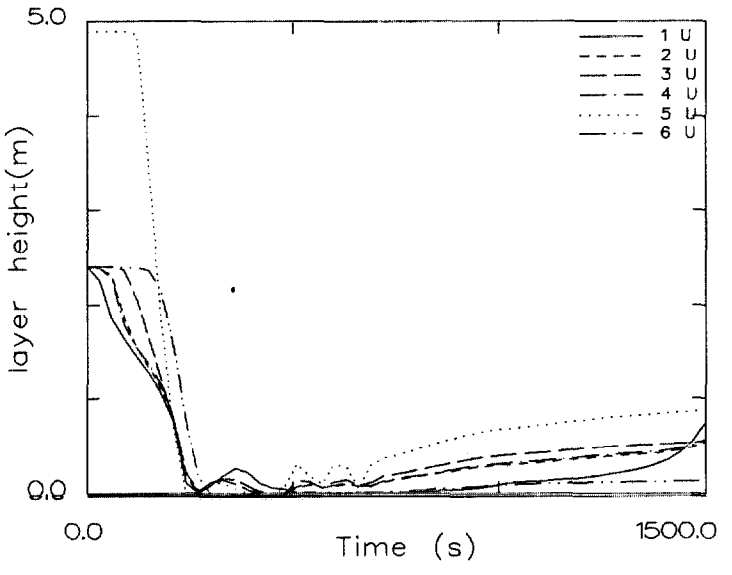
Heat release rate of fire (kW)



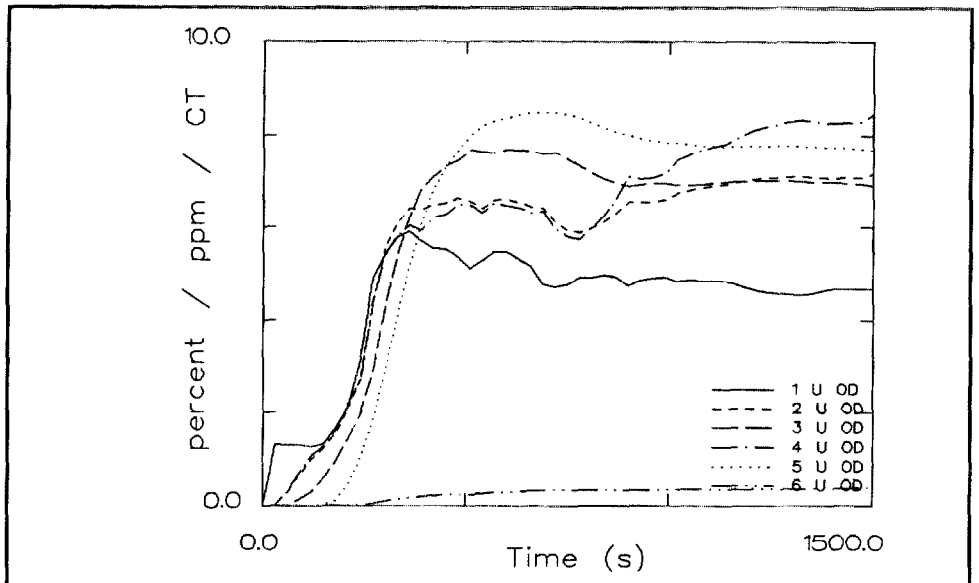
Upper layer temperature (°C)



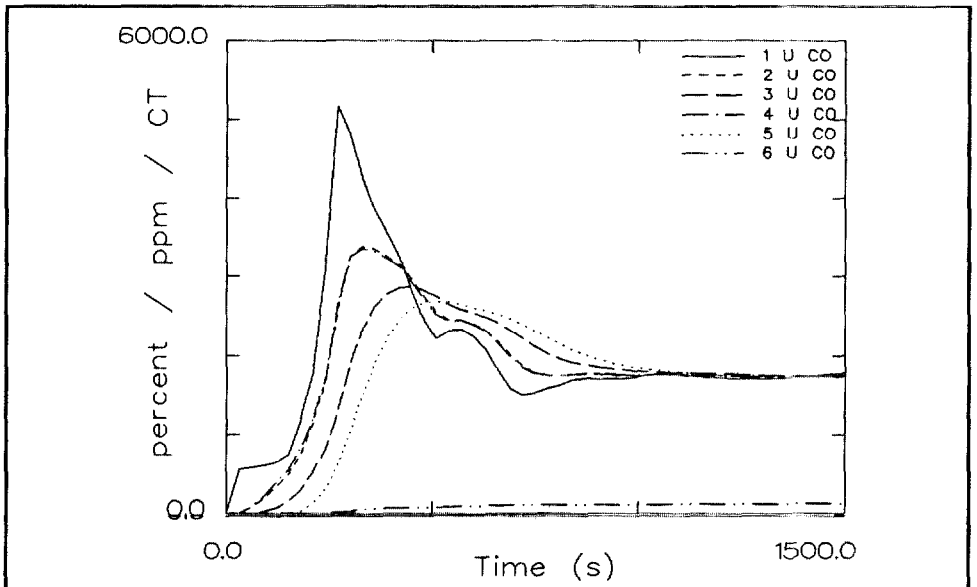
Lower layer temperature (°C)



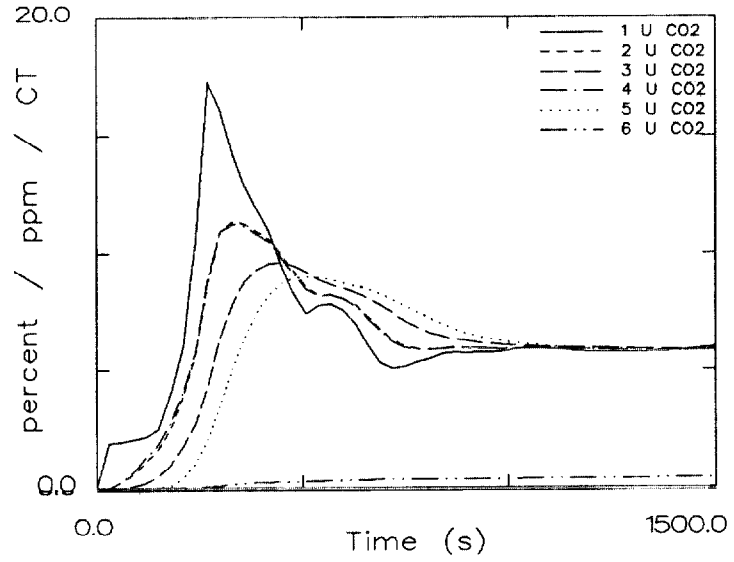
Layer interface height (m)



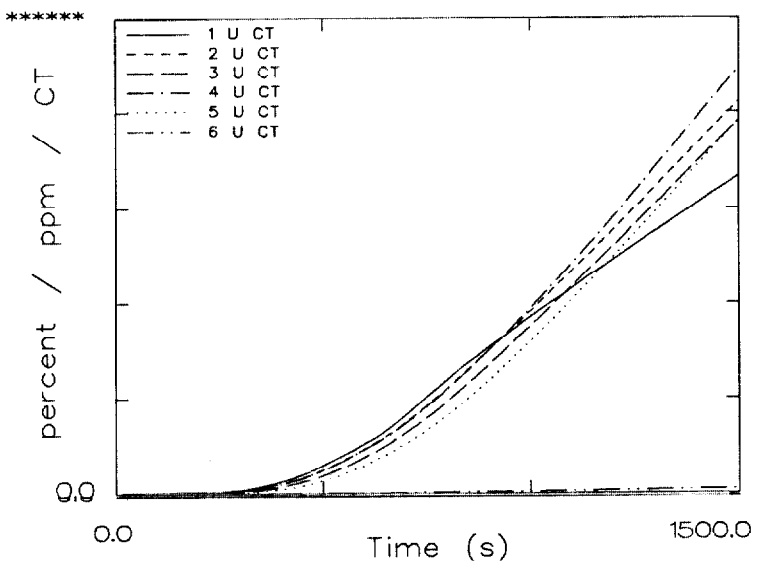
Smoke optical density (m^{-1})



Carbon monoxide concentration (ppm)



Carbon dioxide concentration (%)



Concentration-Time product (ppm-min)

7.5 Printed Output from FAST for Scenario 6

FAST version 18.3.2 - created February 1, 1989 Scenario 6, Sofa and Paneling in Family Room

Total compartments = 6

FLOOR PLAN

Width	3.2	3.0	7.4	3.1	1.0	6.0
Depth	4.3	4.3	5.2	3.1	7.9	9.5
Height	2.4	2.4	2.4	2.4	4.9	2.4
Area	13.8	12.9	38.5	9.5	7.9	57.0
Volume	33.0	31.0	92.4	22.9	38.7	136.8
Ceiling	2.4	2.4	2.4	2.4	4.9	5.1
Floor	0.0	0.0	0.0	0.0	0.0	2.7

CONNECTIONS

1 (1)	Width	0.00	1.10	0.00	1.10	0.00	0.00	1.10
	Soffit	0.00	2.10	0.00	2.10	0.00	0.00	0.20
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	2.10	0.00	2.10	0.00	0.00	0.20
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 (1)	Width	1.10	0.00	1.10	0.00	0.00	0.00	0.00
	Soffit	2.10	0.00	2.10	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	2.10	0.00	2.10	0.00	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 (1)	Width	0.00	1.10	0.00	1.10	1.10	0.00	0.00
	Soffit	0.00	2.10	0.00	2.10	2.10	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	2.10	0.00	2.10	2.10	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 (1)	Width	1.10	0.00	1.10	0.00	0.00	0.00	0.00
	Soffit	2.10	0.00	2.10	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	2.10	0.00	2.10	0.00	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 (1)	Width	0.00	0.00	1.10	0.00	0.00	0.01	0.00
	Soffit	0.00	0.00	2.10	0.00	0.00	4.80	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	2.70	0.00
	a.Soffit	0.00	0.00	2.10	0.00	0.00	4.80	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	2.70	0.00
6 (1)	Width	0.00	0.00	0.00	0.00	0.01	0.00	0.00
	Soffit	0.00	0.00	0.00	0.00	2.10	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	0.00	4.80	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	2.70	0.00	0.00

Material names

Ceiling:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Walls:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Floor:	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	WOOD

```
Thermal data base used: THERMAL.TPF

 Name       Conductivity Specific heat   Density       Thickness   Emissivity     **Codes**

 CONCRETE       1.75        1.000E+03    2.200E+03    0.150        0.940          188    U
 GYPSUM        0.160         900.         800.        1.600E-02    0.900           38    U
 WOOD          7.000E-02    1.000E+03     250.        1.600E-02    0.980                 U

Compartment of origin is                              1
Print interval (seconds)                            100
Number of fire specification intervals is            13
Total time (seconds)                               1500
Fire position                                         1
Limiting oxygen index (%) =                         6.0
Initial relative humidity (%) =                     0.0
Fire type is a SPECIFIED (CONSTRAINED)

Pyrolysis  temperature (K) =                    300.
Ambient air temperature (K) =                   293.
Ambient reference pressure (Pa) =            101300.
Reference elevation (m) =                        0.
External ambient temperature (K) =              273.
External reference pressure (Pa) =           101300.
Reference elevation (m) =                        0.

Fmass=   0.00      4.00E-03  8.00E-03  3.20E-02  0.17      0.15      0.22      0.25      0.20
         0.38      0.38      0.12      4.10E-02  0.00
Hcomb=   1.81E+07  1.81E+07  1.81E+07  1.81E+07  1.81E+07  1.81E+07  1.81E+07  1.81E+07  1.81E+07
         1.81E+07  1.81E+07  1.81E+07  1.81E+07  1.81E+07
Fqdot=   0.00      7.24E+04  1.45E+05  5.79E+05  2.99E+06  2.77E+06  4.05E+06  4.43E+06  3.60E+06
         6.81E+06  6.81E+06  2.21E+06  7.42E+05  0.00
Fhigh=   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
         0.00      0.00      0.00      0.00      0.00
C/CO2=   1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02
         1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02
CO/CO2=  1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02
         1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02
H/C=     8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02
         8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02
CT=      1.0       1.0       1.0       1.0       1.0       1.0       1.0       1.0       1.0
         1.0       1.0       1.0       1.0       1.0
Ftime=   1.00E+02   50.       65.       75.       1.10E+02   30.       50.      1.20E+02   40.
         40.      1.50E+02   1.80E+02  4.90E+02
Dump file = SCEN-6.DMP
```

Time = 0.0 seconds.

Upper temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Lower temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.0	0.0	0.1	0.0	0.0	0.1	
Layer depth(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pressure(Pa)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	

Upper layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 100.0 seconds.

Upper temp(K)	385.7	319.9	295.6	323.9	293.0	293.0	
Lower temp(K)	294.9	293.1	293.0	293.3	293.0	293.0	273.0
Upper vol(m**3)	11.2	8.5	3.7	6.8	0.0	0.6	
Layer depth(m)	0.8	0.7	0.1	0.7	0.0	0.0	
Ceiling temp(K)	315.0	296.2	293.1	296.8	293.0	293.0	
Up wall temp(K)	309.9	295.4	293.1	295.9	293.0	293.0	
Low wall temp(K)	296.5	293.4	293.0	293.5	293.0	293.0	
Floor temp(K)	293.5	293.1	293.0	293.1	293.0	293.0	
Plume flow(kg/s)	4.126E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	4.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	7.240E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	7.240E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	4.170E+00	2.963E-02	2.656E-06	5.166E-02	0.000E+00	5.273E-15	
Pressure(Pa)	6.391E-01	9.199E-01	9.719E-01	8.926E-01	9.351E-01	3.432E-01	

Upper layer species

N2 %	77.7	78.7	79.2	78.6	79.3	79.3
O2 %	19.1	20.1	20.6	20.0	20.7	20.7
CO2 %	2.05	0.784	0.115	0.920	0.000	0.000
CO ppm	611.	234.	34.3	275.	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	1.06	0.405	5.928E-02	0.475	0.000	0.000
OD 1/m	1.29	0.788	0.172	0.867	0.000	0.000
CT g-min/m^3	14.6	2.77	0.282	3.00	0.000	0.000

Lower layer species

N2 %	79.2	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	5.201E-02	3.170E-03	2.421E-12	9.983E-03	1.103E-14	0.000
CO ppm	15.5	0.946	7.227E-10	2.98	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	2.688E-02	1.638E-03	1.251E-12	5.159E-03	5.527E-15	0.000
OD 1/m	4.102E-02	2.290E-03	1.975E-12	7.090E-03	0.000	0.000
CT g-min/m^3	0.129	7.923E-04	3.259E-12	3.309E-03	6.616E-15	0.000

Time = 200.0 seconds.

Upper temp(K)	558.2	414.0	338.2	425.2	300.6	293.1	
Lower temp(K)	297.8	295.4	294.3	295.0	293.0	293.0	273.0
Upper vol(m**3)	20.9	19.1	56.8	14.0	30.4	34.5	
Layer depth(m)	1.5	1.5	1.5	1.5	3.8	0.6	
Ceiling temp(K)	372.6	319.4	299.8	323.2	293.5	293.0	
Up wall temp(K)	358.3	313.4	298.2	316.5	293.4	293.0	
Low wall temp(K)	315.2	298.4	294.6	298.8	293.1	293.0	
Floor temp(K)	296.1	293.7	293.2	293.8	293.0	293.0	
Plume flow(kg/s)	9.980E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	2.646E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	4.790E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	4.790E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	2.788E+02	1.209E+01	2.363E-01	1.725E+01	1.914E-04	1.029E-11	
Pressure(Pa)	5.103E+00	6.224E+00	6.882E+00	6.259E+00	7.428E+00	2.098E+00	

Upper layer species

N2 %	75.0	76.6	78.1	76.4	79.1	79.3
O2 %	16.3	18.0	19.5	17.8	20.5	20.7
CO2 %	5.47	3.42	1.49	3.65	0.281	7.219E-03
CO ppm	1.632E+03	1.020E+03	446.	1.088E+03	84.0	2.16
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	2.82	1.77	0.772	1.88	0.145	3.731E-03
OD 1/m	1.98	1.93	1.28	2.04	0.317	6.473E-03
CT g-min/m^3	31.6	17.6	7.77	18.6	0.682	1.717E-02

Lower layer species

N2 %	79.2	79.2	79.2	79.2	79.3	79.3
O2 %	20.6	20.6	20.7	20.7	20.7	20.7
CO2 %	0.141	0.102	7.429E-02	8.527E-02	3.356E-07	2.407E-10
CO ppm	42.0	30.6	22.2	25.5	1.002E-04	7.186E-08
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	7.265E-02	5.288E-02	3.839E-02	4.406E-02	1.734E-07	1.244E-10
OD 1/m	9.378E-02	7.368E-02	5.060E-02	6.259E-02	1.325E-07	2.015E-10
CT g-min/m^3	1.05	0.634	0.130	0.714	1.116E-06	1.305E-09

Time = 300.0 seconds.

Upper temp(K)	857.7	537.9	416.4	545.9	348.8	294.5	
Lower temp(K)	326.8	297.4	294.4	297.3	293.3	293.1	273.0
Upper vol(m**3)	31.8	29.4	87.8	21.8	37.8	136.7	
Layer depth(m)	2.3	2.3	2.3	2.3	4.8	2.4	
Ceiling temp(K)	692.3	388.1	327.5	394.0	304.4	293.1	
Up wall temp(K)	668.2	372.5	320.1	377.9	301.7	293.1	
Low wall temp(K)	639.1	340.6	306.8	343.7	296.7	293.1	
Floor temp(K)	352.1	300.7	295.1	301.2	293.5	293.2	
Plume flow(kg/s)	2.516E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.639E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.146E+06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	9.523E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.933E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.774E+05
On target(W/m^2)	5.736E+03	2.028E+02	1.306E+01	2.308E+02	5.477E-01	2.814E-07	
Pressure(Pa)	1.074E+01	1.327E+01	1.508E+01	1.319E+01	1.661E+01	8.303E+00	

Upper layer species

N2 %	57.7	68.1	73.8	67.7	76.5	79.2
O2 %	5.44	11.3	15.5	11.2	17.9	20.6
CO2 %	16.1	10.9	6.37	10.9	3.47	9.937E-02
CO ppm	4.812E+03	3.255E+03	1.902E+03	3.253E+03	1.036E+03	29.7
TUHC %	11.2	3.28	0.555	3.71	6.688E-02	2.040E-04
H2O %	8.33	5.63	3.29	5.63	1.79	5.135E-02
OD 1/m	5.42	5.54	4.24	5.39	2.87	9.041E-02
CT g-min/m^3	80.6	59.6	36.4	61.1	16.8	0.429

Lower layer species

N2 %	71.7	79.1	79.0	79.0	79.3	79.3
O2 %	15.1	20.5	20.4	20.4	20.7	20.7
CO2 %	6.03	0.256	0.387	0.342	3.356E-07	2.410E-10
CO ppm	1.801E+03	76.3	115.	102.	1.003E-04	1.372E-07
TUHC %	3.60	9.400E-03	7.538E-03	1.853E-02	0.000	0.000
H2O %	3.12	0.132	0.200	0.177	1.734E-07	1.238E-10
OD 1/m	0.328	1.027E-02	9.617E-03	1.180E-02	8.286E-11	8.877E-13
CT g-min/m^3	8.87	1.17	0.618	1.22	9.183E-06	2.228E-09

Time = 400.0 seconds.

Upper temp(K)	649.0	479.0	399.2	483.7	348.5	294.9	
Lower temp(K)	334.1	301.7	296.1	301.6	294.2	293.4	273.0
Upper vol(m**3)	30.5	30.1	91.3	22.3	38.7	136.7	
Layer depth(m)	2.2	2.3	2.4	2.3	4.9	2.4	
Ceiling temp(K)	578.9	391.8	337.0	396.4	311.5	293.3	
Up wall temp(K)	561.4	377.3	328.5	381.5	307.5	293.3	
Low wall temp(K)	527.0	346.7	313.1	349.2	300.2	293.2	
Floor temp(K)	343.7	303.2	296.6	303.7	294.2	293.4	
Plume flow(kg/s)	1.542E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.530E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	4.216E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	4.181E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	3.467E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.198E+04
On target(W/m^2)	9.056E+02	6.747E+01	7.187E+00	7.465E+01	5.333E-01	8.011E-07	
Pressure(Pa)	6.285E-01	1.910E+00	3.175E+00	1.840E+00	4.391E+00	1.081E+01	

Upper layer species

N2 %	44.4	53.9	62.7	53.8	68.5	79.1
O2 %	4.65	7.63	10.7	7.66	13.3	20.5
CO2 %	11.6	10.8	9.42	10.7	7.76	0.220
CO ppm	3.470E+03	3.226E+03	2.813E+03	3.197E+03	2.316E+03	65.7
TUHC %	32.4	21.2	11.6	21.5	5.87	3.044E-02
H2O %	6.01	5.58	4.87	5.53	4.01	0.114
OD 1/m	5.59	6.42	6.92	6.06	6.35	0.205
CT g-min/m^3	262.	212.	148.	208.	91.4	2.42

Lower layer species

N2 %	79.0	79.0	79.0	79.0	79.3	79.3
O2 %	20.4	20.4	20.4	20.4	20.7	20.7
CO2 %	0.388	0.382	0.385	0.385	3.623E-08	2.420E-10
CO ppm	116.	114.	115.	115.	5.474E-04	1.378E-07
TUHC %	1.346E-02	7.563E-03	7.513E-03	7.546E-03	0.000	0.000
H2O %	0.200	0.197	0.199	0.199	8.515E-08	1.243E-10
OD 1/m	1.843E-04	2.847E-04	2.965E-04	2.430E-04	1.569E-11	8.877E-13
CT g-min/m^3	9.49	1.19	0.637	1.24	9.183E-06	2.232E-09

Time = 500.0 seconds.

Upper temp(K)	512.1	430.3	380.0	433.0	340.1	294.5	
Lower temp(K)	377.5	357.0	340.0	355.1	338.4	293.5	273.0
Upper vol(m**3)	33.0	30.4	88.6	22.4	36.5	136.1	
Layer depth(m)	2.4	2.4	2.3	2.4	4.6	2.4	
Ceiling temp(K)	505.8	380.6	336.3	383.9	312.7	293.4	
Up wall temp(K)	493.0	368.4	328.5	371.6	308.8	293.3	
Low wall temp(K)	470.3	346.4	316.3	348.5	303.6	293.2	
Floor temp(K)	335.0	303.5	297.1	304.0	294.5	293.5	
Plume flow(kg/s)	3.457E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	2.373E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.310E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.310E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.008E+05
On target(W/m^2)	1.299E+02	2.004E+01	3.238E+00	2.164E+01	2.781E-01	2.970E-07	
Pressure(Pa)	-8.112E-02	1.151E+00	2.323E+00	1.085E+00	3.370E+00	1.052E+01	

Upper layer species

N2 %	32.6	42.8	52.6	42.5	59.5	79.0
O2 %	3.95	5.95	8.18	5.93	10.2	20.5
CO2 %	7.62	8.77	9.31	8.67	9.00	0.262
CO ppm	2.276E+03	2.619E+03	2.780E+03	2.588E+03	2.688E+03	78.1
TUHC %	51.3	37.3	24.4	37.7	15.9	7.638E-02
H2O %	3.94	4.53	4.81	4.48	4.65	0.135
OD 1/m	5.12	6.64	7.62	6.59	7.88	0.245
CT g-min/m^3	596.	499.	380.	491.	275.	5.70

Lower layer species

N2 %	51.2	56.3	58.9	56.7	60.2	79.3
O2 %	8.20	9.30	9.95	9.42	10.4	20.7
CO2 %	8.64	9.04	9.08	9.03	8.99	2.462E-10
CO ppm	2.581E+03	2.700E+03	2.710E+03	2.697E+03	2.684E+03	1.402E-07
TUHC %	26.9	20.0	16.7	19.5	15.1	0.000
H2O %	4.47	4.67	4.69	4.67	4.64	1.265E-10
OD 1/m	7.18	6.10	5.55	5.91	7.50	1.744E-13
CT g-min/m^3	23.8	30.5	32.7	29.2	47.4	2.235E-09

Time = 600.0 seconds.

Upper temp(K)	514.0	425.0	374.2	427.9	336.4	294.2	
Lower temp(K)	361.3	338.2	336.4	339.3	332.6	293.5	273.0
Upper vol(m**3)	32.9	29.9	87.5	22.1	36.3	136.0	
Layer depth(m)	2.4	2.3	2.3	2.3	4.6	2.4	
Ceiling temp(K)	485.2	377.2	335.8	380.2	313.0	293.4	
Up wall temp(K)	474.2	365.9	328.5	368.8	309.2	293.3	
Low wall temp(K)	454.0	346.7	318.2	348.4	305.1	293.2	
Floor temp(K)	331.0	303.4	297.2	303.8	294.5	293.5	
Plume flow(kg/s)	3.930E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.990E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	2.044E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	2.044E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.738E+05
On target(W/m^2)	1.345E+02	1.710E+01	2.449E+00	1.869E+01	2.001E-01	1.413E-07	
Pressure(Pa)	5.421E-01	2.064E+00	3.186E+00	2.007E+00	4.189E+00	1.039E+01	

Upper layer species

N2 %	31.0	37.0	43.6	37.0	50.1	78.9
O2 %	3.58	4.85	6.30	4.85	7.86	20.4
CO2 %	7.55	8.06	8.51	8.05	8.74	0.309
CO ppm	2.255E+03	2.407E+03	2.542E+03	2.402E+03	2.609E+03	92.2
TUHC %	53.4	45.3	36.6	45.4	28.2	0.197
H2O %	3.90	4.17	4.40	4.16	4.52	0.160
OD 1/m	5.48	6.60	7.69	6.47	8.38	0.289
CT g-min/m^3	1.047E+03	936.	763.	924.	592.	10.2

Lower layer species

N2 %	48.0	51.5	50.9	51.3	50.9	79.3
O2 %	7.41	8.20	8.04	8.13	8.04	20.7
CO2 %	8.60	8.82	8.81	8.81	8.79	2.500E-10
CO ppm	2.568E+03	2.632E+03	2.629E+03	2.630E+03	2.624E+03	1.423E-07
TUHC %	30.8	26.2	27.0	26.6	27.1	0.000
H2O %	4.45	4.56	4.55	4.55	4.54	1.284E-10
OD 1/m	7.41	7.19	7.31	7.18	8.06	1.501E-13
CT g-min/m^3	351.	310.	301.	299.	334.	2.235E-09

Time = 700.0 seconds.

Upper temp(K)	458.2	402.4	364.9	404.2	332.9	294.1	
Lower temp(K)	363.4	336.2	332.9	336.9	330.1	293.5	273.0
Upper vol(m**3)	32.9	29.8	86.7	22.0	36.1	136.0	
Layer depth(m)	2.4	2.3	2.3	2.3	4.6	2.4	
Ceiling temp(K)	461.3	371.9	335.1	374.5	313.3	293.4	
Up wall temp(K)	453.0	362.1	328.2	364.5	309.6	293.3	
Low wall temp(K)	436.5	345.4	319.2	346.9	306.0	293.2	
Floor temp(K)	327.1	303.1	297.3	303.5	294.6	293.5	
Plume flow(kg/s)	5.296E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	3.421E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.085E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.085E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.290E+06
On target(W/m^2)	4.200E+01	8.074E+00	1.509E+00	8.611E+00	1.431E-01	7.934E-08	
Pressure(Pa)	1.446E+00	2.639E+00	3.534E+00	2.614E+00	4.407E+00	1.036E+01	

Upper layer species

N2 %	20.7	28.8	36.6	28.5	42.7	78.7
O2 %	2.31	3.60	4.97	3.56	6.27	20.4
CO2 %	5.18	6.58	7.68	6.50	8.19	0.355
CO ppm	1.545E+03	1.966E+03	2.294E+03	1.940E+03	2.446E+03	106.
TUHC %	68.7	57.1	46.2	57.6	37.9	0.380
H2O %	2.67	3.40	3.97	3.36	4.23	0.183
OD 1/m	4.76	6.29	7.65	6.18	8.49	0.333
CT g-min/m^3	1.652E+03	1.497E+03	1.273E+03	1.483E+03	1.049E+03	16.8

Lower layer species

N2 %	37.5	44.1	43.6	43.8	43.4	79.3
O2 %	5.36	6.56	6.44	6.50	6.40	20.7
CO2 %	7.43	8.31	8.30	8.28	8.28	2.535E-10
CO ppm	2.218E+03	2.480E+03	2.479E+03	2.474E+03	2.471E+03	1.444E-07
TUHC %	45.3	36.1	36.7	36.5	37.0	0.000
H2O %	3.84	4.29	4.29	4.28	4.28	1.302E-10
OD 1/m	7.06	7.89	7.35	7.77	8.14	1.491E-13
CT g-min/m^3	886.	732.	715.	716.	756.	2.236E-09

Time = 800.0 seconds.

Upper temp(K)	446.8	394.3	358.3	396.3	328.8	293.9	
Lower temp(K)	365.8	333.7	328.8	333.0	324.2	293.4	273.0
Upper vol(m**3)	32.8	28.7	83.0	21.2	35.1	135.0	
Layer depth(m)	2.4	2.2	2.2	2.2	4.4	2.4	
Ceiling temp(K)	445.2	367.2	333.6	369.6	312.9	293.4	
Up wall temp(K)	439.6	358.6	327.3	360.9	309.5	293.3	
Low wall temp(K)	425.3	343.6	319.1	344.8	305.9	293.2	
Floor temp(K)	323.8	302.6	297.3	302.9	294.5	293.4	
Plume flow(kg/s)	5.876E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.728E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	9.040E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	9.040E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.439E+06
On target(W/m^2)	3.155E+01	5.946E+00	1.028E+00	6.427E+00	9.266E-02	3.228E-08	
Pressure(Pa)	7.113E-01	2.014E+00	2.887E+00	1.991E+00	3.697E+00	9.542E+00	

Upper layer species

N2 %	21.7	24.9	30.3	25.0	36.6	78.6
O2 %	2.43	3.00	3.94	3.01	5.21	20.3
CO2 %	5.43	5.87	6.66	5.88	7.30	0.366
CO ppm	1.620E+03	1.752E+03	1.988E+03	1.755E+03	2.180E+03	109.
TUHC %	67.2	62.7	55.1	62.6	46.5	0.441
H2O %	2.80	3.03	3.44	3.04	3.77	0.189
OD 1/m	4.98	5.91	7.25	5.83	8.30	0.343
CT g-min/m^3	2.395E+03	2.216E+03	1.940E+03	2.193E+03	1.644E+03	24.9

Lower layer species

N2 %	32.1	37.4	37.6	37.4	37.5	79.3
O2 %	4.31	5.28	5.33	5.29	5.35	20.7
CO2 %	6.80	7.50	7.53	7.51	7.44	2.584E-10
CO ppm	2.030E+03	2.240E+03	2.247E+03	2.241E+03	2.221E+03	1.471E-07
TUHC %	52.8	45.4	45.0	45.3	45.3	0.000
H2O %	3.51	3.88	3.89	3.88	3.84	1.327E-10
OD 1/m	6.44	7.28	7.43	7.27	7.79	6.583E-14
CT g-min/m^3	1.493E+03	1.248E+03	1.224E+03	1.225E+03	1.307E+03	2.237E-09

Time = 900.0 seconds.

