

Supporting Documentation for a Request to Modify a Major Project

HCB Waste Repackaging Plant

Storage of Repackaged HCB Waste at the Botany Industrial Park

7 June 2010

1. Introduction

This report has been prepared by Orica to support an application under Section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to gain approval for modification of Project Approval (No. 06_0028) to allow for the proposed use of depot 11/57, a location on Orica land at the Botany Industrial Park (BIP), to store waste from the HCB Waste Repackaging Plant.

Orica considers this modification to be minor, with the change generally in line with the operations approved in the third modification (10 July 2009). However extra space is now required and, as the depot was not previously identified, approval is sought to use this location. This document provides supporting information for that approval.

2. Background

The Department of Planning (DoP) granted Project Approval under Section 75J of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the hexachlorobenzene (HCB) Waste Repackaging Plant project on 12 August 2006 (No. 06_0028). Three modifications to the Project Approval have been granted to date. These were:

1. 9 January 2007, to alter air quality monitoring requirements,
2. 16 February 2009, to rectify inconsistencies with Environment Protection Licence 2148 and
3. 10 July 2009, to approve additional container storage areas onsite and for the construction of temporary cover over Store H.

Operation of this project is also licensed through the Department of Environment, Climate Change and Water (DECCW) by Environment Protection Licence (EPL) No. 2148 under the *Protection of Environment Operations Act, 1997* (POEO Act).

The Project's purpose is to repackage HCB waste into UN approved transport containers for export to an offsite treatment facility. The main activities are:

- transfer of existing packaging to repackaging lines
- drum emptying and filling into new packaging
- liquid collection and transfer to site effluent system
- weighing, palleting, stretch wrapping and labelling
- load-out of repackaged waste to container storage areas.

3. Need for Modification

Orica seeks approval to use depot 11/57 for the relocation of a number of shipping containers from depot 11/52, as this area has planning approval (Project Approval 06_0197, 12 November 2009) for the construction of the Car Park Waste Encapsulation (CPWE) Direct-heated Thermal Desorption (DTD) Plant. Although the final layout of the DTD plant is yet to be confirmed; the potential relocation of containers from this depot cannot be adequately stored in approved storage areas combined with ongoing HCB repackaging storage requirements.

Diagrams of the existing operations and storage depots plus the location of depot 11/57 can be seen in Appendix A.

4. Approved Operations

The Project Approval states that Orica shall carry out the project generally in accordance with documents including the Environmental Assessment (EA) prepared by Orica and dated April 2006.

The EA describes the development as:

- a single warehouse building comprising the HCB waste repackaging plant and new Store J storage area (refer to Section 5.1 of the EA)
- related repackaging operations at Store H (refer to Section 5.5.1 of the EA);
- related repackaging operations at Store E (refer to Section 5.5.2 of the EA); and
- additional storage areas (refer to Section 5.6 of the EA).

The following container storage areas are identified in the EA:

- South of Store J in a fenced secure hard-stand area; and
- the old Chlor-alkali area and,
- adjacent to the Steam Stripping Unit (SSU).

As stated previously, diagrams of the existing development and storage as well as the proposed location can be seen in Appendix A.

It was identified in the third Modification Application (10 July 2009) that the onsite storage needs exceeded those identified in the EA due to delays in export.

To best manage HCB waste, the repackaging project has continued operations since that date. Currently 78% of total HCB waste has been repackaged and 656 containers are being stored onsite in locations approved in Approval Modification 3. The status of each depot is listed below.

- Depot 11/50 (94 containers) – 100% Full,
- Depot 11/51 (228 containers) – 100% Full,
- Depot 11/52 (156 containers) – 100% Full and
- Depot 11/54 (178 containers) – 90% Full.

5. Modification Request

Orica is proposing to store HCB waste in shipping containers at an additional location. The identified area for the storage of repackaged HCB waste in shipping containers is:

- Depot 11/57 – on the hardstand area, approximately 30 metres west of the pre-approved depot 11/54 western boundary, to the north of Store I (Depot 11/47) and to the south of Store H (Depot 11/27). Depot 11/57 has a nominal storage capability of approximately 324 containers.

A detailed layout can be seen in the Appendix B.

The proposed Depot 11/57 is a registered dangerous goods store.

Depot	Waste type	Dangerous Goods Classification
Depot 11/57	High-level	Class 6.1

Capital expenditure required for the proposed storage area is expected to be approximately \$3,000. No new physical works or new materials are required beyond those allowed for in the original work activity to build the HCB Waste Repackaging Plant.

Approved dangerous goods storage containers would be used to store the waste in depot 11/57, including 100 L steel drums, 200 L steel drums, intermediate bulk containers (IBCs) and timber storage boxes. These containers are secured within the shipping container providing a double containment store. Bunding is not necessary as the waste is dry and the containers watertight. The repackaged waste and containers are secured and regularly inspected. Containers are stacked two high within the BIP site boundary.

These storages will need to be in place until such time that the HCB waste has been transferred off-site for treatment.

