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Our Reference: Australand(RefrigeratedStore)-LETFinal(Rev0)-1Jul15

Australand Property Group  
1 Homebush Bay Drive, Building C, Level 3  
Rhodes NSW 2138

**Attention:** Mr. Paul Solomon

Dear Paul,

**Subject: Refrigerated Storage Facility, Lots 5&6 Cnr Cowpasture Road & The Horsley Drive, Wetherill Park – Assessment of Application of SEPP33**

Thank you for your inquiry regarding the application of State Environmental Planning Policy No.33 - Hazardous and Offensive Developments (SEPP33) to the proposed refrigerated storage facility at Lots 5 & 6 on the corner of Cowpasture Road and The Horsley Drive, Wetherill Park.

I have reviewed the proposed materials to be stored and handled at the site, and confirm that the materials do not result in the requirement for the application of SEPP33 to the proposed development. I have conducted a detailed assessment attached, demonstrating that SEPP33 does not apply to the proposed refrigerated storage facility.

As a member of the Australasian Institute of Dangerous Goods Consultants ([www.aidgc.org.au](http://www.aidgc.org.au)), I can confirm that I am classified by WorkCover NSW as a "Competent Person" under the Work Health and Safety Act (2011) and the Associated Regulation (2011) to assess Dangerous Goods Storage facilities.

Should you have any further queries please call me on the mobile (0411 659 309). Thank you again for your inquiry.

Yours faithfully,

**Steve Sylvester**  
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# **REFRIGERATED STORAGE FACILITY LOTS 5 & 6, Cnr COWPASTURE ROAD & THE HORSLEY DRIVE, WETHERILL PARK, NSW**

## **ASSESSMENT OF APPLICATION OF SEPP33**

### **1. INTRODUCTION**

#### **1.1 Background**

Australand Property Group (Australand) proposed to develop a refrigerated storage facility at the corner of Cowpasture Rd and The Horsley Drive at Wetherill Park, NSW. The facility will use ammonia as a refrigerant gas, which is classified as a Dangerous Good or DG (Toxic Gas, Class 2.3). Hence, the refrigeration system will hold a quantity of ammonia in storage for the refrigeration of fresh produce at the facility. In addition to the ammonia refrigerant, the facility will store diesel fuel in an above ground integrally bunded tank.

As ammonia is classified as a DG, it is subject to SEPP33, requiring a review of the quantity of gas held on the site. If the quantity exceeds the SEPP33 threshold levels, listed in Applying SEPP33- Hazardous and Offensive Developments (published by the Department of Planning and Environment or DPE), then SEPP33 will apply. Hence, the quantity of goods is critical in determining the required planning studies for the site and Australand has approached RAWRISK Engineering Pty Ltd (RAWRISK) to prepare the SEPP33 assessment for the site. Diesel fuel is not subject to SEPP33 requirements and therefore would not be considered in the assessment, however, for completeness this has been incorporated into the review.

This study has been developed to provide the SEPP33 analysis for the proposed refrigerated storage facility at the corner of Cowpasture Rd and The Horsley Drive at Wetherill Park, NSW.

#### **1.2 Objectives**

The objective of the study is to identify whether SEPP33 applies to the proposed refrigerated storage facility at the corner of Cowpasture Rd and The Horsley Drive at Wetherill Park, NSW, and whether it is necessary to conduct a Preliminary Hazard Analysis (PHA) for the site.

#### **1.3 Scope of Work**

The scope of work is for a SEPP33 analysis of the proposed refrigerated storage facility at the corner of Cowpasture Rd and The Horsley Drive at Wetherill Park, NSW only. The study does not include the assessment of any other facilities or projects currently being developed by Australand.

### **2. METHODOLOGY**

The methodology used for the SEPP33 assessment of the proposed refrigerated storage facility is that recommended in the document 'Applying SEPP33 – Hazardous and Offensive Developments', published by the Department of Planning and Environment, NSW (see summary assessment method in **Attachment A**).

The study approach is as follows:



- Identify the materials proposed for storage at the site;
- Determine whether the materials are listed in the Australian Dangerous Goods Code (ADG, Ref.1) and are there for classified as Dangerous Goods (DGs);
- Where DGs are not listed in the ADG, SEPP33 does not apply;
- Where DGs are listed in the ADG; review the quantities stored and determine whether the quantities exceed the threshold levels listed in Applying SEPP33;
- Where quantities of DGs stored do not exceed SEPP33 thresholds, SEPP33 does not apply; and
- Where quantities of materials stored exceed the threshold levels, it is necessary to conduct a PHA study, which (if required) would be conducted in a separate assessment.

