




KMH Environmental



2nd Annual Independent Environmental Audit


Botany Groundwater Remediation Program



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Introduction

- KMH Environmental has now completed two Audits
 - The first in August 2006
 - The second in August 2007
- Auditors: Ken Holmes / Jon Panic
- Please ask questions as we proceed
- I may refer technical questions to Orica



Audit Process

- Review of previous findings
- The audit
 - inspections
 - Interviews
 - Document reviews
- Audit report preparation
- This presentation



Purpose of the audit

- The purpose of this Audit was to fulfil the requirements of the Independent Auditor as specified in Clause E9.1 (Validation Audit) of Orica's Environmental Protection Licence (EPL) Number 2148.

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Scope of Audit


- Audit period to the end of August 2007 (the EPL renewal date)
- Assess compliance with the following
 - Environment Protection License (EPL);
 - Department of Natural Resource (DNR) Under Part V of the Water Act;
 - Former Department of Planning and Natural Resource (DIPNR) regarding land use safety planning;
 - Sydney Water Corporation;
 - Sydney Ports Corporation; and
 - Department of Primary Industries (DPI).
- Assess the project against the predictions made in the EIS and supporting documents.

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Audit Findings

Audit Findings 2006 / 2007


Category	2006	2007
In Compliance	69	93
Non Compliance	11	5
No Finding	12	10



EIS Predictions


All three containment lines had been commissioned and were operational and the GTP was also operational at the time of this audit.

An assessment of impact predictions made in the EIS was completed.




Key Findings – Non Compliances

- L3.1 - In general the plant has been meeting the DECC Licence discharge levels with the exception of:
 - 7 Dioxin exceedence from Aug 06 to October 06 (none since)
 - 1 Nitrogen Oxide exceedence in August 06 (non since)
 - 1 particulate exceedence in July 07.
- L3.7 - Heat Exchanger Unit temperature lower limits were breached on thirteen occasions (from commencement of GTP operation to 30 August 2006).




Key Findings

- L6.4 - Noise Emissions from GTP likely to exceed the environmental noise goals.
- M2.1 – A comprehensive monitoring program is in place with hundreds of samples taken and tested annually – during this reporting period 3 instances occurred where sampling was not undertaken because of broken sampling pump. (this condition was complied with in 2006).




Key Findings

- E5.2.4 – ecological monitoring in Botany Bay and Bunnerong Canal is required. This has not occurred, however DECC have approved Orica's monitoring plan (this condition should be changed to reflect DECC's approval of Orica's monitoring plan).




Audit Recommendations

- The EPL specifies that Orica must develop a monitoring program for the Ambient Ecological Monitoring and include sites at Bunnerong Canal and Botany Bay as required. Orica monitoring plan suggested that such monitoring was not required. This was accepted by the regulatory authorities. Notwithstanding the identification of chloramines in the Bunnerong Canal discharge and the subsequent treatment program developed in consultation with DECC, the Auditor recommends that *whilst this condition remains in the Licence* that Orica include monitoring sites in Bunnerong Canal.
- The EPL establishes the minimum temperatures within the Heat Exchanger unit. As this condition has been breached due to operator error both during the first and second audit periods, the Auditor recommends that a process control be designed to avoid the temperature dropping below the licence limit.



Audit Recommendations

- At present the noise goals established in the EPL are not being met. The Auditor recommends that Orica implement the measures and treatments identified in the Stephenson report and other relevant measures to reduce noise emissions from the:
 - Air Stripper Feed Pump
 - Feed Tank Sump Pump
 - Stripped Water Treatment Package (including blowers and ductwork)
 - Plant Air Compressor Package.
- The EPL references specific analysis methods to be used by licence holders. The subject licence references outdated ALPHA methods. DECC should ensure that all specified methods in licenses are current as laboratories that are NATA registered will automatically default to most up to date USEPA and ALPHA methods.



EIS Predication

- A review of all EIS predications has been completed.
- There have been no impacts greater than those predicted by the EIS to date.