	Zone 1 Nighttime		Zone 2 Nighttime		Zone 3 Nighttime		Zone 4 Nighttime		Zone 5 Nighttime	
Dilution factor for 2 ou criteria	AUSPLUME Odour concentration	Dilution factor for 2 ou criteria	AUSPLUME Odour concentration 99%	Dilution factor for 2 ou criteria	AUSPLUME Odour concentration 99%	Dilution factor for 2 ou criteria	AUSPLUME Odour concentration 99%	Dilution factor for 2 ou criteria	AUSPLUME Odour concentration 99%	Dilution factor for 2 ou criteria
0.006		**0.003005**		**0.00213**		**0.0033**		**0.010665**		**0.006**
FUGITIVE										
0.00E+00	6.42E-04	3.12E+03	4.55E-04	4.40E+03	1.44E-03	1.39E+03	1.05E-03	1.90E+03	5.92E-04	3.38E+03
0.00E+00	6.36E-04	3.14E+03	4.51E-04	4.43E+03	1.52E-03	1.32E+03	7.68E-04	2.60E+03	4.32E-04	4.63E+03
0.00E+00	6.20E-04	3.23E+03	4.39E-04	4.56E+03	1.59E-03	1.26E+03	4.26E-04	4.69E+03	2.40E-04	8.33E+03
0.00E+00	5.95E-04	3.36E+03	4.22E-04	4.74E+03	1.60E-03	1.25E+03	2.32E-04	8.62E+03	1.30E-04	1.54E+04
0.00E+00	5.65E-04	3.54E+03	4.00E-04	5.00E+03	1.52E-03	1.32E+03	8.42E-05	2.38E+04	4.74E-05	4.22E+04
0.00E+00	5.37E-04	3.72E+03	3.81E-04	5.25E+03	1.34E-03	1.49E+03	4.79E-05	4.18E+04	2.70E-05	7.41E+04
0.00E+00	4.99E-04	4.01E+03	3.53E-04	5.67E+03	1.17E-03	1.71E+03	2.95E-05	6.78E+04	1.66E-05	1.20E+05
0.00E+00	4.59E-04	4.36E+03	3.25E-04	6.15E+03	1.16E-03	1.72E+03	3.43E-05	5.83E+04	1.93E-05	1.04E+05
0.00E+00	8.23E-05	2.43E+04	5.83E-05	3.43E+04	9.31E-04	2.15E+03	1.45E-05	1.38E+05	8.14E-06	2.46E+05
0.00E+00	2.60E-05	7.69E+04	1.84E-05	1.09E+05	3.32E-04	6.02E+03	2.21E-05	9.05E+04	1.24E-05	1.61E+05
0.00E+00	4.44E-04	4.50E+03	3.15E-04	6.35E+03	1.17E-03	1.71E+03	1.75E-04	1.14E+04	9.84E-05	2.03E+04
0.00E+00	3.74E-04	5.35E+03	2.65E-04	7.55E+03	1.24E-03	1.61E+03	7.58E-05	2.64E+04	4.26E-05	4.69E+04
0.00E+00	3.17E-04	6.31E+03	2.25E-04	8.89E+03	1.30E-03	1.54E+03	5.52E-05	3.62E+04	3.11E-05	6.43E+04
0.00E+00	1.27E-05	1.57E+05	9.00E-06	2.22E+05	2.29E-04	8.73E+03	3.52E-05	5.68E+04	1.98E-05	1.01E+05
0.00E+00	1.69E-04	1.18E+04	1.20E-04	1.67E+04	1.41E-03	1.42E+03	3.90E-05	5.13E+04	2.19E-05	9.13E+04
0.00E+00	5.86E-05	3.41E+04	4.15E-05	4.82E+04	1.56E-03	1.28E+03	2.78E-03	7.19E+02	1.56E-03	1.28E+03
0.00E+00	8.55E-05	2.34E+04	6.06E-05	3.30E+04	1.55E-03	1.29E+03	2.77E-03	7.22E+02	1.56E-03	1.28E+03
0.00E+00	1.19E-04	1.68E+04	8.40E-05	2.38E+04	1.53E-03	1.31E+03	2.85E-03	7.02E+02	1.61E-03	1.24E+03
0.00E+00	4.39E-04	4.56E+03	3.11E-04	6.43E+03	1.58E-03	1.27E+03	5.79E-04	3.45E+03	3.26E-04	6.13E+03
0.00E+00	3.76E-04	5.32E+03	2.67E-04	7.49E+03	1.56E-03	1.28E+03	5.70E-04	3.51E+03	3.21E-04	6.23E+03
0.00E+00	3.43E-04	5.83E+03	2.43E-04	8.23E+03	1.56E-03	1.28E+03	7.33E-04	2.73E+03	4.12E-04	4.85E+03
0.00E+00	2.78E-04	7.19E+03	1.97E-04	1.02E+04	1.59E-03	1.26E+03	8.30E-04	2.41E+03	4.67E-04	4.28E+03
0.00E+00	2.42E-04	8.26E+03	1.71E-04	1.17E+04	1.59E-03	1.26E+03	9.89E-04	2.02E+03	5.56E-04	3.60E+03
0.00E+00	1.76E-04	1.14E+04	1.25E-04	1.60E+04	1.58E-03	1.27E+03	1.29E-03	1.55E+03	7.24E-04	2.76E+03
0.00E+00	1.73E-04	1.16E+04	1.23E-04	1.63E+04	1.58E-03	1.27E+03	1.64E-03	1.22E+03	9.22E-04	2.17E+03
0.00E+00	1.61E-04	1.24E+04	1.14E-04	1.75E+04	1.59E-03	1.26E+03	1.93E-03	1.04E+03	1.08E-03	1.85E+03
0.00E+00	1.99E-04	1.01E+04	1.41E-04	1.42E+04	1.57E-03	1.27E+03	2.26E-03	8.85E+02	1.27E-03	1.57E+03
0.00E+00	2.08E-04	9.62E+03	1.48E-04	1.35E+04	1.54E-03	1.30E+03	2.46E-03	8.13E+02	1.38E-03	1.45E+03
0.00E+00	3.11E-04	6.43E+03	2.20E-04	9.09E+03	1.56E-03	1.28E+03	2.30E-03	8.70E+02	1.29E-03	1.55E+03
0.00E+00	2.50E-04	8.00E+03	1.77E-04	1.13E+04	1.46E-03	1.37E+03	2.81E-03	7.12E+02	1.58E-03	1.27E+03
0.00E+00	2.54E-04	7.87E+03	1.80E-04	1.11E+04	1.54E-03	1.30E+03	2.24E-03	8.93E+02	1.26E-03	1.59E+03
0.00E+00	3.08E-04	6.49E+03	2.18E-04	9.17E+03	1.63E-03	1.23E+03	3.03E-03	6.60E+02	1.70E-03	1.18E+03
0.00E+00	1.98E-04	1.01E+04	1.40E-04	1.43E+04	1.57E-03	1.27E+03	2.21E-03	9.05E+02	1.25E-03	1.60E+03
0.00E+00	3.80E-04	5.26E+03	2.69E-04	7.43E+03	1.65E-03	1.21E+03	3.15E-03	6.35E+02	1.77E-03	1.13E+03
0.00E+00	1.46E-04	1.37E+04	1.03E-04	1.94E+04	1.58E-03	1.27E+03	2.17E-03	9.22E+02	1.22E-03	1.64E+03
0.00E+00	4.47E-04	4.47E+03	3.17E-04	6.31E+03	1.58E-03	1.27E+03	3.20E-03	6.25E+02	1.80E-03	1.11E+03
0.00E+00	1.00E-04	2.00E+04	7.11E-05	2.81E+04	1.58E-03	1.27E+03	2.20E-03	9.09E+02	1.24E-03	1.61E+03
0.00E+00	5.36E-04	3.73E+03	3.80E-04	5.26E+03	1.48E-03	1.35E+03	3.19E-03	6.27E+02	1.79E-03	1.12E+03
0.00E+00	6.69E-05	2.99E+04	4.74E-05	4.22E+04	1.56E-03	1.28E+03	2.22E-03	9.01E+02	1.25E-03	1.60E+03
0.00E+00	5.93E-04	3.37E+03	4.20E-04	4.76E+03	1.40E-03	1.43E+03	3.11E-03	6.43E+02	1.75E-03	1.14E+03
0.00E+00	6.02E-04	3.32E+03	4.26E-04	4.69E+03	1.41E-03	1.42E+03	3.09E-03	6.47E+02	1.74E-03	1.15E+03
0.00E+00	5.96E-04	3.36E+03	4.22E-04	4.74E+03	1.41E-03	1.42E+03	2.99E-03	6.69E+02	1.68E-03	1.19E+03
0.00E+00	5.87E-04	3.41E+03	4.16E-04	4.81E+03	1.42E-03	1.41E+03	3.02E-03	6.62E+02	1.70E-03	1.18E+03
0.00E+00	6.10E-04	3.28E+03	4.32E-04	4.63E+03	1.42E-03	1.41E+03	3.05E-03	6.56E+02	1.71E-03	1.17E+03
0.00E+00	6.27E-04	3.19E+03	4.44E-04	4.50E+03	1.41E-03	1.42E+03	3.03E-03	6.60E+02	1.70E-03	1.18E+03
0.00E+00	6.33E-04	3.16E+03	4.48E-04	4.46E+03	1.42E-03	1.41E+03	3.03E-03	6.60E+02	1.70E-03	1.18E+03
0.00E+00	6.20E-04	3.23E+03	4.39E-04	4.56E+03	1.41E-03	1.42E+03	3.03E-03	6.60E+02	1.71E-03	1.17E+03
0.00E+00	6.38E-04	3.13E+03	4.52E-04	4.42E+03	1.41E-03	1.42E+03	3.02E-03	6.62E+02	1.70E-03	1.18E+03
0.00E+00	6.39E-04	3.13E+03	4.53E-04	4.42E+03	1.39E-03	1.44E+03	3.05E-03	6.56E+02	1.72E-03	1.16E+03
0.00E+00	6.20E-04	3.23E+03	4.39E-04	4.56E+03	1.40E-03	1.43E+03	3.07E-03	6.51E+02	1.73E-03	1.16E+03
0.00E+00	6.42E-04	3.12E+03	4.55E-04	4.40E+03	1.40E-03	1.43E+03	3.07E-03	6.51E+02	1.73E-03	1.16E+03
0.00E+00	6.43E-04	3.11E+03	4.55E-04	4.40E+03	1.40E-03	1.43E+03	3.11E-03	6.43E+02	1.75E-03	1.14E+03
0.00E+00	6.43E-04	3.11E+03	4.56E-04	4.39E+03	1.40E-03	1.43E+03	3.13E-03	6.39E+02	1.76E-03	1.14E+03
0.00E+00	6.42E-04	3.12E+03	4.55E-04	4.40E+03	1.40E-03	1.43E+03	3.13E-03	6.39E+02	1.76E-03	1.14E+03
0.00E+00	6.42E-04	3.12E+03	4.55E-04	4.40E+03	1.39E-03	1.44E+03	3.10E-03	6.45E+02	1.74E-03	1.15E+03
0.00E+00	6.43E-04	3.11E+03	4.56E-04	4.39E+03	1.41E-03	1.42E+03	3.17E-03	6.31E+02	1.78E-03	1.12E+03
0		3110		4386		1212		625		1111

Appendix G

AUSPLUME Modelling Results and Spreadsheets for Stockpile Zone Calculations

Zone 1 Daytime Emissions

40913 Macdonaldtown Stockpile Zone Odour Sources

Concentration or deposition Concentration
Emission rate units OUV/second
Concentration units Odour_Units
Units conversion factor 1.00E+00
Constant background concentration 0.00E+00
Terrain effects Egan method
Smooth stability class changes? No
Other stability class adjustments ("urban modes") None
Ignore building wake effects? No
Decay coefficient (unless overridden by met. file) 0.000
Anemometer height 10 m
Roughness height at the wind vane site 0.300 m

DISPERSION CURVES
Horizontal dispersion curves for sources <100m high Pasquill-Gifford
Vertical dispersion curves for sources <100m high Pasquill-Gifford
Horizontal dispersion curves for sources >100m high Briggs Rural
Vertical dispersion curves for sources >100m high Briggs Rural
Enhance horizontal plume spreads for buoyancy? Yes
Enhance vertical plume spreads for buoyancy? Yes
Adjust horizontal P-G formulae for roughness height? Yes
Adjust vertical P-G formulae for roughness height? Yes
Roughness height 0.800m
Adjustment for wind directional shear None

PLUME RISE OPTIONS
Gradual plume rise? Yes
Stack-tip downwash included? Yes
Building downwash algorithm: PRIME method.
Entrainment coeff. for neutral & stable lapse rates 0.60,0.60
Partial penetration of elevated inversions? No
Disregard temp. gradients in the hourly met. file? No

and in the absence of boundary-layer potential temperature gradients
given by the hourly met. file, a value from the following table
(in K/m) is used:

Wind Speed Category	Stability Class A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES
Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES
1 hour

1

40913 Macdonaldtown Stockpile Zone Odour Sources

SOURCE CHARACTERISTICS

INTEGRATED AREA SOURCE: VFZ1AO

X0(m)	Y0(m)	Ground El	Length X	Length Y	Or. Angle	Ver. spread	Height
332359	6247736	18m	32m	25m	-15deg	4m	20m

(Constant) emission rate = 1.00E+00 OUV/second per square metre

Hourly multiplicative factors will be used with
this emission factor.
No gravitational settling or scavenging.

1

40913 Macdonaldtown Stockpile Zone Odour Sources

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):
332119.m 332162.m 332202.m 332243.m 332285.m 332326.m 332370.m
332411.m 332452.m 332493.m 332533.m

and these y-values (or northings):
6247493.m 6247550.m 6247604.m 6247660.m 6247712.m 6247768.m 6247822.m
6247875.m 6247926.m 6247977.m 6248028.m

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEVN	HEIGHT	No.	X	Y	ELEVN	HEIGHT
1	332279	6247616	17.5	1.5	29	332421	6247672	17.5	1.5
2	332277	6247625	17.5	1.5	30	332442	6247701	17.5	1.5
3	332276	6247638	17.5	1.5	31	332421	6247680	17.5	1.5
4	332274	6247650	17.5	1.5	32	332454	6247709	17.5	1.5
5	332275	6247664	17.5	1.5	33	332420	6247687	17.5	1.5
6	332273	6247674	17.5	1.5	34	332467	6247717	17.5	1.5
7	332272	6247688	17.5	1.5	35	332420	6247695	17.5	1.5
8	332269	6247701	17.5	1.5	36	332479	6247727	17.5	1.5
9	332343	6247692	17.5	1.5	37	332419	6247703	17.5	1.5
10	332343	6247707	17.5	1.5	38	332495	6247735	17.5	1.5
11	332263	6247726	17.5	1.5	39	332419	6247710	17.5	1.5
12	332271	6247726	17.5	1.5	40	332509	6247743	17.5	1.5
13	332279	6247731	17.5	1.5	41	332330	6247537	17.5	1.5
14	332342	6247715	17.5	1.5	42	332338	6247541	17.5	1.5
15	332295	6247740	17.5	1.5	43	332344	6247544	17.5	1.5
16	332432	6247743	17.5	1.5	44	332351	6247547	17.5	1.5
17	332435	6247735	17.5	1.5	45	332359	6247551	17.5	1.5
18	332439	6247729	17.5	1.5	46	332366	6247554	17.5	1.5
19	332358	6247641	17.5	1.5	47	332382	6247560	17.5	1.5
20	332366	6247651	17.5	1.5	48	332390	6247565	17.5	1.5
21	332374	6247654	17.5	1.5	49	332399	6247570	17.5	1.5
22	332381	6247662	17.5	1.5	50	332408	6247574	17.5	1.5
23	332386	6247667	17.5	1.5	51	332417	6247579	17.5	1.5
24	332396	6247677	17.5	1.5	52	332426	6247584	17.5	1.5
25	332405	6247681	17.5	1.5	53	332435	6247588	17.5	1.5
26	332412	6247687	17.5	1.5	54	332424	6247578	17.5	1.5
27	332422	6247688	17.5	1.5	55	332423	6247585	17.5	1.5
28	332428	6247692	17.5	1.5	56	332462	6247601	17.5	1.5

METEOROLOGICAL DATA : DECCW Randwick AWS Data BoM SydneyAP Clouds SydneyAP

HOURLY VARIABLE EMISSION FACTOR INFORMATION

The input emission rates specfied above will be multiplied by hourly varying
factors entered via the input file:
C:\Users\sdorairaj\Ausplume\Odour Emmission Files PTM\Zone1DFu.csv
For each stack source, hourly values within this file will be added to each
declared exit velocity (m/sec) and temperature (K).

Title of input hourly emission factor file is:
Variable Emissions,,

HOURLY EMISSION FACTOR SOURCE TYPE ALLOCATION

Prefix V allocated: VFZ1AO

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1 HIGHEST RECORDINGS FOR EACH RECEPTOR (in Odour_Units)
AVERAGING TIME = 1 HOUR

X (km):	332.119	332.162
Y (km)		
6248.028	3.75E-04 06,21/08/08	4.08E-04 06,21/08/08
6247.977	4.24E-04 07,09/09/07	4.62E-04 06,21/08/08
6247.926	4.07E-04 07,09/09/07	5.14E-04 07,09/09/07
6247.875	4.96E-04 07,08/09/07	4.97E-04 07,08/09/07
6247.822	4.99E-04 17,19/05/08	5.92E-04 07,08/09/07
6247.768	5.52E-04 06,26/01/07	6.18E-04 06,26/01/07
6247.712	5.54E-04 06,28/02/07	6.16E-04 18,24/08/07
6247.660	5.31E-04 07,19/03/08	5.87E-04 07,19/03/08
6247.604	4.25E-04 06,19/03/07	5.37E-04 06,19/03/07
6247.550	4.46E-04 06,19/03/07	4.94E-04 06,25/12/08
6247.493	3.94E-04 06,25/12/08	4.32E-04 07,25/05/08

X (km):	332.202	332.243
Y (km)		
6248.028	4.18E-04 08,16/05/08	4.73E-04 08,16/05/08
6247.977	5.01E-04 06,21/08/08	5.32E-04 08,16/05/08
6247.926	5.64E-04 07,09/09/07	5.96E-04 06,21/08/08
6247.875	5.63E-04 07,09/09/07	6.40E-04 07,09/09/07
6247.822	6.41E-04 07,08/09/07	5.53E-04 07,08/09/07
6247.768	6.40E-04 06,26/01/07	5.41E-04 06,26/01/07
6247.712	6.34E-04 06,02/11/08	5.64E-04 06,02/11/08
6247.660	5.68E-04 07,19/03/08	6.16E-04 06,19/03/07
6247.604	5.97E-04 06,19/03/08	6.25E-04 07,25/05/08
6247.550	5.36E-04 07,25/05/08	5.76E-04 06,10/11/08
6247.493	4.62E-04 06,10/11/08	4.97E-04 06,13/12/08

X (km):	332.285	332.326
Y (km)		
6248.028	4.77E-04 08,19/05/07	4.84E-04 08,30/06/08
6247.977	5.74E-04 08,19/05/07	5.32E-04 08,30/06/08
6247.926	6.34E-04 08,16/05/08	5.74E-04 08,19/05/07
6247.875	5.83E-04 06,21/08/08	6.70E-04 10,08/11/07
6247.822	5.46E-04 07,25/12/08	6.83E-04 10,08/09/07
6247.768	6.15E-04 09,02/08/07	5.71E-04 10,26/09/07
6247.712	5.15E-04 15,05/05/07	6.68E-04 15,05/05/07
6247.660	6.98E-04 10,03/06/08	6.19E-04 10,03/06/08
6247.604	6.40E-04 06,29/01/08	6.22E-04 07,05/05/07
6247.550	6.06E-04 06,07/12/08	6.20E-04 06,19/10/08
6247.493	5.23E-04 06,23/01/07	5.38E-04 07,03/06/08

X (km):	332.370	332.411
Y (km)		
6248.028	5.08E-04 06,22/03/07	5.09E-04 08,02/08/07
6247.977	5.87E-04 06,22/03/07	5.76E-04 08,02/08/07
6247.926	6.25E-04 06,22/03/07	5.83E-04 08,02/08/07
6247.875	6.04E-04 10,08/11/07	5.12E-04 06,04/02/07
6247.822	7.08E-04 07,29/01/08	6.93E-04 12,04/07/08
6247.768	2.06E-05 12,09/04/08	4.96E-04 11,05/04/08
6247.712	4.72E-04 11,18/04/07	6.68E-04 07,26/12/08
6247.660	7.24E-04 10,06/05/08	7.35E-04 09,26/10/07
6247.604	6.19E-04 10,06/05/08	6.13E-04 07,01/07/08

