



AMBIENT AIR MONITORING DATA — BROOKLAND GREEN ESTATE, CRANBOURNE

WHAT AND WHERE WERE THE GASES MONITORED?

EPA conducted monitoring in September and October 2008 for a range of gases within the Brookland Greens residential estate located next to the former Stevensons Road Landfill, Cranbourne.

The outside, ambient air within the estate was monitored within the backyards of homes at three locations:

- Powerscout Retreat
- St Mellion Court
- Rosslare Place.

The types of gases monitored for include a range of pollutants that are widely spread in the environment and can be hazardous to human health if present in high enough concentrations. The table below lists the types of gases monitored for last September/October.

METHODS USED TO MONITOR THE GASES

Air samples were collected over a 24 hour period in canisters placed in the backyard of 3 homes. The samples were analysed using a gas chromatograph - mass spectrometer (GC- mass spec).

The GC-Mass Spec is used to identify what pollutants are present within the air samples taken within the Brookland Greens estate and at what concentrations.

The air quality data collected has been compared against air quality objectives used by the EPA to assess the risk that these gases may pose to human health.

The air quality objectives are a set of concentrations, determined by scientific research, which have been found to protect the health of people when they may be in contact with the pollutant for 24 hours a day, 7 days a week, over a 70 year lifetime. The objectives contain a margin of safety that ensures protection of people who may be more sensitive to exposure to the pollutants, such as people with existing illness, children and older adults. The objectives used have been taken from two sources:

- for xylenes, the values have been taken from the Air Toxics National Environment Protection Measure (Air Toxics NEPM)
- for the other pollutants, the values have been obtained from the Texas Centre for Environmental Quality (TCEQ).

RESULTS

Please refer to the following table for the results of air quality analysis. Samples were taken on 2 separate days in St Mellion Crt, Powerscout Retreat and Rosslare Place.

Results of samples from Powerscout Retreat and Rosslare Place showed levels of gases below the 1ppb.

For most of the gases measured at St Mellion Court the concentrations were below one part per billion (ppb). Where concentrations were recorded above 1ppb, the values were well below the air quality objectives and were therefore present at levels that would not pose a risk to the health of the local community.

CONCLUSION

EPA can conclude from the sampling conducted, that all the gases monitored within the estate were at levels that did not pose a risk to the health of the local community.

For more information on air quality monitoring conducted within Victoria by EPA, please click on the following link: www.epa.vic.gov.au/air/monitoring/air_toxics.asp

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Compound	Measured concentrations (ppb) Powerscout Retreat (1)	Measured concentrations (ppb) St Mellion Court (1)	Measured concentrations (ppb) Rosslare Place (1)	Measured concentrations (ppb) Powerscout Retreat (2)	Measured concentrations (ppb) St Mellion Court (2)	Measured concentrations (ppb) Rosslare Place (2)
Vinyl chloride	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane*	<1	<1	<1	<1	<1	<1
Trichloroethene	<1	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1
trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1
Tetrahydrofuran	<1	<1	<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<1	<1
Styrene*	<1	2.2	<1	<1	<1	<1
o-Xylene	<1	2	<1	<1	<1	<1
MIBK	<1	<1	<1	<1	<1	<1
Methyl tert butyl ether	<1	<1	<1	<1	<1	<1
Methyl butyl ketone	<1	<1	<1	<1	<1	<1
Methyl ethyl ketone*	<1	<1	<1	<1	<1	<1
m- & p-Xylene	<1	4.5	<1	<1	<1	<1
Hexachloro-1,3-butadiene	<1	<1	<1	<1	<1	<1
Heptane	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1
Ethyl acetate	<1	<1	<1	<1	<1	<1
Dichloromethane	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1	<1	<1
Dibromochloromethane	<1	<1	<1	<1	<1	<1
Cyclohexane	<1	6.3	<1	<1	<1	<1
cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1
cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1
Carbon disulfide	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1
Benzene	<1	<1	<1	<1	<1	<1
4-Ethyltoluene	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1	<1	<1
1,3-Butadiene	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1	<1	<1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	<1	3.4	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1	<1	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1	<1	<1

* Objectives based on odour threshold which is more stringent than toxicity