

1. SEPP 33 – Hazardous and Offensive Development

1.1 Introduction

SEPP 33 came into force in 1992 with a focus on the identification and assessment of potentially hazardous industry. It applies to any development proposal which falls under the Policy's definition of "potentially hazardous industry" or "potentially offensive industry".

Certain activities may involve handling, storing or processing a range of substances which in the absence of locational, technical or operational controls may create an off-site risk or offence to people, property or the environment. Such activities would be defined as potentially hazardous or potentially offensive.

For development proposals classified as 'potentially hazardous industry' the policy establishes a comprehensive test by way of a preliminary hazard analysis (PHA) to determine the risk to people, property and the environment at the proposed location and in the presence of controls. Should such risk exceed the criteria of acceptability, the development is classified as 'hazardous industry' and may not be permissible, depending on the local zoning.

For developments identified as 'potentially offensive industry', the minimum test for such developments is meeting the requirements for licensing by the DECC or other relevant authority. If a development cannot obtain the necessary pollution control licences or other permits, then it may be classified as 'offensive industry', and may not be permissible in most zonings.

In order to determine whether the W2CP is a Potentially Hazardous development, the Risk Screening Method outlined in the *Applying SEPP 33 Hazardous and Offensive Development Application Guidelines* was applied. The assessment forms the basis of the following chapter, and concluded that the W2CP is not Potentially Hazardous or Offensive Development.

2. Is the W2CP Potentially Hazardous?

In order to determine whether the W2CP is a Potentially Hazardous development, the risk screening method described in the DUAP Guidelines *Applying SEPP 33 Hazardous and Offensive Development Application Guidelines* was applied to the proposed development.

2.1 Project Description

A detailed description of the W2CP is provided in the Environmental Assessment document, for which this report has been prepared as an appendix. In summary, the project will involve development of a new underground longwall coal mine in the Wyong LGA. It will include surface facilities at three locations, namely the Buttonderry Site for materials and personnel access to the mine; the Tooheys Road Site where coal will be brought to the surface and stockpiled for transport off site, and a ventilation shaft site in the Wyong State Forest.

It is estimated that once fully operational, the mine will produce up to 5 million tonnes of raw coal per year. The coal is predicted to be of sufficient quality that washing will not be required.

A by-product of the mining process will be the production of natural gas. This will be brought to the surface and flared off during the initial years, however as more substantial quantities are produced with the natural expansion of the underground mine, options to utilise the gas in a commercial sense will be considered.

2.2 Risk Screening

A Risk Screening process is undertaken on the proposed development to determine whether or not it is Potentially Hazardous. The risk screening is based on the potential for, and consequences of an explosion, fire, or release of toxic substances. It takes the following factors into account:

- ☐ The properties of the substances being handled or stored;
- ☐ The conditions of storage or use;
- ☐ The quantity involved;
- ☐ The location with respect to the site boundary; and
- ☐ The surrounding land use.

The *Australian Code for the Transportation of Dangerous Goods by Road and Rail* (Dangerous Goods Code) provides a full description of the classification of substances as dangerous goods. Dangerous goods that will be stored on site for the W2CP are identified in Table 2.1, while Table 2.2 and Table 2.3 detail the storage situation for each of the identified hazardous materials.

Table 2.1 – Dangerous Goods to be used by the W2CP

Class	Description	W2CP
<i>CLASS 1 - EXPLOSIVES</i>		
Class 1.1	Substances and articles which have a mass explosion hazard (ie one which effects virtually the entire load almost instantly).	✗
Class 1.2	Substances and articles which have a projection hazard but not a mass explosion hazard.	✗
Class 1.3	Substances and articles which have a fire hazard (either with a minor blast hazard or a minor project hazard, or both: bot not a mass explosion hazard.	✗
Class 1.4	Substance or articles which present no significant hazard. The class comprises those which present only a small hazard in the event of ignition. The effects are largely confined to the package, and no projection of fragments or appreciable size or range is to be expected.	✗
Class 1.5	Very insensitive substances which have a mass explosion hazard.	✗
Class 1.6	Extremely insensitive articles which do not have a mass explosion hazard. This class comprises articles which contain only extremely insensitive detonating substances and which demonstrate a negligible probability of accidental initiation or propagation.	✗
<i>CLASS 2 – GASES</i>		
Class 2.1	Flammable gases (gases which ignite on contact with an ignition source.	✓ Mine will produce natural gas as a by-product.
Class2.2	Non flammable, non toxic gases: gases which are neither flammable nor poisonous whether compressed or cryogenic.	✗
Class 2.3	Poisonous gases: gases liable to cause death or serious injury if inhaled.	✗
<i>CLASS 3 – FLAMMABLE LIQUIDS</i>		
PGI	Highly flammable liquids: boiling point below 35°C.	✗
PGII	Flammable liquids: flashpoint of less than 23°C and boiling point above 35°C.	✗
PGIII	Liquids: flashpoint above 23°C but not exceeding 61°C and boiling point greater than 35°C.	✗
C1	Combustible liquids: flashpoint above 61°C but not exceeding 150°C.	✓ Buttonderry and Tooheys Road Sites will store Diesel.

