

Independent Review: Mercury emissions from the Orica Botany plant

Background

Orica (formerly ICI Australia) has operated a chemicals manufacturing facility at the Botany Industrial Park in Matraville since 1942. Orica still undertakes chemical production of chlorine at the site, an activity that is regulated by the provisions of Environment Protection Licence No. 2148. The Environment Protection Authority (EPA) vigorously monitors compliance with the conditions set by the licence.

Elemental mercury was used at Orica's former chlor alkali plant at the site from 1944 until its closure in 2002. This resulted in mercury contamination of the soil and groundwater in the region of the plant. Remedial action is ongoing at the site to prevent any further impacts on groundwater and clean up the soil.

The clean up is being regulated by the EPA under the *Contaminated Land Management Act 1997* by a Management Order issued in early 2012.

Orica has prepared an analysis of detailed remediation options which the EPA has approved. Orica must now submit a Remediation Action Plan, including a timeframe for completion of the works and ongoing community consultation. The works must be completed by the end of 2014.

The primary area of elemental mercury soil contamination is covered by an enclosure that controls airborne mercury emissions while the final plan to remediate the site is developed and approved.

Orica's Environment Protection Licence includes strict conditions relating to mercury. Ambient air monitoring carried out by the company within the boundary of the premises indicates that mercury levels are low and meet licence limits and health standards.

Previous studies detected mercury in sediments in Penrhyn Estuary in Botany Bay near the Patricks Shipping Container Terminal that reached the site through a stormwater channel. The contamination was subsequently cleaned up but a ban on fishing in the estuary remains in place.



Temporary emission control enclosure, former Orica chlor alkali plant/M Hart, EPA

Independent Review

On 25 January 2013, the EPA announced that it would conduct an independent review of all information available about the historical mercury emissions from the former Orica chlor alkali plant. This was in response to concerns raised by community representatives about potential health impacts from the mercury contamination beyond the Matraville plant.

Issues of concern include:

- mercury within the ambient air

- mercury contamination in soils at the site
- mercury in soils outside the boundary of the site
- mercury in groundwater
- possible short- and long-term impacts on the health of the local community from mercury.

While the EPA currently has no reason to believe there are any off-site health impacts from past or current mercury emissions, the review will be comprehensive with independent experts assessing the potential or actual risk from any mercury impacts around the plant and determine appropriate sampling types, methodologies and locations.

The review will include a thorough analysis of the data available to determine if any further information is needed to assess health risks to the local community that are associated with mercury emissions.

It will ensure that the sampling regime developed targets the health risks in a scientifically rigorous and credible manner.



Areas of the former chlor alkali plant in Matraville/M Hart, EPA

The EPA is committed to reducing environmental impacts and improving environmental outcomes.

Goals and outcomes

- Determine if there is any residual elevated health risk to the local community associated with mercury emissions from 1944 until the plant closed in 2002
- Determine if there are any current sources of community exposure to mercury that are not subject to identified management action
- Provide an Independent Review Report with recommendations including determining the appropriate sampling types, methodologies and locations
- Ensure the investigation is conducted in an open and transparent manner and is communicated to the community
- Ensure community confidence in the regulation of Orica's activities

Steering Panel

A Steering Panel has been established to provide an opportunity for community involvement, provide expert advice and to oversee the review process. The panel will develop the Scope of Works for the review and select suitable independent experts to analyse the available information and make recommendations on any further investigations that may need to be undertaken.

The Steering Panel will evaluate the results of the investigation and the recommendations from the independent experts and complete an Independent Review Report in accordance with the Scope of Works. The panel will communicate the findings and recommendations to the community.

Steering Panel representatives

The EPA's Chief Environmental Regulator, Mark Gifford, will chair the Steering Panel which will have representatives from:

- Environment Protection Authority
- NSW Health
- Office of Environment and Heritage (Science Division)
- City of Botany Bay Council
- an independent health expert
- two community members

Indicative timeline for the review

- Steering Panel members confirmed – end February 2013
- Steering Panel first meeting and agreement on Terms of Reference – mid-March 2013
- Steering Panel prepares Scope of Works for review – mid-April 2013
- Complete procurement process to engage independent experts – mid-May 2013
- Independent Review Report and recommendations from independent experts provided to Steering Panel – mid-June 2013
- Steering Panel completes evaluation of the Independent Review Report and recommendations from independent experts – end June 2013
- Steering Panel communicates the findings and recommendations of the Independent Review Report to the community – end June 2013
- Steering Panel carries out recommendations of the Independent Review Report including procuring independent specialists to implement sampling regime – end July 2013
- Independent specialists implement sampling regime – end August 2013
- Steering Panel communicates the findings of sampling regime to the community – end September 2013

Further information and feedback

The EPA has created the following website to provide information about the Independent Review, media releases and links to all previous Botany Community Information Group updates:

www.environment.nsw.gov.au/Oricabotanycttee/index.htm

For more information or to provide feedback, please send an email to the EPA Botany Area Community Information Group Mailbox at info.botany@epa.nsw.gov.au

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Soil mercury contamination investigation points, Block G, former Orica chlor alkali plant