On completion of the assessment prepare a letter report for submission with the Development Application documents to the regulator.

### 3. BRIEF DESCRIPTION OF THE MATERIALS STORED

The refrigerated storage facility will be used for the storage of fresh produce, hence, none of the materials stored at the site will be classified as Dangerous Goods. However, the material used as a refrigerant within the chiller plant is ammonia. An extract from the Australian Dangerous Goods Code or ADG (Ref.1) has been provided at **Table 3-1**.

**Table 3-1: Extract from the ADG (Ammonia)**

UN No. (1)	Name and Description (2)	Class or Division (3)	Subsidiary Risk (4)	Packing Group (5)	Special Provisions (6)	Limited Quantities (7)	Packagings & IBCs		Portable Tanks & Bulk Containers	
							Packing Instruction (8)	Special Packing Provisions (9)	Instructions (10)	Special Provisions (11)
<i>Ref</i>	<i>3.1.2</i>	<i>2.0</i>	<i>2.0</i>	<i>2.0.1.3</i>	<i>3.3</i>	<i>3.4</i>	<i>4.1.4</i>	<i>4.1.4</i>	<i>4.2.5</i> <i>4.3.2</i>	<i>4.2.5</i>
1005	AMMONIA, ANHYDROUS	2.3	8		23	0	P200		T50	

Main Risk Class

Subsidiary Risk Class

The ammonia is classified as a Class 2.3 toxic gas with a subsidiary risk of Class 8 corrosive. The total charge within the refrigerant system will be 3.2 tonnes.

In addition to the ammonia refrigerant used at the facility, it is proposed to store diesel fuel in a 60,000 L above ground integrally bundled tank (see **Attachment B**). Diesel fuel is not classified as a Dangerous Good by the Australian Class Dangerous Goods Code (ADG, Ref.1), however, the fuel is classified as a Combustible Liquid Class C1 by AS1940 (Ref.2) and, hence, has been incorporated into the assessment to determine the SEPP33 applicability to this material.

## 4. SEPP33 ANALYSIS

### 4.1 Ammonia Storage

“Applying SEPP33 – Hazardous and Offensive Developments”, published by the DPE, provides a list of threshold levels for various materials, above which stored quantities would trigger the application of SEPP33.

**Table 4-1** has been extracted from Applying SEPP33, which provides the list of maximum permissible thresholds for the range Dangerous Goods classes, including Class 2.3 gases.

**Table4-1: SEPP33 Threshold Values (Ammonia)**

Applying SEPP 33 | January 2011

**Table 3: General Screening Threshold Quantities**

Class	Screening Threshold	Description
1.2	5 tonne	or are located within 100 m of a residential area
1.3	10 tonne	or are located within 100 m of a residential area
2.1	(LPG only — not including automotive retail outlets <sup>1</sup> )	
	10 tonne or 16 m <sup>3</sup>	if stored above ground
	40 tonne or 64 m <sup>3</sup>	if stored underground or mounded
2.3	5 tonne	anhydrous ammonia, kept in the same manner as for liquefied flammable gases and not kept for sale
	1 tonne	chlorine and sulfur dioxide stored as liquefied gas in containers <100 kg
	2.5 tonne	chlorine and sulphur dioxide stored as liquefied gas in containers >100 kg
	100 kg	liquefied gas kept in or on premises
	100 kg	other poisonous gases

As identified in **Section 3**, the ammonia used within the refrigeration circuit will be anhydrous and will be kept in accumulation tanks within the circuit in the same manner as liquefied gases. The ammonia will not be for sale. Based on these facts, the maximum permissible quantity that may be stored before SEPP33 applies is 5 tonnes. The actual quantity stored within the refrigeration circuit is 3.2 tonnes, which is less than the permissible quantity, hence, SEPP33 does not apply to the main DG risk.

Applying SEPP33 also requires the review of the policy application to be assessed for the subsidiary risk (i.e. the Class 8 corrosives in this case). Like the ammonia, Applying SEPP33 provides a list of permissible threshold quantities for corrosive substances. **Table 4-2** has been extracted from Applying SEPP33 which provides the list of maximum permissible thresholds for Corrosive Substances.

**Table 4-2: SEPP33 Threshold Values (Corrosive Substances)**

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**Table 3: General Screening Threshold Quantities**

Class	Screening Threshold	Description
8	5 tonne	packing group I
	25 tonne	packing group II
	50 tonne	packing group III



It can be seen from Table 3.1 that the ADG does not provide a Packaging Group for the ammonia, as it is predominantly a gas at ambient temperature and pressure and gases are not listed with packaging groups. However, if the worst case packaging group was selected (e.g. Packaging Group I) then the maximum quantity of ammonia that could be stored before sSEPP33 applies is 5 tonnes. As noted above, the maximum quantity stored within the refrigeration circuit is 3.2 tonnes, hence, the stored quantity is less than the threshold quantity and EPP33 does not apply.

