INFORMATION BULLETIN

DANDENONG SOUTH AIR MONITORING PROGRAM: REPORT ONE UPDATE*

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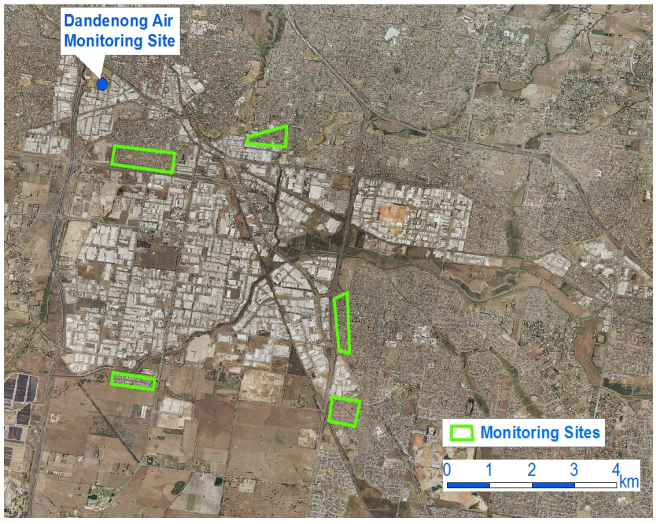
WHY AND WHERE IS EPA MEASURING?

In April 2011 EPA Victoria started an air monitoring program to assess the impact of the Dandenong South industrial zone on air quality in surrounding residential areas. This air quality assessment was initiated in response to community concerns about emissions from the Dandenong South industrial 2 zone and Lyndhurst prescribed waste landfill.

The monitoring program is measuring the levels of specific air pollutants and this report presents the interim results of the monitoring from April 2011 to July 2011 at the residential locations.

Air monitoring is being conducted over a 12 month period at five residential locations surrounding the industrial zone and Lyndhurst landfill. The sites are located in Bangholme, Lynbrook, Hampton Park, Doveton and Dandenong South. The general locations of the sampling sites are marked in green on the aerial photo below.

A statistically sound air quality risk assessment requires about 12 months of data to ensure seasonal variations are considered and to enable assessment of risk for low-level or chronic exposure. EPA will continue to provide interim findings on the analysis every three months.



HOW ARE THE RESULTS ASSESSED?

The air quality data collected is compared against national and international air quality values to assess the risk that these gases may pose to human health. These air quality values are determined by scientific research to protect people's health when they may be in contact with the air pollutant for a short period (up to two weeks) or longer period of one year or more.

These values contain a margin of safety that ensures protection of people who may be more sensitive to breathing air pollutants such as children or older people.

The air quality values used for this assessment have been recommended by the Department of Health and have been taken from the following sources:

- The Air Toxics National Environment Protection Measure (Air Toxics NEPM); and
- For the other pollutants, the values have been obtained from the Texas Centre for Environmental Quality (TCEQ), California's Office of Environmental Health Hazard Assessment (OEHHA), Ontario Ministry of the Environment (Ontario), United Stated Environment Protection Agency (US EPA)

WHAT DO THE RESULTS TELL US?

The results so far indicate the low levels being measured are not a risk to health and more than half of the 63 compounds analysed were not detected.

Of the 24 compounds that have been detected, 17 were well below the relevant air quality value and a further 7 will be assessed at the end of the 12 month monitoring program.

PRIORITY POLLUTANTS

In March 2011 when EPA was designing its air monitoring program, a group of 15 compounds (listed over page) were identified as priority pollutants.

EPA's air pollution emission inventory identified these compounds as being in the highest quantities in the Dandenong area.

* This report is an updated version from the original Dandenong South Air Monitoring Program: Report One. For details, please refer to Page 3.

These were:

1. ethanol
2. dichloromethane
3. toluene
4. xylene
5. methyl ethyl ketone
6. ethyl acetate
7. acetone
8. trichloroethene
9. methyl isobutyl ketone (MIBK)
10. n-hexane
11. benzene
12. tetrachloroethylene
13. styrene
14. ethylbenzene
15. cyclohexane.

For the first round of air monitoring results, the majority of the 15 priority pollutants were detected at low levels or not at all.

Four have no short term air quality value and will be assessed against the long term air quality value at the end of the program.

A summary of the levels of the compounds detected are listed in Table 1 and the compounds not detected are listed in Table 2.

