

APPENDIX 6-E: HYDROCARBON EMISSION SPECIATION PROFILES

**HYDROCARBON EMISSION SPECIATION PROFILES, SYDNEY, MELBOURNE, BRISBANE AND PERTH,
 SCENARIO 1**

Substance	2000	2005	2010	2020
	% w/w Hydrocarbons			
Sydney				
Acetaldehyde	3.2%	3.7%	4.2%	5.5%
Benzene	5.0%	5.2%	5.4%	6.0%
1,3-Butadiene	0.6%	0.6%	0.6%	0.6%
Formaldehyde	2.5%	2.6%	2.8%	3.5%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.4%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.2%	7.8%	7.4%	7.5%
Xylenes (o,m,p)	7.2%	7.0%	6.8%	6.8%
Melbourne				
Acetaldehyde	4.4%	5.1%	5.9%	7.6%
Benzene	5.2%	5.2%	5.4%	5.8%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.1%	3.3%	3.6%	4.5%
PAH (Semi-Volatile)	0.3%	0.4%	0.5%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.0%	7.5%	7.1%	7.0%
Xylenes (o,m,p)	7.1%	6.7%	6.5%	6.4%
Brisbane				
Acetaldehyde	4.9%	5.6%	6.4%	8.6%
Benzene	4.6%	4.5%	4.7%	5.0%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.4%	3.6%	3.9%	5.1%
PAH (Semi-Volatile)	0.4%	0.4%	0.5%	0.7%
PAH as % wt of PM10	0.1%	0.1%	0.2%	0.2%
Toluene	8.0%	7.5%	7.1%	7.1%
Xylenes (o,m,p)	7.0%	6.7%	6.5%	6.4%
Perth				
Acetaldehyde	4.0%	4.6%	5.3%	7.0%
Benzene	4.9%	4.4%	4.5%	4.6%
1,3-Butadiene	0.7%	0.6%	0.5%	0.5%
Formaldehyde	3.0%	3.1%	3.4%	4.2%
PAH (Semi-Volatile)	0.3%	0.4%	0.4%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.3%	7.6%	7.2%	7.0%
Xylenes (o,m,p)	7.2%	6.9%	6.6%	6.4%

PAH = Poly-Aromatic Hydrocarbons
 PM10 = Particulates < 10 µm

**HYDROCARBON EMISSION SPECIATION PROFILES, ADELAIDE, HOBART, CANBERRA AND DARWIN,
 SCENARIO 1**

Substance	2000	2005	2010	2020
	% w/w Hydrocarbons			
Adelaide				
Acetaldehyde	3.2%	3.7%	4.3%	5.7%
Benzene	5.6%	5.7%	5.8%	6.3%
1,3-Butadiene	0.7%	0.6%	0.5%	0.5%
Formaldehyde	2.6%	2.6%	2.8%	3.6%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.5%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.3%	7.7%	7.4%	7.3%
Xylenes (o,m,p)	7.3%	6.9%	6.7%	6.6%
Hobart				
Acetaldehyde	4.4%	5.1%	6.0%	8.0%
Benzene	5.2%	5.2%	5.4%	5.7%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.2%	3.4%	3.7%	4.8%
PAH (Semi-Volatile)	0.3%	0.4%	0.5%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.2%	7.6%	7.1%	6.9%
Xylenes (o,m,p)	7.1%	6.8%	6.5%	6.3%
Canberra				
Acetaldehyde	2.8%	3.2%	3.7%	5.1%
Benzene	5.1%	5.2%	5.4%	6.2%
1,3-Butadiene	0.6%	0.6%	0.6%	0.6%
Formaldehyde	2.3%	2.4%	2.6%	3.3%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.4%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.3%	7.9%	7.6%	7.9%
Xylenes (o,m,p)	7.3%	7.1%	6.9%	7.2%
Darwin				
Acetaldehyde	5.7%	6.6%	7.8%	11.0%
Benzene	4.9%	4.3%	4.2%	4.5%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.8%	4.1%	4.7%	6.4%
PAH (Semi-Volatile)	0.5%	0.5%	0.6%	0.9%
PAH as % wt of PM10	0.1%	0.2%	0.2%	0.3%
Toluene	7.8%	7.4%	7.0%	7.2%
Xylenes (o,m,p)	6.9%	6.6%	6.3%	6.4%

