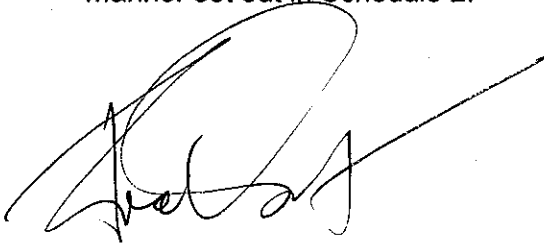


**NOTICE OF AMENDMENT OF A DEVELOPMENT CONSENT GRANTED UNDER
SECTION 80 PURSUANT TO SECTION 96(2) OF THE ENVIRONMENTAL PLANNING
AND ASSESSMENT ACT 1979**

I, the Minister for Planning, pursuant to section 96(2) of the *Environmental Planning and Assessment Act 1979*, modify the development consent referred to in Schedule 1 in the manner set out in Schedule 2.



Frank Sartor MP
Minister for Planning

Sydney,

26th Feb 2006

File No. S01/00867
MOD-115-9-2006-i

SCHEDULE 1

- Development consent:** granted by the Minister for Infrastructure and Planning on 4 May 2004.
- In respect of:** development application 437-12-2002-i made by Thiess Services Pty Ltd on 9 December 2002, in relation to land described as Lot 10, DP 1007931 and part of the bed of Homebush Bay (part residual lands comprised in Certificate of Title Vol. 5018, Fol. 1).
- For the following:**
- Remediation of the former Union Carbide (Lednez) site and part of the bed of Homebush Bay using indirect heated thermal desorption technology and associated processes and infrastructure. Development consent was granted to:
- excavate, stockpile and classify contaminated material from the Lednez (former Union Carbide) site, and sediments from an area of Homebush Bay adjacent to the Lednez site, Meriton site to the north and Orica site to the south;
 - treat contaminated material on site with thermal desorption plant;
 - use material classified as suitable for reuse without treatment and material that has been treated to reinstate the former Lednez site to levels suitable for future residential development;
 - reinstate Homebush Bay excavations with suitable material from the Lednez site;
 - demolish and reconstruct the sea wall along the Lednez site foreshore; and
 - demolish all existing structures on the Lednez site.
- Modification Application:** Modification of the development consent including:
- Modification of the Methodology to Remove Sediments from the Bay – including the use of a mechanical dredging technique.

- Extension of the Footprint of Sediment Removal Works in the Bay by approximately 45%.
- Modification to the Thermal Treatment Technology – from Indirect Thermal Desorption (ITD) to Direct Thermal Desorption (DTD) Technology.
- Modification to the Location of the Thermal Plant and Pre-Treatment Building (PTB).
- Upgrade of the Emissions Control Efficiency for the PTB – including an increase in the stack height from 20m to 23m and improving the removal efficiency of volatile organic compounds from 0-10% to a minimum of 90%.
- Provision of an Enclosure over the Waste Storage Unit.

SCHEDULE 2

The development consent is modified by:

- 1) deleting the existing definitions of "BCD", "ITD" and "decommissioning" from the definitions list.
- 2) inserting new definitions in the definitions list, as follows:

DEC	NSW Department of Environment and Conservation, incorporating the NSW Environment Protection Authority
decommissioning	all activities, including deconstruction and site rehabilitation, after the treatment of the final quantity of contaminated material through the DHTD unit and treatment associated processes
DHTD	direct-heated thermal desorption
DPI	NSW Department of Primary Industries, including NSW Fisheries
NSW Maritime	NSW Maritime Authority, formerly the NSW Waterways Authority

- 3) replacing existing condition 1.2i) with the following:

- i) modification application MOD-115-9-2006-i, accompanied by *Application for Modification to the Existing Development Consent, Remediation of the Lednez Site, Rhodes and Homebush Bay*, prepared by Thiess Services and dated August 2006; and
- j) the conditions of this consent.

- 4) replacing existing condition 1.3 with the following:

1.3 In the event of an inconsistency between:

- a) the conditions of this consent and any document listed from condition 1.2a) to 1.2i) inclusive, the conditions of this consent shall prevail to the extent of the inconsistency; and
- b) any document listed from condition 1.2a) to 1.2i) inclusive, and any other document listed from condition 1.2a) to 1.2i) inclusive, the most recent document shall prevail to the extent of the inconsistency.

- 5) replacing existing condition 1.8 with the following:

1.8 Prior to undertaking any excavation works within Homebush Bay, the Applicant shall consult with and address any requirements of DPI concerning the additional excavation footprint identified in modification application MOD-115-9-2006-i, particularly in relation to material to be replaced as substratum for the bed of Homebush Bay, to the satisfaction of DPI.

- 6) replacing existing condition 4.1b) with the following:

- b) remediation excavation shall not commence until the Applicant has satisfied all requirements of this consent applicable prior to those works;

- 7) replacing existing condition 4.1e) with the following:

- e) remediation operation, including DHTD interim operations in accordance with condition 4.1A, shall not commence until:
 - i) all requirements of this consent applicable prior to the commencement of operation have been met;

- ii) the Independent Environmental Expert has certified to the Director-General that the development is capable of progressing to operation, based on the environmental and safety performance of the development during proof of performance trials; and
- iii) the Applicant has received the written approval of the Director-General and the EPA to proceed.

8) inserting a new condition 4.1A immediately after existing condition 4.1 as follows:

4.1A Notwithstanding condition 4.1, the Applicant may operate the DHTD unit at a reduced rate following the successful completion of the proof of performance tests but prior to the establishment of the final operational conditions with the prior written approval of the DEC. These operations may be permitted by the DEC at a reduced rate, based on consideration of:

- a) successful mini-test results during the start-up/shakedown period for select performance standards (HCL, particulate, other performance standards with short analytical lead times);
- b) submission to the DEC, within one week of the completion of the proof of performance tests, of the operating ranges portion of the performance test report; and
- c) successful completion of the proof of performance tests as reflected by a minimum of three test runs without significant interruptions.

9) replacing the word "ITD" in existing condition 5.3 with the following:

DHTD

10) replacing the word "ITD" in existing condition 5.4 with the following:

DHTD

11) replacing the word "ITD" in existing condition 5.7 with the following:

DHTD

12) replacing existing condition 5.10 with the following:

5.10 For the purposes of this consent, air monitoring/ air discharge points shall be identified as provided in Table 1 below.

Table 1 - Identification of Air Monitoring and Discharge Points

Monitoring/ Discharge Point Identification Number	Monitoring/ Discharge Point Description
1	DHTD exhaust stack
2	Soil drying enclosure exhaust stack
3	Soil drying enclosure carbon filter exhaust
4	DHTD thermal oxidiser
5	Most affected residential receptors (ambient monitoring)
6	Most affected residential receptors that may exist on the former Glad site (ambient monitoring)
7	Location approved by the EPA in writing (meteorological monitoring)

13) inserting a new condition 5.11A immediately after existing condition 5.11 as follows:

5.11A By 1 March 2007, or as otherwise agreed by the Director-General, the Applicant shall complete the installation of the enclosure over the waste

storage unit in accordance with the document referred to in condition 1.2(i). The enclosure shall be well-maintained and operational for the duration of the remediation works at the site, unless otherwise approved by the Director-General.

14) replacing existing condition 5.13 with the following:

5.13 The Applicant shall design, construct, commission, operate and maintain the development to ensure that at each discharge point indicated in Table 2 (refer to condition 5.10 of this consent), the concentration of each pollutant listed does not exceed the maximum allowable discharge concentration limit specified for that pollutant, unless otherwise approved in writing by the DEC. For the purpose of monitoring and determining compliance with this condition, "dioxins and furans" shall be polychlorinated dibenzo-p-dioxins (PCDD) and polychlorinated dibenzofurans (PCDF), presented as 2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD) equivalent and calculated in accordance with the procedures included in Part 4, clause 29 of the *Protection of the Environment Operations (Clean Air) Regulation 2002*.

