

**OPERATIONAL CONTROLS 07 STORAGE AND USE OF HAZARDOUS MATERIALS, FUELS AND LUBRICANTS**

These tables set out the operational controls required to achieve the objectives and targets set out in Environmental Program 07, Storage and Use of Hazardous Materials, Fuels and Lubricants.

BBA will, as a minimum, implement the control activities and performance measures set out below.

Table OCO 7.1 Storage and Use of Hazardous Materials, Fuels and Lubricants

Table OCO 16.1 Spill Management

**Table OCO 7.1 Storage and Use of Hazardous Materials, Fuels and Lubricants**

Ref.	Subject	Reference	Control Activity	Responsibility	Timing	Performance Measure	Audit Check
<b>INDUCTION AND TRAINING</b>							
1.	Design Consultant briefing	CEMP 10	The Design Consultants will be briefed on the design aspects of this Control Document	Design Director	Prior to start of design.	Briefing record	
2.	Project and Site Induction	CEMP 13	All employees, consultants and subcontractors involved will be inducted into the environmental aspects and controls related to this Control Document.	Construction Director or Project Manager, as applicable Start up Manager for Early Works	Prior to personnel commencing work on site	Induction records	
3.	Staff Construction Environmental Management Plan Induction	CEMP 13	All relevant staff will be inducted into the requirements of the Construction Environmental Management Plan and all associated documents.	Construction Director or Project Manager, as applicable	Prior to staff commencing work on site	Induction records	
4.	HAZID workshop	Project Requirement	All relevant staff will participate in Hazard Identification (HAZID) workshops to identify high and extreme risk events	Design Director	Prior to staff commencing work on site	HAZID records	

**OPERATIONAL CONTROLS 07 STORAGE AND USE OF HAZARDOUS MATERIALS, FUELS AND LUBRICANTS**

Ref.	Subject	Reference	Control Activity	Responsibility	Timing	Performance Measure	Audit Check
5.	Awareness Training	CEMP 13 CEMP 14	Conduct awareness instruction of relevant BBA staff, contractors and field personnel. Objectives of Hazardous Materials, Fuels and Lubricants awareness training include: <ul style="list-style-type: none"> <li>• Proper identification and storage.</li> <li>• Refuelling.</li> <li>• Prevention of spills.</li> <li>• Spill management.</li> <li>• Emergency response.</li> </ul>	Project Manager	As per Training Plan	Training records	
6.	Marine crew training	CEMP 14	All crew will be trained in oil spill response	Project Manager	As per Training Plan	Training records	
7.	Briefings	CEMP 13 CEMP 14	Environmental briefings shall emphasize site-specific control requirements.	General Superintendent	Prior to working in a specific area	Record of Briefing. (eg SEP Briefing)	

**DESIGN AND PRE-CONSTRUCTION**

**OPERATIONAL CONTROLS 07 STORAGE AND USE OF HAZARDOUS MATERIALS, FUELS AND LUBRICANTS**

Ref.	Subject	Reference	Control Activity	Responsibility	Timing	Performance Measure	Audit Check
8.	Storage in accordance with DTAE requirements	LU1, Part 3, Sect 2, 2HZ1.1, pg 91, (Seq pg 104)	<p>All designated storage areas (hazardous/dangerous substances) shall be designed in accordance with DTAE guidelines.</p> <p>Bunded areas and transport vehicle loading and unloading aprons must: be made of materials that are impervious to any environmentally hazardous material stored within the bund;            ii) be graded or drained to a sump to allow recovery of liquids;            iii) be chemically resistant to the chemicals stored or transferred;            iv) be designed and managed such that the transfer of materials is adequately controlled by valves, pumps and meters and other equipment wherever practical. The equipment must be adequately protected (eg. with bollards) and contained in an area designed to permit recovery of any released chemicals;            v) be designed such that chemicals which may react dangerously if they come into contact are in different compounds or, if in the same compound, have bunded containment areas that are separate and will prevent spillages mixing; and            vi) be managed such that the capacity of the bund is maintained at all times (eg. by regular inspections and removal of obstructions);</p>	Design Director	Initial site preparation	Design review	
9.	Licence obtained where required	LU1, Part 3, Sect 2, 2HZ1.1, pg 91, (Seq pg 104)	Appropriate licences shall be obtained where the quantity of hazardous/dangerous substances are in excess of the non-licensable limit.	Environmental Manager	Initial site preparation	Licence	

