

14 July 2010

Commercial-in-Confidence

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Dear Mark,

Sydney Adventists Hospital Expansion Project - SEPP 33 Review

Dear Mark,

Thank you for your enquiry regarding the SEPP 33 review for the Sydney Adventists Hospital (SAH) expansion project. The attached document details the results of the review which concludes that SEPP 33 does not apply to the proposed development of the hospital.

Should you require any further information regarding the subject, please contact me on 8484 8984.

Thank you again for the opportunity to assist you with this project.

Yours sincerely,

AECOM Australia Pty Ltd



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Checked by: Steve Sylvester
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Encl: Sydney Adventists Hospital Expansion Project - SEPP 33 Review

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MORRIS BRAY ARCHITECTS

SYDNEY ADVENTISTS HOSPITAL EXPANSION PROJECT

SEPP 33 REVIEW

1.0 INTRODUCTION

The Sydney Adventists Hospital (SAH) expansion project (the Project) proposes to construct additional buildings as part of an expansion project at its facility located on Fox Valley Road in Wahroonga in NSW. As part of the Project, it will be necessary to store and handle a number of materials that are classified as Dangerous Goods (DG) under the provisions of the Australian Dangerous Goods Code. (ADG, Ref.1). The NSW Department of Planning (DoP) has requested that the storage of DG be reviewed for the application of State Environmental Planning Policy No.33, "Hazardous and Offensive Developments" (SEPP 33). To assist this review, Morris Bray Architects has commissioned AECOM to prepare the assessment.

This document provides a SEPP 33 review for the proposed Project at The SAH, Wahroonga, NSW.

2.0 METHODOLOGY

The following methodology was used to assess the storage and handling of DGs at the Project for the application of SEPP33:

- The quantity of DGs and the type of storage was identified and listed;
- The threshold quantities listed in Applying SEPP 33 (Ref.2), a document produced by NSW Department of Planning to assist with SEPP33 reviews, were reviewed and compared to the listed quantities of DGs stored and handled at the site;
- Where the stored quantities were identified to not exceed the threshold quantities, SEPP 33 does not apply, where stored quantities were identified to exceed threshold quantities SEPP 33 applies; and
- A Report was developed detailing the SEPP 33 review for the site.

3.0 BRIEF DESCRIPTION OF THE PROPOSED DG STORAGES

3.1.1 Dangerous Goods Stored and Handled at the Site

The proposed Project at the SAH will include the development of a number of structures and buildings including new wards and operating theatres. These facilities will use a number of DGs that will be stored and handled on site.

The DGs will be stored in dedicated storage locations within the facilities, with all storages designed and operated in accordance with the NSW Occupational Health and Safety (Dangerous Goods Amendment) Regulation – 2005.

The following DGs will be stored and handled as part of the proposed Project:

- Gas cylinder store, gases used in wards and theatres throughout the Project. The following gases will be stored and used –
 - Nitrous Oxide Class 2.2 gas 900 L water capacity of cylinders
 - Carbon Dioxide Class 2.2 gas 50 L water capacity of cylinders
 - Helium Class 2.2 gas 50 L water capacity of cylinders
 - Oxygen Class 2.2 gas (5.1) 1000L water capacity cylinders
- Liquid Oxygen Storage (relocated as part of the project) -

- Oxygen (Liquefied) Class 2.2 (5.1) Tank capacity 1500 L
- Diesel Fuel Tank (relocated as part of the project)
 - Diesel Fuel Class C1 12500 L
- Chemical Storage (Pathology Area)
 - Ethanol Class 3 PGII 300L
 - Nitrogen (Liquefied) Class 2.2 200 L
 - Sodium Hypochlorite Class 8 PGII 180 L
 - Hydrochloric Acid Class 8 PGII 30 L

3.1.2 Safeguards and Hazard Management

The DG storages at the Project will all be minor storages, including the gas cylinder storages. To ensure the appropriate safety provisions are made, all storage depots will comply with the requirements of the Regulation and the applicable Australian Standard to the specific DG stored. As storages are all minor in nature, the safety requirements are minimal, and relate mainly to procedural requirements.