Table 2 – Maximum Allowable Discharge Concentration Limits (Air)

Pollutant	Maximum Allowable Discharge Concentration Limit	Reference Conditions
DISCHARGE POINT 1		
Chlorine (Cl ₂)	180 mgm ⁻³	dry, 273K, 101.3 kPa, 11% O ₂
Hydrogen chloride (HCl)	90 mgm ⁻³	dry, 273K, 101.3 kPa, 11% O ₂
Nitrogen dioxide (NO _x) or nitric oxide (NO) or both	450 mgm ⁻³	dry, 273K, 101.3 kPa, 11% O ₂
Solid particles	25 mgm ⁻³	dry, 273K, 101.3 kPa, 11% O ₂
Total volatile organic compounds (VOC), as n-propane equivalent	10mg/m ³	dry, 273K, 101.3 kPa, 11% O ₂
Dioxins and furans	0.1 ngm ⁻³	TEQ, dry, 273K, 101.3 kPa, 11% O ₂
Carbon monoxide	90 mg/m ³	dry, 273K, 101.3 kPa, 11% O ₂
Sulfuric acid mist (H ₂ SO ₄) or sulfur trioxide (SO ₃) or both, as SO ₃ equivalent	90 mgm ⁻³	dry, 273K, 101.3 kPa, 11% O ₂
Fluorine (F ₂) and any compound containing fluorine, as total fluoride (HF) equivalent	45 mgm ⁻³	dry, 273K, 101.3 kPa, 11% O ₂
Total of Sb, As, Cd, Pb, Hg, Be, Cr, Co, Mn, Ni, Se, Sn and V	0.5 mgm ⁻³	dry, 273K, 101.3 kPa, 11% O ₂
Cadmium	0.1 mgm ⁻³	dry, 273K, 101.3 kPa, 11% O ₂
Mercury	0.1 mgm ⁻³	dry, 273K, 101.3 kPa, 11% O ₂
DISCHARGE POINT 2		
Total of Sb, As, Cd, Pb, Hg, Be, Cr, Co, Mn, Ni, Se, Sn and V	0.5 mgm ⁻³	dry, 273K, 101.3 kPa
Cadmium	0.1 mgm ⁻³	dry, 273K, 101.3 kPa
Mercury	0.1 mgm ⁻³	dry, 273K, 101.3 kPa
Solid particles	10 mgm ⁻³	dry, 273K, 101.3 kPa
Dioxins and furans	0.1 ngm ⁻³	TEQ, dry, 273K, 101.3 kPa
Total volatile organic compounds (VOC), or other measure of light hydrocarbons	Refer to condition 6.8 of this consent	

15) replacing the heading "Stack Design Requirements" immediately before existing condition 5.14 with the following:

Thermal Oxidiser and Stack Design and Performance

16) replacing existing condition 5.14 with new conditions 5.14 and 5.14A as follows:

5.14 Unless otherwise approved in writing by the DEC, the Applicant shall ensure that:

- a) the thermal oxidiser (air monitoring point 4, as defined under condition 5.10 of this consent) is operated under all circumstances, including high gaseous pollutant loads, at a temperature of at least 950°C +/- 30°C and with a gas residence time of at least one second; and
- b) the DHTD plant is operated to achieve a destruction and removal efficiency of 99.9999% for each pollutant specified by the DEC.

5.14A The thermal oxidiser operating temperature and residence time specified in condition 5.14a) may be modified to be consistent with a thermal oxidiser operating temperature and residence time demonstrated through condition 6.9B to achieve a destruction and removal efficiency of 99.9999% for the DHTD plant.

17) Replacing the existing condition 5.16 with new condition 5.16 as follows:

5.16 The Applicant shall ensure that the design parameters specified in Table 2A are met for discharge point 1 and discharge point 2 (refer to condition 5.10 of this consent).

Table 2A – Stack Design Requirements

Discharge Point	Minimum Stack Height (m)	Maximum Stack Tip Diameter (m)
1	30	1.2
2	23	1

18) Replacing the existing condition 5.20 with a new condition 5.20 as follows:

5.20 For the purposes of this consent, water monitoring/ water discharge points shall be identified as provided in Table 3 below. These water monitoring/ water discharge points shall be clearly indicated on maps in the Water Management Plan required under condition 9.7 of this consent or in the Bay Remediation Management Protocol required under condition 9.7A (for bay remediation monitoring/water discharge points including points 3 to 11, inclusive). The water monitoring/ water discharge points need not necessarily be limited to those identified in Table 3, if additional points are identified in an approved Water Management Plan. Monitoring/discharge points in Table 3 may be modified by the DEC, as reflected in the EPL, following the DEC's review of monitoring results from the trial of the sediment containment system, commissioning stage monitoring or ongoing monitoring during the bay remediation works.

Table 3 - Identification of Water Monitoring and Discharge Points

Monitoring/ Discharge Point Identification Number	Monitoring/ Discharge Point Description
1	Sediment basin, as specified in an approved Water Management Plan (refer to condition 9.7 of this consent)
2	Tap on the pipe discharging to Homebush Bay from detention basin(s), as specified in an approved Water Management Plan (refer to condition 9.7 of this consent)
3, 4	Reference sites for ambient turbidity monitoring (to be located 75 metres away from the outer perimeter barrier or otherwise as required by the DEC)
5, 6, 7, 8	Ambient waters one metre outside the outer perimeter barrier, upstream and downstream of the open windows of the work encapsulation barrier, or as otherwise agreed by the DEC, and identified in an approved Bay Remediation Management Protocol (refer to condition 9.7A of this consent). Number and location of monitoring/ discharge points are to be specified in the Bay Remediation Management Protocol for each phase of bay remediation.
9, 10	Ambient waters outside the open (window(s) of the works encapsulation

	barrier, or as otherwise agreed by the DEC, and identified in an approved Bay Remediation Management Protocol (refer to condition 9.7A of this consent). Number and location of monitoring/ discharge points are to be specified in the Bay Remediation Management Protocol for each phase of bay remediation.
11	Ambient waters adjacent to and outside the Excavation Working Area Barrier

Refer to Attachment B to this consent for indicative location of monitoring points

19) replacing existing condition 5.23 with the following:

5.23 The Applicant shall establish as part of the Water Management Plan for the development, and for the approval of the EPA, concentration limits for wastewater reuse. Any such limits shall apply for all or part of the development, as may be required by the EPA.

20) replacing existing condition 5.24 with the following:

5.24 The Applicant shall establish background ambient turbidity levels in Homebush Bay to the satisfaction of the EPA (at water monitoring points 3 and 4, refer to condition 5.20 of this consent). The Water Management Plan required under condition 9.7 of this consent shall specify a turbidity limit in ambient waters of Homebush Bay that will trigger management action if waters outside the silt curtains of the sediment remediation areas installed as part of the development exceed the trigger turbidity level developed based on the requirements of condition 5.25 of this consent.

21) replacing existing condition 5.26 with the following:

5.26 Notwithstanding condition 5.25 of this consent, the Applicant may seek the approval of the EPA for alternative criteria and methods that would allow detection of sediment plumes or a breach of silt curtain(s) during construction and seawall-related works. Different monitoring approaches may be proposed and implemented (eg. continuous monitoring during sediment excavation phases and seawall-related works). For the purpose of this condition, an indication of total suspended solids levels may be established using a turbidity meter after establishing a local relationship between nephelometric turbidity units and total suspended solids. The Water Management Plan referred to under condition 9.7 of this consent shall specify actions that shall be taken if this turbidity limit is exceeded.