6247.550	6.26E-04 06,28/01/07	6.22E-04 15,14/06/07
6247.493	5.45E-04 06,28/01/07	5.41E-04 17,19/07/08

X (km):	332.452	332.493
Y (km)		
6248.028	4.57E-04 06,04/02/07	4.78E-04 06,04/02/07
6247.977	5.67E-04 06,04/02/07	5.40E-04 08,20/07/08
6247.926	6.37E-04 08,20/07/08	6.16E-04 06,25/10/07
6247.875	6.05E-04 06,25/10/07	6.41E-04 06,26/10/08
6247.822	6.64E-04 09,02/06/08	6.54E-04 09,02/06/08
6247.768	6.88E-04 08,27/12/07	7.10E-04 12,02/06/08
6247.712	6.50E-04 09,01/07/08	6.30E-04 11,02/06/08
6247.660	6.68E-04 08,02/11/07	6.17E-04 07,13/02/07
6247.604	6.37E-04 06,18/03/08	6.35E-04 07,12/03/08
6247.550	6.09E-04 06,17/02/07	5.82E-04 06,27/12/07
6247.493	5.26E-04 07,01/07/08	5.01E-04 07,02/08/07

X (km):	332.533
Y (km)	
6248.028	4.39E-04 06,25/10/07
6247.977	5.15E-04 06,25/10/07
6247.926	5.82E-04 06,28/02/08
6247.875	6.28E-04 06,22/04/07
6247.822	6.41E-04 07,01/05/08
6247.768	6.33E-04 07,15/02/07
6247.712	6.38E-04 07,13/05/08
6247.660	6.39E-04 06,21/03/07
6247.604	6.07E-04 06,11/10/07
6247.550	5.46E-04 07,25/08/07
6247.493	4.72E-04 06,27/12/07

At the discrete receptors:

1: 6.32E-04 @Hr06,15/01/07	29: 7.30E-04 @Hr09,26/10/07
2: 6.36E-04 @Hr06,15/01/07	30: 7.16E-04 @Hr08,02/11/07
3: 6.21E-04 @Hr10,03/06/08	31: 6.97E-04 @Hr09,26/10/07
4: 6.46E-04 @Hr10,03/06/08	32: 6.60E-04 @Hr08,02/11/07
5: 6.66E-04 @Hr10,03/06/08	33: 6.92E-04 @Hr08,26/10/08
6: 6.49E-04 @Hr10,03/06/08	34: 6.45E-04 @Hr11,02/06/08
7: 5.93E-04 @Hr10,03/06/08	35: 7.12E-04 @Hr08,15/03/08
8: 4.89E-04 @Hr10,03/06/08	36: 7.17E-04 @Hr11,02/06/08
9: 7.20E-04 @Hr10,04/04/07	37: 7.20E-04 @Hr07,26/12/08
10: 6.43E-04 @Hr10,04/04/07	38: 7.05E-04 @Hr11,02/06/08
11: 5.26E-04 @Hr10,16/12/07	39: 7.17E-04 @Hr07,26/12/08
12: 5.35E-04 @Hr10,16/12/07	40: 6.57E-04 @Hr11,02/06/08
13: 5.30E-04 @Hr10,16/12/07	41: 6.08E-04 @Hr07,03/06/08
14: 5.68E-04 @Hr15,05/05/07	42: 6.15E-04 @Hr08,25/06/07
15: 5.52E-04 @Hr13,27/05/08	43: 6.20E-04 @Hr07,17/02/07
16: 7.07E-04 @Hr07,21/12/08	44: 6.23E-04 @Hr06,16/01/07
17: 7.20E-04 @Hr13,25/05/08	45: 6.30E-04 @Hr06,16/01/07
18: 7.19E-04 @Hr13,25/05/08	46: 6.33E-04 @Hr06,28/01/07
19: 6.87E-04 @Hr10,06/05/08	47: 6.37E-04 @Hr07,12/06/08
20: 7.30E-04 @Hr10,06/05/08	48: 6.40E-04 @Hr06,11/02/08
21: 7.46E-04 @Hr10,06/05/08	49: 6.42E-04 @Hr17,19/07/08
22: 7.31E-04 @Hr10,06/05/08	50: 6.43E-04 @Hr15,14/06/07
23: 6.95E-04 @Hr10,06/05/08	51: 6.40E-04 @Hr06,03/10/07
24: 7.00E-04 @Hr07,21/01/07	52: 6.43E-04 @Hr07,01/07/08
25: 7.00E-04 @Hr15,03/06/07	53: 6.44E-04 @Hr07,05/10/07
26: 7.05E-04 @Hr07,11/10/07	54: 6.43E-04 @Hr07,01/07/08
27: 6.91E-04 @Hr08,26/10/08	55: 6.44E-04 @Hr07,01/07/08
28: 6.84E-04 @Hr07,26/12/08	56: 6.43E-04 @Hr06,19/02/07

Zone 2 Daytime Emissions

40913 Macdonaldtown Fugitive Stockpile Emissions Zone 2 Daytime

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Concentration or deposition Concentration
Emission rate units OUV/second
Concentration units Odour_Units
Units conversion factor 1.00E+00
Constant background concentration 0.00E+00
Terrain effects Egan method
Smooth stability class changes? No
Other stability class adjustments ("urban modes") None
Ignore building wake effects? No
Decay coefficient (unless overridden by met. file) 0.000
Anemometer height 10 m
Roughness height at the wind vane site 0.300 m

DISPERSION CURVES
Horizontal dispersion curves for sources <100m high Pasquill-Gifford
Vertical dispersion curves for sources <100m high Pasquill-Gifford
Horizontal dispersion curves for sources >100m high Briggs Rural
Vertical dispersion curves for sources >100m high Briggs Rural
Enhance horizontal plume spreads for buoyancy? Yes
Enhance vertical plume spreads for buoyancy? Yes
Adjust horizontal P-G formulae for roughness height? Yes
Adjust vertical P-G formulae for roughness height? Yes
Roughness height 0.800m
Adjustment for wind directional shear None

PLUME RISE OPTIONS
Gradual plume rise? Yes
Stack-tip downwash included? Yes
Building downwash algorithm: PRIME method.
Entrainment coeff. for neutral & stable lapse rates 0.60,0.60
Partial penetration of elevated inversions? No
Disregard temp. gradients in the hourly met. file? No

and in the absence of boundary-layer potential temperature gradients
given by the hourly met. file, a value from the following table
(in K/m) is used:

Wind Speed Category	Stability Class A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES
Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES
1 hour

1

40913 Macdonaldtown Fugitive Stockpile Emissions Zone 2 Daytime

SOURCE CHARACTERISTICS

INTEGRATED AREA SOURCE: VFZ2AO

X0(m)	Y0(m)	Ground El	Length X	Length Y	Or. Angle	Ver. spread	Height
332359	6247736	18m	32m	25m	-15deg	4m	20m

(Constant) emission rate = 1.00E+00 OUV/second per square metre

Hourly multiplicative factors will be used with
this emission factor.
No gravitational settling or scavenging.

1

40913 Macdonaldtown Fugitive Stockpile Emissions Zone 2 Daytime

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):
332119.m 332162.m 332202.m 332243.m 332285.m 332326.m 332370.m
332411.m 332452.m 332493.m 332533.m

and these y-values (or northings):
6247493.m 6247550.m 6247604.m 6247660.m 6247712.m 6247768.m 6247822.m
6247875.m 6247926.m 6247977.m 6248028.m

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEVN	HEIGHT	No.	X	Y	ELEVN	HEIGHT
1	332279	6247616	17.5	1.5	29	332421	6247672	17.5	1.5
2	332277	6247625	17.5	1.5	30	332442	6247701	17.5	1.5
3	332276	6247638	17.5	1.5	31	332421	6247680	17.5	1.5
4	332274	6247650	17.5	1.5	32	332454	6247709	17.5	1.5
5	332275	6247664	17.5	1.5	33	332420	6247687	17.5	1.5
6	332273	6247674	17.5	1.5	34	332467	6247717	17.5	1.5
7	332272	6247688	17.5	1.5	35	332420	6247695	17.5	1.5
8	332269	6247701	17.5	1.5	36	332479	6247727	17.5	1.5
9	332343	6247692	17.5	1.5	37	332419	6247703	17.5	1.5
10	332343	6247707	17.5	1.5	38	332495	6247735	17.5	1.5
11	332263	6247726	17.5	1.5	39	332419	6247710	17.5	1.5
12	332271	6247726	17.5	1.5	40	332509	6247743	17.5	1.5
13	332279	6247731	17.5	1.5	41	332330	6247537	17.5	1.5
14	332342	6247715	17.5	1.5	42	332338	6247541	17.5	1.5
15	332295	6247740	17.5	1.5	43	332344	6247544	17.5	1.5
16	332432	6247743	17.5	1.5	44	332351	6247547	17.5	1.5
17	332435	6247735	17.5	1.5	45	332359	6247551	17.5	1.5
18	332439	6247729	17.5	1.5	46	332366	6247554	17.5	1.5
19	332358	6247641	17.5	1.5	47	332382	6247560	17.5	1.5
20	332366	6247651	17.5	1.5	48	332390	6247565	17.5	1.5
21	332374	6247654	17.5	1.5	49	332399	6247570	17.5	1.5
22	332381	6247662	17.5	1.5	50	332408	6247574	17.5	1.5
23	332386	6247667	17.5	1.5	51	332417	6247579	17.5	1.5
24	332396	6247677	17.5	1.5	52	332426	6247584	17.5	1.5
25	332405	6247681	17.5	1.5	53	332435	6247588	17.5	1.5
26	332412	6247687	17.5	1.5	54	332424	6247578	17.5	1.5
27	332422	6247688	17.5	1.5	55	332423	6247585	17.5	1.5
28	332428	6247692	17.5	1.5	56	332462	6247601	17.5	1.5

METEOROLOGICAL DATA : DECCW Randwick AWS Data BoM SydneyAP Clouds SydneyAP

HOURLY VARIABLE EMISSION FACTOR INFORMATION

The input emission rates specfied above will be multiplied by hourly varying
factors entered via the input file:
C:\Users\sdorairaj\Ausplume\Odour Emmission Files PTM\Zone2DFu.csv
For each stack source, hourly values within this file will be added to each
declared exit velocity (m/sec) and temperature (K).

Title of input hourly emission factor file is:
Variable,Emissions,

HOURLY EMISSION FACTOR SOURCE TYPE ALLOCATION

Prefix V allocated: VFZ2AO

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1 HIGHEST RECORDINGS FOR EACH RECEPTOR (in Odour_Units)
AVERAGING TIME = 1 HOUR

X (km):	332.119	332.162
Y (km)		
6248.028	2.66E-04 06,21/08/08	2.89E-04 06,21/08/08
6247.977	3.00E-04 07,09/09/07	3.27E-04 06,21/08/08
6247.926	2.89E-04 07,09/09/07	3.64E-04 07,09/09/07
6247.875	3.51E-04 07,08/09/07	3.52E-04 07,08/09/07
6247.822	3.54E-04 17,19/05/08	4.19E-04 07,08/09/07
6247.768	3.91E-04 06,26/01/07	4.38E-04 06,26/01/07
6247.712	3.92E-04 06,28/02/07	4.37E-04 18,24/08/07
6247.660	3.76E-04 07,19/03/08	4.16E-04 07,19/03/08
6247.604	3.01E-04 06,19/03/07	3.81E-04 06,19/03/07
6247.550	3.16E-04 06,19/03/07	3.50E-04 06,25/12/08
6247.493	2.79E-04 06,25/12/08	3.06E-04 07,25/05/08

X (km):	332.202	332.243
Y (km)		
6248.028	2.96E-04 08,16/05/08	3.35E-04 08,16/05/08
6247.977	3.55E-04 06,21/08/08	3.77E-04 08,16/05/08
6247.926	4.00E-04 07,09/09/07	4.22E-04 06,21/08/08
6247.875	3.99E-04 07,09/09/07	4.53E-04 07,09/09/07
6247.822	4.54E-04 07,08/09/07	3.92E-04 07,08/09/07
6247.768	4.53E-04 06,26/01/07	3.83E-04 06,26/01/07
6247.712	4.49E-04 06,02/11/08	3.99E-04 06,02/11/08
6247.660	4.02E-04 07,19/03/08	4.36E-04 06,19/03/07
6247.604	4.23E-04 06,19/03/08	4.42E-04 07,25/05/08
6247.550	3.79E-04 07,25/05/08	4.08E-04 06,10/11/08
6247.493	3.27E-04 06,10/11/08	3.52E-04 06,13/12/08

X (km):	332.285	332.326
Y (km)		
6248.028	3.38E-04 08,19/05/07	3.43E-04 08,30/06/08
6247.977	4.07E-04 08,19/05/07	3.77E-04 08,30/06/08
6247.926	4.49E-04 08,16/05/08	4.07E-04 08,19/05/07
6247.875	4.13E-04 06,21/08/08	4.75E-04 10,08/11/07
6247.822	3.87E-04 07,25/12/08	4.84E-04 10,08/09/07
6247.768	4.35E-04 09,02/08/07	4.05E-04 10,26/09/07
6247.712	3.65E-04 15,05/05/07	4.73E-04 15,05/05/07
6247.660	4.95E-04 10,03/06/08	4.38E-04 10,03/06/08
6247.604	4.53E-04 06,29/01/08	4.41E-04 07,05/05/07
6247.550	4.29E-04 06,07/12/08	4.39E-04 06,19/10/08
6247.493	3.71E-04 06,23/01/07	3.81E-04 07,03/06/08

X (km):	332.370	332.411
Y (km)		
6248.028	3.60E-04 06,22/03/07	3.61E-04 08,02/08/07
6247.977	4.15E-04 06,22/03/07	4.08E-04 08,02/08/07
6247.926	4.42E-04 06,22/03/07	4.13E-04 08,02/08/07
6247.875	4.28E-04 10,08/11/07	3.63E-04 06,04/02/07
6247.822	5.02E-04 07,29/01/08	4.91E-04 12,04/07/08
6247.768	1.46E-05 12,09/04/08	3.51E-04 11,05/04/08
6247.712	3.34E-04 11,18/04/07	4.73E-04 07,26/12/08
6247.660	5.13E-04 10,06/05/08	5.21E-04 09,26/10/07

6247.604	4.38E-04 10,06/05/08	4.34E-04 07,01/07/08
6247.550	4.44E-04 06,28/01/07	4.40E-04 15,14/06/07
6247.493	3.86E-04 06,28/01/07	3.83E-04 17,19/07/08

X (km):	332.452	332.493
Y (km)		
6248.028	3.24E-04 06,04/02/07	3.38E-04 06,04/02/07
6247.977	4.02E-04 06,04/02/07	3.82E-04 08,20/07/08
6247.926	4.51E-04 08,20/07/08	4.37E-04 06,25/10/07
6247.875	4.29E-04 06,25/10/07	4.54E-04 06,26/10/08
6247.822	4.70E-04 09,02/06/08	4.63E-04 09,02/06/08
6247.768	4.87E-04 08,27/12/07	5.03E-04 12,02/06/08
6247.712	4.60E-04 09,01/07/08	4.46E-04 11,02/06/08
6247.660	4.73E-04 08,02/11/07	4.37E-04 07,13/02/07
6247.604	4.51E-04 06,18/03/08	4.50E-04 07,12/03/08
6247.550	4.31E-04 06,17/02/07	4.12E-04 06,27/12/07
6247.493	3.72E-04 07,01/07/08	3.55E-04 07,02/08/07

X (km):	332.533
Y (km)	
6248.028	3.11E-04 06,25/10/07
6247.977	3.65E-04 06,25/10/07
6247.926	4.12E-04 06,28/02/08
6247.875	4.45E-04 06,22/04/07
6247.822	4.54E-04 07,01/05/08
6247.768	4.48E-04 07,15/02/07
6247.712	4.52E-04 07,13/05/08
6247.660	4.53E-04 06,21/03/07
6247.604	4.30E-04 06,11/10/07
6247.550	3.87E-04 07,25/08/07
6247.493	3.34E-04 06,27/12/07

At the discrete receptors:

1: 4.47E-04 @Hr06,15/01/07	29: 5.17E-04 @Hr09,26/10/07
2: 4.50E-04 @Hr06,15/01/07	30: 5.07E-04 @Hr08,02/11/07
3: 4.40E-04 @Hr10,03/06/08	31: 4.94E-04 @Hr09,26/10/07
4: 4.58E-04 @Hr10,03/06/08	32: 4.67E-04 @Hr08,02/11/07
5: 4.72E-04 @Hr10,03/06/08	33: 4.90E-04 @Hr08,26/10/08
6: 4.60E-04 @Hr10,03/06/08	34: 4.57E-04 @Hr11,02/06/08
7: 4.20E-04 @Hr10,03/06/08	35: 5.05E-04 @Hr08,15/03/08
8: 3.46E-04 @Hr10,03/06/08	36: 5.08E-04 @Hr11,02/06/08
9: 5.10E-04 @Hr10,04/04/07	37: 5.10E-04 @Hr07,26/12/08
10: 4.55E-04 @Hr10,04/04/07	38: 4.99E-04 @Hr11,02/06/08
11: 3.73E-04 @Hr10,16/12/07	39: 5.08E-04 @Hr07,26/12/08
12: 3.79E-04 @Hr10,16/12/07	40: 4.66E-04 @Hr11,02/06/08
13: 3.75E-04 @Hr10,16/12/07	41: 4.31E-04 @Hr07,03/06/08
14: 4.02E-04 @Hr15,05/05/07	42: 4.36E-04 @Hr08,25/06/07
15: 3.91E-04 @Hr13,27/05/08	43: 4.39E-04 @Hr07,17/02/07
16: 5.00E-04 @Hr07,21/12/08	44: 4.41E-04 @Hr06,16/01/07
17: 5.10E-04 @Hr13,25/05/08	45: 4.46E-04 @Hr06,16/01/07
18: 5.09E-04 @Hr13,25/05/08	46: 4.48E-04 @Hr06,28/01/07
19: 4.87E-04 @Hr10,06/05/08	47: 4.51E-04 @Hr07,12/06/08
20: 5.17E-04 @Hr10,06/05/08	48: 4.54E-04 @Hr06,11/02/08
21: 5.29E-04 @Hr10,06/05/08	49: 4.55E-04 @Hr17,19/07/08
22: 5.17E-04 @Hr10,06/05/08	50: 4.56E-04 @Hr15,14/06/07
23: 4.92E-04 @Hr10,06/05/08	51: 4.53E-04 @Hr06,03/10/07
24: 4.96E-04 @Hr07,21/01/07	52: 4.55E-04 @Hr07,01/07/08
25: 4.96E-04 @Hr15,03/06/07	53: 4.56E-04 @Hr07,05/10/07
26: 5.00E-04 @Hr07,11/10/07	54: 4.55E-04 @Hr07,01/07/08
27: 4.90E-04 @Hr08,26/10/08	55: 4.56E-04 @Hr07,01/07/08
28: 4.85E-04 @Hr07,26/12/08	56: 4.56E-04 @Hr06,19/02/07

Zone 3 Daytime Emissions

40913 Macdonaldtown Fugitive Stockpile Emissions Sources Zone 3 Daytim

Concentration or deposition Concentration
Emission rate units OUV/second
Concentration units Odour_Units
Units conversion factor 1.00E+00
Constant background concentration 0.00E+00
Terrain effects Egan method
Smooth stability class changes? No
Other stability class adjustments ("urban modes") None
Ignore building wake effects? No
Decay coefficient (unless overridden by met. file) 0.000
Anemometer height 10 m
Roughness height at the wind vane site 0.300 m

DISPERSION CURVES
Horizontal dispersion curves for sources <100m high Pasquill-Gifford
Vertical dispersion curves for sources <100m high Pasquill-Gifford
Horizontal dispersion curves for sources >100m high Briggs Rural
Vertical dispersion curves for sources >100m high Briggs Rural
Enhance horizontal plume spreads for buoyancy? Yes
Enhance vertical plume spreads for buoyancy? Yes
Adjust horizontal P-G formulae for roughness height? Yes
Adjust vertical P-G formulae for roughness height? Yes
Roughness height 0.800m
Adjustment for wind directional shear None

PLUME RISE OPTIONS
Gradual plume rise? Yes
Stack-tip downwash included? Yes
Building downwash algorithm: PRIME method.
Entrainment coeff. for neutral & stable lapse rates 0.60,0.60
Partial penetration of elevated inversions? No
Disregard temp. gradients in the hourly met. file? No

and in the absence of boundary-layer potential temperature gradients
given by the hourly met. file, a value from the following table
(in K/m) is used:

Wind Speed Category	Stability Class A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES
Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES
1 hour

40913 Macdonaldtown Fugitive Stockpile Emissions Sources Zone 3 Daytim

SOURCE CHARACTERISTICS

INTEGRATED AREA SOURCE: VFZ3AO

X0(m)	Y0(m)	Ground El	Length X	Length Y	Or. Angle	Ver. spread	Height
332338	6247710	18m	45m	25m	-15deg	4m	20m

(Constant) emission rate = 1.00E+00 OUV/second per square metre

Hourly multiplicative factors will be used with
this emission factor.
No gravitational settling or scavenging.