**OPERATIONAL CONTROLS 07 STORAGE AND USE OF HAZARDOUS MATERIALS, FUELS AND LUBRICANTS**

Ref.	Subject	Reference	Control Activity	Responsibility	Timing	Performance Measure	Audit Check
10.	SEPs to show storage area details	LU1, Part 3, Sect 2, 2HZ1.1, pg 91, (Seq pg 104)	The location, type and size of the designated storage area shall be detailed in the Site Environment Plan (SEP) by determining the typical substances, segregation, separation, potential quantities and regulatory obligations.	Environmental Manager	Initial site preparation	Site Environmental Plan	
11.	Storage areas signed	Regulations	Designated storage areas shall be clearly signed showing the class of hazardous/dangerous substances and related precautions.	General Superintendent	Initial site preparation	Signage in place	
12.	Bund capacity	LU1, Part 3, Sect 2, 2HZ1.1, pg 91, (Seq pg 104) LU1, Part 3, Sect 2, 2HZ2.1, pg 92, (Seq pg 105) LU1, Part 3, Sect 5, 5WM1.1, pg 157, (Seq pg 170) LU1, Part 3, Sect 6, 6WM2.1, pg 166, (Seq pg 179) LU2, Part 3, HZ1.1, pg 21, (Seq pg 235) Lu3, Part 3, WM3.1, pg 41, (Seq pg 280) LU4, Part 3, WM3.1, pg 42, (Seq pg 331)	Designated storage areas shall be surrounded by bunding with storage capacity of the largest of:  i) at least 110% of the volume of the largest storage vessel; or ii) at least 110% of the combined volume of any interconnected vessels within that bund; or iii) at least 25% of the total volume of all vessels stored in that spill collection bund; or iv) the capacity of the largest tank and the output of any firewater system over a twenty minute period.	General Superintendent	Initial site preparation	Design review	
13.	Bund liner	LU1, Part 3, Sect 2, 2HZ1.1, pg 91, (Seq pg 104)	Bunds shall be designed with an impermeable liner.	General Superintendent	Initial site preparation	Design review	
14.	Bund sump	Project Requirement	Bunded areas will contain an oily water interceptor and sump. Bund drainage points will be padlocked.	General Superintendent	Initial site preparation	Design review	

**OPERATIONAL CONTROLS 07 STORAGE AND USE OF HAZARDOUS MATERIALS, FUELS AND LUBRICANTS**

Ref.	Subject	Reference	Control Activity	Responsibility	Timing	Performance Measure	Audit Check
15.	Spill kit availability	LU1, Part 3, Sect 2, 2HZ4.1, pg 93, (Seq pg 106) LU2, Part 3, HZ2.1, pg 21, (Seq pg 235) LU3, Part 3, WM5.1, pg 41, (Seq pg 280) LU4, Part 3, WM5.1, pg 42, (Seq pg 331) EM1, WM3.1, pg 18, (Seq pg 359)	Prior to the commencement of work hydrocarbon spill kits must be available.	General Superintendent	Initial site preparation	Inspection records	
16.	Asbestos audit	Project Requirement	Where asbestos material is suspected a licensed contractor shall conduct an asbestos audit, prior to handling the material.	General Superintendent	Initial site preparation	Audit Report	
17.	Asbestos handling	Project Requirement	Only approved asbestos contractors shall be employed to handle and transport asbestos to an appropriately licensed landfill.	General Superintendent	Initial site preparation	Approval Certificate	
<b>CONSTRUCTION</b>							
18.	Classification of materials known and labelled	Project Requirement LU1, Part 3, Sect 2, 2HZ3.1, pg 92, (Seq pg 105)	The classification of materials brought onto site shall be determined prior to use. All hazardous/dangerous substances containers must be clearly & properly labelled. An inventory of chemicals brought onto site, used on site and taken off site will be maintained.	General Superintendent	Ongoing	Hazardous materials records	
19.	Storage volumes minimised	Project Requirement	Only the minimum required volumes of hazardous substances and materials will be stored on site.	General Superintendent	Ongoing	Inspection records	
20.	MSDS obligatory	LU1, Part 3, Sect 2, 2HZ3.1, pg 92, (Seq pg 105)	No hazardous/dangerous substances shall be used without a current Material Safety Data Sheet (MSDS).	General Superintendent	Ongoing	MSDS available	
21.	MSDS available	LU1, Part 3, Sect 2, 2HZ3.1, pg 92, (Seq pg 105)	All MSDS's shall be registered and be available onsite at all times	General Superintendent	Ongoing	MSDS available	