22) inserting a new heading immediately after new condition 5.26, as follows:

Concentration Limits and Triggers – Bay Remediation Works

23) inserting new conditions 5.26A and 5.26B immediately after the new heading “Concentration Limits and Triggers – Bay Remediation Works”, as follows:

5.26A The Applicant shall undertake the development in a manner that meets the following water quality limits at the monitoring points specified (refer to condition 5.20), unless otherwise agreed by the DEC and reflected in an approved Bay Remediation Management Protocol for the bay remediation works (refer to condition 9.7A of this consent):

- a) wet weather turbidity monitoring:
 - i) turbidity levels within one metre outside of the silt curtain(s) (ie. at any of the points 5, 6, 7 or 8) shall not exceed the turbidity levels at the background turbidity reference points (points 3 and 4) by more than 66 Nephelometric Turbidity Units (NTU);
 - ii) the probe that is used to monitor the turbidity levels under i) shall be fitted with an alarm, that is operational, to ensure detection of sediment plumes from the remediation works;

- iii) for the purposes of determining compliance with i) above, turbidity levels shall be measured continuously at 15 minute intervals. Non-compliance with i) will be taken to have occurred if any three consecutive 15-minute readings at one or more of the points 5, 6, 7 and 8 are greater than 66 NTU above the same three consecutive 15-minute readings at the background turbidity reference points 3 or 4. If turbidity limits are exceeded then appropriate investigation and management actions shall be implemented, in accordance with an approved Bay Remediation Management Protocol;
 - iv) an appropriate definition of a wet weather event shall be provided in the Bay Remediation Management Protocol and wet weather triggers shall remain in place for three days following the wet weather event. High wind events that increase the background turbidity of the Bay may also be included in the definition.
- b) dry weather turbidity monitoring:
 - i) turbidity levels within one metre outside of the silt curtain(s) (ie. at any of the points 5, 6, 7 or 8) shall not exceed the turbidity levels at the background turbidity reference points (points 3 and 4) by more than 40 NTU;
 - ii) the probe that is used to monitor the turbidity levels under i) shall be fitted with an alarm, that is operational, to ensure detection of sediment plumes from the remediation works;
 - iii) for the purposes of determining compliance with i) above, turbidity levels shall be measured continuously at 15 minute intervals. Non-compliance with i) will be taken to have occurred if any three consecutive 15-minute readings at one or more of the points 5, 6, 7 and 8 are greater than 40 NTU above the same three consecutive 15-minute readings at the background turbidity reference points 3 or 4. If turbidity limits are exceeded then appropriate investigation and management actions shall be implemented, in accordance with an approved Bay Remediation Management Protocol;
- c) concentration limit for dioxins outside the outer perimeter barrier:
 - i) dioxin concentrations within one metre outside of the silt curtain(s) (ie. at any of the points 5, 6, 7 or 8) shall not exceed 40 picograms total TEQs per litre (using WHO TEFs 2006);
 - ii) if dioxin concentrations exceed this value then all works shall cease and the Applicant shall immediately seek the DEC's agreement to specific response measures to be implemented and as reflected in an approved Bay Remediation Management Protocol;
- d) concentration limit for DDTs outside the outer perimeter barrier:
 - i) DDT concentrations (measured as each of DDT, DDD and DDE) within one metre outside of the silt curtain(s) (ie. at any of the points 5, 6, 7 or 8) shall not exceed 0.05 micrograms per litre;
 - ii) if DDT concentrations exceed this value then all works shall cease and the Applicant shall immediately seek the DEC's agreement to specific response measures to be implemented and as reflected in an approved Bay Remediation Management Protocol.

5.26B The Applicant shall apply the following water quality trigger values with respect to remediation works within Homebush Bay, unless otherwise agreed by the DEC and reflected in an approved Bay Remediation Management Protocol for the bay remediation works (refer to condition 9.7A of this consent):

- a) wet weather turbidity monitoring:
 - i) turbidity levels within one metre outside of the silt curtain(s) (ie. at points 9 or 10) shall not exceed the turbidity levels at the background turbidity reference points (points 3 and 4) by more than 22 NTU for trigger 1, and 44 NTU for trigger 2;
 - ii) unless otherwise agreed by the DEC, the probe that is used to monitor the turbidity levels under i) shall be fitted with an alarm, that is operational, to ensure detection of sediment plumes from the remediation works;
 - iii) for the purposes of determining compliance with i) above, turbidity levels shall be measured continuously at points 3, 4, 9 and 10 at 15 minute intervals. Non-compliance with i) will be taken to have occurred if any three consecutive 15-minute readings at one or more of points 9 and 10 are more than 22 NTU for trigger 1, and 44 NTU for trigger 2, above the same three consecutive 15-minute readings at the background turbidity reference points 3 or 4. If turbidity limits are exceeded then appropriate investigation and management actions shall be implemented, in accordance with an approved Bay Remediation Management Protocol;
- b) dry weather turbidity monitoring:
 - i) turbidity levels within one metre outside of the silt curtain(s) (ie. at points 9 or 10) shall not exceed the turbidity levels at the background turbidity reference points (points 3 and 4) by more than 20 NTU for trigger 1, and 30 NTU for trigger 2;
 - ii) unless otherwise agreed by the DEC, the probe that is used to monitor the turbidity levels under i) shall be fitted with an alarm, that is operational, to ensure detection of sediment plumes from the remediation works;
 - iii) for the purposes of determining compliance with i) above, turbidity levels shall be measured continuously at points 3, 4, 9 and 10 at 15 minute intervals. Non-compliance with i) will be taken to have occurred if any three consecutive 15-minute readings at one or more of points 9 and 10 are more than 20 NTU for trigger 1, and 30 NTU for trigger 2, above the same three consecutive 15-minute readings at the background turbidity reference points 3 or 4. If turbidity limits are exceeded then appropriate investigation and management actions shall be implemented, in accordance with an approved Bay Remediation Management Protocol;
- c) a turbidity trigger value and operational response shall be developed by the Applicant for point 11, based on results from the trial of the containment systems;
- d) trigger values for dioxin outside the open window of the works encapsulation barrier:
 - i) dioxin concentrations within one metre outside of the silt curtain(s) (ie. at points 9 and 10) shall not exceed 30 picograms total TEQs per litre (using WHO TEFs 2006);
 - ii) if dioxin concentrations exceed this value then the Applicant shall implement appropriate investigation and management actions as reflected in an approved Bay Remediation Management Protocol;
- e) trigger values for DDTs outside the open window of the works encapsulation barrier:
 - i) DDT concentrations (measured as each of DDT, DDD and DDE) within one metre outside of the silt curtain(s) (ie. at points 9 and 10) shall not exceed 0.02 micrograms per litre for trigger 1;

- ii) if DDT concentrations exceed this value then the Applicant shall implement appropriate investigation and management actions as reflected in an approved Bay Remediation Management Protocol.

24) replacing existing condition 5.31 with the following:

5.31 The Applicant shall ensure that all materials used for the construction of structures in the Bay are clean and free of contaminants, to the satisfaction of NSW Maritime.

25) replacing the words "Homebush Bay/ Land Interface Design" immediately before existing condition 5.34 with the following:

Homebush Bay/ Land Interface Design and Remediation Requirements

26) inserting new conditions 5.37A, 5.37B and 5.37C immediately after existing condition 5.37 as follows:

5.37A The remediation excavation depth within Homebush Bay shall be a minimum of 500 millimetres +/- 150 millimetres and with a mean depth over the entire excavation footprint of 500 millimetres. Notwithstanding, the +/- 150 millimetre tolerance shall not apply in the following areas so as to permit an excavation depth of less than 500 millimetres:

- a) excavation areas identified as having a TCDD concentration in excess of $20 \mu\text{gkg}^{-1}$ within Cells NE-2, NE-6s, NE-7s, NE-8, NE-9, and 12S as shown on the URS Figure 7 at 0.4m to 0.5m depth (Technical Paper 5 in the document referred to under condition 1.2b) to the extent they are within the proposed footprint.