A dedicated cylinder store (minor store) will be designed and installed within the expanded facilities. This store will be located in caged area to prevent unauthorised access and provided with adequate separation in accordance with the regulatory requirements.

All procedures required under the provisions of the Regulation and Standards will be developed and used at the facility. Personnel involved with the storage and handling of the DGs will be trained in their correct storage and use.

It is reiterated that all storages are “Minor” under the provisions of the Regulation and therefore the above proposed safeguards are considered adequate to manage the risks associated with the DGs stored and handled.

4.0 SEPP 33 ANALYSIS

A review of Applying SEPP 33 (Ref.2) indicates that a number of DG stored are not subject to the provision of SEPP 33. The following classes of DGs are not subject to SEPP 33 (see Attachment 1):

- Class 2.2 gases; and
- Diesel Fuel

Hence, only the flammable liquids and corrosive substances will be subject to the SEPP 33 requirements (see Attachment 1). A review of the storage quantities in relation to the SEPP 33 threshold limits has been conducted in **Table 4.1**.

Table 4.1: SEPP 33 Analysis for DGs Stored at the Project

Dangerous Good	Storage Qty	SEPP 33 Threshold	SEPP 33 Applies (Y/N)
Ethanol Class 3 PGII	300 L	2000 L	N
Sodium Hypochlorite, Class 8 PGII	180L	25000 L	N
Hydrochloric Acid, Class 8 PG II	30 L	25000 L	N

It can be seen from **Table 4.1** that none of the threshold levels listed in SEPP 33 are exceeded for the DGs stored in the proposed Project.

5.0 CONCLUSION

Based on the analysis conducted in this study, it is concluded that SEPP 33 does not apply to the proposed expansion Project at the Sydney Adventists Hospital.

6.0 REFERENCES

1. The Australia Code for the Transport of Dangerous Goods by Road and Rail, 7th ed, 2007, Federal Office of Road Safety, Canberra ACT
2. Applying SEPP 33 - Hazardous and Offensive Developments, NSW Department of Planning 1994

ATTACHMENT 1

SEPP33 THRESHOLD LEVELS FOR DANGEROUS GOODS CLASSES

TABLE 3. SCREENING THRESHOLD QUANTITIES

Class	Screening Threshold	Description
1.2	5 tonnes	or are located within 100 m of a residential area
1.3	10 tonnes	or are located within 100 m of a residential area
2.1	(LPG only — not including automotive retail outlets)	
	16 m ³	if stored above ground
	64 m ³	if stored underground or mounded
2.3	5 tonnes	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 tonnes	chlorine and sulphur dioxide stored as liquefied gas in containers >100 kg
	100 kg	liquefied gas kept in or on premises
	10 m ³	other poisonous gases (measured at metric standard conditions of 101.3 kPa at 15°C)
4.1	5 tonnes	
4.2	1 tonne	
4.3	1 tonne	
5.1	25 tonnes	ammonium nitrate — high density fertiliser grade, kept on land zoned rural where rural industry is carried out, if the depot is at least 50 metres from the site boundary
	5 tonnes	ammonium nitrate — elsewhere
	2.5 tonnes	dry pool chlorine — if at a dedicated pool supply shop, in containers <30 kg
	1 tonne	dry pool chlorine — if at a dedicated pool supply shop, in containers >30 kg
	5 tonnes	any other class 5.1
5.2	10 tonnes/10 m ³	
6.1(a)	0.5 tonnes/0.5 m ³	
6.1(b)	2.5 tonnes/2.5 m ³	
6.2	0.5 tonnes/0.5 m ³	includes clinical waste
7	all	should demonstrate compliance with Australian codes
8	5 tonnes/5 m ³	packaging group I
	25 tonnes/25 m ³	packaging group II
	50 tonnes/50 m ³	packaging group III

Note: The classes used are those referred to in the Dangerous Goods Code and are explained in appendix 6.

Note: Class 2.2 and Diesel fuel are not listed in the above table as they are not subject to SEPP33 (Ref.2)