Upper temp(K)	419.8	383.0	353.6	384.8	326.6	293.7	
Lower temp(K)	359.4	332.2	326.6	331.4	321.8	293.4	273.0
Upper vol(m**3)	32.5	27.8	79.6	20.4	34.1	133.3	
Layer depth(m)	2.4	2.2	2.1	2.1	4.3	2.3	
Ceiling temp(K)	431.4	363.2	332.5	365.3	312.7	293.3	
Up wall temp(K)	428.0	355.8	326.8	358.0	309.5	293.3	
Low wall temp(K)	414.3	341.9	319.0	342.9	305.9	293.2	
Floor temp(K)	321.1	302.1	297.2	302.4	294.4	293.4	
Plume flow(kg/s)	5.688E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	9.050E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	4.663E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	4.663E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.715E+05
On target(W/m^2)	1.457E+01	3.702E+00	7.585E-01	3.998E+00	7.157E-02	1.345E-08	
Pressure(Pa)	1.057E-01	8.498E-01	1.760E+00	6.927E-01	2.432E+00	8.223E+00	

Upper layer species

N2 %	23.7	25.0	27.5	25.1	32.6	78.6
O2 %	2.78	2.99	3.46	3.02	4.58	20.3
CO2 %	5.72	5.92	6.24	5.94	6.57	0.366
CO ppm	1.709E+03	1.767E+03	1.863E+03	1.773E+03	1.960E+03	109.
TUHC %	64.4	62.6	59.1	62.4	52.4	0.444
H2O %	2.96	3.06	3.22	3.07	3.39	0.189
OD 1/m	4.75	6.56	6.90	7.11	8.01	0.344
CT g-min/m^3	3.068E+03	3.001E+03	2.703E+03	2.999E+03	2.373E+03	33.4

Lower layer species

N2 %	30.1	32.8	33.0	32.8	33.1	79.3
O2 %	4.00	4.52	4.58	4.52	4.67	20.7
CO2 %	6.46	6.80	6.78	6.79	6.67	2.642E-10
CO ppm	1.929E+03	2.029E+03	2.024E+03	2.027E+03	1.992E+03	1.504E-07
TUHC %	55.6	51.8	51.6	51.8	51.6	0.000
H2O %	3.34	3.51	3.50	3.51	3.45	1.357E-10
OD 1/m	6.83	7.30	6.82	7.55	7.57	3.438E-14
CT g-min/m^3	2.157E+03	1.869E+03	1.830E+03	1.856E+03	1.969E+03	2.237E-09

Time = 1000.0 seconds.

Upper temp(K)	406.1	374.2	348.2	375.8	324.0	293.6	
Lower temp(K)	351.0	329.5	324.0	328.7	320.1	293.4	273.0
Upper vol(m**3)	31.7	27.2	77.2	20.0	33.4	131.9	
Layer depth(m)	2.3	2.1	2.0	2.1	4.2	2.3	
Ceiling temp(K)	419.6	359.0	331.1	361.0	312.3	293.3	
Up wall temp(K)	417.8	352.8	326.0	354.9	309.4	293.3	
Low wall temp(K)	404.4	340.0	318.7	340.9	305.9	293.2	
Floor temp(K)	318.8	301.6	297.1	301.9	294.4	293.4	
Plume flow(kg/s)	5.308E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	4.550E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	3.434E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	3.434E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.763E+05
On target(W/m^2)	9.233E+00	2.450E+00	5.249E-01	2.656E+00	5.192E-02	6.837E-09	
Pressure(Pa)	-1.008E-01	7.612E-01	1.491E+00	6.988E-01	2.103E+00	7.132E+00	

Upper layer species

N2 %	24.9	25.1	26.4	25.2	30.1	78.6
O2 %	3.04	3.05	3.27	3.08	4.17	20.3
CO2 %	5.82	5.88	6.05	5.89	6.19	0.367
CO ppm	1.738E+03	1.755E+03	1.808E+03	1.758E+03	1.849E+03	110.
TUHC %	62.8	62.4	60.7	62.3	55.8	0.456
H2O %	3.01	3.04	3.13	3.04	3.20	0.190
OD 1/m	4.94	6.63	6.97	7.21	7.85	0.345
CT g-min/m^3	3.708E+03	3.830E+03	3.516E+03	3.892E+03	3.194E+03	41.9

Lower layer species

N2 %	29.1	30.3	30.5	30.3	30.6	79.3
O2 %	3.91	4.12	4.17	4.12	4.25	20.7
CO2 %	6.20	6.37	6.35	6.36	6.26	2.696E-10
CO ppm	1.850E+03	1.901E+03	1.895E+03	1.899E+03	1.868E+03	1.535E-07
TUHC %	57.1	55.4	55.2	55.4	55.2	0.000
H2O %	3.20	3.29	3.28	3.29	3.23	1.385E-10
OD 1/m	6.39	7.21	6.71	7.51	7.61	2.480E-14
CT g-min/m^3	2.861E+03	2.593E+03	2.508E+03	2.605E+03	2.738E+03	2.237E-09

Time = 1100.0 seconds.

Upper temp(K)	395.3	368.3	344.8	369.8	322.2	293.5	
Lower temp(K)	344.6	327.1	322.2	326.5	318.7	293.4	273.0
Upper vol(m**3)	31.3	26.8	75.9	19.7	33.1	131.1	
Layer depth(m)	2.3	2.1	2.0	2.1	4.2	2.3	
Ceiling temp(K)	410.1	355.7	329.9	357.5	312.0	293.3	
Up wall temp(K)	409.8	350.6	325.3	352.5	309.3	293.3	
Low wall temp(K)	396.3	338.5	318.4	339.2	305.9	293.2	
Floor temp(K)	317.0	301.2	297.0	301.5	294.3	293.4	
Plume flow(kg/s)	4.993E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	3.347E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	2.408E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	2.408E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.292E+04
On target(W/m^2)	6.173E+00	1.814E+00	4.054E-01	1.961E+00	4.086E-02	4.485E-09	
Pressure(Pa)	-1.273E-01	5.894E-01	1.281E+00	5.154E-01	1.835E+00	6.432E+00	

Upper layer species

N2 %	25.6	25.6	26.0	25.7	28.6	78.6
O2 %	3.19	3.15	3.22	3.16	3.87	20.3
CO2 %	5.87	5.91	5.98	5.92	6.01	0.373
CO ppm	1.754E+03	1.766E+03	1.785E+03	1.768E+03	1.795E+03	111.
TUHC %	61.8	61.9	61.2	61.7	58.0	0.515
H2O %	3.04	3.06	3.09	3.06	3.11	0.193
OD 1/m	4.86	6.89	6.96	7.74	7.78	0.351
CT g-min/m^3	4.318E+03	4.682E+03	4.357E+03	4.837E+03	4.074E+03	50.8

Lower layer species

N2 %	28.5	28.8	28.8	28.8	28.9	79.3
O2 %	3.84	3.87	3.88	3.87	3.94	20.7
CO2 %	6.04	6.14	6.11	6.13	6.05	2.741E-10
CO ppm	1.802E+03	1.832E+03	1.825E+03	1.830E+03	1.805E+03	1.561E-07
TUHC %	58.0	57.5	57.5	57.5	57.5	0.000
H2O %	3.12	3.17	3.16	3.17	3.12	1.408E-10
OD 1/m	6.34	7.26	6.57	7.68	7.64	2.115E-14
CT g-min/m^3	3.582E+03	3.389E+03	3.234E+03	3.445E+03	3.585E+03	2.237E-09

Time = 1200.0 seconds.

Upper temp(K)	385.1	362.5	341.5	363.9	320.6	293.5	
Lower temp(K)	340.0	325.5	320.6	324.8	317.4	293.4	273.0
Upper vol(m**3)	30.7	26.3	74.4	19.3	32.6	130.4	
Layer depth(m)	2.2	2.0	1.9	2.0	4.1	2.3	
Ceiling temp(K)	401.2	352.5	328.8	354.2	311.7	293.3	
Up wall temp(K)	402.1	348.5	324.7	350.2	309.2	293.3	
Low wall temp(K)	389.0	337.0	318.2	337.7	305.9	293.2	
Floor temp(K)	315.5	300.9	296.9	301.1	294.3	293.4	
Plume flow(kg/s)	4.577E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	2.510E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.616E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.616E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.860E+04
On target(W/m^2)	4.050E+00	1.319E+00	3.132E-01	1.426E+00	3.276E-02	3.460E-09	
Pressure(Pa)	-7.861E-02	4.085E-01	1.106E+00	2.845E-01	1.587E+00	5.899E+00	

Upper layer species

N2 %	25.7	25.7	25.9	25.8	27.8	78.5
O2 %	3.27	3.21	3.23	3.22	3.72	20.3
CO2 %	5.77	5.87	5.94	5.87	5.92	0.382
CO ppm	1.722E+03	1.752E+03	1.772E+03	1.752E+03	1.767E+03	114.
TUHC %	61.8	61.7	61.4	61.7	59.1	0.604
H2O %	2.98	3.03	3.07	3.03	3.06	0.197
OD 1/m	4.68	7.05	7.02	8.10	7.77	0.359
CT g-min/m^3	4.923E+03	5.550E+03	5.216E+03	5.819E+03	4.989E+03	60.6

Lower layer species

N2 %	28.0	27.9	27.9	27.9	28.0	79.3
O2 %	3.79	3.69	3.70	3.69	3.76	20.7
CO2 %	5.90	6.01	5.99	6.00	5.94	2.782E-10
CO ppm	1.761E+03	1.794E+03	1.788E+03	1.792E+03	1.774E+03	1.584E-07
TUHC %	58.8	58.8	58.9	58.9	58.8	0.000
H2O %	3.05	3.10	3.09	3.10	3.07	1.429E-10
OD 1/m	6.27	7.31	6.43	7.86	7.68	1.908E-14
CT g-min/m^3	4.319E+03	4.228E+03	3.986E+03	4.341E+03	4.478E+03	2.237E-09

Time = 1300.0 seconds.

Upper temp(K)	378.6	358.1	338.6	359.4	319.2	293.5	
Lower temp(K)	335.4	324.0	319.6	323.4	316.2	293.4	273.0
Upper vol(m**3)	29.9	25.8	73.2	18.9	32.3	130.0	
Layer depth(m)	2.2	2.0	1.9	2.0	4.1	2.3	
Ceiling temp(K)	393.3	349.6	327.6	351.1	311.3	293.3	
Up wall temp(K)	395.3	346.5	324.0	348.1	309.0	293.3	
Low wall temp(K)	382.6	335.6	317.9	336.2	305.9	293.2	
Floor temp(K)	314.3	300.6	296.8	300.8	294.3	293.4	
Plume flow(kg/s)	3.987E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.673E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.298E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.298E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	3.024E+00	1.010E+00	2.449E-01	1.095E+00	2.656E-02	2.972E-09	
Pressure(Pa)	-8.862E-02	3.235E-01	9.688E-01	2.057E-01	1.416E+00	5.472E+00	

Upper layer species

N2 %	25.9	25.8	25.9	25.8	27.3	78.4
O2 %	3.34	3.26	3.25	3.27	3.64	20.3
CO2 %	5.73	5.81	5.89	5.81	5.86	0.392
CO ppm	1.711E+03	1.735E+03	1.757E+03	1.734E+03	1.749E+03	117.
TUHC %	61.6	61.7	61.5	61.7	59.7	0.711
H2O %	2.96	3.00	3.04	3.00	3.03	0.203
OD 1/m	4.57	7.11	7.01	8.30	7.78	0.369
CT g-min/m^3	5.513E+03	6.441E+03	6.085E+03	6.851E+03	5.926E+03	71.5

Lower layer species

N2 %	27.8	27.3	27.3	27.3	27.5	79.3
O2 %	3.78	3.60	3.61	3.60	3.66	20.7
CO2 %	5.83	5.93	5.92	5.92	5.88	2.820E-10
CO ppm	1.739E+03	1.770E+03	1.766E+03	1.769E+03	1.754E+03	1.606E-07
TUHC %	59.2	59.6	59.6	59.6	59.5	0.000
H2O %	3.01	3.06	3.06	3.06	3.04	1.449E-10
OD 1/m	6.31	7.42	6.45	8.08	7.74	1.774E-14
CT g-min/m^3	5.068E+03	5.104E+03	4.751E+03	5.282E+03	5.402E+03	2.237E-09

Time = 1400.0 seconds.

Upper temp(K)	377.0	355.5	336.6	356.9	318.1	293.5	
Lower temp(K)	330.3	322.7	318.8	322.1	315.2	293.4	273.0
Upper vol(m**3)	28.4	25.4	72.5	18.6	32.1	129.6	
Layer depth(m)	2.1	2.0	1.9	2.0	4.1	2.3	
Ceiling temp(K)	386.5	347.1	326.5	348.6	311.0	293.3	
Up wall temp(K)	389.9	344.8	323.4	346.4	308.9	293.3	
Low wall temp(K)	377.0	334.3	317.6	334.9	305.9	293.2	
Floor temp(K)	313.3	300.3	296.7	300.5	294.2	293.4	
Plume flow(kg/s)	3.049E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	8.367E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.372E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.372E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	2.810E+00	8.620E-01	2.033E-01	9.395E-01	2.236E-02	2.787E-09	
Pressure(Pa)	-7.858E-02	2.300E-01	8.495E-01	1.114E-01	1.276E+00	5.133E+00	

Upper layer species

N2 %	26.2	25.9	25.9	26.0	27.1	78.3
O2 %	3.39	3.31	3.28	3.32	3.61	20.2
CO2 %	5.80	5.80	5.84	5.80	5.81	0.403
CO ppm	1.733E+03	1.731E+03	1.745E+03	1.732E+03	1.736E+03	120.
TUHC %	61.1	61.5	61.5	61.5	60.0	0.834
H2O %	3.00	3.00	3.02	3.00	3.00	0.208
OD 1/m	4.67	7.08	6.99	8.26	7.75	0.380
CT g-min/m^3	6.096E+03	7.337E+03	6.959E+03	7.898E+03	6.876E+03	83.7

Lower layer species

N2 %	27.8	27.0	27.0	27.0	27.2	79.3
O2 %	3.79	3.55	3.56	3.55	3.62	20.7
CO2 %	5.79	5.88	5.86	5.87	5.83	2.855E-10
CO ppm	1.728E+03	1.754E+03	1.750E+03	1.754E+03	1.740E+03	1.626E-07
TUHC %	59.2	60.0	60.1	60.1	59.9	0.000
H2O %	2.99	3.04	3.03	3.03	3.01	1.467E-10
OD 1/m	6.59	7.49	6.52	8.17	7.73	1.684E-14
CT g-min/m^3	5.849E+03	6.010E+03	5.537E+03	6.283E+03	6.345E+03	2.237E-09

Time = 1500.0 seconds.

Upper temp(K)	383.3	355.9	335.8	357.5	317.5	293.4	
Lower temp(K)	329.7	321.8	318.3	321.3	314.5	293.4	273.0
Upper vol(m**3)	22.7	23.9	71.2	17.4	31.8	129.2	
Layer depth(m)	1.7	1.9	1.9	1.8	4.0	2.3	
Ceiling temp(K)	381.4	345.4	325.7	346.9	310.7	293.3	
Up wall temp(K)	386.6	343.7	323.0	345.3	308.8	293.3	
Low wall temp(K)	372.7	333.3	317.4	333.8	305.8	293.2	
Floor temp(K)	312.6	300.0	296.6	300.2	294.2	293.4	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	3.752E+00	8.841E-01	1.887E-01	9.749E-01	2.017E-02	2.572E-09	
Pressure(Pa)	-2.255E-01	-1.817E-01	4.092E-01	-3.104E-01	8.255E-01	4.797E+00	

Upper layer species

N2 %	26.7	26.2	26.0	26.2	27.0	78.2
O2 %	3.41	3.35	3.31	3.35	3.61	20.2
CO2 %	5.97	5.86	5.84	5.86	5.78	0.414
CO ppm	1.783E+03	1.748E+03	1.742E+03	1.751E+03	1.725E+03	124.
TUHC %	60.4	61.1	61.4	61.1	60.2	0.951
H2O %	3.09	3.03	3.02	3.03	2.99	0.214
OD 1/m	4.68	7.18	6.92	8.47	7.70	0.390
CT g-min/m^3	6.671E+03	8.226E+03	7.830E+03	8.935E+03	7.830E+03	97.3

Lower layer species

N2 %	28.5	26.9	26.9	26.9	27.0	79.3
O2 %	4.06	3.54	3.54	3.54	3.60	20.7
CO2 %	5.67	5.84	5.82	5.84	5.79	2.890E-10
CO ppm	1.693E+03	1.744E+03	1.739E+03	1.743E+03	1.729E+03	1.645E-07
TUHC %	58.4	60.3	60.3	60.3	60.1	0.000
H2O %	2.93	3.02	3.01	3.02	2.99	1.484E-10
OD 1/m	6.16	7.69	6.43	8.57	7.60	1.603E-14
CT g-min/m^3	6.655E+03	6.939E+03	6.335E+03	7.306E+03	7.292E+03	2.237E-09

7.6 Input Data for EXITT for Scenario 6 (Example Data File SCEN-6.BLD)

```
 6 29
 3 1 3 4 4
  6 6 6 6 7
  7 8 8 8 8
  8 8 5 5 1
  2 2 3 2 5
  5 3 6 3
 1 2 3 4 5
  6 7 8 9 5
  2 1 3 7 8
  9 6 25 25 2
  24 24 3 24 25
  5 3 9 1
 2.4 2.4 2.4 2.4 2.4
  2.4 2.4 2.4 2.4 2.4
  2.4 2.4 2.4 2.4 2.4
  2.4 2.4 2.4 2.4 2.4
  2.4 2.4 2.4 2.4 2.4
  4.9 2.4 2.4 2.4
 0.  0.  0.  0.  0.
  0.  0.  0.  0.  0.
  0.  0.  0.  0.  0.
  0.  0.  2.5 2.5 0.
  0.  0.  0.  0.  2.5
  0.  0.  0.  0.
 35 35 35 35 35
  35 35 35 35 35
  35 35 35 35 35
  35 35 35 35 35
  35 35 35 35 35
  35 35 35 35
 2
 -1. -1.
 5 19
 83 83 83 83 95
  59 59 59 59 83
  83 83 83 59 59
  59 59 71 71 83
  83 83 83 83 71
  83 83 59 83
 71 71 71 71 71
  71 71 71 71 71
  71 71 71 71 71
  71 71 95 95 71
  71 71 71 71 95
  71 71 71 71
  36
   1  12       2.34696
   1  23       2.43840
   1  29       1.84146
   2  11       2.36667
   2  20       1.37160
   2  21       2.40966
   3  13       2.71340
   3  23       2.11721
   3  27       2.74743
   4   5       1.52400
   4  20       2.28600
   5  10       1.21920
   5  26       1.22869
   5  27       3.20040
   6  17       2.59528
   6  18       4.73291
```

```
  7  14      1.67640
  7  19      2.40887
  8  15      1.67640
  8  18      2.31748
  9  16      1.64140
  9  28      1.73763
 10  26      1.22869
 11  21      4.36503
 12  29      4.18842
 13  23      4.00902
 13  27      4.43795
 18  28      2.89560
 18  19      1.67640
 19  25      2.28600
 20  21      1.98120
 21  22      1.50097
 22  24      1.58496
 22  29      1.82880
 23  29      2.37079
 25  26      5.47996
4
45 40 16 14
1 0 1 0
0 0 0 0
6 6 9 8
0 0 0 0
0. 0. 15. 0.
-1. -1. -1. -1.
```

7.7 Printed Output from EXITT for Scenario 6

```
EXITT Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89
FAST DUMP FILE    :  SCEN-6.DMP
BUILDING/OCCUPANT FILE: SCEN-6.BLD
EXITT OUTPUT FILE     : SCEN-6.EXT
EXITT DUMP FILE       : SCEN-6.EVA

NO. OF ROOMS (RUN WITH FAST)       6
NO. OF DOORS                       2
NO. OF WINDOWS                     6
TOTAL NUMBER OF NODES             29
```

EXITT NODE NUMBER	EXITT ROOM NUMBER	FAST ROOM NUMBER	ROOM HEIGHT (M)	FLOOR HEIGHT (M)
1	1	3	2.4	0.0
2*	2	1	2.4	0.0
3	3	3	2.4	0.0
4	4	4	2.4	0.0
5	5	4	2.4	0.0
6	6	6	2.4	0.0
7	7	6	2.4	0.0
8	8	6	2.4	0.0
9	9	6	2.4	0.0
10	5	7	2.4	0.0
11	2	7	2.4	0.0
12	1	8	2.4	0.0
13	3	8	2.4	0.0
14	7	8	2.4	0.0
15	8	8	2.4	0.0
16	9	8	2.4	0.0
17	6	8	2.4	0.0
18	25	5	2.4	2.5
19	25	5	2.4	2.5
20*	2	1	2.4	0.0
21	24	2	2.4	0.0
22	24	2	2.4	0.0
23	3	3	2.4	0.0
24	24	2	2.4	0.0
25	25	5	2.4	2.5
26	5	5	4.9	0.0
27	3	3	2.4	0.0
28	9	6	2.4	0.0
29	1	3	2.4	0.0

* INDICATES NODE IS IN BURN ROOM

NODE NUMBER	NOISE LEVEL (DECIBELS)
1	35
2	35
3	35
4	35
5	35
6	35
7	35
8	35
9	35
10	35
11	35
12	35
13	35

14	35
15	35
16	35
17	35
18	35
19	35
20	35
21	35
22	35
23	35
24	35
25	35
26	35
27	35
28	35
29	35

NUMBER OF SMOKE DETECTORS: 2

SMOKE DET NO.	NODE	ACTIVATION TIME (SEC)	
1	5	DETERMINED BY EXITT TO BE	0.0 SECONDS
2	19	DETERMINED BY EXITT TO BE	0.0 SECONDS

EXITT NODE NUMBER	ALARM LEVEL (DECIBELS) 1	2
1	83	71
2	83	71
3	83	71
4	83	71
5	95	71
6	59	71
7	59	71
8	59	71
9	59	71
10	83	71
11	83	71
12	83	71
13	83	71
14	59	71
15	59	71
16	59	71
17	59	71
18	71	95
19	71	95
20	83	71
21	83	71
22	83	71
23	83	71
24	83	71
25	71	95
26	83	71
27	83	71
28	59	71
29	83	71

EDGE LIST

FROM NODE	TO NODE	DISTANCE (M)
1 -	12	2.35
-	23	2.44
-	29	1.84
2 -	11	2.37
-	20	1.37
-	21	2.41
3 -	13	2.71
-	23	2.12
-	27	2.75
4 -	5	1.52
-	20	2.29
5 -	4	1.52

	-	10	1.22
	-	26	1.23
	-	27	3.20
6	-	17	2.60
	-	18	4.73
7	-	14	1.68
	-	19	2.41
8	-	15	1.68
	-	18	2.32
9	-	16	1.64
	-	28	1.74
10	-	5	1.22
	-	26	1.23
11	-	2	2.37
	-	21	4.37
12	-	1	2.35
	-	29	4.19
13	-	3	2.71
	-	23	4.01
	-	27	4.44
14	-	7	1.68
15	-	8	1.68
16	-	9	1.64
17	-	6	2.60
18	-	6	4.73
	-	8	2.32
	-	19	1.68
	-	28	2.90
19	-	7	2.41
	-	18	1.68
	-	25	2.29
20	-	2	1.37
	-	4	2.29
	-	21	1.98
21	-	2	2.41
	-	11	4.37
	-	20	1.98
	-	22	1.50
22	-	21	1.50
	-	24	1.58
	-	29	1.83
23	-	1	2.44
	-	3	2.12
	-	13	4.01
	-	29	2.37
24	-	22	1.58
25	-	19	2.29
	-	26	5.48
26	-	5	1.23
	-	10	1.23
	-	25	5.48
27	-	3	2.75
	-	5	3.20
	-	13	4.44
28	-	9	1.74
	-	18	2.90
29	-	1	1.84
	-	12	4.19
	-	22	1.83
	-	23	2.37

TOTAL NUMBER OF DIRECTED EDGES 72

NUMBER OF PEOPLE 4

PERSON	LOCATION	AGE	SEX	STATE	SLEEP PENALTY	REQUIRE ASSISTANCE	TRAVEL SPEED
1	6	45	MALE	ASLEEP	0.0	NO	1.30
2	6	40	FEMALE	ASLEEP	0.0	NO	1.30
3	9	16	MALE	ASLEEP	15.0	NO	1.30
4	8	14	FEMALE	ASLEEP	0.0	NO	1.30

ACTIONS TAKEN BY PERSON 1

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
6	6	0.0	--	--	--	INITIAL POSITION
6	6	116.0	--	--	20	INVESTIGATE FIRE
18	5	119.6	--	--	20	ARRIVE AT NEW NODE
19	5	120.9	--	--	20	ARRIVE AT NEW NODE
19	5	121.9	--	--	--	ALERTED BY ANOTHER - END INVESTIGATION
19	5	123.9	3	--	9	GO TO AWAKEN OTHER
18	5	124.9	3	--	9	ARRIVE AT NEW NODE
28	6	126.6	3	--	9	ARRIVE AT NEW NODE
9	6	127.7	3	--	9	ARRIVE AT NEW NODE
9	6	127.7	3	--	--	AWAKEN OCCUPANT
9	6	130.2	--	--	--	LEAVE BUILDING
28	6	131.2	--	--	10	ARRIVE AT NEW NODE
18	5	132.9	--	--	10	ARRIVE AT NEW NODE
19	5	133.9	--	--	10	ARRIVE AT NEW NODE
25	5	135.2	--	--	10	ARRIVE AT NEW NODE
26	5	142.3	--	--	10	ARRIVE AT NEW NODE
10	7	143.0	--	--	10	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 2

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
6	6	0.0	--	--	--	INITIAL POSITION
6	6	116.0	--	--	20	INVESTIGATE FIRE
18	5	119.6	--	--	20	ARRIVE AT NEW NODE
19	5	120.9	--	--	20	ARRIVE AT NEW NODE
19	5	121.9	--	--	--	ALERTED BY ANOTHER - END INVESTIGATION
19	5	123.9	--	--	--	LEAVE BUILDING
25	5	125.3	--	--	10	ARRIVE AT NEW NODE
26	5	132.3	--	--	10	ARRIVE AT NEW NODE
10	7	133.0	--	--	10	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 3

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
9	6	0.0	--	--	--	INITIAL POSITION
9	6	127.7	--	1	--	BEING AWAKENED
9	6	132.7	--	--	--	LEAVE BUILDING
28	6	133.7	--	--	10	ARRIVE AT NEW NODE
18	5	135.4	--	--	10	ARRIVE AT NEW NODE
19	5	136.4	--	--	10	ARRIVE AT NEW NODE
25	5	137.7	--	--	10	ARRIVE AT NEW NODE
26	5	144.8	--	--	10	ARRIVE AT NEW NODE
10	7	145.5	--	--	10	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 4

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
8	6	0.0	--	--	--	INITIAL POSITION
8	6	116.0	--	--	20	INVESTIGATE FIRE
18	5	117.8	--	--	20	ARRIVE AT NEW NODE
19	5	119.1	--	--	20	ARRIVE AT NEW NODE
25	5	120.8	--	--	20	ARRIVE AT NEW NODE
25	5	120.8	--	--	20	BAD SMOKE - CURRENT ACTION STOPPED
25	5	123.8	--	--	--	LEAVE BUILDING
26	5	127.1	--	--	10	ARRIVE AT NEW NODE
10	7	127.8	--	--	10	LEAVE BUILDING THROUGH DOOR

7.8 Printed Output from TENAB for Scenario 6

```
FAST  Version:  18.3
TENAB Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89

FAST DUMP FILE    :  SCEN-6.DMP
EXITT DUMP FILE   :  SCEN-6.EVA
TENAB OUTPUT FILE:  SCEN-6.TEN
TENAB DUMP FILE   :  SCEN-6.PLT
```

OCCUPANT	NODE NUMBER	ROOM NUMBER	FLOOR ELEVATION	ENTER TIME (S)
1	6	6	0.00	0.0
	18	5	2.50	119.6
	19	5	2.50	120.9
	18	5	2.50	124.9
	28	6	0.00	126.6
	9	6	0.00	127.7
	28	6	0.00	131.2
	18	5	2.50	132.9
	19	5	2.50	133.9
	25	5	2.50	135.2
	26	5	0.00	142.3
	10	DOOR	0.00	143.0
2	6	6	0.00	0.0
	18	5	2.50	119.6
	19	5	2.50	120.9
	25	5	2.50	125.3
	26	5	0.00	132.3
	10	DOOR	0.00	133.0
3	9	6	0.00	0.0
	28	6	0.00	133.7
	18	5	2.50	135.4
	19	5	2.50	136.4
	25	5	2.50	137.7
	26	5	0.00	144.8
	10	DOOR	0.00	145.5
4	8	6	0.00	0.0
	18	5	2.50	117.8
	19	5	2.50	119.1
	25	5	2.50	120.8
	26	5	0.00	127.1
	10	DOOR	0.00	127.8

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED1	0.5	1.0
TEMP1 DEG C	65.0	100.0
CT (G-MIN/M3)	450.0	900.0
FED2	1.0	
TEMP2	1.0	
FED3	1.0	

PERSON 1

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
150.	10	ESCAPE		0.000E+00 0.897E-03 0.502E-02	0.200E+02 0.000E+00	0.144E-06	0.260E-11
1510.	10	FINAL TIME		0.000E+00 0.897E-03 0.502E-02	0.200E+02 0.000E+00	0.144E-06	0.260E-11

PERSON 2

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
140.	10	ESCAPE		0.000E+00 0.834E-03 0.467E-02	0.200E+02 0.000E+00	0.112E-06	0.108E-11
1510.	10	FINAL TIME		0.000E+00 0.834E-03 0.467E-02	0.200E+02 0.000E+00	0.112E-06	0.108E-11

PERSON 3

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
150.	10	ESCAPE		0.000E+00 0.912E-03 0.511E-02	0.200E+02 0.000E+00	0.870E-07	0.265E-11
1510.	10	FINAL TIME		0.000E+00 0.912E-03 0.511E-02	0.200E+02 0.000E+00	0.870E-07	0.265E-11

PERSON 4

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
130.	10	ESCAPE		0.000E+00 0.801E-03 0.449E-02	0.200E+02 0.000E+00	0.673E-07	0.390E-12
1510.	10	FINAL TIME		0.000E+00 0.801E-03 0.449E-02	0.200E+02 0.000E+00	0.673E-07	0.390E-12

FED1 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO,CO2,HCN AND O2 BASED ON THE HAZARD I TENAB FED PLUS AN OXYGEN TERM
FED2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO,CO2,HCN AND O2 BASED ON PURSER'S EQUATIONS
FED3 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO2 BASED ON PURSER'S EQUATIONS
TEMP1 - THE AVERAGE TEMPERATURE OF THE LAYER OF THE ROOM TO WHICH THE PERSON IS EXPOSED - IT IS THE SAME AS TEMP USED IN THE HAZARD I TENAB
TEMP2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CONVECTIVE HEAT BASED ON PURSER'S EQUATIONS

* IF PERSON IS WAITING AT A WINDOW, HE IS CONSIDERED TO BE AT THE NODE (ROOM) FROM WHICH HE CAME PRIOR TO REACHING THE WINDOW THIS ALLOWS HIM TO CONTINUE TO BE EXPOSED TO THE ROOM FIRE CONDITIONS

CHAPTER 8. SCENARIO 7, FAMILY ROOM FIRE WITH DOORS CLOSED

8.1 Summary of Fire Scenario 7

For scenario 7, A cigarette fire in the sofa in the family room spreads to the panelling in the room. Four occupants are in the house.

