

# Orica Botany Groundwater Survey Community Liaison Committee Newsletter

Issue 7

June 2001

## Summary of Meeting No. 12

Community Liaison Committee (CLC) Meeting No. 12 was held on Wednesday 14 March 2001 at Botany Town Hall.

### Pilot Scale Reactive Iron Barrier

In February 1999 Orica installed a pilot scale reactive iron barrier to test its effectiveness in destroying a range of chlorinated hydrocarbons (CHCs) in groundwater. The CHCs came from former chlorinated solvents plants once located on the manufacturing site. Six performance monitoring events have occurred to date.

No additional performance monitoring of the barrier has been conducted since the last CLC meeting. However, two major reports have been issued by EnviroMetal Technologies, Inc. (ETI). The first was a summary report of all activities to date (see the section on the Voluntary Remediation Agreement overleaf). The second was on the results from the cores taken from the barrier. This report concluded:

- Total porosity (permeability) loss (i.e., clogging) due to precipitation (of scale and solids) is ~5%/year, which is a good result for long term maintenance-free operation of the barrier;
- There is no evidence of biofouling (i.e., build up of microbes/slime); and
- The results are consistent with other sites ETI has studied.

Additional monitoring points have been installed to provide extra data along the proposed alignment of the full scale barrier. This will be used to verify site conditions to be factored into the full scale design. Orica estimates that the barrier will be operational for many years, but expects an immediate improvement in shallow groundwater quality once it is installed.

### Monitoring Program

The most recent round of surface water monitoring was conducted in February 2001. The results showed decreases in all CHCs in Springvale Drain and Penrhyn Estuary. This result is likely to have been influenced by rainfall shortly prior to the monitoring event.

Monitoring of groundwater is also continuing in areas affected by the CHC plumes.

## **Focus on *Orica Botany Groundwater Survey Community Liaison Committee***

A Community Liaison Committee (CLC) was established during Stage 1 of the then ICI Botany Groundwater Survey (1989-1990), under the chairmanship of the Environment Protection Authority NSW (EPA NSW). During Stage 2 (1993-1996) and into Stage 3 (Remediation; starting in August 1996), the Orica Botany Groundwater Survey CLC has been retained. In 1997 an independent Chair, Professor Ronnie Harding of the University of NSW Institute of Environmental Studies, was appointed. Orica provides the secretarial function.

The CLC currently comprises representatives from:

- **government** (Botany Bay City Council, Randwick City Council, EPA NSW, Department of Land and Water Conservation, Sydney Ports Corporation, South Eastern Sydney Public Health Unit, National Parks and Wildlife Service, and Freightcorp);
- **industry** (Orica and their consultants, Amcor Packaging and Solvay Interco); and
- **local residential groups** (Botany Environment Watch, BEREPA and BBPPC).

CLC meetings include reporting of progress of the Groundwater Survey to these groups. They have included visits to the Orica site to inspect remediation works, and presentations by Orica's international consultants who assist with technology relating to key remediation modules.

To date, the Stage 3 CLC has had twelve meetings.

In the fifth meeting it was proposed and agreed that, like the Hexachlorobenzene (HCB) Community Participation and Review Committee, the CLC should issue a newsletter following each meeting. The two page newsletter is sent to over 4,000 addresses in the suburbs neighbouring the Orica Botany Site including Banksmeadow, Botany, East Botany, Pagewood, Hillsdale and Matraville. The first issue was distributed in July 1999. The newsletter is also an integral part of Orica's ongoing communication strategy under the Voluntary Remediation Agreement.

The CLC is not just for a select few. Local community groups and individuals are encouraged to attend. Details of the next meeting are always printed at the end of each newsletter. **Be a part of this ground-breaking team!**

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## **Springvale Drain Sediment Removal and Drain Reconstruction**

Approximately 1000 m<sup>3</sup> of contaminated sediments will be excavated from the currently bypassed section of Springvale Drain running through Orica Southlands and placed into a sediment containment structure pending testing to determine treatment and disposal options. Orica has briefed the Regulators, and has submitted a Development Application (DA) for the work to Council.



**View of Springvale Drain from Mcpherson Street (downstream) end looking north**

## **Shallow EDC Plume Containment**

Groundwater monitoring has revealed a plume of EDC (ethylene dichloride, a CHC formerly produced on the manufacturing site) in a section of the groundwater underflowing the site. Under the Voluntary Remediation Agreement (see below) Orica has set itself an objective to reduce the mass of CHCs in the shallow groundwater (which can seep into Springvale Drain).

A shallow groundwater containment system to prevent seepage of EDC into Springvale Drain (reported previously) has been designed and reviewed using Orica's safety studies. Orica has received approval for the process from the Environment Protection Authority NSW (EPA NSW), and Orica's operating licence has been amended to include the new process. Orica submitted a DA to Council in December 2000 and is awaiting planning approval.

## **Bioremediation Program**

Orica plans to proceed with the field scale research trials recommended by Dr David Major (GeoSyntec Consultants) to remediate EDC-contaminated groundwater using biological processes:

- Injecting nutrients to accelerate bioremediation; and

- Circulating deep (higher concentration) groundwater and shallow aquifer (where there are more active bacteria) to improve conditions for biodegradation.

Orica has begun work to design and implement the trials.

## **Voluntary Remediation Agreement**

A Voluntary Remediation Agreement was signed by Orica and EPA NSW on 28 February 2000. It sets out the investigation, research and remediation modules and goals for the Orica Botany Groundwater Survey. It requires Orica to issue an Annual Summary Report to EPA NSW, which was done on 28 February 2001. Copies of the report were issued to CLC members.

The Agreement requires Orica to develop a Stage 4 Plan by the end of this year. A draft Plan will be issued to EPA NSW for discussion by June 2001.

## **CLC Membership**

Concern was expressed about gaps in community representation and participation in the CLC. The Chair urged all members to ensure that they delegate their representative role if they are unable to attend meetings. Members of the community are encouraged to participate in the CLC (see "Focus On ..." on page 1).

## **Botany Sands Aquifer Management Plan**

A brief update on the Botany Sands Aquifer Management Plan was presented to the CLC. The Directors General of the Department of Land and Water Conservation (DLWC) and EPA NSW are discussing the proposed concept of beneficial use of groundwater. DLWC is also planning to expand the regional monitoring network by installing more groundwater wells in the western and southern areas. DLWC is also reviewing the effects of the recently gazetted Water Management Act on the Management Plan, and plans to reconvene the Management Plan Advisory Committee. β

## **About this Newsletter**

This newsletter aims to keep the Randwick and Botany communities informed about progress of the Orica (formerly ICI Australia) Botany Groundwater Stage 3 Remediation Program. The newsletter is prepared by Orica on behalf of the CLC following each quarterly meeting of the CLC.

## **Who Receives this Newsletter?**

This newsletter is distributed throughout the suburbs neighbouring Orica's Botany Site including Banksmeadow, Botany, East Botany, Hillsdale, Matraville and Pagewood.

**Meeting No. 13 will be held at Botany Town Hall on Wednesday, 8 August 2001, starting at 1 p.m. If you wish to enquire about the CLC or its meetings, please call Orica's Community Hotline 1800 025 138.**