Appendix 3

SEPP 33 Risk Screening and Preliminary Hazard Analysis

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A3.1 INTRODUCTION

Consideration has been made as to whether the Project should be considered a hazardous or potentially hazardous industry under *State Environmental Planning Policy 33 – Hazardous and Offensive Development* (SEPP 33). In accordance with the risk screening method provided by the Department of Planning document *Applying SEPP 33 – Consultation Draft* (DoP, 2008b), the following presents the details of the determination as to the classification of the Project under SEPP 33.

Industries or projects determined by the risk screening to be hazardous or potentially hazardous would require the preparation of a Preliminary Hazard Analysis (PHA) in accordance with Clause 12 of SEPP 33. No further assessment under SEPP 33 is required for projects not considered potentially hazardous.

A3.2 RISK SCREENING

A3.2.1 Hazardous Materials within the Project Site

Hazardous materials are defined within DoP (2008b) as substances falling within the classification of the *Australian Code for the Transportation of Dangerous Goods by Road and Rail* (Dangerous Goods Code) (Department of Infrastructure, Transport, Regional Development and Local Government, 2009). Based on this definition, the hazardous materials to be stored with the Mine Site, their quantities and storage location are summarised in **Table A3.1**.

Table A3.1
Hazardous Materials Storage with the Mine Site

Material	Class	Description	Storage Quantity	Storage Location	Distance to Site boundary	Threshold Limit	Threshold Triggered
Diesel Fuel	C1	Combustible liquids: flashpoint above 61°C but not exceeding 150°C	100 000L	Bunded fuel bay in the vicinity of the workshop	>500m	10m	No
Lubricating oils and greases	C2	Combustible liquids flashpoint above 150°C	<2 500L	Bunded fuel bay and workshop areas	>500m	nil	No
Liquified Petroleum Gas (LPG)	2.1	Flammable Gas: Gases which ignite on contact with an ignition source	6 x 7 500L tanks (45 000L) (~22.7t)	Bunded location adjacent to the Processing Plant within the Processing Plant and Office Area (see **Figure 2.16**)	600m	10t or 16m^3	**Yes**
Sodium Cyanide (Solid)	6.1 PGI	Solid briquettes delivered in sealed iso-container	22t	Bunded location adjacent to the Processing Plant within the Processing Plant and Office Area (see **Figure 2.16)**	NA	2.5t	**Yes**
Sodium Cyanide (solution)	6.1 PGIII	Solution mixed on site	5 000L		NA	2.5t	**Yes**
Hydrochloric Acid	8 PGII	Concentrated liquid	24 000L (23.6t)		NA	50t	No
Caustic Soda (Sodium Hydroxide) (Solution)	8 PGIII	Concentrated liquid	24 000L (36t)		NA	50t	No
Ammonium Nitrate	5.1	Oxidizing substances and organic peroxides	20t	Magazine	>50m	25t	No

A3.2.2 Transportation of Hazardous Materials

Transport information for the hazardous materials to and from the Mine Site is presented in **Table A3.2**.

Table A3.2
Hazardous Material Transportation

Material	Class	Average No. of Loads	Threshold Limit	Approximate Load Size	Threshold Triggered
		Loads per Year			
Diesel Fuel	C1	225	1000	25kL	No
Lubricating oils and greases	C2	50	750	100kg	No
Liquified Petroleum Gas (LPG)	2.1	20	500	40t	**Yes**
Sodium Cyanide (solid)	6.1 PGI	15	nil	22t	**Yes**
Hydrochloric Acid	8 PGII	12	500	10t	No
Caustic Soda (Sodium Hydroxide) (solution)	8 PGII	12	500	4t	No
Ammonium Nitrate	5.1	100	500	15t	No

A3.2.3 Risk Screening Results

Based on the risk screening results presented in **Tables A3.1** and **A3.2** a Preliminary Hazard Analysis (PHA) is required for the transport, storage and use of sodium cyanide for the Project.

A3.3 PRELIMINARY HAZARD ANALYSIS

A3.3.1 Introduction

This PHA has been conducted as part of the *Environmental Assessment* to evaluate the hazards associated with the use, storage and transport of two dangerous goods (sodium cyanide and lead concentrate).