BUILDING: Two-story detached house

OCCUPANTS: Father, aged 45, fully capable but asleep in bedroom 1.

Mother, aged 40, fully capable but asleep in bedroom 1.

Boy, aged 16, asleep in bedroom 2, sleeping penalty 15.

Girl, aged 14, asleep in bedroom 3.

DOORS: Doors to passageway between kitchen/family room and front hall closed; other downstairs doors downstairs open; all bedroom doors closed.

FIRE: Cigarette fire in family room sofa spreads to panelling.

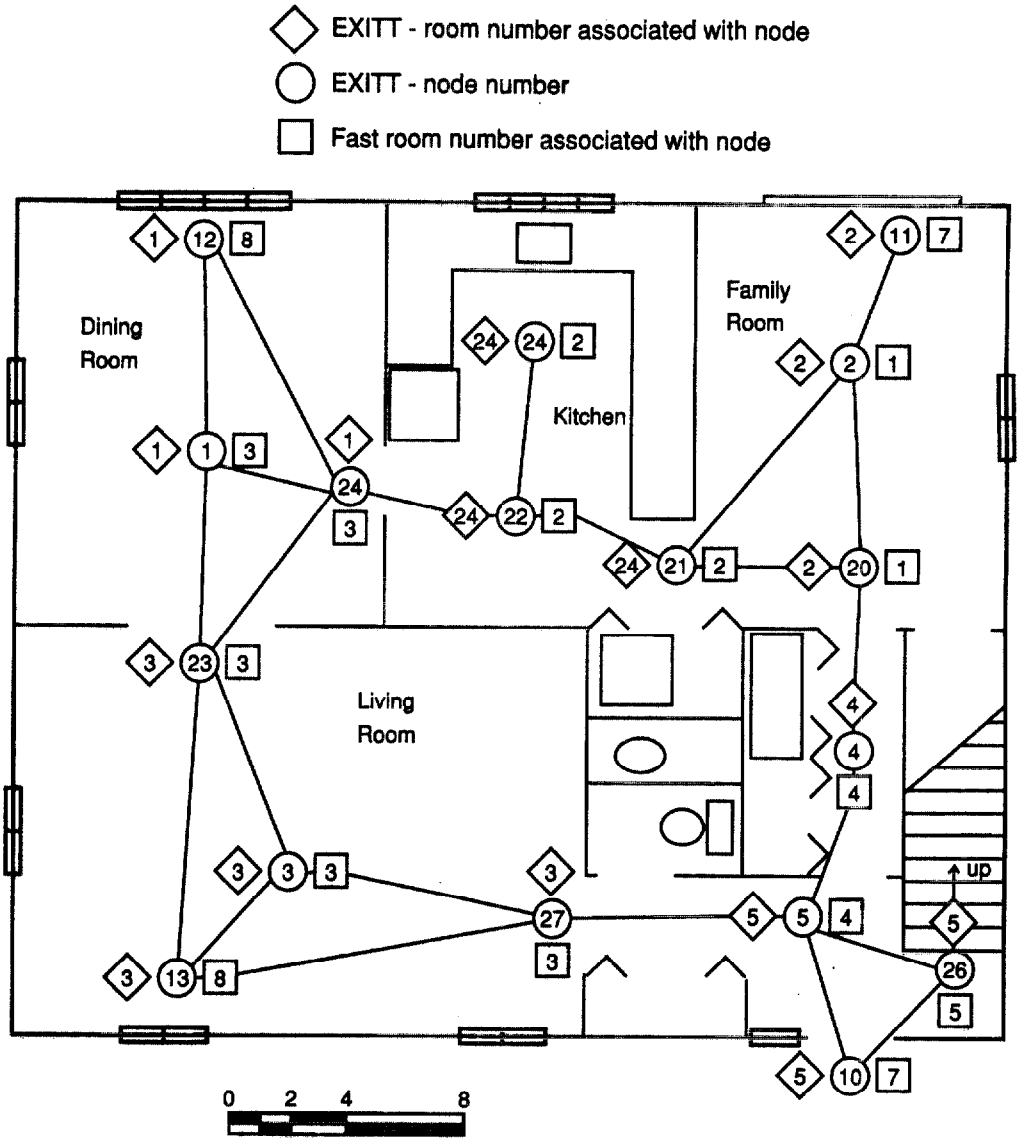
FUEL: Sofa taken directly from HAZARD I fire properties database, material code UPS001 (Upholstered sofa, F32, wood frame, PU foam, FR olefin). Data for panelling taken from test R1 and R5 in reference [2].

CEILINGS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

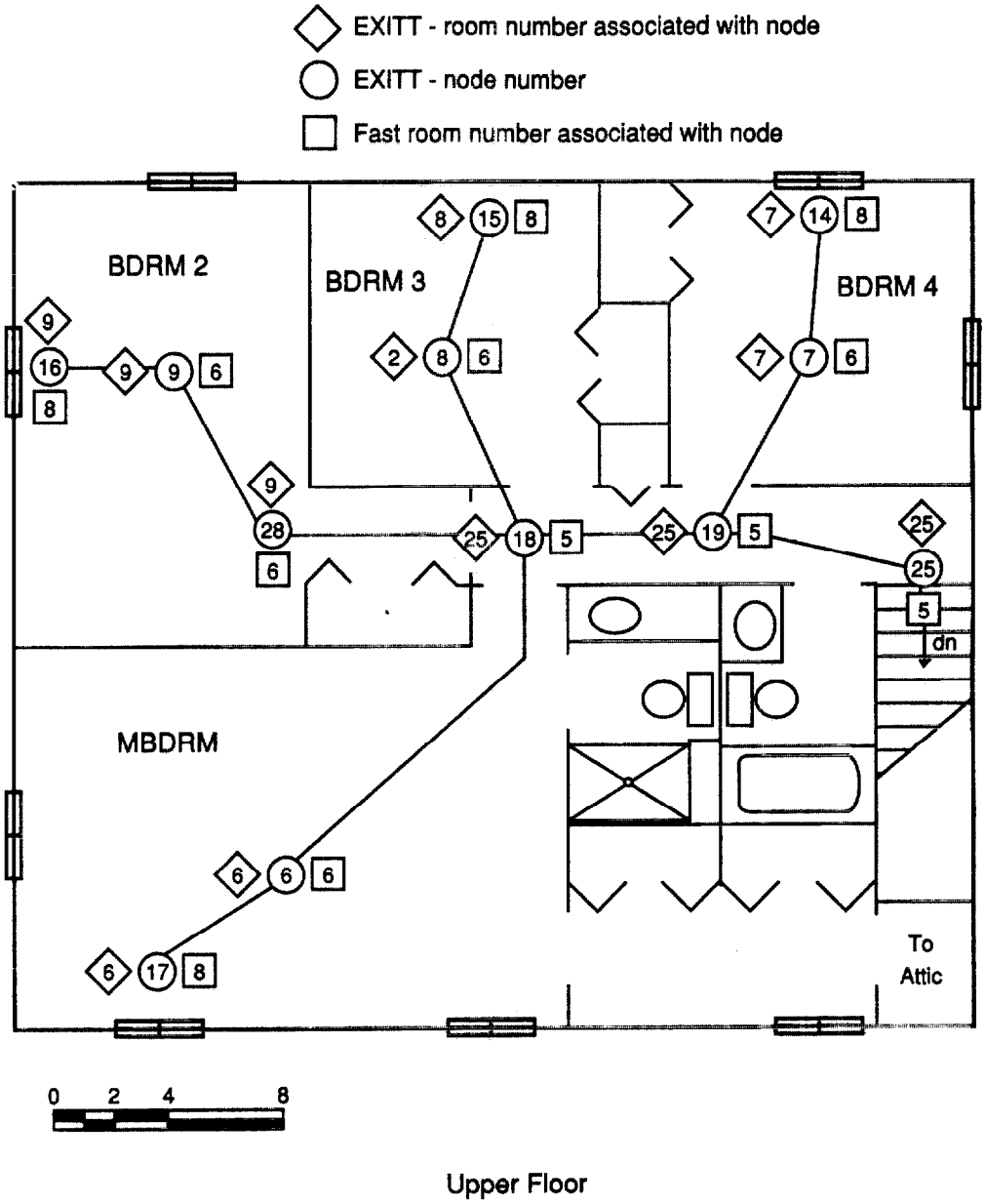
WALLS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

FLOORS: First floor is 0.15-m-thick concrete slab, taken directly from HAZARD I materials property database. Material code CNC001, Concrete, normal weight, Type I cement, Dolomite aggregate. Second floor is Douglas fir plywood, taken directly from HAZARD I materials property database. Material code DFP001, Douglas fir plywood, 10% moisture.

8.2 Floor Plan and EXITT Building Description for Scenario 7



Lower Floor

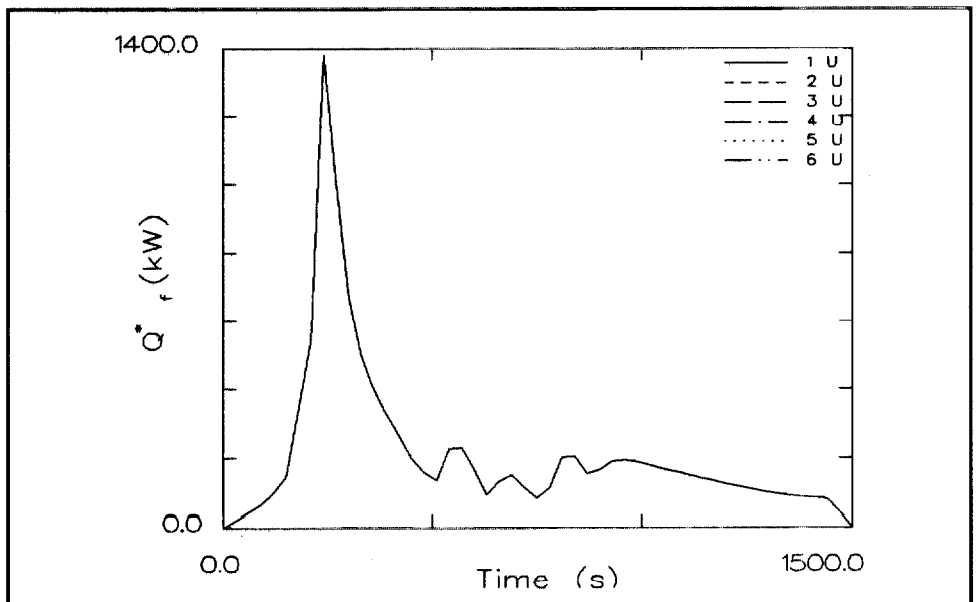

EXITT - room number associated with node
EXITT - node number
Fast room number associated with node
BDRM 2
BDRM 3
BDRM 4
MBDRM
dn
To
Attic
0 2 4 8

Upper Floor

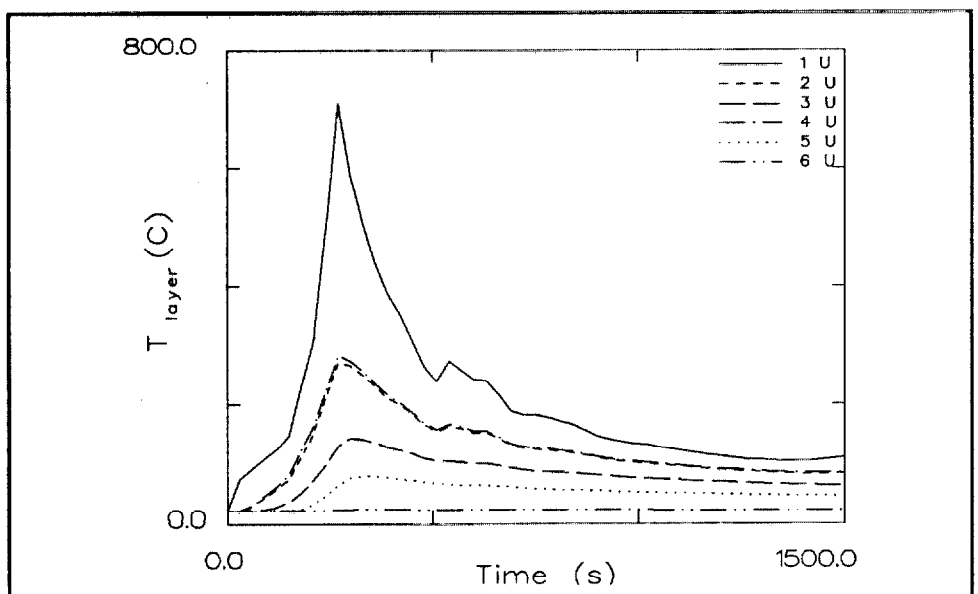
8.3 FAST Input Data for Scenario 7 (Example Data File SCEN-7.DAT)

```
VERSN   18   Scenario 7, Sofa and Paneling in Family Room
TIMES   1500 100  30   0   0
TAMB   293.  101300.      0.
EAMB   273.  101300.      0.
HI/F     0.00   0.00   0.00   0.00   0.00   2.70
WIDTH    3.20   3.00   7.40   3.09   1.00   6.00
DEPTH    4.30   4.30   5.20   3.09   7.90   9.50
HEIGH    2.40   2.40   2.40   2.40   4.90   2.40
HVENT   1  2  1   1.10   2.10   0.00
HVENT   1  4  1   0.01   2.10   0.00
HVENT   1  7  1   1.10   0.20   0.00   0.00
HVENT   2  3  1   1.10   2.10   0.00
HVENT   3  4  1   0.01   2.10   0.00
HVENT   3  5  1   1.10   2.10   0.00
HVENT   5  6  1   0.01   4.80   2.70
CEILI GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
WALLS GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
FLOOR CONCRETE  CONCRETE  CONCRETE  CONCRETE  CONCRETE  WOOD
CHEMI     0.    0.   6.0    18100000.  300.
LFBO   1
LFBT   2
LFPOS  1
LFMAX 13
FTIME    100.    50.    65.    75.   110.    30.    50.   120.    40.    40.   150.   180.   490.
FMASS  0.000 0.004 0.008 0.032 0.165 0.153 0.224 0.245 0.199 0.376 0.376 0.122 0.041 0.0000
FHIGH    0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.00
FAREA    0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.00
FQDOT  0.00  7.24E+04 1.45E+05 5.79E+05 2.99E+06 2.77E+06 4.05E+06 4.43E+06 3.60E+06 6.81E+06 6.81E+06
       2.21E+06 7.42E+05 0.00
CT    1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000
HCR   0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080
CO    0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019
OD    0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013
DUMPR SCEN-7.DMP
```

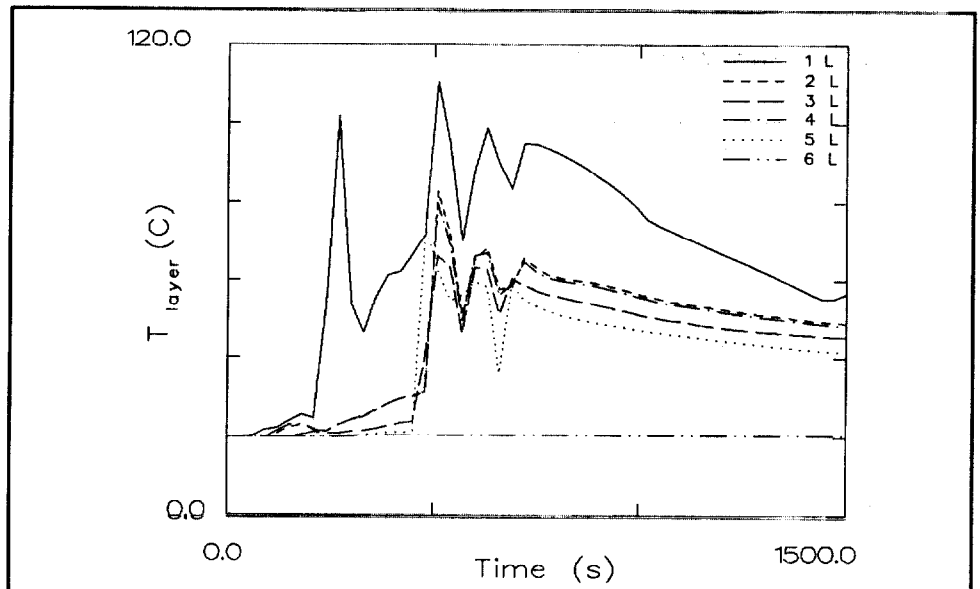
8.4 Selected Graphs from Scenario 7



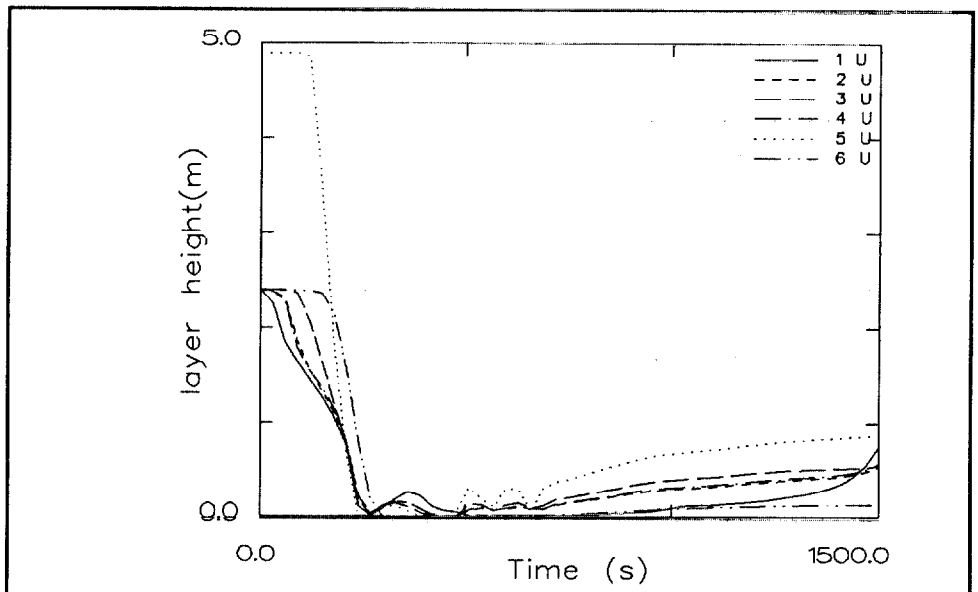
Heat release rate of fire (kW)



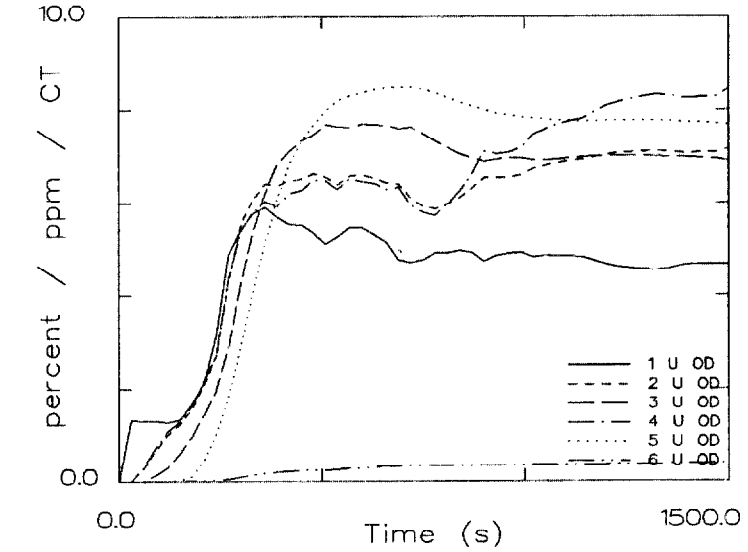
Upper layer temperature (°C)



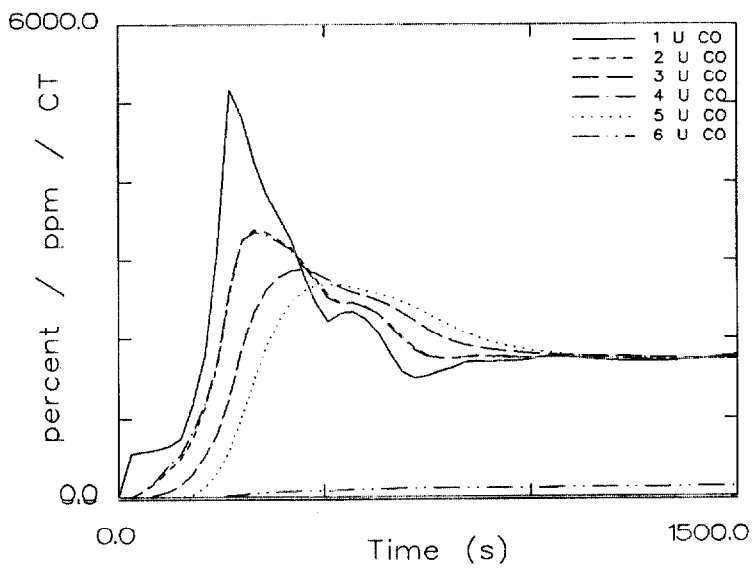
Lower layer temperature (°C)



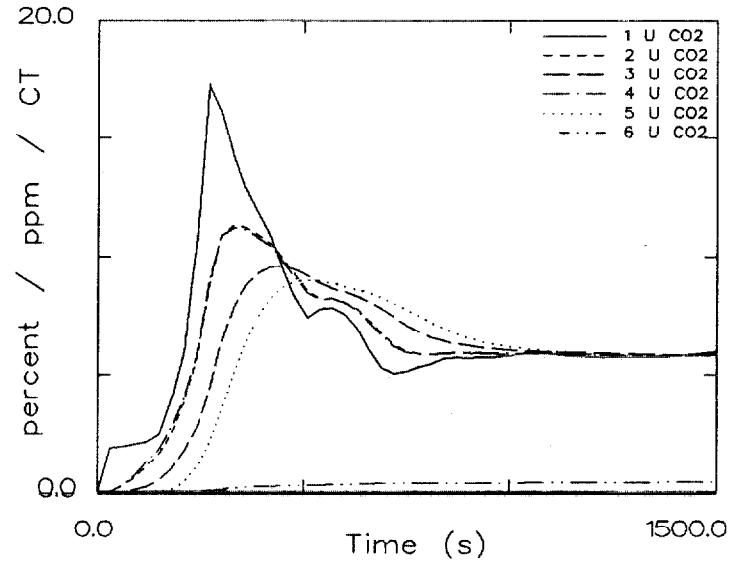
Layer interface height (m)



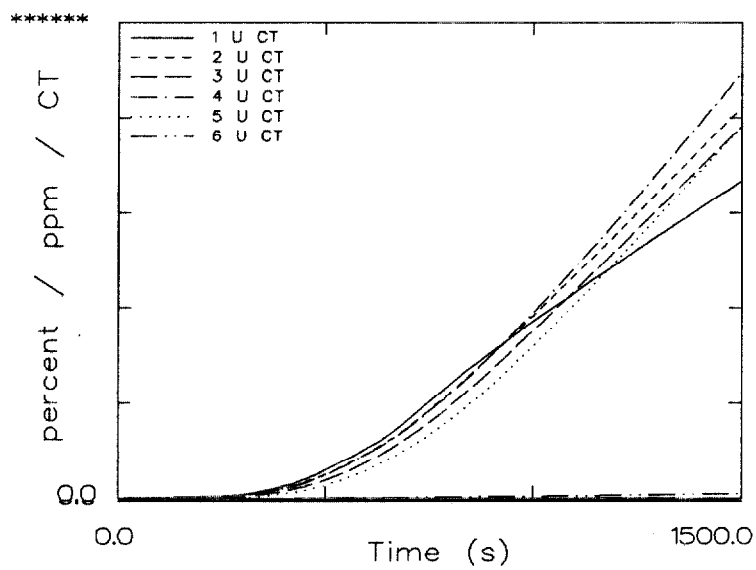
Smoke optical density (m^{-1})



Carbon monoxide concentration (ppm)



Carbon dioxide concentration (%)



Concentration-Time product (ppm-min)

8.5 Printed Output from FAST for Scenario 7

FAST version 18.3.2 - created February 1, 1989 Scenario 7, Sofa and Paneling in Family Room

Total compartments = 6

FLOOR PLAN

Width	3.2	3.0	7.4	3.1	1.0	6.0
Depth	4.3	4.3	5.2	3.1	7.9	9.5
Height	2.4	2.4	2.4	2.4	4.9	2.4
Area	13.8	12.9	38.5	9.5	7.9	57.0
Volume	33.0	31.0	92.4	22.9	38.7	136.8
Ceiling	2.4	2.4	2.4	2.4	4.9	5.1
Floor	0.0	0.0	0.0	0.0	0.0	2.7

CONNECTIONS

1 (1)	Width	0.00	1.10	0.00	0.01	0.00	0.00	1.10
	Soffit	0.00	2.10	0.00	2.10	0.00	0.00	0.20
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	2.10	0.00	2.10	0.00	0.00	0.20
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 (1)	Width	1.10	0.00	1.10	0.00	0.00	0.00	0.00
	Soffit	2.10	0.00	2.10	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	2.10	0.00	2.10	0.00	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 (1)	Width	0.00	1.10	0.00	0.01	1.10	0.00	0.00
	Soffit	0.00	2.10	0.00	2.10	2.10	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	2.10	0.00	2.10	2.10	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 (1)	Width	0.01	0.00	0.01	0.00	0.00	0.00	0.00
	Soffit	2.10	0.00	2.10	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	2.10	0.00	2.10	0.00	0.00	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 (1)	Width	0.00	0.00	1.10	0.00	0.00	0.01	0.00
	Soffit	0.00	0.00	2.10	0.00	0.00	4.80	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	2.70	0.00
	a.Soffit	0.00	0.00	2.10	0.00	0.00	4.80	0.00
	a.Sill	0.00	0.00	0.00	0.00	0.00	2.70	0.00
6 (1)	Width	0.00	0.00	0.00	0.00	0.01	0.00	0.00
	Soffit	0.00	0.00	0.00	0.00	2.10	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	0.00	0.00	0.00	4.80	0.00	0.00
	a.Sill	0.00	0.00	0.00	0.00	2.70	0.00	0.00

Material names

Ceiling:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Walls:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Floor:	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	WOOD

```
Thermal data base used: THERMAL.TPF

 Name        Conductivity Specific heat   Density       Thickness   Emissivity     **Codes**

 CONCRETE       1.75        1.000E+03    2.200E+03     0.150        0.940          188    U
 GYPSUM        0.160         900.         800.         1.600E-02    0.900           38    U
 WOOD         7.000E-02    1.000E+03     250.         1.600E-02    0.980                 U

Compartment of origin is                              1
Print interval (seconds)                            100
Number of fire specification intervals is            13
Total time (seconds)                               1500
Fire position                                         1
Limiting oxygen index (%) =                         6.0
Initial relative humidity (%) =                     0.0
Fire type is a SPECIFIED (CONSTRAINED)

Pyrolysis  temperature (K) =                     300.
Ambient air temperature (K) =                    293.
Ambient reference pressure (Pa) =             101300.
Reference elevation (m) =                         0.
External ambient temperature (K) =               273.
External reference pressure (Pa) =            101300.
Reference elevation (m) =                         0.

Fmass=   0.00       4.00E-03  8.00E-03  3.20E-02  0.17      0.15      0.22      0.25      0.20
         0.38       0.38      0.12      4.10E-02  0.00
Hcomb=   1.81E+07   1.81E+07  1.81E+07  1.81E+07  1.81E+07  1.81E+07  1.81E+07  1.81E+07  1.81E+07
         1.81E+07   1.81E+07  1.81E+07  1.81E+07  1.81E+07
Fqdot=   0.00       7.24E+04  1.45E+05  5.79E+05  2.99E+06  2.77E+06  4.05E+06  4.43E+06  3.60E+06
         6.81E+06   6.81E+06  2.21E+06  7.42E+05  0.00
Fhigh=   0.00       0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
         0.00       0.00      0.00      0.00      0.00
C/CO2=   1.30E-02   1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02  1.30E-02
         1.30E-02   1.30E-02  1.30E-02  1.30E-02  1.30E-02
CO/CO2=  1.90E-02   1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02  1.90E-02
         1.90E-02   1.90E-02  1.90E-02  1.90E-02  1.90E-02
H/C=     8.00E-02   8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02  8.00E-02
         8.00E-02   8.00E-02  8.00E-02  8.00E-02  8.00E-02
CT=      1.0        1.0       1.0       1.0       1.0       1.0       1.0       1.0       1.0
         1.0        1.0       1.0       1.0       1.0
Ftime=   1.00E+02   50.       65.       75.       1.10E+02  30.       50.       1.20E+02  40.
         40.        1.50E+02  1.80E+02  4.90E+02
Dump file = SCEN-7.DMP
```

Time = 0.0 seconds.

Upper temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Lower temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.0	0.0	0.1	0.0	0.0	0.1	
Layer depth(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pressure(Pa)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	

Upper layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 100.0 seconds.

Upper temp(K)	382.9	324.3	295.9	294.6	293.0	293.0	
Lower temp(K)	295.1	293.3	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	13.7	10.4	3.3	2.3	0.0	0.6	
Layer depth(m)	1.0	0.8	0.1	0.2	0.0	0.0	
Ceiling temp(K)	314.4	296.8	293.1	293.1	293.0	293.0	
Up wall temp(K)	309.5	295.8	293.1	293.1	293.0	293.0	
Low wall temp(K)	296.5	293.5	293.0	293.0	293.0	293.0	
Floor temp(K)	293.5	293.1	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	3.941E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	4.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	7.240E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	7.240E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	3.683E+00	5.418E-02	3.971E-06	3.897E-07	0.000E+00	5.273E-15	
Pressure(Pa)	6.170E-01	1.039E+00	1.105E+00	9.378E-01	1.066E+00	3.546E-01	

Upper layer species

N2 %	77.6	78.5	79.2	79.2	79.3	79.3
O2 %	19.0	20.0	20.6	20.7	20.7	20.7
CO2 %	2.12	0.928	0.134	4.401E-02	0.000	0.000
CO ppm	632.	277.	40.1	13.1	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	1.09	0.480	6.938E-02	2.274E-02	0.000	0.000
OD 1/m	1.30	0.884	0.193	6.717E-02	0.000	0.000
CT g-min/m^3	14.6	2.98	0.315	0.287	0.000	0.000

Lower layer species

N2 %	79.2	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	5.442E-02	1.055E-02	3.204E-14	4.249E-06	0.000	0.000
CO ppm	16.2	3.15	9.737E-12	1.269E-03	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	2.812E-02	5.451E-03	1.657E-14	2.196E-06	0.000	0.000
OD 1/m	4.094E-02	7.608E-03	2.729E-14	3.229E-06	0.000	0.000
CT g-min/m^3	0.103	3.153E-03	3.407E-14	1.133E-05	0.000	0.000

Time = 200.0 seconds.