## 4.2 Diesel Fuel

Diesel fuel is not listed in the Australian Dangerous Goods Code (ADG, Ref.1), hence, is not classified as a Dangerous Good, however, it is listed in AS1940 (Ref.2) as a Combustible Liquid Class C1.

A review of “Applying SEPP33-Hazardous and Offensive Developments” indicates that Class C1 materials are not subject to SEPP33. An extract from Page 16 of “Applying SEPP33” has been included below.

Applying SEPP 33 | January 2011

**Note:** LPG automotive retail outlets fall within SEPP 33 but procedures for dealing with them are not covered in these guidelines. The required PHA should demonstrate to the consent authority compliance with the Department of Planning publication Hazardous Industry Locational Guidelines No 1 —Liquefied Petroleum Gas Automotive Retail Outlets.

- If combustible liquids of class C1 are present on site and are stored in a separate bund or within a storage area where there are no flammable materials stored they are not considered to be potentially hazardous. If, however, they are stored with other flammable liquids, that is, class 3PGI, II or III, then they are to be treated as class 3PGIII, because under these circumstances they may contribute fuel to a fire.

It can be seen from the “dot point” above that where Class C1 materials are stored in a separate bund from flammable liquids, then they are not considered potentially hazardous. A review of the tank design indicates that it is designed with an integral bund and there are no flammable liquids stored at the site. Hence, the diesel fuel stored at the facility is not potentially hazardous and SEPP33 does not apply to this material.

## 5. CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis conducted in this assessment, it has been identified that the anhydrous ammonia proposed for storage and use within the refrigeration circuit at the proposed cold storage is held in quantities less than the maximum permissible threshold for both primary and subsidiary DG Class risk. In addition, it was identified that diesel fuel storage is not subject to SEPP33, based on the fuel design and storage configuration. Hence, it is concluded that SEPP33 does not apply to the proposed refrigerated storage facility at the corner of Cowpasture Rd and The Horsley Drive at Wetherill Park, NSW.

Notwithstanding the conclusions drawn above, it is recommended that prior to issue of the occupancy certificate at the site, the facility be reviewed by a Dangerous Goods consultant to confirm the refrigeration system complies with the requirements of the relevant DG storage codes, standards and regulations, predominantly:

- The Work Health and Safety Regulation – 2011, administered by WorkCover, NSW under the Work Health and Safety Act 2011.



- AS2022- 2003, Anhydrous Ammonia – Storage and Handling, Standards Association of Australia.
- AS1677.2- 1998, Refrigerating Systems Part 2: Safety requirements for fixed applications, Standards Association of Australia.

It is also recommended that the diesel fuel storage be included in the Dangerous Goods assessment, indicated above, as diesel fuel is included as an assessable material under the Work Health and Safety Regulation (2011) storage requirements.