- Sodium cyanide is a Class 6.1 reagent used in the recovery of silver from crushed and ground ore and would be stored on the Mine Site in quantities exceeding the threshold nominated by DoP (2008) as triggering the preparation of a PHA (2.5t). Transport of a Class 6.1 dangerous good in any quantity is also identified by DoP (2008b) as triggering a PHA.

- LPG is a Class 2.1 flammable gas which would be used for heating reagents during processing operations and would be stored on the Mine Site in quantities exceeding the threshold nominated by DoP (2008) as triggering the preparation of a PHA (10t). The bulk mass of LPG transported to the Mine Site in road registered trucks (40t) would also exceed the threshold for classification as a potentially hazardous industry (DoP, 2008b) requiring the preparation of a PHA.

Preparation of this PHA addresses the requirements of *State Environmental Planning Policy (SEPP) No. 33 (Hazardous and Offensive Development)* and has been documented in general accordance with *Guidelines for Hazard Analysis: Hazardous Industry Planning Advisory Paper No. 6* (DUAP, 1992a).

The PHA has been completed in accordance with the general principles of risk evaluation and assessment outlined in the NSW Department of Urban Affairs and Planning (DUAP) *Multi-Level Risk Assessment* (DUAP, 1999).

Assessed risks are compared to the qualitative risk assessment criteria developed in accordance with Australian Standard/New Zealand Standard (AS/NZS) 4360:2004 *Risk Management* (AS/NZS 4360:2004). Further, this PHA considers the qualitative criteria provided in *Risk Criteria for Land Use Planning: Hazardous Industry Planning Advisory Paper No. 4* (DUAP, 1992b).

A3.3.2 Objectives and Scope

The objective of this PHA is to identify the risks posed by the Project-related use, storage and transport of sodium cyanide and LPG to people, property and the environment and assess the identified risks using applicable qualitative criteria. This assessment considers off-site risks to people, property and the environment (in the presence of controls) arising from atypical and abnormal hazardous events and conditions, i.e. equipment failure, operator error and external events. The assessment does not consider risks to the employees, property or business of the Proponent.

This analysis should be read in conjunction with Section 2 of the *Environmental Assessment*.

A3.3.3 Study Methodology

The NSW Department of Planning (DoP) *Multi Level Risk Assessment* (DUAP, 1999) approach was used for this study. The approach considered the development in context of its location and its technical and safety management control. The *Multi Level Risk Assessment Guidelines* are intended to assist industry, consultants and the consent authorities to carry out and evaluate risk assessments at an appropriate level for the facility being studied.

The Multi Level Risk Assessment approach is summarised in **Figure A3.1**. There are three levels of assessment, depending on the outcome of the preliminary screening. These are:

- Level 1 – Qualitative Analysis, primarily based on the hazard identification techniques and qualitative risk assessment of consequences, frequency and risk;
- Level 2 – Partially Quantitative Analysis, using hazard identification and the focused quantification of key potential offsite risks; and
- Level 3 – Quantitative Risk Analysis (QRA), based on the full detailed quantification of risks, consistent with Hazardous Industry Planning Advisory paper No.6 – Guidelines for Hazard Analysis.

The initial Level 1 qualitative analysis methodology employed during the preparation of the PHA was as follows:

i) Identification of the hazards associated with the use, storage and transport of sodium cyanide.