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1 ___

40913 Macdonaldtown Fugitive Stockpile Emissions Sources Zone 3 Daytim

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):
332119.m 332162.m 332202.m 332243.m 332285.m 332326.m 332370.m
332411.m 332452.m 332493.m 332533.m

and these y-values (or northings):
6247493.m 6247550.m 6247604.m 6247660.m 6247712.m 6247768.m 6247822.m
6247875.m 6247926.m 6247977.m 6248028.m

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEVN	HEIGHT	No.	X	Y	ELEVN	HEIGHT
1	332279	6247616	17.5	1.5	29	332421	6247672	17.5	1.5
2	332277	6247625	17.5	1.5	30	332442	6247701	17.5	1.5
3	332276	6247638	17.5	1.5	31	332421	6247680	17.5	1.5
4	332274	6247650	17.5	1.5	32	332454	6247709	17.5	1.5
5	332275	6247664	17.5	1.5	33	332420	6247687	17.5	1.5
6	332273	6247674	17.5	1.5	34	332467	6247717	17.5	1.5
7	332272	6247688	17.5	1.5	35	332420	6247695	17.5	1.5
8	332269	6247701	17.5	1.5	36	332479	6247727	17.5	1.5
9	332343	6247692	17.5	1.5	37	332419	6247703	17.5	1.5
10	332343	6247707	17.5	1.5	38	332495	6247735	17.5	1.5
11	332263	6247726	17.5	1.5	39	332419	6247710	17.5	1.5
12	332271	6247726	17.5	1.5	40	332509	6247743	17.5	1.5
13	332279	6247731	17.5	1.5	41	332330	6247537	17.5	1.5
14	332342	6247715	17.5	1.5	42	332338	6247541	17.5	1.5
15	332295	6247740	17.5	1.5	43	332344	6247544	17.5	1.5
16	332432	6247743	17.5	1.5	44	332351	6247547	17.5	1.5
17	332435	6247735	17.5	1.5	45	332359	6247551	17.5	1.5
18	332439	6247729	17.5	1.5	46	332366	6247554	17.5	1.5
19	332358	6247641	17.5	1.5	47	332382	6247560	17.5	1.5
20	332366	6247651	17.5	1.5	48	332390	6247565	17.5	1.5
21	332374	6247654	17.5	1.5	49	332399	6247570	17.5	1.5
22	332381	6247662	17.5	1.5	50	332408	6247574	17.5	1.5
23	332386	6247667	17.5	1.5	51	332417	6247579	17.5	1.5
24	332396	6247677	17.5	1.5	52	332426	6247584	17.5	1.5
25	332405	6247681	17.5	1.5	53	332435	6247588	17.5	1.5
26	332412	6247687	17.5	1.5	54	332424	6247578	17.5	1.5
27	332422	6247688	17.5	1.5	55	332423	6247585	17.5	1.5
28	332428	6247692	17.5	1.5	56	332462	6247601	17.5	1.5

METEOROLOGICAL DATA : DECCW Randwick AWS Data BoM SydneyAP Clouds SydneyAP

HOURLY VARIABLE EMISSION FACTOR INFORMATION

The input emission rates specfied above will be multiplied by hourly varying
factors entered via the input file:
C:\Users\sdorairaj\Ausplume\Odour Emmission Files PTM\Zone3DFu.csv
For each stack source, hourly values within this file will be added to each
declared exit velocity (m/sec) and temperature (K).

Title of input hourly emission factor file is:
Variable Emissions Zone 3 daytime,,

HOURLY EMISSION FACTOR SOURCE TYPE ALLOCATION

Prefix V allocated: VFZ3AO

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1 HIGHEST RECORDINGS FOR EACH RECEPTOR (in Odour_Units)
AVERAGING TIME = 1 HOUR

X (km):	332.119	332.162
Y (km)		
6248.028	8.82E-04 18,18/08/08	8.14E-04 18,18/08/08
6247.977	9.08E-04 07,09/09/07	1.01E-03 06,21/08/08
6247.926	1.02E-03 07,09/09/07	1.13E-03 07,09/09/07
6247.875	9.40E-04 07,08/09/07	1.19E-03 07,09/09/07
6247.822	1.23E-03 07,08/09/07	1.32E-03 07,08/09/07
6247.768	1.29E-03 17,19/05/08	1.39E-03 17,19/05/08
6247.712	1.30E-03 06,05/10/07	1.42E-03 06,05/10/07
6247.660	1.27E-03 06,02/11/08	1.40E-03 06,12/03/08
6247.604	1.10E-03 07,19/03/08	1.22E-03 06,19/03/07
6247.550	1.08E-03 06,19/03/07	1.21E-03 06,19/03/08
6247.493	9.65E-04 06,25/12/08	1.05E-03 07,25/05/08

X (km):	332.202	332.243
Y (km)		
6248.028	9.46E-04 08,16/05/08	9.96E-04 08,19/05/07
6247.977	1.02E-03 08,16/05/08	1.16E-03 08,16/05/08
6247.926	1.23E-03 06,21/08/08	1.28E-03 08,16/05/08
6247.875	1.36E-03 07,09/09/07	1.39E-03 06,21/08/08
6247.822	1.19E-03 07,08/09/07	1.31E-03 07,09/09/07
6247.768	1.31E-03 17,19/05/08	1.11E-03 09,02/08/07
6247.712	1.39E-03 07,09/06/08	1.10E-03 10,16/12/07
6247.660	1.41E-03 07,19/03/08	1.18E-03 10,03/06/08
6247.604	1.41E-03 06,19/03/07	1.40E-03 06,25/12/08
6247.550	1.28E-03 07,25/05/08	1.37E-03 06,10/11/08
6247.493	1.13E-03 06,10/11/08	1.21E-03 06,13/12/08

X (km):	332.285	332.326
Y (km)		
6248.028	8.94E-04 08,19/05/07	1.06E-03 08,30/06/08
6247.977	1.13E-03 08,19/05/07	1.22E-03 08,30/06/08
6247.926	1.35E-03 08,19/05/07	1.33E-03 08,30/06/08
6247.875	1.39E-03 08,16/05/08	1.36E-03 10,08/11/07
6247.822	1.14E-03 10,08/09/07	1.62E-03 10,08/11/07
6247.768	1.53E-03 07,11/11/08	1.30E-03 10,08/09/07
6247.712	1.17E-03 13,27/05/08	6.24E-04 11,29/03/08
6247.660	1.61E-03 10,03/06/08	1.57E-03 11,22/04/07
6247.604	1.31E-03 06,29/01/08	1.25E-03 10,06/05/08
6247.550	1.41E-03 07,11/02/08	1.41E-03 07,03/06/08
6247.493	1.26E-03 07,05/05/07	1.29E-03 07,17/02/07

X (km):	332.370	332.411
Y (km)		
6248.028	1.07E-03 06,22/03/07	1.02E-03 08,02/08/07
6247.977	1.25E-03 06,22/03/07	1.14E-03 08,02/08/07
6247.926	1.39E-03 06,22/03/07	1.23E-03 06,04/02/07
6247.875	1.33E-03 08,02/08/07	1.36E-03 06,04/02/07
6247.822	1.37E-03 11,27/12/07	1.24E-03 12,04/07/08
6247.768	1.03E-03 08,21/12/08	1.56E-03 14,24/05/08
6247.712	1.95E-04 10,03/03/08	1.43E-03 13,25/05/08
6247.660	1.58E-03 14,26/08/07	1.48E-03 08,15/03/08
6247.604	1.54E-03 10,06/05/08	1.47E-03 09,26/10/07

6247.550	1.40E-03 07,12/06/08	1.41E-03 07,01/07/08
6247.493	1.30E-03 07,12/06/08	1.28E-03 06,03/10/07

X (km):	332.452	332.493
Y (km)		
6248.028	9.63E-04 06,04/02/07	9.75E-04 08,20/07/08
6247.977	1.18E-03 06,04/02/07	1.10E-03 08,20/07/08
6247.926	1.35E-03 08,20/07/08	1.29E-03 06,25/10/07
6247.875	1.42E-03 06,25/10/07	1.40E-03 06,28/02/08
6247.822	1.24E-03 06,26/10/08	1.41E-03 06,22/04/07
6247.768	1.60E-03 09,02/06/08	1.39E-03 12,02/06/08
6247.712	1.63E-03 11,02/06/08	1.48E-03 11,02/06/08
6247.660	1.58E-03 08,02/11/07	1.37E-03 08,09/06/08
6247.604	1.37E-03 07,25/08/07	1.41E-03 06,11/10/07
6247.550	1.39E-03 07,25/06/07	1.33E-03 07,04/03/07
6247.493	1.23E-03 06,17/02/07	1.17E-03 06,19/02/07

X (km):	332.533
Y (km)	
6248.028	8.97E-04 06,25/10/07
6247.977	1.05E-03 06,25/10/07
6247.926	1.20E-03 06,28/02/08
6247.875	1.32E-03 06,25/11/07
6247.822	1.41E-03 06,12/11/08
6247.768	1.43E-03 07,14/04/07
6247.712	1.43E-03 06,11/11/07
6247.660	1.42E-03 07,01/06/07
6247.604	1.36E-03 06,13/03/08
6247.550	1.25E-03 07,19/05/07
6247.493	1.09E-03 07,04/03/07

At the discrete receptors:

1: 1.44E-03 @Hr10,03/06/08	29: 1.56E-03 @Hr08,02/11/07
2: 1.52E-03 @Hr10,03/06/08	30: 1.46E-03 @Hr13,25/05/08
3: 1.59E-03 @Hr10,03/06/08	31: 1.54E-03 @Hr08,03/03/07
4: 1.60E-03 @Hr10,03/06/08	32: 1.63E-03 @Hr11,02/06/08
5: 1.52E-03 @Hr10,03/06/08	33: 1.57E-03 @Hr08,10/09/07
6: 1.34E-03 @Hr10,03/06/08	34: 1.65E-03 @Hr11,02/06/08
7: 1.17E-03 @Hr15,05/05/07	35: 1.58E-03 @Hr09,01/07/08
8: 1.16E-03 @Hr08,23/04/08	36: 1.58E-03 @Hr09,13/07/08
9: 9.31E-04 @Hr09,15/02/07	37: 1.58E-03 @Hr09,11/10/07
10: 3.32E-04 @Hr15,05/05/07	38: 1.48E-03 @Hr09,13/07/08
11: 1.17E-03 @Hr13,27/05/08	39: 1.56E-03 @Hr13,25/05/08
12: 1.24E-03 @Hr13,27/05/08	40: 1.40E-03 @Hr07,15/02/07
13: 1.30E-03 @Hr13,27/05/08	41: 1.41E-03 @Hr08,25/06/07
14: 2.29E-04 @Hr11,29/03/08	42: 1.41E-03 @Hr07,17/02/07
15: 1.41E-03 @Hr09,02/08/07	43: 1.42E-03 @Hr06,16/01/07
16: 1.56E-03 @Hr08,27/12/07	44: 1.42E-03 @Hr06,28/01/07
17: 1.55E-03 @Hr07,02/01/08	45: 1.41E-03 @Hr06,28/01/07
18: 1.53E-03 @Hr14,25/05/08	46: 1.42E-03 @Hr07,12/06/08
19: 1.58E-03 @Hr10,06/05/08	47: 1.41E-03 @Hr17,19/07/08
20: 1.56E-03 @Hr14,26/08/07	48: 1.41E-03 @Hr15,14/06/07
21: 1.56E-03 @Hr07,21/01/07	49: 1.39E-03 @Hr07,01/07/08
22: 1.59E-03 @Hr12,18/06/08	50: 1.40E-03 @Hr06,17/03/08
23: 1.59E-03 @Hr15,03/06/07	51: 1.40E-03 @Hr06,17/02/07
24: 1.58E-03 @Hr08,26/10/08	52: 1.40E-03 @Hr07,02/08/07
25: 1.58E-03 @Hr07,26/12/08	53: 1.40E-03 @Hr06,18/03/08
26: 1.59E-03 @Hr08,03/03/07	54: 1.40E-03 @Hr07,02/08/07
27: 1.57E-03 @Hr09,01/07/08	55: 1.39E-03 @Hr07,02/08/07
28: 1.54E-03 @Hr09,01/07/08	56: 1.41E-03 @Hr07,12/03/08

Zone 4 Daytime Emissions

40913 Macdonaldtown Fugitive Emissions Stockpiles Zone 4

Concentration or deposition	Concentration
Emission rate units	OUV/second
Concentration units	Odour_Units
Units conversion factor	1.00E+00
Constant background concentration	0.00E+00
Terrain effects	Egan method
Smooth stability class changes?	No
Other stability class adjustments ("urban modes")	None
Ignore building wake effects?	No
Decay coefficient (unless overridden by met. file)	0.000
Anemometer height	10 m
Roughness height at the wind vane site	0.300 m

DISPERSION CURVES

Horizontal dispersion curves for sources <100m high	Pasquill-Gifford
Vertical dispersion curves for sources <100m high	Pasquill-Gifford
Horizontal dispersion curves for sources >100m high	Briggs Rural
Vertical dispersion curves for sources >100m high	Briggs Rural
Enhance horizontal plume spreads for buoyancy?	Yes
Enhance vertical plume spreads for buoyancy?	Yes
Adjust horizontal P-G formulae for roughness height?	Yes
Adjust vertical P-G formulae for roughness height?	Yes
Roughness height	0.800m
Adjustment for wind directional shear	None

PLUME RISE OPTIONS

Gradual plume rise?	Yes
Stack-tip downwash included?	Yes
Building downwash algorithm:	PRIME method.
Entrainment coeff. for neutral & stable lapse rates	0.60,0.60
Partial penetration of elevated inversions?	No
Disregard temp. gradients in the hourly met. file?	No

and in the absence of boundary-layer potential temperature gradients
given by the hourly met. file, a value from the following table
(in K/m) is used:

Wind Speed Category	Stability Class A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES
Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES
1 hour

1

40913 Macdonaldtown Fugitive Emissions Stockpiles Zone 4

SOURCE CHARACTERISTICS

INTEGRATED AREA SOURCE: VFZ4AO

X0(m)	Y0(m)	Ground El	Length X	Length Y	Or. Angle	Ver. spread	Height
332294	6247673	18m	45m	25m	-25deg	4m	20m

(Constant) emission rate = 1.00E+00 OUV/second per square metre

Hourly multiplicative factors will be used with
this emission factor.
No gravitational settling or scavenging.

1

40913 Macdonaldtown Fugitive Emissions Stockpiles Zone 4

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):
332119.m 332162.m 332202.m 332243.m 332285.m 332326.m 332370.m
332411.m 332452.m 332493.m 332533.m

and these y-values (or northings):
6247493.m 6247550.m 6247604.m 6247660.m 6247712.m 6247768.m 6247822.m
6247875.m 6247926.m 6247977.m 6248028.m

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEVN	HEIGHT	No.	X	Y	ELEVN	HEIGHT
1	332279	6247616	17.5	1.5	29	332421	6247672	17.5	1.5
2	332277	6247625	17.5	1.5	30	332442	6247701	17.5	1.5
3	332276	6247638	17.5	1.5	31	332421	6247680	17.5	1.5
4	332274	6247650	17.5	1.5	32	332454	6247709	17.5	1.5
5	332275	6247664	17.5	1.5	33	332420	6247687	17.5	1.5
6	332273	6247674	17.5	1.5	34	332467	6247717	17.5	1.5
7	332272	6247688	17.5	1.5	35	332420	6247695	17.5	1.5
8	332269	6247701	17.5	1.5	36	332479	6247727	17.5	1.5
9	332343	6247692	17.5	1.5	37	332419	6247703	17.5	1.5
10	332343	6247707	17.5	1.5	38	332495	6247735	17.5	1.5
11	332263	6247726	17.5	1.5	39	332419	6247710	17.5	1.5
12	332271	6247726	17.5	1.5	40	332509	6247743	17.5	1.5
13	332279	6247731	17.5	1.5	41	332330	6247537	17.5	1.5
14	332342	6247715	17.5	1.5	42	332338	6247541	17.5	1.5
15	332295	6247740	17.5	1.5	43	332344	6247544	17.5	1.5
16	332432	6247743	17.5	1.5	44	332351	6247547	17.5	1.5
17	332435	6247735	17.5	1.5	45	332359	6247551	17.5	1.5
18	332439	6247729	17.5	1.5	46	332366	6247554	17.5	1.5
19	332358	6247641	17.5	1.5	47	332382	6247560	17.5	1.5
20	332366	6247651	17.5	1.5	48	332390	6247565	17.5	1.5
21	332374	6247654	17.5	1.5	49	332399	6247570	17.5	1.5
22	332381	6247662	17.5	1.5	50	332408	6247574	17.5	1.5
23	332386	6247667	17.5	1.5	51	332417	6247579	17.5	1.5
24	332396	6247677	17.5	1.5	52	332426	6247584	17.5	1.5
25	332405	6247681	17.5	1.5	53	332435	6247588	17.5	1.5
26	332412	6247687	17.5	1.5	54	332424	6247578	17.5	1.5
27	332422	6247688	17.5	1.5	55	332423	6247585	17.5	1.5
28	332428	6247692	17.5	1.5	56	332462	6247601	17.5	1.5

METEOROLOGICAL DATA : DECCW Randwick AWS Data BoM SydneyAP Clouds SydneyAP

HOURLY VARIABLE EMISSION FACTOR INFORMATION

The input emission rates specfied above will be multiplied by hourly varying
factors entered via the input file:
C:\Users\sdorairaj\Ausplume\Odour Emmission Files PTM\Zone4DFu.csv
For each stack source, hourly values within this file will be added to each
declared exit velocity (m/sec) and temperature (K).

Title of input hourly emission factor file is:
Variable Emissions Zone 4 Day,,

HOURLY EMISSION FACTOR SOURCE TYPE ALLOCATION

Prefix V allocated: VFZ4AO

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1 HIGHEST RECORDINGS FOR EACH RECEPTOR (in Odour_Units)
AVERAGING TIME = 1 HOUR

X (km):	332.119	332.162
Y (km)		
6248.028	1.77E-03 08,16/05/08	1.92E-03 08,19/05/07
6247.977	1.93E-03 06,21/08/08	2.23E-03 08,16/05/08
6247.926	2.37E-03 06,21/08/08	2.37E-03 08,16/05/08
6247.875	2.67E-03 07,09/09/07	2.89E-03 06,21/08/08
6247.822	2.51E-03 07,09/09/07	3.10E-03 07,09/09/07
6247.768	3.09E-03 07,08/09/07	2.98E-03 07,08/09/07
6247.712	3.16E-03 06,26/01/07	2.99E-03 06,26/01/07
6247.660	3.16E-03 18,24/08/07	3.00E-03 18,24/08/07
6247.604	2.98E-03 07,19/03/08	2.84E-03 06,19/03/07
6247.550	2.87E-03 06,19/03/07	3.11E-03 06,25/12/08
6247.493	2.57E-03 06,25/12/08	2.80E-03 06,15/01/07

X (km):	332.202	332.243
Y (km)		
6248.028	1.95E-03 08,19/05/07	1.88E-03 08,30/06/08
6247.977	2.35E-03 08,19/05/07	2.09E-03 08,19/05/07
6247.926	2.71E-03 08,16/05/08	2.63E-03 08,19/05/07
6247.875	2.92E-03 08,16/05/08	3.09E-03 08,19/05/07
6247.822	3.11E-03 06,21/08/08	2.89E-03 08,16/05/08
6247.768	2.32E-03 07,09/09/07	2.96E-03 10,08/09/07
6247.712	2.60E-03 09,02/08/07	3.35E-03 09,02/08/07
6247.660	2.60E-03 08,23/04/08	2.80E-03 15,05/05/07
6247.604	3.08E-03 10,03/06/08	3.56E-03 10,03/06/08
6247.550	3.18E-03 06,15/01/07	3.09E-03 06,07/12/08
6247.493	2.95E-03 06,13/12/08	3.06E-03 06,23/01/07

X (km):	332.285	332.326
Y (km)		
6248.028	2.13E-03 08,30/06/08	2.13E-03 06,22/03/07
6247.977	2.50E-03 08,30/06/08	2.51E-03 06,22/03/07
6247.926	2.87E-03 08,30/06/08	2.90E-03 06,22/03/07
6247.875	3.06E-03 08,30/06/08	3.14E-03 08,02/08/07
6247.822	3.33E-03 10,08/11/07	2.62E-03 08,02/08/07
6247.768	3.36E-03 14,13/04/08	3.45E-03 11,27/12/07
6247.712	1.21E-03 10,26/09/07	8.07E-04 08,21/12/08
6247.660	2.05E-03 15,05/05/07	1.82E-03 10,03/03/08
6247.604	3.16E-03 09,30/06/08	3.37E-03 10,06/05/08
6247.550	2.93E-03 08,25/06/07	3.11E-03 10,06/05/08
6247.493	3.09E-03 07,17/02/07	3.08E-03 06,11/02/08

