

# **ORICA MERCURY INDEPENDENT REVIEW**

**EPA Community Meeting**  
**7 March 2013**

# Purpose of Meeting

- Information on mercury contamination
- How the site has been regulated
- How the EPA proposes to regulate the proposed containment and remediation
- Purpose and function of the Independent Review
- Questions/concerns

# Former Chlor Alkali Plant



# NSW EPA Soil Washing Remediation - 2011

- Orica identified soil washing as the best option for remediating the mercury contaminated soils.
- Regulated by the EPA under the *Contaminated Land Management Act 1997*, under an approved Voluntary Management Proposal (VMP).
- Site Environment Protection Licence (2148) used to regulate operational controls for the remedial works (e.g. air monitoring, dust, odour)
- Large temporary emissions control enclosure (TECE) over Block G to control emissions during excavation and soil washing, with regular monitoring outside TECE and at site boundary.

# Temporary Emissions Control Enclosure



# **NSW EPA Soil Washing Remediation - 2011**

- **Soil Washing commenced in May 2011 –suspended in August 2011 due to technical and operational issues.**
- **VMP withdrawn and Management Order issued by EPA requiring an alternative acceptable remediation approach.**
- **Emissions within and surrounding the TECE continue to be monitored and reported in accordance with licence conditions.**

# Management Order

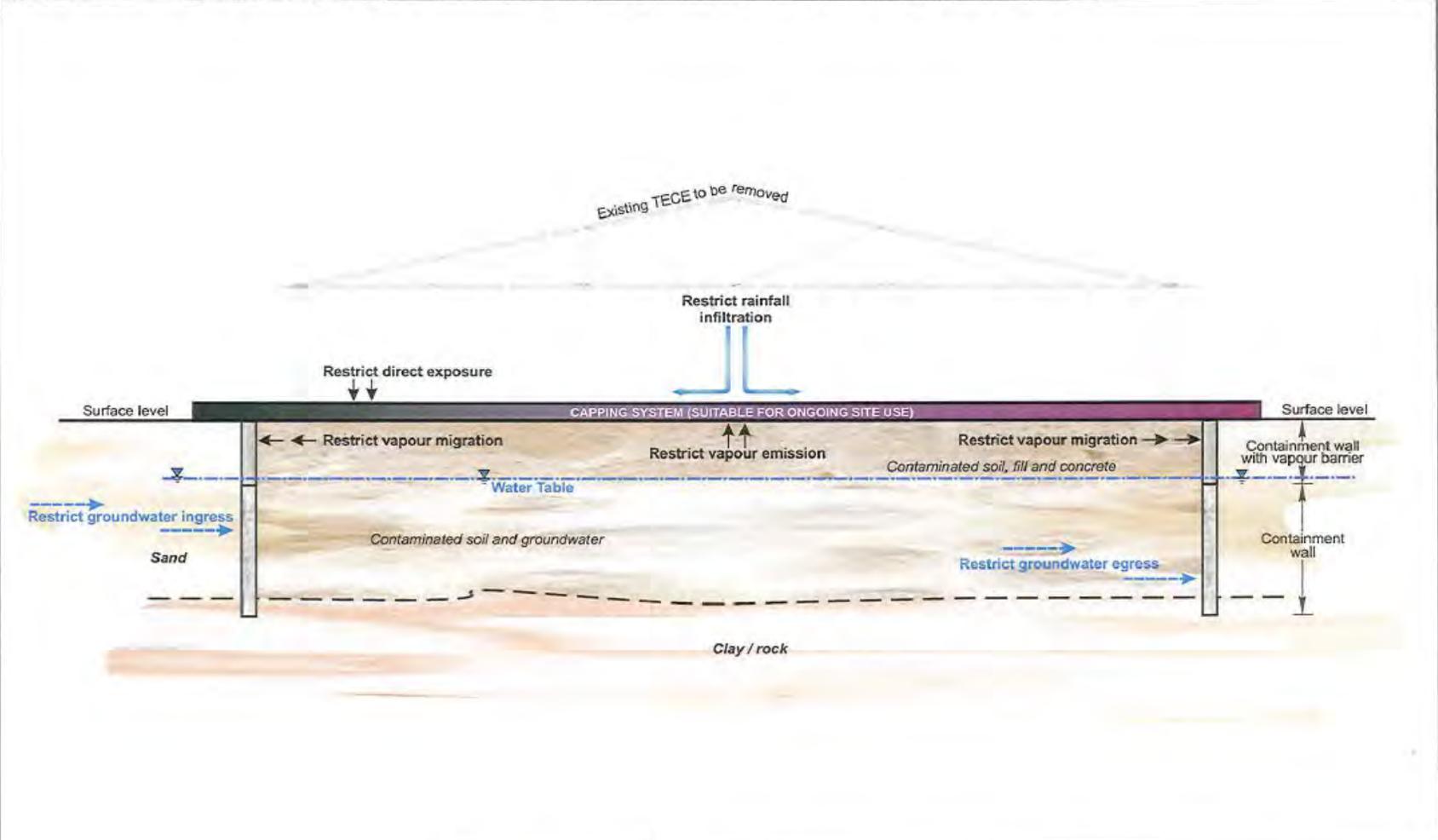
- **Requirements of Management Order:**
  - **Prepare a Remedial Options Appraisal Report (ROAR)**
  - **Engage an independent EPA approved expert to review and comment on the ROAR prior to submission to the EPA**
  - **Identification of the preferred remedial approach**
  - **Submission of a revised Remediation Action Plan (RAP)**
  - **Submission of a Groundwater Monitoring Plan**