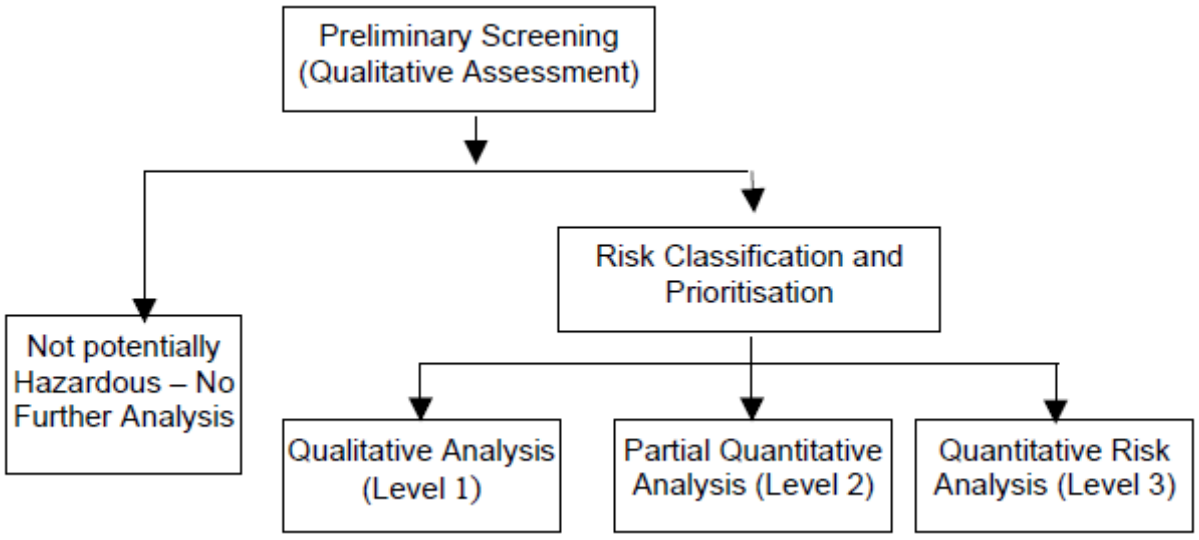

Figure A3.1
MULTI LEVEL RISK ASSESSMENT PROCESS

ii) Examination of the maximum reasonable consequence of identified events, namely the worst-case consequence that could reasonably be expected, given the scenario and based upon previous experience.

iii) Qualitative estimation of the likelihood of events.

iv) Proposal of risk treatment measures.

v) Qualitative assessment of risks to the environment, members of the public and their property arising from atypical and abnormal events and compare these to applicable qualitative criteria.

vi) Recommendation of further risk treatment measures if considered warranted.

vii) Qualitative determination of the residual risk assuming the implementation of the risk treatment measures.

A3.3.4 Risk Management Process

The PHA has been undertaken in general accordance with the risk management process described in AS/NZS 4360:2004. The risk management process is shown schematically in **Figure A3.2** and includes the following components.

- Establish the risk assessment context – Section A3.3.4.
- Identify risks – Section A3.3.5.
- Analyse, evaluate and treat risks – Section A3.3.6 and Tables A3.6a and A3.6b.