X (km):	332.370	332.411
Y (km)		
6248.028	2.02E-03 08,02/08/07	1.89E-03 06,04/02/07
6247.977	2.29E-03 08,02/08/07	2.33E-03 06,04/02/07
6247.926	2.48E-03 06,04/02/07	2.76E-03 06,04/02/07
6247.875	3.02E-03 06,04/02/07	2.98E-03 08,20/07/08
6247.822	2.90E-03 08,20/07/08	3.14E-03 08,16/08/07
6247.768	3.09E-03 09,19/02/08	3.35E-03 09,02/06/08
6247.712	3.38E-03 11,07/05/07	3.67E-03 12,02/06/08
6247.660	3.50E-03 09,01/07/08	3.27E-03 11,02/06/08
6247.604	3.48E-03 09,26/10/07	3.29E-03 08,02/11/07

6247.550	3.03E-03 06,17/02/07	3.13E-03 06,26/02/08
6247.493	3.04E-03 07,01/07/08	2.94E-03 07,02/08/07

X (km):	332.452	332.493
Y (km)		
6248.028	1.95E-03 06,04/02/07	1.79E-03 08,20/07/08
6247.977	2.25E-03 08,20/07/08	2.11E-03 06,25/10/07
6247.926	2.58E-03 06,25/10/07	2.42E-03 08,16/08/07
6247.875	2.94E-03 08,16/08/07	2.72E-03 06,26/10/08
6247.822	3.07E-03 06,25/11/07	2.97E-03 06,22/04/07
6247.768	3.14E-03 06,12/11/08	3.15E-03 07,01/05/08
6247.712	3.18E-03 12,02/06/08	3.17E-03 07,15/02/07
6247.660	3.03E-03 11,02/06/08	3.16E-03 07,16/08/07
6247.604	3.12E-03 06,11/01/07	3.09E-03 06,26/06/07
6247.550	3.08E-03 07,19/05/07	2.90E-03 07,13/02/07
6247.493	2.79E-03 06,26/02/08	2.59E-03 06,27/01/08

X (km):	332.533
Y (km)	
6248.028	1.73E-03 06,25/10/07
6247.977	1.97E-03 08,16/08/07
6247.926	2.23E-03 06,26/10/08
6247.875	2.49E-03 06,25/11/07
6247.822	2.73E-03 06,11/09/08
6247.768	2.91E-03 08,07/07/08
6247.712	2.98E-03 08,08/08/07
6247.660	2.97E-03 07,23/03/08
6247.604	2.85E-03 06,13/09/07
6247.550	2.64E-03 07,18/08/07
6247.493	2.37E-03 06,11/10/07

At the discrete receptors:

1: 3.38E-03 @Hr11,22/04/07	29: 3.57E-03 @Hr11,02/06/08
2: 3.48E-03 @Hr11,22/04/07	30: 3.37E-03 @Hr09,13/07/08
3: 3.48E-03 @Hr10,04/04/07	31: 3.64E-03 @Hr11,02/06/08
4: 3.22E-03 @Hr15,05/05/07	32: 3.14E-03 @Hr12,02/06/08
5: 2.37E-03 @Hr15,05/05/07	33: 3.62E-03 @Hr11,02/06/08
6: 1.82E-03 @Hr11,29/03/08	34: 3.15E-03 @Hr07,15/02/07
7: 1.57E-03 @Hr11,29/03/08	35: 3.65E-03 @Hr09,13/07/08
8: 2.11E-03 @Hr10,26/09/07	36: 3.20E-03 @Hr06,14/03/08
9: 1.70E-03 @Hr10,20/03/07	37: 3.65E-03 @Hr09,13/07/08
10: 1.83E-03 @Hr11,05/04/08	38: 3.17E-03 @Hr07,14/04/07
11: 3.23E-03 @Hr07,11/11/08	39: 3.66E-03 @Hr12,02/06/08
12: 2.87E-03 @Hr07,25/12/08	40: 3.12E-03 @Hr07,14/04/07
13: 2.77E-03 @Hr10,08/09/07	41: 3.10E-03 @Hr08,03/05/07
14: 1.93E-03 @Hr12,15/07/08	42: 3.07E-03 @Hr06,03/03/07
15: 2.73E-03 @Hr14,13/04/08	43: 3.06E-03 @Hr06,03/10/07
16: 3.26E-03 @Hr09,02/06/08	44: 3.04E-03 @Hr07,01/07/08
17: 3.19E-03 @Hr12,02/06/08	45: 3.03E-03 @Hr06,17/03/08
18: 3.27E-03 @Hr12,02/06/08	46: 3.03E-03 @Hr06,17/02/07
19: 3.51E-03 @Hr08,15/03/08	47: 3.04E-03 @Hr07,25/06/07
20: 3.53E-03 @Hr08,03/03/07	48: 3.04E-03 @Hr06,27/12/07
21: 3.48E-03 @Hr09,01/07/08	49: 3.05E-03 @Hr06,26/02/08
22: 3.45E-03 @Hr09,11/10/07	50: 3.07E-03 @Hr07,12/03/08
23: 3.40E-03 @Hr09,11/10/07	51: 3.09E-03 @Hr08,29/05/07
24: 3.50E-03 @Hr11,02/06/08	52: 3.11E-03 @Hr07,13/07/08
25: 3.66E-03 @Hr11,02/06/08	53: 3.14E-03 @Hr06,03/06/08
26: 3.67E-03 @Hr11,02/06/08	54: 3.13E-03 @Hr07,19/05/07
27: 3.60E-03 @Hr11,02/06/08	55: 3.10E-03 @Hr07,13/07/08
28: 3.55E-03 @Hr09,13/07/08	56: 3.17E-03 @Hr06,11/01/07

Zone 5 Daytime Emissions

40913 Macdonaldtown Fugitive Emissions Stockpiles Zone 5 Day

Concentration or deposition	Concentration
Emission rate units	OUV/second
Concentration units	Odour_Units
Units conversion factor	1.00E+00
Constant background concentration	0.00E+00
Terrain effects	Egan method
Smooth stability class changes?	No
Other stability class adjustments ("urban modes")	None
Ignore building wake effects?	No
Decay coefficient (unless overridden by met. file)	0.000
Anemometer height	10 m
Roughness height at the wind vane site	0.300 m

DISPERSION CURVES

Horizontal dispersion curves for sources <100m high	Pasquill-Gifford
Vertical dispersion curves for sources <100m high	Pasquill-Gifford
Horizontal dispersion curves for sources >100m high	Briggs Rural
Vertical dispersion curves for sources >100m high	Briggs Rural
Enhance horizontal plume spreads for buoyancy?	Yes
Enhance vertical plume spreads for buoyancy?	Yes
Adjust horizontal P-G formulae for roughness height?	Yes
Adjust vertical P-G formulae for roughness height?	Yes
Roughness height	0.800m
Adjustment for wind directional shear	None

PLUME RISE OPTIONS

Gradual plume rise?	Yes
Stack-tip downwash included?	Yes
Building downwash algorithm:	PRIME method.
Entrainment coeff. for neutral & stable lapse rates	0.60,0.60
Partial penetration of elevated inversions?	No
Disregard temp. gradients in the hourly met. file?	No

and in the absence of boundary-layer potential temperature gradients
given by the hourly met. file, a value from the following table
(in K/m) is used:

Wind Speed Category	Stability Class A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES
Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES
1 hour

40913 Macdonaldtown Fugitive Emissions Stockpiles Zone 5 Day

SOURCE CHARACTERISTICS

INTEGRATED AREA SOURCE: VFZ5AO

X0(m)	Y0(m)	Ground El	Length X	Length Y	Or. Angle	Ver. spread	Height
332294	6247673	18m	45m	25m	-25deg	4m	20m

(Constant) emission rate = 1.00E+00 OUV/second per square metre

Hourly multiplicative factors will be used with
this emission factor.
No gravitational settling or scavenging.

1

40913 Macdonaldtown Fugitive Emissions Stockpiles Zone 5 Day

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):
332119.m 332162.m 332202.m 332243.m 332285.m 332326.m 332370.m
332411.m 332452.m 332493.m 332533.m

and these y-values (or northings):
6247493.m 6247550.m 6247604.m 6247660.m 6247712.m 6247768.m 6247822.m
6247875.m 6247926.m 6247977.m 6248028.m

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEVN	HEIGHT	No.	X	Y	ELEVN	HEIGHT
1	332279	6247616	17.5	1.5	29	332421	6247672	17.5	1.5
2	332277	6247625	17.5	1.5	30	332442	6247701	17.5	1.5
3	332276	6247638	17.5	1.5	31	332421	6247680	17.5	1.5
4	332274	6247650	17.5	1.5	32	332454	6247709	17.5	1.5
5	332275	6247664	17.5	1.5	33	332420	6247687	17.5	1.5
6	332273	6247674	17.5	1.5	34	332467	6247717	17.5	1.5
7	332272	6247688	17.5	1.5	35	332420	6247695	17.5	1.5
8	332269	6247701	17.5	1.5	36	332479	6247727	17.5	1.5
9	332343	6247692	17.5	1.5	37	332419	6247703	17.5	1.5
10	332343	6247707	17.5	1.5	38	332495	6247735	17.5	1.5
11	332263	6247726	17.5	1.5	39	332419	6247710	17.5	1.5
12	332271	6247726	17.5	1.5	40	332509	6247743	17.5	1.5
13	332279	6247731	17.5	1.5	41	332330	6247537	17.5	1.5
14	332342	6247715	17.5	1.5	42	332338	6247541	17.5	1.5
15	332295	6247740	17.5	1.5	43	332344	6247544	17.5	1.5
16	332432	6247743	17.5	1.5	44	332351	6247547	17.5	1.5
17	332435	6247735	17.5	1.5	45	332359	6247551	17.5	1.5
18	332439	6247729	17.5	1.5	46	332366	6247554	17.5	1.5
19	332358	6247641	17.5	1.5	47	332382	6247560	17.5	1.5
20	332366	6247651	17.5	1.5	48	332390	6247565	17.5	1.5
21	332374	6247654	17.5	1.5	49	332399	6247570	17.5	1.5
22	332381	6247662	17.5	1.5	50	332408	6247574	17.5	1.5
23	332386	6247667	17.5	1.5	51	332417	6247579	17.5	1.5
24	332396	6247677	17.5	1.5	52	332426	6247584	17.5	1.5
25	332405	6247681	17.5	1.5	53	332435	6247588	17.5	1.5
26	332412	6247687	17.5	1.5	54	332424	6247578	17.5	1.5
27	332422	6247688	17.5	1.5	55	332423	6247585	17.5	1.5
28	332428	6247692	17.5	1.5	56	332462	6247601	17.5	1.5

METEOROLOGICAL DATA : DECCW Randwick AWS Data BoM SydneyAP Clouds SydneyAP

HOURLY VARIABLE EMISSION FACTOR INFORMATION

The input emission rates specfied above will be multiplied by hourly varying
factors entered via the input file:
C:\Users\sdorairaj\Ausplume\Odour Emmission Files PTM\Zone5DFu.csv
For each stack source, hourly values within this file will be added to each
declared exit velocity (m/sec) and temperature (K).

Title of input hourly emission factor file is:
Variable,Emissions Zone 5 Day,

HOURLY EMISSION FACTOR SOURCE TYPE ALLOCATION

Prefix V allocated: VFZ5AO

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1 HIGHEST RECORDINGS FOR EACH RECEPTOR (in Odour_Units)
AVERAGING TIME = 1 HOUR

X (km):	332.119	332.162
Y (km)		
6248.028	9.98E-04 08,16/05/08	1.11E-03 18,01/06/07
6247.977	1.09E-03 06,21/08/08	1.25E-03 08,16/05/08
6247.926	1.34E-03 06,21/08/08	1.34E-03 08,16/05/08
6247.875	1.50E-03 07,09/09/07	1.63E-03 06,21/08/08
6247.822	1.41E-03 07,09/09/07	1.74E-03 07,09/09/07
6247.768	1.74E-03 07,08/09/07	1.68E-03 07,08/09/07
6247.712	1.78E-03 06,26/01/07	1.68E-03 06,26/01/07
6247.660	1.78E-03 18,24/08/07	1.69E-03 18,24/08/07
6247.604	1.68E-03 07,19/03/08	1.60E-03 06,19/03/07
6247.550	1.62E-03 06,19/03/07	1.75E-03 06,25/12/08
6247.493	1.45E-03 06,25/12/08	1.57E-03 06,15/01/07

X (km):	332.202	332.243
Y (km)		
6248.028	1.10E-03 08,19/05/07	1.06E-03 08,30/06/08
6247.977	1.32E-03 08,19/05/07	1.18E-03 08,19/05/07
6247.926	1.53E-03 08,16/05/08	1.48E-03 08,19/05/07
6247.875	1.64E-03 08,16/05/08	1.74E-03 08,19/05/07
6247.822	1.75E-03 06,21/08/08	1.63E-03 08,16/05/08
6247.768	1.31E-03 07,09/09/07	1.67E-03 10,08/09/07
6247.712	1.46E-03 09,02/08/07	1.88E-03 09,02/08/07
6247.660	1.46E-03 08,23/04/08	1.57E-03 15,05/05/07
6247.604	1.73E-03 10,03/06/08	2.01E-03 10,03/06/08
6247.550	1.79E-03 06,15/01/07	1.74E-03 06,07/12/08
6247.493	1.66E-03 06,13/12/08	1.72E-03 06,23/01/07

X (km):	332.285	332.326
Y (km)		
6248.028	1.20E-03 08,30/06/08	1.20E-03 06,22/03/07
6247.977	1.40E-03 08,30/06/08	1.41E-03 06,22/03/07
6247.926	1.62E-03 08,30/06/08	1.63E-03 06,22/03/07
6247.875	1.72E-03 08,30/06/08	1.77E-03 08,02/08/07
6247.822	1.87E-03 10,08/11/07	1.47E-03 08,02/08/07
6247.768	1.89E-03 14,13/04/08	1.94E-03 11,27/12/07
6247.712	6.78E-04 10,26/09/07	4.54E-04 08,21/12/08
6247.660	1.15E-03 15,05/05/07	1.02E-03 10,03/03/08
6247.604	1.78E-03 09,30/06/08	1.90E-03 10,06/05/08
6247.550	1.65E-03 08,25/06/07	1.75E-03 10,06/05/08
6247.493	1.74E-03 07,17/02/07	1.73E-03 06,11/02/08

X (km):	332.370	332.411
Y (km)		
6248.028	1.14E-03 08,02/08/07	1.06E-03 06,04/02/07
6247.977	1.29E-03 08,02/08/07	1.31E-03 06,04/02/07
6247.926	1.40E-03 06,04/02/07	1.55E-03 06,04/02/07
6247.875	1.70E-03 06,04/02/07	1.68E-03 08,20/07/08
6247.822	1.63E-03 08,20/07/08	1.77E-03 08,16/08/07
6247.768	1.74E-03 09,19/02/08	1.88E-03 09,02/06/08
6247.712	1.90E-03 11,07/05/07	2.06E-03 12,02/06/08
6247.660	1.97E-03 09,01/07/08	1.84E-03 11,02/06/08
6247.604	1.96E-03 09,26/10/07	1.85E-03 08,02/11/07

6247.550	1.71E-03 06,17/02/07	1.76E-03 06,26/02/08
6247.493	1.71E-03 07,01/07/08	1.66E-03 07,02/08/07

X (km):	332.452	332.493
Y (km)		
6248.028	1.10E-03 06,04/02/07	1.01E-03 08,20/07/08
6247.977	1.26E-03 08,20/07/08	1.19E-03 06,25/10/07
6247.926	1.45E-03 06,25/10/07	1.36E-03 08,16/08/07
6247.875	1.66E-03 08,16/08/07	1.53E-03 06,26/10/08
6247.822	1.73E-03 06,25/11/07	1.67E-03 06,22/04/07
6247.768	1.76E-03 06,12/11/08	1.77E-03 07,01/05/08
6247.712	1.79E-03 12,02/06/08	1.78E-03 07,15/02/07
6247.660	1.71E-03 11,02/06/08	1.78E-03 07,16/08/07
6247.604	1.76E-03 06,11/01/07	1.74E-03 06,26/06/07
6247.550	1.73E-03 07,19/05/07	1.63E-03 07,13/02/07
6247.493	1.57E-03 06,26/02/08	1.46E-03 06,27/01/08

X (km):	332.533
Y (km)	
6248.028	9.76E-04 06,25/10/07
6247.977	1.11E-03 08,16/08/07
6247.926	1.25E-03 06,26/10/08
6247.875	1.40E-03 06,25/11/07
6247.822	1.53E-03 06,11/09/08
6247.768	1.64E-03 08,07/07/08
6247.712	1.67E-03 08,08/08/07
6247.660	1.67E-03 07,23/03/08
6247.604	1.60E-03 06,13/09/07
6247.550	1.49E-03 07,18/08/07
6247.493	1.33E-03 06,11/10/07

At the discrete receptors:

1: 1.90E-03 @Hr11,22/04/07	29: 2.01E-03 @Hr11,02/06/08
2: 1.96E-03 @Hr11,22/04/07	30: 1.90E-03 @Hr09,13/07/08
3: 1.96E-03 @Hr10,04/04/07	31: 2.05E-03 @Hr11,02/06/08
4: 1.81E-03 @Hr15,05/05/07	32: 1.76E-03 @Hr12,02/06/08
5: 1.34E-03 @Hr15,05/05/07	33: 2.04E-03 @Hr11,02/06/08
6: 1.03E-03 @Hr11,29/03/08	34: 1.77E-03 @Hr07,15/02/07
7: 8.81E-04 @Hr11,29/03/08	35: 2.05E-03 @Hr09,13/07/08
8: 1.19E-03 @Hr10,26/09/07	36: 1.80E-03 @Hr06,14/03/08
9: 9.56E-04 @Hr10,20/03/07	37: 2.05E-03 @Hr09,13/07/08
10: 1.03E-03 @Hr11,05/04/08	38: 1.79E-03 @Hr07,14/04/07
11: 1.82E-03 @Hr07,11/11/08	39: 2.06E-03 @Hr12,02/06/08
12: 1.61E-03 @Hr07,25/12/08	40: 1.76E-03 @Hr07,14/04/07
13: 1.56E-03 @Hr10,08/09/07	41: 1.74E-03 @Hr08,03/05/07
14: 1.09E-03 @Hr12,15/07/08	42: 1.73E-03 @Hr06,03/03/07
15: 1.53E-03 @Hr14,13/04/08	43: 1.72E-03 @Hr06,03/10/07
16: 1.84E-03 @Hr09,02/06/08	44: 1.71E-03 @Hr07,01/07/08
17: 1.79E-03 @Hr12,02/06/08	45: 1.70E-03 @Hr06,17/03/08
18: 1.84E-03 @Hr12,02/06/08	46: 1.70E-03 @Hr06,17/02/07
19: 1.98E-03 @Hr08,15/03/08	47: 1.71E-03 @Hr07,25/06/07
20: 1.98E-03 @Hr08,03/03/07	48: 1.71E-03 @Hr06,27/12/07
21: 1.96E-03 @Hr09,01/07/08	49: 1.72E-03 @Hr06,26/02/08
22: 1.94E-03 @Hr09,11/10/07	50: 1.73E-03 @Hr07,12/03/08
23: 1.91E-03 @Hr09,11/10/07	51: 1.74E-03 @Hr08,29/05/07
24: 1.97E-03 @Hr11,02/06/08	52: 1.75E-03 @Hr07,13/07/08
25: 2.06E-03 @Hr11,02/06/08	53: 1.76E-03 @Hr06,03/06/08
26: 2.06E-03 @Hr11,02/06/08	54: 1.76E-03 @Hr07,19/05/07
27: 2.03E-03 @Hr11,02/06/08	55: 1.74E-03 @Hr07,13/07/08
28: 2.00E-03 @Hr09,13/07/08	56: 1.78E-03 @Hr06,11/01/07

Zone 1 Nighttime Emissions

40913 Macdonaldtown Fugitive Stockpile Emissions Zone 1 Night

Concentration or deposition Concentration
Emission rate units OUV/second
Concentration units Odour_Units
Units conversion factor 1.00E+00
Constant background concentration 0.00E+00
Terrain effects Egan method
Smooth stability class changes? No
Other stability class adjustments ("urban modes") None
Ignore building wake effects? No
Decay coefficient (unless overridden by met. file) 0.000
Anemometer height 10 m
Roughness height at the wind vane site 0.300 m

DISPERSION CURVES
Horizontal dispersion curves for sources <100m high Pasquill-Gifford
Vertical dispersion curves for sources <100m high Pasquill-Gifford
Horizontal dispersion curves for sources >100m high Briggs Rural
Vertical dispersion curves for sources >100m high Briggs Rural
Enhance horizontal plume spreads for buoyancy? Yes
Enhance vertical plume spreads for buoyancy? Yes
Adjust horizontal P-G formulae for roughness height? Yes
Adjust vertical P-G formulae for roughness height? Yes
Roughness height 0.800m
Adjustment for wind directional shear None

PLUME RISE OPTIONS
Gradual plume rise? Yes
Stack-tip downwash included? Yes
Building downwash algorithm: PRIME method.
Entrainment coeff. for neutral & stable lapse rates 0.60,0.60
Partial penetration of elevated inversions? No
Disregard temp. gradients in the hourly met. file? No

and in the absence of boundary-layer potential temperature gradients
given by the hourly met. file, a value from the following table
(in K/m) is used:

Wind Speed Category	Stability Class A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES
Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES
1 hour

40913 Macdonaldtown Fugitive Stockpile Emissions Zone 1 Night

SOURCE CHARACTERISTICS

INTEGRATED AREA SOURCE: VFZ1AO

X0(m)	Y0(m)	Ground El	Length X	Length Y	Or. Angle	Ver. spread	Height
332359	6247736	18m	32m	25m	-15deg	4m	20m

(Constant) emission rate = 1.00E+00 OUV/second per square metre

Hourly multiplicative factors will be used with
this emission factor.
No gravitational settling or scavenging.

