

Environmental Authority No. MIN00401001 (mining activities)

Section 228 Environmental Protection Act 1994

This environmental authority is granted under the Environmental Protection Act 1994 and includes conditions to minimise environmental harm caused, or likely to be caused, by the authorised mining activities. An environmental authority (mining activities) may be for mining activities authorised (under the Mineral Resources Act 1989) to occur under one of the following mining tenements: a prospecting permit; mining claim; exploration permit; mineral development licence; or mining lease. In general, a mining activity means: prospecting, exploring, mining; or processing minerals; remediation; rehabilitation; and includes facilitation and supporting activities and any action taken to prevent environmental harm.

Under the provisions of the Environmental Protection Act 1994 this environmental authority is

Reefway Pty Ltd Level 22 Allendale Square 77 St Georges Terrace Perth WA 6000

Savannah Resources Pty Ltd Level 22, Allendale Square 77 St Georges Terrace Perth WA 6000

in respect of carrying out activities as part of the following mining project:

Type of environmental authority (mining activities)	Authorised mining tenements	Location
Mining Leases	ML 5426	100km north of Mount Isa
	ML 5435	MOUNT ISA
,	ML 5446	
•	ML 5447	
	ML 5448	• .
	ML 5474	-
	ML 5476	•
,	ML 5478	
•	ML90168	
•	ML90169	
	ML90170	• •

The mining activities are authorized to the extent defined in Schedule 6 Section 12(c) of the Environmental Protection Regulation 1998.

This environmental authority is subject to the conditions set out in the attached schedules. The anniversary date of this environmental authority is 24 July each year.

This environmental authority takes effect from 24 July 2006 for granted tenements and will take effect for ML 90168, 90170 and 90169 upon date of grant of tenure.

s.49 - Signature

Geoff Metcalfe District Manager Mt Isa District, Northern Region Delegate of Administering Authority Environmental Protection Act 1994 24/7/06

This environmental authority incorporates the following schedules:

Schedule A - General

Schedule B - Air

Schedule C - Water

Schedule D - Noise and Vibration

Schedule E - Waste

Schedule F - Land

Schedule G - Community

Schedule H - Definitions

Schedule I - Maps / Plans

Schedule A - General

Financial Assurance

(A1-1) Provide a financial assurance in the amount and form required by the administering authority prior to the commencement of activities proposed under this environmental authority.

NOTE: The calculation of financial assurance for condition (A1-1) must be in accordance with Guideline 17 and may include a performance discount. The amount is defined as the maximum total rehabilitation cost for complete rehabilitation of all disturbed areas, which may vary on an annual basis due to progressive rehabilitation. The amount required for the financial assurance must be the highest Total Rehabilitation Coccupied for any year of the Plan of Operations and calculated using the formula: (Financial Assurance Highest Total Annual Rehabilitation Cost x Percentage Required).

(A1-2) The financial assurance is to remain in force until the administering authority is satisfied that no claim on the assurance is likely.

NOTE: Where progressive rehabilitation is completed and acceptable to the administering authority, progressive reductions to the amount of financial assurance will be applicable where rehabilitation has been completed in accordance with the acceptance criteria defined within this environmental authority.

Maintenance of Measures, Plant and Equipment

- (A2-1) The environmental authority holder must ensure:
 - that all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority are installed;
 - · that such measures, plant and equipment are maintained in a proper condition; and
 - that such measures, plant and equipment are operated in a proper manner.

Monitoring

- (A3-1) Record, compile and keep for a minimum of five years all monitoring results required by this environment authority and make available for inspection all or any of these records upon request by the administering authority.
- (A3-2) Where monitoring is a requirement of this environmental authority, ensure that a competent person(s) conducts all monitoring.

Storage and Handling of Flammable, Combustible and Corrosive Liquids

- (A4-1) Spillage of all flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm (other than trivial harm) and maintained in accordance with Section 5.8 of AS 1940 Storage and Handling of Flammable and Combustible Liquids of 2004.
- (A4-2) The on-site storage of corrosive liquids must be in accordance with Section 5.7 of AS 3780 Storage and Handling of Corrosive Substances 1994

Definitions

Words and phrases used throughout this environmental authority are defined in Schedule H - Definitions. (A5-1)Where a definition for a term used in this environmental authority is sought and the term is not defined within this environmental authority, the definitions in the Environmental Protection Act 1994, its Regulations and Environmental Protection Policies must be used.

END CONTIONS FOR SCHEDULE A

Schedule B - Air

Dust Nuisance

- Subject to Conditions (B1-2) and (B1-3) the release of dust or particulate matter or both resulting from the (B1-1)mining activity must not cause an environmental nulsance at any sensitive or commercial place.
- When requested by the administering authority, dust and particulate monitoring must be undertaken within a (B1-2)reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nulsance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- if the environmental authority holder can provide evidence through monitoring that the following limits are not (B1-3)being exceeded then the holder is not in breach of (B1-1):
 - Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air - Determination of particulates - Deposited matter - Gravimetric method of 1991.
- If monitoring indicates exceedence of the relevant limits in Condition (B1-3), then the environmental authority (B1-4)
 - address the complaint including the use of appropriate dispute resolution if required; or
 - immediately implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nuisance.

Odour Nuisance

- Subject to condition (B2-2), the release of noxious or offensive odour(s) or any other noxious or offensive (B2-1)airbome contaminant(s) resulting from the mining activity must not cause an environmental nuisarice at any sensitive or commercial place.
- (B2-2)When requested by the administering authority, odour monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- If monitoring indicates Condition (B2-1) is not being met then the environmental authority holder must: (B2-3)
 - address the complaint including the use of appropriate dispute resolution if required; or
 - immediately implement odour abatement measures so that emissions of odour from the activity do not result in further environmental nuisance.

END CONDITIONS FOR SCHEDULE B

s.49 - Signature

Schedule C - Water

Release to Waters

Receiving waters affected by the release of process water or storm water contaminated by the mining activities or both must be monitored at the locations and frequencies defined in Schedule C - Table 1 and Schedule I - Map 1. and comply with the contaminant limits defined in Schedule C - Table 3.

Schedule C - Table 1 (Receiving Water Monitoring Locations and Frequency)

Monitoring point	Easting (AMG 84 Zöne 54)	(AMG 847Zone 54)	Montaring frequency
MKUS 1- reference site *	305625	7797450	Each flow event
MKUS 2- reference site*	TBD	TBD	Each flew event
MKDS 1- test site	301160	7800135	Each flow event
MKD\$ 2- test site	306366	7798356	Each flow event
MKDS 3- test site	306370	7798363	Each flow event
MKDS 4- test site	301300	7797255	Each flow event

NOTE: This does not apply to dams containing hazardous waste Reference sites must:

be from the same biogeographical and climatic region; have similar geology, soil types and topography contain a range of habitats similar to those at the test site

be of similar flow regime; and

not be so close to the test sites that any disturbances at the test site also result in a change at the reference site, TBD- to be determined and provided to the QEPA prior to commencement of mining.

Subject to Condition (C1-1), if the receiving water contaminant trigger levels defined in Schedule C - Table 2 are C1-2 exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results,

Schedule C - Table 2 (Receiving Water

Parameter	Units .	Mirdmen	Maximum	Trigger Type
pH 1	pН	6.0	8.0	Range
EC ^t	μS/cm	N/A	250	Maximum
Sulphate 2	mg/L	N/A	500	Maximum
Aluminium ²	mg/L	N/A	2.5	Maximum
· Arsenic ²	. mg/L	N/A	0.25	Maximum
Boron ²	mg/L	N/A	0.37	Maximum
Cadmium ²	mg/L	N/A	0.005	Maximum
.Chromium ²	mg/L	N/A	0.5	Maximum
Cobalt ²	mg/L	N/A	0.5	Maximum
Copper ²	mg/L	N/A	0.5	Maximum
Fluoride ²	mg/L ·	N/A	1 1	Maximum
Lead ²	mg/L	N/A	0.05	Maximum
Manganese ³	mg/L	N/A	1.9	Maximum
Mercury ²	mg/L	N/A	0.001	Maximum
Molybdenum ²	mg/L	N/A	0.075	Maximum
. Nickel ²	mg/L	N/A	0.5	Maximum
Selenium ²	mg/L	N/A	0.01	Maximum
Zinc ²	mg/L	N/A	10	Maximum

Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000).

Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking Water and are to be analysed as total metals (unflitered).

Contaminant trigger limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) 95% and are to be analysed as

filtered metals.

