



Capital Insight Pty Ltd
Level 6, 77 Berry Street
North Sydney
NSW 2060

30 November 2009

Attention: Mr. Ed Jaworski

Dear Ed,

Re: Dangerous Goods Compliance – Energy Technology Building & Laboratory UNSW

Thank you for your inquiry regarding the compliance of the proposed Energy Technology Building & Laboratory (the Facility), at the University of NSW (UNSW), with the NSW Occupational Health and Safety (Dangerous Goods Amendment) Regulation – 2005 (the Regulation). I have reviewed the quantities of Dangerous Goods proposed for storage at the Facility (see Table 1 attached), and the proposed Facility design, and conclude the following:

- The facility will be classified as a manifest site, based on the storage of Class 2.2 gases alone (noting that the total storage of Nitrogen and oxygen exceeds the threshold limit for manifest quantities);
- Notification to WorkCover NSW for the storage of the proposed Dangerous Goods will be required within 14 days of the Dangerous Goods being stored at the facility;
- It will be necessary to conduct a Risk Assessment, develop a dangerous goods register, a site manifest and an emergency plan as part of the storage and handling of the Dangerous Goods (these will be required within 14 days of the Dangerous Goods being stored at the Facility);
- The Facility design (i.e. Dangerous Goods storage design) complies with the requirements of the Regulation.

Should you require any further information regarding this subject, please call me on the mobile (0411 659 309).

Yours sincerely,

A handwritten signature in black ink, appearing to read "Steve Sylvester".

**Steve Sylvester, Associate Director – Risk & Safety Engineering
AECOM**

Details of the Assessor:

Mr. Steve Sylvester, Associate Director Risk Engineering at AECOM, is a mechanical engineer with nearly 40 years engineering experience, both in plant operation and Dangerous Goods Consulting. He is a founding member of the Australasian Institute of Dangerous Goods Consultants, a WorkCover NSW sponsored organisation formed to assist industry and government bodies alike in matters associated with Dangerous Goods storage and handling. A full resume can be supplied on request.

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TABLE 1
LIST OF DANGEROUS GOODS STORED AND HANDLED AT THE
ENERGY TECHNOLOGY BUILDING & LABORATORY UNSW

Class	Spree Level 1 (L/kg)	Spree Level 2 (L/kg)	Spree Level 3 (L/kg)	Waste (L/kg)	Cancer Research (L/kg)	TOTAL (L/kg)	Threshold Levels (OH&S Regs) (L/kg)		
							Minor Storage	Placard Storage	Manifest Site
Flam. Liquid – 3	1,280	250	300	250	85	2,165	<250	<2,500	>2500
Solids – 4	-	50	300	450	25	825	<250	<2,500	>2500
Oxidising – 5.1	1,280	50	300	250	25	1,905	<250	<2,500	>2500
Toxic – 6.1	1,440	150	300	100	20	2,010	<250	<2,500	>2500
Corrosive – 8	3,190	500	300	250	80	4,320	<1000	<10,000	>10,000
Miscellaneous – 9	1,500	250	300	1000	10	3,060	<1000	<10,000	>10,000
Gases									
Flam Gas – 2.1	700 L						<500*	<5,000*	>5,000*
Non Toxic/Flam 2.2	20,000 L						<5,000*	<10,000*	>10,000*
Toxic – 2.3	40 L						<50*	<500*	>500*

* Water Capacity of Cylinders



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30 November 2009

Attention: Mr. Ed Jaworski

Dear Ed,

Re: State Environmental Planning Policy No.33 Review – Energy Technology Building & Laboratory UNSW

Thank you for your inquiry regarding the application of State Environmental Planning Policy No.33 (SEPP33) to the proposed Energy Technology Building & Laboratory (the Facility) at the University of NSW (UNSW). SEPP33 has been developed by the Department of Planning to determine the hazardous and offensive nature of proposed developments and to identify whether such development can be permitted within specific zoning applications.

SEPP33 Application - Hazards

To assist in determining whether SEPP33 applies to a proposed facility, the Department of Planning has issued a guideline "Applying SEPP33 – Hazardous and Offensive Development Guidelines". This guideline provides a methodology for comparing the quantities of Dangerous Goods at a site to threshold quantities listed in the guideline. Where the stored quantities are below the threshold levels, SEPP33 does not apply. However, where the threshold levels are exceeded, it is necessary to demonstrate that the proposed facility is not hazardous and offensive by conducting a Preliminary Hazard Analysis.

Using the guidelines issued by the Department of Planning, a review of the applicability of SEPP33 was conducted. **Table 1** summarises the results of this review. Based on these results it is concluded that SEPP33 does not apply to the proposed Energy Technology Building & Laboratory at the University of NSW (UNSW) as the threshold levels are not exceeded.

SEPP33 Application - Offensiveness

The application of SEPP33 in the area of offensiveness relates to the potential for a facility to discharge hazardous or dangerous materials that could cause offense to sensitive land users around the site. The Applying SEPP33 guideline provides a test for offensiveness that relates to the requirement for an EPA license for pollution control. Figure 1 from the "Applying SEPP33 Guidelines" is a flow chart that asks a series of questions in relation to the potential for offensive impacts. The offensive test commences with a question "Does the development require any pollution control licences?", if the answer is no, then SEPP33 does not apply.