Validation of excavation depth shall be by means of pre-excavation and post-excavation surveys, or as otherwise agreed by the Director-General.

5.37B The method of remediation excavation within Homebush Bay shall include all practicable measures to prevent surficial sediments from flowing into adjacent over-deepened areas and shall not involve sweeping of surficial sediment into such over-deepened areas.

5.37C Reinstatement material for excavated areas of Homebush bay shall be placed to a minimum thickness of 500 millimetres. Validation of the minimum thickness of reinstatement material shall be based on comparison of pre-reinstatement and post-reinstatement surveys or as otherwise agreed by the Director-General. The reinstatement material shall be clean fill approved by the DEC accredited site auditor for the development.

27) replacing the words "Coffer Dam and Silt Curtain Requirements" immediately before existing condition 5.41 with the following:

Silt Curtain Requirements

28) replacing existing condition 5.41 with the following:

5.41 The Applicant shall ensure that silt curtains are installed, and associated monitoring operational, before sediment excavation commences and following conclusion of those works, until background ambient water quality is attained within the area bounded by the silt curtains.

29) deleting existing condition 5.42.

30) replacing existing 5.43 with the following:

5.43 The Applicant shall inspect silt curtains installed as part of the development daily, and following every rainfall event affecting the site, to ensure that the silt curtains are working effectively. Inspections shall include a visual check of the physical integrity of the silt curtains. If inspections indicate that there is a plume of material escaping from the silt curtains, all relevant excavation and outdoor materials handling activities shall cease until the silt curtain(s) are repaired. The Applicant shall record inspection dates, times and observations, with these records made available to the DEC on request.

31) deleting existing conditions 5.44, 5.45, 5.46 and 5.47.

32) inserting new condition 5.51A immediately after existing condition 5.51, as follows:

5.51A The studies referred to under condition 5.51 shall be updated to reflect changes made to the development through MOD-115-9-2006-i and resubmitted for approval, in the same manner required under condition 5.51.

33) inserting new condition 5.52A immediately after existing condition 5.52, as follows:

5.52A The studies referred to under condition 5.52 shall be updated to reflect changes made to the development through MOD-115-9-2006-i and resubmitted for approval, in the same manner required under condition 5.52.

34) replacing existing condition 5.54d)i) with the following:

i) only the DHTD plant and one front-end loader at a time are permitted to operate between 18:00 and 07:00 on any day; and

35) replacing existing condition 5.56 with a the following:

5.56 The Applicant shall design, construct, operate and maintain the development to ensure that the noise contributed from the development to the background acoustic environment after the completion of noise barriers on the site does not exceed the maximum noise contribution limits specified in Table 4, at the locations indicated, and during the periods specified. The Applicant shall investigate and finalise the implementation of additional noise mitigation measures as proposed in the document referred to in condition 1.2(h) of this consent. The location of the Statewide, Meriton and McRoss sites shall be as identified in the document referred to under condition 1.2(f) of this consent, in the event that any residential occupation of those sites occurs during the life of the development. The criteria in Table 4 only apply at wind speeds up to 3ms^{-1} at ten metres above ground level, or, temperature inversion conditions up to 3°C per 100 metres and wind speeds up to 2ms^{-1} at ten metres above ground level.

Table 4 - Maximum Allowable Noise Contributions (Evening and Night)

Location	Evening 18:00 to 22:00 any day	Night 22:00 to 07:00 Mondays to Saturdays 22:00 to 08:00 Sundays/ public holidays	
	$L_{Aeq}(15\text{ minute})$	$L_{Aeq}(15\text{ minute})$	$L_{A1}(1\text{ minute})$
Rhodes residential areas	47	44	54
Meadowbank residential areas	44	41	51
Marquet Street (EPL monitoring location, corner of	44	42	52 (criterion at ground level)

Mary and Marquet Streets)			
Statewide site – ground level	50	45	58
Statewide site – 10 metre elevation	52.5	47.5	58
Statewide site – 20 metre elevation	55	50	58
Meriton site – ground level	46.5	45	58
Meriton site – 10 metre elevation	49	47.5	58
Meriton site – 20 metre elevation	50.5	48	58
McRoss site – ground level	39	39	58
McRoss site – 10 metre elevation	46	46	58
McRoss site – 20 metre elevation	47	47	58

36) replacing existing condition 5.57 with the following:

5.57 The Applicant shall design, construct, operate and maintain the development, and apply best environmental practice, with the aim of minimising noise impacts from the development after the completion of noise barriers on the site relative to the noise goals specified in Table 5, at the locations indicated, and during the periods specified. The location of the Statewide, Meriton and McRoss sites shall be as identified in the document referred to under condition 1.2f) of this consent, in the event that any residential occupation of those sites occurs during the life of the development. Stages 1 to 4 refer to the stages of the development presented in the documents listed under condition 1.2 of this consent. This condition only applies at wind speeds up to 3ms^{-1} at ten metres above ground level or temperature inversion conditions up to 3°C per 100 metres and wind speeds up to 2ms^{-1} at ten metres above ground level.

Table 5 - Maximum Noise Goals (Day)

Location	Day
	07:00 to 18:00 Mondays to Saturdays 08:00 to 18:00 pm Sundays/ public holidays
	$L_{Aeq}(15\text{ minutes})$
Rhodes residential areas – stage 1	55
Rhodes residential areas – stage 2	50
Rhodes residential areas – stage 3	52
Rhodes residential areas – stage 4	50
Meadowbank residential areas	48
Marquet Street – stage 1	44
Marquet Street – stage 2	53
Marquet Street – stage 3	50
Marquet Street – stage 4	50
Statewide site – ground level	59 (based on existing EPL)
Statewide site – 10 metre elevation	70
Statewide site – 20 metre elevation	70
Meriton site – ground level	67
Meriton site – 10 metre elevation	67
Meriton site – 20 metre elevation	67
McRoss site – ground level	55
McRoss site – 10 metre elevation	61
McRoss site – 20 metre elevation	62

37) Inserting a new condition 5.57A immediately after existing condition 5.57 as follows:

5.57A Prior to the commencement of construction of the DHDT plant, and based on final detailed design of plant and equipment, the Applicant shall undertake an updated noise impact assessment of the DHDT plant and remediation activities, including cumulative noise impact assessment of all

site remediation activities during DHTD plant operations, to demonstrate compliance with the noise limits and goals specified under conditions 5.56 and 5.57. The cumulative noise impact assessment shall also include the operation of the Allied Feeds DHTD plant, unless the Applicant confirms in writing that the two DHTD Plants will not operate concurrently. The design of the DHTD plant shall incorporate the necessary controls to ensure that the model results demonstrate compliance with the noise limits and goals specified under conditions 5.56 and 5.57. The revision of the Operation Noise Management Protocol required under condition 9.16 shall consider the results of the noise assessment and modelling for the DHTD plant and other remediation activities.

38) deleting existing condition 5.66.

39) replacing the two references to "Table 7" in condition 6.2 with the following:

Table 6

40) replacing the words "Discharges to Atmosphere – ITD Unit" immediately before existing condition 6.4 with the following:

Discharges to Atmosphere – DHTD Unit

41) replacing existing condition 6.4 with the following:

6.4 The Applicant shall determine the pollutant concentrations and emission parameters specified in Table 7 below, at air monitoring/discharge point 1 (refer to condition 5.10 of this consent), and employing the sampling and analysis method specified. Monitoring shall be undertaken during commissioning and proof of performance trials, as specified in an approved Commissioning and Proof of Performance Program (refer to condition 9.12 of this consent), and quarterly during operation of the development. The frequency of monitoring for "Special Compounds" listed in the Table shall be determined by the monitoring results from proof of performance tests. Sampling positions for the purpose of this condition shall be located in accordance with test method TM-1. All monitoring results obtained under this condition shall be made available to the Rhodes Community Consultative Community, and to the general public on request.