Parameter	Units	Minimum	Maximum	Trigger Type
pH ⁴	рН	6.0	9.0	Range
TDS ²	mg/L	N/A	4000	Maximum
Sulphate 1	mg/L	N/A	1000	Meximum
Aluminium ¹	mg/L	N/A	5	Maximum
Arsenic ¹	mg/L	N/A	0.5	Maximum
Boron ¹	mg/L .	N/A	5	Maximum
Cadmium ¹	mg/L	N/A	0.61	Maximum
Chromium ¹	mg/L	N/A	1	· Maximum
Cobalt ¹	rng/L	N/A	1.	Maximum
Copper ^f	mg/L_	N/A	1	Maximum
. Fluoride ¹	mg/L	N/A	2	Maximum
Lead ¹	mg/L	N/A	0.1	· Maximum
Manganese ³	mg/L_	N/A	2.5	Maximum
Mercury ¹	mg/L	N/A	0.002	Maximum:
Molybdenum ¹	mg/L	N/A	0.15	Maximum
Nickel ¹	mg/L	N/A	1	Maximum
Sejenium ¹	mg/L	N/A	0.02	Maximum
Zinc ¹	mg/L	· N/A	20	Maximum

¹Contaminant limits based on table 4.3.2 ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unfiltered)

End of Pipe Release

(C1-3) End of pipe release limits for storm water contaminated by mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 4 and Schedule I - Map 2 and 3 and comply with the contaminant limits defined in Schedule C - Table 5.

² Contaminant limits are based on Table 4.3.1 Livestock drinking water quality and are analysed as Total metals (unfiltered)
³ Contaminant limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) 80% and are to be analysed as filtered

metals.

⁴ Contaminant limits based on Table 3.3.4 of Aquatic Ecosystems ANZECC (2000)



Schedule C - Table 4 (End of pipe monitoring locations and frequency)

Monitoring point	Easting (AMG 84, Zone 54)	Northing (AMG 84, Zone 54)	Monitoring frequency
Mount Clarke ROM Area Sediment Dam	303834	7799496	Each flow event
Mount Clarke Pit Area Sediment Dam	305336	7799592	Each flow event
Mount Clarke/Flying Horse Sediment Dam	305887	. 7798726	Each flow event
Process Plant ROM Pad Sediment Dam 1	303040	7798656	Each flow event
Process Plant ROM Pad Sediment Dam 2	302905	7798900	Each flow event
Process Plant ROM Pad Sediment Dam 3	302771	7799010	Each flow event

his does not apply to dams containing hazardous waste.

Schedule C - Table 5 (End of pipe contaminant release limits)

Parameter	Units	Minimum	Maximum	Limit Type 🚓
pH	рH	6	9	Range
TDS	mg/L	N/A	4000	Maximum
Sulphate	mg/L	N/A	1000	Maximum
Arsenic	mg/L	N/A	5	Meximum
Cadmium	mg/L	N/A	0.01	Maximum
Chromium	mg/L	N/A	1	Meximum
Cobalt	mg/L	N/A	. 1	Maximum
Copper	mg/L	N/A	1 .	Maximum
Lead	mg/L	. N/A	0.1	Meximum
Mercury	mg/L.	N/A	0.002	Meximum
Zinc	mg/L	N/A	20 ter quality and are anothered	Manufacture

Contaminant limits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unfiltered) NOTE: This does not apply to dams containing hazardous waste.

Dams Containing Hazardous Waste

Water storages containing process water and storm water contaminated by mining activities must be monitored (C1-4)at the locations and frequencies defined in Schedule C - Table 6 and Schedule I - Map 4 and samples analysed for the parameters defined in Schedule C - Table 7.

Schedule C - Table 6 (Water Storage Monitoring Locations of Hazardous Dams)

Monitoring point	Easting (Zone 54, AMG 84)	Northing (Zone 54, AMG 84)	: Monitoring frequency
PLS Ponds	302000	7797450	Annually, March
ILS Pond	301900	7797450	Annually, March
Raffinate Pond Pre-Settler	301860	7797450	Annually, March
Raffinate Pond -	301800	7797450	Annually, March
Storm water Pond 1	301750	7797450	Annually, March
Storm water Pond 2	301750	7797350	Annually, March

(C1-5) In the event that the water quality within any dam containing hazardous waste does not comply with the contaminant limits defined in Schedule C - Table 7, implement measures to prevent access by all livestock and minimise access by fauna to the dam.

Schedule C - Table 7 (Water Quality Limits for Dams Containing Hazardous Waste)

Parameter	Units	Contaminant Limit	Limit Type
pH	Filq	4-9	Range
TDS	mg/L	5,000	Maximum
Boron	mg/L	5 .	Maximum
Sulphate	mg/L.	1000	Maximum
Aluminum	mg/L	5	Maximum
Arsenic	mg/L	0.5	Meximum
Cobalt	mg/L	1	Maximum
Copper	mg/L	• 1	Meximum
Lead	mg/L	0.1	Maximum
Nickel	mg/L	1	Meximum
Zinc	mg/L	. 20	-Maximum

Contaminant limits based on ANZECC (2000 Livestock drinking water quality and are analysed as total metals (unfiltered).)

(C1-6) The design storage allowance on 1 November of each year for any dam containing hazardous waste constructed or operated within the operational land must comply with Schedule C - Table 8.

Schedule C - Table 8 (Storage Design for Dams Containing Hazardous Waste)

Sterage Type	Design Storage Allowance "	Spillway Critical Design Storm ⁽²⁾	Mandatory Reporting Level
Stormwater Pond 1	1: 100 Year ARI 2 month wet season plus process inputs for the 2 month wet season	1: 1000 Year ARI	1: 100 year ARI
Stormwater Pond 2	1: 100 Year ARI 2 month wet season plus process inputs for the 2 month wet season	1: 1000 Year ARI	1: 100 year ARI

Note (1): The design storage allowance on 1 November of each year for any dam containing hazardous waste constructed within the operational land must be equivalent to the run-off from a 1 in 100 ARI 2 month wet season plus process inputs for the equivalent wet season. Process inputs refers to hazardous mineral process waste and water, which is being disposed of in the storage facility.

Note (2): The critical design storm has a duration that produces the peak discharge for the catchments.

Note (a): The mandatory reporting level refers to the volume below the spillway crest, either the 1: 100 ARI 72 hour storm or the 1:100 ARI wave allowance, whichever is lower.

(C1-7) The spillway for any dam containing hazardous waste, constructed or operated within the operational land must be designed and maintained to withstand the peak flow from the spillway critical design storm defined in Schedule C - Table 8.

- The holder of the environmental authority must mark the mandatory reporting level defined in Schedule C -(C1-8)Table 8 on the spillway of all dams containing hazardous waste within the operational land.
- The holder of the environmental authority must notify the administering authority when the pendage level of the (C1-9)dam containing hazardous waste, reaches the mandatory reporting level defined in Schedule C - Table 8.

Stream Sediment Contaminant Levels

- All reasonable and practicable erosion protection measures and sediment control measures must be (C2-1)implemented and maintained to minimise erosion and the release of sediment.
- The bed of the receiving waters, affected by the release of process water and storm water contaminated by the (C2-2)mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 9 and Schedule I - Map 5.

Schedule C - Table 9 (Receiving Stream Sediment Monitoring Locations and Frequency)

Monitoring point	Easting (AGD 84 Zone 54)	Northing (AGD 84 Zone 54)	Monitoring frequency
MKUS 1- reference site *	305625	7797450	May each year
MKUS 2- reference site*	TBD	TED	May each year
MKDS 1- test site	301160	7800135	May each year
MKDS 2- test site	306366	7798356	May each year
MKDS 3- test site	306370	7798363	May each year
MKDS 4- test site	301300	7797255	May each year

NOTE: This does not apply to dams containing hazardous waste Reference sites must:

be from the same biogeographical and climatic region;

b)

have similar geology, soil types and topography contain a range of habitats similar to those at the test site

be of similar flow regime; and

- e) not be so close to the test sites that any disturbances at the test site also result in a change at the reference site. TBD- to be determined and provided to the QEPA prior to commencement of mining.
- Subject to Condition (C2-2), if the stream sediment contaminant trigger levels defined in Schedule C Table 10 (C2-3)are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

Schedule C - Table 10 (Receiving Stream Sediment Contaminant Trion

Parameter	Units	Gontaminant trigger levels	Trigger Type
Antimony ¹	mg/kg dry wt	2	Meximum
Arsenic ¹	mg/kg dry wt	20	Maximum
Cadmium ¹	mg/kg dry wt	1.5	Maximum
Chromium [†]	mg/kg dry wt	80	Meximum
Copper ²	mg/kg dry wt	100	Maximum
Lead ¹	mg/kg dry wt	50	Maximum
Nickel ¹	mg/kg dry wt	21	Maximum Maximum
Silver ¹	mg/kg dry wt	1	Maximum
Mercury ¹	mg/kg dry wt	0.15	Maximum
Zinc ^t	mg/kg dry wt	200	Maximum

ANZECC (2000): ISOG Low trigger values, Sediment Quality Guidelines, Aquatic Ecosystems, Table 3.5.1. ² Site specific trigger value as calculated in section 3.5 of EM Plan January 2006

Subject to Condition (C2-2), stream sediment contaminant limits must not exceed the contaminant limits defined (C2-4)in Schedule C -Table 11.