1

40913 Macdonaldtown Fugitive Stockpile Emissions Zone 1 Night

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):
332119.m 332162.m 332202.m 332243.m 332285.m 332326.m 332370.m
332411.m 332452.m 332493.m 332533.m

and these y-values (or northings):
6247493.m 6247550.m 6247604.m 6247660.m 6247712.m 6247768.m 6247822.m
6247875.m 6247926.m 6247977.m 6248028.m

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEVN	HEIGHT	No.	X	Y	ELEVN	HEIGHT
1	332279	6247616	17.5	1.5	29	332421	6247672	17.5	1.5
2	332277	6247625	17.5	1.5	30	332442	6247701	17.5	1.5
3	332276	6247638	17.5	1.5	31	332421	6247680	17.5	1.5
4	332274	6247650	17.5	1.5	32	332454	6247709	17.5	1.5
5	332275	6247664	17.5	1.5	33	332420	6247687	17.5	1.5
6	332273	6247674	17.5	1.5	34	332467	6247717	17.5	1.5
7	332272	6247688	17.5	1.5	35	332420	6247695	17.5	1.5
8	332269	6247701	17.5	1.5	36	332479	6247727	17.5	1.5
9	332343	6247692	17.5	1.5	37	332419	6247703	17.5	1.5
10	332343	6247707	17.5	1.5	38	332495	6247735	17.5	1.5
11	332263	6247726	17.5	1.5	39	332419	6247710	17.5	1.5
12	332271	6247726	17.5	1.5	40	332509	6247743	17.5	1.5
13	332279	6247731	17.5	1.5	41	332330	6247537	17.5	1.5
14	332342	6247715	17.5	1.5	42	332338	6247541	17.5	1.5
15	332295	6247740	17.5	1.5	43	332344	6247544	17.5	1.5
16	332432	6247743	17.5	1.5	44	332351	6247547	17.5	1.5
17	332435	6247735	17.5	1.5	45	332359	6247551	17.5	1.5
18	332439	6247729	17.5	1.5	46	332366	6247554	17.5	1.5
19	332358	6247641	17.5	1.5	47	332382	6247560	17.5	1.5
20	332366	6247651	17.5	1.5	48	332390	6247565	17.5	1.5
21	332374	6247654	17.5	1.5	49	332399	6247570	17.5	1.5
22	332381	6247662	17.5	1.5	50	332408	6247574	17.5	1.5
23	332386	6247667	17.5	1.5	51	332417	6247579	17.5	1.5
24	332396	6247677	17.5	1.5	52	332426	6247584	17.5	1.5
25	332405	6247681	17.5	1.5	53	332435	6247588	17.5	1.5
26	332412	6247687	17.5	1.5	54	332424	6247578	17.5	1.5
27	332422	6247688	17.5	1.5	55	332423	6247585	17.5	1.5
28	332428	6247692	17.5	1.5	56	332462	6247601	17.5	1.5

METEOROLOGICAL DATA : DECCW Randwick AWS Data BoM SydneyAP Clouds SydneyAP

HOURLY VARIABLE EMISSION FACTOR INFORMATION

The input emission rates specfied above will be multiplied by hourly varying
factors entered via the input file:
C:\Users\sdorairaj\Ausplume\Odour Emmission Files PTM\Zone1NFu.csv
For each stack source, hourly values within this file will be added to each
declared exit velocity (m/sec) and temperature (K).

Title of input hourly emission factor file is:
Variable Emissions Zone 1 night,,

HOURLY EMISSION FACTOR SOURCE TYPE ALLOCATION

Prefix V allocated: VFZ1AO

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1 HIGHEST RECORDINGS FOR EACH RECEPTOR (in Odour_Units)
AVERAGING TIME = 1 HOUR

X (km):	332.119	332.162
Y (km)		
6248.028	4.12E-04 05,18/04/08	3.90E-04 20,22/10/07
6247.977	4.25E-04 05,06/02/07	4.61E-04 05,11/10/07
6247.926	4.52E-04 23,02/06/08	5.20E-04 05,06/02/07
6247.875	4.96E-04 23,02/06/08	5.73E-04 23,02/06/08
6247.822	5.22E-04 05,26/01/07	5.43E-04 05,26/01/07
6247.768	5.24E-04 05,29/01/08	5.74E-04 05,29/01/08
6247.712	5.53E-04 02,24/03/08	6.16E-04 02,24/03/08
6247.660	5.31E-04 05,25/12/08	5.87E-04 05,25/12/08
6247.604	4.93E-04 02,04/02/08	5.49E-04 05,01/01/08
6247.550	4.44E-04 05,01/01/08	4.94E-04 24,25/10/07
6247.493	4.05E-04 04,15/01/07	4.29E-04 05,15/01/07

X (km):	332.202	332.243
Y (km)		
6248.028	4.43E-04 05,29/11/08	4.50E-04 05,29/11/08
6247.977	4.62E-04 05,29/11/08	5.46E-04 05,29/11/08
6247.926	5.69E-04 05,11/10/07	5.64E-04 05,29/11/08
6247.875	5.78E-04 23,02/06/08	6.40E-04 05,11/10/07
6247.822	5.72E-04 23,02/06/08	6.01E-04 23,02/06/08
6247.768	6.01E-04 05,26/01/07	5.25E-04 05,26/01/07
6247.712	6.28E-04 02,24/03/08	5.52E-04 05,25/12/08
6247.660	6.30E-04 02,04/02/08	6.27E-04 05,01/01/08
6247.604	6.01E-04 05,26/10/07	6.34E-04 05,23/01/07
6247.550	5.38E-04 05,23/01/07	5.75E-04 05,18/11/07
6247.493	4.65E-04 05,18/11/07	4.95E-04 05,11/01/07

X (km):	332.285	332.326
Y (km)		
6248.028	3.58E-04 05,29/11/08	2.82E-04 21,21/03/07
6247.977	4.89E-04 05,29/11/08	3.25E-04 05,04/01/07
6247.926	6.18E-04 05,29/11/08	3.95E-04 05,29/11/08
6247.875	5.81E-04 05,29/11/08	4.51E-04 05,29/11/08
6247.822	4.20E-04 05,06/02/07	1.84E-04 05,29/11/08
6247.768	2.32E-04 05,26/01/07	8.15E-06 05,26/01/07
6247.712	2.91E-04 05,25/12/08	4.22E-05 05,26/10/07
6247.660	5.23E-04 05,23/01/07	3.61E-04 05,11/01/07
6247.604	6.34E-04 05,11/01/07	6.21E-04 03,20/07/08
6247.550	6.02E-04 02,31/08/08	6.22E-04 05,27/01/08
6247.493	5.23E-04 03,20/07/08	5.29E-04 05,27/01/08

X (km):	332.370	332.411
Y (km)		
6248.028	4.19E-04 05,02/11/07	5.11E-04 05,02/11/07
6247.977	4.84E-04 05,02/11/07	5.95E-04 05,02/11/07
6247.926	5.15E-04 05,02/11/07	6.39E-04 24,02/06/08
6247.875	4.03E-04 05,02/11/07	5.29E-04 23,15/11/08
6247.822	6.76E-05 05,02/11/07	1.66E-04 01,05/03/07
6247.768	4.44E-11 23,15/11/08	4.08E-06 05,30/11/07
6247.712	1.56E-06 05,18/11/08	2.51E-05 05,11/11/08
6247.660	2.69E-04 05,18/11/08	3.41E-04 05,19/11/08
6247.604	6.04E-04 05,18/11/08	6.17E-04 04,08/11/08

6247.550	6.24E-04 05,18/11/08	6.02E-04 02,05/03/07
6247.493	5.42E-04 05,18/11/08	5.37E-04 02,05/03/07

X (km):	332.452	332.493
Y (km)		
6248.028	4.82E-04 24,02/06/08	4.71E-04 23,15/11/08
6247.977	5.77E-04 23,15/11/08	5.45E-04 01,05/03/07
6247.926	6.18E-04 23,15/11/08	6.13E-04 05,24/10/07
6247.875	6.06E-04 05,24/10/07	5.40E-04 05,28/12/07
6247.822	3.80E-04 05,28/12/07	5.87E-04 05,18/12/08
6247.768	1.86E-04 05,12/11/08	5.07E-04 20,20/01/08
6247.712	2.54E-04 05,25/11/07	5.37E-04 04,30/10/08
6247.660	5.00E-04 05,26/01/08	6.17E-04 05,12/11/07
6247.604	6.34E-04 05,03/06/08	6.35E-04 05,26/01/08
6247.550	6.09E-04 05,19/11/08	5.81E-04 05,03/06/08
6247.493	5.24E-04 04,08/11/08	4.92E-04 05,19/11/08

X (km):	332.533
Y (km)	
6248.028	4.51E-04 01,05/03/07
6247.977	5.10E-04 05,24/10/07
6247.926	4.77E-04 05,24/10/07
6247.875	6.27E-04 05,28/12/07
6247.822	6.42E-04 05,30/11/07
6247.768	6.35E-04 20,20/01/08
6247.712	6.37E-04 19,17/02/08
6247.660	6.39E-04 05,22/12/08
6247.604	6.07E-04 05,11/11/08
6247.550	5.46E-04 05,26/01/08
6247.493	4.68E-04 05,03/06/08

At the discrete receptors:

1: 6.42E-04 @Hr05,18/11/07	29: 3.11E-04 @Hr05,03/06/08
2: 6.36E-04 @Hr05,31/10/08	30: 2.50E-04 @Hr05,09/10/07
3: 6.20E-04 @Hr05,23/01/07	31: 2.54E-04 @Hr05,07/12/08
4: 5.95E-04 @Hr05,23/01/07	32: 3.08E-04 @Hr01,24/03/08
5: 5.65E-04 @Hr24,25/10/07	33: 1.98E-04 @Hr05,19/10/08
6: 5.37E-04 @Hr05,01/01/08	34: 3.80E-04 @Hr22,27/04/07
7: 4.99E-04 @Hr02,04/02/08	35: 1.46E-04 @Hr05,26/01/08
8: 4.59E-04 @Hr02,04/02/08	36: 4.47E-04 @Hr21,27/04/07
9: 8.23E-05 @Hr05,11/01/07	37: 1.00E-04 @Hr05,25/01/08
10: 2.60E-05 @Hr05,18/11/07	38: 5.36E-04 @Hr24,03/02/08
11: 4.44E-04 @Hr02,24/03/08	39: 6.69E-05 @Hr01,31/08/08
12: 3.74E-04 @Hr02,24/03/08	40: 5.93E-04 @Hr01,10/11/07
13: 3.17E-04 @Hr02,24/03/08	41: 6.02E-04 @Hr05,27/01/08
14: 1.27E-05 @Hr05,23/01/07	42: 5.96E-04 @Hr05,27/01/08
15: 1.69E-04 @Hr02,24/03/08	43: 5.87E-04 @Hr05,18/11/08
16: 5.86E-05 @Hr24,03/02/08	44: 6.10E-04 @Hr05,18/11/08
17: 8.55E-05 @Hr19,17/02/08	45: 6.27E-04 @Hr05,18/11/08
18: 1.19E-04 @Hr04,30/10/08	46: 6.33E-04 @Hr05,18/11/08
19: 4.39E-04 @Hr05,18/11/08	47: 6.20E-04 @Hr02,05/03/07
20: 3.76E-04 @Hr05,18/11/08	48: 6.38E-04 @Hr02,05/03/07
21: 3.43E-04 @Hr05,18/11/08	49: 6.39E-04 @Hr02,05/03/07
22: 2.78E-04 @Hr02,05/03/07	50: 6.20E-04 @Hr04,08/11/08
23: 2.42E-04 @Hr02,05/03/07	51: 6.42E-04 @Hr04,08/11/08
24: 1.76E-04 @Hr05,03/12/07	52: 6.43E-04 @Hr05,03/12/07
25: 1.73E-04 @Hr05,19/11/08	53: 6.43E-04 @Hr05,19/11/08
26: 1.61E-04 @Hr05,03/06/08	54: 6.42E-04 @Hr04,08/11/08
27: 1.99E-04 @Hr05,26/01/08	55: 6.42E-04 @Hr04,08/11/08
28: 2.08E-04 @Hr05,25/01/08	56: 6.43E-04 @Hr05,03/06/08

Zone 2 Nighttime Emissions

40913 Macdonaldtown Fugitive Stockpile Emissions Zone 2 Night

Concentration or deposition	Concentration
Emission rate units	OUV/second
Concentration units	Odour_Units
Units conversion factor	1.00E+00
Constant background concentration	0.00E+00
Terrain effects	Egan method
Smooth stability class changes?	No
Other stability class adjustments ("urban modes")	None
Ignore building wake effects?	No
Decay coefficient (unless overridden by met. file)	0.000
Anemometer height	10 m
Roughness height at the wind vane site	0.300 m

DISPERSION CURVES

Horizontal dispersion curves for sources <100m high	Pasquill-Gifford
Vertical dispersion curves for sources <100m high	Pasquill-Gifford
Horizontal dispersion curves for sources >100m high	Briggs Rural
Vertical dispersion curves for sources >100m high	Briggs Rural
Enhance horizontal plume spreads for buoyancy?	Yes
Enhance vertical plume spreads for buoyancy?	Yes
Adjust horizontal P-G formulae for roughness height?	Yes
Adjust vertical P-G formulae for roughness height?	Yes
Roughness height	0.800m
Adjustment for wind directional shear	None

PLUME RISE OPTIONS

Gradual plume rise?	Yes
Stack-tip downwash included?	Yes
Building downwash algorithm:	PRIME method.
Entrainment coeff. for neutral & stable lapse rates	0.60,0.60
Partial penetration of elevated inversions?	No
Disregard temp. gradients in the hourly met. file?	No

and in the absence of boundary-layer potential temperature gradients
given by the hourly met. file, a value from the following table
(in K/m) is used:

Wind Speed Category	Stability Class A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES
Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES
1 hour

1

40913 Macdonaldtown Fugitive Stockpile Emissions Zone 2 Night

SOURCE CHARACTERISTICS

INTEGRATED AREA SOURCE: VFZ2AO

X0(m)	Y0(m)	Ground El	Length X	Length Y	Or. Angle	Ver. spread	Height
332359	6247736	18m	32m	25m	-15deg	4m	20m

(Constant) emission rate = 1.00E+00 OUV/second per square metre

Hourly multiplicative factors will be used with
this emission factor.
No gravitational settling or scavenging.

1

40913 Macdonaldtown Fugitive Stockpile Emissions Zone 2 Night

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):
332119.m 332162.m 332202.m 332243.m 332285.m 332326.m 332370.m
332411.m 332452.m 332493.m 332533.m

and these y-values (or northings):
6247493.m 6247550.m 6247604.m 6247660.m 6247712.m 6247768.m 6247822.m
6247875.m 6247926.m 6247977.m 6248028.m

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEVN	HEIGHT	No.	X	Y	ELEVN	HEIGHT
1	332279	6247616	17.5	1.5	29	332421	6247672	17.5	1.5
2	332277	6247625	17.5	1.5	30	332442	6247701	17.5	1.5
3	332276	6247638	17.5	1.5	31	332421	6247680	17.5	1.5
4	332274	6247650	17.5	1.5	32	332454	6247709	17.5	1.5
5	332275	6247664	17.5	1.5	33	332420	6247687	17.5	1.5
6	332273	6247674	17.5	1.5	34	332467	6247717	17.5	1.5
7	332272	6247688	17.5	1.5	35	332420	6247695	17.5	1.5
8	332269	6247701	17.5	1.5	36	332479	6247727	17.5	1.5
9	332343	6247692	17.5	1.5	37	332419	6247703	17.5	1.5
10	332343	6247707	17.5	1.5	38	332495	6247735	17.5	1.5
11	332263	6247726	17.5	1.5	39	332419	6247710	17.5	1.5
12	332271	6247726	17.5	1.5	40	332509	6247743	17.5	1.5
13	332279	6247731	17.5	1.5	41	332330	6247537	17.5	1.5
14	332342	6247715	17.5	1.5	42	332338	6247541	17.5	1.5
15	332295	6247740	17.5	1.5	43	332344	6247544	17.5	1.5
16	332432	6247743	17.5	1.5	44	332351	6247547	17.5	1.5
17	332435	6247735	17.5	1.5	45	332359	6247551	17.5	1.5
18	332439	6247729	17.5	1.5	46	332366	6247554	17.5	1.5
19	332358	6247641	17.5	1.5	47	332382	6247560	17.5	1.5
20	332366	6247651	17.5	1.5	48	332390	6247565	17.5	1.5
21	332374	6247654	17.5	1.5	49	332399	6247570	17.5	1.5
22	332381	6247662	17.5	1.5	50	332408	6247574	17.5	1.5
23	332386	6247667	17.5	1.5	51	332417	6247579	17.5	1.5
24	332396	6247677	17.5	1.5	52	332426	6247584	17.5	1.5
25	332405	6247681	17.5	1.5	53	332435	6247588	17.5	1.5
26	332412	6247687	17.5	1.5	54	332424	6247578	17.5	1.5
27	332422	6247688	17.5	1.5	55	332423	6247585	17.5	1.5
28	332428	6247692	17.5	1.5	56	332462	6247601	17.5	1.5

METEOROLOGICAL DATA : DECCW Randwick AWS Data BoM SydneyAP Clouds SydneyAP

HOURLY VARIABLE EMISSION FACTOR INFORMATION

The input emission rates specfied above will be multiplied by hourly varying
factors entered via the input file:
C:\Users\sdorairaj\Ausplume\Odour Emmission Files PTM\Zone2NFu.csv
For each stack source, hourly values within this file will be added to each
declared exit velocity (m/sec) and temperature (K).