C2	Combustible liquids: flashpoint above 150°C.	✓ Buttonderry and Tooheys Road Sites will store oils and grease.
<i>CLASS 4 – FLAMMABLE SOLIDS Flammable solids substances liable to spontaneous combustion and substances which in contact with water emit flammable gases.</i>		
Class 4.1	Flammable solids, substances which are readily combustible and may catch fire through friction, self-reactive and related substances and desensitised explosives.	✗
Class 4.2	Substances which spontaneously combust.	✗
Class 4.3	Substances which in contact with water emit flammable gases.	✗
<i>CLASS 5 – OXIDISING AGENTS AND ORGANIC PEROXIDES</i>		
Class 5.1	Oxidising agents: substances which, although not necessarily combustible, may readily liberate oxygen, or be the cause of oxidation processes.	✗
Class 5.2	Organic peroxides: substances which are combustible, act as oxidising substances and may be liable to explosive decomposition.	✗
<i>CLASS 6 – POISONOUS (TOXIC) AND INFECTIOUS SUBSTANCES</i>		
Class 6.1(a)	Poisonous (toxic) substance of packaging groups (PG) I or II: substances which are liable to cause death or serious injury to human health if swallowed, inhaled or by skin contact.	✗
Class 6.1(b)	Harmful (toxic) substances of packaging group (PG) III: substances which are harmful to human health if swallowed, inhaled or by skin contact.	✓ herbicides may be stored on site if required.
Class 6.2	Infectious substances: substances containing viable micro-organisms including a bacterium, virus, rickettsia, parasite, fungus, or a recombinant, hybrid or mutant, that are known or reasonably believed to cause disease in humans or animals.	✗
<i>CLASS 7 – RADIOACTIVE SUBSTANCES</i>		
Class 7	Materials or combinations of materials which spontaneously emit radiation.	✗
<i>CLASS 8 – CORROSIVE SUBSTANCES</i>		
Class 8	Substances which by chemical action, will cause severe damage when in contact with living tissue, or in the case of leakage will materially damage or even destroy other goods.	✗
<i>CLASS 9 – MISCELLANEOUS DANGEROUS GOODS</i>		
Class 9	Substances and articles which present dangers not covered by other classes.	✗

Note: Classification taken from the *Australian Code for the Transportation of Dangerous Goods by Road and Rail*

Table 2.2 – Hazardous Materials Listing for the Buttonderry Site

Substance	Dangerous Goods Class	Volume to be Stored L	Method of Storage	Delivery Frequency and Volume	Distance of Store from Boundary
Diesel	C1	20,000	Bunded above ground tank	Weekly	250 m
Gear Oil	C2	900	20 L drums bunded store	Weekly	250 m
Engine Oil	C2	5,000	20 L drums bunded store	Weekly	250 m
Transformer Oil	C2	40	20 L drums bunded store	Monthly	250 m
General Gearbox	C2	2,050	205 L drums bunded store	Weekly	250 m
General Engine	C2	4,100	205 L drums bunded store	Weekly	250 m
Coupling Fluid	C2	160	20 L drums bunded store	Monthly	250 m
Chain/Wire oil	C2	20	20 L drums bunded store	Monthly	250 m
Gear Seal	C2	20	20 L drums bunded store	Monthly	250 m
Hydraulic Oil	C2	2,000	20 L drums bunded store	Weekly	>150 m

Table 2.3 – Hazardous Materials Listing for the Tooheys Road Site

Substance	Dangerous Goods Class	Volume to be Stored	Method of Storage	Delivery Frequency and Volume	Distance of Store from Boundary
Diesel	C1	20,000 L	Bunded above ground tank	Weekly	>150 m
Gear Oil	C2	900	20 L drums bunded store	Weekly	>150 m
Engine Oil	C2	5,000	20 L drums bunded store	Weekly	>150 m
Transformer Oil	C2	40	20 L drums bunded store	Monthly	>150 m
Hydraulic	C2	2,000	20 L drums bunded store	Weekly	>150 m
Pneumatic Oil	C2	6,000	20 L drums bunded store	Weekly	>150 m
LSD Gearbox Oil	C2	400	20 L drums bunded store	Monthly	>150 m
General Gearbox	C2	2,050	205 L drums bunded store	Weekly	>150 m
General Engine	C2	4,100	205 L drums bunded store	Weekly	>150 m
Coupling Fluid	C2	160	20 L drums bunded store	Monthly	>150 m
Chain/Wire oil	C2	20	20 L drums bunded store	Monthly	>150 m
Gear Seal	C2	20	20 L drums bunded store	Monthly	>150 m
Compressor Oil	C2	160	20 L drums bunded store	Weekly	>150 m
Longwall Fluid	C2	10,000	Bunded above ground tank	Weekly	>150 m

The only materials to be stored and used on site are the diesel fuel (Class C1) and oils and greases (Class C2). No other hazardous materials will be present, these items do not need to be considered any further under the guidelines, and the W2CP is not a Potentially Hazardous Industry.

Based on the risk screening method of DUAP (1997), neither the storage nor transport of hazardous materials associated with the W2CP will result in the project being considered potentially hazardous under SEPP 33. As such, there is no requirement to undertake a Preliminary Hazard Analysis.