Schedule C - Table 11 (Receiving Stream Sediment Contaminant Limits)

Parameter :	Units	Contaminant limits	Limit Type
Antimony [†] .	mg/kg dry wt	25	Maximum .
Arsenic [†]	mg/kg dry wt	70	Maximum
Cadmium ¹	mg/kg dry wt	10	Maximum
Chromium [†]	mg/kg dry wt	370	· · · Maximum
. Copper ²	mg/kg dry wt	120	Maximum
Lead ¹	mg/kg dry wt	220	Maximum
Nickel ¹	mg/kg dry wt	52	Maximum
Silver ¹	mg/kg dry wt	3.7	Maximum
Mercury ¹	mg/kg dry wt		Maximum
Zine [†]	mg/kg dry wt	410	Maximum

ANZECC (2000): ISQG High trigger values, Sediment Quality Guidelines, Aquatic Ecosystems, Table 3.5.1. ² Site specific trigger value as calculated in section 3.5 of EM Plan January 2006

All stream sediment sampling must be undertaken in accordance with AS 5667.1 Guidance on Sampling of (C2-5)**Bottom Sediments of 1998**

Sewage effluent

- All effluent released from the treatment plant must be monitored at the frequency and for the parameters specified (C3-1) in Schedule C - Table 12.
- Sewage effluent used for dust suppression must not exceed sewage effluent release limits defined in Schedule C -(C3-2)Table 12.
- Sewage Effluent used for dust suppression must not cause spray drift or over spray to any sensitive or commercial (C3-3)place, and must not be applied at a rate that causes pooling, pending and/or runoff of any effluent irrigated.
- Subject to Conditions (C3-1) to (C3-3) inclusive, sewage effluent from sewage treatment facilities must be reused (C3-4)or evaporated and must not be directly released from the sewage treatment plant to any water way or drainage line other than in accordance with Schedule C - Table 12.

Schedule C - Table 12 (Sewage effluent quality targets for dust suppression)

Faecal Coliforms (organisms/100mL)		1000 ³		Quarterly
pH (pH Units)	. 6 ³		8.5	Quarterly
Quality characteristics	Minimum	Median	Maximum 🚁	The second of th
Fig. 1997		Release Limit		Monitoring Frequency

A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling

Release limits sourced from Queensland Water Recycling Guldelines December 2005 Table 6:2b

² A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling with four out of five samples must be less than the maximum .

A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling with four out of five samples must be higher than the minimum but lower than the maximum limit.

Groundwater

(C4-1) Groundwater, affected by the mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 13 and Schedule I - Map 6.

Schedule C - Table 13 (Groundwater Monitoring Locations and Frequency)

Monitoring point	Easting (AGD 84 Zone 54).	Northings ;(AGD 84-Zone 54);	Monitoring frequency
LA MB01 (Process Plant)- reference site	302484	7796800	Monthly
LA MB02 (Process Plant) - reference site	. 302891	7797385	Monthly
LA MB03 (Process Plant) - reference site	302128	7797950	Monthly
LA MB04 (Process Plant)	TBD	TBD	Monthly
LA MB05 (Process Plant)	TBD	TBD	Monthly
LA MB06 (Process Plant)	TBD	TBD	Monthly
LA MB07 (Process Plant)	TBD	TBD	Monthly
LA MB08 (Process Plant)	TBD	TBD	Monthly
LA MB09 (Process Plant)	TBD	TBD	Monthly
LA MB010 (Process Plant)	TBD	TBD	Monthly
A MB011 (Process Plant)	TBD	TBD	Monthly
A MB012 (Process Plant)	TBD	TBD	Monthly
A MB013 (Process Plant)	TBD	TBD	Monthly
A MB014 (Process Plant)	TBD	TBD	Monthly .
MK MB01 (pit area)	305360	7799013	
MK PB01 (pit area)	305356	7799019	Quarterly Quarterly

NOTE: This does not apply to dams containing hazardous waste

TBD- To be determined

Reference sites must:

- a) be from the same biogeographical and climatic region;
- b) have similar geology, soll types and topography
- c) contain a range of habitats similar to those at the test site
- d) be of similar flow regime; and not be so close to the test sites that any disturbances at the test site also result in a change at the reference site.
- (C4-2) Subject to Condition (C4-1), iff the groundwater contaminant trigger levels defined in Schedule C Table 14 are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

File D Part 2

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Schedule C - Table 14 (Groundwater Contaminant Trigger Levels)

Parameter !	Units	Minimian	Waxinum'	Trigger type
pH ¹	pH	6	8	Range
TDS ²	mg/L	. NA	2000	Maximum
Sulphate ²	mg/L	N/A	500	Maximum
Aluminium ²	mg/L	N/A	2.5	Maximum
Arsenic ²	mg/L	N/A	0.25	Maximum
Boron ²	mg/L	N/A	0.37	Maximum
Cadmium ²	mg/L	N/A	0.005	Maximum
Chromlum ²	mg/L	N/A	0.5	Maximum
Cobalt ²	mg/L	N/A	0.5	Maximum .
Copper ²	mg/L	N/A	0.5	Maximum
Fluoride ²	mg/L.	N/A		Maximum
Lead ²	mg/L	N/A	0.05	Maximum
Manganese ⁸	mg/L	NA	1.9	Maximum
Mercury ²	mg/L	N/A	0.001	Maximum
Molybdenum ²	mg/L	N/A	0.075	Maximum
Nickel ²	mg/L	NA	0.5	Maximum
Selenium ²	mg/L	N/A	0.01	Maximum
Zinc ²	mg/L	N/A	10	Maximum

Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000)

(C4-3) Subject to Condition (C4-1), groundwater contaminant limits must not exceed the contaminant limits defined in Schedule C – Table 15.

² Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2008) Livestock Drinking Water and are to be analysed as total metals (unfiltered).

³ Contaminant trigger limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2009) and are applying the contaminant trigger.

² Contaminant trigger limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) and are analysed as Filtered Metals

Schedule C - Table 15 (Groundwater Contaminant Limits)

Parameter	Units	Minimum	Maximum	Limit Type
pH ¹	рН	6 .	9	
TDS ¹	mg/L	N/A	4000	Range
Sulphate ¹	mg/L	N/A	1000	Maximum
Aluminum ¹	mg/L	N/A :	5	. Maximum
Arsenic ¹	mg/L.	N/A	· · · · · · · · · · · · · · · · · · ·	Meximum
Boron ¹	mg/L	N/A	0.5	Maximum
Cadmium ¹	· mg/L	N/A ·	5	Maximum
Chromium ¹	mg/L	the state of the s	0.01	Maximum
		N/A	1	Maximum
Cobalt ¹	mg/L	N/A	1	Maximum
Copper ¹	mg/L	N/A	1	Maximum
Fluoride ¹	mg/L	N/A	2	Maximum
Lead ¹	mg/L	N/A	0.1	Maximum
Manganese ²	mg/L	N/A	2.5	
Mercury ¹	mg/L	N/A	0.002	Maximum
Malybdenum ¹	mg/L	N/A		Meximum
Nickel ¹	mg/L	N/A	0.15	Meximum
Selenium ¹	mg/L	N/A	1	Maximum
Zinc¹	mg/L		0.02	Maximum
	. 1	N/A	20	Maximum

¹ Contaminant limits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total Metals (unfiltered)
² Contaminant limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) and are analysed as Filtered Metals.

(C4-4) The method of water sampling required by this environmental authority must comply with that set out in the latest edition of the Environmental Protection Agency's Water Quality Sampling Manual.