Table 7 – Periodic Pollutant and Parameter Monitoring (Air)

Pollutant/ Parameter	Units of Measure	Method
Chlorine (Cl ₂)	mgm ⁻³	TM-7 and TM-8
Hydrogen chloride (HCl)	mgm ⁻³	TM-7 and TM-8
Nitrogen dioxide (NO ₂) or nitric oxide (NO), or both	mgm ⁻³	TM-11
Solid particles	mgm ⁻³	TM-15
Dioxins and furans	ngm ⁻³	TM-18
Total volatile organic compounds (VOC)	ppm	TM-34
Sulfuric acid mist (H ₂ SO ₄) or sulfur trioxide (SO ₃) or both, as SO ₃ equivalent	mgm ⁻³	TM-3
Fluorine (F ₂) and any compound containing fluorine, as total fluoride (HF) equivalent	mgm ⁻³	TM-9
Total of Sb, As, Cd, Pb, Hg, Be, Cr, Co, Mn, Ni, Se, Sn and V	mgm ⁻³	TM-12, TM-13 and TM-14
Cadmium	mgm ⁻³	TM-12, TM-13 and TM-14
Mercury	mgm ⁻³	TM-12, TM-13 and TM-14

Special Compounds (endrin, lindane, hexachlorobenzene, pentachlorobenzene, pentachlorophenol, 1,2,4,5-tetrachlorobenzene, dioxins total, 2-chlorophenol, 4-chlorophenol, 2,4-dichlorophenol, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, 1,4-dichlorobenzene, 2,4-D, 2,4,5-T, aldrin, dieldrin, chlordane, DDTs, heptachlor epoxide, and polycyclic aromatic hydrocarbons (PAHs) as benzo(a)pyrene equivalent)	mgm ⁻³	TM-34
Carbon monoxide	mgm ⁻³	TM-32
Velocity	ms ⁻¹	TM-2
Moisture content in stack gases	%	TM-22
Dry gas density	kgm ⁻³	TM-23
Molecular weight of stack gases	gmol ⁻¹	TM-23
Carbon dioxide in stack gases	%	TM-24
Oxygen in stack gases	%	TM-25

42) replacing existing condition 6.5 with the following:

6.5 The Applicant shall continuously monitor the pollutant concentration and emission parameters specified in Table 8 below, at air monitoring/discharge point 1 (refer to condition 5.10 of this consent), and employing the sampling and analysis method specified. Monitoring shall be undertaken during commissioning and proof of performance trials, as specified in an approved Commissioning and Proof of Performance Program (refer to condition 9.12 of this consent), and during operation of the development. All monitoring results obtained under this condition shall be made available to the Rhodes Community Consultative Community, and to the general public on request.

Table 8 – Continuous Pollutant and Parameter Monitoring (Air)

Pollutant/ Parameter	Units of Measure	Method
nitrogen dioxide (NO ₂) or nitric oxide (NO) or both	mgm ⁻³	CEM-2
carbon monoxide	ppm	CEM-4
volumetric flowrate	m ³ s ⁻¹	CEM-6
temperature	°C	TM-2
carbon dioxide in stack gases	%	CEM-3
oxygen in stack gases	%	CEM-3

43) inserting new condition 6.5A immediately after new condition 6.5 as follows:

6.5A At least three months prior to the commencement of commissioning of the thermal treatment unit, the Applicant shall submit for the approval of the DEC a report containing the manufacturer's performance specification for the acid gas scrubber and the proposed method for continuously monitoring the performance of the scrubber.

44) replacing the words "Discharges to Atmosphere – Soil Drying Enclosure and BCD" with the following:

Discharges to Atmosphere – Soil Drying Enclosure

45) replacing existing condition 6.6 with the following:

6.6 The Applicant shall determine the pollutant concentrations and emission parameters specified in Table 9 below, at air monitoring/discharge point 2 (refer to condition 5.10 of this consent), and employing the sampling and analysis method specified. Monitoring shall be undertaken during commissioning and proof of performance trials, as specified in an approved Commissioning and Proof of Performance Program (refer to condition 9.12 of this consent), and six-monthly during operation of the development. The

frequency of monitoring for "Special Compounds" listed in the Table shall be determined by the monitoring results from commissioning and proof of performance tests. Sampling positions for the purpose of this condition shall be located in accordance with test method TM-1. All monitoring results obtained under this condition shall be made available to the Rhodes Community Consultative Community, and to the general public on request.

Table 9 –Periodic Pollutant and Parameter Monitoring (Air)

Pollutant/ Parameter	Units of Measure	Method
Total of Sb, As, Cd, Pb, Hg, Be, Cr, Co, Mn, Ni, Se, Sn and V	mgm ⁻³	TM-12, TM-13 and TM-14
Cadmium	mgm ⁻³	TM-12, TM-13 and TM-14
Mercury	mgm ⁻³	TM-12, TM-13 and TM-14
Solid particles	mgm ⁻³	TM-15
Dioxins and furans	ngm ⁻³	TM-18
Special Compounds (endrin, lindane, hexachlorobenzene, pentachlorobenzene, pentachlorophenol, 1,2,4,5-tetrachlorobenzene, dioxins total, 2-chlorophenol, 4-chlorophenol, 2,4-dichlorophenol, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, 1,4-dichlorobenzene, 2,4-D, 2,4,5-T, aldrin, dieldrin, chlordane, DDTs, heptachlor epoxide, and polycyclic aromatic hydrocarbons (PAHs) as benzo(a)pyrene equivalent)	mgm ⁻³	TM-34
Total volatile organic compounds (VOC), or other measure of light hydrocarbons	Refer to condition 6.8 of this consent	

46) replacing existing condition 6.7 with the following:

- 6.7 Prior to the commencement of any soil handling in the soil drying enclosure, the Applicant shall submit to the Director-General, details of a continuous monitoring methodology, or other methodology acceptable to the EPA, to be used to detect breakthrough of the carbon filter(s) applied to the soil drying enclosure (air monitoring point 3, as identified under condition 5.10 of this consent). Details of the continuous monitoring method shall be accompanied by evidence of the DEC's satisfaction with the continuous monitoring method. The Applicant shall apply the approved monitoring method on a continuous basis during commissioning, proof of performance trials and operation of the development.

47) Inserting a new heading and conditions 6.9A and 6.9B immediately after existing condition 6.9 as follows:

Thermal Oxidiser Performance Monitoring

- 6.9A The Applicant shall continuously monitor the performance of the thermal oxidiser (monitoring point 4 identified under condition 5.10 of this consent). The parameters specified in Table 9A shall be monitored, employing the sampling and analysis methods indicated. All monitoring results obtained under this condition shall be made available to the Rhodes Community Consultative Community, and to the general public on request.

Table 9A - Thermal Oxidiser Performance Monitoring

Parameter	Units of Measure	Method
volumetric flowrate	m ³ s ⁻¹	CEM-6
temperature	°C	TM-2

- 6.9B The Applicant shall demonstrate the destruction and removal efficiency of the DHTD plant during proof of performance trials, as specified in an approved Commissioning and Proof of Performance Program (refer to

condition 9.12 of this consent). The methodology to demonstrate the destruction and removal efficiency of the DHTD plant shall be approved by the DEC.