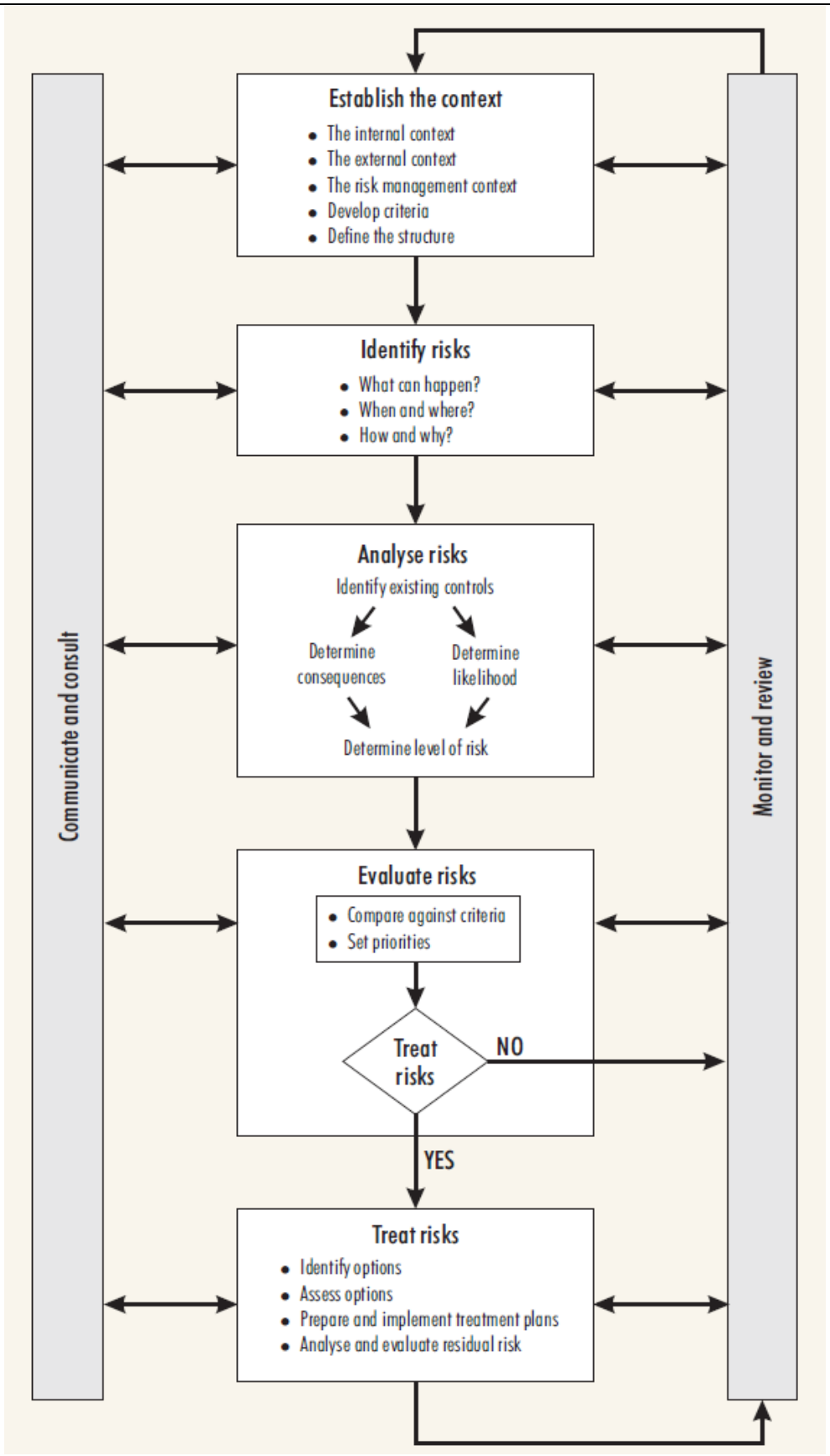

Figure A3.2
Source: AS/NZS 4360:2004 **RISK MANAGEMENT PROCESS**

A3.3.5 Qualitative Measures of Consequence, Likelihood and Risk Ranking Table

To undertake a qualitative risk assessment it is useful to define (in a descriptive sense) the various levels of consequence of a particular event, and the likelihood (or probability) of such an event occurring. Risk assessment criteria were developed in accordance with AS/NZS 4360:2004 which allowed the workshop team to develop risk criteria during the establish the context phase.

In accordance with AS/NZS 4360:2004, **Tables A3.3**, **A3.4** and **A3.5** were reviewed by the PHA workshop team. The tables were considered to be consistent with the specific objectives and context of the PHA.

Table A3.3
Qualitative Likelihood Rating

Level	Descriptor	Description
A	Almost Certain	Is expected to occur in most circumstances.
B	Likely	Will probably occur in most circumstances.
C	Possible	Could occur.
D	Unlikely	Could occur but not expected.
E	Rare	Conceivable, but only in exceptional circumstances.
Source: HB 203:2006 (Standards Australia, 2006) - Table 4(A)		

Table A3.4
Qualitative Consequence Rating

Level	Descriptor	People	Environment	Asset / Production
5	Catastrophic	Multiple fatality	Extreme environmental harm, e.g. widespread catastrophic impact	More than $5 million (M) loss or production delay
4	Major	Permanent total disabilities, single fatality	Major environmental harm, e.g. widespread substantial impact	$1M to $5M loss or production delay
3	Moderate	Major injury or health effects, e.g. major lost workday case/permanent disability	Serious environmental harm, e.g. widespread and significant impact	$500 thousand (k) to $1M loss or production delay
2	Minor	Minor injury or health effects, e.g. restricted work or minor lost workday case	Material environmental harm, e.g. localised and significant impact	$50k to $500k loss or production delay
1	Insignificant	Slight injury or health effects, e.g. first aid/minor medical treatment level	Minimal environmental harm, e.g. interference or likely interference to an environmental value	Less than $50k loss or production delay
Source: Modified after HB 203:2006 (Standards Australia, 2006) - Table 4(B)				

Table A3.5
Risk Rating Matrix

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
A (Almost Certain)	A	A	I	I	I
B (Likely)	T	A	A	I	I
C (Possible)	T	T	A	A	I
D (Unlikely)	T	T	T	A	A
E (Rare)	T	T	T	T	A

Note: Rating modified after HB 203:2006 (Standards Australia, 2006) - Table 4(C)

The risk rankings are defined as follows.