Voids

- (C5-1) Water quality in mining voids and final voids must be monitored at the locations and frequencies defined in Schedule C Table 16 and for the parameters detailed in Schedule C Table 17.
- (C5-2) In the event that water quality within the mining voids or final voids does not comply with the contaminant limits defined in Schedule C Table 17, implement measures to prevent access by all livestock and minimise access by fauna to the void.

Schedule C - Table 16 (Voids Monitoring Locations and Frequency)

WOOTH CIRING PIL	Annually
Mount Clarke Pit	Annually
Mount Kelly/Flying Horse Pit	A
Monitoring point	Monitoring frequency

Released

Schadule C - Table 17 Wold Water Quality Limits)

Parameter	Units	Limit	Limit Type
pН	pН	6-9	Range
TDS	mg/L	4000	Maximum
Sulphate	mg/L.	1000	Maximum
Arsenic	mg/L	0.5	Maximum
Cadmium	mg/L	0.01	Meximum
Chromium	mg/L	ij	Maximum
Copper	mg/L	1	Maximum
Lead	mg/L	0.1	Maximum
Mercury	mg/L	0.002	Maximum
Zinc	mg/L	. 20'	Maximum

Contaminant limits are based on ANZECC (2000 Livestock drinking water quality and analysed for total metals (unfiltered))

Acid Rock Drainage and Leachate Management

(C6-1) Subject to limits defined in Schedule C all reasonable and practicable measures must be implemented to prevent hazardous leachate being directly or indirectly released or likely to be released as a result of the activity to any groundwater, watercourse and waters.

END CONDITIONS FOR SCHEDULE C

Schedule D - Noise and Vibration

Noise Nuisance

- (D1-1) Subject to Conditions (D1-2) and (D1-3) noise from the mining activity must not cause an environmental nuisance to an affected building.
- (D1-2) When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (D1-3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Vibration nuisance

- (D2-1) Subject to Conditions (D2-2) and (D2-3) vibration from the mining activity must not cause an environmental nuisance to an affected building.
- (D2-2) When requested by the administering authority, vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.

END CONDITIONS FOR SCHEDULE D

Schedule E - Waste

Storage of Tyres

- (E1-1) Tyres stored awaiting disposal or transport for take-back and, recycling, or waste-to-energy options should be stockpiled in volumes less than 3m in height and 200m² in area and at least 10m from any other tyre storage area.
- (E1-2) All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10m radius of the scrap tyre storage area.

Disposal of Tyres

- (E2-1) Disposing of scrap tyres resulting from the mining activities in spoil emplacements is acceptable, provided tyres are placed as deep in the spoil as reasonably practicable.
- (E2-2) Scrap tyres resulting from the mining activities disposed within the operational land must not impede saturated aquifers or compromise the stability of the consolidated landform.

Waste Management

(E3-1) A Waste Management Program, in accordance with the Environmental Protection (Waste Management) Policy 2000, must be included in the Plan of Operations.

Regulated Waste

- (E 4-1) All regulated waste received and removed from the site, that is over 250kg in weight, must be transported by a person who holds a current authority to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (E4-2) Except as otherwise provided by the conditions of this authority, all waste removed from the site must be taken to a facility that is lawfully allowed to accept such waste under the provisions of the *Environmental Protection* Act 1994.
- (E4-3) Where regulated waste is removed from the Project (other than by a release as permitted under another schedule of this environmental authority), records must be kept of the following:
 - a) the date, quantity and type of waste removed, and
 - b) name of the waste transporter that removed the waste; and
 - c) the intended treatment/disposal destination of the waste.

Note: Records of documents maintained in compliance with a waste tracking system established under the Environmental Protection Act 1994 or any other law for regulated waste will be deemed to satisfy this condition.

Waste Rock Characterisation

(E5-1) All areas to be mined must undergo a waste rock characterisation survey (where waste rock is to be dispositive of on the surface) and a report submitted to the administering authority prior to mining where this survey has no previously been carried out.

END CONDITIONS FOR SCHEDULE E

Oaccess

Restway Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No MIN00401001

Mount Clarke Topsoil Stockpile				Capability	Capability	Analo	and Sire
	4.5	HabitaVLIG	Habitat/LiG	Class 4 - 5	Class 4 - 5	Ç 4	
Mount Clarke Pit Area Sediment Dam	0.6	Habitat	Water Storage	Class 4 - 5	Water Storage	TBD	TBD
Mount Clarke ROM Area Sediment Dam	0.4	Habitat	Water Storage	Class 4 - 5	Water Storage		
Mount Clarke – Diversion/Interception /Sediment Dam Drains	3,2	Habitat	LIG or diversion Habitat	Class 4 - 5	Olass 4 - 5	TBO	- CBT
Roacs/Tracks	18.8	Existing tracks or	Tracks for grazier or LIG	Class 4 - 5	Class 4 - 5		•
Accommodation Camp and Facilities	ιco	9]	ÐΠ	Class 4	Class 4	<u>원</u>	TBD
Sewage Plant and Pond	0.2	911	ତାମ	Class 4	Class 4	요 1	TBD
ROM Pad - at process plant	7.8	917	9I7	Class 4 - 5	Class 4 -5	<u> </u>	TBD DBT
Process plant and associated buildings	3,3	917	ÐIT	Class 4	Class'4	180	TBO
Overland Conveyor	1.8					180	180
Workshop/Office Access Circuit Area	2.9	9]]	LIG	Class 4	Class 4	180 181	081
Heap Leach Pads – Stage 1 and 2	43.2	PIG	Habitat/LiG	Class 4	Class 4-5	TBD	og L
Process Water Ponds - PLS, ILS and Raffinate	6. 4.	911	Water storages	Class 4	Water storages		
Stormwater Ponds 1 and 2	11.4	LIG	Water storages	Class 4	Water storages		
Stormwater Pond spillway channel	0.7	9	LIG or diversion	Class 4	Class 4-5	18D	Cal
Raw Water Pond	0.6	9J7	LIG/Wafer storage	Class 4	7		
Process Area Topsoil Stockniles	9.7	SIT	917	Class 4	Class 4 Ul Water storage	TBD	TBD

nmental Protection Agency sland Parks and Wildlife Service Queensland Governmen

Reefway Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No MIND0401001

Schedule F - Land

Rehabilitation Landform Criteria

(F1-1) All areas significantly disturbed by mining activities must be rehabilitated to a stable landform with a self-sustaining vegetation cover in accordance with Schedule F —

Schedule F - Table 1 (Final Land Use and Rehabilitation Approval Schedule)

Salegon.	Max		Pand Daso	puer	Land Capability	Analogue Site	ie Site
	. (Na)	DISTURBANCE	POST DISTURBANCE	PRE DISTURBANCE	POST DISTURBANCE	Lengifude	Latitude
Mount Kelly/Flying Horse Pit	13.2	Habitat	Water Storage	Class 5	Water Storage		
Mount Kelly/Flying Horse Waste Rock Dump	82	Habitat	Habitat	Class 5	Class 5	TBD	TBD
Mount Kelly/Flying Horse Topsoil Stockpile	7:	Habitat	Habitat	Class 5	Class 5	TBD	CieT
Mount Kelly/Flying Horse Sediment Dams	£.	Habitat	Water Storage	Class 5	Water Storage		
Mount Kelly/Flying Horse Diversion Drains	1.3	Habitat	LIG or diversion Habitat	Class 5	Class 5	TBD OBT	TBD
Mount Clarke Pit	9.5	Habitat	Water Storage	Class 5	Water Storage	٠	
Mount Clarke Waste Rock Dump	16.3	Habitat/LIG	Habitat/LIG	Class 4 - 5	Class 4 -5	TRD	. 001
Mount Clarke Low Grade Stockpile	5.4	Habitat/LIG	Habitat/LIG	Class 4 - 5	Class 4 - 5		20 6
Mount Clarke/Flying Horse/Mount Kelly ROM Storage & Live Rehandle	5.5	Flabitat ·	Habitat/LIG	Class 4 - 5	Class 4 - 5	TBD	題
٠							٠

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		18 D		TBD	180	TBD	TBD	TBD	780	TBD	180
		701	····	TBD	E	四	180	TBD	<u> </u>	TBD	<u>2</u>
Land Capability	Class 4 - 5	Sac A		Class 4	CIASS 4 - 5	Class 4 - 5	Class 4	Class 4		Class 4 - 5	
ur .	Class 4	Class 4 - 5		Class 4 -5	7	Class 4 - 5	Class 4	Class 4	Close A	Class 4 - 5	
en gue	LIG or diversion	LIG or ponds	TIG	LIG	<u>e</u>	97	97	LIG	LIG/Habitat	LIG/Habitat	
	9 	9 ∏	FIG	DI CIG	DI3	LIG	Pin	FIG	150 150	ΠG	
Max	2.7	-	2,6	-	0.2	0.3	0.3	4.3	5	59,9	276.4
Disturbance Category	Drainage Diversions	Sediment Ponds	. Bulk Fill Stockpile	Pripelines and Powerlines (on lease)	Rubbish Dumps	Concrete Batch Plant	Fuel Storage Area	Contractor Laydown Area	Exploration	Construction Access inet of specific areas)	Total

*Analogue sites and disturbance description are to be identified and the environmental authority holder must amend the environmental authority to include analogue sites in

LIG- Low Intensity Grazing Classes are derived from the Department of Minerals and Energy's Land Sultability Assessment Techniques (1995)

(F1-2)

Progressive rehabilitation must commence when areas become avallable within the operational land.

