

Botany Groundwater Cleanup Project

Fact Sheet 1

Updated January 2005

Fact sheets are designed to provide the community with simple and easy-to-understand information on environmental science and technology. Readers requiring greater detail should contact Orica:

- by email to info@oricabotanygroundwater.com
- by phoning our Community Feedback Line - 1800 025 138
- by writing to - Community Matters, 16-20 Beauchamp Road, Matraville 2036

Trials at Lidcombe Waste Treatment Plant

This fact sheet is no longer applicable, but remains available online to provide relevant background information on the project and ensure that there is a complete record of Orica's public communications.

In April and May 2004 tankers transported 260 tonnes (approximately 20 loads) of contaminated groundwater to Lidcombe. The trials showed that it is not a technically reliable treatment method and treatment therefore ceased. The contaminated groundwater is currently being treated at the Steam Stripping Unit (see Fact Sheet 2), until the Groundwater Treatment Plant is operational in around October 2005.

What will the trials involve?

The trials at Lidcombe will be for 20 working days. They will involve delivery to Lidcombe of one tanker-load of contaminated groundwater per day, weekdays. The trials will consist of an initial five working days period, followed by a fortnight of performance data evaluation. If no adverse effects to the treatment plant are observed, the trials will continue for another 15 working days.

What is the Lidcombe facility?

Waste Service NSW's Liquid Waste Treatment Plant at Lidcombe opened in 1988 to treat industrial liquid wastes generated in the Newcastle, Sydney and Wollongong areas. It treats wastes that are not suitable for disposal to the sewer or solid waste landfill in an untreated form due to high contaminant levels and/or their ability to leach from the disposal site. It operates under a licence from the EPA with conditions controlling emissions.



Why send it to Lidcombe?

By sending groundwater to Lidcombe as a trial, Orica will determine whether the plant has the capacity to accept and treat the Orica contaminated groundwater. If this proves to be successful, Waste Service NSW advise that they may be able to process up to 100 kL/day (the equivalent of 5 tanker loads).

*Left: Lidcombe Liquid Treatment Plant
Photo courtesy of Waste Service NSW*

How will it get to Lidcombe?

The groundwater will be transported by tanker. For the trials, this will consist of 1 vacuum tanker per day. If the trials are successful, a larger volume of groundwater will be transported to Lidcombe – up to 5 pressurised tankers per day. Orica plans to build a tanker loading facility at Southlands for the post-trial operations (see Fact Sheet 8). The Development Application for the facility has been sent to the Department of Infrastructure, Planning and Natural Resources (DIPNR).



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How does the treatment process at Lidcombe work?

The Botany groundwater will undergo three treatment processes in accordance with the Lidcombe licence:

- a) Physical separation – light, oily material will be skimmed off and blended with other recovered oils and used as fuel in Lidcombe’s oil heater. While Orica expects that there will be negligible or no “skimmable” material, this will be monitored during the trials. Vapours emitted from the groundwater will be processed through the plant’s vent emission control process.
- b) Heavy sludge/solids will be settled out as part of the physical separation process, and blended with other solids to be immobilised and sent to landfill. Again, while Orica expects that there will be negligible material that settles as sludge, this will be monitored as part of the trial process.
- c) Biodegradation – the middle layer that contains the majority of the contaminated water (i.e., non-oily or aqueous phase) will be blended with other aqueous wastes and sent to large digesters, where the organic compounds (including chlorinated hydrocarbons or CHCs) will be biodegraded over a period of several days. The pH will be adjusted and then the treated water will be discharged to the sewer.

Links to further references

For further information visit the Lidcombe website:

<http://www.wasteservice.nsw.gov.au/dir138/aptrixpublishing.nsf/Content/WasteManagementCentres-Lidcombe>