Tolerable (T): The risk associated is acceptably low.

As low As Reasonably Practicable (A): The risk has been reduced to as low a level as possible and all feasible controls and mitigation strategies are implemented.

Intolerable (I): The risk cannot be reduced to an acceptable level with residual impacts likely to have significant impact on the local environment or stakeholders.

Risk acceptance criteria for the Project require risks to be reduced to a Tolerable (T) level.

A3.3.6 Hazard Identification

A3.3.6.1 Overview

The risk screening process undertaken in accordance with SEPP 33 identified one potentially hazardous material to be used, stored and transported to and from the Project Site, namely sodium cyanide.

The hazard (or risk) identification summary table (**Table A3.6**) provides a summary of the potential off-site risks and hazards identified for the Project and a qualitative assessment of the risks posed. **Tables A3.6** also consider the component areas of the Project where the potentially hazardous materials would be used, stored or transported, the types of incidents attributable to these potentially hazardous materials and the risk treatment or management measures that would be adopted.

A3.3.6.2 Component Areas

For the purposes of hazard identification and assessment, the following component areas were identified for the use, storage and transport of sodium cyanide and LPG.

- Transportation to the Mine Site.
- Storage facilities within the Mine Site.
- Combustion and energy generation (LPG only).
- Ore treatment and processing (sodium cyanide only).
- Residue and process water management (sodium cyanide only).

A3.3.6.3 Incident Classes

The following generic classes of incident were identified.

- Accident.
- Leaks/spills.
- Fire.
- Theft / sabotage.

These incident classes were applied to the component areas to identify scenarios for which control/mitigation measures were developed.

A3.3.6.4 Project Risk Treatment Measures

Sodium Cyanide

Indicative sodium cyanide management measures are identified in Section 2.6.4. These management measures would be documented in detailed *Reagent Management Plan* that would be prepared prior to receipt of the first delivery of sodium cyanide. The Proponent anticipates that this plan would be required to be prepared in consultation with or approved by the following government agencies.

- Department of Planning.
- Department of Environment, Climate Change and Water.
- NSW Office of Water.
- Roads and Traffic Authority.
- Industry and Investment NSW.
- WorkCover NSW.
- Parkes Shire Council.
- Narromine Shire Council.

In addition, general hazard control measures would be documented in the following management plans to be developed for the Project.

- *Contractor Management Plan.*
- *Emergency Management Plan.*
- *Bushfire Management Plan.*

Finally, the following overarching control measures would be adopted for the Project.

- **Design and Engineering of Structures –** Civil engineering structures would be constructed in accordance with applicable codes, guidelines and Australian Standards.
- **Maintenance –** Ongoing and timely maintenance of all mobile and fixed plant and equipment in accordance with the manufacturer's recommended maintenance schedule, and consistent with the maintenance schemes required by relevant standards. Only vehicles permitted to carry dangerous goods would be used for transport of hazardous materials.
- **Supply and Transport Contractor** – Only licenced and approved cyanide supply and transport companies would be used to supply and transport cyanide to the Mine Site. Transportation operations would only be undertaken once all required approvals, licences, risk assessments and management procedures have been obtained.
- **Storage, Handling and Usage Procedures –** Storage, handling and usage procedures for potentially hazardous materials would be developed in accordance with Australian Standards, relevant legislation and Material Safety Data Sheets. These procedures would be site specific in relation to personal protective equipment, emergency management equipment and first aid treatment.
- **Staff Training –** Operators and drivers would inducted, trained and (where appropriate) licensed for their job descriptions. Only those personnel licensed to undertake skilled and potentially hazardous work would be permitted to do so.
- **General Contractor Management** – All contractors employed by the Proponent would be required to operate in accordance with the relevant Australian Standards, NSW Legislation and Project Contractor Management Plan.