# NSW EPA Current Remedial Approach

- **Two RAPs submitted:**
  - **Blocks A and M – targeted removal of isolated areas of mercury contaminated soil**
  - **Block G – removal of mercury contaminated soils to the extent practicable followed by a cap and containment system. Includes construction of a vertical barrier wall to prevent a continued source of mercury contamination to groundwater, and a vapour barrier and cap to prevent vapour emissions and ensure the protection of on-site workers and the community. The cap will also prevent infiltration from the overlying salt stockpile.**

# Current Remedial Approach

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 www.golder.com GOLDER ASSOCIATES PTY LTD	CLIENT		ORICA AUSTRALIA PTY LTD		PROJECT					REMEDIATION ACTION PLAN - BLOCK G				
	DRAWN	HC	DATE	26.06.2012	TITLE					CAPPING AND CONTAINMENT WALL				
	CHECKED	GRS	DATE	09.07.2012	CONCEPTUAL DESIGN									
	SCALE	NOT TO SCALE		A4	PROJECT No.	117623084	DOC No.	006	DOC TYPE	R	FIGURE No.	F007	REVISION	1

# Current Remedial Approach

- The EPA is generally in agreement with the concept of Orica's current proposed Remedial approach. Block G RAP only provides a framework – awaiting the detail.
- In reaching this agreement the EPA took into consideration:
  - Advice provided by the independent expert
  - Experience from overseas regulators
  - Risks to health and the environment of the various options
  - Community issues/concerns
  - Practical and technical constraints (available technology, quantities, logistics etc.)

# Current Remedial Approach

- **Key Environmental Issues**
  - **Mercury emissions**
  - **Potential health affects**
  - **Groundwater**
- **Environmental Management Plans to be provided – detail all environmental control measures / monitoring programs / action levels, responses etc.**
- **Plans will be reviewed by EPA with NSW Health to ensure proposed measures to protect health and the environment are appropriate and meet all regulatory requirements.**

# Proposed Regulatory Framework

- Continue regulation under the *Contaminated Land Management Act 1997* to provide an overarching regulatory framework for the remediation project, including long term monitoring requirements.
- Site Environment Protection Licence (2148) will be used to regulate the operational aspects of the project.
- A financial assurance will be required for long term management of the project.

# **Environment Protection Licence 2148**

## **Environment Management**

### **Air Noise Water**

- **Current Operational Chlorine Plant**
- **Ground Water Treatment Plant**
- **HCB Storage and HCB Packaging**
- **Former Chlor Alkali Plant**

## Operational Conditions

- **Standard Conditions**
- **Monitoring Limits and Conditions**



# FCAP Remediation

## Special Conditions

- **Mercury monitoring – Carbon beds**
- **Mercury monitoring – Inside shed**
- **Ambient air boundary monitoring**
- **Measurement requirements**
- **Operational conditions if monitoring indicates trigger limits are reached.**

## **Environment Protection Licence 2148 Amendment**

- **Licence variation will be completed in consultation with the community**
- **Project will be completed in a staged approach on the licence**
- **As the project proceeds licence variations will be made.**
- **Minor changes will be reported at the Community Liaison Committee meeting**
- **Financial assurance component will also be in the licence similar to the Ground Water Treatment Plant**

# Purpose of the Independent Review

The review will

- Be comprehensive process and involve independent experts.
- assess any potential off-site mercury impacts around the former Chlor-Alkali Plant at Botany.
- analyse available data to determine the residual health risks to the adjacent community.
- determine the appropriate sampling type, methodologies and locations.
- ensure that the sampling regime developed is targeted to the risks and is undertaken in a scientifically rigorous and credible manner.

# Independent Review Steering Panel Establishment

**The EPA has established the Independent Review Steering Panel.**

**The panel will have representatives from the following organisations and the community:**

- **Environment Protection Authority**
- **NSW Health**
- **Office of Environment and Heritage (Science Division)**
- **City of Botany Bay Council**
- **Independent Health Expert**
- **Two Community Members**

# Independent Review Steering Panel

## The purpose of the Steering Panel is to:

- Ensure expert input
- Provide the opportunity for community engagement.
- Develop the Scope of Works for the review.
- Select suitable independent experts to analyse the available information and make recommendations on any further investigations that may need to be undertaken.
- Complete the Independent Review Report in accordance with the scope of works.
- Evaluate the Independent Review Report and communicate the findings and recommendations to the community.
- Develop an action plan for Orica to implement the recommendations of the Independent Review Report.

# Independent Review Goals & Outcomes

- **Determine if there is residual elevated health risk to the adjacent community associated with mercury emissions from 1945 until the plant closed in 2002.**
- **Determine if there are any pathways for community exposure to mercury that are not subject to identified management action.**
- **Provide an Independent Review Report, with recommendations.**
- **Ensure the investigation is conducted in an open and transparent manner and is communicated to the community.**
- **Ensuring community confidence of the EPA's regulation of Orica's site.**

# Communication

The EPA will provide monthly progress updates about the Independent Review via multiple channels.

Updates will be provided to The Orica Community Liaison Committee.

A new website has been created to provide information, media releases, and links to all previous Botany Community Information Group U-Engage updates.

**[www.environment.nsw.gov.au/Oricabotanycttee/index.htm](http://www.environment.nsw.gov.au/Oricabotanycttee/index.htm)**

If you have a question or would like more information regarding the Independent Review or the EPA's regulation in the Botany Area, or if you would like to provide feedback, please send an email to the EPA Botany Area Community Information Group Mailbox at **[info.botany@epa.nsw.gov.au](mailto:info.botany@epa.nsw.gov.au)** and the EPA will address your issue as promptly as possible.