Title of input hourly emission factor file is:
Variable,Emissions Zone 2 night,

HOURLY EMISSION FACTOR SOURCE TYPE ALLOCATION

Prefix V allocated: VFZ2AO

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1 HIGHEST RECORDINGS FOR EACH RECEPTOR (in Odour_Units)
AVERAGING TIME = 1 HOUR

X (km):	332.119	332.162
Y (km)		
6248.028	2.92E-04 05,18/04/08	2.76E-04 20,22/10/07
6247.977	3.01E-04 05,06/02/07	3.26E-04 05,11/10/07
6247.926	3.20E-04 23,02/06/08	3.68E-04 05,06/02/07
6247.875	3.51E-04 23,02/06/08	4.06E-04 23,02/06/08
6247.822	3.70E-04 05,26/01/07	3.85E-04 05,26/01/07
6247.768	3.71E-04 05,29/01/08	4.06E-04 05,29/01/08
6247.712	3.91E-04 02,24/03/08	4.37E-04 02,24/03/08
6247.660	3.76E-04 05,25/12/08	4.16E-04 05,25/12/08
6247.604	3.49E-04 02,04/02/08	3.89E-04 05,01/01/08
6247.550	3.14E-04 05,01/01/08	3.50E-04 24,25/10/07
6247.493	2.88E-04 04,15/01/07	3.04E-04 05,15/01/07

X (km):	332.202	332.243
Y (km)		
6248.028	3.14E-04 05,29/11/08	3.19E-04 05,29/11/08
6247.977	3.28E-04 05,29/11/08	3.87E-04 05,29/11/08
6247.926	4.03E-04 05,11/10/07	3.99E-04 05,29/11/08
6247.875	4.10E-04 23,02/06/08	4.54E-04 05,11/10/07
6247.822	4.05E-04 23,02/06/08	4.25E-04 23,02/06/08
6247.768	4.26E-04 05,26/01/07	3.72E-04 05,26/01/07
6247.712	4.45E-04 02,24/03/08	3.91E-04 05,25/12/08
6247.660	4.47E-04 02,04/02/08	4.44E-04 05,01/01/08
6247.604	4.26E-04 05,26/10/07	4.49E-04 05,23/01/07
6247.550	3.81E-04 05,23/01/07	4.08E-04 05,18/11/07
6247.493	3.30E-04 05,18/11/07	3.50E-04 05,11/01/07

X (km):	332.285	332.326
Y (km)		
6248.028	2.53E-04 05,29/11/08	2.00E-04 19,10/06/07
6247.977	3.46E-04 05,29/11/08	2.30E-04 05,04/01/07
6247.926	4.37E-04 05,29/11/08	2.79E-04 05,29/11/08
6247.875	4.12E-04 05,29/11/08	3.19E-04 05,29/11/08
6247.822	2.97E-04 05,06/02/07	1.30E-04 05,29/11/08
6247.768	1.64E-04 05,26/01/07	5.77E-06 05,26/01/07
6247.712	2.06E-04 05,25/12/08	2.99E-05 05,26/10/07
6247.660	3.70E-04 05,23/01/07	2.56E-04 05,11/01/07
6247.604	4.49E-04 05,11/01/07	4.40E-04 03,20/07/08
6247.550	4.26E-04 02,31/08/08	4.41E-04 05,27/01/08
6247.493	3.71E-04 03,20/07/08	3.75E-04 05,27/01/08

X (km):	332.370	332.411
Y (km)		
6248.028	2.96E-04 05,02/11/07	3.62E-04 05,02/11/07
6247.977	3.43E-04 05,02/11/07	4.21E-04 05,02/11/07
6247.926	3.65E-04 05,02/11/07	4.53E-04 24,02/06/08
6247.875	2.85E-04 05,02/11/07	3.75E-04 23,15/11/08
6247.822	4.79E-05 05,02/11/07	1.18E-04 01,05/03/07
6247.768	3.15E-11 23,15/11/08	2.89E-06 05,30/11/07
6247.712	1.10E-06 05,18/11/08	1.77E-05 05,11/11/08
6247.660	1.90E-04 05,18/11/08	2.41E-04 05,19/11/08
6247.604	4.28E-04 05,18/11/08	4.37E-04 04,08/11/08

6247.550	4.42E-04 05,18/11/08	4.26E-04 02,05/03/07
6247.493	3.84E-04 05,18/11/08	3.81E-04 02,05/03/07

X (km):	332.452	332.493
Y (km)		
6248.028	3.42E-04 24,02/06/08	3.34E-04 23,15/11/08
6247.977	4.09E-04 23,15/11/08	3.86E-04 01,05/03/07
6247.926	4.38E-04 23,15/11/08	4.34E-04 05,24/10/07
6247.875	4.29E-04 05,24/10/07	3.83E-04 05,28/12/07
6247.822	2.69E-04 05,28/12/07	4.16E-04 05,18/12/08
6247.768	1.32E-04 05,12/11/08	3.59E-04 20,20/01/08
6247.712	1.80E-04 05,25/11/07	3.80E-04 04,30/10/08
6247.660	3.54E-04 05,26/01/08	4.37E-04 05,12/11/07
6247.604	4.49E-04 05,03/06/08	4.50E-04 05,26/01/08
6247.550	4.31E-04 05,19/11/08	4.12E-04 05,03/06/08
6247.493	3.71E-04 04,08/11/08	3.48E-04 05,19/11/08

X (km):	332.533
Y (km)	
6248.028	3.19E-04 01,05/03/07
6247.977	3.61E-04 05,24/10/07
6247.926	3.38E-04 05,24/10/07
6247.875	4.44E-04 05,28/12/07
6247.822	4.55E-04 05,30/11/07
6247.768	4.50E-04 20,20/01/08
6247.712	4.51E-04 19,17/02/08
6247.660	4.53E-04 05,22/12/08
6247.604	4.30E-04 05,11/11/08
6247.550	3.87E-04 05,26/01/08
6247.493	3.31E-04 05,03/06/08

At the discrete receptors:

1: 4.55E-04 @Hr05,18/11/07	29: 2.20E-04 @Hr05,03/06/08
2: 4.51E-04 @Hr05,31/10/08	30: 1.77E-04 @Hr05,09/10/07
3: 4.39E-04 @Hr05,23/01/07	31: 1.80E-04 @Hr05,07/12/08
4: 4.22E-04 @Hr05,23/01/07	32: 2.18E-04 @Hr01,24/03/08
5: 4.00E-04 @Hr24,25/10/07	33: 1.40E-04 @Hr05,19/10/08
6: 3.81E-04 @Hr05,01/01/08	34: 2.69E-04 @Hr22,27/04/07
7: 3.53E-04 @Hr02,04/02/08	35: 1.03E-04 @Hr05,26/01/08
8: 3.25E-04 @Hr02,04/02/08	36: 3.17E-04 @Hr21,27/04/07
9: 5.83E-05 @Hr05,11/01/07	37: 7.11E-05 @Hr05,25/01/08
10: 1.84E-05 @Hr05,18/11/07	38: 3.80E-04 @Hr24,03/02/08
11: 3.15E-04 @Hr02,24/03/08	39: 4.74E-05 @Hr01,31/08/08
12: 2.65E-04 @Hr02,24/03/08	40: 4.20E-04 @Hr01,10/11/07
13: 2.25E-04 @Hr02,24/03/08	41: 4.26E-04 @Hr05,27/01/08
14: 9.00E-06 @Hr05,23/01/07	42: 4.22E-04 @Hr05,27/01/08
15: 1.20E-04 @Hr02,24/03/08	43: 4.16E-04 @Hr05,18/11/08
16: 4.15E-05 @Hr24,03/02/08	44: 4.32E-04 @Hr05,18/11/08
17: 6.06E-05 @Hr19,17/02/08	45: 4.44E-04 @Hr05,18/11/08
18: 8.40E-05 @Hr04,30/10/08	46: 4.48E-04 @Hr05,18/11/08
19: 3.11E-04 @Hr05,18/11/08	47: 4.39E-04 @Hr02,05/03/07
20: 2.67E-04 @Hr05,18/11/08	48: 4.52E-04 @Hr02,05/03/07
21: 2.43E-04 @Hr05,18/11/08	49: 4.53E-04 @Hr02,05/03/07
22: 1.97E-04 @Hr02,05/03/07	50: 4.39E-04 @Hr04,08/11/08
23: 1.71E-04 @Hr02,05/03/07	51: 4.55E-04 @Hr04,08/11/08
24: 1.25E-04 @Hr05,03/12/07	52: 4.55E-04 @Hr05,03/12/07
25: 1.23E-04 @Hr05,19/11/08	53: 4.56E-04 @Hr05,19/11/08
26: 1.14E-04 @Hr05,03/06/08	54: 4.55E-04 @Hr04,08/11/08
27: 1.41E-04 @Hr05,26/01/08	55: 4.55E-04 @Hr04,08/11/08
28: 1.48E-04 @Hr05,25/01/08	56: 4.56E-04 @Hr05,03/06/08

Zone 3 Nighttime Emissions

40913 Macdonaldtown Fugitive Stockpile Emissions Sources Zone 3 Daytim

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Concentration or deposition Concentration
Emission rate units OUV/second
Concentration units Odour_Units
Units conversion factor 1.00E+00
Constant background concentration 0.00E+00
Terrain effects Egan method
Smooth stability class changes? No
Other stability class adjustments ("urban modes") None
Ignore building wake effects? No
Decay coefficient (unless overridden by met. file) 0.000
Anemometer height 10 m
Roughness height at the wind vane site 0.300 m

DISPERSION CURVES
Horizontal dispersion curves for sources <100m high Pasquill-Gifford
Vertical dispersion curves for sources <100m high Pasquill-Gifford
Horizontal dispersion curves for sources >100m high Briggs Rural
Vertical dispersion curves for sources >100m high Briggs Rural
Enhance horizontal plume spreads for buoyancy? Yes
Enhance vertical plume spreads for buoyancy? Yes
Adjust horizontal P-G formulae for roughness height? Yes
Adjust vertical P-G formulae for roughness height? Yes
Roughness height 0.800m
Adjustment for wind directional shear None

PLUME RISE OPTIONS
Gradual plume rise? Yes
Stack-tip downwash included? Yes
Building downwash algorithm: PRIME method.
Entrainment coeff. for neutral & stable lapse rates 0.60,0.60
Partial penetration of elevated inversions? No
Disregard temp. gradients in the hourly met. file? No

and in the absence of boundary-layer potential temperature gradients
given by the hourly met. file, a value from the following table
(in K/m) is used:

Wind Speed Category	Stability Class A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES
Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES
1 hour

40913 Macdonaldtown Fugitive Stockpile Emissions Sources Zone 3 Daytim

SOURCE CHARACTERISTICS

INTEGRATED AREA SOURCE: VFZ3AO

X0(m)	Y0(m)	Ground El	Length X	Length Y	Or. Angle	Ver. spread	Height
332338	6247710	18m	45m	25m	-15deg	4m	20m

(Constant) emission rate = 1.00E+00 OUV/second per square metre

Hourly multiplicative factors will be used with
this emission factor.
No gravitational settling or scavenging.

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1 _____

40913 Macdonaldtown Fugitive Stockpile Emissions Sources Zone 3 Daytim

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):
332119.m 332162.m 332202.m 332243.m 332285.m 332326.m 332370.m
332411.m 332452.m 332493.m 332533.m

and these y-values (or northings):
6247493.m 6247550.m 6247604.m 6247660.m 6247712.m 6247768.m 6247822.m
6247875.m 6247926.m 6247977.m 6248028.m

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEVN	HEIGHT	No.	X	Y	ELEVN	HEIGHT
1	332279	6247616	17.5	1.5	29	332421	6247672	17.5	1.5
2	332277	6247625	17.5	1.5	30	332442	6247701	17.5	1.5
3	332276	6247638	17.5	1.5	31	332421	6247680	17.5	1.5
4	332274	6247650	17.5	1.5	32	332454	6247709	17.5	1.5
5	332275	6247664	17.5	1.5	33	332420	6247687	17.5	1.5
6	332273	6247674	17.5	1.5	34	332467	6247717	17.5	1.5
7	332272	6247688	17.5	1.5	35	332420	6247695	17.5	1.5
8	332269	6247701	17.5	1.5	36	332479	6247727	17.5	1.5
9	332343	6247692	17.5	1.5	37	332419	6247703	17.5	1.5
10	332343	6247707	17.5	1.5	38	332495	6247735	17.5	1.5
11	332263	6247726	17.5	1.5	39	332419	6247710	17.5	1.5
12	332271	6247726	17.5	1.5	40	332509	6247743	17.5	1.5
13	332279	6247731	17.5	1.5	41	332330	6247537	17.5	1.5
14	332342	6247715	17.5	1.5	42	332338	6247541	17.5	1.5
15	332295	6247740	17.5	1.5	43	332344	6247544	17.5	1.5
16	332432	6247743	17.5	1.5	44	332351	6247547	17.5	1.5
17	332435	6247735	17.5	1.5	45	332359	6247551	17.5	1.5
18	332439	6247729	17.5	1.5	46	332366	6247554	17.5	1.5
19	332358	6247641	17.5	1.5	47	332382	6247560	17.5	1.5
20	332366	6247651	17.5	1.5	48	332390	6247565	17.5	1.5
21	332374	6247654	17.5	1.5	49	332399	6247570	17.5	1.5
22	332381	6247662	17.5	1.5	50	332408	6247574	17.5	1.5
23	332386	6247667	17.5	1.5	51	332417	6247579	17.5	1.5
24	332396	6247677	17.5	1.5	52	332426	6247584	17.5	1.5
25	332405	6247681	17.5	1.5	53	332435	6247588	17.5	1.5
26	332412	6247687	17.5	1.5	54	332424	6247578	17.5	1.5
27	332422	6247688	17.5	1.5	55	332423	6247585	17.5	1.5
28	332428	6247692	17.5	1.5	56	332462	6247601	17.5	1.5

METEOROLOGICAL DATA : DECCW Randwick AWS Data BoM SydneyAP Clouds SydneyAP

HOURLY VARIABLE EMISSION FACTOR INFORMATION

The input emission rates specfied above will be multiplied by hourly varying
factors entered via the input file:
C:\Users\sdorairaj\Ausplume\Odour Emmission Files PTM\Zone3NFu.csv
For each stack source, hourly values within this file will be added to each
declared exit velocity (m/sec) and temperature (K).

Title of input hourly emission factor file is:
Variable,Emissions,

HOURLY EMISSION FACTOR SOURCE TYPE ALLOCATION

Prefix V allocated: VFZ3AO

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1 HIGHEST RECORDINGS FOR EACH RECEPTOR (in Odour_Units)
AVERAGING TIME = 1 HOUR

X (km):	332.119	332.162
Y (km)		
6248.028	9.24E-04 04,06/02/07	8.82E-04 01,23/04/07
6247.977	9.19E-04 05,11/10/07	8.95E-04 05,29/11/08
6247.926	1.03E-03 05,06/02/07	1.14E-03 05,11/10/07
6247.875	1.14E-03 23,02/06/08	1.22E-03 05,06/02/07
6247.822	1.08E-03 23,02/06/08	1.32E-03 23,02/06/08
6247.768	1.29E-03 05,26/01/07	1.41E-03 05,26/01/07
6247.712	1.30E-03 05,26/12/08	1.42E-03 05,26/12/08
6247.660	1.21E-03 05,25/12/08	1.39E-03 05,25/12/08
6247.604	1.17E-03 02,04/02/08	1.32E-03 02,04/02/08
6247.550	1.09E-03 05,01/01/08	1.21E-03 24,25/10/07
6247.493	9.60E-04 24,25/10/07	1.05E-03 05,23/01/07

X (km):	332.202	332.243
Y (km)		
6248.028	9.34E-04 05,29/11/08	8.38E-04 05,29/11/08
6247.977	1.09E-03 05,29/11/08	1.09E-03 05,29/11/08
6247.926	1.10E-03 05,29/11/08	1.32E-03 05,29/11/08
6247.875	1.37E-03 05,11/10/07	1.26E-03 05,29/11/08
6247.822	1.42E-03 23,02/06/08	1.32E-03 05,06/02/07
6247.768	1.36E-03 05,26/01/07	9.41E-04 05,26/01/07
6247.712	1.38E-03 05,26/12/08	1.00E-03 02,24/03/08
6247.660	1.41E-03 05,25/12/08	1.23E-03 02,04/02/08
6247.604	1.40E-03 05,01/01/08	1.41E-03 05,23/01/07
6247.550	1.31E-03 05,23/01/07	1.37E-03 05,18/11/07
6247.493	1.14E-03 05,18/11/07	1.20E-03 05,11/01/07

X (km):	332.285	332.326
Y (km)		
6248.028	7.51E-04 03,09/09/07	7.25E-04 01,28/03/08
6247.977	8.14E-04 05,29/11/08	6.89E-04 21,21/03/07
6247.926	1.12E-03 05,29/11/08	7.67E-04 21,21/03/07
6247.875	1.35E-03 05,29/11/08	7.37E-04 05,04/01/07
6247.822	9.39E-04 05,29/11/08	5.41E-04 05,29/11/08
6247.768	3.98E-04 23,02/06/08	2.69E-05 05,11/10/07
6247.712	2.73E-04 02,24/03/08	4.23E-06 05,25/12/08
6247.660	7.24E-04 24,25/10/07	2.63E-04 05,11/01/07
6247.604	1.30E-03 05,11/01/07	1.16E-03 05,27/01/08
6247.550	1.41E-03 02,31/08/08	1.38E-03 05,27/01/08
6247.493	1.26E-03 03,20/07/08	1.22E-03 05,18/11/08

X (km):	332.370	332.411
Y (km)		
6248.028	9.54E-04 05,02/11/07	1.05E-03 05,02/11/07
6247.977	1.13E-03 05,02/11/07	1.23E-03 24,02/06/08
6247.926	1.29E-03 05,02/11/07	1.36E-03 24,02/06/08
6247.875	1.27E-03 05,02/11/07	1.38E-03 23,15/11/08
6247.822	6.34E-04 05,02/11/07	9.01E-04 01,05/03/07
6247.768	1.00E-05 01,05/03/07	1.95E-04 21,20/01/08
6247.712	3.20E-08 05,22/12/08	8.01E-05 21,27/04/07
6247.660	1.62E-04 02,05/03/07	4.75E-04 05,26/01/08
6247.604	1.12E-03 02,05/03/07	1.23E-03 05,19/11/08

6247.550	1.39E-03 02,05/03/07	1.40E-03 04,08/11/08
6247.493	1.26E-03 02,05/03/07	1.25E-03 04,08/11/08

X (km):	332.452	332.493
Y (km)		
6248.028	9.98E-04 23,15/11/08	9.53E-04 23,15/11/08
6247.977	1.19E-03 23,15/11/08	1.12E-03 01,05/03/07
6247.926	1.29E-03 23,15/11/08	1.28E-03 05,24/10/07
6247.875	1.42E-03 05,24/10/07	1.16E-03 05,24/10/07
6247.822	1.07E-03 05,28/12/07	1.42E-03 21,20/01/08
6247.768	8.25E-04 05,30/11/07	1.32E-03 05,19/12/08
6247.712	6.94E-04 24,03/02/08	1.28E-03 05,30/10/08
6247.660	1.03E-03 01,04/02/08	1.37E-03 05,15/12/07
6247.604	1.37E-03 05,19/10/08	1.42E-03 03,21/08/08
6247.550	1.38E-03 05,03/06/08	1.33E-03 05,19/10/08
6247.493	1.23E-03 05,19/11/08	1.17E-03 05,03/06/08

X (km):	332.533
Y (km)	
6248.028	9.20E-04 01,05/03/07
6247.977	1.05E-03 05,24/10/07
6247.926	1.03E-03 05,24/10/07
6247.875	1.29E-03 05,28/12/07
6247.822	1.41E-03 05,18/12/08
6247.768	1.43E-03 05,12/11/08
6247.712	1.43E-03 22,15/11/08
6247.660	1.42E-03 22,27/04/07
6247.604	1.36E-03 01,04/02/08
6247.550	1.25E-03 05,25/01/08
6247.493	1.09E-03 05,19/10/08

At the discrete receptors:

1: 1.28E-03 @Hr05,18/11/07	29: 5.02E-04 @Hr03,20/11/08
2: 1.23E-03 @Hr05,15/01/07	30: 6.00E-04 @Hr05,31/10/07
3: 1.13E-03 @Hr05,23/01/07	31: 4.10E-04 @Hr01,04/02/08
4: 1.04E-03 @Hr24,25/10/07	32: 7.93E-04 @Hr23,03/02/08
5: 8.78E-04 @Hr05,01/01/08	33: 3.33E-04 @Hr05,24/01/07
6: 7.92E-04 @Hr02,04/02/08	34: 9.91E-04 @Hr05,30/10/08
7: 6.73E-04 @Hr05,25/12/08	35: 2.70E-04 @Hr02,10/11/07
8: 6.32E-04 @Hr05,25/12/08	36: 1.15E-03 @Hr05,27/11/08
9: 8.02E-06 @Hr05,11/01/07	37: 2.20E-04 @Hr04,30/10/08
10: 6.66E-07 @Hr05,23/01/07	38: 1.32E-03 @Hr04,31/08/08
11: 6.96E-04 @Hr05,29/01/08	39: 1.87E-04 @Hr21,27/04/07
12: 5.28E-04 @Hr05,29/01/08	40: 1.40E-03 @Hr20,20/01/08
13: 3.84E-04 @Hr05,29/01/08	41: 1.34E-03 @Hr05,27/01/08
14: 1.56E-07 @Hr05,01/01/08	42: 1.38E-03 @Hr05,18/11/08
15: 1.66E-04 @Hr05,26/01/07	43: 1.41E-03 @Hr05,18/11/08
16: 3.78E-04 @Hr05,12/11/08	44: 1.42E-03 @Hr05,18/11/08
17: 4.19E-04 @Hr20,20/01/08	45: 1.40E-03 @Hr05,18/11/08
18: 4.66E-04 @Hr04,31/08/08	46: 1.38E-03 @Hr02,05/03/07
19: 5.19E-04 @Hr05,18/11/08	47: 1.41E-03 @Hr02,05/03/07
20: 3.46E-04 @Hr02,05/03/07	48: 1.36E-03 @Hr04,08/11/08
21: 3.10E-04 @Hr04,08/11/08	49: 1.40E-03 @Hr04,08/11/08
22: 2.15E-04 @Hr05,19/11/08	50: 1.40E-03 @Hr05,03/12/07
23: 1.88E-04 @Hr05,03/06/08	51: 1.40E-03 @Hr05,19/11/08
24: 1.48E-04 @Hr05,26/01/08	52: 1.36E-03 @Hr05,19/11/08
25: 1.99E-04 @Hr01,31/08/08	53: 1.40E-03 @Hr05,03/06/08
26: 2.31E-04 @Hr01,04/02/08	54: 1.39E-03 @Hr05,19/11/08
27: 3.46E-04 @Hr05,22/12/08	55: 1.36E-03 @Hr05,19/11/08
28: 4.14E-04 @Hr02,10/11/07	56: 1.41E-03 @Hr05,26/01/08

Zone 4 Nighttime Emissions

40913 Macdonaldtown Fugitive Emissions Stockpiles Zone 4 Night

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Concentration or deposition Concentration
Emission rate units OUV/second
Concentration units Odour_Units
Units conversion factor 1.00E+00
Constant background concentration 0.00E+00
Terrain effects Egan method
Smooth stability class changes? No
Other stability class adjustments ("urban modes") None
Ignore building wake effects? No
Decay coefficient (unless overridden by met. file) 0.000
Anemometer height 10 m
Roughness height at the wind vane site 0.300 m

DISPERSION CURVES
Horizontal dispersion curves for sources <100m high Pasquill-Gifford
Vertical dispersion curves for sources <100m high Pasquill-Gifford
Horizontal dispersion curves for sources >100m high Briggs Rural
Vertical dispersion curves for sources >100m high Briggs Rural
Enhance horizontal plume spreads for buoyancy? Yes
Enhance vertical plume spreads for buoyancy? Yes
Adjust horizontal P-G formulae for roughness height? Yes
Adjust vertical P-G formulae for roughness height? Yes
Roughness height 0.800m
Adjustment for wind directional shear None

PLUME RISE OPTIONS
Gradual plume rise? Yes
Stack-tip downwash included? Yes
Building downwash algorithm: PRIME method.
Entrainment coeff. for neutral & stable lapse rates 0.60,0.60
Partial penetration of elevated inversions? No
Disregard temp. gradients in the hourly met. file? No

and in the absence of boundary-layer potential temperature gradients
given by the hourly met. file, a value from the following table
(in K/m) is used:

Wind Speed Category	Stability Class A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES
Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES
1 hour

1

40913 Macdonaldtown Fugitive Emissions Stockpiles Zone 4 Night

SOURCE CHARACTERISTICS

INTEGRATED AREA SOURCE: VFZ4AO

X0(m)	Y0(m)	Ground El	Length X	Length Y	Or. Angle	Ver. spread	Height
332294	6247673	18m	45m	25m	-25deg	4m	20m

(Constant) emission rate = 1.00E+00 OUV/second per square metre

Hourly multiplicative factors will be used with
this emission factor.
No gravitational settling or scavenging.