Upper temp(K)	586.1	452.1	339.8	302.5	300.2	293.1	
Lower temp(K)	322.1	300.6	294.1	293.0	293.0	293.0	273.0
Upper vol(m**3)	23.2	19.0	51.8	10.3	29.2	33.1	
Layer depth(m)	1.7	1.5	1.3	1.1	3.7	0.6	
Ceiling temp(K)	382.4	329.3	300.1	294.1	293.5	293.0	
Up wall temp(K)	367.0	321.5	298.3	293.9	293.4	293.0	
Low wall temp(K)	322.5	301.2	294.6	293.2	293.1	293.0	
Floor temp(K)	297.0	294.1	293.2	293.0	293.0	293.0	
Plume flow(kg/s)	8.749E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	2.646E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	4.790E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	4.790E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	4.162E+02	3.616E+01	2.700E-01	4.567E-04	1.511E-04	9.168E-12	
Pressure(Pa)	3.891E+00	5.799E+00	6.906E+00	6.421E+00	7.370E+00	2.244E+00	

Upper layer species

N2 %	74.0	75.4	78.1	79.1	79.1	79.3
O2 %	15.4	16.8	19.5	20.6	20.5	20.7
CO2 %	6.67	4.85	1.56	0.203	0.263	7.348E-03
CO ppm	1.990E+03	1.449E+03	464.	60.5	78.4	2.19
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	3.44	2.51	0.804	0.105	0.136	3.797E-03
OD 1/m	2.35	2.34	1.37	0.256	0.300	6.313E-03
CT g-min/m^3	33.4	19.9	7.97	1.76	0.637	1.712E-02

Lower layer species

N2 %	78.7	79.1	79.2	79.3	79.3	79.3
O2 %	20.1	20.5	20.7	20.7	20.7	20.7
CO2 %	0.775	0.268	5.929E-02	4.526E-04	1.376E-08	3.617E-12
CO ppm	231.	79.9	17.7	0.135	4.107E-06	1.080E-09
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.400	0.138	3.064E-02	2.340E-04	7.109E-09	1.869E-12
OD 1/m	0.472	0.180	4.024E-02	2.479E-04	5.289E-09	3.081E-12
CT g-min/m^3	2.69	1.44	9.240E-02	5.653E-04	3.509E-08	1.644E-11

Time = 300.0 seconds.

Upper temp(K)	736.1	496.8	376.7	314.9	330.9	294.0	
Lower temp(K)	433.6	305.8	308.0	293.1	293.2	293.0	273.0
Upper vol(m**3)	32.2	28.4	84.6	15.8	38.1	136.5	
Layer depth(m)	2.3	2.2	2.2	1.7	4.8	2.4	
Ceiling temp(K)	588.1	380.5	317.6	297.9	300.9	293.1	
Up wall temp(K)	565.8	366.1	312.2	296.8	299.0	293.1	
Low wall temp(K)	542.1	331.9	302.2	294.1	295.5	293.0	
Floor temp(K)	334.0	299.5	294.4	293.2	293.4	293.1	
Plume flow(kg/s)	6.005E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.639E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	6.707E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.450E+03	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	6.707E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.450E+03	4.787E+05
On target(W/m^2)	2.174E+03	9.730E+01	2.775E+00	1.302E-02	1.158E-01	6.152E-08	
Pressure(Pa)	4.038E+00	7.012E+00	8.945E+00	1.198E+01	9.994E+00	7.257E+00	

Upper layer species

N2 %	47.5	63.9	74.0	78.4	76.8	79.2
O2 %	3.84	10.8	16.2	19.9	18.4	20.7
CO2 %	14.3	9.93	5.22	0.928	2.87	7.430E-02
CO ppm	4.282E+03	2.966E+03	1.559E+03	277.	858.	22.2
TUHC %	25.8	9.50	1.49	0.231	0.250	0.000
H2O %	7.41	5.13	2.70	0.479	1.49	3.839E-02
OD 1/m	4.72	5.06	3.72	1.02	2.51	6.710E-02
CT g-min/m^3	102.	76.4	38.7	9.62	16.2	0.369

Lower layer species

N2 %	60.5	77.8	77.2	79.3	79.3	79.3
O2 %	10.4	19.3	18.8	20.7	20.7	20.7
CO2 %	9.02	1.72	2.31	1.365E-03	1.376E-08	3.617E-12
CO ppm	2.694E+03	513.	691.	0.408	4.106E-06	4.263E-09
TUHC %	14.7	0.195	0.344	0.000	0.000	0.000
H2O %	4.66	0.887	1.20	7.055E-04	7.108E-09	1.989E-12
OD 1/m	2.53	0.429	0.600	5.788E-04	1.448E-10	2.277E-13
CT g-min/m^3	33.2	3.30	2.13	6.851E-03	1.049E-07	3.200E-11

Time = 400.0 seconds.

Upper temp(K)	610.2	456.9	368.8	314.1	330.7	294.3	
Lower temp(K)	445.4	324.7	328.1	293.3	293.7	293.3	273.0
Upper vol(m**3)	32.7	29.8	88.7	16.6	38.6	136.7	
Layer depth(m)	2.4	2.3	2.3	1.7	4.9	2.4	
Ceiling temp(K)	529.4	379.9	322.8	299.3	304.9	293.2	
Up wall temp(K)	511.7	366.7	316.8	297.9	302.3	293.2	
Low wall temp(K)	500.3	339.8	308.0	294.6	297.6	293.1	
Floor temp(K)	330.7	301.3	295.2	293.3	293.8	293.3	
Plume flow(kg/s)	4.221E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.530E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	3.063E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	3.063E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.646E+05
On target(W/m^2)	5.708E+02	4.070E+01	1.858E+00	1.109E-02	1.143E-01	1.616E-07	
Pressure(Pa)	2.473E-01	2.363E+00	4.035E+00	6.206E+00	5.058E+00	9.554E+00	

Upper layer species

N2 %	37.2	51.1	64.5	76.4	70.5	79.1
O2 %	4.16	8.39	12.8	19.1	15.2	20.6
CO2 %	9.32	8.31	6.74	1.51	5.41	0.161
CO ppm	2.783E+03	2.480E+03	2.011E+03	450.	1.615E+03	47.9
TUHC %	43.7	27.3	11.9	2.11	5.64	3.903E-02
H2O %	4.82	4.29	3.48	0.778	2.80	8.295E-02
OD 1/m	4.26	4.79	4.89	1.63	4.43	0.148
CT g-min/m^3	312.	248.	140.	37.2	79.5	1.85

Lower layer species

N2 %	47.7	68.8	67.9	79.3	79.3	79.3
O2 %	7.66	14.5	14.1	20.7	20.7	20.7
CO2 %	8.05	5.86	6.02	1.365E-03	1.060E-08	3.626E-12
CO ppm	2.404E+03	1.750E+03	1.799E+03	0.408	5.680E-05	5.180E-09
TUHC %	31.8	7.33	8.32	0.000	0.000	0.000
H2O %	4.16	3.03	3.11	7.055E-04	8.836E-09	2.820E-12
OD 1/m	3.30	2.02	2.36	4.766E-04	9.048E-12	3.551E-13
CT g-min/m^3	162.	25.6	31.6	1.280E-02	1.051E-07	3.259E-11

Time = 500.0 seconds.

Upper temp(K)	509.7	417.2	356.0	311.8	325.6	294.0	
Lower temp(K)	411.6	324.8	324.9	293.5	293.4	293.3	273.0
Upper vol(m**3)	32.9	30.3	90.2	17.9	38.7	136.3	
Layer depth(m)	2.4	2.4	2.3	1.9	4.9	2.4	
Ceiling temp(K)	480.0	371.1	323.0	299.9	305.9	293.2	
Up wall temp(K)	466.6	359.9	317.3	298.4	303.3	293.2	
Low wall temp(K)	459.0	339.4	310.2	295.0	298.6	293.1	
Floor temp(K)	324.7	301.5	295.5	293.3	294.0	293.3	
Plume flow(kg/s)	3.787E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	2.373E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.409E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.409E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.065E+06
On target(W/m^2)	1.244E+02	1.342E+01	8.875E-01	7.037E-03	6.346E-02	5.765E-08	
Pressure(Pa)	4.981E-01	2.096E+00	3.476E+00	5.140E+00	4.374E+00	9.391E+00	

Upper layer species

N2 %	26.2	39.9	55.1	73.2	62.6	79.1
O2 %	3.60	6.65	10.4	17.9	12.6	20.6
CO2 %	5.46	6.30	6.72	1.99	6.35	0.182
CO ppm	1.629E+03	1.880E+03	2.005E+03	595.	1.895E+03	54.3
TUHC %	61.5	43.5	23.8	5.70	14.7	7.150E-02
H2O %	2.82	3.25	3.47	1.03	3.28	9.400E-02
OD 1/m	3.80	4.69	5.34	2.14	5.34	0.168
CT g-min/m^3	700.	558.	345.	103.	227.	4.29

Lower layer species

N2 %	37.2	60.4	59.5	79.3	79.3	79.3
O2 %	6.37	11.9	11.7	20.7	20.7	20.7
CO2 %	5.62	6.51	6.50	1.365E-03	2.316E-09	3.673E-12
CO ppm	1.677E+03	1.943E+03	1.941E+03	0.408	3.639E-05	5.247E-09
TUHC %	47.4	17.4	18.5	0.000	0.000	0.000
H2O %	2.90	3.36	3.36	7.055E-04	5.661E-09	2.857E-12
OD 1/m	3.70	3.93	3.84	4.548E-04	1.882E-11	1.066E-13
CT g-min/m^3	448.	129.	144.	1.819E-02	1.051E-07	3.304E-11

Time = 600.0 seconds.

Upper temp(K)	519.0	417.6	353.3	310.8	323.5	293.8	
Lower temp(K)	374.6	315.8	315.1	293.8	293.8	293.3	273.0
Upper vol(m**3)	32.9	30.1	89.9	19.1	38.6	136.5	
Layer depth(m)	2.4	2.3	2.3	2.0	4.9	2.4	
Ceiling temp(K)	472.0	370.0	323.2	300.2	306.2	293.2	
Up wall temp(K)	459.4	359.3	317.7	298.7	303.7	293.2	
Low wall temp(K)	447.8	339.6	310.7	295.3	299.7	293.1	
Floor temp(K)	323.0	301.7	295.7	293.4	294.1	293.3	
Plume flow(kg/s)	3.413E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.990E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.683E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.683E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.352E+06
On target(W/m^2)	1.471E+02	1.358E+01	7.469E-01	5.675E-03	4.866E-02	2.936E-08	
Pressure(Pa)	8.211E-01	2.614E+00	4.085E+00	5.759E+00	4.975E+00	9.479E+00	

Upper layer species

N2 %	25.6	35.0	46.1	69.3	53.6	79.0
O2 %	3.37	5.64	8.32	16.7	10.2	20.5
CO2 %	5.58	5.89	6.21	2.36	6.33	0.212
CO ppm	1.665E+03	1.759E+03	1.856E+03	703.	1.891E+03	63.3
TUHC %	62.1	49.9	35.7	10.2	26.1	0.174
H2O %	2.88	3.05	3.21	1.22	3.27	0.109
OD 1/m	3.97	4.75	5.46	2.55	5.74	0.196
CT g-min/m^3	1.217E+03	1.020E+03	686.	224.	484.	7.49

Lower layer species

N2 %	40.8	56.8	55.7	79.3	60.8	79.3
O2 %	7.22	11.1	10.9	20.7	12.1	20.7
CO2 %	5.75	6.27	6.21	1.365E-03	6.38	3.708E-12
CO ppm	1.717E+03	1.872E+03	1.855E+03	0.408	1.905E+03	5.297E-09
TUHC %	42.9	22.1	23.5	0.000	17.0	0.000
H2O %	2.97	3.24	3.21	7.055E-04	3.30	2.884E-12
OD 1/m	3.65	3.89	3.66	4.636E-04	0.725	1.605E-13
CT g-min/m^3	819.	338.	347.	2.360E-02	197.	3.322E-11

Time = 700.0 seconds.

Upper temp(K)	471.7	397.0	346.0	309.0	320.7	293.7	
Lower temp(K)	355.4	316.9	314.1	294.0	299.8	293.3	273.0
Upper vol(m**3)	33.0	30.1	89.7	20.0	38.6	136.4	
Layer depth(m)	2.4	2.3	2.3	2.1	4.9	2.4	
Ceiling temp(K)	447.7	364.1	322.6	300.2	306.4	293.2	
Up wall temp(K)	438.3	355.0	317.5	298.8	303.9	293.2	
Low wall temp(K)	427.0	337.9	311.1	295.6	300.6	293.1	
Floor temp(K)	319.7	301.4	295.8	293.5	294.1	293.3	
Plume flow(kg/s)	4.726E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	3.421E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.379E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.379E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.286E+06
On target(W/m^2)	5.751E+01	6.589E+00	4.460E-01	3.673E-03	3.331E-02	1.590E-08	
Pressure(Pa)	2.440E+00	3.943E+00	5.199E+00	6.460E+00	5.954E+00	9.391E+00	

Upper layer species

N2 %	16.2	26.3	39.1	65.2	46.4	78.8
O2 %	2.15	4.18	6.85	15.5	8.52	20.5
CO2 %	3.51	4.50	5.65	2.58	6.04	0.236
CO ppm	1.048E+03	1.345E+03	1.688E+03	771.	1.804E+03	70.5
TUHC %	76.0	62.3	45.0	15.1	35.4	0.307
H2O %	1.81	2.33	2.92	1.33	3.12	0.122
OD 1/m	3.15	4.35	5.46	2.83	5.91	0.219
CT g-min/m^3	1.898E+03	1.616E+03	1.147E+03	402.	865.	11.9

Lower layer species

N2 %	35.9	49.2	49.3	79.3	50.4	79.3
O2 %	6.43	9.21	9.24	20.7	9.47	20.7
CO2 %	4.93	6.10	6.10	1.365E-03	6.21	3.748E-12
CO ppm	1.473E+03	1.823E+03	1.821E+03	0.408	1.854E+03	5.355E-09
TUHC %	49.8	31.8	31.8	0.000	30.2	0.000
H2O %	2.55	3.15	3.15	7.055E-04	3.21	2.915E-12
OD 1/m	4.65	6.17	6.11	4.895E-04	9.06	1.238E-13
CT g-min/m^3	1.378E+03	648.	648.	2.896E-02	540.	3.337E-11

Time = 800.0 seconds.

Upper temp(K)	476.4	393.9	342.7	307.3	318.3	293.6	
Lower temp(K)	360.3	324.4	318.3	294.2	315.6	293.3	273.0
Upper vol(m**3)	32.9	29.3	85.2	20.5	35.9	135.7	
Layer depth(m)	2.4	2.3	2.2	2.1	4.5	2.4	
Ceiling temp(K)	436.8	360.6	321.9	300.1	306.3	293.2	
Up wall temp(K)	429.5	352.5	317.1	298.8	303.9	293.2	
Low wall temp(K)	416.8	336.6	311.1	295.8	301.1	293.1	
Floor temp(K)	317.7	301.2	295.8	293.5	294.1	293.3	
Plume flow(kg/s)	3.959E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.728E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.733E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.733E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.369E+06
On target(W/m^2)	6.379E+01	5.836E+00	3.452E-01	2.386E-03	2.307E-02	6.946E-09	
Pressure(Pa)	1.498E+00	3.255E+00	4.505E+00	5.397E+00	5.222E+00	8.828E+00	

Upper layer species

N2 %	17.5	23.6	33.4	61.6	40.5	78.8
O2 %	2.30	3.68	5.71	14.5	7.30	20.4
CO2 %	3.79	4.14	5.03	2.70	5.51	0.246
CO ppm	1.130E+03	1.235E+03	1.502E+03	805.	1.645E+03	73.3
TUHC %	74.2	66.2	52.9	19.6	43.4	0.370
H2O %	1.96	2.14	2.60	1.39	2.85	0.127
OD 1/m	3.27	4.06	5.31	3.01	5.83	0.228
CT g-min/m^3	2.695E+03	2.344E+03	1.744E+03	644.	1.368E+03	18.1

Lower layer species

N2 %	31.6	39.7	40.9	79.3	41.5	79.3
O2 %	5.39	7.12	7.36	20.7	7.50	20.7
CO2 %	4.78	5.45	5.55	1.365E-03	5.60	3.801E-12
CO ppm	1.426E+03	1.626E+03	1.657E+03	0.408	1.671E+03	5.429E-09
TUHC %	55.4	44.5	42.9	0.000	42.1	0.000
H2O %	2.47	2.81	2.87	7.055E-04	2.89	2.956E-12
OD 1/m	4.00	4.79	4.98	4.536E-04	5.95	4.348E-14
CT g-min/m^3	1.934E+03	1.003E+03	1.006E+03	3.426E-02	874.	3.353E-11

Time = 900.0 seconds.

Upper temp(K)	502.8	409.4	349.6	308.5	321.1	293.5	
Lower temp(K)	342.8	321.6	319.2	294.4	317.9	293.3	273.0
Upper vol(m**3)	32.8	29.3	85.7	20.9	36.0	135.7	
Layer depth(m)	2.4	2.3	2.2	2.2	4.6	2.4	
Ceiling temp(K)	450.0	366.4	323.8	300.4	307.0	293.2	
Up wall temp(K)	442.2	357.9	318.9	299.1	304.6	293.2	
Low wall temp(K)	423.2	339.7	312.3	296.1	301.8	293.1	
Floor temp(K)	319.4	301.7	295.9	293.5	294.1	293.3	
Plume flow(kg/s)	2.983E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	9.050E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.666E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.666E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.041E+06
On target(W/m^2)	1.092E+02	1.037E+01	5.773E-01	3.216E-03	3.529E-02	4.961E-09	
Pressure(Pa)	4.126E-01	2.253E+00	3.634E+00	4.923E+00	4.456E+00	8.837E+00	

Upper layer species

N2 %	23.0	26.1	30.3	58.5	34.9	78.6
O2 %	2.69	3.73	4.94	13.6	6.06	20.4
CO2 %	5.55	5.18	4.97	2.88	5.10	0.268
CO ppm	1.658E+03	1.545E+03	1.483E+03	860.	1.523E+03	80.1
TUHC %	65.5	61.9	56.9	23.3	51.0	0.574
H2O %	2.87	2.67	2.57	1.49	2.64	0.139
OD 1/m	4.16	4.63	5.26	3.23	5.68	0.249
CT g-min/m^3	3.314E+03	3.033E+03	2.439E+03	943.	1.995E+03	25.9

Lower layer species

N2 %	33.4	36.2	36.0	79.3	35.4	79.3
O2 %	5.59	6.34	6.30	20.7	6.18	20.7
CO2 %	5.27	5.22	5.18	1.365E-03	5.14	3.836E-12
CO ppm	1.573E+03	1.560E+03	1.547E+03	0.408	1.534E+03	5.480E-09
TUHC %	52.6	49.1	49.5	0.000	50.2	0.000
H2O %	2.72	2.70	2.68	7.055E-04	2.65	2.984E-12
OD 1/m	4.15	4.43	4.70	4.187E-04	5.37	4.466E-14
CT g-min/m^3	2.414E+03	1.448E+03	1.473E+03	3.957E-02	1.405E+03	3.362E-11

Time = 1000.0 seconds.

Upper temp(K)	525.3	423.5	356.5	309.8	324.8	293.5	
Lower temp(K)	342.2	323.6	320.3	294.6	320.6	293.3	273.0
Upper vol(m**3)	32.4	28.5	83.7	21.3	36.0	135.6	
Layer depth(m)	2.4	2.2	2.2	2.2	4.6	2.4	
Ceiling temp(K)	461.1	372.7	326.7	301.0	308.4	293.2	
Up wall temp(K)	453.3	363.8	321.5	299.6	305.8	293.2	
Low wall temp(K)	431.7	344.1	314.2	296.5	303.0	293.1	
Floor temp(K)	321.0	302.3	296.2	293.6	294.2	293.3	
Plume flow(kg/s)	3.171E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	4.550E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.806E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.806E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.624E+05
On target(W/m^2)	1.643E+02	1.634E+01	9.154E-01	4.473E-03	5.773E-02	4.200E-09	
Pressure(Pa)	1.558E-01	1.877E+00	3.431E+00	4.808E+00	4.235E+00	8.770E+00	

Upper layer species

N2 %	26.0	27.0	28.9	55.8	31.5	78.4
O2 %	2.75	3.47	4.37	12.7	5.17	20.3
CO2 %	6.76	6.00	5.32	3.12	5.10	0.287
CO ppm	2.018E+03	1.791E+03	1.588E+03	933.	1.524E+03	85.8
TUHC %	60.5	60.0	58.2	26.5	55.2	0.785
H2O %	3.49	3.10	2.75	1.61	2.64	0.149
OD 1/m	4.75	5.18	5.54	3.51	5.76	0.267
CT g-min/m^3	3.857E+03	3.658E+03	3.157E+03	1.284E+03	2.707E+03	35.6

Lower layer species

N2 %	32.0	32.9	32.7	79.3	31.9	79.3
O2 %	5.18	5.53	5.52	20.7	5.29	20.7
CO2 %	5.34	5.10	5.08	1.365E-03	5.08	3.881E-12
CO ppm	1.594E+03	1.524E+03	1.517E+03	0.408	1.518E+03	5.544E-09
TUHC %	54.3	53.5	53.6	0.000	54.7	0.000
H2O %	2.76	2.64	2.63	7.055E-04	2.63	3.018E-12
OD 1/m	4.98	5.08	5.21	3.996E-04	5.46	4.193E-14
CT g-min/m^3	3.003E+03	2.040E+03	2.099E+03	4.439E-02	2.081E+03	3.369E-11

Time = 1100.0 seconds.

Upper temp(K)	514.3	422.3	358.6	310.4	326.9	293.5	
Lower temp(K)	340.2	326.1	322.6	294.8	322.7	293.3	273.0
Upper vol(m**3)	32.1	28.3	82.6	21.5	35.7	135.4	
Layer depth(m)	2.3	2.2	2.1	2.3	4.5	2.4	
Ceiling temp(K)	461.0	375.8	329.1	301.5	309.9	293.2	
Up wall temp(K)	454.5	367.1	323.7	300.0	307.1	293.2	
Low wall temp(K)	431.1	346.9	316.0	296.9	304.2	293.1	
Floor temp(K)	321.7	302.8	296.4	293.7	294.2	293.3	
Plume flow(kg/s)	3.245E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	3.347E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.540E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.540E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.993E+05
On target(W/m^2)	1.353E+02	1.576E+01	1.046E+00	5.179E-03	7.478E-02	3.736E-09	
Pressure(Pa)	-1.408E-01	1.560E+00	2.899E+00	4.227E+00	3.694E+00	8.587E+00	

Upper layer species

N2 %	27.2	27.7	28.6	53.5	30.0	78.3
O2 %	2.80	3.30	3.98	12.0	4.60	20.3
CO2 %	7.23	6.59	5.83	3.40	5.41	0.306
CO ppm	2.160E+03	1.969E+03	1.739E+03	1.016E+03	1.615E+03	91.3
TUHC %	58.4	58.5	58.2	29.1	56.8	0.990
H2O %	3.74	3.41	3.01	1.76	2.79	0.158
OD 1/m	5.29	5.39	6.06	3.84	6.11	0.284
CT g-min/m^3	4.375E+03	4.249E+03	3.879E+03	1.665E+03	3.460E+03	47.7

Lower layer species

N2 %	31.0	30.7	30.6	79.3	30.1	79.3
O2 %	4.83	4.86	4.85	20.7	4.67	20.7
CO2 %	5.46	5.28	5.27	1.365E-03	5.35	3.934E-12
CO ppm	1.631E+03	1.577E+03	1.574E+03	0.408	1.598E+03	5.621E-09
TUHC %	55.5	56.0	56.1	0.000	56.7	0.000
H2O %	2.82	2.73	2.72	7.055E-04	2.77	3.060E-12
OD 1/m	5.23	5.34	5.62	3.594E-04	5.80	3.504E-14
CT g-min/m^3	3.626E+03	2.686E+03	2.783E+03	4.877E-02	2.797E+03	3.375E-11

Time = 1200.0 seconds.

Upper temp(K)	499.3	417.5	358.1	310.4	327.3	293.5	
Lower temp(K)	344.0	327.6	323.9	295.0	323.2	293.3	273.0
Upper vol(m**3)	31.7	27.9	81.5	21.8	35.4	135.1	
Layer depth(m)	2.3	2.2	2.1	2.3	4.5	2.4	
Ceiling temp(K)	455.9	376.4	330.5	301.9	310.9	293.2	
Up wall temp(K)	450.9	368.3	325.2	300.4	308.1	293.2	
Low wall temp(K)	427.6	348.3	317.4	297.2	305.2	293.1	
Floor temp(K)	321.6	303.1	296.6	293.7	294.3	293.3	
Plume flow(kg/s)	3.307E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	2.510E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.257E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.257E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.719E+05
On target(W/m^2)	1.021E+02	1.357E+01	1.013E+00	5.221E-03	7.845E-02	3.354E-09	
Pressure(Pa)	-2.137E-01	1.319E+00	2.573E+00	3.843E+00	3.332E+00	8.329E+00	

Upper layer species

N2 %	27.8	28.0	28.5	51.4	29.5	78.1
O2 %	2.87	3.20	3.71	11.2	4.23	20.2
CO2 %	7.34	6.88	6.25	3.68	5.80	0.324
CO ppm	2.192E+03	2.053E+03	1.865E+03	1.099E+03	1.732E+03	96.7
TUHC %	57.6	57.8	57.9	31.5	57.1	1.18
H2O %	3.79	3.55	3.23	1.90	3.00	0.167
OD 1/m	5.53	5.76	6.48	4.17	6.57	0.301
CT g-min/m^3	4.902E+03	4.834E+03	4.601E+03	2.081E+03	4.229E+03	62.1

Lower layer species

N2 %	30.6	29.7	29.7	79.3	29.5	79.3
O2 %	4.58	4.40	4.39	20.7	4.28	20.7
CO2 %	5.73	5.62	5.63	1.365E-03	5.74	3.993E-12
CO ppm	1.712E+03	1.678E+03	1.680E+03	0.408	1.714E+03	5.704E-09
TUHC %	55.6	56.9	57.0	0.000	57.1	0.000
H2O %	2.96	2.90	2.91	7.055E-04	2.97	3.105E-12
OD 1/m	5.59	5.85	6.12	3.318E-04	6.26	2.846E-14
CT g-min/m^3	4.275E+03	3.375E+03	3.512E+03	5.278E-02	3.535E+03	3.380E-11

Time = 1300.0 seconds.

Upper temp(K)	483.5	411.3	356.4	310.1	326.9	293.5	
Lower temp(K)	341.5	328.0	324.3	295.2	322.9	293.3	273.0
Upper vol(m**3)	30.9	27.5	80.2	22.0	35.0	134.7	
Layer depth(m)	2.2	2.1	2.1	2.3	4.4	2.4	
Ceiling temp(K)	448.5	375.4	331.1	302.1	311.6	293.2	
Up wall temp(K)	445.3	368.1	326.1	300.7	308.8	293.2	
Low wall temp(K)	421.6	348.6	318.3	297.5	305.8	293.1	
Floor temp(K)	320.9	303.2	296.7	293.8	294.3	293.3	
Plume flow(kg/s)	3.137E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	1.673E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	1.001E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	1.001E+05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.340E+04
On target(W/m^2)	7.425E+01	1.106E+01	9.109E-01	4.829E-03	7.486E-02	2.932E-09	
Pressure(Pa)	-2.354E-01	1.100E+00	2.255E+00	3.464E+00	2.974E+00	7.991E+00	

Upper layer species

N2 %	28.4	28.4	28.5	49.6	29.4	77.9
O2 %	3.00	3.19	3.54	10.6	3.99	20.2
CO2 %	7.42	7.06	6.56	3.95	6.15	0.341
CO ppm	2.214E+03	2.108E+03	1.958E+03	1.179E+03	1.836E+03	102.
TUHC %	56.8	57.2	57.5	33.5	56.8	1.35
H2O %	3.83	3.65	3.39	2.04	3.18	0.176
OD 1/m	5.80	6.01	6.84	4.50	6.99	0.317
CT g-min/m^3	5.440E+03	5.429E+03	5.326E+03	2.530E+03	5.005E+03	78.4

Lower layer species

N2 %	30.7	29.3	29.4	79.3	29.4	79.3
O2 %	4.44	4.10	4.09	20.7	4.03	20.7
CO2 %	5.97	5.97	5.98	1.365E-03	6.09	4.054E-12
CO ppm	1.783E+03	1.783E+03	1.787E+03	0.408	1.820E+03	5.792E-09
TUHC %	55.4	57.0	57.0	0.000	56.9	0.000
H2O %	3.09	3.09	3.09	7.055E-04	3.15	3.153E-12
OD 1/m	5.94	6.28	6.57	3.053E-04	6.66	2.282E-14
CT g-min/m^3	4.934E+03	4.086E+03	4.258E+03	5.648E-02	4.281E+03	3.384E-11

Time = 1400.0 seconds.

Upper temp(K)	475.3	406.9	354.6	309.7	326.3	293.4	
Lower temp(K)	331.8	327.3	324.1	295.3	322.2	293.3	273.0
Upper vol(m**3)	29.4	26.8	78.6	22.1	34.6	134.1	
Layer depth(m)	2.1	2.1	2.0	2.3	4.4	2.4	
Ceiling temp(K)	441.9	374.0	331.4	302.3	312.0	293.2	
Up wall temp(K)	440.3	367.6	326.6	300.9	309.3	293.2	
Low wall temp(K)	414.4	348.4	319.0	297.8	306.3	293.1	
Floor temp(K)	320.1	303.1	296.8	293.8	294.3	293.3	
Plume flow(kg/s)	2.528E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	8.367E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	8.637E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	8.637E+04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	6.223E+01	9.494E+00	8.130E-01	4.351E-03	6.896E-02	2.392E-09	
Pressure(Pa)	-2.450E-01	8.065E-01	1.866E+00	3.033E+00	2.548E+00	7.569E+00	

Upper layer species

N2 %	29.2	28.9	28.8	48.0	29.5	77.8
O2 %	3.09	3.21	3.45	10.0	3.86	20.1
CO2 %	7.61	7.26	6.80	4.20	6.43	0.356
CO ppm	2.271E+03	2.167E+03	2.032E+03	1.253E+03	1.918E+03	106.
TUHC %	55.6	56.3	56.9	35.3	56.4	1.49
H2O %	3.93	3.75	3.52	2.17	3.32	0.184
OD 1/m	6.10	6.24	7.15	4.81	7.34	0.331
CT g-min/m^3	5.990E+03	6.025E+03	6.053E+03	3.008E+03	5.784E+03	96.4

Lower layer species

N2 %	31.1	29.3	29.3	79.3	29.4	79.3
O2 %	4.50	3.92	3.91	20.7	3.88	20.7
CO2 %	6.07	6.26	6.29	1.365E-03	6.38	4.119E-12
CO ppm	1.813E+03	1.869E+03	1.877E+03	0.408	1.905E+03	5.884E-09
TUHC %	54.7	56.8	56.7	0.000	56.5	0.000
H2O %	3.14	3.24	3.25	7.055E-04	3.30	3.203E-12
OD 1/m	6.25	6.59	6.91	2.748E-04	6.98	1.829E-14
CT g-min/m^3	5.608E+03	4.805E+03	5.012E+03	5.986E-02	5.030E+03	3.388E-11

Time = 1500.0 seconds.