PAH = Poly-Aromatic Hydrocarbons
 PM10 = Particulates < 10 µm

**HYDROCARBON EMISSION SPECIATION PROFILES, SYDNEY, MELBOURNE, BRISBANE AND PERTH,
 SCENARIO 2**

Substance	2000	2005	2010	2020
	% w/w Hydrocarbons			
Sydney				
Acetaldehyde	3.2%	3.7%	4.2%	5.5%
Benzene	5.0%	5.3%	6.0%	6.7%
1,3-Butadiene	0.6%	0.6%	0.6%	0.6%
Formaldehyde	2.5%	2.6%	2.8%	3.5%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.4%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.2%	7.8%	7.4%	7.5%
Xylenes (o,m,p)	7.2%	7.0%	6.8%	6.8%
Melbourne				
Acetaldehyde	4.4%	5.1%	5.9%	7.6%
Benzene	5.2%	5.3%	5.9%	6.5%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.1%	3.3%	3.6%	4.5%
PAH (Semi-Volatile)	0.3%	0.4%	0.5%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.0%	7.5%	7.1%	7.0%
Xylenes (o,m,p)	7.1%	6.7%	6.5%	6.4%
Brisbane				
Acetaldehyde	4.9%	5.6%	6.4%	8.6%
Benzene	4.6%	4.5%	5.0%	5.4%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.4%	3.6%	3.9%	5.1%
PAH (Semi-Volatile)	0.4%	0.4%	0.5%	0.7%
PAH as % wt of PM10	0.1%	0.1%	0.2%	0.2%
Toluene	8.0%	7.5%	7.1%	7.1%
Xylenes (o,m,p)	7.0%	6.7%	6.5%	6.4%
Perth				
Acetaldehyde	4.0%	4.6%	5.3%	7.0%
Benzene	4.9%	4.4%	4.6%	4.8%
1,3-Butadiene	0.7%	0.6%	0.5%	0.5%
Formaldehyde	3.0%	3.1%	3.4%	4.2%
PAH (Semi-Volatile)	0.3%	0.4%	0.4%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.3%	7.6%	7.2%	7.0%
Xylenes (o,m,p)	7.2%	6.9%	6.6%	6.4%

PAH = Poly-Aromatic Hydrocarbons
 PM10 = Particulates < 10 µm

**HYDROCARBON EMISSION SPECIATION PROFILES, ADELAIDE, HOBART, CANBERRA AND DARWIN,
 SCENARIO 2**

Substance	2000	2005	2010	2020
	% w/w Hydrocarbons			
Adelaide				
Acetaldehyde	3.2%	3.7%	4.3%	5.7%
Benzene	5.6%	5.7%	6.2%	6.9%
1,3-Butadiene	0.7%	0.6%	0.5%	0.5%
Formaldehyde	2.6%	2.6%	2.8%	3.6%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.5%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.3%	7.7%	7.4%	7.3%
Xylenes (o,m,p)	7.3%	6.9%	6.7%	6.6%
Hobart				
Acetaldehyde	4.4%	5.1%	6.0%	8.0%
Benzene	5.2%	5.3%	5.9%	6.4%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.2%	3.4%	3.7%	4.8%
PAH (Semi-Volatile)	0.3%	0.4%	0.5%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.2%	7.6%	7.1%	6.9%
Xylenes (o,m,p)	7.1%	6.8%	6.5%	6.3%
Canberra				
Acetaldehyde	2.8%	3.2%	3.7%	5.1%
Benzene	5.1%	5.3%	6.0%	7.0%
1,3-Butadiene	0.6%	0.6%	0.6%	0.6%
Formaldehyde	2.3%	2.4%	2.6%	3.3%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.4%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.3%	7.9%	7.6%	7.9%
Xylenes (o,m,p)	7.3%	7.1%	6.9%	7.2%
Darwin				
Acetaldehyde	5.7%	6.6%	7.8%	11.0%
Benzene	4.9%	4.3%	4.4%	4.7%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.8%	4.1%	4.7%	6.4%
PAH (Semi-Volatile)	0.5%	0.5%	0.6%	0.9%
PAH as % wt of PM10	0.1%	0.2%	0.2%	0.3%
Toluene	7.8%	7.4%	7.0%	7.2%
Xylenes (o,m,p)	6.9%	6.6%	6.3%	6.4%