6. Options

Repackaging and storage of HCB waste is necessary while the export application process continues. A number of options for storing the materials have been assessed. These are as follows:

Alternatives	Suitability
Use available existing depots.	<p>Existing depots require greater preparation.</p> <p>Depots 11/53 and 11/54 are not capable of storing high-level waste due to their proximity to the BIP boundary.</p> <p>Significant remediation works will be conducted throughout the Former Chlor-alkali Plant site in the later half of 2010. As plans for this are yet to be finalised, depots 11/55 and 11/56 (which lie mostly on that site) may be deemed unsuitable.</p>
Restack containers within the existing depots from two high to three high to alleviate capacity issues.	<p>This is a time-consuming and costly exercise, potentially requiring studies on geotechnical suitability and extensive earthworks to cater for the excess weight.</p> <p>Three-high stacking requires additional handling equipment which is not currently available on site.</p> <p>Extra space to temporarily store containers whilst conducting these works would also be required.</p>
Return portions of repackaged waste to original HCB stores.	<p>Roughly half of the HCB waste has been returned to the original HCB stores for temporary storage following repackaging. In each case, the old store is emptied of the original waste then is thoroughly cleaned out before introducing repackaged waste. However, remaining space is limited and there is unlikely to be sufficient space for all of the remaining HCB waste.</p> <p>The waste inventory grows with repackaging (as old packaging, pallets and used personal protective equipment become waste also). The logistics of the repackaging operation require the bulk of the waste to be stored in shipping containers.</p>
Pause or reduce repackaging operations to reduce need for extra storage space.	<p>The repackaging process improves the integrity of the waste packaging, reducing the potential of harm to human health and the environment.</p> <p>Proceeding with consistent operations and utilizing current skills and trained resources provides smoother more effective operations.</p> <p>Repackaging also ensures the containers are suitable for export.</p>

Alternatives	Suitability
Stack containers at depot 11/57	<p>Depot 11/57 requires only minor works to be suitable for container storage such as signage and improved fork truck access.</p> <p>The area is level and has existing driveway access.</p> <p>The depot is suitable for the storage of high level waste as approved by Work Cover NSW and the risk analysis, as dictated in AS/NZS 4452, has been carried out.</p> <p>The area is located away from a site boundary.</p>

7. Preferred Option

Depot 11/57 is the preferred option for the following reasons:

- Depot 11/57 requires minimal works to be suitable for container storage,
- the area is level and has existing driveway access,
- the risk analysis, as dictated in AS/NZS 4452: the storage and handling of toxic substances has been completed (refer Appendix C),
- the area is located away from a BIP site boundary and;
- the depot is suitable for the storage of high level waste as approved by Work Cover NSW (refer Appendix D).

8. Other Approvals

Orica holds the following licences as issued by DECCW.

- Licence No. 26 under the Environmentally Hazardous Chemicals Act, 1985 (EHC Act) for the keeping, conveying and processing of scheduled chemical wastes.
- EPL No. 2148 under the POEO Act, 1997, for the environmental standards of the operations of the project.

The additional storage area has been notified to and acknowledged by Work Cover NSW as a dangerous goods store and complies with the relevant requirements of the HCB Waste Management Plan.

The use of the additional storage area for repackaged waste will be managed in accordance with the conditions of these licences; and no changes are required for this modification. No other approvals are required.

9. Potential Impacts of Preferred Option

Potential environmental and human health impacts of the project have previously been assessed in the EA and were examined again in subsequent modification applications.

Orica notes, no new or significant environmental impacts or landuse safety issues have been introduced since the previous approval.

The table below details these potential issues arising from the use of depot 11/57.

Issue	Modification Assessment	Additional Mitigation Measures
Landuse safety planning	<p>Storages have been registered as dangerous goods stores with Work Cover NSW.</p> <p>Depot 11/57 meets the requirements of the offset, labeling, access and security requirements of the Australian Dangerous Goods Code.</p>	None required.
Worker safety	Worker involvement limited to transport activities and managed with existing safe work practices.	None required.
Air Quality	<p>The storage areas will house repacked waste in sealed shipping containers.</p> <p>These stores present no air quality impacts.</p>	None required.
Human Health Impact Assessment	<p>The storage areas will house repacked waste in sealed shipping containers.</p> <p>These stores present no impact to human health.</p>	None required.
Hydrology and Surface Water	<p>Bunding is not required in the storage area as the repackaged waste is dry and will be housed securely in shipping containers.</p> <p>Rainwater from the storage area would drain to the existing BIP site stormwater system.</p> <p>Depot 11/57 presents no potential impacts to hydrology or surface waters.</p>	None required.
Geology, Hydrogeology and Soil	No new or increased impact.	None required.
Waste Management	<p>This is a waste management project. The storage area will house secure shipping containers.</p> <p>The modification presents no new waste streams.</p>	None required.

Issue	Modification Assessment	Additional Mitigation Measures
Noise and Vibration	<p>Minor localised noise will be generated as a result of transporting and positioning the shipping containers.</p> <p>This activity will be conducted during day light hours at the BIP and will not make a significant contribution to the noise levels at the BIP site boundary.</p>	None required.
Traffic and Transport	<p>No off-site transportation is required as part of this modification. Minor on-site traffic movements required to position the repackaged waste to the new storage areas.</p> <p>Insignificant in the context of existing site traffic movements.</p>	None required.
Visual Amenity	Depot 11/57 will only be visible within the BIP (an existing industrial environment).	BIP occupiers would be notified.
Cultural Heritage	No new or increased impact	None required.
Flora & Fauna	No new or increased impact	None required.
Cumulative Impacts	<p>Waste inventory based on that described in original EA.</p> <p>Depot 11/57 presents no new cumulative risks.</p>	None required.

10. Consultation

The City of Botany Bay Council (CoBB), DECCW and the community receive regular updates on the progress of the HCB waste repackaging operations and export application process via the quarterly Community Participation and Review Committee (CPRC) meetings.

Specific updates are also provided to DECCW as required by Orica's EHC Act Licence and EPL2148 reporting requirements.

Orica will advise both DECCW and CoBB of its intention, including a copy of this document for their information.