48) inserting new conditions 6.14A, 6.14B, 6.14C and 6.14D immediately after existing condition 6.14 as follows:

6.14A The Applicant shall prepare and implement a **Bay Water Monitoring Program** with respect to water quality in Homebush Bay during sediment excavation and associated works. The Program shall address the requirements of the DEC and NSW Maritime. The Program shall be incorporated in the Bay Remediation Management Protocol required under condition 9.7A, and shall include, but not necessarily limited to:

- a) monitoring requirements for the trial of the sediment containment system (refer to condition 6.14E);
- b) monitoring requirements for the commissioning stage of the bay remediation works, including daily grab sampling at bay monitoring locations (refer to condition 5.20) to be analysed for the full suite of contaminants (refer to condition 6.14B) and turbidity and organic carbon for seven days of daily monitoring including at least two full movements of the pontoon (ie. two arcs of the excavator), or as modified in writing by the DEC following review of monitoring results from the trial of the sediment containment system;
- c) provision for a review of the monitoring program as soon as practicable after the trial of the sediment containment system (refer to condition 6.14E). The applicant may propose and justify alternative measurements, parameters and concentration limits for monitoring the sediment attached chemicals and the soluble chemical levels in the bay. The review shall be based on the results of the trial or other relevant data or information. Based on this review the applicant may proposed to monitor fewer parameters at a lower frequency if the trial results justify such a revision and propose a review of the licence limits for the approval of the DEC. Further reviews based on new information may be proposed at other stages of the works including after the commissioning stage monitoring program; and
- d) provision for the application of the revised Program, once approved by the DEC, for the remainder of the life of the development, unless otherwise agreed by the DEC (Note: the Applicant shall submit the Program for the approval of the DEC, including revised parameters to be monitored and revised concentration limits for the point(s) of discharge).

Note: The DEC has indicated that the objective of the monitoring program is to identify the pollutant contributions from the works and identify when natural processes in the bay may lead to licence limits being exceeded. The trial of the sediment containment system (condition 6.14E) and the commissioning stage monitoring may provide information for a review of the licence limits for monitoring the performance of the dredging containment system. When reviewing the licence limits the DEC will take into account the likely impact of the pollution caused, practical measures to prevent, control, abate, and mitigate pollution and protect the environment from pollution.

6.14B For each monitoring point specified in Table 10A, the Applicant shall monitor (by sampling and obtaining the results by analysis) the concentration of each pollutant specified. The Applicant shall use the sampling method, units of measure, and sample at the frequency, specified in the Table. Monitoring requirements in the Table may be modified by the DEC following its review of monitoring results from the trial of the sediment

containment system, from commissioning stage monitoring or from on-going monitoring.

Table 10A – Water Quality Monitoring Requirements (Homebush Bay)

Pollutant/Parameter	Units of Measure	Frequency	Sampling Method
Commissioning Stage⁽ⁱ⁾			
TCDD (equivalent)	pgL ⁻¹	Daily	Grab sample half way through outgoing tide at Point 7 and 9 if one window of the works encapsulation barrier (WEB) is open; or Grab sample half way through outgoing tide at points 7 and 8, 9 and 10 if two windows of the WEB are open.
DDTs	µgL ⁻¹	Daily	Grab sample half way through outgoing tide at Point 7 and 9 if one window of the works encapsulation barrier (WEB) is open; or Grab sample half way through outgoing tide at points 7 and 8, 9 and 10 if two windows of the WEB are open.
Turbidity	NTU	Continuous	Probe
Total organic carbon	mgL ⁻¹	Daily	Grab sample half way through outgoing tide at Point 7 and 9 if one window of the works encapsulation barrier (WEB) is open; or Grab sample half way through outgoing tide at points 7 and 8, 9 and 10 if two windows of the WEB are open.
All pollutants listed on Point 17 on EPL ⁽ⁱⁱ⁾	µgL ^{-1 (iii)}	Weekly or monthly ^(v)	Grab sample half way through outgoing tide at Point 7 and 9 if one window of the works encapsulation barrier (WEB) is open; or Grab sample half way through outgoing tide at points 7 and 8, 9 and 10 if two windows of the WEB are open.
Ongoing^(iv)			
TCDD (equivalent)	pgL ⁻¹	Weekly, monthly or three-monthly ^(v)	Grab sample half way through outgoing tide at Point 7 and 9 if one window of the works encapsulation barrier (WEB) is open; or Grab sample half way through outgoing tide at points 7 and 8, 9 and 10 if two windows of the WEB are open.
DDTs	µgL ⁻¹	Weekly, monthly or three-monthly ^(v)	Grab sample half way through outgoing tide at Point 7 and 9 if one window of the works encapsulation barrier (WEB) is open; or Grab sample half way through outgoing tide at points 7 and 8, 9 and 10 if two windows of the WEB are open.
Turbidity	NTU	Continuous	Probe
Total organic carbon	mgL ⁻¹	See note below ^(v)	See note below ^(v)
Relevant chemicals from EPL point 17		See note below ^(v)	See note below ^(v)

Notes:

(i) Commissioning stage is defined as the first two full movements of the pontoon ie. two arcs of the excavator

(ii) Environment Protection Licence 12146

(iii) Except: TCDD equivalent which is pg/L; pH which is pH units; Turbidity which is nephelometric turbidity units; Total Suspended Solids which is mg/L; and temperature which is degrees Celsius

(iv) There shall be increased monitoring during the remediation of the most contaminated centre area (frequency/no. of parameters).

(v) Depending on results of trial and/or commissioning stage monitoring.

6.14C The Applicant shall examine the potential for monitoring total organic carbon (TOC) to complement turbidity for regular ongoing monitoring as a surrogate for sediment-attached pollutants.

6.14D The Applicant shall examine the potential of using semi-permeable membrane devices as an ongoing monitoring tool to determine average water column concentrations during dredging.

- 49) inserting a new heading and new condition 6.14E immediately after new condition 6.14D as follows:

Trial of Sediment Containment System

- 6.14E A trial of the proposed sediment containment system and monitoring program shall be conducted prior to implementing the full system. The trial shall include additional grab samples at Point 11 outside the excavation working area barrier (refer to attachment B to this consent) and at Point 3 as a measure of the ambient conditions in the bay. All grab samples shall be analysed for all pollutants listed for Point 17 on the current Environment Protection Licence. Total suspended solids, Turbidity (NTU) and total organic carbon measurements shall also be taken during the trial. A minimum of three grab samples at each sampling location should be taken, including adjacent to and outside the excavation working area barrier, outside open windows of the works encapsulation barrier, outside the outer perimeter barrier and at an ambient background site. The Applicant shall submit details of the proposed trial's methodology and monitoring for the approval of Director-General and the DEC prior to undertaken the trial.

- 50) inserting a new heading and new condition 6.14F immediately after new condition 6.14E as follows:

Solubilisation Trial

- 6.14F Unless an alternative proposal is found acceptable by the DEC to address the assessment of the impact of soluble chemicals, a solubilisation trial shall be undertaken prior to the commencement of bay remediation works according to the following study design:
- a) collection of five sediment samples in the most contaminated grid squares of the bay;
 - b) collection of water sample(s) from the western side of bay as per trial 2 (see Appendix D of the document referred to in condition 1.2i));
 - c) analysis of sediment samples for dioxins, DDTs and chlorinated benzenes;
 - d) selection of the two worst sediment samples – analyse these 2 samples for rest of suite of chemicals as per trial 1 and trial 2 (see Appendix D of the document referred to in condition 1.2i)) with appropriate detection limits agreed with the DEC;
 - e) analysis of the water sample (s) for suite of chemicals as per trial 1 and 2;
 - f) conducting elutriate test for each of the samples by mixing 1:4 sediment/water mix for 30 minutes;
 - g) settlement of the mixture for one hour;
 - h) separation of water from the sediment using a centrifuge – separation shall be completed within a few hours at most; and
 - i) analysis of the elutriate for whole suite of chemicals as per trial 1 and trial 2.

The elutriate tests shall be conducted in duplicate – i.e. two tests for each sediment sample (i.e. four altogether) resulting in four elutriate samples for analysis – two from each sediment sample. The results of the solubility trials shall be submitted to the DEC and the Department with the Water Monitoring Program for the Homebush Bay remediation works required under condition 6.14A.

- 51) deleting existing condition 6.16, including the preceding heading “*Ambient Turbidity Monitoring*”, and following note box.