PAH = Poly-Aromatic Hydrocarbons
 PM10 = Particulates < 10 µm

**HYDROCARBON EMISSION SPECIATION PROFILES, SYDNEY, MELBOURNE, BRISBANE AND PERTH,
 SCENARIO 3**

Substance	2000	2005	2010	2020
% w/w Hydrocarbons				
Sydney				
Acetaldehyde	3.2%	3.7%	4.2%	5.5%
Benzene	5.0%	5.2%	5.4%	5.7%
1,3-Butadiene	0.6%	0.6%	0.6%	0.6%
Formaldehyde	2.5%	2.6%	2.8%	3.5%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.4%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.2%	7.8%	7.4%	7.5%
Xylenes (o,m,p)	7.2%	7.0%	6.8%	6.8%
Melbourne				
Acetaldehyde	4.4%	5.1%	5.9%	7.6%
Benzene	5.1%	5.1%	5.2%	5.5%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.1%	3.3%	3.6%	4.5%
PAH (Semi-Volatile)	0.3%	0.4%	0.5%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.0%	7.5%	7.1%	7.0%
Xylenes (o,m,p)	7.1%	6.7%	6.5%	6.4%
Brisbane				
Acetaldehyde	4.9%	5.6%	6.4%	8.6%
Benzene	4.6%	4.4%	4.8%	5.0%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.4%	3.6%	3.9%	5.1%
PAH (Semi-Volatile)	0.4%	0.4%	0.5%	0.7%
PAH as % wt of PM10	0.1%	0.1%	0.2%	0.2%
Toluene	8.0%	7.5%	7.1%	7.1%
Xylenes (o,m,p)	7.0%	6.7%	6.5%	6.4%
Perth				
Acetaldehyde	4.0%	4.6%	5.3%	7.0%
Benzene	5.1%	4.4%	4.6%	4.8%
1,3-Butadiene	0.7%	0.6%	0.5%	0.5%
Formaldehyde	3.0%	3.1%	3.4%	4.2%
PAH (Semi-Volatile)	0.3%	0.4%	0.4%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.3%	7.6%	7.2%	7.0%
Xylenes (o,m,p)	7.2%	6.9%	6.6%	6.4%

PAH = Poly-Aromatic Hydrocarbons
 PM10 = Particulates < 10 µm

**HYDROCARBON EMISSION SPECIATION PROFILES, ADELAIDE, HOBART, CANBERRA AND DARWIN,
 SCENARIO 3**

Substance	2000	2005	2010	2020
	% w/w Hydrocarbons			
Adelaide				
Acetaldehyde	3.2%	3.7%	4.3%	5.7%
Benzene	5.6%	5.6%	5.6%	6.0%
1,3-Butadiene	0.7%	0.6%	0.5%	0.5%
Formaldehyde	2.6%	2.6%	2.8%	3.6%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.5%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.3%	7.7%	7.4%	7.3%
Xylenes (o,m,p)	7.3%	6.9%	6.7%	6.6%
Hobart				
Acetaldehyde	4.4%	5.1%	6.0%	8.0%
Benzene	5.1%	5.1%	5.2%	5.4%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.2%	3.4%	3.7%	4.8%
PAH (Semi-Volatile)	0.3%	0.4%	0.5%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.2%	7.6%	7.1%	6.9%
Xylenes (o,m,p)	7.1%	6.8%	6.5%	6.3%
Canberra				
Acetaldehyde	2.8%	3.2%	3.7%	5.1%
Benzene	5.1%	5.2%	5.4%	6.0%
1,3-Butadiene	0.6%	0.6%	0.6%	0.6%
Formaldehyde	2.3%	2.4%	2.6%	3.3%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.4%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.3%	7.9%	7.6%	7.9%
Xylenes (o,m,p)	7.3%	7.1%	6.9%	7.2%
Darwin				
Acetaldehyde	5.7%	6.6%	7.8%	11.0%
Benzene	5.1%	4.3%	4.4%	4.7%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.8%	4.1%	4.7%	6.4%
PAH (Semi-Volatile)	0.5%	0.5%	0.6%	0.9%
PAH as % wt of PM10	0.1%	0.2%	0.2%	0.3%
Toluene	7.8%	7.4%	7.0%	7.2%
Xylenes (o,m,p)	6.9%	6.6%	6.3%	6.4%