Upper temp(K)	443.2	393.8	351.8	308.7	325.4	293.4	
Lower temp(K)	323.0	328.5	324.2	295.5	320.6	293.3	273.0
Upper vol(m**3)	23.2	23.4	73.6	21.9	33.4	133.0	
Layer depth(m)	1.7	1.8	1.9	2.3	4.2	2.3	
Ceiling temp(K)	432.5	371.5	331.4	302.3	312.3	293.2	
Up wall temp(K)	432.7	366.0	326.8	301.0	309.7	293.2	
Low wall temp(K)	404.2	347.0	319.4	298.0	306.6	293.1	
Floor temp(K)	319.0	302.9	296.8	293.8	294.3	293.3	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	2.873E+01	5.814E+00	6.761E-01	3.408E-03	6.227E-02	1.547E-09	
Pressure(Pa)	-9.172E-01	-7.575E-01	-1.043E-01	1.175E+00	5.154E-01	6.679E+00	

Upper layer species

N2 %	31.0	29.8	29.2	46.7	30.2	77.8
O2 %	3.61	3.37	3.43	9.57	3.94	20.1
CO2 %	7.53	7.39	7.02	4.42	6.60	0.362
CO ppm	2.248E+03	2.206E+03	2.097E+03	1.319E+03	1.972E+03	108.
TUHC %	53.3	55.0	56.2	36.6	55.3	1.54
H2O %	3.89	3.82	3.63	2.28	3.41	0.187
OD 1/m	6.68	6.65	7.49	5.10	7.64	0.338
CT g-min/m^3	6.549E+03	6.619E+03	6.783E+03	3.513E+03	6.564E+03	116.

Lower layer species

N2 %	40.7	29.5	29.6	79.3	30.0	79.3
O2 %	7.67	3.84	3.82	20.7	3.89	20.7
CO2 %	4.95	6.46	6.52	1.365E-03	6.59	4.198E-12
CO ppm	1.479E+03	1.930E+03	1.948E+03	0.408	1.966E+03	5.997E-09
TUHC %	43.8	56.4	56.2	0.000	55.7	0.000
H2O %	2.56	3.34	3.37	7.055E-04	3.40	3.265E-12
OD 1/m	4.87	6.47	6.78	1.779E-04	6.75	1.283E-14
CT g-min/m^3	6.262E+03	5.509E+03	5.752E+03	6.263E-02	5.758E+03	3.391E-11

8.6 Input Data for EXITT for Scenario 7 (Example Data File SCEN-7.BLD)

```
6 29
3 1 3 4 4
 6 6 6 6 7
 7 8 8 8 8
 8 8 5 5 1
 2 2 3 2 5
 5 3 6 3
1 2 3 4 5
 6 7 8 9 5
 2 1 3 7 8
 9 6 25 25 2
 24 24 3 24 25
 5 3 9 1
2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
 2.4 2.4 2.4 2.4 2.4
 4.9 2.4 2.4 2.4
0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
 0.  0.  0.  0.  0.
 0.  0.  2.5 2.5 0.
 0.  0.  0.  0.  2.5
 0.  0.  0.  0.
35 35 35 35 35
 35 35 35 35 35
 35 35 35 35 35
 35 35 35 35 35
 35 35 35 35 35
 35 35 35 35
2
-1. -1.
5 19
83 71 83 83 95
 59 59 59 59 83
 71 83 83 59 59
 59 59 71 71 71
 71 71 83 71 71
 83 83 59 83
71 59 71 71 71
 71 71 71 71 71
 59 71 71 71 71
 71 71 95 95 59
 59 59 71 59 95
 71 71 71 71
 36
  1  12      2.34696
  1  23      2.43840
  1  29      1.84146
  2  11      2.36667
  2  20      1.37160
  2  21      2.40966
  3  13      2.71340
  3  23      2.11721
  3  27      2.74743
  4   5      1.52400
  4  20      2.28600
  5  10      1.21920
  5  26      1.22869
  5  27      3.20040
  6  17      2.59528
  6  18      4.73291
```

```
  7  14      1.67640
  7  19      2.40887
  8  15      1.67640
  8  18      2.31748
  9  16      1.64140
  9  28      1.73763
 10  26      1.22869
 11  21      4.36503
 12  29      4.18842
 13  23      4.00902
 13  27      4.43795
 18  28      2.89560
 18  19      1.67640
 19  25      2.28600
 20  21      1.98120
 21  22      1.50097
 22  24      1.58496
 22  29      1.82880
 23  29      2.37079
 25  26      5.47996
4
45 40 16 14
1 0 1 0
0 0 0 0
6 6 9 8
0 0 0 0
0. 0. 15. 0.
-1. -1. -1. -1.
```

8.7 Printed Output from EXITT for Scenario 7

```
EXITT Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89
FAST DUMP FILE    :  SCEN-7.DMP
BUILDING/OCCUPANT FILE: SCEN-7.BLD
EXITT OUTPUT FILE     : SCEN-7.EXT
EXITT DUMP FILE       : SCEN-7.EVA

NO. OF ROOMS (RUN WITH FAST)       6
NO. OF DOORS                       2
NO. OF WINDOWS                     6
TOTAL NUMBER OF NODES             29
```

EXITT NODE NUMBER	EXITT ROOM NUMBER	FAST ROOM NUMBER	ROOM HEIGHT (M)	FLOOR HEIGHT (M)
1	1	3	2.4	0.0
2*	2	1	2.4	0.0
3	3	3	2.4	0.0
4	4	4	2.4	0.0
5	5	4	2.4	0.0
6	6	6	2.4	0.0
7	7	6	2.4	0.0
8	8	6	2.4	0.0
9	9	6	2.4	0.0
10	5	7	2.4	0.0
11	2	7	2.4	0.0
12	1	8	2.4	0.0
13	3	8	2.4	0.0
14	7	8	2.4	0.0
15	8	8	2.4	0.0
16	9	8	2.4	0.0
17	6	8	2.4	0.0
18	25	5	2.4	2.5
19	25	5	2.4	2.5
20*	2	1	2.4	0.0
21	24	2	2.4	0.0
22	24	2	2.4	0.0
23	3	3	2.4	0.0
24	24	2	2.4	0.0
25	25	5	2.4	2.5
26	5	5	4.9	0.0
27	3	3	2.4	0.0
28	9	6	2.4	0.0
29	1	3	2.4	0.0

* INDICATES NODE IS IN BURN ROOM

NODE NUMBER	NOISE LEVEL (DECIBELS)
1	35
2	35
3	35
4	35
5	35
6	35
7	35
8	35
9	35
10	35
11	35
12	35
13	35

14	35
15	35
16	35
17	35
18	35
19	35
20	35
21	35
22	35
23	35
24	35
25	35
26	35
27	35
28	35
29	35

NUMBER OF SMOKE DETECTORS: 2

SMOKE DET NO.	NODE	ACTIVATION TIME (SEC)	
1	5	DETERMINED BY EXITT TO BE	0.0 SECONDS
2	19	DETERMINED BY EXITT TO BE	0.0 SECONDS

EXITT NODE NUMBER	ALARM LEVEL (DECIBELS) 1	2
1	83	71
2	71	59
3	83	71
4	83	71
5	95	71
6	59	71
7	59	71
8	59	71
9	59	71
10	83	71
11	71	59
12	83	71
13	83	71
14	59	71
15	59	71
16	59	71
17	59	71
18	71	95
19	71	95
20	71	59
21	71	59
22	71	59
23	83	71
24	71	59
25	71	95
26	83	71
27	83	71
28	59	71
29	83	71

EDGE LIST

FROM NODE	TO NODE	DISTANCE (M)
1 -	12	2.35
-	23	2.44
-	29	1.84
2 -	11	2.37
-	20	1.37
-	21	2.41
3 -	13	2.71
-	23	2.12
-	27	2.75
4 -	5	1.52
-	20	2.29
5 -	4	1.52

	-	10	1.22
	-	26	1.23
	-	27	3.20
6	-	17	2.60
	-	18	4.73
7	-	14	1.68
	-	19	2.41
8	-	15	1.68
	-	18	2.32
9	-	16	1.64
	-	28	1.74
10	-	5	1.22
	-	26	1.23
11	-	2	2.37
	-	21	4.37
12	-	1	2.35
	-	29	4.19
13	-	3	2.71
	-	23	4.01
	-	27	4.44
14	-	7	1.68
15	-	8	1.68
16	-	9	1.64
17	-	6	2.60
18	-	6	4.73
	-	8	2.32
	-	19	1.68
	-	28	2.90
19	-	7	2.41
	-	18	1.68
	-	25	2.29
20	-	2	1.37
	-	4	2.29
	-	21	1.98
21	-	2	2.41
	-	11	4.37
	-	20	1.98
	-	22	1.50
22	-	21	1.50
	-	24	1.58
	-	29	1.83
23	-	1	2.44
	-	3	2.12
	-	13	4.01
	-	29	2.37
24	-	22	1.58
25	-	19	2.29
	-	26	5.48
26	-	5	1.23
	-	10	1.23
	-	25	5.48
27	-	3	2.75
	-	5	3.20
	-	13	4.44
28	-	9	1.74
	-	18	2.90
29	-	1	1.84
	-	12	4.19
	-	22	1.83
	-	23	2.37

TOTAL NUMBER OF DIRECTED EDGES 72

NUMBER OF PEOPLE 4

PERSON	LOCATION	AGE	SEX	STATE	SLEEP PENALTY	REQUIRE ASSISTANCE	TRAVEL SPEED
1	6	45	MALE	ASLEEP	0.0	NO	1.30
2	6	40	FEMALE	ASLEEP	0.0	NO	1.30
3	9	16	MALE	ASLEEP	15.0	NO	1.30
4	8	14	FEMALE	ASLEEP	0.0	NO	1.30

ACTIONS TAKEN BY PERSON 1

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
6	6	0.0	--	--	--	INITIAL POSITION
6	6	141.0	--	--	20	INVESTIGATE FIRE
18	5	144.6	--	--	20	ARRIVE AT NEW NODE
19	5	145.9	--	--	20	ARRIVE AT NEW NODE
19	5	146.9	--	--	--	ALERTED BY ANOTHER - END INVESTIGATION
19	5	148.9	3	--	9	GO TO AWAKEN OTHER
18	5	149.9	3	--	9	ARRIVE AT NEW NODE
28	6	151.6	3	--	9	ARRIVE AT NEW NODE
9	6	152.7	3	--	9	ARRIVE AT NEW NODE
9	6	152.7	3	--	--	AWAKEN OCCUPANT
9	6	155.2	--	--	--	LEAVE BUILDING
28	6	156.2	--	--	10	ARRIVE AT NEW NODE
18	5	157.9	--	--	10	ARRIVE AT NEW NODE
19	5	158.9	--	--	10	ARRIVE AT NEW NODE
25	5	160.2	--	--	10	ARRIVE AT NEW NODE
26	5	163.5	--	--	10	ARRIVE AT NEW NODE
10	7	164.2	--	--	10	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 2

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
6	6	0.0	--	--	--	INITIAL POSITION
6	6	141.0	--	--	20	INVESTIGATE FIRE
18	5	144.6	--	--	20	ARRIVE AT NEW NODE
19	5	145.9	--	--	20	ARRIVE AT NEW NODE
19	5	146.9	--	--	--	ALERTED BY ANOTHER - END INVESTIGATION
19	5	148.9	--	--	--	LEAVE BUILDING
25	5	150.3	--	--	10	ARRIVE AT NEW NODE
26	5	153.5	--	--	10	ARRIVE AT NEW NODE
10	7	154.3	--	--	10	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 3

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
9	6	0.0	--	--	--	INITIAL POSITION
9	6	152.7	--	1	--	BEING AWAKENED
9	6	157.7	--	--	--	LEAVE BUILDING
28	6	158.7	--	--	10	ARRIVE AT NEW NODE
18	5	160.4	--	--	10	ARRIVE AT NEW NODE
19	5	161.4	--	--	10	ARRIVE AT NEW NODE
25	5	162.7	--	--	10	ARRIVE AT NEW NODE
26	5	166.0	--	--	10	ARRIVE AT NEW NODE
10	7	166.7	--	--	10	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 4

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
8	6	0.0	--	--	--	INITIAL POSITION
8	6	141.0	--	--	20	INVESTIGATE FIRE
18	5	142.8	--	--	20	ARRIVE AT NEW NODE
19	5	144.1	--	--	20	ARRIVE AT NEW NODE
25	5	145.8	--	--	20	ARRIVE AT NEW NODE
25	5	145.8	--	--	20	BAD SMOKE - CURRENT ACTION STOPPED
25	5	148.8	--	--	--	LEAVE BUILDING
26	5	152.1	--	--	10	ARRIVE AT NEW NODE
10	7	152.8	--	--	10	LEAVE BUILDING THROUGH DOOR

8.8 Printed Output from TENAB for Scenario 7

```
FAST  Version:  18.3
TENAB Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89

FAST DUMP FILE    :  SCEN-7.DMP
EXITT DUMP FILE   :  SCEN-7.EVA
TENAB OUTPUT FILE:  SCEN-7.TEN
TENAB DUMP FILE   :  SCEN-7.PLT
```

OCCUPANT	NODE NUMBER	ROOM NUMBER	FLOOR ELEVATION	ENTER TIME (S)
1	6	6	0.00	0.0
	18	5	2.50	144.6
	19	5	2.50	145.9
	16	5	2.50	149.9
	28	6	0.00	151.6
	9	6	0.00	152.7
	28	6	0.00	156.2
	18	5	2.50	157.9
	19	5	2.50	158.9
	25	5	2.50	160.2
	26	5	0.00	163.5
	10	DOOR	0.00	164.2
2	6	6	0.00	0.0
	18	5	2.50	144.6
	19	5	2.50	145.9
	25	5	2.50	150.3
	26	5	0.00	153.5
	10	DOOR	0.00	154.3
3	9	6	0.00	0.0
	28	6	0.00	158.7
	18	5	2.50	160.4
	19	5	2.50	161.4
	25	5	2.50	162.7
	26	5	0.00	166.0
	10	DOOR	0.00	166.7
4	8	6	0.00	0.0
	18	5	2.50	142.8
	19	5	2.50	144.1
	25	5	2.50	145.8
	26	5	0.00	152.1
	10	DOOR	0.00	152.8

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED1	0.5	1.0
TEMP1 DEG C	65.0	100.0
CT (G-MIN/M3)	450.0	900.0
FED2	1.0	
TEMP2	1.0	
FED3	1.0	

PERSON 1

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
170.	10	ESCAPE		0.000E+00 0.106E-02 0.577E-02	0.200E+02 0.000E+00	0.405E-01	0.382E-08
1510.	10	FINAL TIME		0.000E+00 0.106E-02 0.577E-02	0.200E+02 0.000E+00	0.405E-01	0.382E-08

PERSON 2

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
160.	10	ESCAPE		0.000E+00 0.975E-03 0.542E-02	0.200E+02 0.000E+00	0.197E-01	0.501E-09
1510.	10	FINAL TIME		0.000E+00 0.975E-03 0.542E-02	0.200E+02 0.000E+00	0.197E-01	0.501E-09

PERSON 3

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
170.	10	ESCAPE		0.000E+00 0.108E-02 0.586E-02	0.200E+02 0.000E+00	0.315E-01	0.460E-08
1510.	10	FINAL TIME		0.000E+00 0.108E-02 0.586E-02	0.200E+02 0.000E+00	0.315E-01	0.460E-08

PERSON 4

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
160.	10	ESCAPE		0.000E+00 0.962E-03 0.537E-02	0.200E+02 0.000E+00	0.118E-01	0.215E-09
1510.	10	FINAL TIME		0.000E+00 0.962E-03 0.537E-02	0.200E+02 0.000E+00	0.118E-01	0.215E-09

FED1 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO,CO2,HCN AND O2 BASED ON THE HAZARD I TENAB FED PLUS AN OXYGEN TERM

FED2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO,CO2,HCN AND O2 BASED ON PURSER'S EQUATIONS

FED3 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO2 BASED ON PURSER'S EQUATIONS

TEMP1 - THE AVERAGE TEMPERATURE OF THE LAYER OF THE ROOM TO WHICH THE PERSON IS EXPOSED - IT IS THE SAME AS TEMP USED IN THE HAZARD I TENAB

TEMP2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CONVECTIVE HEAT BASED ON PURSER'S EQUATIONS

* IF PERSON IS WAITING AT A WINDOW, HE IS CONSIDERED TO BE AT THE NODE (ROOM) FROM WHICH HE CAME PRIOR TO REACHING THE WINDOW THIS ALLOWS HIM TO CONTINUE TO BE EXPOSED TO THE ROOM FIRE CONDITIONS

CHAPTER 9. SCENARIO 8, OFFICE FIRE

9.1 Summary of Fire Scenario 8

For scenario 8, a fire in a trash can next to a desk exposes window drapery. Four occupants are in the house.

BUILDING: Two-story detached house

OCCUPANTS: Father, aged 45, fully capable but asleep in family room.

Mother, aged 40, fully capable in kitchen.

Boy, aged 16, fully capable in bedroom 2 listening to loud stereo.

Girl, aged 14, fully capable in kitchen.

DOORS: All doors open except door to bedroom 2 closed.

FIRE: Fire in trash can next to desk exposes window drapery. Bedroom 4 serves as a home office.

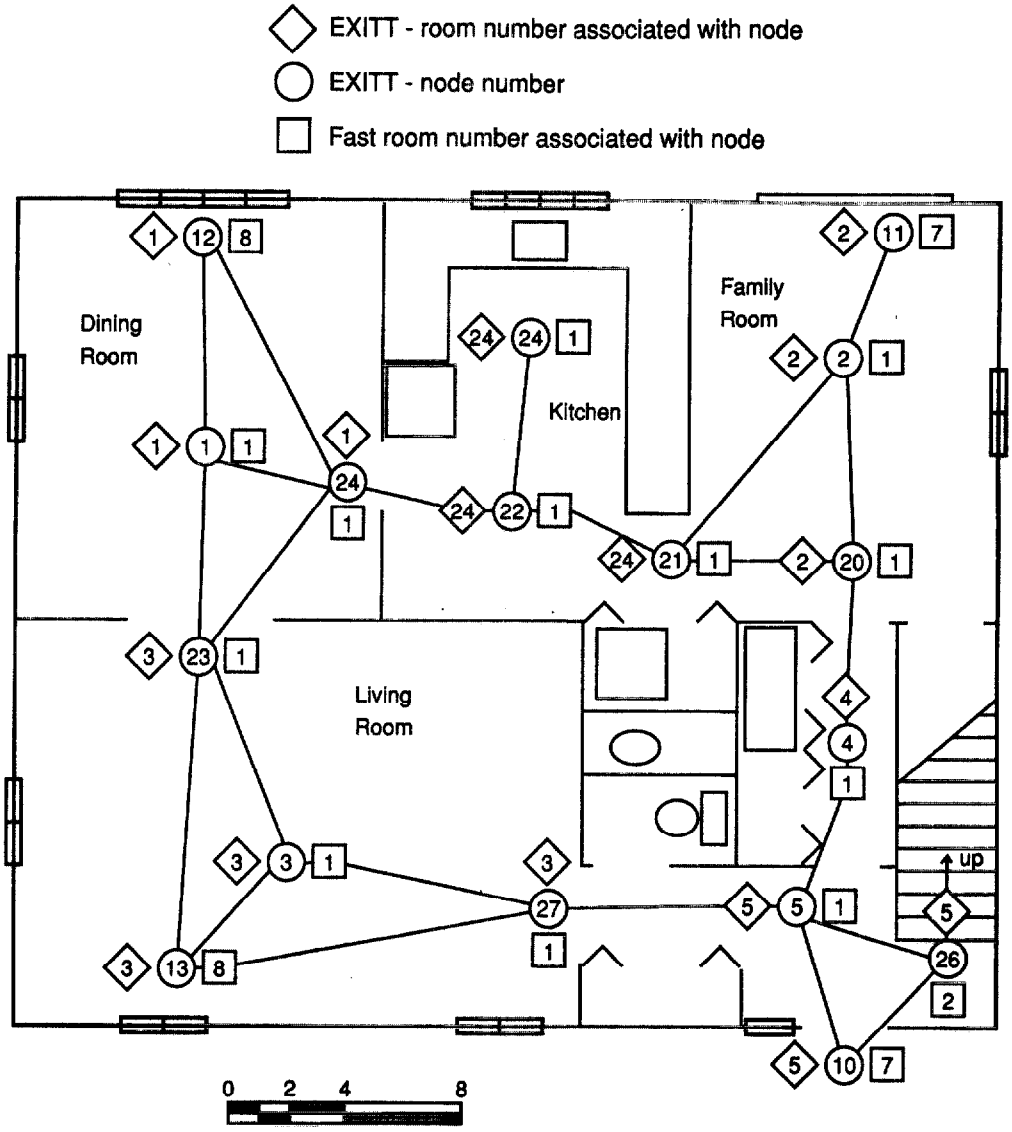
FUEL: All material and fire properties taken directly from HAZARD I fire properties database. Material code WPB001 (wastepaper basket, polyethylene, milk cartons) is first item ignited. Material code CTN001 (curtain, cotton, 0.31 kg/m^2) is second item to ignite. Material code TLV001 (television set, B/W, wood cabinet) with total mass increased to approximately 30 kg is used to simulate office desk.

CEILINGS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

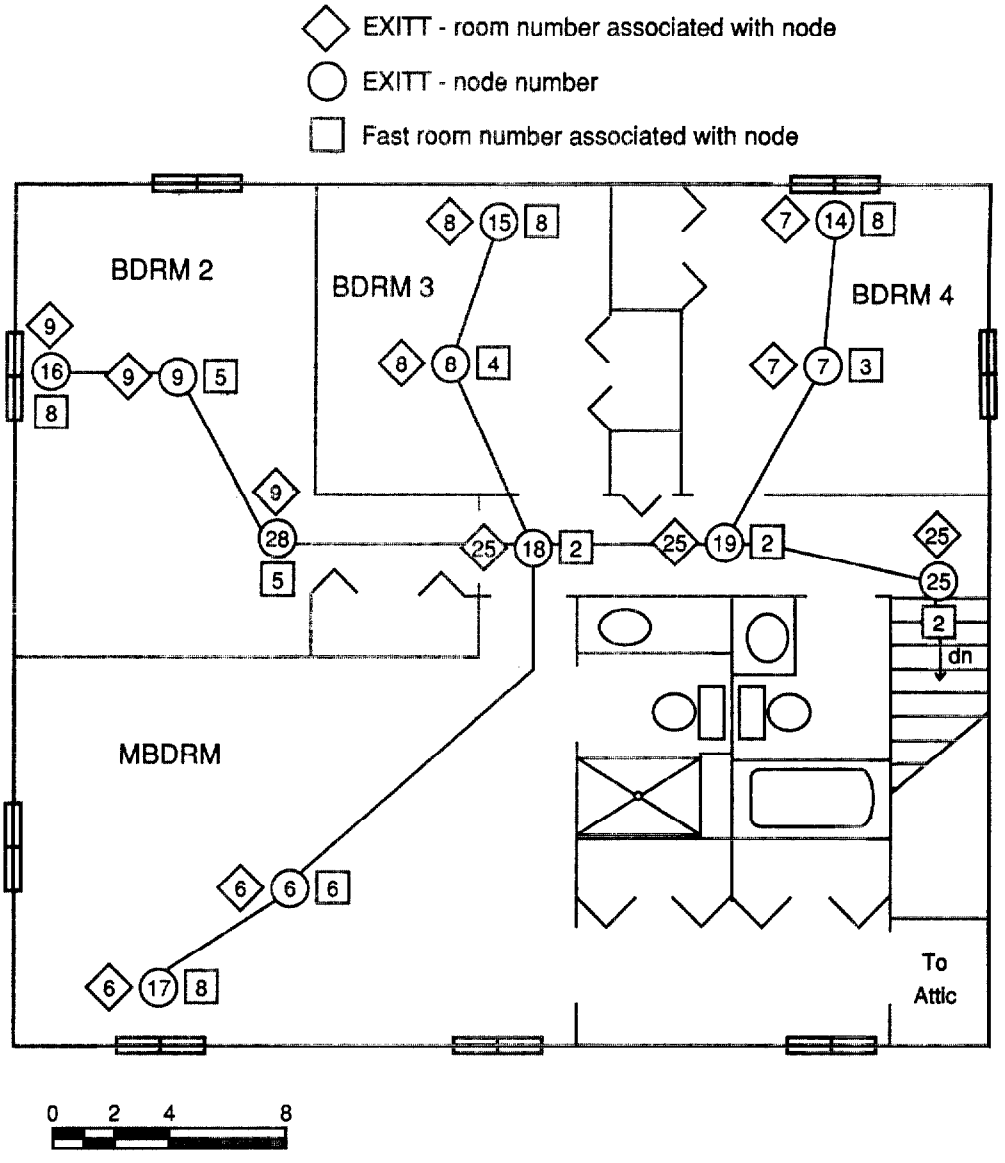
WALLS: Gypsum board, standard, taken directly from HAZARD I materials property database. Material code GBD001.

FLOORS: First floor is 0.15-m-thick concrete slab, taken directly from HAZARD I materials property database. Material code CNC001, Concrete, normal weight, Type I cement, Dolomite aggregate. Second floor is Douglas fir plywood, taken directly from HAZARD I materials property database. Material code DFP001, Douglas fir plywood, 10% moisture.

9.2 Floor Plan and EXITT Building Description for Scenario 8



Lower Floor

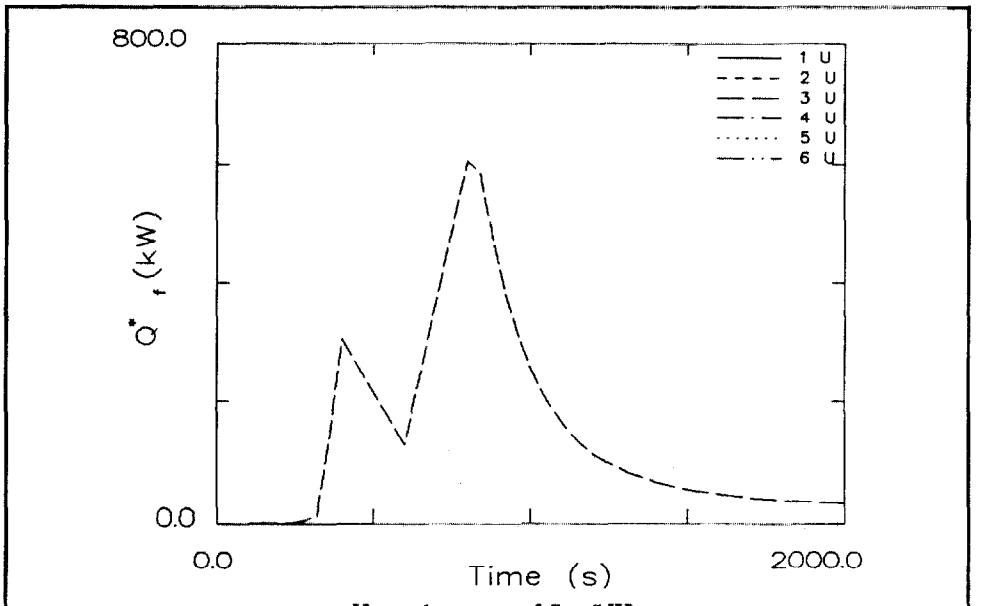

EXITT - room number associated with node
EXITT - node number
Fast room number associated with node
BDRM 2
BDRM 3
BDRM 4
MBDRM
dn
To
Attic
0 2 4 8

Upper Floor

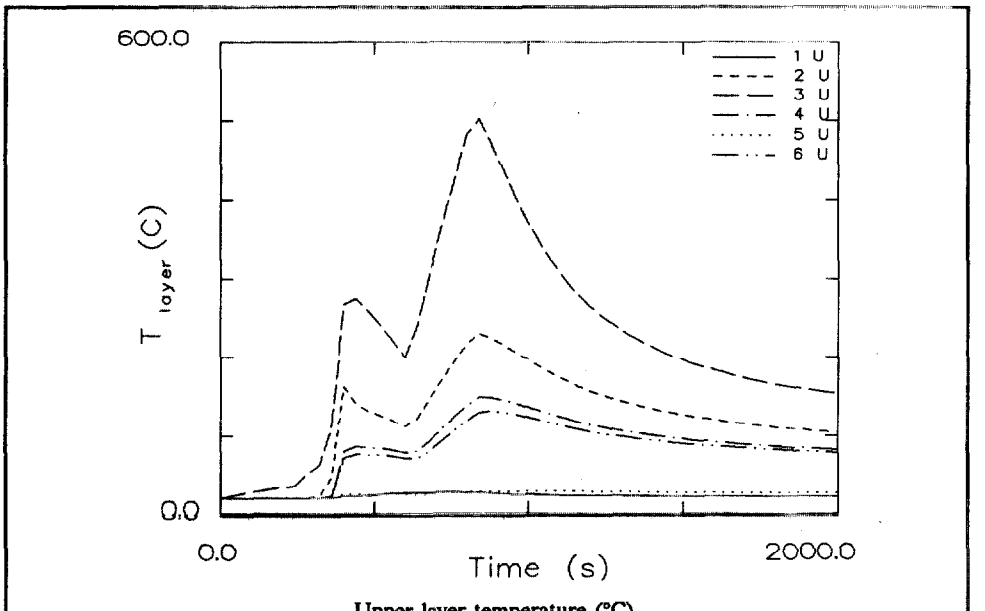
9.3 FAST Input Data for Scenario 8 (Example Data File SCEN-8.DAT)

```
VERSN   18   Scenario 8, Office / Bedroom Fire
TIMES   2000 100  40   0   0
TAMB   293.  101300.      0.
EAMB   273.  101300.      0.
HI/F     0.00    0.00   2.70   2.70   2.70   2.70
WIDTH   10.00    1.00   3.00   3.00   3.00   4.00
DEPTH    6.40    9.00   3.20   3.20   4.80   5.80
HEIGH    2.40    4.90   2.40   2.40   2.40   2.40
HVENT   1  2  1   1.10   2.10   0.00
HVENT   1  7  1   1.10   0.20   0.00   0.00
HVENT   2  3  1   1.10   4.80   2.70
HVENT   2  4  1   1.10   4.80   2.70
HVENT   2  5  1   0.01   4.80   2.70
HVENT   2  6  1   1.10   4.80   2.70
CEILI GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
WALLS GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM    GYPSUM
FLOOR CONCRETE  CONCRETE  CONCRETE  CONCRETE  CONCRETE  WOOD
CHEMI     0.    0.   6.0    18100000.  300.
LFBO   3
LFBT   2
LFPOS  1
LFMAX  8
FTIME    240.   110.    25.   225.   250.   600.   400.   150.
FMASS  0.0000 0.0001 0.0008 0.0180 0.0070 0.0400 0.0240 0.0120 0.0050
FHIGH    0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00
FAREA    0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50   0.50
FQDOT  0.00     1.81E+03 1.45E+04 3.26E+05 1.27E+05 7.24E+05 4.34E+05 2.17E+05 9.05E+04
CT    1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000
HCR   0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080 0.080
CO    0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019 0.019
OD    0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013 0.013
DUMPR SCEN-8.DMP
```