- 52) inserting new condition 7.8 immediately after existing condition 7.7 as follows:

- 7.8 As part of the community consultation program for the development, the Applicant shall develop a plan for informing the local community of the works subject to MOD-115-9-2006-i. The plan shall be developed in consultation with the Rhodes Community Consultative Committee and shall be implemented during the carrying out of the MOD-115-9-2006-i works.

53) replacing existing condition 9.7g)iii) with the following:

- iii) contingency actions for flood, heavy rainfall and storm-surges into remediation areas or damage to silt curtains;

54) inserting a new heading and new conditions 9.7A and 9.7B immediately after existing condition 9.7, as follows:

Bay Remediation Management Protocol

- 9.7A Prior to commencement of bay remediation works, the Applicant shall prepare and submit for the approval of the DEC and the Director-General, a **Bay Remediation Management Protocol** to detail how excavation works and associated activities within Homebush Bay will be carried out and managed in practice. The Plan shall address the requirements of the Department and NSW Maritime and shall include, but not necessarily limited to, the following:
- a) monitoring points, frequencies, sample methods, operational trigger levels and responses, licence limits and contingency plans (refer to conditions 6.14A to 6.14D and 9.7B);
 - b) the number of movements of the excavator arm and impermeable 12x12 curtain necessary to complete each arc, the time to complete an arc and how the barge will be moved to each new position including what precautions are needed;
 - c) procedures for installation and removal of the piles required for the Works Encapsulation Barrier;
 - d) how the remediation area is separated into the three sections (southern, northern and central) and how the boundaries relate to the contamination;
 - e) locations and movement of turbidity monitors particularly in relation to the windows in the works encapsulation barrier and outer perimeter barrier, the two reference sites and the excavator;
 - f) procedures for the removal of fish which may become trapped inside the sediment barrier containment system and the release of these fish back into the Bay;
 - g) procedures and systems (eg. signage, watercraft speed limits, bay access restrictions, minimum distances, etc) to ensure that watercraft of the bay do not impact on the barrier containment system and remediation activities;
 - h) procedures and systems for the regular inspection and maintenance of the barrier containment system;
 - i) procedures for reviewing and updating the Protocol as works in the Bay progress. The Protocol, including the monitoring program, operational triggers, licence limits and contingency measures, shall be reviewed by the Applicant following the assessment of monitoring results from the trial of the sediment containment system (refer to condition 6.14E) and the commissioning-stage monitoring (refer to condition 6.14A).

Once approved, the Applicant shall implement the Protocol, or approved revisions of the Protocol, for the duration of the Bay remediation works.

The responses to operational trigger levels and licence limit exceedances shall be approved by the DEC.

- 9.7B As part of the Bay Remediation Management Protocol required under condition 9.7A of this consent, the Applicant shall prepare and implement a **Bay Contingency Protocol** for use in response to exceedances of operational monitoring triggers and licence limits. Contingency approaches that shall be considered in development the Protocol shall include, but not necessarily limited to:
- a) use of flocculants;
 - b) use of a second works encapsulation barrier;
 - c) use of a second works encapsulation barrier plus use of flocculants;
 - d) specified short timeframe to complete each cell;
 - e) land based excavation of shallow areas and stop work at low tides – already suggested depending on monitoring results;
 - f) pumping from the excavation working area barrier to land to create a net inflow of water to the excavation working area barrier during excavation;
 - g) reporting exceedances of operational trigger values and licence limits to the DEC, including actions taken and results of action taken upon exceedances;
 - h) stop work; and
 - i) depending on the results of the trial of the containment system (refer to condition 6.14E, contingencies shall be developed for unacceptable results from the trial including the use of alternative containment systems such as sheet piling.

55) replacing existing condition 9.9a) with the following:

- a) a list of all liquid and non-liquid wastes that may be generated at the site including, but not necessarily limited to:
 - i) material that has undergone processing by the DHTD plant but requires off-site disposal;
 - ii) materials that cannot be treated by the DHTD plant due to either its size and/ or physical or chemical nature;
 - iii) building or demolition materials including those generated from the demolition of the seawall or other on-site structures;
 - iv) spent activated carbon;
 - v) baghouse dusts;
 - vi) liquid waste treatment plant residues and sludges;
 - vii) any other waste generated by the development;

56) replacing existing condition 9.12 with the following:

- 9.12 The Applicant shall prepare and implement a **Commissioning and Proof of Performance Program** to detail an environmental management framework, practices and procedures to be followed during the commissioning of all treatment technologies and contaminated soil handling and storage components of the development (including the soil drying enclosure and DHTD plant) and to demonstrate that the remediation technology is capable of meeting environmental criteria within a demonstrating operating range(s), prior to progression to full operation. The Program shall address the requirements of the EPA and shall include, but not necessarily be limited to:

Commissioning (Trials with None/Clean Soils)

- a) operational range(s) for relevant plant and equipment, including temperatures, pressures, flowrates etc;
- b) a schedule and procedures for testing all major process components, including all pollution control equipment, both in the absence of any soil load, and with the staged introduction of uncontaminated soils, with

- rational and justification for staging/ composition of the schedule and procedures;
- c) monitoring requirements and verification mechanisms to ensure compliance with operating design parameters for the remediation technology, including pollution control equipment, and compliance with relevant environmental and safety criteria;
- d) provision for the successful completion of a 24 hour clean soil shakedown without significant interruption to demonstrate that the DHTD is mechanically sound in accordance with best practice requirements;
- e) provision for review and certification of environmental and safety performance by the Independent Environmental Expert;

Proof of Performance (Demonstration of Contaminated Soils Performance)

- a) a framework for the collection of information equivalent to that required by *National Protocol – Approval/ Licensing of Trials of Technologies for the Treatment/ Disposal of Schedule X Wastes*;
- b) a framework for the collection of information to demonstrate that the remediation technology is capable of meeting:
 - i) performance criteria outlined in the documents listed under condition 1.2 of this consent;
 - ii) the technology assessment submitted in accordance with condition 1.9 of this consent;
 - iii) relevant criteria specified in: *OCP National Management Plan; Chemicals Control Order in Relation to Dioxin Contaminated Wastes 1986; Scheduled Chemical Wastes Chemical Control Order 2004; Chemical Control Order in Relation to Materials and Wastes Containing Polychlorinated Biphenyl 1997* or, to the extent that it is impracticable to comply with the foregoing, best practice treatment levels (refer to condition 5.2 of this consent);
- c) a testing regime and procedures for fully characterising contaminated feed materials, based on the contaminant constituents, contaminant concentrations and other physico-chemical characteristics, prior to processing within the development;
- d) provision for a minimum of three full runs on the most difficult/contaminated feed having regard to contaminant constituents, contaminant concentrations and the range of soil matrices;
- e) a schedule and procedures for testing all major process components, including all pollution control equipment with rational and justification for staging/ composition of the schedule and procedures;
- f) monitoring requirements and verification mechanisms to ensure compliance with operating design parameters for the remediation technology, including pollution control equipment, and compliance with relevant environmental and safety criteria, with rational and justification for staging/ composition of the schedule and procedures;
- g) emissions testing consistent with the operational monitoring requirements specified in this consent and the Environment Protection Licence for the development;
- h) mechanisms for review stages, changes in operational modes, or changes in equipment to address non-compliances with any design specifications, treatment standards or limits in relation to environmental or safety performance;
- i) provision for review and certification of environmental and safety performance by the Independent Environmental Expert;

Treatment Trials for Spent Activated Carbon Waste

- a) a schedule and procedures for treatment trial(s) and/ or provision of an equivalent level of information through peer reviewed scientific literature from a credible source, to demonstrate (with supporting engineering and laboratory test data) that the contaminant concentration in spent activated carbon waste that may be generated on the site can be

adequately and safely reduced by treatment through the DHTD plant to levels required by this consent and the Environment Protection Licence for the development, for reuse of materials on-site;