PAH = Poly-Aromatic Hydrocarbons
 PM10 = Particulates < 10 µm

**HYDROCARBON EMISSION SPECIATION PROFILES, SYDNEY, MELBOURNE, BRISBANE AND PERTH,
 SCENARIO 4**

Substance	2000	2005	2010	2020
	% w/w Hydrocarbons			
Sydney				
Acetaldehyde	3.2%	3.7%	4.2%	5.5%
Benzene	5.0%	4.4%	4.4%	4.5%
1,3-Butadiene	0.6%	0.6%	0.6%	0.6%
Formaldehyde	2.5%	2.6%	2.8%	3.5%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.4%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.2%	7.8%	7.4%	7.5%
Xylenes (o,m,p)	7.2%	7.0%	6.8%	6.8%
Melbourne				
Acetaldehyde	4.4%	5.1%	5.9%	7.6%
Benzene	5.1%	4.1%	4.1%	4.3%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.1%	3.3%	3.6%	4.5%
PAH (Semi-Volatile)	0.3%	0.4%	0.5%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.0%	7.5%	7.1%	7.0%
Xylenes (o,m,p)	7.1%	6.7%	6.5%	6.4%
Brisbane				
Acetaldehyde	4.9%	5.6%	6.4%	8.6%
Benzene	4.6%	4.0%	4.1%	4.2%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.4%	3.6%	3.9%	5.1%
PAH (Semi-Volatile)	0.4%	0.4%	0.5%	0.7%
PAH as % wt of PM10	0.1%	0.1%	0.2%	0.2%
Toluene	8.0%	7.5%	7.1%	7.1%
Xylenes (o,m,p)	7.0%	6.7%	6.5%	6.4%
Perth				
Acetaldehyde	4.0%	4.6%	5.3%	7.0%
Benzene	5.1%	4.4%	4.4%	4.3%
1,3-Butadiene	0.7%	0.6%	0.5%	0.5%
Formaldehyde	3.0%	3.1%	3.4%	4.2%
PAH (Semi-Volatile)	0.3%	0.4%	0.4%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.3%	7.6%	7.2%	7.0%
Xylenes (o,m,p)	7.2%	6.9%	6.6%	6.4%

PAH = Poly-Aromatic Hydrocarbons
 PM10 = Particulates < 10 µm

**HYDROCARBON EMISSION SPECIATION PROFILES, ADELAIDE, HOBART, CANBERRA AND DARWIN,
 SCENARIO 4**

Substance	2000	2005	2010	2020
	% w/w Hydrocarbons			
Adelaide				
Acetaldehyde	3.2%	3.7%	4.3%	5.7%
Benzene	5.6%	4.5%	4.4%	4.4%
1,3-Butadiene	0.7%	0.6%	0.5%	0.5%
Formaldehyde	2.6%	2.6%	2.8%	3.6%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.5%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.3%	7.7%	7.4%	7.3%
Xylenes (o,m,p)	7.3%	6.9%	6.7%	6.6%
Hobart				
Acetaldehyde	4.4%	5.1%	6.0%	8.0%
Benzene	5.1%	4.1%	4.1%	4.3%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.2%	3.4%	3.7%	4.8%
PAH (Semi-Volatile)	0.3%	0.4%	0.5%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.2%	7.6%	7.1%	6.9%
Xylenes (o,m,p)	7.1%	6.8%	6.5%	6.3%
Canberra				
Acetaldehyde	2.8%	3.2%	3.7%	5.1%
Benzene	5.1%	4.5%	4.4%	4.7%
1,3-Butadiene	0.6%	0.6%	0.6%	0.6%
Formaldehyde	2.3%	2.4%	2.6%	3.3%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.4%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.3%	7.9%	7.6%	7.9%
Xylenes (o,m,p)	7.3%	7.1%	6.9%	7.2%
Darwin				
Acetaldehyde	5.7%	6.6%	7.8%	11.0%
Benzene	5.1%	4.3%	4.1%	4.3%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.8%	4.1%	4.7%	6.4%
PAH (Semi-Volatile)	0.5%	0.5%	0.6%	0.9%
PAH as % wt of PM10	0.1%	0.2%	0.2%	0.3%
Toluene	7.8%	7.4%	7.0%	7.2%
Xylenes (o,m,p)	6.9%	6.6%	6.3%	6.4%