LPG

The storage facilities for LPG would be stored in accordance with the required Australian Standard. Similarly, the tankers transporting the LPG to the Mine Site would be appropriately registered.

Mine Site personnel responsible for the delivery of the LPG from the tanker to the Mine Site storage tanks would receive appropriate training for this task.

General hazard control measures would be documented in the following management plans to be developed for the Project.

- *Contractor Management Plan.*
- *Emergency Management Plan.*
- *Bushfire Management Plan.*

Finally, the overarching control measures to be adopted for the management of sodium cyanide would also apply to the management of LPG on the Mine Site.

A3.3.7 Risk Management and Evaluation

Tables A3.6 and **A3.7** present a qualitative assessment of risks associated with the use, storage and transport of sodium cyanide and LPG respectively. Hazard treatment measures are identified, where required, to produce a 'tolerable' level of risk in accordance with the risk acceptance criteria described in Section A3.3.4. These measures are consistent with those identified in Section 2. Reference is also made to the control measures identified in Section A3.3.5.4.

Table A3.6
Hazard Assessment – Sodium Cyanide

Project Component	Incident Type	Scenario	Proposed Control / Treatment	Likelihood	Consequence	Risk
Off-site transport to the Project Site	Accident	Traffic accident resulting in spillage and possible pollution.	• All transport requirements for sodium cyanide would be complied with, indicatively including the following. - All transportation operations in accordance with the **"International Cyanide Management Code For The Manufacture, Transport and Use of Cyanide In The Production of Gold" (Cyanide Code).** - Dangerous goods licenced drivers to be used. - All drivers would be subject to competency tests. - All vehicles would be appropriately licenced. for dangerous goods. - Internal audits by supplier. - Only audited transport route(s) to be followed by driver. - MSDS and Chemalert information retained by driver and Proponent. - Effective communication between driver, supplier and the Proponent. • Approved *Reagent Management Plan* prepared, implemented and personnel trained in its use. • *Emergency Management Plan* for dealing with cyanide spill developed and implemented. The plan would indicatively involve the following. – Advise emergency services of the spill. – Isolate the spill area (if possible to do so safely). – Evacuate (or assist in evacuation) all persons within appropriate distance of the spill.	E	4	T
	Spill	Operator error/poor maintenance leading to leak or spill.	• As above	D	3	T
	Fire	Accident resulting in fire and the generation of HCN gas.	• As above	E	4	T

Table A3.6 (cont'd)
Hazard Assessment – Sodium Cyanide

Project Component	Incident Type	Scenario	Proposed Control / Treatment	Likelihood	Consequence	Risk
Storage facilities within the Mine Site	Accident/ Fire/ Explosion	Damage to cyanide storage facility as a result of accident, fire or explosion within the plant	• Non-flammable storage containers and bunding. • Plant designed to minimise potential risks associated with fire and explosion. • Isolate incompatible substances. • Develop and implement safe work procedures. • Install appropriate fire protection and management systems.	E	4	T
	Spill	Inadequate maintenance and/or design resulting in spillage.	• Bunding constructed of impermeable material. • Bunding constructed to relevant construction standard. • MSDS and Chemalert information retained by the Proponent. • Environmental inspections and reporting completed regularly. • Operational personnel to have completed relevant training in emergency response and/or HAZMAT. • Approved *Reagent Management Plan* prepared, implemented and personnel trained in its use.	D	3	T
			• *Emergency Management Plan* for dealing with spill developed and implemented. The plan will involve the following. – Advise emergency services of the spill. – Isolate the spill area (if possible to do so safely). – Evacuate (or assist in evacuation) all persons within 1.3km of the spill.	E	3	T
	Theft / Sabotage	Theft and malicious act/sabotage.	• Access to the Mine Site restricted by lockable gate. • Storage facility to be fenced and locked with restricted access. • Regular monitoring by personnel. • Signage identifying risks associated with sodium cyanide.	E	4	T