- b) if undertaken, the treatment trials referred to under a) above shall include, but not necessarily be limited to:
- i) a detailed work program/ plan for assessment and review at least one month prior to the commencement of trials;
 - ii) provision for the supervision of all trials by a suitably qualified person(s), and the carrying out of the trials in a fit and proper manner;
 - iii) details of trial apparatus, such as operational plant, pilot scale plant or benchtop laboratory scale (preferentially in that order), as may be agreed by the EPA;
 - iv) details of trial conditions representative of the expected worst case operating conditions and the type treatment technology;
 - v) subject to environmental, safety and operational constraints, the trial shall include treatment of spent activated carbon waste blended with carbon-free media (ie. silicious sand);
 - vi) procedures for testing spent activated carbon waste for all contaminants of concern, before blending with soil, and treatment;
 - viii) provision for testing spent activated carbon waste independently/ separately from soil (ie. separation of treated soil and spent activated carbon before testing);
 - ix) provision for the submission of a report to the EPA and the Director-General, within one month of the completion of trials on spent activated carbon waste, including but not necessarily limited to:
 - details of the treatment trial methodology used, conditions and rationale;
 - details of operating conditions eg scale of trial, materials used, size of batches etc;
 - trial results together with a discussion and interpretation of the results;
 - comparison of treatment trial results against the treatment outcomes expected of the DHTD plant on other matrix types (ie excavated contaminated material in the absence of spent activated carbon waste);
 - justification that the treatment trial was adequately representative of the expected treatment processes and conditions on the site;
 - a review of scientific references and published research applicable to the relevant treatment processes and conditions, to support the conclusions of the treatment trial;
 - x) sufficient information for the Director-General and the EPA to establish whether approval for progression to full-scale operation of the treatment processes on the site, having consideration of whether:
 - information from the trial demonstrates that the treatment of spent activated carbon waste from all expected sources through the DHTD plant would be successful;
 - information from the trial demonstrates that the treatment of spent activated carbon waste as a percentage blend within the proof of performance trials was successful;

The Plan shall be submitted for the approval of the Director-General and the EPA, accompanied by a review of the Plan by the Independent Environmental Expert, prior to the commencement of commissioning. The Applicant shall make the Plan available to the public for inspection, on request.

- 57) inserting a new heading and new condition 9.16 immediately after existing condition 9.15, as follows:**

Revision of Environmental Management Plans

9.16 The Applicant shall revise all relevant management plans and documents required under this consent in order to incorporate and address, as required, the modifications to the development described in modification application MOD-115-9-2006-i. Management plans and documents to be revised shall include, but not necessarily limited to, the following:

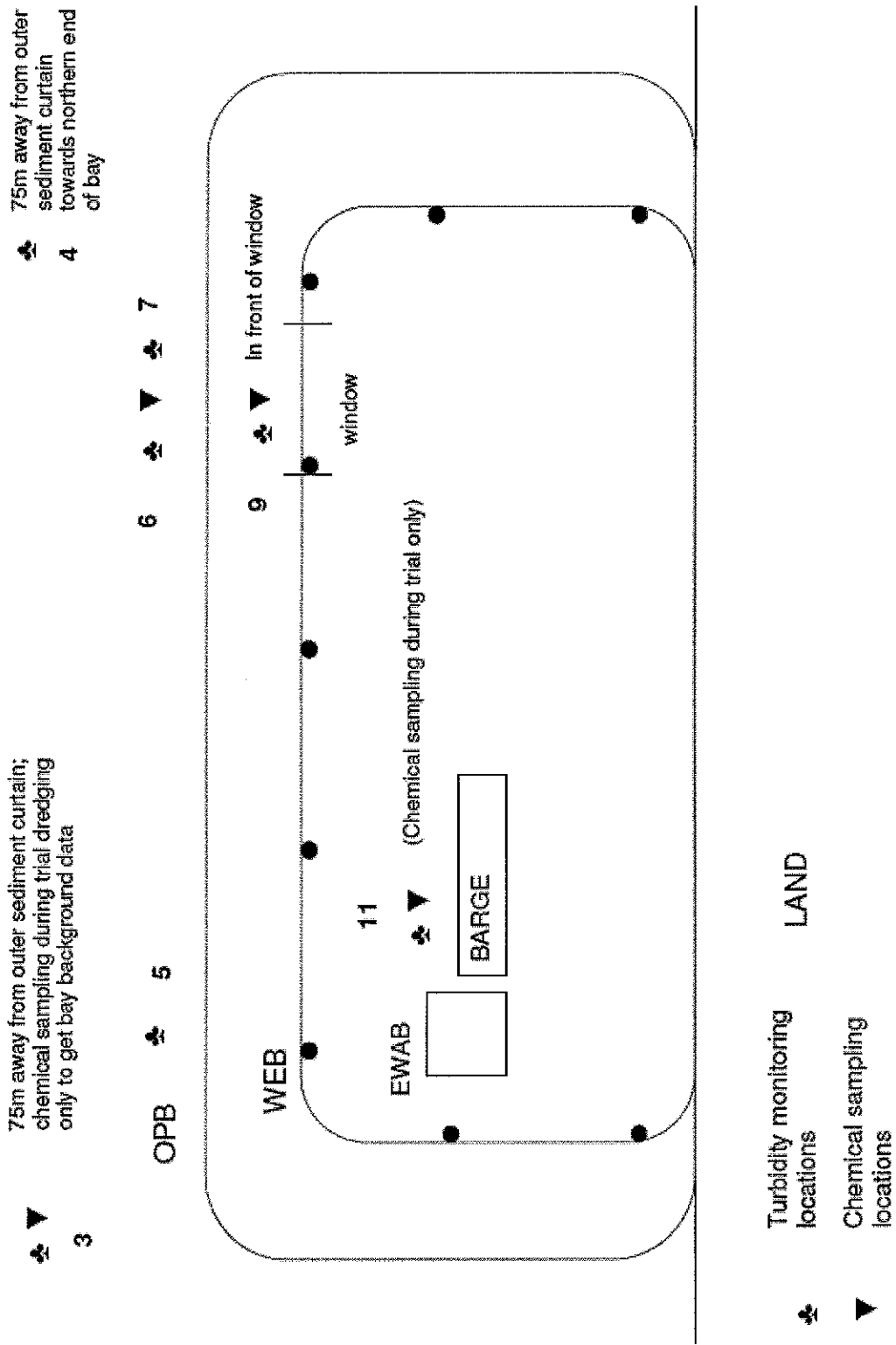
- a) relevant Standard Operating Procedures (condition 9.2)
- b) Environmental Training Program (condition 9.4)
- c) Contaminated Materials Management Protocol (condition 9.5)
- d) Air Quality Management Plan (condition 9.6)
- e) Water Management Plan (condition 9.7)
- f) Erosion and Sediment Protocol (condition 9.8)
- g) Waste Management Plan (condition 9.9)
- h) Site Establishment and Construction Noise Management Protocol (condition 9.10)
- i) Acid Sulfate Soil Management Protocol (condition 9.11)
- j) Commissioning and Proof of Performance Program (condition 9.12)
- k) Operation Noise Management Protocol (condition 9.13)
- l) Operation Environmental Management Plan (condition 9.14)
- m) Decommissioning Environmental Management Plan (condition 9.15)

The revision of the Operation Noise Management Protocol shall be undertaken following consultation with local residents most likely effected by the development modification and shall incorporate the controls included in the design of the DHTD resulting from the investigations required under condition 5.57A. Revised Management Plans and documents shall be submitted for Director-General and/or DEC for approval in accordance with the requirements of the relevant condition, or as otherwise required by the Director-General.

- 58) attaching, as Attachment B to the consent, the following words and diagrams:**

ATTACHMENT B – FIGURES

Indicative bay sampling locations when one window section is open



Indicative bay sampling locations when two window sections are open