(F1-3)

Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in Schedule F - Table 2 by 30 June 2007

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Schedule F - Table 2 (Landform Design)

Disturbânce type	Slope range (%)	Projective surface area (ha)
Waste Hock Dumps	33%-76% (1:3 to angle of repose)	49.7
Heap Leach Pads	<33% or 1:3	43.2
ROM Pads	33%-76% (1:3 to angle of repose)	13.3

Residual Void Outcome

(F2-1) Residual voids must not cause any serious environmental harm to land, surface waters or any recognised groundwater aquifer, other than the environmental harm constituted by the existence of the residual void itself and subject to any other condition within this environmental authority.

Dams Containing Hazardous Waste

Description of Dam

(F3-1) The construction or operation of any dam containing hazardous waste within the operational land must comply with Schedule F - Table 3.

Schedule F — Table 3 (Size and Purpose of Dams Containing Hazardous Waste)

Name of dam containing hazardous waste (1)	Maximum surface area of dam (ha):	Maximum volume of dam (m²)	Maximum depth of dam (m) ⁽²⁾	Purpose of dam ⁽³⁾
Process Water Ponds (Raffinate Pre-Settler, Raffinate, ILS and PLS)	3.4	51,100	4.5	Storage of Process Solutions
Heap Leach Pads	43.2	N/A	N/A	Storage of Process Solutions
Stormwater Pond 1 (Stage 1 only)	6.47	302,760	6.35	Storage of storm water runoff from processing area
Stormwater Pend 1 & 2 (Stage 2)	10.4	467,720	6.35	Storage of storm water runoff from processing area

Note (1): The name of the dam containing hazardous waste should refer to the name of the dam e.g. process residue facility and decant dam.

Note (a): For dams that do not require a dam wall, input the maximum void depth e.g. where dams are formed by excavating below the land surface or backfilling a residual void.

Note (9): Purpose of the dam should outline the designed function, e.g. "the permanent containment of tailings resulting from the extraction of nickel, cobalt and other metals at the XYZ Refinery".

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Location of Dam

The location of any dam containing hazardous waste within the licensed place must be located within the (F3-2)polygonal area defined by the co-ordinates defined in Schedule C- Table 4 -Map 4.

Schedule F -	- Table 4 () acatio	n of Dame Design	ng Hazardous Waste)
	· · · · · · · · · · · · · · · · · · ·	II VI DBIIIS CONTAINI	THE HOTOVOOLON MINNES
The second second second second	24	The state of the s	FIRST FIGURE WASTER

Name of dam containing hazardous wasto	Easting(AMG 84, Zone 84) (I)	Northing (AMG 84, Zone 54) (ar
PLS Ponds, ILS, Raffinate Pre-settler and Raffinate Pond	301760 302065 302035 301760	7797640 7797640 7797310 7797310
Stormwater Pond 1 and 2	301470 301760 301760 301470	7797640 7797640 7797110 7797110
Heap Leach Pads (17): A minimum of 3 control points is required to the second of the	302065 302720 302720 302035	7797945 7797945 7796825

Note (!): A minimum of 3 control points is required to constrain the location of all activities associated with the dam containing hazardous waste. Additional infrastructure which forms part of any dam containing hazardous waste may include appurtenant works consisting of tallings discharge pipelines, seepage collection systems, runoff diversion bunds, containment systems, pressure relief wells, decant and recycle water systems.

Standards and Criteria

- The holder of the environmental authority must design, construct, repair, maintain, operate and decommission (F3-3) the dams defined in Schedule F - Table 3 and 4 in accordance with an acknowledged design plan that must comply with the standard environmental conditions in the "Code of Environmental Compliance for High Hazard
- (F3-4) The holder of the environmental authority must design, construct, and operate all low hazardous dams containing hazardous waste and non-hazardous dams in accordance with the criteria outlined in Appendix B of the Code of Environmental Compliance for Mining Activities.

Inspection of Dams

- High hazard dams containing hazardous waste shall be inspected by a Registered Professional Engineer (F3-5)Queensland (RPEQ) prior to 1 November each year or at any time if alarming, unusual or otherwise
- For each inspection, the engineer shall assess the condition of the dam and its foundations, determine the (F3-6) hydraulic adequacy of the dam and assess the adequacy of the works with respect to dam safety.
- For each inspection, two copies of the engineer's report and any recommendations as to measures to be taken (F3-7) to ensure the integrity of the dam shall be furnished to the administering authority within 28 days of the Decommissioning of Dam - Objective

Dams containing hazardous waste must not be abandoned and must be decommissioned to a situation where (F3-8)water can no longer be stored in the dams. The dams and their contained waste(s) must be stable, whereafter the dams are no longer dams and they become landforms on the operational land and must comply with the rehabilitation requirements of this environmental authority.

Decommissioning of Dam - Documentation and Compliance

Decommissioning activities for dams must be documented in detail in the plan of operations under which the (F3-9)activities are to occur. Where the detailed documentation is not already contained in the Design Plan for the dam, the detailed documentation is considered to be an amendment to the design plan and must be submitted

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as an amendment to the design plan required by the "Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste".

Infrastructure

(F4-1) All intrastructure, constructed by or for the environmental authority holder during the mining activities including water storage structures, must be removed from the site prior to mining lease surrender, except where agreed in writing by the post mining landowner / holder.

NOTE: This is not applicable where the landowner / holder is also the environmental authority holder.

Contaminated Lands

- (F5-1) A register and map of all potentially contaminated sites and any remediation details, must be kept on site, updated regularly, and included in each Plan of Operations.
- (F5-2) A Spillage Management Plan and an Emergency Plan for all hazardous materials stored on-site, together with a description of suitable equipment and training must be updated and included with each Plan of Operations.

END CONDITIONS FOR SCHEDULE F

Schedule G - Community

Complaint Response

(G1-1) All complaints received must be recorded including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority on request.

END CONDITIONS FOR SCHEDULE G

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Schedule H - Definitions

"acceptance criteria" means the measures by which the actions implemented to rehabilitate the land are deemed to be complete. The acceptance criteria indicate the success of the rehabilitation outcome or remediation of areas which have been significantly been disturbed by the mining activities. Acceptance criteria may include information regarding:

vegetation establishment, survival and succession;

vegetation productivity, sustained growth and structure development;

fauna colonisation and habitat development;

ecosystem processes such as soil development and nutrient cycling, and the recolonisation of specific fauna groups such as collembola, mites and termites which are involved in these processes;

microbiological studies including recolonisation by mycorrhizal fungi, microbial biomass and respiration;

effects of various establishment treatments such as deep ripping, topsoil handling, seeding and fertiliser application on vegetation growth and development;

resilience of vegetation to disease, insect attack, drought and fire;

vegetation water use and effects on ground water levels and catchment yields.

"affected building"

for noise means any building or any part of a building, for example the building from which the noise is made, at which the noise can be heard.

for vibration means any building or any part of a building, for example the activity from which the vibration is made, at which the vibration can be felt.

"ambient (or total) noise" at a place, means the level of noise at the place from all sources (near and far), measured as the Leq for an appropriate time interval.

"appropriately qualified person" means any person who conforms to the EPA operational policy for an "appropriately qualified person (analyst)" in accordance with Section 490(7) of the Environmental Protection Act 1994.

"ARD" means acid rock drainage and refers to the low pH, high heavy metal pollutant typical of sulphidic mine wastes, and most commonly associated with the production of ferrous iron and sulphuric acid through the oxidation of sulphide minerals.

"authority" means environmental authority (mining activities) under the Environmental Protection Act 1994.