1

40913 Macdonaldtown Fugitive Emissions Stockpiles Zone 4 Night

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):
332119.m 332162.m 332202.m 332243.m 332285.m 332326.m 332370.m
332411.m 332452.m 332493.m 332533.m

and these y-values (or northings):
6247493.m 6247550.m 6247604.m 6247660.m 6247712.m 6247768.m 6247822.m
6247875.m 6247926.m 6247977.m 6248028.m

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEVN	HEIGHT	No.	X	Y	ELEVN	HEIGHT
1	332279	6247616	17.5	1.5	29	332421	6247672	17.5	1.5
2	332277	6247625	17.5	1.5	30	332442	6247701	17.5	1.5
3	332276	6247638	17.5	1.5	31	332421	6247680	17.5	1.5
4	332274	6247650	17.5	1.5	32	332454	6247709	17.5	1.5
5	332275	6247664	17.5	1.5	33	332420	6247687	17.5	1.5
6	332273	6247674	17.5	1.5	34	332467	6247717	17.5	1.5
7	332272	6247688	17.5	1.5	35	332420	6247695	17.5	1.5
8	332269	6247701	17.5	1.5	36	332479	6247727	17.5	1.5
9	332343	6247692	17.5	1.5	37	332419	6247703	17.5	1.5
10	332343	6247707	17.5	1.5	38	332495	6247735	17.5	1.5
11	332263	6247726	17.5	1.5	39	332419	6247710	17.5	1.5
12	332271	6247726	17.5	1.5	40	332509	6247743	17.5	1.5
13	332279	6247731	17.5	1.5	41	332330	6247537	17.5	1.5
14	332342	6247715	17.5	1.5	42	332338	6247541	17.5	1.5
15	332295	6247740	17.5	1.5	43	332344	6247544	17.5	1.5
16	332432	6247743	17.5	1.5	44	332351	6247547	17.5	1.5
17	332435	6247735	17.5	1.5	45	332359	6247551	17.5	1.5
18	332439	6247729	17.5	1.5	46	332366	6247554	17.5	1.5
19	332358	6247641	17.5	1.5	47	332382	6247560	17.5	1.5
20	332366	6247651	17.5	1.5	48	332390	6247565	17.5	1.5
21	332374	6247654	17.5	1.5	49	332399	6247570	17.5	1.5
22	332381	6247662	17.5	1.5	50	332408	6247574	17.5	1.5
23	332386	6247667	17.5	1.5	51	332417	6247579	17.5	1.5
24	332396	6247677	17.5	1.5	52	332426	6247584	17.5	1.5
25	332405	6247681	17.5	1.5	53	332435	6247588	17.5	1.5
26	332412	6247687	17.5	1.5	54	332424	6247578	17.5	1.5
27	332422	6247688	17.5	1.5	55	332423	6247585	17.5	1.5
28	332428	6247692	17.5	1.5	56	332462	6247601	17.5	1.5

METEOROLOGICAL DATA : DECCW Randwick AWS Data BoM SydneyAP Clouds SydneyAP

HOURLY VARIABLE EMISSION FACTOR INFORMATION

The input emission rates specfied above will be multiplied by hourly varying
factors entered via the input file:
C:\Users\sdorairaj\Ausplume\Odour Emmission Files PTM\Zone4NFu.csv
For each stack source, hourly values within this file will be added to each
declared exit velocity (m/sec) and temperature (K).

Title of input hourly emission factor file is:
Variable,Emissions Zone 4 Night,

HOURLY EMISSION FACTOR SOURCE TYPE ALLOCATION

Prefix V allocated: VFZ4AO

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1 HIGHEST RECORDINGS FOR EACH RECEPTOR (in Odour_Units)
AVERAGING TIME = 1 HOUR

X (km):	332.119	332.162
Y (km)		
6248.028	9.21E-04 19,17/06/08	8.94E-04 24,17/10/08
6247.977	9.11E-04 05,29/11/08	9.93E-04 05,29/11/08
6247.926	9.76E-04 05,11/10/07	1.14E-03 05,29/11/08
6247.875	1.20E-03 05,11/10/07	1.18E-03 05,11/10/07
6247.822	1.28E-03 23,02/06/08	1.40E-03 05,06/02/07
6247.768	1.21E-03 23,02/06/08	1.38E-03 23,02/06/08
6247.712	1.34E-03 05,26/01/07	1.31E-03 05,26/01/07
6247.660	1.42E-03 02,24/03/08	1.35E-03 02,24/03/08
6247.604	1.34E-03 05,25/12/08	1.43E-03 02,04/02/08
6247.550	1.30E-03 05,01/01/08	1.39E-03 24,25/10/07
6247.493	1.15E-03 05,23/01/07	1.26E-03 05,31/10/08

X (km):	332.202	332.243
Y (km)		
6248.028	8.44E-04 23,01/09/08	8.40E-04 01,22/03/07
6247.977	8.91E-04 05,29/11/08	6.89E-04 03,09/09/07
6247.926	1.16E-03 05,29/11/08	8.55E-04 05,29/11/08
6247.875	1.37E-03 05,29/11/08	1.16E-03 05,29/11/08
6247.822	1.30E-03 05,11/10/07	1.29E-03 05,29/11/08
6247.768	1.14E-03 23,02/06/08	6.95E-04 05,11/10/07
6247.712	9.00E-04 05,26/01/07	1.92E-04 05,26/01/07
6247.660	9.52E-04 05,25/12/08	2.82E-04 02,04/02/08
6247.604	1.30E-03 05,26/10/07	9.54E-04 05,15/01/07
6247.550	1.43E-03 05,15/01/07	1.36E-03 05,11/01/07
6247.493	1.33E-03 05,11/01/07	1.38E-03 03,20/07/08

X (km):	332.285	332.326
Y (km)		
6248.028	8.27E-04 01,28/03/08	8.64E-04 05,02/11/07
6247.977	7.11E-04 05,02/11/07	1.03E-03 05,02/11/07
6247.926	7.76E-04 05,02/11/07	1.22E-03 05,02/11/07
6247.875	7.84E-04 21,21/03/07	1.36E-03 05,02/11/07
6247.822	6.46E-04 05,04/01/07	1.17E-03 05,02/11/07
6247.768	2.33E-04 05,29/11/08	2.88E-04 24,02/06/08
6247.712	6.22E-07 23,02/06/08	3.42E-07 05,28/12/07
6247.660	1.33E-05 05,23/01/07	1.57E-06 05,26/01/08
6247.604	5.98E-04 03,20/07/08	5.47E-04 02,05/03/07
6247.550	1.29E-03 05,27/01/08	1.31E-03 02,05/03/07
6247.493	1.33E-03 05,18/11/08	1.38E-03 02,05/03/07

X (km):	332.370	332.411
Y (km)		
6248.028	9.45E-04 05,02/11/07	8.87E-04 23,15/11/08
6247.977	1.11E-03 24,02/06/08	1.07E-03 23,15/11/08
6247.926	1.27E-03 24,02/06/08	1.22E-03 23,15/11/08
6247.875	1.40E-03 23,15/11/08	1.38E-03 01,05/03/07
6247.822	1.26E-03 23,15/11/08	1.34E-03 05,24/10/07
6247.768	6.17E-04 05,24/10/07	1.17E-03 05,28/12/07
6247.712	1.49E-04 05,19/12/08	8.21E-04 02,26/06/07
6247.660	1.94E-04 05,25/11/07	8.77E-04 04,30/10/08
6247.604	8.77E-04 05,07/12/08	1.24E-03 01,31/08/08

6247.550	1.36E-03 05,19/11/08	1.41E-03 05,07/12/08
6247.493	1.37E-03 04,08/11/08	1.30E-03 05,03/06/08

X (km):	332.452	332.493
Y (km)		
6248.028	8.76E-04 03,10/01/07	8.70E-04 21,16/03/07
6247.977	9.81E-04 01,05/03/07	9.54E-04 05,24/10/07
6247.926	1.17E-03 01,05/03/07	1.03E-03 05,24/10/07
6247.875	1.26E-03 05,24/10/07	1.06E-03 05,28/12/07
6247.822	1.33E-03 05,28/12/07	1.35E-03 21,20/01/08
6247.768	1.41E-03 05,18/12/08	1.41E-03 05,30/11/07
6247.712	1.33E-03 20,20/01/08	1.43E-03 20,20/01/08
6247.660	1.33E-03 21,27/04/07	1.42E-03 23,03/02/08
6247.604	1.41E-03 05,24/01/07	1.39E-03 05,25/11/07
6247.550	1.39E-03 05,25/01/08	1.31E-03 05,12/11/07
6247.493	1.26E-03 05,07/12/08	1.15E-03 05,25/01/08

X (km):	332.533
Y (km)	
6248.028	7.80E-04 05,24/10/07
6247.977	9.01E-04 20,29/07/07
6247.926	8.12E-04 05,28/12/07
6247.875	1.10E-03 05,28/12/07
6247.822	1.23E-03 05,18/12/08
6247.768	1.28E-03 05,19/12/08
6247.712	1.34E-03 04,31/08/08
6247.660	1.34E-03 24,03/02/08
6247.604	1.28E-03 22,27/04/07
6247.550	1.19E-03 05,24/01/07
6247.493	1.07E-03 03,21/08/08

At the discrete receptors:

1: 4.74E-04 @Hr02,31/08/08	29: 1.03E-03 @Hr23,03/02/08
2: 3.46E-04 @Hr05,11/01/07	30: 1.27E-03 @Hr04,31/08/08
3: 1.92E-04 @Hr05,18/11/07	31: 1.01E-03 @Hr05,30/10/08
4: 1.04E-04 @Hr05,23/01/07	32: 1.36E-03 @Hr20,20/01/08
5: 3.79E-05 @Hr05,01/01/08	33: 9.97E-04 @Hr01,10/11/07
6: 2.16E-05 @Hr02,04/02/08	34: 1.42E-03 @Hr02,26/06/07
7: 1.33E-05 @Hr02,24/03/08	35: 9.77E-04 @Hr05,27/11/08
8: 1.55E-05 @Hr05,29/01/08	36: 1.44E-03 @Hr05,12/11/08
9: 6.51E-06 @Hr04,31/08/08	37: 9.89E-04 @Hr04,31/08/08
10: 9.93E-06 @Hr05,30/11/07	38: 1.43E-03 @Hr05,12/11/08
11: 7.87E-05 @Hr23,02/06/08	39: 9.97E-04 @Hr02,26/06/07
12: 3.41E-05 @Hr23,02/06/08	40: 1.40E-03 @Hr05,19/12/08
13: 2.49E-05 @Hr05,16/01/07	41: 1.39E-03 @Hr02,05/03/07
14: 1.58E-05 @Hr04,26/06/07	42: 1.34E-03 @Hr02,05/03/07
15: 1.75E-05 @Hr05,29/11/08	43: 1.36E-03 @Hr04,08/11/08
16: 1.25E-03 @Hr05,30/11/07	44: 1.37E-03 @Hr04,08/11/08
17: 1.25E-03 @Hr05,19/12/08	45: 1.36E-03 @Hr05,03/12/07
18: 1.28E-03 @Hr05,19/12/08	46: 1.36E-03 @Hr05,19/11/08
19: 2.61E-04 @Hr05,25/01/08	47: 1.36E-03 @Hr05,03/06/08
20: 2.57E-04 @Hr01,04/02/08	48: 1.36E-03 @Hr05,03/06/08
21: 3.30E-04 @Hr05,24/01/07	49: 1.37E-03 @Hr05,07/12/08
22: 3.74E-04 @Hr22,27/04/07	50: 1.38E-03 @Hr05,26/01/08
23: 4.45E-04 @Hr04,30/10/08	51: 1.38E-03 @Hr05,25/01/08
24: 5.79E-04 @Hr04,05/03/07	52: 1.40E-03 @Hr05,28/01/07
25: 7.37E-04 @Hr05,30/10/08	53: 1.41E-03 @Hr01,31/08/08
26: 8.67E-04 @Hr01,10/11/07	54: 1.41E-03 @Hr05,25/01/08
27: 1.02E-03 @Hr05,27/11/08	55: 1.39E-03 @Hr05,28/01/07
28: 1.11E-03 @Hr05,27/11/08	56: 1.43E-03 @Hr05,24/01/07

Zone 5 Nighttime Emissions

40913 Macdonaldtown Fugitive Emissions Stockpiles Zone 5 Night

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Concentration or deposition Concentration
Emission rate units OUV/second
Concentration units Odour_Units
Units conversion factor 1.00E+00
Constant background concentration 0.00E+00
Terrain effects Egan method
Smooth stability class changes? No
Other stability class adjustments ("urban modes") None
Ignore building wake effects? No
Decay coefficient (unless overridden by met. file) 0.000
Anemometer height 10 m
Roughness height at the wind vane site 0.300 m

DISPERSION CURVES
Horizontal dispersion curves for sources <100m high Pasquill-Gifford
Vertical dispersion curves for sources <100m high Pasquill-Gifford
Horizontal dispersion curves for sources >100m high Briggs Rural
Vertical dispersion curves for sources >100m high Briggs Rural
Enhance horizontal plume spreads for buoyancy? Yes
Enhance vertical plume spreads for buoyancy? Yes
Adjust horizontal P-G formulae for roughness height? Yes
Adjust vertical P-G formulae for roughness height? Yes
Roughness height 0.800m
Adjustment for wind directional shear None

PLUME RISE OPTIONS
Gradual plume rise? Yes
Stack-tip downwash included? Yes
Building downwash algorithm: PRIME method.
Entrainment coeff. for neutral & stable lapse rates 0.60,0.60
Partial penetration of elevated inversions? No
Disregard temp. gradients in the hourly met. file? No

and in the absence of boundary-layer potential temperature gradients
given by the hourly met. file, a value from the following table
(in K/m) is used:

Wind Speed Category	Stability Class A	B	C	D	E	F
1	0.000	0.000	0.000	0.000	0.020	0.035
2	0.000	0.000	0.000	0.000	0.020	0.035
3	0.000	0.000	0.000	0.000	0.020	0.035
4	0.000	0.000	0.000	0.000	0.020	0.035
5	0.000	0.000	0.000	0.000	0.020	0.035
6	0.000	0.000	0.000	0.000	0.020	0.035

WIND SPEED CATEGORIES
Boundaries between categories (in m/s) are: 1.54, 3.09, 5.14, 8.23, 10.80

WIND PROFILE EXPONENTS: "Irwin Urban" values (unless overridden by met. file)

AVERAGING TIMES
1 hour

1

40913 Macdonaldtown Fugitive Emissions Stockpiles Zone 5 Night

SOURCE CHARACTERISTICS

INTEGRATED AREA SOURCE: VFZ5AO

X0(m)	Y0(m)	Ground El	Length X	Length Y	Or. Angle	Ver. spread	Height
332294	6247673	18m	45m	25m	-25deg	4m	20m

(Constant) emission rate = 1.00E+00 OUV/second per square metre

Hourly multiplicative factors will be used with
this emission factor.
No gravitational settling or scavenging.

1

40913 Macdonaldtown Fugitive Emissions Stockpiles Zone 5 Night

RECEPTOR LOCATIONS

The Cartesian receptor grid has the following x-values (or eastings):
332119.m 332162.m 332202.m 332243.m 332285.m 332326.m 332370.m
332411.m 332452.m 332493.m 332533.m

and these y-values (or northings):
6247493.m 6247550.m 6247604.m 6247660.m 6247712.m 6247768.m 6247822.m
6247875.m 6247926.m 6247977.m 6248028.m

DISCRETE RECEPTOR LOCATIONS (in metres)

No.	X	Y	ELEVN	HEIGHT	No.	X	Y	ELEVN	HEIGHT
1	332279	6247616	17.5	1.5	29	332421	6247672	17.5	1.5
2	332277	6247625	17.5	1.5	30	332442	6247701	17.5	1.5
3	332276	6247638	17.5	1.5	31	332421	6247680	17.5	1.5
4	332274	6247650	17.5	1.5	32	332454	6247709	17.5	1.5
5	332275	6247664	17.5	1.5	33	332420	6247687	17.5	1.5
6	332273	6247674	17.5	1.5	34	332467	6247717	17.5	1.5
7	332272	6247688	17.5	1.5	35	332420	6247695	17.5	1.5
8	332269	6247701	17.5	1.5	36	332479	6247727	17.5	1.5
9	332343	6247692	17.5	1.5	37	332419	6247703	17.5	1.5
10	332343	6247707	17.5	1.5	38	332495	6247735	17.5	1.5
11	332263	6247726	17.5	1.5	39	332419	6247710	17.5	1.5
12	332271	6247726	17.5	1.5	40	332509	6247743	17.5	1.5
13	332279	6247731	17.5	1.5	41	332330	6247537	17.5	1.5
14	332342	6247715	17.5	1.5	42	332338	6247541	17.5	1.5
15	332295	6247740	17.5	1.5	43	332344	6247544	17.5	1.5
16	332432	6247743	17.5	1.5	44	332351	6247547	17.5	1.5
17	332435	6247735	17.5	1.5	45	332359	6247551	17.5	1.5
18	332439	6247729	17.5	1.5	46	332366	6247554	17.5	1.5
19	332358	6247641	17.5	1.5	47	332382	6247560	17.5	1.5
20	332366	6247651	17.5	1.5	48	332390	6247565	17.5	1.5
21	332374	6247654	17.5	1.5	49	332399	6247570	17.5	1.5
22	332381	6247662	17.5	1.5	50	332408	6247574	17.5	1.5
23	332386	6247667	17.5	1.5	51	332417	6247579	17.5	1.5
24	332396	6247677	17.5	1.5	52	332426	6247584	17.5	1.5
25	332405	6247681	17.5	1.5	53	332435	6247588	17.5	1.5
26	332412	6247687	17.5	1.5	54	332424	6247578	17.5	1.5
27	332422	6247688	17.5	1.5	55	332423	6247585	17.5	1.5
28	332428	6247692	17.5	1.5	56	332462	6247601	17.5	1.5

METEOROLOGICAL DATA : DECCW Randwick AWS Data BoM SydneyAP Clouds SydneyAP

HOURLY VARIABLE EMISSION FACTOR INFORMATION

The input emission rates specfied above will be multiplied by hourly varying
factors entered via the input file:
C:\Users\sdorairaj\Ausplume\Odour Emmission Files PTM\Zone5NFu.csv
For each stack source, hourly values within this file will be added to each
declared exit velocity (m/sec) and temperature (K).