**OPERATIONAL CONTROLS 07 STORAGE AND USE OF HAZARDOUS MATERIALS, FUELS AND LUBRICANTS**

Ref.	Subject	Reference	Control Activity	Responsibility	Timing	Performance Measure	Audit Check
22.	Handling and use in accordance with MSDS and JSEA	Project Requirement	All handling and usage of hazardous/dangerous substances shall be in accordance with the recommended requirements of each specific MSDS and Job Safety Environment Analysis (JSEA).	General Superintendent	Ongoing	JSEA's inspection Records	
23.	Spill kits	Project Requirement	Spill kits should be deployed at all work sites near waterways. When working in the vicinity of a waterway or other sensitive areas, plant operators should be trained in the use of spill kits.	General Superintendent	Ongoing	Inspection records Training Records	
24.	All loose drums in bunds	Vic EPA Pub 347	All loose fuel and lubricant drums shall be stored within the bunded area regardless of whether they are full or empty.	General Superintendent	Ongoing	Inspection records	
25.	Refuelling location	LU1, Part 3, Sect 2, 2HZ1.1, pg 91, (Seq pg 104)	Refuelling is to take place in designated refuelling areas. When this is not appropriate, refuelling is not to take place in any location where spillage may contaminate surrounding waterways or topsoil stockpiles.	General Superintendent	Ongoing	Inspection records	
26.	No refuelling near watercourses	LU1, Part 3, Sect 5, 5SW8.1, pg 150, (Seq pg 163) LU1, Part 3, Sect 6, 6SW8.1, pg 162, (Seq pg 175) LU3, Part 3, SW8.1, pg 26, (Seq pg 265) LU4, Part 3, SW8.1, pg 27, (Seq pg 316)	Under no circumstances shall plant be refuelled near a watercourse. The minimum separation between a watercourse and a refuelling area is 50 m.	General Superintendent	Ongoing	Inspection records	
27.	Refuelling attended	Project Requirement	Refuelling operations will not be left unattended for any period	General Superintendent	Ongoing	Inspection records	
28.	Parking of plant	Project Requirement	Plant parking shall be in designated areas. These areas shall be selected on the basis of reducing the consequences of accidental spills or leakage of fuel or lubricants. They shall be shown on the Site Environmental Plans.	Environmental Manager	Ongoing	Inspection records. SEP	

**OPERATIONAL CONTROLS 07 STORAGE AND USE OF HAZARDOUS MATERIALS, FUELS AND LUBRICANTS**

Ref.	Subject	Reference	Control Activity	Responsibility	Timing	Performance Measure	Audit Check
29.	Plant spill trays	Project Requirement	All fixed plant (including on any pipe laying vessels) will be equipped with drip trays which will be inspected after rain events.	General Superintendent	Ongoing	Inspection records	
30.	Spill tray water	Project Requirement	Oily water from plant spill trays will be collected and stored in labelled 200 litre drums for later disposal to a licensed facility.	General Superintendent	Ongoing	Inspection records	
31.	Daily plant inspections	Project Requirement	All plant and machinery (particularly fuel lines, hydraulic hoses) will be inspected daily and any faults or signs of wear and tear reported to the Site Environmental Officer.	General Superintendent	Ongoing	Inspection records	
32.	Observed leakage	Project Requirement	Any equipment from which an oil leakage creates a visible spillage on the ground must be immediately taken out of service and repaired.	General Superintendent	Ongoing	Inspection records	
33.	Servicing of plant	Project Requirement	Plant shall be serviced and inspected regularly for oil and fuel leaks. Any leaks detected shall be rectified as soon as possible.	General Superintendent	Ongoing	Inspection and maintenance records	
34.	Servicing location	Project Requirement	Infield servicing and refuelling of equipment will be limited to designated areas at each construction site. The hydrocarbon storage will be double skinned vessels or contained within bunded areas which have a capacity of 110% of the stored hydrocarbon material.	General Superintendent	Ongoing	Inspection records	
35.	Storage of waste fuels and oils	Project Requirement	All waste oils and lubricants shall be stored at the designated storage area in preparation for recycling or disposal.	General Superintendent	Ongoing	Inspection records	
36.	Disposal of waste fuels and oils	EMPC Act 1994	Only DTAE licensed (Waste Transport Business Environment Protection Notice) and approved waste transport and disposal contractors shall be employed for the disposal of these wastes.	Site Environmental Officer	Ongoing	WTB-EPN	