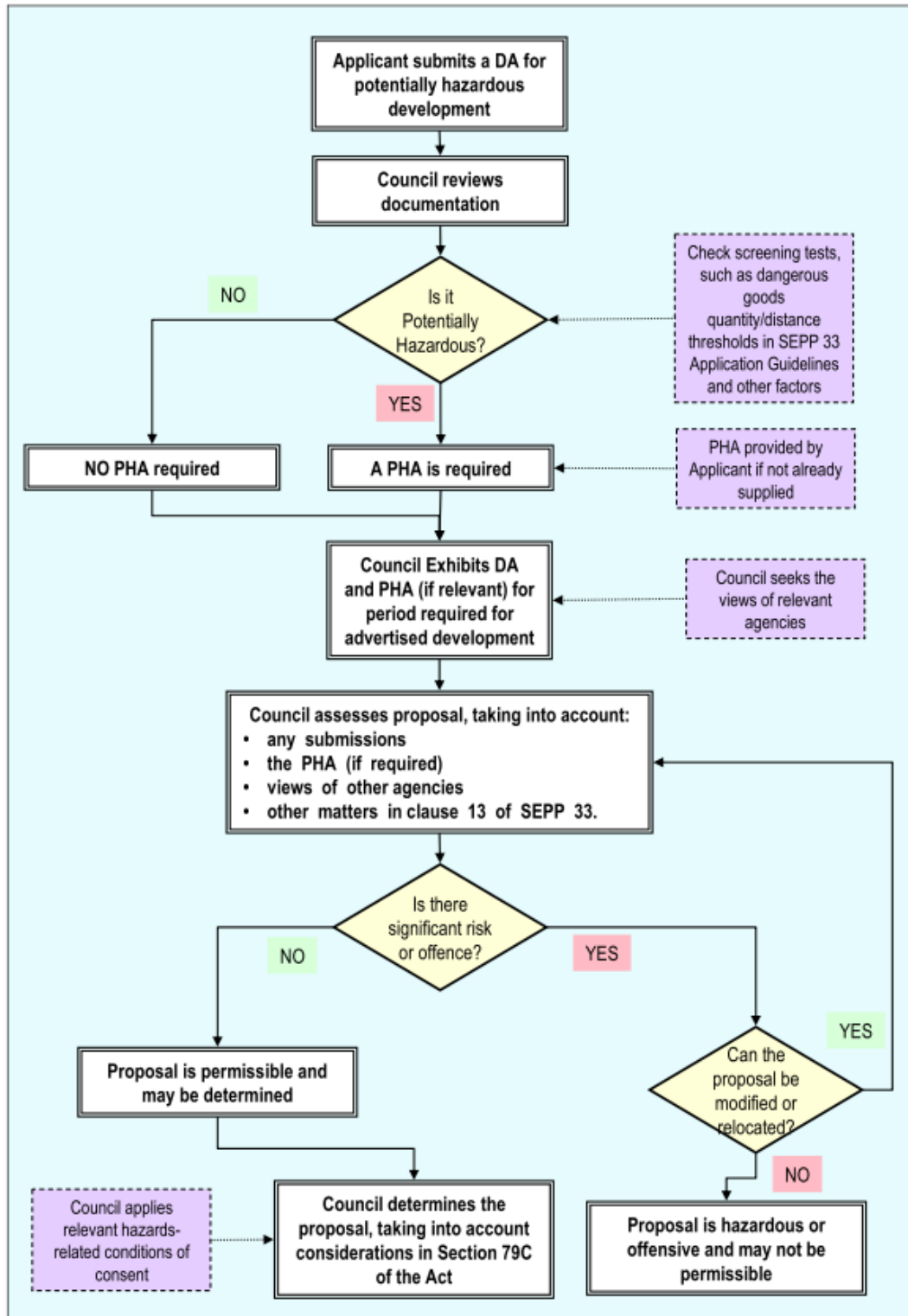
## 6. REFERENCES

1. The Australian Code for the Transport of Dangerous Goods by Road and Rail (known as the Australian Dangerous Goods Code or ADG), 7<sup>th</sup> ed. 2007, Federal office of Road Safety, Canberra, ACT.
2. AS1940-2004, The storage and handling of flammable and combustible liquids, Standards Association of Australia, Sydney

## ATTACHMENT A – SEPP33 SCREENING PROCESS

Applying SEPP 33 | January 2011

Figure 1: The SEPP 33 Process





## ATTACHMENT B – PROPOSED FUEL TANK INSTALLATION



# SAVE ON FUEL BUY AUSSIE DUROSTATIC DS SERIES

## THE RELIABLE BULK BUNDED FUEL STORAGE STATIC TANK

We know first hand how harsh our environment can be so we design our products specifically to withstand Australian conditions. Our Equipment must be tough enough to withstand arduous onsite useage. Just imagine how much money you'll save once the time spent on maintenance of failed fuel equipment is yours to focus on your actual project. Thats why the DuroStatic is the perfect choice for your refuelling requirements.







# DURABLE & RELIABLE REFUELLING SOLUTIONS

Four Point Lifting Access

Lockable Pump Bay

Domed Roof



Australian Made

Access Ladder

## Features

### Standard

- Self Bunded
- Signage
- Lockable Fill Point
- Overfill Protection Valve
- Four Lift Points
- Dipstick
- Anti Syphon Valve
- Provision for Fast Fill System
- Domed Roof

### Optional

- Fuel Management Systems
- 240 v Fill-Rite Pump
- Yanmar Diesel Pump
- Bowser Systems
- Heavy Duty Hose Reel
- Flow Meter
- Mobile skid frame
- Spill Kit
- Fire Extinguisher
- 3" Flowmeter with Mechanical register
- Rotary Vane Pump
- 2" centrifical pump with Viton seals
- 3" centrifical pump with Viton seals

## Specifications

DS 062 - Duro Static Tank	
WEIGHT	13400kg
SAFE FILL	60000L
SIZE	12.2 x 2.4 x 2.9m



62,000L Bunded Static Tank



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