Table 1: Dandenong South air monitoring results 27 April 2011 – 26 July 2011

Compound Name	Site 1		Site 2		Site 3		Site 4		Site 5		Guideline		
	Avg ppb	Max ppb	Avg ppb	Max ppb	Avg ppb	Max ppb	Avg ppb	Max ppb	Avg ppb	Max ppb	ppb	Averaging period	Air quality standard
Ethanol	6.2	12.0	4.3	11.6	4.7	9.9	5.3	14.0	6.7	32.3	3,715,000	Annual	ATSDR
Acetone	3.9	8.0	4.3	9.6	3.5	7.4	3.1	6.5	2.8	4.2	4,752	24 Hour	Ontario
Toluene	1.6	5.4	1.6	4.8	1.8	5.3	1.8	5.0	2.1	7.1	1,000	24 Hour	NEPM
Methyl butyl ketone	0.6	6.3	bdl	0.7	bdl	1.3	bdl	bdl	bdl	bdl	1.0	Annual	TCEQ
m- & p-Xylene	0.8	2.4	0.8	2.5	bdl	2.5	0.8	2.3	1.0	3.6	250	24 Hour	NEPM
Methylene Chloride	0.7	2.8	bdl	bdl	bdl	0.6	bdl	1.5	bdl	0.6	60	24 Hour	Ontario
Carbon disulfide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	2.4	bdl	1.8	300	Annual	ATSDR
Isopropyl Alcohol	0.9	2.3	bdl	1.2	0.5	1.6	0.5	1.7	1.1	2.0	2,822	24 Hour	Ontario
Methyl ethyl ketone	0.6	1.4	0.6	2.2	0.5	1.1	0.5	1.3	0.5	1.0	322	24 Hour	Ontario
Acrolein	bdl	0.9	bdl	0.9	bdl	0.7	bdl	1.0	bdl	1.9	3	24 Hour	ATSDR
Heptane	bdl	0.6	bdl	bdl	bdl	bdl	bdl	1.6	bdl	0.6	2,551	24 Hour	Ontario
Chloromethane	0.7	1.5	0.7	0.9	bdl	1.3	0.7	0.9	0.6	0.8	147	24 Hour	Ontario
Benzene	bdl	0.7	bdl	1.1	bdl	1.0	bdl	1.2	bdl	1.3	3.0	Annual	NEPM
o-Xylene	bdl	0.9	bdl	0.9	bdl	0.9	bdl	0.8	bdl	1.3	250	24 Hour	NEPM
Ethyl acetate	bdl	0.8	bdl	0.7	bdl	bdl	bdl	0.7	bdl	1.1	400	Annual	TCEQ
Vinyl acetate	bdl	bdl	bdl	bdl	bdl	1.1	bdl	0.8	bdl	bdl	10	Annual	ATSDR
1,4-Dioxane	bdl	bdl	bdl	1.1	bdl	bdl	bdl	bdl	bdl	bdl	923	24 Hour	Ontario
Hexane	bdl	0.6	bdl	0.9	bdl	0.6	bdl	0.8	bdl	0.9	600	Annual	ATSDR
Ethylbenzene	bdl	0.5	bdl	0.6	bdl	0.6	bdl	0.6	bdl	0.9	5,000	24 Hour	ATSDR
Styrene	bdl	0.9	bdl	0.8	bdl	0.5	bdl	bdl	bdl	0.8	89	24 Hour	Ontario
Methyl isobutyl ketone	bdl	bdl	bdl	0.9	bdl	0.8	bdl	bdl	bdl	bdl	278	24 Hour	Ontario
1,2,4-Trichlorobenzene	bdl	bdl	bdl	0.8	bdl	bdl	bdl	bdl	bdl	bdl	51	24 Hour	Ontario
Cyclohexane	bdl	0.6	bdl	bdl	bdl	bdl	bdl	0.5	bdl	0.7	1,684	24 Hour	Ontario
Dichloro-difluoromethane	bdl	0.6	bdl	0.6	bdl	0.6	0.5	0.6	bdl	0.6	96,063	24 Hour	Ontario

Key: *bdl* – below detectable limit (0.5 ppb), N/A – no appropriate standard

Table 2: Compounds not detected during air monitoring at Dandenong South

Compound Name		
1,3-Butadiene	1,2-Dibromoethane	1,1-Dichloroethylene
4-Ethyltoluene	Bromoform	trans-1,2-Dichloroethylene
1,3,5-Trimethylbenzene	Chloroethane	cis-1,2-Dichloroethylene
Methyl tert-butyl ether	1,1-Dichloroethane	Trichloroethylene
Tetrahydrofuran	1,2-Dichloroethane	cis-1,3-dichloropropene
Methyl methacrylate	1,1,1-Trichloroethane	trans-1,3-dichloropropene
Dichlorotetrafluoroethane	1,2-Dichloropropane	Tetrachloroethylene
Trichlorofluoromethane	1,1,2-Trichloroethane	Chlorobenzene
1,1,2-Trichloro-1,2,2-trifluoroethane	1,1,2,2-Tetrachloroethane	Benzyl chloride
Bromomethane	Chloroform	1,3-Dichlorobenzene
Bromodichloromethane	Carbon tetrachloride	1,4-Dichlorobenzene
Dibromochloromethane	Vinyl chloride	1,2-Dichlorobenzene
1,2,4-Trichlorobenzene	Hexachlorobutadiene	Naphthalene

* This report is an updated version from the original Dandenong South Air Monitoring Program: Report One. Three compounds (1,2,4-Trichlorobenzene, Hexachlorobutadiene and Naphthalene) that had originally been detected on one sampling day at one single location are now not reported as detected. This is due to technical problems with the analysis of these compounds in that particular sample. Tables 1 and 2 have been updated to reflect this information, with the three compounds now listed in Table 2 as compounds not detected during air monitoring.