**OPERATIONAL CONTROLS 07 STORAGE AND USE OF HAZARDOUS MATERIALS, FUELS AND LUBRICANTS**

Ref.	Subject	Reference	Control Activity	Responsibility	Timing	Performance Measure	Audit Check
37.	Clean up of spills	Project Requirement	Spills shall be contained (and cleaned up) onsite by the use of earth bunds, spill kits or other suitable means.	General Superintendent	Ongoing	Incident report	
<b>Special measures for marine based work</b>							
38.	Refuelling attendance and isolation valves	Project Requirement	Two operators shall be in attendance at all times, one at the tanker delivering the fuel the other at point of discharge. Isolation valves for quick shut off of flow must be located at both locations	General Superintendent	Ongoing	Incident report	
39.	Spill kit availability	Project Requirement	A well stocked spill kit (absorbent pads, absorbent litter) that can be quickly deployed and recovered should a minor spill (<200 litres) occur in the marine environment shall be available at all times.	General Superintendent	Ongoing	Incident report	
40.	Pipe laying vessel spill kit	Project Requirement	Pipelaying vessels shall be equipped with spill response gear (including floating boom, skimmers, and absorbent materials).	General Superintendent	Ongoing	Incident Report	
41.	Spills greater than 200 litres	Project Requirement	Spills of >200 litres will require additional assistance provided by the Port of Launceston Oil Spill Response Group	General Superintendent	Ongoing	Incident Report	
42.	Dispersants	Project Requirement	Use of dispersants is prohibited unless directed by an oil spill response authority	General Superintendent	Ongoing	Incident Report	
<b>INCIDENTS</b>							

**OPERATIONAL CONTROLS 07 STORAGE AND USE OF HAZARDOUS MATERIALS, FUELS AND LUBRICANTS**

Ref.	Subject	Reference	Control Activity	Responsibility	Timing	Performance Measure	Audit Check
43.	Potential environmental harm	CEMP incident response procedures	<p>Class 1: <i>An actual adverse effect on the health or safety of human beings that is of a high impact or on a wide scale; an actual adverse effect on the environment that is of a high impact or on a wide scale; an actual loss or property damage of an amount, or amounts in aggregate, exceeding ten times the threshold amount (\$5,000); an environmental nuisance of a high impact or on a wide scale; an actual adverse effect on the health or safety of human beings that is not negligible; an actual adverse effect on the environment that is not negligible</i> - cease relevant activities across all sites until the problem is fully understood and rectified; follow incident response procedures</p> <p>Class 2: <i>The emission of a pollutant that unreasonably interferes with, or is likely to unreasonably interfere with, a person's enjoyment of the environment; any emission specified in an environment protection policy to be an environmental nuisance; an actual loss or property damage of an amount, or amounts in aggregate, exceeding the threshold amount (\$5,000)</i> - cease relevant activities at the site of occurrence until the problem is rectified; follow incident response procedures</p>	Environmental Manager	Ongoing	Incident response records	

**OPERATIONAL CONTROLS 07 STORAGE AND USE OF HAZARDOUS MATERIALS, FUELS AND LUBRICANTS**

Ref.	Subject	Reference	Control Activity	Responsibility	Timing	Performance Measure	Audit Check
44.	Potential permit breach	CEMP incident response procedures	<p><i>Class A: A permit condition has been breached and either the environmental consequences are significant or the breach is due to a wilful or negligent failure to attempt to satisfy the condition – cease relevant activities across all sites until the problem is fully understood and rectified; follow incident response procedures</i></p> <p><i>Class B: A permit condition has been technically breached but the intent of the condition has been or will be achieved and environmental consequences of the breach are not significant – cease relevant activities at the site of occurrence until the problem rectified; follow incident response procedures</i></p> <p><i>Class C: Compliance with the permit has been raised as an issue but the intent and requirements established by the permit condition have been met – examine the significance and potential for corrective action; follow incident response procedures</i></p>	Environmental Manager	Ongoing	Incident response records	
<b>EVALUATING PERFORMANCE</b>							
45.	Inspections	CEMP 16	Inspect the condition of protection and control measures and arrange maintenance, as required.	Site Environmental Officer	Daily	Weekly Checklist	
46.	Reporting	CEMP 17	Report on the implementation of this EP monthly.	Site Environmental Officer	Ongoing	Monthly Report	
47.	Reporting	CEMP 17	Report on the implementation of this EP in the environmental section of the monthly Project Report.	Environmental Manager	Ongoing	Monthly Report	

**OPERATIONAL CONTROLS 07 STORAGE AND USE OF HAZARDOUS MATERIALS, FUELS AND LUBRICANTS**

Ref.	Subject	Reference	Control Activity	Responsibility	Timing	Performance Measure	Audit Check
48.	Assess monitoring results	CEMP 19	Evaluate and assess monitoring results against specified targets	Environmental Manager	Ongoing	Reports	
49.	Corrective action	CEMP 19	Take corrective action, where required	Project Manager	As required	Action taken	

**Revision Status**

Revision	Date	Revision Description	Prepared	Reviewed	Approved
A0	27 April 2007	Draft for BBA review	IW		
A1	9 May 2007	Draft for DTAE review	IW		
B0	22 October 2007	Revised for submission to DTAE following auditor's comments	IW	JD	JC
B4	22 January 2008	Revised following DTAE comments	JRD	JD	CF