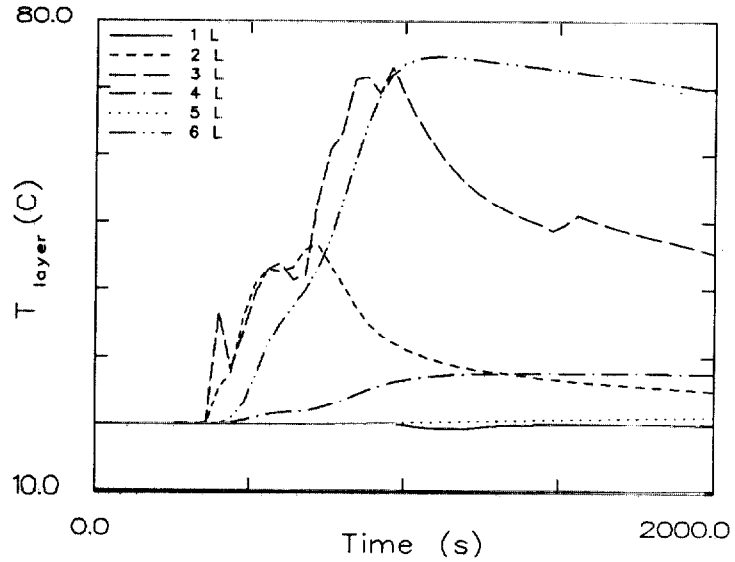
9.4 Selected Graphs from Scenario 8



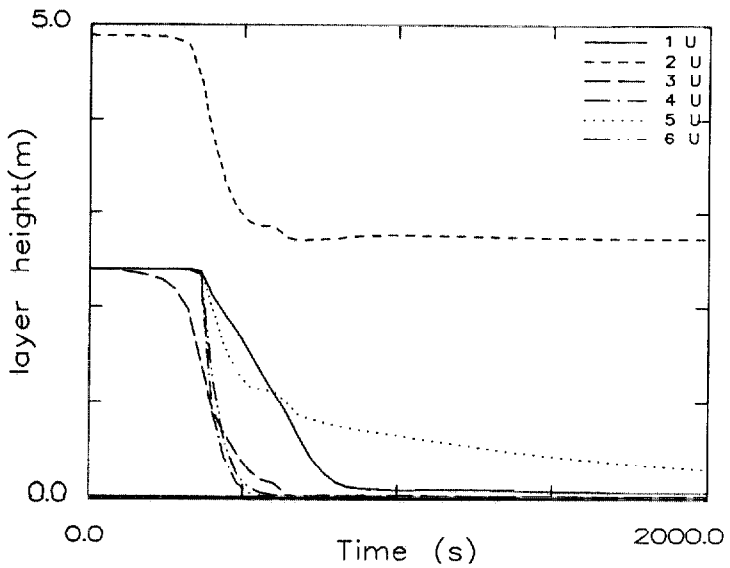
Heat release rate of fire (kW)



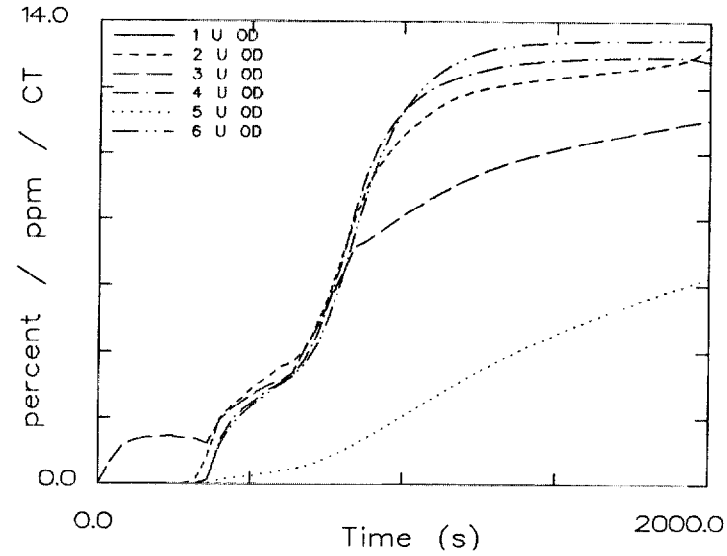
Upper layer temperature (°C)



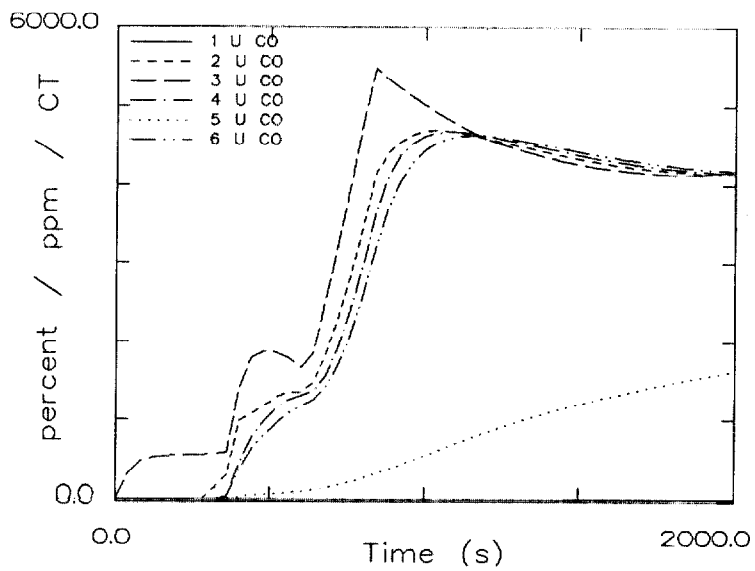
Lower layer temperature (°C)



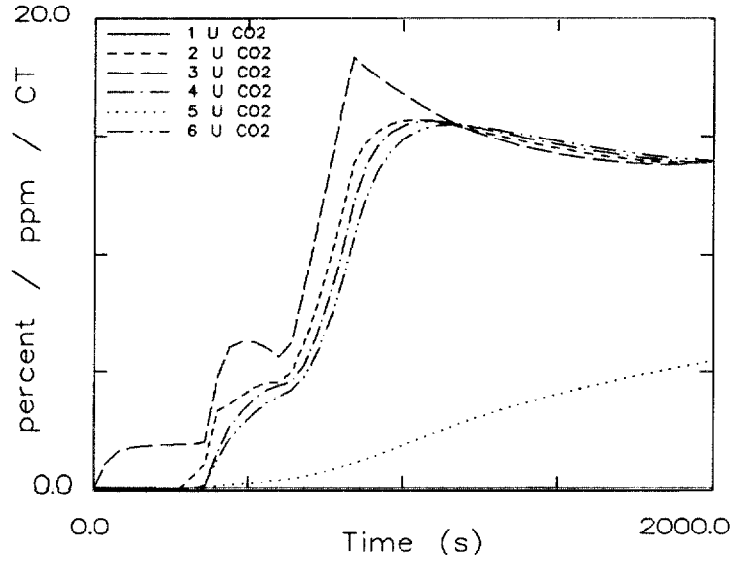
Layer interface height (m)



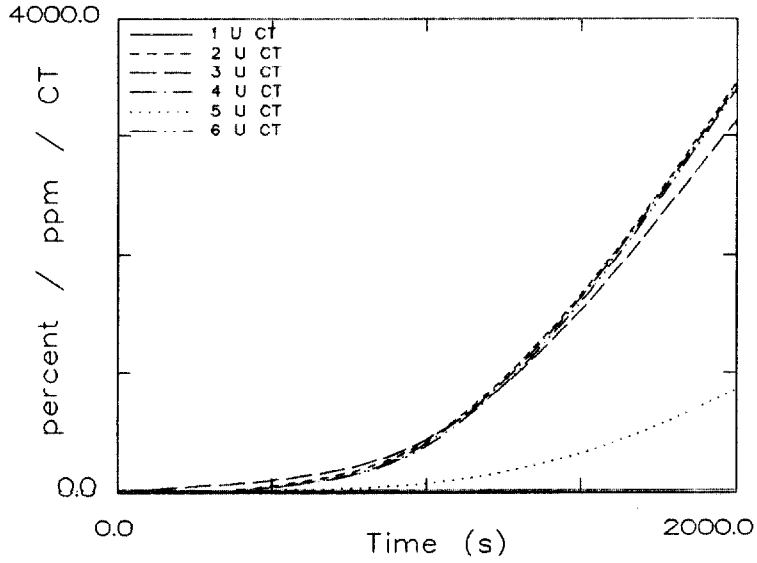
Smoke optical density (m^{-1})



Carbon monoxide concentration (ppm)



Carbon dioxide concentration (%)



Concentration-Time product (ppm-min)

9.5 Printed Output from FAST for Scenario 8

FAST version 18.3.2 - created February 1, 1989 Scenario 8, Office / Bedroom Fire

Total compartments = 6

FLOOR PLAN

Width	10.0	1.0	3.0	3.0	3.0	4.0
Depth	6.4	9.0	3.2	3.2	4.8	5.8
Height	2.4	4.9	2.4	2.4	2.4	2.4
Area	64.0	9.0	9.6	9.6	14.4	23.2
Volume	153.6	44.1	23.0	23.0	34.6	55.7
Ceiling	2.4	4.9	5.1	5.1	5.1	5.1
Floor	0.0	0.0	2.7	2.7	2.7	2.7

CONNECTIONS

1 (1)	Width	0.00	1.10	0.00	0.00	0.00	0.00	1.10
	Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.20
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.20
	a.Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 (1)	Width	1.10	0.00	1.10	1.10	0.01	1.10	0.00
	Soffit	2.10	0.00	4.80	4.80	4.80	4.80	0.00
	Sill	0.00	0.00	2.70	2.70	2.70	2.70	0.00
	a.Soffit	2.10	0.00	4.80	4.80	4.80	4.80	0.00
	a.Sill	0.00	0.00	2.70	2.70	2.70	2.70	0.00
3 (1)	Width	0.00	1.10	0.00	0.00	0.00	0.00	0.00
	Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	4.80	0.00	0.00	0.00	0.00	0.00
	a.Sill	0.00	2.70	0.00	0.00	0.00	0.00	0.00
4 (1)	Width	0.00	1.10	0.00	0.00	0.00	0.00	0.00
	Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	4.80	0.00	0.00	0.00	0.00	0.00
	a.Sill	0.00	2.70	0.00	0.00	0.00	0.00	0.00
5 (1)	Width	0.00	0.01	0.00	0.00	0.00	0.00	0.00
	Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	4.80	0.00	0.00	0.00	0.00	0.00
	a.Sill	0.00	2.70	0.00	0.00	0.00	0.00	0.00
6 (1)	Width	0.00	1.10	0.00	0.00	0.00	0.00	0.00
	Soffit	0.00	2.10	0.00	0.00	0.00	0.00	0.00
	Sill	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	a.Soffit	0.00	4.80	0.00	0.00	0.00	0.00	0.00
	a.Sill	0.00	2.70	0.00	0.00	0.00	0.00	0.00

Material names

Ceiling:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Walls:	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM	GYPSUM
Floor:	CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE	WOOD

Thermal data base used: THERMAL.TPF

Name	Conductivity	Specific heat	Density	Thickness	Emissivity	**Codes**	
CONCRETE	1.75	1.000E+03	2.200E+03	0.150	0.940	188	U
GYPSUM	0.160	900.	800.	1.600E-02	0.900	38	U
WOOD	7.000E-02	1.000E+03	250.	1.600E-02	0.980		U

Compartment of origin is 3
Print interval (seconds) 100
Number of fire specification intervals is 8
Total time (seconds) 2000
Fire position 1
Limiting oxygen index (%) = 6.0
Initial relative humidity (%) = 0.0
Fire type is a SPECIFIED (CONSTRAINED)

Pyrolysis temperature (K) = 300.
Ambient air temperature (K) = 293.
Ambient reference pressure (Pa) = 101300.
Reference elevation (m) = 0.
External ambient temperature (K) = 273.
External reference pressure (Pa) = 101300.
Reference elevation (m) = 0.

Fmass=	0.00	1.00E-04	8.00E-04	1.80E-02	7.00E-03	4.00E-02	2.40E-02	1.20E-02	5.00E-03
Hcomb=	1.81E+07	1.81E+07	1.81E+07	1.81E+07	1.81E+07	1.81E+07	1.81E+07	1.81E+07	1.81E+07
Fqdot=	0.00	1.81E+03	1.45E+04	3.26E+05	1.27E+05	7.24E+05	4.34E+05	2.17E+05	9.05E+04
Fhigh=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C/CO2=	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02	1.30E-02
CO/CO2=	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02
H/C=	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02	8.00E-02
CT=	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ftime=	2.40E+02	1.10E+02	25.	2.25E+02	2.50E+02	6.00E+02	4.00E+02	1.50E+02	

Dump file = SCEN-8.DMP

Time = 0.0 seconds.

Upper temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Lower temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.2	0.0	0.0	0.0	0.0	0.1	
Layer depth(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Pressure(Pa)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	

Upper layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 100.0 seconds.

Upper temp(K)	293.0	293.0	300.5	293.0	293.0	293.0	
Lower temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.2	0.1	0.2	0.1	0.0	0.1	
Layer depth(m)	0.0	0.0	0.0	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	293.9	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	293.7	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.1	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	4.504E-03	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	4.167E-05	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	7.542E+02	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	7.542E+02	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	7.827E-25	1.789E-04	5.237E-15	5.310E-15	5.237E-15	
Pressure(Pa)	-8.765E-02	-8.801E-02	1.404E-01	1.392E-01	1.049E-01	1.391E-01	

Upper layer species

N2 %	79.3	79.3	77.9	79.3	79.3	79.3
O2 %	20.7	20.7	19.4	20.7	20.7	20.7
CO2 %	0.000	0.000	1.69	0.000	0.000	0.000
CO ppm	0.000	0.000	503.	0.000	0.000	0.000
TUHC %	0.000	0.000	9.868E-08	0.000	0.000	0.000
H2O %	0.000	0.000	0.871	0.000	0.000	0.000
OD 1/m	0.000	0.000	1.28	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	8.71	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 200.0 seconds.

Upper temp(K)	293.0	293.0	306.1	293.0	293.0	293.0	
Lower temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.2	0.2	0.8	0.1	0.0	0.2	
Layer depth(m)	0.0	0.0	0.1	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	295.5	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	294.9	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.3	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.0	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	9.001E-03	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	8.333E-05	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	1.508E+03	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	1.508E+03	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	7.827E-25	1.686E-03	5.237E-15	5.310E-15	5.237E-15	
Pressure(Pa)	-7.986E-02	-7.733E-02	1.524E-01	1.499E-01	1.287E-01	1.498E-01	

Upper layer species

N2 %	79.3	79.3	77.8	79.3	79.3	79.3
O2 %	20.7	20.7	19.2	20.7	20.7	20.7
CO2 %	0.000	0.000	1.83	0.000	0.000	0.000
CO ppm	0.000	0.000	548.	0.000	0.000	0.000
TUHC %	0.000	0.000	1.209E-07	0.000	0.000	0.000
H2O %	0.000	0.000	0.948	0.000	0.000	0.000
OD 1/m	0.000	0.000	1.44	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	24.8	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 300.0 seconds.

Upper temp(K)	293.0	293.0	330.3	293.0	293.0	293.0	
Lower temp(K)	293.0	293.0	293.1	293.0	293.0	293.0	273.0
Upper vol(m**3)	0.2	0.7	3.0	0.1	0.0	0.2	
Layer depth(m)	0.0	0.1	0.3	0.0	0.0	0.0	
Ceiling temp(K)	293.0	293.0	300.3	293.0	293.0	293.0	
Up wall temp(K)	293.0	293.0	298.5	293.0	293.0	293.0	
Low wall temp(K)	293.0	293.0	293.9	293.0	293.0	293.0	
Floor temp(K)	293.0	293.0	293.1	293.0	293.0	293.0	
Plume flow(kg/s)	0.000E+00	0.000E+00	5.170E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	4.818E-04	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	8.561E-07	8.727E+03	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	8.727E+03	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	8.561E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	0.000E+00	3.097E-14	1.096E-01	5.237E-15	5.310E-15	5.237E-15	
Pressure(Pa)	-3.906E-03	2.298E-02	2.770E-01	2.480E-01	1.726E-01	2.454E-01	

Upper layer species

N2 %	79.3	79.3	77.8	79.3	79.3	79.3
O2 %	20.7	20.7	19.2	20.7	20.7	20.7
CO2 %	0.000	1.137E-02	1.88	0.000	0.000	0.000
CO ppm	0.000	3.40	562.	0.000	0.000	0.000
TUHC %	0.000	8.096E-11	4.490E-08	0.000	0.000	0.000
H2O %	0.000	5.877E-03	0.973	0.000	0.000	0.000
OD 1/m	0.000	6.415E-04	1.39	0.000	0.000	0.000
CT g-min/m^3	0.000	1.151E-04	41.5	0.000	0.000	0.000

Lower layer species

N2 %	79.3	79.3	79.3	79.3	79.3	79.3
O2 %	20.7	20.7	20.7	20.7	20.7	20.7
CO2 %	0.000	0.000	0.000	0.000	0.000	0.000
CO ppm	0.000	0.000	0.000	0.000	0.000	0.000
TUHC %	0.000	0.000	0.000	0.000	0.000	0.000
H2O %	0.000	0.000	0.000	0.000	0.000	0.000
OD 1/m	0.000	0.000	0.000	0.000	0.000	0.000
CT g-min/m^3	0.000	0.000	0.000	0.000	0.000	0.000

Time = 400.0 seconds.

Upper temp(K)	294.9	435.1	539.6	352.4	297.8	344.2	
Lower temp(K)	293.0	298.4	309.6	293.0	293.0	293.1	273.0
Upper vol(m**3)	18.2	9.8	14.3	14.5	6.3	26.5	
Layer depth(m)	0.3	1.1	1.5	1.5	0.4	1.1	
Ceiling temp(K)	293.1	322.6	359.9	301.3	293.4	299.5	
Up wall temp(K)	293.1	316.0	347.5	299.2	293.3	297.8	
Low wall temp(K)	293.0	294.6	310.2	294.3	293.1	294.1	
Floor temp(K)	293.0	293.2	295.3	293.2	293.0	295.6	
Plume flow(kg/s)	0.000E+00	0.000E+00	8.015E-01	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	1.678E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	9.034E-04	3.039E+05	0.000E+00	2.009E-11	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	3.039E+05	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	9.034E-04	0.000E+00	0.000E+00	2.009E-11	0.000E+00	0.000E+00
On target(W/m^2)	7.776E-07	2.301E+01	2.088E+02	7.022E-01	3.013E-05	3.876E-01	
Pressure(Pa)	3.727E+00	3.867E+00	3.427E+00	4.925E+00	3.612E+00	5.448E+00	

Upper layer species

N2 %	79.3	76.7	75.5	78.1	79.2	78.3
O2 %	20.7	18.1	16.9	19.5	20.6	19.7
CO2 %	0.000	3.32	4.73	1.52	0.103	1.22
CO ppm	0.000	991.	1.413E+03	454.	30.8	365.
TUHC %	0.000	1.529E-14	1.649E-08	9.306E-15	0.000	7.116E-16
H2O %	0.000	1.71	2.45	0.785	5.330E-02	0.632
OD 1/m	0.000	1.99	1.94	1.32	0.144	1.18
CT g-min/m^3	0.000	8.94	58.5	3.59	0.446	3.03

Lower layer species

N2 %	79.3	79.2	79.0	79.3	79.3	79.3
O2 %	20.7	20.6	20.4	20.7	20.7	20.7
CO2 %	8.083E-03	0.140	0.340	1.627E-05	1.448E-03	5.215E-07
CO ppm	2.41	41.8	102.	4.858E-03	0.432	1.557E-04
TUHC %	5.722E-15	8.722E-14	9.231E-10	0.000	0.000	0.000
H2O %	4.177E-03	7.239E-02	0.176	8.407E-06	7.483E-04	2.695E-07
OD 1/m	7.752E-03	0.101	0.234	1.060E-05	1.066E-03	3.627E-07
CT g-min/m^3	1.339E-02	0.301	0.691	3.616E-05	1.927E-03	1.263E-06

Time = 500.0 seconds.

Upper temp(K)	297.2	401.2	522.3	357.7	297.1	348.2	
Lower temp(K)	293.0	311.8	309.8	293.8	293.0	297.9	273.0
Upper vol(m**3)	49.1	17.6	19.6	22.3	17.0	52.2	
Layer depth(m)	0.8	2.0	2.0	2.3	1.2	2.2	
Ceiling temp(K)	293.5	334.4	399.6	312.7	293.8	309.2	
Up wall temp(K)	293.4	326.3	383.7	308.4	293.6	305.6	
Low wall temp(K)	293.1	297.1	336.7	299.4	293.2	296.0	
Floor temp(K)	293.0	293.5	300.3	294.0	293.0	303.8	
Plume flow(kg/s)	0.000E+00	0.000E+00	2.598E-01	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	1.189E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	2.155E+05	0.000E+00	6.933E-06	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	2.155E+05	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.933E-06	0.000E+00	0.000E+00
On target(W/m^2)	1.707E-05	7.722E+00	1.559E+02	9.903E-01	1.647E-05	5.225E-01	
Pressure(Pa)	1.104E+00	6.420E-01	1.387E+00	3.185E+00	5.335E+00	3.630E+00	

Upper layer species

N2 %	79.3	76.0	74.3	76.5	79.1	76.9
O2 %	20.7	17.4	15.7	17.8	20.6	18.3
CO2 %	0.000	4.15	6.28	3.57	0.200	2.96
CO ppm	0.000	1.240E+03	1.875E+03	1.067E+03	59.7	885.
TUHC %	0.000	6.988E-09	1.156E-08	6.089E-09	2.165E-12	4.527E-09
H2O %	0.000	2.15	3.24	1.85	0.103	1.53
OD 1/m	0.000	2.86	2.69	2.45	0.251	2.34
CT g-min/m^3	0.000	37.4	85.7	26.8	2.80	24.7

Lower layer species

N2 %	79.2	78.5	78.7	79.3	79.3	79.3
O2 %	20.7	20.0	20.1	20.7	20.7	20.7
CO2 %	7.626E-02	0.928	0.773	3.104E-04	1.645E-03	5.215E-07
CO ppm	22.8	277.	231.	9.268E-02	0.491	1.557E-04
TUHC %	1.142E-10	1.652E-09	1.397E-09	2.845E-13	1.228E-15	0.000
H2O %	3.941E-02	0.479	0.400	1.604E-04	8.499E-04	2.695E-07
OD 1/m	8.128E-02	0.618	0.394	9.636E-05	8.173E-04	2.298E-07
CT g-min/m^3	0.367	3.60	3.21	1.624E-03	1.329E-02	4.702E-06

Time = 600.0 seconds.

Upper temp(K)	299.6	385.0	473.5	351.4	297.4	344.1	
Lower temp(K)	293.0	315.7	316.9	294.7	293.0	307.9	273.0
Upper vol(m**3)	83.3	18.4	21.6	23.0	18.5	55.2	
Layer depth(m)	1.3	2.0	2.3	2.4	1.3	2.4	
Ceiling temp(K)	294.2	336.1	396.5	316.0	294.0	312.3	
Up wall temp(K)	294.0	328.2	382.1	311.3	293.8	308.3	
Low wall temp(K)	293.4	299.2	346.5	302.4	293.3	300.4	
Floor temp(K)	293.1	293.7	302.7	294.6	293.0	309.3	
Plume flow(kg/s)	0.000E+00	0.000E+00	1.782E-01	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	7.000E-03	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	1.270E+05	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	1.270E+05	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.039E-04	4.033E+00	5.994E+01	6.586E-01	2.084E-05	3.847E-01	
Pressure(Pa)	1.096E-02	-7.951E-01	1.805E-01	2.304E+00	4.596E+00	2.542E+00	

Upper layer species

N2 %	79.3	75.7	74.9	75.8	79.0	76.2
O2 %	20.7	17.1	16.2	17.2	20.4	17.5
CO2 %	0.000	4.55	5.61	4.41	0.339	3.95
CO ppm	0.000	1.358E+03	1.675E+03	1.316E+03	101.	1.179E+03
TUHC %	0.000	5.961E-09	7.929E-09	6.231E-09	1.799E-10	5.704E-09
H2O %	0.000	2.35	2.90	2.28	0.175	2.04
OD 1/m	0.000	3.57	3.14	3.07	0.417	3.03
CT g-min/m^3	0.000	74.7	120.	59.3	6.66	56.1

Lower layer species

N2 %	79.0	78.2	78.3	79.3	79.3	79.3
O2 %	20.4	19.7	19.7	20.7	20.7	20.7
CO2 %	0.343	1.31	1.30	3.217E-02	1.645E-03	5.215E-07
CO ppm	102.	392.	389.	9.60	0.491	1.557E-04
TUHC %	5.301E-10	1.867E-09	1.878E-09	5.615E-11	1.424E-15	0.000
H2O %	0.177	0.679	0.673	1.662E-02	8.499E-04	2.695E-07
OD 1/m	0.450	1.24	1.14	2.705E-03	7.727E-04	1.091E-07
CT g-min/m^3	3.16	14.6	12.0	2.918E-02	2.239E-02	6.623E-06

Time = 700.0 seconds.

Upper temp(K)	300.6	433.4	613.3	375.0	298.9	360.5	
Lower temp(K)	293.0	319.9	319.3	295.2	293.0	314.2	273.0
Upper vol(m**3)	120.1	19.8	23.0	23.0	22.4	55.6	
Layer depth(m)	1.9	2.2	2.4	2.4	1.6	2.4	
Ceiling temp(K)	294.8	349.7	448.8	322.5	294.4	317.2	
Up wall temp(K)	294.4	339.8	429.3	316.7	294.1	312.4	
Low wall temp(K)	293.7	301.7	393.0	305.9	293.4	303.2	
Floor temp(K)	293.1	294.0	310.3	295.3	293.1	315.2	
Plume flow(kg/s)	0.000E+00	0.000E+00	3.591E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	2.020E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	3.661E+05	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	3.222E+05	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	4.397E+04	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.873E-04	2.190E+01	5.939E+02	2.557E+00	6.902E-05	1.172E+00	
Pressure(Pa)	1.265E+00	5.435E-01	1.051E+00	4.609E+00	6.585E+00	5.025E+00	

Upper layer species

N2 %	79.3	73.8	71.6	74.7	78.9	75.2
O2 %	20.7	15.2	12.9	16.0	20.3	16.6
CO2 %	0.000	6.92	9.71	5.81	0.541	5.18
CO ppm	0.000	2.065E+03	2.899E+03	1.735E+03	162.	1.546E+03
TUHC %	0.000	1.089E-07	2.358E-07	8.682E-08	1.878E-09	6.157E-08
H2O %	0.000	3.57	5.02	3.00	0.280	2.68
OD 1/m	0.000	4.46	4.44	4.15	0.630	3.92
CT g-min/m^3	0.000	119.	162.	99.8	12.5	95.7

Lower layer species

N2 %	78.6	77.9	77.9	79.3	79.3	79.3
O2 %	20.1	19.4	19.3	20.7	20.7	20.7
CO2 %	0.809	1.69	1.78	3.217E-02	1.645E-03	5.215E-07
CO ppm	242.	506.	532.	9.60	0.491	1.557E-04
TUHC %	4.568E-09	1.826E-08	2.041E-08	7.451E-09	2.128E-15	0.000
H2O %	0.418	0.875	0.922	1.662E-02	8.499E-04	2.695E-07
OD 1/m	1.73	2.10	1.21	2.443E-06	6.838E-04	1.040E-08
CT g-min/m^3	14.1	33.5	26.6	3.841E-02	3.067E-02	8.695E-06

Time = 800.0 seconds.

Upper temp(K)	300.4	490.0	756.1	411.3	301.0	392.3	
Lower temp(K)	293.1	313.8	336.5	296.6	293.1	326.0	273.0
Upper vol(m**3)	143.9	19.6	23.0	23.0	23.7	55.4	
Layer depth(m)	2.2	2.2	2.4	2.4	1.6	2.4	
Ceiling temp(K)	295.2	379.1	568.2	338.2	295.0	329.9	
Up wall temp(K)	294.7	365.2	543.8	329.7	294.6	322.8	
Low wall temp(K)	293.9	305.5	511.8	314.2	293.6	309.5	
Floor temp(K)	293.2	294.6	332.0	296.8	293.1	328.7	
Plume flow(kg/s)	0.000E+00	0.000E+00	6.507E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	3.340E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	6.048E+05	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	5.239E+05	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	8.089E+04	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.659E-04	8.499E+01	2.594E+03	1.106E+01	2.360E-04	5.494E+00	
Pressure(Pa)	8.798E-01	3.874E-01	2.656E-01	4.042E+00	7.423E+00	4.465E+00	

Upper layer species

N2 %	79.3	70.1	66.6	71.4	78.6	72.4
O2 %	20.7	11.4	7.77	12.7	20.0	13.7
CO2 %	0.000	11.6	16.1	9.96	0.886	8.69
CO ppm	0.000	3.469E+03	4.805E+03	2.974E+03	264.	2.593E+03
TUHC %	0.000	4.158E-07	4.922E-07	3.854E-07	1.493E-08	3.021E-07
H2O %	0.000	6.00	8.32	5.15	0.458	4.49
OD 1/m	0.000	6.89	6.30	6.73	1.01	6.18
CT g-min/m^3	0.000	184.	225.	162.	22.0	153.

Lower layer species

N2 %	78.0	76.7	76.3	26.4	79.3	79.3
O2 %	19.4	18.1	17.7	6.90	20.7	20.7
CO2 %	1.68	3.26	3.75	1.072E-02	1.645E-03	5.215E-07
CO ppm	502.	974.	1.120E+03	3.20	0.491	1.554E-04
TUHC %	3.199E-08	9.710E-08	1.122E-07	1.339E-05	2.337E-15	0.000
H2O %	0.869	1.69	1.94	5.541E-03	8.499E-04	2.696E-07
OD 1/m	6.77	3.75	4.26	3.802E-10	6.952E-04	3.863E-11
CT g-min/m^3	57.5	67.0	59.5	3.841E-02	3.872E-02	8.713E-06

Time = 900.0 seconds.

Upper temp(K)	298.8	493.9	726.4	420.7	301.9	404.3	
Lower temp(K)	293.1	307.3	343.0	298.4	293.1	340.1	273.0
Upper vol(m**3)	148.3	19.3	22.9	23.0	24.5	55.5	
Layer depth(m)	2.3	2.1	2.4	2.4	1.7	2.4	
Ceiling temp(K)	295.2	398.9	613.1	351.2	295.6	341.8	
Up wall temp(K)	294.7	383.6	590.6	341.1	295.1	333.1	
Low wall temp(K)	294.0	308.8	566.1	322.5	293.8	316.4	
Floor temp(K)	293.2	295.3	348.8	298.5	293.1	342.3	
Plume flow(kg/s)	0.000E+00	0.000E+00	1.386E-01	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	3.867E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	4.294E+05	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	2.145E+05	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	2.149E+05	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	6.496E-05	9.187E+01	1.991E+03	1.501E+01	3.642E-04	8.673E+00	
Pressure(Pa)	1.213E-01	-1.660E-01	-9.102E-01	2.477E+00	6.468E+00	2.838E+00	

Upper layer species

N2 %	79.3	65.9	62.0	67.2	78.2	68.5
O2 %	20.7	8.22	5.61	9.03	19.6	10.1
CO2 %	0.000	15.0	17.7	14.3	1.34	13.0
CO ppm	0.000	4.489E+03	5.289E+03	4.258E+03	399.	3.887E+03
TUHC %	0.000	1.96	4.13	1.06	2.071E-02	0.686
H2O %	0.000	7.77	9.15	7.37	0.691	6.73
OD 1/m	0.000	9.32	7.48	9.86	1.52	9.37
CT g-min/m^3	0.000	284.	313.	262.	36.8	245.