"blasting" means the use of explosive materials to fracture-

(a) rock, coal and other minerals for later recovery; or

structural components or other items to facilitate removal from a site or for reuse.

"building" includes a structure of any type and part of a building or structure.

"commercial place" means a work place used as an office or for business or commercial purposes, which is not part of the mining activity and does not include employees accommodation or public roads.

"competent person" means a person with the demonstrated skill and knowledge required to carry out the task to a standard necessary for the reliance upon collected data or protection of the environment.

"dam" means a containment or proposed containment whether permanent or temporary, which is designed to contain, divert or control flowable substances. However this does not include a fabricated or manufactured tank or container designed to a recognised standard.

"design plan" in the context of a dam design is the documentation required under the Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, the procedures and criteria to be used for operating the dam and the decommissioning and rehabilitation objectives in terms of procedures, works and outcomes at the end of dam life, The documents can include design and investigation reports, drawings, specifications and certifications.

"environmental authority holder" means the holder of this environmental authority.

"flow event" means a flow event producing sufficient water to permit a monitoring creek bed flow of 30cm or more at the

"flowable substance" means matter or mixture of materials which can be forced to or otherwise flow under any conditions possible in a situation. It includes water, other liquids or a mixture that includes water or any other liquid or suspended

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"hazardous waste" means any substance, whether liquid, solid or gaseous, derived by or resulting from, the processing of minerals that tends to destroy life or impair'or endanger health.

"Infrastructure" means water storage dams, roads and tracks, buildings and other structures built for the purpose of mining activities but does not include facilities required for the long term management of mining impacts or the protection of potential resources. Such facilities include dams containing hazardous waste, waste rock dumps, voids, or ore stockpiles and buildings or other structures whose ownership can be transferred and which have a residual beneficial use for the next owner of the operational land or the background land owner.

"L_{A 10, ed), 10 mins}" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10-minute measurement period, using Fast response.

"La1, ed), 10 mins" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10-minute measurement period, using Fast response.

"L_{A, max-adj, T}" means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response.

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.

"land capability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land suitability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land use" term to describe the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

"leachate" means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

"mandatory reporting level" means the volume below the spillway crest, equivalent to the lower of the AEP, 72 hour storm or the AEP wave allowance (AEP is the annual exceedence probability).

"mineral" means a substance which normally occurs naturally as part of the earth's crust or is dissolved or suspended in water within or upon the earth's crust and includes a substance which may be extracted from such a substance, and includes—

- (a) clay if mined for use for its ceramic properties, kaolin and bentonite;
- (b) foundry sand;
- (c) hydrocarbons and other substances or matter occurring in association with shale or coal and necessarily mined, extracted, produced or released by or in connection with mining for shale or coal or for the purpose of enhancing the safety of current or future mining operations for coal or the extraction or production of mineral countries.
- (d) limestone if mined for use for its chemical properties;
- (e) marble;
- (f) mineral oil or gas extracted or produced from shale or coal by in situ processes;
- (g) peat;
- (h) salt including brine;
- (i) shale from which mineral oil may be extracted or produced;
- (i) silica, including silica sand, if mined for use for its chemical properties;
- (k) rock mined in block or slab form for building or monumental purposes;
- but does not include-
- (I) living matter;
- (m) petroleum within the meaning of the Petroleum Act 1923;
- (n) soil, sand, gravel or rock (other than rock mined in block or slab form for building or monumental purposes) to be used or to be supplied for use as such, whether intact or in broken form;
- (o) water.

"noxious" means harmful or injurious to health or physical well being, other than trivial harm.

"offensive" means causing reasonable offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive, other than trivial harm.

∠→ 2+/7/06 Page 24 of 32 • 0902 12-513 "peak particle velocity (ppv)" means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time, usually measured in millimetres/second (mms⁻¹).

"protected area" means - a protected area under the Nature Conservation Act 1992; or

- a marine park under the Marine Parks Act 1992; or
- a World Heritage Area.

"progressive rehabilitation" means rehabilitation (defined below) undertaken progressively or a staged approach to rehabilitation as mining operations are ongoing.

"reference site" (or analogue site) may reflect the original location, adjacent area or another area where rehabilitation success has been completed for a similar biodiversity. Details of the reference site may be as photographs, computer generated images and vegetation models etc.

"rehabilitation" the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

"representative" means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

"residual void" means an open pit resulting from the removal of ore and/or waste rock which will remain following the cessation of all mining activities and completion of rehabilitation processes.

"self sustaining" means an area of land which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

'sensitive place" means:

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- an educational institution; or
- a medical center or hospital; or
- a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- a public park or gardens.

"significant disturbance" - includes land

- (a) If it is contaminated land; or
- it has been disturbed and human intervention is needed to rehabilitate it.
 - to a state required under the relevant environmental authority; or
 - if the environmental authority does not require the land to be rehabilitated to a particular state to its state II. immediately before the disturbance.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpiled;
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoll)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining activities occur;
- areas submerged by tailings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining activities have ceased: or
- areas where land has been contaminated and a suitability statement has not been issued.

However, the following areas are not included:

- areas off lease (e.g. roads or tracks which provide access to the mining lease);
- areas previously significantly-disturbed which have achieved the rehabilitation outcomes;
- by agreement with the EPA, areas previously significantly disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the EPA;
- disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

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"spillway" means passage or outlet from the darn through which surplus water flows.

"stable" means land form dimensions are or will be stable within tolerable limits now and in the foreseeable future. Stability includes consideration of geotechnical stability, settlement and consolidation allowances, bearing capacity (traffic ability), erosion resistance and geochemical stability with respect to seepage and contaminant generation.

"suitably qualified and experienced person" means a person who is a Registered Professional Engineer of Queensland under the provisions of the *Professional Engineers Act 1988* or a Corporate Member of the Institution of Engineers Australia or holds equivalent professional qualifications and has the following:

- (a) knowledge of engineering principles related to the structures, geomechanics, hydrology, hydraulics, chemistry and environmental impact of dams; and
- (b) at least a total of five years of suitable experience and demonstrated expertise in at least four of the following areas:
 investigation, design or construction of dams;
- operation and maintenance of dams:
- geomechanics with particular emphasis stability, geology and geochemistry;
- hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology;
- hydraulics with particular reference to sediment transport and deposition, erosion control, beach processes:
- hydrogeology with particular reference to seepage, groundwater,
- solute transport processes and monitoring thereof; or
- dam safety.

"tolerable limits" means that a range of values could be accepted to achieve an overall environmental management objective (eg. a range of settlement of a tailing capping could still meet the objective of draining the cap quickly, preventing pondage and limiting infiltration and percolation).

"trivial harm" means environmental harm which is not material or serious environmental harm and will not cause actual or potential loss or damage to property of an amount of, or amounts totalling more than \$5,000.

"watercourse" - Means a river, creek or stream in which water flows permanently or intermittently in a visibly defined channel (natural, artificial or artificially improved) with:

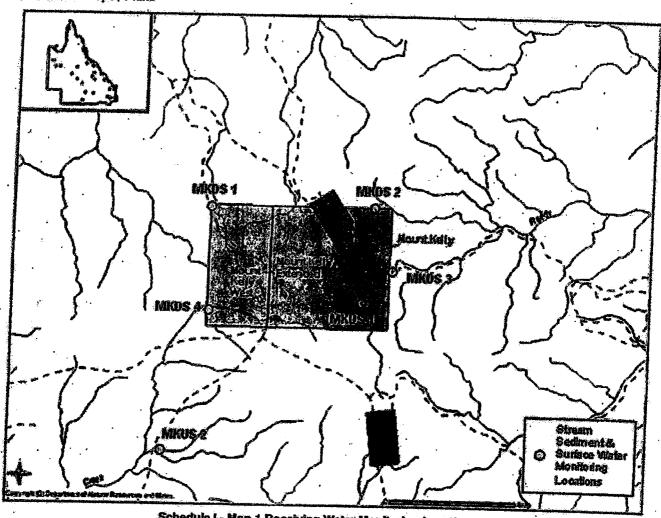
- (a) continuous bed and banks;
- (b) an extended period of flow for some months after rain ceases, and
- (c) an adequacy of flow that sustains basic ecological processes and maintains biodiversity.

"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea) or any part-thereof.