Table A3.6 (cont'd)
Hazard Assessment – Sodium Cyanide

Project Component	Incident Type	Scenario	Proposed Control / Treatment	Likelihood	Consequence	Risk
Ore treatment and processing	Accident	Accident within the processing plant area resulting in spillage of ore slurry or solution containing sodium cyanide.	• Restricted vehicle access to the processing plant area enforced. • Leach circuit contained within separate bunded area with a capacity of at least 110% of the largest container or tank likely to contain cyanide. • MSDS and Chemalert information retained by the Proponent. • Regular maintenance inspections and reporting of all storage, transfer and containment facilities. • Operational personnel to have completed relevant training in emergency response and/or HAZMAT. • Approved *Reagent Management Plan* prepared, implemented and personnel trained in its use. • *Emergency Management Plan* for dealing with spill developed and implemented.	C	2	T
	Spill	Operator error or poor maintenance leading to leak or spill.	• Restricted vehicle access to the processing plant area enforced. • Processing plant contained within bunded area capable of retaining any spill. • MSDS and Chemalert information retained by The Proponent. • Plant personnel provided with appropriate training. • Regular inspections of the plant completed and any maintenance requirements reported and enacted. • Approved *Reagent Management Plan* prepared, implemented and personnel trained in its use. • Operational personnel to have completed relevant training in emergency response and/or HAZMAT. • *Emergency Management Plan* for dealing with spill developed and implemented.	D	3	T

Table A3.6 (cont'd)
Hazard Assessment – Sodium Cyanide

Project Component	Incident Type	Scenario	Proposed Control / Treatment	Likelihood	Consequence	Risk
Residue and process water management	Spill	Leak from or rupture of tailings pipeline.	• Inspections and reporting completed regularly. • Pumping ceased immediately on identification of leak. • Pumping only to recommence following repair of leak. • All tailings material excavated and manually placed within the RSF. • *Emergency Management Plan* for dealing with spill developed and implemented.	D	2	T
		Leak from RSF.	• RSF constructed in accordance with NSW Dams Safety Committee requirements. • Regular inspections of RSF walls for structural integrity. • Specific operating procedures implement for the construction of each lift. • RSF lined with impermeable clay or artificial liner. • Monitoring of shallow piezometers to detect seepage or leakage from the RSF. • Contingency strategy to be developed and implemented in the event seepage or leakage identified by monitoring.	C	2	T
		Overflow or leak from Process Water Dam.	• Dam designed with suitable freeboard to retain rainfall from design storm event and diversion structures to prevent inflow of surface waters. • Dam constructed with impermeable liner. • Inspections and reporting completed regularly. • If leak detected, flow to be isolated and contained. Water within the process water dam to be pumped to either raw water dam or RSF and the dam repaired. • Contaminated material to be excavated and manually placed within the RSF.	D	3	T

Table A3.7 (cont'd)
Hazard Assessment – LPG

Project Component	Incident Type	Scenario	Proposed Control / Treatment	Likelihood	Consequence	Risk
Transport to the Mine Site	Accident	Traffic accident resulting in spillage and possible pollution.	• All transport requirements for LPG would be complied with, indicatively including the following. - Dangerous goods licenced drivers to be used. - All vehicles would be appropriately licenced and registered for the transport of LPG. - Access to the Mine Site would be via Newell Highway and Tomingley West Road only. - MSDS and Chemalert information retained by driver and Proponent. - Effective communication between driver, supplier and the Proponent would be maintained. • *Emergency Management Plan* for dealing with LPG leak or spill developed and implemented. The plan would indicatively involve the following. – Advise emergency services of the spill. – Isolate the spill area (if possible to do so safely). – Evacuate (or assist in evacuation) all persons within appropriate distance of the spill.	D	3	T
	Spill	Operator error/poor maintenance leading to leak or spill.	• As above. • Operational personnel to have completed relevant training in emergency response and/or HAZMAT.	D	2	T
	Fire	Accident resulting in fire.	• Smoking and any other flame generating activities would be prohibited within the truck cab or in the vicinity of the tanker. • *Emergency Management Plan* for dealing with LPG leak or spill developed and implemented. The plan would indicatively involve the following. – Advise emergency services of the fire (or potential for fire). – Isolate the area (if possible to do so safely). – Evacuate (or assist in evacuation) all persons within appropriate distance of the fire.	E	4	T