Title of input hourly emission factor file is:
Variable,Emissions Zone 5 Night,

HOURLY EMISSION FACTOR SOURCE TYPE ALLOCATION

Prefix V allocated: VFZ5AO

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1 HIGHEST RECORDINGS FOR EACH RECEPTOR (in Odour_Units)
AVERAGING TIME = 1 HOUR

X (km):	332.119	332.162
Y (km)		
6248.028	1.15E-03 19,17/06/08	1.12E-03 24,17/10/08
6247.977	1.14E-03 05,29/11/08	1.24E-03 05,29/11/08
6247.926	1.22E-03 05,11/10/07	1.43E-03 05,29/11/08
6247.875	1.50E-03 05,11/10/07	1.48E-03 05,11/10/07
6247.822	1.60E-03 23,02/06/08	1.75E-03 05,06/02/07
6247.768	1.51E-03 23,02/06/08	1.72E-03 23,02/06/08
6247.712	1.68E-03 05,26/01/07	1.64E-03 05,26/01/07
6247.660	1.78E-03 02,24/03/08	1.69E-03 02,24/03/08
6247.604	1.68E-03 05,25/12/08	1.79E-03 02,04/02/08
6247.550	1.63E-03 05,01/01/08	1.74E-03 24,25/10/07
6247.493	1.44E-03 05,23/01/07	1.58E-03 05,31/10/08

X (km):	332.202	332.243
Y (km)		
6248.028	1.05E-03 23,01/09/08	1.05E-03 01,22/03/07
6247.977	1.11E-03 05,29/11/08	8.61E-04 03,09/09/07
6247.926	1.45E-03 05,29/11/08	1.07E-03 05,29/11/08
6247.875	1.71E-03 05,29/11/08	1.45E-03 05,29/11/08
6247.822	1.63E-03 05,11/10/07	1.61E-03 05,29/11/08
6247.768	1.43E-03 23,02/06/08	8.68E-04 05,11/10/07
6247.712	1.13E-03 05,26/01/07	2.40E-04 05,26/01/07
6247.660	1.19E-03 05,25/12/08	3.52E-04 02,04/02/08
6247.604	1.62E-03 05,26/10/07	1.19E-03 05,15/01/07
6247.550	1.79E-03 05,15/01/07	1.70E-03 05,11/01/07
6247.493	1.66E-03 05,11/01/07	1.72E-03 03,20/07/08

X (km):	332.285	332.326
Y (km)		
6248.028	1.03E-03 01,28/03/08	1.08E-03 05,02/11/07
6247.977	8.89E-04 05,02/11/07	1.29E-03 05,02/11/07
6247.926	9.69E-04 05,02/11/07	1.53E-03 05,02/11/07
6247.875	9.80E-04 21,21/03/07	1.69E-03 05,02/11/07
6247.822	8.07E-04 05,04/01/07	1.46E-03 05,02/11/07
6247.768	2.91E-04 05,29/11/08	3.60E-04 24,02/06/08
6247.712	7.78E-07 23,02/06/08	4.28E-07 05,28/12/07
6247.660	1.66E-05 05,23/01/07	1.96E-06 05,26/01/08
6247.604	7.48E-04 03,20/07/08	6.83E-04 02,05/03/07
6247.550	1.61E-03 05,27/01/08	1.64E-03 02,05/03/07
6247.493	1.67E-03 05,18/11/08	1.72E-03 02,05/03/07

X (km):	332.370	332.411
Y (km)		
6248.028	1.18E-03 05,02/11/07	1.11E-03 23,15/11/08
6247.977	1.39E-03 24,02/06/08	1.33E-03 23,15/11/08
6247.926	1.59E-03 24,02/06/08	1.53E-03 23,15/11/08
6247.875	1.75E-03 23,15/11/08	1.73E-03 01,05/03/07
6247.822	1.57E-03 23,15/11/08	1.67E-03 05,24/10/07
6247.768	7.71E-04 05,24/10/07	1.46E-03 05,28/12/07
6247.712	1.86E-04 05,19/12/08	1.03E-03 02,26/06/07
6247.660	2.43E-04 05,25/11/07	1.10E-03 04,30/10/08
6247.604	1.10E-03 05,07/12/08	1.55E-03 01,31/08/08

6247.550	1.71E-03 05,19/11/08	1.76E-03 05,07/12/08
6247.493	1.71E-03 04,08/11/08	1.63E-03 05,03/06/08

X (km):	332.452	332.493
Y (km)		
6248.028	1.10E-03 03,10/01/07	1.09E-03 21,16/03/07
6247.977	1.23E-03 01,05/03/07	1.19E-03 05,24/10/07
6247.926	1.47E-03 01,05/03/07	1.29E-03 05,24/10/07
6247.875	1.57E-03 05,24/10/07	1.32E-03 05,28/12/07
6247.822	1.66E-03 05,28/12/07	1.68E-03 21,20/01/08
6247.768	1.76E-03 05,18/12/08	1.76E-03 05,30/11/07
6247.712	1.66E-03 20,20/01/08	1.79E-03 20,20/01/08
6247.660	1.67E-03 21,27/04/07	1.78E-03 23,03/02/08
6247.604	1.76E-03 05,24/01/07	1.74E-03 05,25/11/07
6247.550	1.73E-03 05,25/01/08	1.63E-03 05,12/11/07
6247.493	1.57E-03 05,07/12/08	1.44E-03 05,25/01/08

X (km):	332.533
Y (km)	
6248.028	9.75E-04 05,24/10/07
6247.977	1.13E-03 20,29/07/07
6247.926	1.01E-03 05,28/12/07
6247.875	1.38E-03 05,28/12/07
6247.822	1.54E-03 05,18/12/08
6247.768	1.60E-03 05,19/12/08
6247.712	1.68E-03 04,31/08/08
6247.660	1.67E-03 24,03/02/08
6247.604	1.60E-03 22,27/04/07
6247.550	1.48E-03 05,24/01/07
6247.493	1.34E-03 03,21/08/08

At the discrete receptors:

1: 5.92E-04 @Hr02,31/08/08	29: 1.29E-03 @Hr23,03/02/08
2: 4.32E-04 @Hr05,11/01/07	30: 1.58E-03 @Hr04,31/08/08
3: 2.40E-04 @Hr05,18/11/07	31: 1.26E-03 @Hr05,30/10/08
4: 1.30E-04 @Hr05,23/01/07	32: 1.70E-03 @Hr20,20/01/08
5: 4.74E-05 @Hr05,01/01/08	33: 1.25E-03 @Hr01,10/11/07
6: 2.70E-05 @Hr02,04/02/08	34: 1.77E-03 @Hr02,26/06/07
7: 1.66E-05 @Hr02,24/03/08	35: 1.22E-03 @Hr05,27/11/08
8: 1.93E-05 @Hr05,29/01/08	36: 1.80E-03 @Hr05,12/11/08
9: 8.14E-06 @Hr04,31/08/08	37: 1.24E-03 @Hr04,31/08/08
10: 1.24E-05 @Hr05,30/11/07	38: 1.79E-03 @Hr05,12/11/08
11: 9.84E-05 @Hr23,02/06/08	39: 1.25E-03 @Hr02,26/06/07
12: 4.26E-05 @Hr23,02/06/08	40: 1.75E-03 @Hr05,19/12/08
13: 3.11E-05 @Hr05,16/01/07	41: 1.74E-03 @Hr02,05/03/07
14: 1.98E-05 @Hr04,26/06/07	42: 1.68E-03 @Hr02,05/03/07
15: 2.19E-05 @Hr05,29/11/08	43: 1.70E-03 @Hr04,08/11/08
16: 1.56E-03 @Hr05,30/11/07	44: 1.71E-03 @Hr04,08/11/08
17: 1.56E-03 @Hr05,19/12/08	45: 1.70E-03 @Hr05,03/12/07
18: 1.61E-03 @Hr05,19/12/08	46: 1.70E-03 @Hr05,19/11/08
19: 3.26E-04 @Hr05,25/01/08	47: 1.71E-03 @Hr05,03/06/08
20: 3.21E-04 @Hr01,04/02/08	48: 1.70E-03 @Hr05,03/06/08
21: 4.12E-04 @Hr05,24/01/07	49: 1.72E-03 @Hr05,07/12/08
22: 4.67E-04 @Hr22,27/04/07	50: 1.73E-03 @Hr05,26/01/08
23: 5.56E-04 @Hr04,30/10/08	51: 1.73E-03 @Hr05,25/01/08
24: 7.24E-04 @Hr04,05/03/07	52: 1.75E-03 @Hr05,28/01/07
25: 9.22E-04 @Hr05,30/10/08	53: 1.76E-03 @Hr01,31/08/08
26: 1.08E-03 @Hr01,10/11/07	54: 1.76E-03 @Hr05,25/01/08
27: 1.27E-03 @Hr05,27/11/08	55: 1.74E-03 @Hr05,28/01/07
28: 1.38E-03 @Hr05,27/11/08	56: 1.78E-03 @Hr05,24/01/07

Appendix H

Greenhouse Gas Emissions Calculations

Project No. 40913
Project: Former Macdonaldtown Gasworks

Greenhouse and Exhaust Emissions Assessment Scope 1 Emissions Macdonaldtown Site

1	List of Plant / Machinery Consuming Fuel		
	excavator	40	L/hour
	truck and dog	0.5	L/km
	air compressor	30	L/hour
	water cart	0.5	L/km

2	Estimate of Fuel Consumption During Material Removal			
	Contaminated soil for Treatment	16215	m3	
		22701	tonnes	EPA (2006) 1m3 material = 1.4 tonnes
	Contaminated soil for Landfill Disposal	3765	m3	
		5271	tonnes	EPA (2006) 1m3 material = 1.4 tonnes
	Number of trips required to disposal of soil to treatment site	756.7	trips	assumes on average one truck + dog trailer trip transports 30 tonnes
	Number of trips required to transfer of soil to landfill	175.7	trips	assumes on average one truck + dog trailer trip transports 30 tonnes
	Distance travelled to dispose soil to landfill	21084	km	(assume 120 km per trip)
	Distance travelled to transfer soil to treatment location	19674.2	km	(assume 26 km per trip)
	Fuel consumed disposing soil to landfill	10542	L	using 0.5L/km consumed by truck + dog trailer
	Fuel consumed transfering soil to treatment site and back	9837.1	L	using 0.5L/km consumed by truck + dog trailer

3	Estimate of Fuel Consumption by On-site Equipment		
	Number of site work days (assumes 6 months of 6 days/week)	154	days
	Number works hours (assumes 9 hours/day)	1386	hours
	Fuel used by 2 Excavators (for project duration)	110880	Litres
	Fuel used by air compressor (x 1 for project duration)	41580	Litres
	Fuel used by water cart (assume 30 km of travel per day)	2310	Litres

4	Estimate of Total fuel Consumed by Project		
	Estimated Volume of Fuel used (site equipment + material removal)	175149	Litres

5	Predicted Scope 1 Emissions			
	Estimated CO2 emission	472.90	(tonnes CO_2-e)	2.7 tonnes CO2 equivalent per kL of diesel fuel consumed (NECC 2009)

Estimated Exhaust Emissions			
Constituent	**Fuel Used**	**Emission Factor**	**Emission (kg)**
VOCs	175149	0.0018	315.27
NOx	175149	0.023	4028.43
CO	175149	0.0068	1191.01
PM10	175149	0.0018	315.27
SO2	175149	0.000017	2.98

Appendix I

Risk Assessment Calculations

Human Health Risk Assessment Calculation

Calculation of Chemical Concentration in Air

(AUSPLUME highest value based on 24h Averaging time)

Assumes all controls in places as per AQMP

Assumes Stage 1 remediation works to be undertaken over 6 month period

Benzene

	Receptor Location					
AUSPLUME SOURCE ID	**1**	**2**	**3**	**4**	**5**	**6**
V1EX	1.27E-03	3.35E-03	2.63E-03	5.32E-04	1.80E-03	2.21E-03
F1	7.67E-08	3.86E-07	6.12E-07	1.49E-07	4.93E-07	4.71E-07
V2EX	4.02E-04	4.15E-03	1.18E-03	1.12E-04	6.13E-04	2.29E-03
F2	1.53E-05	1.43E-04	2.09E-04	3.31E-05	1.38E-04	2.37E-04
WTBE	4.50E-01	3.74E+00	1.76E+00	2.60E-01	1.08E+00	2.67E+00
Highest concentration from any one area						
SUM (micro-g/m3)	4.52E-01	3.74E+00	1.76E+00	2.61E-01	1.09E+00	2.67E+00
SUM (milli-g/m3)	0.000451687	0.003742643	0.00175902	0.000260977	0.001085551	0.002673737

Benzo(a)pyrene

V1EX	9.61E-04	2.42E-03	1.90E-03	3.85E-04	1.30E-03	1.60E-03
F1	4.76E-06	2.39E-05	3.80E-05	4.93E-05	3.06E-05	2.92E-05
V2EX	4.02E-03	4.15E-02	1.18E-02	1.12E-03	6.13E-03	2.29E-02
F2	1.03E-04	1.25E-03	5.77E-04	1.02E-04	3.83E-04	5.77E-04
WTBP	3.77E-04	2.70E-03	2.30E-03	8.13E-04	2.04E-03	3.15E-03
Highest concentration from any one area						
SUM (micro-g/m3)	5.09E-03	4.52E-02	1.43E-02	1.66E-03	7.84E-03	2.51E-02
SUM (milli-g/m3)	5.08876E-06	4.51939E-05	0.000014315	1.6563E-06	7.8436E-06	2.51062E-05

Calculation of Health Risk - Receptor Location 1

CDI = (C * IR * ET * EF * ED) / (365 * AT * BW)

Benzene

	Child 0-5	Child 6-15	Adult 16 - 70		Construction Worker	
C	0.000451687	0.000451687	0.000451687		0.000451687	
IR	0.63	0.78	1.2		1.33	
ET	10	10	10		10	
EF	156	156	156		240	
ED	0.25	0.25	0.25		1	
AT non threshold	70	70	70		70	
AT threshold	1	1	1		1	
BW	13.2	34.5	70		70	
CDI non threshold	3.29062E-07	1.55879E-07	1.18194E-07		8.06143E-07	
CDI threshold	2.30344E-05	1.09115E-05	8.27357E-06		5.643E-05	
SF benzene	0.021	0.021	0.021		0.021	
risk	6.91031E-09	3.27346E-09	2.48207E-09	**1.26658E-08**	1.6929E-08	
RfD benzene	0.0029	0.0029	0.0029		0.0029	
Hazard Index	0.007942886	0.003762593	0.002852955	**0.007942886**	0.019458615	

Benzo(a)pyrene

	Child 0-5	Child 6-15	Adult 16 - 70		Construction Worker	
C	5.08876E-06	5.08876E-06	5.08876E-06		5.08876E-06	
IR	0.63	0.78	1.2		1.33	
ET	10	10	10		8	
EF	78	78	78		240	
ED	0.25	0.25	0.25		1	
AT non threshold	70	70	70		70	
AT threshold	1	1	1		1	
BW	13.2	34.5	70		70	
CDI non threshold	1.85363E-09	8.78074E-10	6.65792E-10		7.26567E-09	
CDI threshold	1.29754E-07	6.14652E-08	4.66055E-08		5.08597E-07	
SF benzo(a)pyrene	304	304	304		304	
risk	5.63503E-07	2.66935E-07	2.02401E-07	**5.63503E-07**	2.20876E-06	

Calculation of Health Risk - Receptor Location 2

CDI = (C * IR * ET * EF * ED) / (365 * AT * BW)

Benzene

	Child 0-5	Child 6-15	Adult 16 - 70		Construction Worker	
C	0.003742643	0.003742643	0.003742643		0.003742643	
IR	0.63	0.78	1.2		1.33	
ET	10	10	10		10	
EF	78	78	78		240	
ED	0.25	0.25	0.25		1	
AT non threshold	70	70	70		70	
AT threshold	1	1	1		1	
BW	13.2	34.5	70		70	
CDI non threshold	1.36329E-06	6.45799E-07	4.89672E-07		6.67963E-06	
CDI threshold	9.54304E-05	4.5206E-05	3.4277E-05		0.000467574	
SF benzene	0.021	0.021	0.021		0.021	
risk	2.86291E-08	1.35618E-08	1.02831E-08	**5.2474E-08**	1.40272E-07	
RfD benzene	0.0029	0.0029	0.0029		0.0029	
Hazard Index	0.03290704	0.015588262	0.011819671	**0.03290704**	0.161232441	

Benzo(a)pyrene

	Child 0-5	Child 6-15	Adult 16 - 70		Construction Worker	
C	4.51939E-05	4.51939E-05	4.51939E-05		4.51939E-05	
IR	0.63	0.78	1.2		1.33	
ET	10	10	10		8	
EF	78	78	78		240	
ED	0.25	0.25	0.25		1	
AT non threshold	70	70	70		70	
AT threshold	1	1	1		1	
BW	13.2	34.5	70		70	
CDI non threshold	1.64623E-08	7.79828E-09	5.91298E-09		6.45273E-08	
CDI threshold	1.15236E-06	5.4588E-07	4.13909E-07		4.51691E-06	
SF benzo(a)pyrene	304	304	304		304	
risk	5.00453E-06	2.37068E-06	1.79755E-06	**9.17276E-06**	1.96163E-05	

Calculation of Health Risk - Receptor Location 3

CDI = (C * IR * ET * EF * ED) / (365 * AT * BW)

Benzene

	Child 0-5	**Child 6-15**	**Adult 16 - 70**		**Construction Worker**	
C	0.00175902	0.00175902	0.00175902		0.00175902	
IR	0.63	0.78	1.2		1.33	
ET	10	10	10		8	
EF	78	78	78		240	
ED	0.25	0.25	0.25		1	
AT non threshold	70	70	70		70	
AT threshold	1	1	1		1	
BW	13.2	34.5	70		70	
CDI non threshold	6.40739E-07	3.03522E-07	2.30143E-07		2.51151E-06	
CDI threshold	4.48517E-05	2.12465E-05	1.611E-05		0.000175806	
SF benzene	0.021	0.021	0.021		0.021	
risk	1.34555E-08	6.37396E-09	4.833E-09	**2.46625E-08**	5.27417E-08	
RfD benzene	0.0029	0.0029	0.0029		0.0029	
Hazard Index	0.015466108	0.007326388	0.005555174	**0.015466108**	0.060622613	

Benzo(a)pyrene						
	Child 0-5	**Child 6-15**	**Adult 16 - 70**		**Construction Worker**	
C	0.000014315	0.000014315	0.000014315		0.000014315	
IR	0.63	0.78	1.2		1.33	
ET	10	10	10		8	
EF	78	78	78		240	
ED	0.25	0.25	0.25		1	
AT non threshold	70	70	70		70	
AT threshold	1	1	1		1	
BW	13.2	34.5	70		70	
CDI non threshold	5.21437E-09	2.47008E-09	1.87292E-09		2.04388E-08	
CDI threshold	3.65006E-07	1.72905E-07	1.31104E-07		1.43072E-06	
SF benzo(a)pyrene	304	304	304		304	
risk	1.58517E-06	7.50904E-07	5.69366E-07	**2.90544E-06**	6.21339E-06	

Calculation of Health Risk - Receptor Location 4

CDI = (C * IR * ET * EF * ED) / (365 * AT * BW)

Benzene

	Child 0-5	Child 6-15	Adult 16 - 70		Construction Worker	
C	0.000260977	0.00175902	0.00175902		0.00175902	
IR	0.63	0.78	1.2		1.33	
ET	10	10	10		8	
EF	78	78	78		240	
ED	0.25	0.25	0.25		1	
AT non threshold	70	70	70		70	
AT threshold	1	1	1		1	
BW	13.2	34.5	70		70	
CDI non threshold	9.50633E-08	3.03522E-07	2.30143E-07		2.51151E-06	
CDI threshold	6.65443E-06	2.12465E-05	1.611E-05		0.000175806	
SF benzene	0.021	0.021	0.021		0.021	
risk	1.99633E-09	6.37396E-09	4.833E-09	**1.32033E-08**	5.27417E-08	
RfD benzene	0.0029	0.0029	0.0029		0.0029	
Hazard Index	0.002294632	0.007326388	0.005555174	**0.007326388**	0.060622613	

Benzo(a)pyrene

	Child 0-5	Child 6-15	Adult 16 - 70		Construction Worker	
C	1.6563E-06	1.6563E-06	1.6563E-06		1.6563E-06	
IR	0.63	0.78	1.2		1.33	
ET	10	10	10		8	
EF	78	78	78		240	
ED	0.25	0.25	0.25		1	
AT non threshold	70	70	70		70	
AT threshold	1	1	1		1	
BW	13.2	34.5	70		70	
CDI non threshold	6.03322E-10	2.85797E-10	2.16703E-10		2.36485E-09	
CDI threshold	4.22326E-08	2.00058E-08	1.51692E-08		1.65539E-07	
SF benzo(a)pyrene	304	304	304		304	
risk	1.8341E-07	8.68824E-08	6.58779E-08	**3.3617E-07**	7.18913E-07	