

Orica Botany Groundwater Survey Community Liaison Committee Newsletter

Issue 3

December 1999

Summary of Meeting No. 8

Meeting No. 8 of the Community Liaison Committee (CLC) was held on Wednesday 24 November 1999.

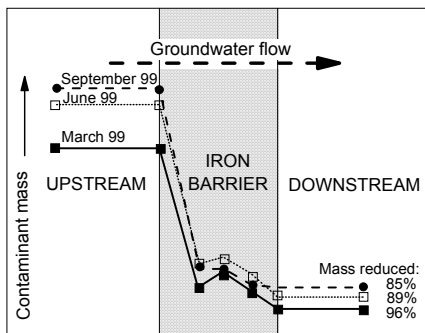
The meeting commenced with a tour of Orica Southlands to inspect and be briefed on work on:

- repairs to Orica stormwater pipes;
- proposed realignment of Springvale Drain; and
- Pilot Scale Reactive Iron Barrier.

Returning to the Orica offices, Project Manager Peter Russell presented the Committee with a progress update for the different modules of the groundwater project.

Pilot Scale Reactive Iron Barrier

Monitoring of the reactive iron barrier's performance has continued. Data from month six is now available.



John Vogan (EnviroMetal Technologies, Inc., Canada) has reviewed the data. Despite appearances in the graph, he says the performance is not degrading and is consistently good. The variation is due to changes in field conditions. John recommends a further six months' monitoring.

Springvale Drain Realignment

Orica proposes to move a section of Springvale Drain in Southlands 10 m to the west to bypass contaminated sediments in the existing alignment.

In July 1999 the contract for this work was awarded to Thiess Environmental Services. However start of work has been delayed by the complications of regulatory approval. It is expected Botany Bay City Council will approve the Combined Development & Construction Certificate Application in their last meeting of this year.

[Ed. Note: Council approval was granted 16 December 1999.]

Continued overleaf

About this Newsletter

This is the third issue of this newsletter. It aims to keep the Randwick and Botany communities informed about progress of the activities associated with the Orica (formerly ICI Australia) Botany Groundwater Stage 3 Remediation Program. The newsletter has been prepared by Orica on behalf of the Community Liaison Committee (CLC) and is being distributed to Orica's industrial and residential neighbours. Publication of the newsletter follows each quarterly meeting of the CLC.

Who's on the Committee?

The CLC was formed at the start of the Survey to involve the community in the process. It comprises representatives from **government** (Environment Protection Authority (EPA), Botany Bay City Council, Randwick City Council, Department of Land & Water Conservation (DLWC), South Eastern Sydney Public Health Unit, National Parks & Wildlife Service, Freightcorp and Sydney Ports Corporation), **local residential groups** (BEREPA, Botany Environment Watch and BBPPC), and **industry** (Orica, Amcor Packaging and Solvay Interox). The independent Chair for the Committee is Assoc. Prof. Ronnie Harding from UNSW Institute of Environmental Studies.

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. 📧

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Meeting No. 9 will be held at Botany Town Hall on Wednesday 29 March 2000, commencing at 1 p.m. If you wish to enquire about the CLC or its meetings, please call Orica's Community Hotline 1800 025 138.

Orica Stormwater Pipes' Repairs

Orica stormwater pipes are being repaired [see Focus on Technology] to stop contaminated groundwater entering the pipes and being discharged to Springvale Drain.

The 900 mm pipe has been lined and grouted. The groundwater ingress into this pipe has ceased. Repairs to the culverts under the railway easement are under way. The 1350 mm pipe has been relined and will be grouted shortly. Work is on track for completion by end of December 1999.

Monitoring Program

Orica is regularly monitoring surface water, groundwater, air and marine organisms to track improvements and watch for any changes in environmental conditions.

Testing of chlorinated hydrocarbons (CHCs) in deep and shallow groundwater was completed in September. The report has not yet been issued, but results show no significant changes to conditions since July 1999.

Similarly, a report for surface water monitoring was issued to EPA NSW in November. There were no changes to the previous conclusions.


EDC Plume Investigations

Groundwater monitoring has shown that a body of groundwater containing high concentrations of ethylene dichloride (EDC, a product formerly manufactured by Orica) has extended to an area beneath Southlands. Orica has issued to EPA NSW a plume containment strategy report, and is proceeding with its recommendations. The first steps are to conduct field trials at Southlands to evaluate installation and pumping controls, and lab trials to assess the need for pre-treating the groundwater before pumping into the air stripper to remove the CHCs.

Orica will continue to brief EPA NSW and DLWC of the trials' outcomes and of a full scale system design. If required, it could be ready to install by August 2000.

Orica is also conducting further investigations into the source of the EDC plume (focussing on the former manufacturing plant) and northern extent of the plume (in the area where drums of EDC waste were previously stored). Interim reports are expected around March 2000.

Further Remediation Research

Orica has commissioned two further research projects to investigate remediation options for EDC in Botany groundwater. Under the direction of Dr David Major (Geosyntec Consultants, Canada) the University of Waterloo will assess microbiological processes in laboratory microcosms. And Professor Bob Gillham will direct work at the University of Waterloo, Canada to evaluate nickel-plated iron in a reactive barrier. 

Focus on Technology: In-Situ Pipe Relining

Over time pipelines' flow capacity can be reduced. This can be due to build up of solids in the line, tree roots, faulty joints, partial collapse, erosion, corrosion, etc. Correcting these problems can be very difficult – particularly when the pipelines run through sensitive or hard-to-access locations.

One technique that is less constrained by poor access is relining the pipelines with semi-rigid polythene pipe. This technique has been used by No-Dig Pipe Laying Pty Ltd in many applications, including the repair of the Orica stormwater pipes. The photos below are from the Orica work.

The pipe lining is installed in a number of steps:

1. The pipe internals are inspected using robotic closed circuit television. Blockages and debris are identified and removed.



2. Sections of polythene pipe are heat welded together to form long runs.



3. A cable is attached to one end of the liner and a 10 tonne winch is used to pull it through the damaged pipe.



4. Once in place the liner is sealed into the pipe by filling the annulus (gap between liner and pipe) with cement-based grout.