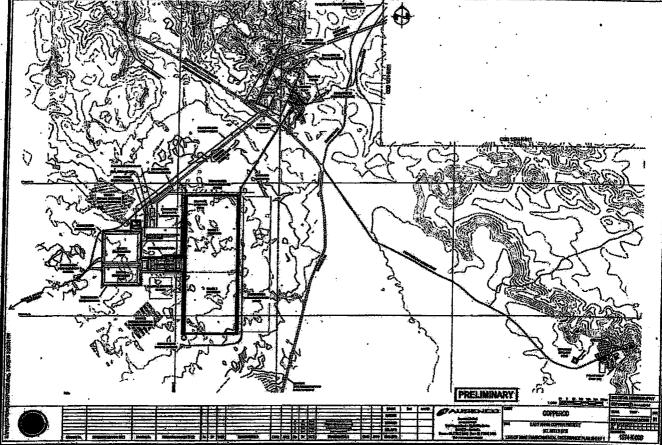
END CONDITIONS FOR SCHEDULE H

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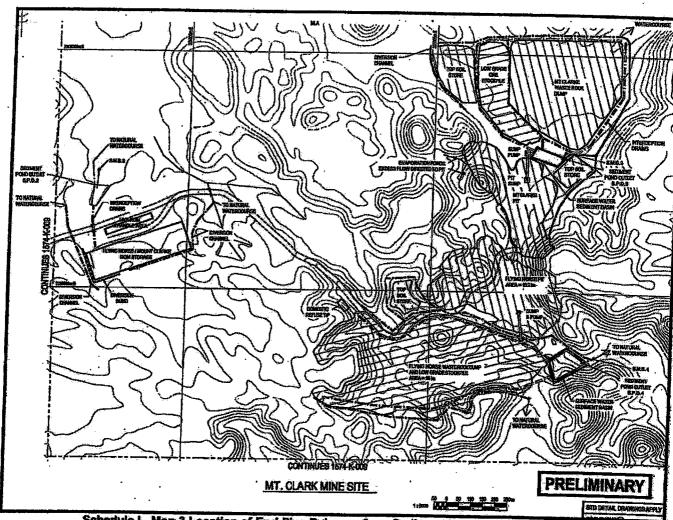
Schedule I - Maps / Plans



Schedule I - Map 1 Receiving Water Monitoring Locations

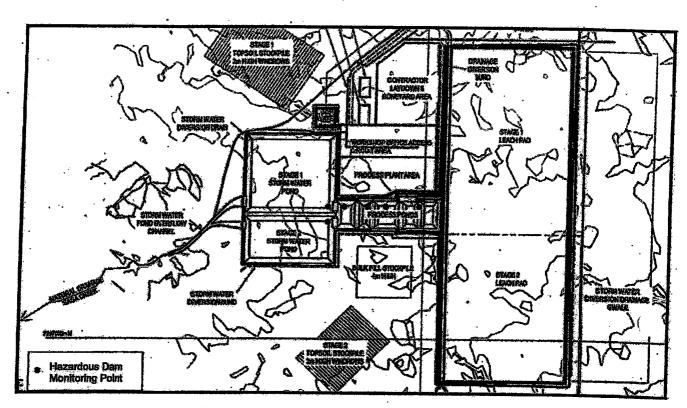


Schedule I - Map 2 Location of End Pipe Releases from Sediment Dams - Processing Are



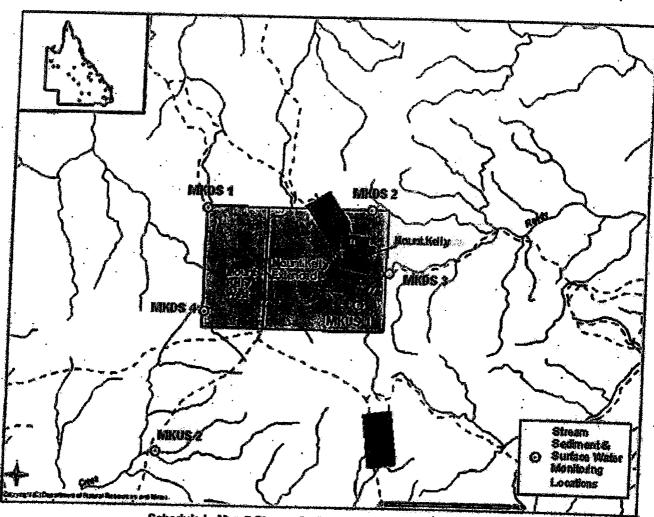
Schedule I - Map 3 Location of End Pipe Releases from Sediment Dams - Mining Area

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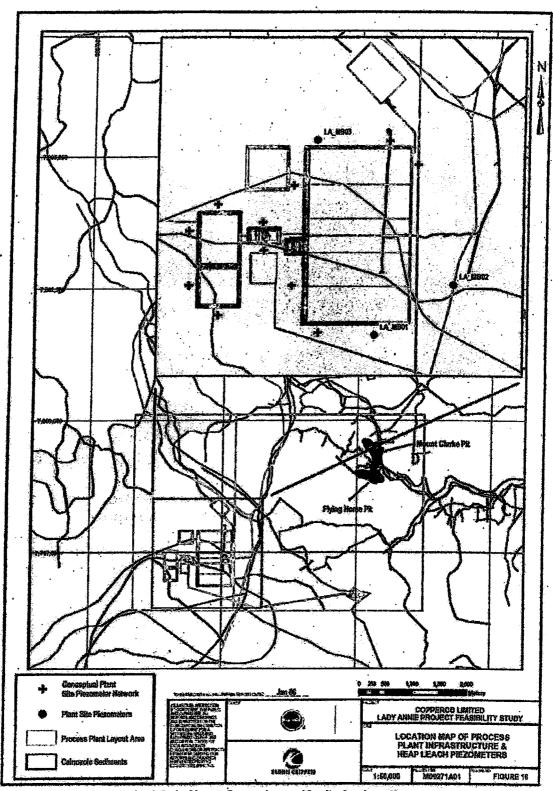
Schedule 1 - Map 4 Location of Hazardous Dams

Released



Schedule I - Map 5 Stream Sediments Monitoring Locations

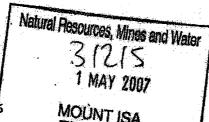




Schedule I - Map 6 Groundwater Monitoring Locations

END CONDITIONS FOR SCHEDULE I

END OF EVIRONMENTAL AUTHORITY





Enquiries Telephone Your reference Our reference

Neil Mayer (07) 4744 7820 MIN100401006 **ISA658**

MOUNT ISA RECEIVED

Environmental Protection Agency incorporating the Queensland Parks and Wildlife Ser

30 April 2007

Reefway Pty Ltd Level 22, Allendale Square 77 St Georges Terrace Perth WA 6000

CC/

Savannah Resources Pty Ltd Level 22, Allendale Square 77 St Georges Terrace Perth WA 6000

Dear Sir/Madam

Re: Amendment of Environmental Authority MIN100401006.

I refer to the application for amendment of Environmental Authority (Mining Activities) MIN100401006 received at the Brisbane EPA office on 2 October 2006.

Please find attached the amended Environmental Authority (EA) MIN100401006. This EA takes effect from 30 April 2007 and the anniversary date of this authority is 24 July of each

If you have any inquiries in relation to the above details please contact Neil Maver on

Yours faithfully

s.49 - Signature

Geoff Metcalfe **District Manager Environmental Operations** Mount Isa District, Northern Region

C/c Mining Registrar

Page 1 of 1

Cnr Carnooweal & Mary Streets Mount Isa Queensland 4825 Australia

PO Box 2316 Mount Isa Queensland 4825 Australia

Telephone (07) 4744 7888 Facsimile (07) 4744 7800 Website www.epa.qld.gov.eu ABN 87 221 158 786



Environmental Authority No. MIN100401006 (mining activities)

Section 258 Environmental Protection Act 1994

This environmental authority is granted under the Environmental Protection Act 1994 and includes conditions to minimise environmental harm caused, or likely to be caused, by the authorised mining activities. An environmental authority (mining activities) may be for mining activities authorised (under the Mineral Resources Act 1989) to occur under one of the following mining tenements: a prospecting permit; mining claim; exploration permit; mineral development licence; or mining lease. In general, a mining activity means: prospecting, exploring, mining; or processing minerals; remediation; rehabilitation; and includes facilitation and supporting activities and any action taken to prevent environmental harm.