PAH = Poly-Aromatic Hydrocarbons
 PM10 = Particulates < 10 µm

**HYDROCARBON EMISSION SPECIATION PROFILES, SYDNEY, MELBOURNE, BRISBANE AND PERTH,
 SCENARIO 5**

Substance	2000	2005	2010	2020
	% w/w Hydrocarbons			
Sydney				
Acetaldehyde	3.2%	3.7%	4.2%	5.5%
Benzene	5.0%	4.4%	4.4%	4.5%
1,3-Butadiene	0.6%	0.6%	0.6%	0.6%
Formaldehyde	2.5%	2.6%	2.8%	3.5%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.4%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.2%	7.8%	7.4%	7.5%
Xylenes (o,m,p)	7.2%	7.0%	6.8%	6.8%
Melbourne				
Acetaldehyde	4.4%	5.1%	5.9%	7.6%
Benzene	5.1%	4.1%	4.1%	4.3%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.1%	3.3%	3.6%	4.5%
PAH (Semi-Volatile)	0.3%	0.4%	0.5%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.0%	7.5%	7.1%	7.0%
Xylenes (o,m,p)	7.1%	6.7%	6.5%	6.4%
Brisbane				
Acetaldehyde	4.9%	5.6%	6.4%	8.6%
Benzene	4.6%	4.0%	4.1%	4.2%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.4%	3.6%	3.9%	5.1%
PAH (Semi-Volatile)	0.4%	0.4%	0.5%	0.7%
PAH as % wt of PM10	0.1%	0.1%	0.2%	0.2%
Toluene	8.0%	7.5%	7.1%	7.1%
Xylenes (o,m,p)	7.0%	6.7%	6.5%	6.4%
Perth				
Acetaldehyde	4.0%	4.6%	5.3%	7.0%
Benzene	5.1%	4.4%	4.4%	4.3%
1,3-Butadiene	0.7%	0.6%	0.5%	0.5%
Formaldehyde	3.0%	3.1%	3.4%	4.2%
PAH (Semi-Volatile)	0.3%	0.4%	0.4%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.3%	7.6%	7.2%	7.0%
Xylenes (o,m,p)	7.2%	6.9%	6.6%	6.4%

PAH = Poly-Aromatic Hydrocarbons
 PM10 = Particulates < 10 µm

**HYDROCARBON EMISSION SPECIATION PROFILES, ADELAIDE, HOBART, CANBERRA AND DARWIN,
 SCENARIO 5**

Substance	2000	2005	2010	2020
	% w/w Hydrocarbons			
Adelaide				
Acetaldehyde	3.2%	3.7%	4.3%	5.7%
Benzene	5.6%	4.5%	4.4%	4.4%
1,3-Butadiene	0.7%	0.6%	0.5%	0.5%
Formaldehyde	2.6%	2.6%	2.8%	3.6%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.5%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.3%	7.7%	7.4%	7.3%
Xylenes (o,m,p)	7.3%	6.9%	6.7%	6.6%
Hobart				
Acetaldehyde	4.4%	5.1%	6.0%	8.0%
Benzene	5.1%	4.1%	4.1%	4.2%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.2%	3.4%	3.7%	4.8%
PAH (Semi-Volatile)	0.3%	0.4%	0.5%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.2%	7.6%	7.1%	6.9%
Xylenes (o,m,p)	7.1%	6.8%	6.5%	6.3%
Canberra				
Acetaldehyde	2.8%	3.2%	3.7%	5.1%
Benzene	5.1%	4.5%	4.4%	4.7%
1,3-Butadiene	0.6%	0.6%	0.6%	0.6%
Formaldehyde	2.3%	2.4%	2.6%	3.3%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.4%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.3%	7.9%	7.6%	7.9%
Xylenes (o,m,p)	7.3%	7.1%	6.9%	7.2%
Darwin				
Acetaldehyde	5.7%	6.6%	7.8%	11.0%
Benzene	5.1%	4.3%	4.1%	4.3%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.8%	4.1%	4.7%	6.4%
PAH (Semi-Volatile)	0.5%	0.5%	0.6%	0.9%
PAH as % wt of PM10	0.1%	0.2%	0.2%	0.3%
Toluene	7.8%	7.4%	7.0%	7.2%
Xylenes (o,m,p)	6.9%	6.6%	6.3%	6.4%