Lower layer species

N2 %	76.9	74.4	73.4	1.011E-02	79.3	79.3
O2 %	18.3	15.9	15.0	2.641E-03	20.7	20.7
CO2 %	2.96	5.99	6.93	9.462E-06	1.645E-03	5.355E-07
CO ppm	884.	1.788E+03	2.068E+03	7.930E-02	0.491	1.374E-03
TUHC %	1.859E-02	0.215	0.527	1.285E-05	2.621E-15	0.000
H2O %	1.53	3.10	3.58	1.272E-05	8.499E-04	4.951E-07
OD 1/m	16.9	5.48	5.26	1.901E-11	6.702E-04	6.506E-12
CT g-min/m^3	196.	122.	115.	3.841E-02	4.669E-02	8.713E-06

Time = 1000.0 seconds.

Upper temp(K)	297.5	469.8	644.3	409.5	302.0	396.6	
Lower temp(K)	292.9	304.3	342.2	299.7	293.2	346.8	273.0
Upper vol(m**3)	149.0	19.3	22.9	23.0	25.2	55.6	
Layer depth(m)	2.3	2.1	2.4	2.4	1.8	2.4	
Ceiling temp(K)	295.0	399.3	576.4	354.3	296.0	345.7	
Up wall temp(K)	294.6	385.0	557.8	344.3	295.4	337.0	
Low wall temp(K)	294.0	309.8	533.9	325.8	294.0	319.9	
Floor temp(K)	293.2	295.6	347.4	299.4	293.2	347.5	
Plume flow(kg/s)	0.000E+00	0.000E+00	1.348E-01	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	3.600E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	2.576E+05	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	7.656E+04	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	1.810E+05	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	2.293E-05	5.505E+01	8.587E+02	1.041E+01	3.752E-04	6.496E+00	
Pressure(Pa)	-1.339E-01	-3.661E-01	-1.197E+00	1.839E+00	5.352E+00	2.133E+00	

Upper layer species

N2 %	79.3	62.6	59.1	63.8	77.7	65.0
O2 %	20.7	6.99	5.40	7.42	19.2	8.09
CO2 %	0.000	15.7	16.8	15.5	1.84	14.9
CO ppm	0.000	4.684E+03	5.019E+03	4.622E+03	548.	4.445E+03
TUHC %	0.000	5.37	8.67	4.10	0.150	3.16
H2O %	0.000	8.11	8.69	8.00	0.949	7.69
OD 1/m	0.000	10.6	8.12	11.3	2.08	11.3
CT g-min/m^3	0.000	427.	436.	405.	58.5	382.

Lower layer species

N2 %	76.0	71.9	70.4	2.652E-05	79.3	79.3
O2 %	17.5	14.0	12.9	1.149E-05	20.7	20.7
CO2 %	3.99	8.08	9.12	5.362E-06	1.645E-03	4.247E-06
CO ppm	1.191E+03	2.413E+03	2.724E+03	7.930E-02	0.491	5.678E-02
TUHC %	0.178	1.23	2.12	1.285E-05	2.935E-15	0.000
H2O %	2.06	4.18	4.71	1.272E-05	8.499E-04	9.917E-06
OD 1/m	27.2	6.68	6.45	2.597E-11	6.428E-04	2.264E-11
CT g-min/m^3	460.	199.	195.	3.841E-02	5.431E-02	8.713E-06

Time = 1100.0 seconds.

Upper temp(K)	296.6	447.5	581.6	397.6	301.7	387.0	
Lower temp(K)	292.3	302.6	334.3	300.3	293.3	347.9	273.0
Upper vol(m**3)	148.9	19.3	22.9	23.0	25.9	55.6	
Layer depth(m)	2.3	2.1	2.4	2.4	1.8	2.4	
Ceiling temp(K)	294.9	394.6	540.5	353.8	296.2	348.2	
Up wall temp(K)	294.5	381.8	525.5	344.5	295.6	337.9	
Low wall temp(K)	294.0	310.0	500.6	326.7	294.1	321.2	
Floor temp(K)	293.2	295.7	343.1	299.8	293.2	348.6	
Plume flow(kg/s)	0.000E+00	0.000E+00	1.202E-01	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	3.333E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	1.649E+05	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	1.975E+04	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	1.451E+05	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	9.515E-06	3.210E+01	3.915E+02	6.749E+00	3.332E-04	4.416E+00	
Pressure(Pa)	-1.727E-01	-3.712E-01	-1.176E+00	1.564E+00	4.672E+00	1.821E+00	

Upper layer species

N2 %	79.3	60.0	56.8	61.1	77.1	62.2
O2 %	20.7	6.31	5.25	6.58	18.7	7.01
CO2 %	0.000	15.7	16.0	15.7	2.35	15.5
CO ppm	0.000	4.674E+03	4.784E+03	4.680E+03	700.	4.616E+03
TUHC %	0.000	8.76	12.5	7.35	0.405	6.14
H2O %	0.000	8.09	8.28	8.10	1.21	7.99
OD 1/m	0.000	11.4	8.70	12.0	2.65	12.4
CT g-min/m^3	0.000	608.	593.	588.	89.3	560.

Lower layer species

N2 %	75.1	69.9	68.4	1.090E-05	79.3	7.62
O2 %	16.8	12.7	11.9	9.324E-06	20.7	1.99
CO2 %	4.79	9.25	10.0	5.362E-06	1.645E-03	1.057E-05
CO ppm	1.431E+03	2.763E+03	2.993E+03	7.930E-02	0.491	0.141
TUHC %	0.494	2.67	3.77	1.285E-05	3.265E-15	0.000
H2O %	2.48	4.78	5.18	1.272E-05	8.499E-04	2.467E-05
OD 1/m	32.5	7.39	7.02	2.557E-11	6.255E-04	2.260E-11
CT g-min/m^3	836.	298.	298.	3.841E-02	6.166E-02	8.713E-06

Time = 1200.0 seconds.

Upper temp(K)	296.0	429.5	536.7	387.3	301.3	378.5	
Lower temp(K)	292.4	301.5	328.9	300.6	293.4	347.6	273.0
Upper vol(m**3)	148.7	19.3	23.0	23.0	26.6	55.6	
Layer depth(m)	2.3	2.1	2.4	2.4	1.8	2.4	
Ceiling temp(K)	294.8	389.0	512.3	352.2	296.4	345.4	
Up wall temp(K)	294.5	377.7	500.7	343.7	295.7	337.8	
Low wall temp(K)	293.9	309.9	475.2	326.8	294.2	321.7	
Floor temp(K)	293.2	295.8	338.9	299.9	293.2	348.2	
Plume flow(kg/s)	0.000E+00	0.000E+00	1.019E-01	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	3.067E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	1.122E+05	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	1.122E+05	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	4.614E-06	1.961E+01	1.989E+02	4.456E+00	2.696E-04	3.022E+00	
Pressure(Pa)	-1.469E-01	-3.433E-01	-1.044E+00	1.450E+00	4.236E+00	1.669E+00	

Upper layer species

N2 %	79.3	57.7	54.8	58.8	76.4	59.9
O2 %	20.7	5.90	5.13	6.09	18.3	6.38
CO2 %	0.000	15.4	15.4	15.5	2.83	15.5
CO ppm	0.000	4.588E+03	4.585E+03	4.627E+03	844.	4.623E+03
TUHC %	0.000	11.9	15.6	10.4	0.769	9.08
H2O %	0.000	7.94	7.94	8.01	1.46	8.00
OD 1/m	0.000	11.8	9.19	12.4	3.19	12.9
CT g-min/m^3	0.000	827.	784.	806.	130.	774.

Lower layer species

N2 %	74.3	68.2	66.8	1.090E-05	79.3	0.415
O2 %	16.2	12.0	11.2	9.324E-06	20.7	0.108
CO2 %	5.43	9.82	10.4	5.362E-06	1.645E-03	1.057E-05
CO ppm	1.621E+03	2.932E+03	3.106E+03	7.930E-02	0.491	0.141
TUHC %	0.920	4.14	5.34	1.285E-05	3.613E-15	0.000
H2O %	2.81	5.07	5.38	1.272E-05	8.499E-04	2.467E-05
OD 1/m	35.7	7.81	7.51	2.777E-11	6.140E-04	2.327E-11
CT g-min/m^3	1.282E+03	416.	420.	3.841E-02	6.886E-02	8.713E-06

Time = 1300.0 seconds.

Upper temp(K)	295.6	416.9	507.8	379.7	300.9	372.2	
Lower temp(K)	292.8	300.8	325.6	300.7	293.5	347.0	273.0
Upper vol(m**3)	149.0	19.4	23.0	23.0	27.3	55.6	
Layer depth(m)	2.3	2.2	2.4	2.4	1.9	2.4	
Ceiling temp(K)	294.7	384.1	491.8	350.4	296.4	344.4	
Up wall temp(K)	294.4	374.3	483.6	342.7	295.8	337.4	
Low wall temp(K)	293.9	309.7	457.4	326.6	294.3	321.9	
Floor temp(K)	293.2	295.8	335.4	300.0	293.2	347.7	
Plume flow(kg/s)	0.000E+00	0.000E+00	8.333E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	2.800E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	8.422E+04	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	8.422E+04	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	2.622E-06	1.329E+01	1.200E+02	3.193E+00	2.165E-04	2.216E+00	
Pressure(Pa)	-9.543E-02	-2.829E-01	-8.961E-01	1.423E+00	4.006E+00	1.620E+00	

Upper layer species

N2 %	79.3	55.8	53.0	56.8	75.7	57.8
O2 %	20.7	5.58	4.95	5.75	17.8	5.96
CO2 %	0.000	15.1	14.9	15.2	3.27	15.3
CO ppm	0.000	4.498E+03	4.453E+03	4.545E+03	977.	4.569E+03
TUHC %	0.000	14.6	18.2	13.2	1.22	11.8
H2O %	0.000	7.79	7.71	7.87	1.69	7.91
OD 1/m	0.000	12.1	9.59	12.7	3.70	13.2
CT g-min/m^3	0.000	1.079E+03	1.007E+03	1.056E+03	182.	1.022E+03

Lower layer species

N2 %	73.4	67.0	65.7	1.090E-05	79.3	2.789E-02
O2 %	15.6	11.5	10.9	9.324E-06	20.7	7.291E-03
CO2 %	6.02	10.1	10.5	5.362E-06	1.645E-03	1.057E-05
CO ppm	1.798E+03	3.009E+03	3.145E+03	7.930E-02	0.491	0.141
TUHC %	1.46	5.50	6.68	1.285E-05	3.981E-15	0.000
H2O %	3.11	5.21	5.44	1.272E-05	8.499E-04	2.467E-05
OD 1/m	42.5	8.10	7.71	2.833E-11	6.073E-04	2.340E-11
CT g-min/m^3	1.820E+03	550.	559.	3.841E-02	7.595E-02	8.713E-06

Time = 1400.0 seconds.

Upper temp(K)	295.3	407.2	486.3	373.8	300.4	367.1	
Lower temp(K)	292.9	300.2	323.3	300.7	293.6	346.5	273.0
Upper vol(m**3)	149.4	19.5	23.0	23.0	27.9	55.6	
Layer depth(m)	2.3	2.2	2.4	2.4	1.9	2.4	
Ceiling temp(K)	294.6	379.8	475.6	348.8	296.5	343.3	
Up wall temp(K)	294.4	371.3	470.5	341.8	295.9	337.0	
Low wall temp(K)	293.9	309.6	443.8	326.3	294.4	322.0	
Floor temp(K)	293.2	295.8	332.7	300.0	293.2	347.1	
Plume flow(kg/s)	0.000E+00	0.000E+00	6.994E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	2.533E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	6.634E+04	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	6.634E+04	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.697E-06	9.577E+00	7.881E+01	2.405E+00	1.733E-04	1.705E+00	
Pressure(Pa)	-6.918E-02	-2.397E-01	-7.984E-01	1.373E+00	3.811E+00	1.553E+00	

Upper layer species

N2 %	79.3	54.2	51.6	55.1	75.0	56.1
O2 %	20.7	5.33	4.79	5.47	17.4	5.65
CO2 %	0.000	14.8	14.6	14.9	3.67	15.1
CO ppm	0.000	4.409E+03	4.344E+03	4.460E+03	1.097E+03	4.498E+03
TUHC %	0.000	16.9	20.4	15.6	1.72	14.2
H2O %	0.000	7.63	7.52	7.72	1.90	7.78
OD 1/m	0.000	12.2	9.89	12.8	4.15	13.3
CT g-min/m^3	0.000	1.359E+03	1.259E+03	1.335E+03	246.	1.300E+03

Lower layer species

N2 %	72.5	65.9	64.7	1.090E-05	79.3	2.228E-03
O2 %	15.0	11.1	10.6	9.324E-06	20.7	5.816E-04
CO2 %	6.56	10.2	10.6	5.362E-06	1.645E-03	1.057E-05
CO ppm	1.958E+03	3.042E+03	3.151E+03	7.930E-02	0.491	0.141
TUHC %	2.08	6.69	7.83	1.285E-05	4.376E-15	0.000
H2O %	3.39	5.26	5.45	1.272E-05	8.499E-04	2.467E-05
OD 1/m	51.6	8.31	7.78	2.830E-11	6.014E-04	2.338E-11
CT g-min/m^3	2.507E+03	699.	711.	3.841E-02	8.297E-02	8.713E-06

Time = 1500.0 seconds.

Upper temp(K)	295.1	399.5	469.9	369.1	300.1	363.2	
Lower temp(K)	293.0	299.7	322.2	300.7	293.7	345.9	273.0
Upper vol(m**3)	149.8	19.5	23.0	23.0	28.4	55.6	
Layer depth(m)	2.3	2.2	2.4	2.4	2.0	2.4	
Ceiling temp(K)	294.6	376.0	462.2	347.2	296.5	342.3	
Up wall temp(K)	294.3	368.8	459.9	341.0	295.9	336.6	
Low wall temp(K)	293.9	309.5	432.8	326.1	294.5	322.0	
Floor temp(K)	293.2	295.7	330.4	299.9	293.2	346.5	
Plume flow(kg/s)	0.000E+00	0.000E+00	5.989E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	2.250E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	5.421E+04	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	5.421E+04	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	1.196E-06	7.255E+00	5.527E+01	1.892E+00	1.420E-04	1.368E+00	
Pressure(Pa)	-5.829E-02	-2.127E-01	-7.301E-01	1.316E+00	3.640E+00	1.482E+00	

Upper layer species

N2 %	79.3	52.8	50.5	53.7	74.3	54.6
O2 %	20.7	5.14	4.67	5.26	17.0	5.41
CO2 %	0.000	14.5	14.3	14.7	4.04	14.8
CO ppm	0.000	4.328E+03	4.258E+03	4.379E+03	1.205E+03	4.423E+03
TUHC %	0.000	18.9	22.1	17.7	2.26	16.4
H2O %	0.000	7.49	7.37	7.58	2.09	7.65
OD 1/m	0.000	12.3	10.1	12.9	4.57	13.4
CT g-min/m^3	0.000	1.665E+03	1.535E+03	1.640E+03	321.	1.603E+03

Lower layer species

N2 %	71.6	65.1	63.8	1.090E-05	79.3	2.064E-04
O2 %	14.5	10.9	10.3	9.324E-06	20.7	6.505E-05
CO2 %	7.01	10.2	10.6	5.362E-06	1.645E-03	1.057E-05
CO ppm	2.093E+03	3.056E+03	3.162E+03	7.930E-02	0.491	0.141
TUHC %	2.73	7.72	8.96	1.285E-05	4.801E-15	0.000
H2O %	3.62	5.29	5.47	1.272E-05	8.499E-04	2.467E-05
OD 1/m	61.7	8.44	7.83	2.810E-11	5.960E-04	2.330E-11
CT g-min/m^3	3.383E+03	860.	873.	3.841E-02	8.992E-02	8.713E-06

Time = 1600.0 seconds.

Upper temp(K)	295.0	393.3	457.0	365.2	299.8	359.9	
Lower temp(K)	293.0	299.3	323.3	300.7	293.8	345.4	273.0
Upper vol(m**3)	150.2	19.5	23.0	23.0	28.9	55.6	
Layer depth(m)	2.3	2.2	2.4	2.4	2.0	2.4	
Ceiling temp(K)	294.6	372.6	450.8	345.8	296.6	341.3	
Up wall temp(K)	294.3	366.5	451.1	340.3	296.0	336.2	
Low wall temp(K)	293.9	309.4	424.0	325.8	294.6	322.1	
Floor temp(K)	293.2	295.7	328.5	299.9	293.3	345.9	
Plume flow(kg/s)	0.000E+00	0.000E+00	5.294E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	1.950E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	4.584E+04	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	4.584E+04	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	8.959E-07	5.703E+00	4.083E+01	1.534E+00	1.191E-04	1.130E+00	
Pressure(Pa)	-5.777E-02	-2.035E-01	-6.801E-01	1.261E+00	3.486E+00	1.413E+00	

Upper layer species

N2 %	79.3	51.8	49.7	52.5	73.6	53.3
O2 %	20.7	5.00	4.59	5.10	16.6	5.22
CO2 %	0.000	14.3	14.1	14.4	4.37	14.6
CO ppm	0.000	4.261E+03	4.197E+03	4.307E+03	1.304E+03	4.352E+03
TUHC %	0.000	20.5	23.3	19.4	2.82	18.2
H2O %	0.000	7.37	7.26	7.45	2.26	7.53
OD 1/m	0.000	12.4	10.4	12.9	4.95	13.4
CT g-min/m^3	0.000	1.992E+03	1.831E+03	1.967E+03	407.	1.930E+03

Lower layer species

N2 %	70.8	64.4	62.4	1.090E-05	79.3	4.560E-05
O2 %	14.1	10.7	9.85	9.324E-06	20.7	2.472E-05
CO2 %	7.38	10.2	10.8	5.362E-06	1.645E-03	1.057E-05
CO ppm	2.204E+03	3.060E+03	3.217E+03	7.930E-02	0.491	0.141
TUHC %	3.36	8.59	10.6	1.285E-05	5.258E-15	0.000
H2O %	3.81	5.30	5.57	1.272E-05	8.499E-04	2.467E-05
OD 1/m	71.9	8.52	8.12	2.844E-11	5.907E-04	2.338E-11
CT g-min/m^3	4.466E+03	1.032E+03	1.054E+03	3.841E-02	9.681E-02	8.713E-06

Time = 1700.0 seconds.

Upper temp(K)	294.9	388.1	446.7	361.9	299.5	357.1	
Lower temp(K)	293.0	299.0	321.9	300.7	293.9	344.8	273.0
Upper vol(m**3)	150.4	19.6	23.0	23.0	29.3	55.6	
Layer depth(m)	2.4	2.2	2.4	2.4	2.0	2.4	
Ceiling temp(K)	294.5	369.4	440.3	344.4	296.6	340.4	
Up wall temp(K)	294.3	364.5	442.9	339.5	296.0	335.8	
Low wall temp(K)	293.9	309.3	416.2	325.5	294.7	322.0	
Floor temp(K)	293.1	295.7	326.9	299.9	293.3	345.3	
Plume flow(kg/s)	0.000E+00	0.000E+00	4.552E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	1.650E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	3.947E+04	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	3.947E+04	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	7.000E-07	4.617E+00	3.152E+01	1.274E+00	1.025E-04	9.546E-01	
Pressure(Pa)	-6.235E-02	-1.985E-01	-6.477E-01	1.207E+00	3.349E+00	1.348E+00	

Upper layer species

N2 %	79.3	50.9	49.2	51.6	72.9	52.3
O2 %	20.7	4.89	4.53	4.97	16.3	5.08
CO2 %	0.000	14.1	13.9	14.2	4.67	14.4
CO ppm	0.000	4.207E+03	4.153E+03	4.247E+03	1.394E+03	4.290E+03
TUHC %	0.000	21.7	24.1	20.8	3.38	19.7
H2O %	0.000	7.28	7.19	7.35	2.41	7.43
OD 1/m	0.000	12.6	10.5	12.9	5.29	13.4
CT g-min/m^3	0.000	2.338E+03	2.144E+03	2.313E+03	505.	2.276E+03

Lower layer species

N2 %	70.1	63.8	61.9	1.090E-05	79.3	2.924E-05
O2 %	13.7	10.6	9.76	9.324E-06	20.7	2.472E-05
CO2 %	7.68	10.2	10.7	5.362E-06	1.645E-03	1.057E-05
CO ppm	2.294E+03	3.058E+03	3.202E+03	7.930E-02	0.491	0.141
TUHC %	3.97	9.30	11.2	1.285E-05	5.749E-15	0.000
H2O %	3.97	5.29	5.54	1.272E-05	8.499E-04	2.467E-05
OD 1/m	81.6	8.56	8.11	2.846E-11	5.855E-04	2.338E-11
CT g-min/m^3	5.764E+03	1.212E+03	1.244E+03	3.841E-02	0.104	8.713E-06

Time = 1800.0 seconds.

Upper temp(K)	294.8	383.8	438.4	359.1	299.3	354.8	
Lower temp(K)	293.0	298.7	320.7	300.7	293.9	344.1	273.0
Upper vol(m**3)	150.6	19.6	23.0	23.0	29.7	55.6	
Layer depth(m)	2.4	2.2	2.4	2.4	2.1	2.4	
Ceiling temp(K)	294.5	366.5	431.0	343.0	296.6	339.4	
Up wall temp(K)	294.3	362.5	435.5	338.8	296.0	335.4	
Low wall temp(K)	293.9	309.1	409.3	325.1	294.8	321.9	
Floor temp(K)	293.1	295.7	325.6	299.8	293.3	344.6	
Plume flow(kg/s)	0.000E+00	0.000E+00	3.932E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	1.350E-02	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	3.499E+04	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	3.499E+04	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	5.696E-07	3.832E+00	2.519E+01	1.079E+00	9.006E-05	8.210E-01	
Pressure(Pa)	-7.224E-02	-1.977E-01	-6.300E-01	1.153E+00	3.222E+00	1.284E+00	

Upper layer species

N2 %	79.3	50.4	48.9	50.8	72.2	51.5
O2 %	20.7	4.81	4.50	4.88	15.9	4.96
CO2 %	0.000	14.0	13.8	14.1	4.95	14.2
CO ppm	0.000	4.167E+03	4.129E+03	4.199E+03	1.478E+03	4.238E+03
TUHC %	0.000	22.6	24.6	21.9	3.94	20.9
H2O %	0.000	7.21	7.15	7.27	2.56	7.34
OD 1/m	0.000	12.7	10.7	12.9	5.62	13.4
CT g-min/m^3	0.000	2.700E+03	2.469E+03	2.675E+03	613.	2.639E+03

Lower layer species

N2 %	69.4	63.4	61.6	1.090E-05	79.3	2.924E-05
O2 %	13.4	10.5	9.71	9.324E-06	20.7	2.472E-05
CO2 %	7.93	10.2	10.7	5.362E-06	1.645E-03	1.057E-05
CO ppm	2.367E+03	3.051E+03	3.186E+03	7.930E-02	0.491	0.141
TUHC %	4.53	9.86	11.7	1.285E-05	6.278E-15	0.000
H2O %	4.10	5.28	5.51	1.272E-05	8.499E-04	2.467E-05
OD 1/m	89.1	8.58	8.05	2.816E-11	5.804E-04	2.328E-11
CT g-min/m^3	7.267E+03	1.398E+03	1.439E+03	3.841E-02	0.110	8.713E-06

Time = 1900.0 seconds.

Upper temp(K)	294.7	380.2	431.6	356.7	299.1	352.7	
Lower temp(K)	292.9	298.4	319.6	300.6	294.0	343.5	273.0
Upper vol(m**3)	150.5	19.6	23.0	23.0	30.1	55.6	
Layer depth(m)	2.4	2.2	2.4	2.4	2.1	2.4	
Ceiling temp(K)	294.5	363.8	422.7	341.7	296.6	338.4	
Up wall temp(K)	294.3	360.7	428.8	338.1	296.1	335.0	
Low wall temp(K)	293.9	309.0	403.2	324.7	294.8	321.8	
Floor temp(K)	293.1	295.7	324.5	299.8	293.3	343.9	
Plume flow(kg/s)	0.000E+00	0.000E+00	3.332E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	9.667E-03	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	3.215E+04	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	3.215E+04	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	4.728E-07	3.254E+00	2.083E+01	9.300E-01	8.063E-05	7.170E-01	
Pressure(Pa)	-8.774E-02	-1.866E-01	-6.374E-01	1.088E+00	3.104E+00	1.219E+00	

Upper layer species

N2 %	79.3	50.0	48.9	50.3	71.6	50.8
O2 %	20.7	4.77	4.50	4.81	15.6	4.88
CO2 %	0.000	13.9	13.8	13.9	5.21	14.1
CO ppm	0.000	4.143E+03	4.129E+03	4.164E+03	1.556E+03	4.198E+03
TUHC %	0.000	23.1	24.6	22.6	4.50	21.9
H2O %	0.000	7.17	7.15	7.21	2.69	7.27
OD 1/m	0.000	12.8	10.9	13.0	5.92	13.5
CT g-min/m^3	0.000	3.074E+03	2.802E+03	3.047E+03	732.	3.015E+03

Lower layer species

N2 %	68.9	63.1	61.5	1.090E-05	79.3	2.924E-05
O2 %	13.1	10.4	9.72	9.324E-06	20.7	2.472E-05
CO2 %	8.12	10.2	10.6	5.362E-06	1.645E-03	1.057E-05
CO ppm	2.424E+03	3.042E+03	3.167E+03	7.930E-02	0.491	0.141
TUHC %	5.03	10.3	11.9	1.285E-05	6.845E-15	0.000
H2O %	4.20	5.26	5.48	1.272E-05	8.499E-04	2.467E-05
OD 1/m	91.1	8.56	7.76	2.608E-11	5.752E-04	2.264E-11
CT g-min/m^3	8.900E+03	1.589E+03	1.636E+03	3.841E-02	0.117	8.713E-06

Time = 2000.0 seconds.