Table A3.7 (cont'd)

Hazard Assessment – LPG

Project Component	Incident Type	Scenario	Proposed Control / Treatment	Likelihood	Consequence	Risk
Transport to the Mine Site (cont'd)	Fire (cont'd)	Accident resulting in fire (cont'd)	• *Bushfire Management Plan* for dealing with fire developed and implemented. The plan would indicatively involve the following. – Training for Mine Site personnel. – Advise emergency services of the fire. – Isolate the area (if possible to do so safely). – Nominate muster areas and evacuation procedures.			
Storage facilities within the Mine Site	Accident/ Fire/ Explosion	Damage to storage tanks as a result of accident, fire or explosion within the plant	• Non-flammable storage containers and bunding. • Plant designed to minimise potential risks associated with fire and explosion. • Isolate incompatible substances. • Develop and implement safe work procedures. • Provide appropriate training for Mine Site personnel. • Install appropriate fire protection and management systems.	E	4	T
	Spill	Inadequate maintenance and/or design resulting in spillage	• Bunding constructed of impermeable material. • Bunding constructed to relevant construction standard. • MSDS and Chemalert information retained by the Proponent. • Develop safe working procedure for LPG transfer from tanker to Mine Site storage tanks. • Environmental inspections and reporting completed regularly. • Operational personnel to have completed relevant training in emergency response and/or HAZMAT. • Approved *Emergency Management Plan* prepared, implemented and personnel trained in its use.	D	3	T
			• *Emergency Management Plan* for dealing with spill developed and implemented. The plan will involve the following. – Advise emergency services of the spill. – Isolate the spill area (if possible to do so safely). – Evacuate (or assist in evacuation) all persons.	E	3	T

Table A3.7 (cont'd)
Hazard Assessment – LPG

Project Component	Incident Type	Scenario	Proposed Control / Treatment	Likelihood	Consequence	Risk
Storage facilities within the Mine Site (cont'd)	Theft / Sabotage	Theft and malicious act/sabotage.	• Access to the Mine Site restricted by lockable gate. • Storage facility to be fenced and locked with restricted access. • Regular monitoring by personnel. • Signage identifying risks associated with LPG.	E	4	T
LPG combustion and energy generation	Accident	Accident within the processing plant area resulting in spillage or leak of LPG	• Restricted vehicle access to the processing plant area enforced. • Combustion undertaken within bunded area capable of retaining any spill. • MSDS and Chemalert information retained by the Proponent. • Regular maintenance inspections and reporting of all storage, transfer and containment facilities. • Operational personnel to have completed relevant training in emergency response and/or HAZMAT. • *Emergency Management Plan* for dealing with spill developed and implemented.	D	2	T
	Spill	Operator error or poor maintenance leading to leak or spill.	• Restricted vehicle access to the processing plant area enforced. • Processing plant contained within bunded area capable of retaining any spill. • MSDS and Chemalert information retained by The Proponent. • Plant personnel provided with appropriate training. • Regular inspections of the plant completed and any maintenance requirements reported and enacted. • Approved Reagent Management Plan prepared, implemented and personnel trained in its use. • Operational personnel to have completed relevant training in emergency response and/or HAZMAT. • Emergency Management Plan for dealing with spill developed and implemented.	D	3	T

Table A3.7 (cont'd)
Hazard Assessment – LPG

Project Component	Incident Type	Scenario	Proposed Control / Treatment	Likelihood	Consequence	Risk
LPG combustion and energy generation (cont'd)	Fire	Failure / damage to processing plant resultant in spillage or leakage of LPG which ignites	• Restricted vehicle access to the processing plant area enforced. • Ignition sources excluded from immediate areas surrounding the processing plant. • Regular maintenance inspections and reporting of all storage, transfer and containment facilities. • Operational personnel to have completed relevant training in emergency response and/or HAZMAT. • *Emergency Management Plan* for dealing with spill developed and implemented. • *Bushfire Management Plan* for dealing with fire developed and implemented.	E	4	T