PAH = Poly-Aromatic Hydrocarbons
 PM10 = Particulates < 10 µm

**HYDROCARBON EMISSION SPECIATION PROFILES, SYDNEY, MELBOURNE, BRISBANE AND PERTH,
 SCENARIO 6**

Substance	2000	2005	2010	2020
% w/w Hydrocarbons				
Sydney				
Acetaldehyde	3.2%	3.7%	4.2%	5.5%
Benzene	5.0%	4.3%	4.4%	4.5%
1,3-Butadiene	0.6%	0.6%	0.6%	0.6%
Formaldehyde	2.5%	2.6%	2.8%	3.5%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.4%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.2%	7.8%	7.4%	7.5%
Xylenes (o,m,p)	7.2%	7.0%	6.8%	6.8%
Melbourne				
Acetaldehyde	4.4%	5.1%	5.9%	7.6%
Benzene	5.1%	4.0%	4.1%	4.3%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.1%	3.3%	3.6%	4.5%
PAH (Semi-Volatile)	0.3%	0.4%	0.5%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.0%	7.5%	7.1%	7.0%
Xylenes (o,m,p)	7.1%	6.7%	6.5%	6.4%
Brisbane				
Acetaldehyde	4.9%	5.6%	6.4%	8.6%
Benzene	4.6%	4.0%	4.1%	4.2%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.4%	3.6%	3.9%	5.1%
PAH (Semi-Volatile)	0.4%	0.4%	0.5%	0.7%
PAH as % wt of PM10	0.1%	0.1%	0.2%	0.2%
Toluene	8.0%	7.5%	7.1%	7.1%
Xylenes (o,m,p)	7.0%	6.7%	6.5%	6.4%
Perth				
Acetaldehyde	4.0%	4.6%	5.3%	7.0%
Benzene	5.1%	4.4%	4.4%	4.3%
1,3-Butadiene	0.7%	0.6%	0.5%	0.5%
Formaldehyde	3.0%	3.1%	3.4%	4.2%
PAH (Semi-Volatile)	0.3%	0.4%	0.4%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.3%	7.6%	7.2%	7.0%
Xylenes (o,m,p)	7.2%	6.9%	6.6%	6.4%

PAH = Poly-Aromatic Hydrocarbons
 PM10 = Particulates < 10 µm

**HYDROCARBON EMISSION SPECIATION PROFILES, ADELAIDE, HOBART, CANBERRA AND DARWIN,
 SCENARIO 6**

Substance	2000	2005	2010	2020
% w/w Hydrocarbons				
Adelaide				
Acetaldehyde	3.2%	3.7%	4.3%	5.7%
Benzene	5.6%	4.5%	4.4%	4.4%
1,3-Butadiene	0.7%	0.6%	0.5%	0.5%
Formaldehyde	2.6%	2.6%	2.8%	3.6%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.5%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.3%	7.7%	7.4%	7.3%
Xylenes (o,m,p)	7.3%	6.9%	6.7%	6.6%
Hobart				
Acetaldehyde	4.4%	5.1%	6.0%	8.0%
Benzene	5.1%	4.1%	4.1%	4.2%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.2%	3.4%	3.7%	4.8%
PAH (Semi-Volatile)	0.3%	0.4%	0.5%	0.6%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.2%
Toluene	8.2%	7.6%	7.1%	6.9%
Xylenes (o,m,p)	7.1%	6.8%	6.5%	6.3%
Canberra				
Acetaldehyde	2.8%	3.2%	3.7%	5.1%
Benzene	5.1%	4.4%	4.4%	4.7%
1,3-Butadiene	0.6%	0.6%	0.6%	0.6%
Formaldehyde	2.3%	2.4%	2.6%	3.3%
PAH (Semi-Volatile)	0.2%	0.3%	0.3%	0.4%
PAH as % wt of PM10	0.1%	0.1%	0.1%	0.1%
Toluene	8.3%	7.9%	7.6%	7.9%
Xylenes (o,m,p)	7.3%	7.1%	6.9%	7.2%
Darwin				
Acetaldehyde	5.7%	6.6%	7.8%	11.0%
Benzene	5.1%	4.2%	4.1%	4.3%
1,3-Butadiene	0.6%	0.6%	0.5%	0.5%
Formaldehyde	3.8%	4.1%	4.7%	6.4%
PAH (Semi-Volatile)	0.5%	0.5%	0.6%	0.9%
PAH as % wt of PM10	0.1%	0.2%	0.2%	0.3%
Toluene	7.8%	7.4%	7.0%	7.2%
Xylenes (o,m,p)	6.9%	6.6%	6.3%	6.4%

PAH = Poly-Aromatic Hydrocarbons
 PM10 = Particulates < 10 µm