Upper temp(K)	294.6	377.4	426.6	354.8	299.0	351.0	
Lower temp(K)	292.8	298.1	318.3	300.6	294.1	342.8	273.0
Upper vol(m**3)	150.3	19.6	22.9	23.0	30.4	55.6	
Layer depth(m)	2.3	2.2	2.4	2.4	2.1	2.4	
Ceiling temp(K)	294.4	361.4	415.5	340.5	296.6	337.5	
Up wall temp(K)	294.2	359.1	422.8	337.4	296.1	334.6	
Low wall temp(K)	293.9	308.8	397.7	324.3	294.9	321.7	
Floor temp(K)	293.1	295.7	323.6	299.7	293.3	343.2	
Plume flow(kg/s)	0.000E+00	0.000E+00	2.685E-02	0.000E+00	0.000E+00	0.000E+00	
Pyrol rate(kg/s)	0.000E+00	0.000E+00	5.000E-03	0.000E+00	0.000E+00	0.000E+00	
Fire size(W)	0.000E+00	0.000E+00	3.029E+04	0.000E+00	0.000E+00	0.000E+00	
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ul(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Plume in ll(W)	0.000E+00	0.000E+00	3.029E+04	0.000E+00	0.000E+00	0.000E+00	
Vent fire(W)	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
On target(W/m^2)	4.021E-07	2.856E+00	1.796E+01	8.219E-01	7.339E-05	6.392E-01	
Pressure(Pa)	-1.147E-01	-1.892E-01	-6.649E-01	1.012E+00	2.988E+00	1.145E+00	

Upper layer species

N2 %	79.3	50.0	49.4	50.1	71.0	50.4
O2 %	20.7	4.76	4.54	4.77	15.3	4.83
CO2 %	0.000	13.9	14.0	13.9	5.46	14.0
CO ppm	0.000	4.147E+03	4.172E+03	4.149E+03	1.630E+03	4.173E+03
TUHC %	0.000	23.1	23.8	23.0	5.03	22.5
H2O %	0.000	7.18	7.22	7.18	2.82	7.22
OD 1/m	0.000	13.3	11.1	12.8	6.21	13.4
CT g-min/m^3	0.000	3.460E+03	3.137E+03	3.426E+03	861.	3.402E+03

Lower layer species

N2 %	68.4	62.9	61.7	1.090E-05	79.3	2.924E-05
O2 %	12.9	10.4	9.86	9.324E-06	20.7	2.472E-05
CO2 %	8.26	10.2	10.5	5.362E-06	1.645E-03	1.057E-05
CO ppm	2.466E+03	3.031E+03	3.131E+03	7.930E-02	0.491	0.141
TUHC %	5.47	10.5	11.7	1.285E-05	7.456E-15	0.000
H2O %	4.27	5.25	5.42	1.272E-05	8.499E-04	2.467E-05
OD 1/m	87.1	8.54	7.79	2.451E-11	5.697E-04	2.210E-11
CT g-min/m^3	1.056E+04	1.783E+03	1.831E+03	3.841E-02	0.124	8.713E-06

9.6 Input Data for EXITT for Scenario 8 (Example Data File SCEN-8.BLD)

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 6 3 4 5 7
 7 8 8 8 8
 8 8 2 2 1
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 2 1 5 1
1 2 3 4 5
 6 7 8 9 5
 2 1 3 7 8
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 2.4 2.4 2.4 2.4 2.4
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 4.9 2.4 2.4 2.4
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 65 35 35 35 35
 35 35 35 35 35
 35 35 65 35
2
-1. -1.
5 19
83 83 83 83 95
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 59 71 71 71 83
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71 71 71 71 71
 83 83 83 71 71
 71 71 71 83 83
 71 83 95 95 71
 71 71 71 71 95
 71 71 71 71
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  1  23      2.43840
  1  29      1.84146
  2  11      2.36667
  2  20      1.37160
  2  21      2.40966
  3  13      2.71340
  3  23      2.11721
  3  27      2.74743
  4   5      1.52400
  4  20      2.28600
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  5  26      1.22869
  5  27      3.20040
  6  17      2.59528
  6  18      4.73291
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  7  19      2.40887
  8  15      1.67640
  8  18      2.31748
  9  16      1.64140
  9  28      1.73763
 10  26      1.22869
 11  21      4.36503
 12  29      4.18842
 13  23      4.00902
 13  27      4.43795
 18  28      2.89560
 18  19      1.67640
 19  25      2.28600
 20  21      1.98120
 21  22      1.50097
 22  24      1.58496
 22  29      1.82880
 23  29      2.37079
 25  26      5.47996
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45 40 14 16
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2 24 24 9
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-1. -1. -1. -1.
```

9.7 Printed Output from EXITT for Scenario 8

```
EXITT Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89
FAST DUMP FILE    :  SCEN-8.DMP
BUILDING/OCCUPANT FILE: SCEN-8.BLD
EXITT OUTPUT FILE      : SCEN-8.EXT
EXITT DUMP FILE        : SCEN-8.EVA

NO. OF ROOMS (RUN WITH FAST)        6
NO. OF DOORS                        2
NO. OF WINDOWS                      6
TOTAL NUMBER OF NODES              29
```

EXITT NODE NUMBER	EXITT ROOM NUMBER	FAST ROOM NUMBER	ROOM HEIGHT (M)	FLOOR HEIGHT (M)
1	1	1	2.4	0.0
2	2	1	2.4	0.0
3	3	1	2.4	0.0
4	4	1	2.4	0.0
5	5	1	2.4	0.0
6	6	6	2.4	0.0
7*	7	3	2.4	0.0
8	8	4	2.4	0.0
9	9	5	2.4	0.0
10	5	7	2.4	0.0
11	2	7	2.4	0.0
12	1	8	2.4	0.0
13	3	8	2.4	0.0
14	7	8	2.4	0.0
15	8	8	2.4	0.0
16	9	8	2.4	0.0
17	6	8	2.4	0.0
18	25	2	2.4	2.5
19	25	2	2.4	2.5
20	2	1	2.4	0.0
21	24	1	2.4	0.0
22	24	1	2.4	0.0
23	3	1	2.4	0.0
24	24	1	2.4	0.0
25	25	2	2.4	2.5
26	5	2	4.9	0.0
27	3	1	2.4	0.0
28	9	5	2.4	0.0
29	1	1	2.4	0.0

* INDICATES NODE IS IN BURN ROOM

NODE NUMBER	NOISE LEVEL (DECIBELS)
1	35
2	35
3	35
4	35
5	35
6	35
7	35
8	35
9	65
10	35
11	35
12	35
13	35

14	35
15	35
16	65
17	35
18	35
19	35
20	35
21	35
22	35
23	35
24	35
25	35
26	35
27	35
28	65
29	35

NUMBER OF SMOKE DETECTORS: 2

SMOKE DET NO.	NODE	ACTIVATION TIME (SEC)	
1	5	DETERMINED BY EXITT TO BE	0.0 SECONDS
2	19	DETERMINED BY EXITT TO BE	0.0 SECONDS

EXITT NODE NUMBER	ALARM LEVEL (DECIBELS) 1	2
1	83	71
2	83	71
3	83	71
4	83	71
5	95	71
6	71	83
7	71	83
8	71	83
9	59	71
10	83	71
11	83	71
12	83	71
13	83	71
14	71	83
15	71	83
16	59	71
17	71	83
18	71	95
19	71	95
20	83	71
21	83	71
22	83	71
23	83	71
24	83	71
25	71	95
26	83	71
27	83	71
28	59	71
29	83	71

EDGE LIST

FROM NODE	TO NODE	DISTANCE (M)
1 -	12	2.35
-	23	2.44
-	29	1.84
2 -	11	2.37
-	20	1.37
-	21	2.41
3 -	13	2.71
-	23	2.12
-	27	2.75
4 -	5	1.52
-	20	2.29
5 -	4	1.52

	-	10	1.22
	-	26	1.23
	-	27	3.20
6	-	17	2.60
	-	18	4.73
7	-	14	1.68
	-	19	2.41
8	-	15	1.68
	-	18	2.32
9	-	16	1.64
	-	28	1.74
10	-	5	1.22
	-	26	1.23
11	-	2	2.37
	-	21	4.37
12	-	1	2.35
	-	29	4.19
13	-	3	2.71
	-	23	4.01
	-	27	4.44
14	-	7	1.68
15	-	8	1.68
16	-	9	1.64
17	-	6	2.60
18	-	6	4.73
	-	8	2.32
	-	19	1.68
	-	28	2.90
19	-	7	2.41
	-	18	1.68
	-	25	2.29
20	-	2	1.37
	-	4	2.29
	-	21	1.98
21	-	2	2.41
	-	11	4.37
	-	20	1.98
	-	22	1.50
22	-	21	1.50
	-	24	1.58
	-	29	1.83
23	-	1	2.44
	-	3	2.12
	-	13	4.01
	-	29	2.37
24	-	22	1.58
25	-	19	2.29
	-	26	5.48
26	-	5	1.23
	-	10	1.23
	-	25	5.48
27	-	3	2.75
	-	5	3.20
	-	13	4.44
28	-	9	1.74
	-	18	2.90
29	-	1	1.84
	-	12	4.19
	-	22	1.83
	-	23	2.37

TOTAL NUMBER OF DIRECTED EDGES 72

NUMBER OF PEOPLE 4

PERSON	LOCATION	AGE	SEX	STATE	SLEEP PENALTY	REQUIRE ASSISTANCE	TRAVEL SPEED
1	2	45	MALE	ASLEEP	0.0	NO	1.30
2	24	40	FEMALE	AWAKE	0.0	NO	1.30
3	24	14	FEMALE	AWAKE	0.0	NO	1.30
4	9	16	MALE	AWAKE	0.0	NO	1.30

ACTIONS TAKEN BY PERSON 1

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
2	1	0.0	--	--	--	INITIAL POSITION
2	1	337.0	--	--	7	INVESTIGATE FIRE
20	1	338.1	--	--	7	ARRIVE AT NEW NODE
4	1	339.8	--	--	7	ARRIVE AT NEW NODE
5	1	341.0	--	--	7	ARRIVE AT NEW NODE
26	2	341.9	--	--	7	ARRIVE AT NEW NODE
25	2	346.1	--	--	7	ARRIVE AT NEW NODE
25	2	346.1	--	--	--	SAW SMOKE - END INVESTIGATION
25	2	346.1	--	--	--	LEAVE BUILDING
26	2	349.4	--	--	10	ARRIVE AT NEW NODE
10	7	350.1	--	--	10	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 2

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
24	1	0.0	--	--	--	INITIAL POSITION
24	1	333.0	--	--	7	INVESTIGATE FIRE
22	1	334.2	--	--	7	ARRIVE AT NEW NODE
21	1	335.4	--	--	7	ARRIVE AT NEW NODE
20	1	336.9	--	--	7	ARRIVE AT NEW NODE
4	1	338.7	--	--	7	ARRIVE AT NEW NODE
5	1	339.8	--	--	7	ARRIVE AT NEW NODE
26	2	340.8	--	--	7	ARRIVE AT NEW NODE
25	2	345.0	--	--	7	ARRIVE AT NEW NODE
25	2	345.0	--	--	--	SAW SMOKE - END INVESTIGATION
25	2	345.0	--	--	--	LEAVE BUILDING
26	2	348.2	--	--	10	ARRIVE AT NEW NODE
10	7	349.0	--	--	10	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 3

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
24	1	0.0	--	--	--	INITIAL POSITION
24	1	333.0	--	--	7	INVESTIGATE FIRE
22	1	334.2	--	--	7	ARRIVE AT NEW NODE
21	1	335.4	--	--	7	ARRIVE AT NEW NODE
20	1	336.9	--	--	7	ARRIVE AT NEW NODE
4	1	338.7	--	--	7	ARRIVE AT NEW NODE
5	1	339.8	--	--	7	ARRIVE AT NEW NODE
26	2	340.8	--	--	7	ARRIVE AT NEW NODE
25	2	345.0	--	--	7	ARRIVE AT NEW NODE
25	2	345.0	--	--	--	SAW SMOKE - END INVESTIGATION
25	2	345.0	--	--	--	LEAVE BUILDING
26	2	348.2	--	--	10	ARRIVE AT NEW NODE
10	7	349.0	--	--	10	LEAVE BUILDING THROUGH DOOR

ACTIONS TAKEN BY PERSON 4

NODE	ROOM	TIME	SAV-ING	SAVED BY	DESTI-NATION	ACTION
9	5	0.0	--	--	--	INITIAL POSITION
9	5	352.9	--	--	7	INVESTIGATE FIRE
28	5	354.3	--	--	7	ARRIVE AT NEW NODE
18	2	356.5	--	--	7	ARRIVE AT NEW NODE
18	2	356.5	--	--	--	SAW SMOKE - END INVESTIGATION
18	2	356.5	--	--	--	LEAVE BUILDING
19	2	357.5	--	--	10	ARRIVE AT NEW NODE
25	2	358.8	--	--	10	ARRIVE AT NEW NODE
26	2	362.1	--	--	10	ARRIVE AT NEW NODE
10	7	362.8	--	--	10	LEAVE BUILDING THROUGH DOOR

9.8 Printed Output from TENAB for Scenario 8

```
FAST  Version:  18.3
TENAB Version:  18.1 - Creation Date: 02/09/89 - Run Date: 04/28/89

FAST DUMP FILE    :  SCEN-8.DMP
EXITT DUMP FILE   :  SCEN-8.EVA
TENAB OUTPUT FILE:  SCEN-8.TEN
TENAB DUMP FILE   :  SCEN-8.PLT
```

OCCUPANT	NODE NUMBER	ROOM NUMBER	FLOOR ELEVATION	ENTER TIME (S)
1	2	1	0.00	0.0
	20	1	0.00	338.1
	4	1	0.00	339.8
	5	1	0.00	341.0
	26	2	0.00	341.9
	25	2	2.50	346.1
	26	2	0.00	349.4
	10	DOOR	0.00	350.1
2	24	1	0.00	0.0
	22	1	0.00	334.2
	21	1	0.00	335.4
	20	1	0.00	336.9
	4	1	0.00	338.7
	5	1	0.00	339.8
	26	2	0.00	340.8
	25	2	2.50	345.0
	26	2	0.00	348.2
	10	DOOR	0.00	349.0
3	24	1	0.00	0.0
	22	1	0.00	334.2
	21	1	0.00	335.4
	20	1	0.00	336.9
	4	1	0.00	338.7
	5	1	0.00	339.8
	26	2	0.00	340.8
	25	2	2.50	345.0
	26	2	0.00	348.2
	10	DOOR	0.00	349.0
4	9	5	0.00	0.0
	28	5	0.00	354.3
	18	2	2.50	356.5
	19	2	2.50	357.5
	25	2	2.50	358.8
	26	2	0.00	362.1
	10	DOOR	0.00	362.8

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED1	0.5	1.0
TEMP1 DEG C	65.0	100.0
CT (G-MIN/M3)	450.0	900.0
FED2	1.0	
TEMP2	1.0	
FED3	1.0	

PERSON 1

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
360.	10	ESCAPE		0.000E+00 0.220E-02 0.123E-01	0.200E+02 0.000E+00	0.000E+00	0.140E-03
2010.	10	FINAL TIME		0.000E+00 0.220E-02 0.123E-01	0.200E+02 0.000E+00	0.000E+00	0.140E-03

PERSON 2

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
350.	10	ESCAPE		0.000E+00 0.219E-02 0.123E-01	0.200E+02 0.000E+00	0.000E+00	0.134E-03
2010.	10	FINAL TIME		0.000E+00 0.219E-02 0.123E-01	0.200E+02 0.000E+00	0.000E+00	0.134E-03

PERSON 3

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
350.	10	ESCAPE		0.000E+00 0.219E-02 0.123E-01	0.200E+02 0.000E+00	0.000E+00	0.134E-03
2010.	10	FINAL TIME		0.000E+00 0.219E-02 0.123E-01	0.200E+02 0.000E+00	0.000E+00	0.134E-03

PERSON 4

TIME (SEC)	NODE	CONDITION	CAUSE	FED1 FED2 FED3	TEMP1 TEMP2	CT (G-MIN/M3)	FLUX (KW-SEC/M2)
370.	10	ESCAPE		0.000E+00 0.228E-02 0.127E-01	0.203E+02 0.000E+00	0.211E-01	0.241E-02
2010.	10	FINAL TIME		0.000E+00 0.228E-02 0.127E-01	0.203E+02 0.000E+00	0.211E-01	0.241E-02

FED1 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO,CO2,HCN AND O2 BASED ON THE HAZARD I TENAB FED PLUS AN OXYGEN TERM

FED2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO,CO2,HCN AND O2 BASED ON PURSER'S EQUATIONS

FED3 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CO2 BASED ON PURSER'S EQUATIONS

TEMP1 - THE AVERAGE TEMPERATURE OF THE LAYER OF THE ROOM TO WHICH THE PERSON IS EXPOSED - IT IS THE SAME AS TEMP USED IN THE HAZARD I TENAB

TEMP2 - THE FRACTIONAL EFFECTIVE DOSE DUE TO CONVECTIVE HEAT BASED ON PURSER'S EQUATIONS

* IF PERSON IS WAITING AT A WINDOW, HE IS CONSIDERED TO BE AT THE NODE (ROOM) FROM WHICH HE CAME PRIOR TO REACHING THE WINDOW THIS ALLOWS HIM TO CONTINUE TO BE EXPOSED TO THE ROOM FIRE CONDITIONS

CHAPTER 10. REFERENCES

[1] Babrauskas, V.; Krasny, J. F. Fire behavior of upholstered furniture. Natl. Bur. Stand. (U.S.) Monogr. 173; 1985 November. 101 p.

[2] Lee, B. T. Effect of wall and room surfaces on the rate of heat, smoke, and carbon monoxide production in a park lodging bedroom. Natl. Bur. Stand. (U.S.) NBSIR 85-2988; 1986.

APPENDIX A
THREE PROPOSED TYPICAL HOUSE DESIGNS FOR ENERGY CONSERVATION RESEARCH

Three Proposed Typical House Designs for Energy Conservation Research

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ABSTRACT

The ability of various energy conservation design features to reduce residential energy consumption can only be judged by comparing houses with and without such features. Comparisons can be made based on measuring energy consumption of actual houses, or by computer modeling energy consumption. With either approach, if the houses being evaluated are the basis for estimating regional or national energy savings possible with a given change from current construction practice, it is important that the houses be typical of the given population of houses. For that purpose this report contains three house designs typical of new house construction for much of the nation.

FOREWORD

This is one of a series of working reports documenting NBS research efforts to develop energy and cost data. The work described in this report was jointly funded through ERDA/NBS Mod. No. 2 of Contract E (49-1) 3800 and Task Order No. EA-77-A-01-6010 and through HUD/NBS Contract No. RT193-12.

The background work for this report was completed in support of two other reports "Geographic Variation in the Heating and Cooling Requirements of a Typical Single-Family House," and "Determination of Optimal Energy Conservation Designs in Single-Family Housing: Preliminary Results."

The house designs presented in this report are not intended as "model" houses which should be copied for any particular design qualities. Their purpose is merely to typify a large percentage of new house construction being built in the U.S. today. They

are presented to provide a basis for comment with suggested revisions to improve their representativeness welcome.

SI CONVERSION

In view of present accepted practice by the building industry in the United States, common U.S. units of measurement have been used throughout this paper. In recognition of the position of the U.S.A. as a signatory to the General Conference on Weights and Measures, which gave official status to the Metric SI System of units in 1960, the following conversion factors are provided to assist readers who use the SI units.

Length

1 inch (″) = 0.0254 meter
1 foot (′) = 0.3048

Area

1 square foot (ft^2) = 0.0929 $meter^2$

Volume

1 cubic foot (ft^3) = 0.0283 $meter^3$

Thermal Resistance

1 °F h ft^2/Btu = 0.1761m^2 °C/W

1. INTRODUCTION

House designs typical of today's construction practices are needed as a basis for comparing the effectiveness of various energy conservation strategies. This report proposes three typical houses as follows:

1) a compact "ranch style" house
2) a townhouse
3) a larger two story detached house

These are not intended to be "model" houses which should be copied because of any particular design qualities. Instead, they are intended to be typical of housing now being built in the U.S.A.

The design of the three houses was based upon the judgment of the author (an architect experienced in residential design) and upon a 1974 report by the National Association of Home Builders (NAHB) titled, "A National Survey of Characteristics and Construction Practices for All Types of One Family Houses." The survey data represented 84,000 homes built by 1600 builders selected randomly from the 27,000 builder members of NAHB.

The decision to present three house designs was based on the NAHB statistics on the frequency of various house configurations. Out of the total number of houses constructed by builders in the survey, 73 percent were detached, 19 percent were townhouses, and 8 percent were duplexes, quadruplexes, or "other." Given these percentages it was decided to present designs for the detached and townhouse categories but not for the duplex, quadruplex, and other category since the latter represented a small percentage comprised of diverse configurations. The decision to present two detached designs was based on the fact that of all detached houses in the survey, 52 percent were one-story and 17 percent were two-story. Since detached houses constituted such a large percentage of the houses, separate designs for one and two-story houses were deemed necessary. Separate designs were not presented for "split level" houses (bedroom area half a flight up from living area) nor for "bi-level" or "raised ranch" houses (ranch plan above a half out of the ground basement) because these configurations are merely a variation of the ranch design and can easily be derived, given the information for the ranch design.

Each of the three house designs presented varies slightly from the national average for all houses. The basementless ranch house, with 1176 sq. ft. of floor area, is smaller than the national average detached house of 1684 sq. ft. The smaller size was based on two judgment factors: First, the three-bedroom, one-story houses would tend to be smaller

than the overall average floor area of all single-family detached houses which include two-story houses and houses with basements. Second, since 1974, the trend has been for new houses to be more compact and it is expected that this trend will continue. A final note regarding the ranch design, windows have been excluded from the side elevations. This is a common practice due to closeness of neighboring houses. Window areas for the front and rear elevations were selected as the minimum desirable for the room areas, given that orientation is unknown.

The ranch house design, as well as the other two house designs, is meant to be typical of today's home building practices and is not a house specifically designed for energy conservation.

The townhouse, with a floor area of 1315 sq. ft., is also smaller than the national average of 1393 sq. ft., again reflecting the trend toward more compact houses. Also, three bedrooms were included, rather than the national average of 2.2 bedrooms, because it was felt that this configuration has become prevalent as townhouses have become increasingly common.

The two-story house, with 1994 sq. ft. of finished floor area plus a basement, is slightly larger than the national average of 1684 sq. ft. This house design is included to represent a high-priced category of large houses.

2. Drawings

Schedule of Drawings

Ranch	schedule of component surface areas
Townhouse	schedule of component surface areas
Two-story	schedule of component surface areas

Key to Symbols Used in Drawings

2850 = 2′ - 8″ W x 5′ - 0″ H
TW = twin windows
DH = double hung
SL GL DR = sliding glass door
FG = fixed glass
HT = height
O.C. = on center

SCHEDULE OF COMPONENT SURFACE AREAS

(Ranch House)

Slab (ground contact area)		1176 sq. ft.
Wall Areas		
Front		
Insulation Area (75% of net wall area)		196
Stud Area (25% of net wall area)		65
Window Area		55
Door Area		20
	Total	336
Rear		
Insulation Area (75% of net wall area)		198
Stud Area (25% of net wall area)		66
Window Area (including single-glass door)		72
	Total	336
Sides		
Insulation Area (85% wall area)		190
Stud Area (15% wall area)		34
	Total	224
Ceiling		
Insulation Area (90% floor area)		1058
Truss Cord Area (10% floor area)		118
	Total	1176 sq. ft.

SCHEDULE OF COMPONENT SURFACE AREAS

(Townhouse)

Slab (ground contact area)		654 sq. ft.
Wall Areas		
Front		
Insulation Area (75% net wall area)		160
Stud Area (25% net wall area)		53
Window Area		97
Door Area		20
	Total	330
Rear		
Insulation Area (75% net wall area)		172
Stud Area (25% net wall area)		58
Window Area (incl. sl. gl. dr.)		100
	Total	330
Sides - (Party Walls)		
Ceiling		
Insulation Area (90% floor area)		595
Truss Cord Area (10% floor area)		66
	Total	661 sq. ft.

SCHEDULE OF COMPONENT SURFACE AREAS

(Two-Story House)

Basement		
Slab		975 sq. ft.
Foundation Walls		977
Wall Areas		
Front		
Insulation Area (75% net wall area)		378
Stud Area (25% net wall area)		126
Window Area		65
Door Area		20
	Total	589
Rear		
Insulation Area		368
Stud Area		123
Window Area (incl. sl. gl. dr.)		98
	Total	589
Sides (right & left sides similar if optional fireplace built)		
Insulation Area (85% net wall area)		412
Stud Area (15% net wall area)		73
Window Area		23
	Total	508
Ceiling		
Insulation Area (90% floor area)		918
Truss Cord Area (10% floor area)		102
	Total	1020 sq. ft.

3. MATERIAL SPECIFICATIONS

The following is a list of the materials noted on the drawings for the ranch and two-story houses (detached) and for the townhouse, along with the percentage of houses in the NAHB survey which were built using these materials. Also, included are design features incorporated in the three house designs with associated NAHB reported percentages from the same survey. In a few instances the material specified or the design feature included in the typical house designs do not represent the highest percentage report in the NAHB survey. The basis for such deviation is the author's judgment of changes in building practice since the 1974 NAHB survey. In these cases, both the selected material or design feature and its associated percentage as well as the material or design feature with the highest survey percentage (shown in parentheses) are reported. In some instances the majority of responding builders did not answer a question regarding use of a material. This is indicated by "no answer" in the percentage column.

MATERIALS SPECIFIED

	NAHB Reported Percent of Total	
	Detached	Townhouses
First Floor (on grade):		
1 inch perimeter insulation	no answer	
Carpet	85	89
First floor (above basement):		
no insulation	no answer	
5/8" plywood underlayment	17	40
Carpet	85	89
Exterior Walls:		
Aluminum siding	15	24
(Brick)	(34)	(24)
1/2" intermed. density insul. bd.	27	35
2 x 4 framing 16" o.c.	78	95
3 1/2" R-11 Batt insul.	71	81
Kraft paper vapor barrier	35	30
1/2" gypsum wallboard	82	78
Windows:		
Aluminum	64	78
Double-hung	33	--
Horizontal sliders	--	35
Single glazing	70	66
No storm sash	75	72
Doors:		
Solid wood (front entry)	67	43
No storm door	75	72
Slide glass door (dining area)	not reported	
Roof/Ceiling:		
Asphalt Shingle	85	77
1/2 inch plywood sheathing	55	51
2 x 4 (or 6) trusses 24 inches o.c.	63	72
R-19 loose fill (±6") insulation	41	29
R-19 batt (6") insulation	--	(39)
1/2 inch drywall	80	89
Plumbing/Mechanical:		
Warm air, ducted heating	79	80
Electric furnace	not reported	
Natural gas furnace	(49)	(40)
Central air conditioning	67	86
Electric domestic water heater	51	55

DESIGN FEATURES

	NAHB Reported Percent of Total	
	Detached	Townhouses
Foundation:		
Slab-on-grade	34	70
(Full basement)	(34)	(25)
Number of Floors:		
One-story	52	--
Two-story	17	73
Finished Floor Area:		
1200-1599	31	57
1600-2399	43	--
Garages:		
none	not reported	
one-car	--	29
two-car	(70)	--
Number of bedrooms:		
three	68	66
four	25	
Number of bathrooms:		
(one and one half)	--	(38)
two	50.1	--
two and one half	22	36.7
Roof form:		
gable	75	76
(Fireplace)	(57)	(50)

4. THERMAL RESISTANCE OF MATERIALS USED IN THE THREE HOUSES

COMPONENT		R (for thickness listed)
First floor (on grade):		
Expanded polystyrene extruded (1″)		5.00
Poured concrete slab (4″)		0.32
Carpet and fibrous pad		2.08
Horizontal air film (still, heat flow down)		0.92
	Total	8.32

First floor (above basement):

The basement is assumed to be unheated. However, transient heat from the heating plant (located in the basement) warms the air near the basement ceiling sufficiently to make it unnecessary to calculate downward heat loss through the first floor according to the *ASHRAE Handbook of Fundamentals*, page 378, (see note 5).

Walls (insulation area):

Vertical air film (15 mph wind)		0.17
Aluminum siding		0.60
Intermediate density insulating sheathing (1/2″)		1.22
Cavity insulation		11.00
Gypsum wallboard (1/2″)		0.45
Vertical air film (still)		0.68
	Total	14.12

Walls (stud area):

Vertical air film (15 mph wind)		0.17
Aluminum siding		0.60
Intermediate density insulating sheathing		1.22
2 x 4 wooden studs		4.35
Gypsum wallboard (1/2″)		0.45
Vertical air film		0.68
	Total	7.47

Windows:

Vertical air film (15 mph wind)		0.17
Architectural glass		0.03
Vertical air film (still)		0.68
	Total	0.88

Doors - (front entry)

Vertical air film (15 mph wind)		0.17
Solid Hardwood (1 3/4″)		1.59
Vertical air film (still)		0.68
	Total	2.44

Ceiling (insulation area)

Horizontal air film (still, heat flow up)		0.61	
Gypsum drywall (1/2″)			0.45
Insulation		19.00	
Horizontal air film (still, heat flow up)		0.61	
	Total	20.67	

Ceiling (truss cord area)

Horizontal air film (still, heat flow up)	0.61	
Gypsum drywall (1/2″)		0.45
2 x 4 wooden truss cords	4.35	
Horizontal air film (still, heat flow up)	0.61	
Total	6.02	

Notes:

1. The resistance in the above table are calculated from tables given in Chapter 20 of the 1972 edition of the ASHRAE Handbook of Fundamentals published by the American Society of Heating, Refrigeration, and Air-Conditioning Engineers, Inc., New York.

2. It could be inferred that since R-values were given for the ceiling and insulation only, the attic temperature is assumed to be at the outside air temperature. This may or may not be true depending on the amount of attic ventilation. An ongoing National Institute of Standards and Technology project recording attic temperature for various attic ventilation conditions will provide more data to help quantify the extent the attic serves as a buffer in winter and a heat trap in summer.

3. Since the windows are specified to be aluminum, the R-value can be applied to the entire window area. It is unreasonable, however, to assert that the windows are typically left uncovered at night given the privacy concern in urban or suburban environments. A tight-weave drapery hanging to the floor and in loose contact with the walls at the sides of the windows could be expected to increase the resistance to heat flow of the window by 10 to 15 percent. This is substantial as the reduction occurs at night when winter outside-inside temperature differences are greatest.

4. In calculating the downward heat flow through the slab a resistance must be assigned to the earth immediately below the slab. The perimeter insulation isolates the earth below the slab from the earth beyond to the extent of the insulation's R-value. To calculate how much heat is lost laterally out of the sides of the slab see Table 2, page 378 of the 1972 *ASHRAE Handbook of Fundamentals.*

5. In calculating summer heat gain the resistance of the air film is considered to be 0.25 rather than 0.17 as a 7 1/2 mph wind is conventionally assumed rather than the 15 mph wind for winter. Similarly, the value for the air film at the attic surfaces would be slightly better (0.92) in the summer as the direction of heat flow is downward as apposed to upward in winter (0.61).

5. SUGGESTED APPLICATIONS FOR THE THREE TYPICAL DESIGNS

This report provides a basis for research in the areas of energy conservation, fire safety, security, and environmental behavior.

An example research project in the area of energy conservation would be to model the energy consumption of the houses in each of 10 different locations (selected to represent a sampling of the various climates in the U.S.) and quantify the effects of various climate variables on the energy consumption of typical new houses. Such a study has been completed for the ranch house (publication is expected in the near future), but needs to be done for the townhouse and the two-story house. Once these data have been calculated and tabulated they will provide a comparative basis for many energy conservation modifications. For example, the houses could be reanalyzed with the glass areas greatly increased on the elevation facing south and decreased to HUD minimum property standards on the elevation facing north. At the same time, double glazing could be substituted for single glazing. Included in the reports of these data could be illustrations of how energy efficient fenestration and orientation can be achieved while actually enhancing privacy through landscape planning. Examples include the use of trees and shrubs, definition of court spaces, and open space planning. Similar studies could be made to document the energy and cost effectiveness of builders providing external sun protection for the glazed areas of houses, be it sun screens, deciduous trees, awnings, or roof overhangs. Such a study, especially in conjunction with a study of the effectiveness of whole-house-fan ventilation, would document surprising energy savings as a result of the dramatic reduction in the dependence on mechanical air conditioning.

In the area of fire safety, the three house designs and material specification provide a standard basis to study rates of flame and smoke propagation, rates of release of toxic substances, containment of heat, air movement patterns, and egress behavior in conjunction with models of human decision making in fire situations.

Security issues need to be investigated concurrent with research of various energy conservation measures such as adding storm windows and storm doors, increasing glass area on the south-facing side (e.g., replacing a window with a sliding glass door), orientating houses away from the street when necessary to maximize south exposure, and landscaping to shade windows (which may reduce street surveillance of windows and doors).

Finally, in the area of environmental behavior, these three designs provide the starting point to study how trends in new house construction (such as reducing house size) necessitate rethinking the way interior and exterior spaces are divided and defined relative to life styles. As land costs, material costs, and labor costs increase first costs, and as energy costs increase operating costs, future new house design will change. A study is

needed, starting, with the three house designs to forecast various design and construction changes as a result of these pressures and suggest the best alternatives. Such a study would help assure that houses of the future are affordable, energy conserving, and accommodate behavioral needs.

Each of these examples of further research benefits from using the same three house designs as a baseline. The designs provide the common denominator for evaluating how design modifications for one objective such as energy conservation may help or hinder the achievement of other objectives such as improved fire safety, security, or habitability.

6. CONCLUSION

The three typical house designs and material specifications described in this report provide a statistically documented basis from which energy savings for various improvements can be calculated.

Of the three houses, the ranch is the most easily typified. There are a limited number of permutations such as the "raised ranch" and the "split level." In the case of the townhouse, there are slightly more variations in design, including the substitution of the upstairs bath with a walk-in closet, the placement of the kitchen to the front of the townhouse with the previous location of the kitchen becoming a dining area, and the front facade being flush with no overhangs and no sliding glass door off the breakfast area or upstairs master bedroom.

Two-story houses, larger in size and higher in price than the former two examples, are least easily typified. Typical variations from the design shown include: the location of the stair in the center of the house and either parallel or perpendicular to the run as shown, and the location of the upstairs baths in the location of the bedroom number 3 as shown. The interior partitioning in this design, as in the other two designs, is not presently a concern in modeling energy consumption, however. For both the two-story and the ranch it is common to see an attached one or two-car garage, sometimes with a family room to the rear of the garage.

It is apparent, in each of the three designs, that common cosmetic facade elements such as applied vinyl window shutters have not been shown. It should not be concluded that this reflects the commonness or rarity of such features. Rather, they have been omitted merely because they typically have no significant effect on energy performance.

Finally, any conclusions based on these designs must be qualified to reflect the fact that the designs are representative of new house construction as the time of this publication. These designs are not representative of the whole housing stock (pre-World War II houses differ substantially), nor do the designs anticipate changes in future house construction. The author invites suggested modifications to the designs from the readers based on their experience of what is typical.

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This report describes the first version of a method for predicting the hazards to occupants involved in a building fire. To implement the method, a personal computer software package called HAZARD I is provided. The software consists of modules which can predict the time varying environment within a building resulting from a specified fire; the locations and actions of a specified group of occupants as they interact with the building, the fire, and each other; and the impact of the exposure of each of the occupants to the fire products in terms of whether the occupants successfully escape, are incapacitated, or are killed. The documentation includes the *Software User's Guide*, and a *Reference Guide* consisting of the *Technical Reference Guide* and *Example Cases*.

NIST Handbook 146 is a set consisting of the three volumes described above plus computer software supplied on seven (7) 5¼" and four (4) 3½" disks.

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