The installation of fume hoods in the proposed laboratory would not constitute a production process that would require the obtaining of a pollution control licence from the Department of Environment & Climate Change or DECC (formerly the Environmental Protection Authority or EPA). Fume hoods are mainly used for occupational health and safety purposes to prevent the accumulation of vapours and dusts in work areas. The formation of vapours and dusts in hoods is minor and the quantities released via hood the discharge are intermittent and negligible. Discharges from fume hoods would not exceed any of the DECC permissible discharge limits. Hence, there would be no requirements for licensing of fume hood discharges and SEPP33 would therefore not apply.

Should you require any further information regarding this subject, please call me on the mobile (0411 659 309).

Yours sincerely,



**Steve Sylvester, Associate Director – Risk & Safety Engineering
AECOM**

Details of the Assessor:

Mr. Steve Sylvester, Associate Director Risk Engineering at AECOM, is a mechanical engineer with nearly 40 years engineering experience, both in plant operation and Dangerous Goods Consulting. Steve has conducted numerous SEPP33 reviews and PHA studies and is an accredited Hazard Auditor and HAZOP leader with the NSW Department of Planning. A full resume can be supplied on request.

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TABLE 1
LIST OF DANGEROUS GOODS STORED AND HANDLED AT THE
ENERGY TECHNOLOGY BUILDING & LABORATORY UNSW

Class	Spree Level 1 (L/kg)	Spree Level 2 (L/kg)	Spree Level 3 (L/kg)	Waste (L/kg)	Cancer Research (L/kg)	TOTAL (L/kg)	Threshold Level (L/kg)
Flam. Liquid – 3	1,280	250	300	250	85	2,165	(see Note 1 below)
Solids – 4	-	50	300	450	25	825	1,000
Oxidising – 5.1	1,280	50	300	250	25	1,905	5,000
Toxic – 6.1	1,440	150	300	100	20	2,010	2,500
Corrosive – 8	3,190	500	300	250	80	4,320	25,000
Miscellaneous – 9	1,500	250	300	1000	10	3,060	Unlimited [#]
Gases							
Flam Gas – 2.1	700 L (about 5.6m ³)						(See Note 2 below)
Non Toxic/Flam 2.2	20,000 L						Unlimited [#]
Toxic – 2.3 (ammonia)	100 kg						5,000
Toxic – 2.3 (other toxic gases)	40 L (<10m ² at STP)						10m ³ @ STP*

* Standard Temperature (15°C) and Pressure (101kPa)

SEPP33 does not apply to Class 9 and 2.2 Dangerous Goods

Note 1: SEPP33 does not apply to Class 3 flammable liquids unless the quantities exceed 2,000 L. For a storage of 2,165 L, SEPP33 requires the liquids to be stored more than 6m from the site boundary. A review of the proposed design indicates that the flammable liquids are stored more than 6m from the site boundary.

Note 2: SEPP33 does not apply to flammable gases unless the quantities exceed 5m³ (STP). For a storage of 5.6m³, SEPP33 requires the gases to be stored more than 6.5m from the site boundary. A review of the proposed design indicates that the flammable gases are stored more than 6.5m from the site boundary.

UNSW



MARTINA LAVIN
OHS COORDINATOR
Occupational Health and Safety Unit
Human Resources

2 December 2009

*Mr Joe Santangelo,
Project Manager
Facilities Management*

Dear Joe,

With regards to the storage of dangerous goods at the Tyree Energy Technology Building and Laboratory, I can confirm the following:

- 1. The OHS Unit will be adding this facility onto the "Notification of Dangerous Goods on Premises" ref: 35/002722 to WorkCover within 14 days of the dangerous goods being stored at the facility.*
- 2. The relevant schools within the Faculty of Engineering who will be occupying this building will be developing the risk assessments as well as maintaining the dangerous goods register and manifest for this facility. In conjunction with the Emergency Management Unit, a site specific emergency plan will also be prepared for this building.*
- 3. At all stages the University will be seeking advice from a dangerous goods consultant to ensure that the design of the facility complies with the requirements of the OHS Regulation 2001, specifically Chapter 6 with respect to the storage of dangerous goods.*

Should you require any further information regarding this subject please contact myself on 9385 2914.

Yours sincerely,

*Martina Lavin
OHS Coordinator
Human Resources*

THE UNIVERSITY OF NEW SOUTH WALES
UNSW SYDNEY NSW 2052 AUSTRALIA
Telephone: +61 2 9385 2914
Facsimile: +61 2 9385 2365
Email: m.lavin@unsw.edu.au
Web: http://www.hr.unsw.edu.au/ohswc/ohs/ohs_home.html
Location: Level 1 North Wing Chancellery
A B N 5 7 1 9 5 8 7 3 1 7 9
CRICOS Provider Number: 00098G