Under the provisions of the *Environmental Protection Act 1994* this Environmental Authority is issued to:

Reefway Pty Ltd Level 22 Allendale Square 77 St Georges Terrace Perth WA 6000

Savannah Resources Pty Ltd Level 22, Allendale Square 77 St Georges Terrace Perth WA 6000

in respect of carrying out activities as part of the following mining project:

Type of Environmental Authority (mining activities)

Authorised mining tenements

Location

Mining Leases

ML 5426, ML 5478, ML90168 ML90169, ML90170, ML90178 ML90179, ML 5435, ML 5446 ML 5447, ML 5448, ML 5474 ML 5476.

100km north of Mount Isa

The mining activities are authorized to the extent defined in Schedule 6 Section 14(c) of the Environmental Protection Regulation 1998.

This Environmental Authority is subject to the conditions set out in the attached schedules.

The anniversary date of this Environmental Authority is 24 July each year.

This Environmental Authority takes effect from 30 April 2007.

s.49 - Signature

Assort Metcaire
District Manager
Mount Isa District, Northern Region
Delegate of Administering Authority
Environmental Protection Act 1994

NVIRONMENTA

This Environmental Authority incorporates the following schedules:

Schedule A

General

Schedule B

Air

Schedule C

Water

Schedule D

Noise and Vibration

Schedule E

Waste

Schedule F

I and

Schedule G

Community

Schedule H

Definitions

Schedule I

Maps / Plans

Schedule A - General

Financial Assurance

(A1-1)Provide a financial assurance in the amount and form required by the administering authority prior commencement of activities proposed under this environmental authority.

NOTE: The calculation of financial assurance for condition (A1-1) must be in accordance with Guideline 17 and may include a performance discount. The amount is defined as the maximum total rehabilitation cost for complete rehabilitation of all disturbed areas, which may vary on an annual basis due to progressive rehabilitation. The amount required for the financial assurance must be the highest Total Rehabilitation Cost calculated for any year of the Plan of Operations and calculated using the formula: (Financial Assurance = Highest Total Annual Rehabilitation Cost x Percentage Required).

The financial assurance is to remain in force until the administering autiturity is satisfied that no claim on the (A1-2)assurance is likely.

NOTE: Where progressive rehabilitation is completed and acceptable to the administering authority, progressive reductions to the amount of financial assurance will be applicable where rehabilitation has been completed in accordance with the acceptance criteria defined within this environmental authority.

Maintenance of Measures, Plant and Equipment

- (A2-1) The environmental authority holder must ensure:
 - that all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority are installed;
 - that such measures, plant and equipment are maintained in a proper condition; and that such measures, plant and equipment are operated in a proper manner.

Monitoring

- Record, compile and keep for a minimum of five years all monitoring results required by this environmental (A3-1)authority and make available for inspection all or any of these records upon request by the administering authority.
- Where monitoring is a requirement of this environmental authority, ensure that a competent person(s) conducts (A3-2)all monitoring.

Storage and Handling of Flammable, Combustible and Corrosive Liquids

- Spillage of all flammable and combustible liquids must be contained within an on-site containment system and (A4-1)controlled in a manner that prevents environmental harm (other than trivial harm) and maintained in accordance with Section 5.8 of AS 1940 - Storage and Handling of Flammable and Combustible Liquids of 2004.
- (A4-2)The on-site storage of corrosive liquids must be in accordance with Section 5.7 of AS 3780 - Storage and Handling of Corrosive Substances 1994.

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I his Environmental Authority takes effect 30 April 2007

Environmental Protection Agency

Definitions

(A5-1) Words and phrases used throughout this environmental authority are defined in Schedule H - Definitions. Where a definition for a term used in this environmental authority is sought and the term is not defined within this environmental authority, the definitions in the Environmental Protection Act 1994, its Regulations and Environmental Protection Policies must be used.

END CONTIONS FOR SCHEDULE A

Schedule B - Air

Dust Nuisance

- (B1-1) Subject to Conditions (B1-2) and (B1-3) the release of dust or particulate matter or both resulting from the mining activity must not cause an environmental nulsance at any sensitive or commercial place.
- (B1-2) When requested by the administering authority, dust and particulate monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B1-3) If the environmental authority holder can provide evidence through monitoring that the following limits are not being exceeded then the holder is not in breach of (B1-1):
 - a) Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air Determination of particulates Deposited matter Gravimetric method of 1991.
- (B1-4) If monitoring indicates exceedence of the relevant limits in Condition (B1-3), then the environmental authority holder must:
 - address the complaint including the use of appropriate dispute resolution if required; or
 - b) Immediately implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nuisance.

Odour Nuisance

- (B2-1) Subject to condition (B2-2), the release of noxious or offensive odour(s) or any other noxious or offensive airborne contaminant(s) resulting from the mining activity must not cause an environmental nulsance at any sensitive or commercial place.
- (B2-2) When requested by the administering authority, odour monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B2-3) If monitoring indicates Condition (B2-1) is not being met then the environmental authority holder must:
 - a) address the complaint including the use of appropriate dispute resolution if required; or
 - b) Immediately implement odour abatement measures so that emissions of odour from the activity do not result in further environmental nuisance.

END CONDITIONS FOR SCHEDULE B

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Environmental Protection Agency



Schedule C - Water

Release to Waters

Receiving waters affected by the release of process water or storm water contaminated by the mining activities or both must be monitored at the locations and frequencies defined in Schedule C - Table 1 and Schedule I - Map 1 & 2, and the results of the test sites comply with the contaminant limits defined in Schedule C - Table 3.

Schedule C - Table 1 (Receiving Water Monitoring Locations and Frequency)

Monitoring point	Easting (AMG 84 Zone 54)	Northing (AMG 84 Zone 54)	* Manitaring frequency
MKUS 1- reference site *	305625	7797450	Each flow event
MKUS 2- reference site*	TBD	TBD	Each flow event
MKDS 1- test site	301160	7800135	Each flow event
MKDS 2- test site	306366	7798356	Each flow event
MKDS 3- test site	306370	7798363	Each flow event
MKDS 4- test site	301300	7797255	Each flow event
LA- US1- reference site*	295150	7812680	Each flow event
LA- US2- reference site*	295750	7812480	Each flow event
LA- DS1- test site	294000	7810100	Each flow event
A- DS2- test site	295500	7810400	Each flow event

NOTE: This does not apply to dams containing hazardous waste

*Reference sites must:

be from the same biogeographical and climatic region;

b)

have similar geology, soil types and topography contain a range of habitats similar to those at the test site

be of similar flow regime; and

not be so close to the test sites that any disturbances at the test site also result in a change at the reference site. TBD- to be determined and provided to the QEPA prior to commencement of mining.

C1-2 Subject to Condition (Ci-1), if the receiving water contaminant trigger levels defined in Schedule C - Table 2 are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

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Schedule C - Table 2 (Receiving Water Trigger Limits)

Parameter	Units *	Minimum	Maximum	" Trigger Type
pH ¹	pH	6	8.5	Range
EC'	μS/em	N/A	250	Maximum
Sulphate 2	mg/L	N/A	500	Maximum
Aluminium ⁴	mg/L	N/A	2.5	Maximum
Aluminium ⁵	mg/L	N/A	11.5	Maximum
Arsenic ²	mg/L	N/A	0.25	Maximum
Boron ²	mg/L	N/A	0.37	Meximum
Cadmlum ²	mg/L	N/A	0.005	Meximum
Chromium ²	mg/L	N/A	0.5	Meximum
Cobalt ²	mg/L	N/A	0.5	Maximum
Copper ⁴	mg/L	N/A	0.5	Meximum
Copper ⁵	mg/L	NA	0.83	Maximum
Fluoride ²	mg/L	N/A	1	Maximum
Lead ⁴	mg/L	N/A	0.05	Maximum
Lead ⁵ .	mg/L	N/A	0.065	Maximum
Vanganese ^s	mg/L	N/A	1.9	Maximum
Mercury ²	mg/L	N/A	0,001	Maximum
folybdenum ²	mg/L	N/A	0.075	Maximum
Nickel ⁸	mg/L	N/A	0.5	Maximum
Selenium ²	mg/L	N/A	0.01	Maximum
Zinc ²	mg/L	N/A	10	Maximum

¹ Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000).
² Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking Water and are to be analysed as trial metals (unfiltered).

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Water and are to be analysed as total metals (unfiltered).

Contaminant trigger limits based on ANZECC (2000) trigger levels for aquatic ecosystems of slightly - moderately disturbed systems - table 3.4.1 level of proteotion 95% / Table 3.3.4/3.3.5 - Tropical Australia upland rivers.

Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking Water and are to be analysed as total metals (unfiltered). These limits are set for the Mount Kelly Leases only (ML 5426, ML 5478, ML90168, ML90169, ML90170, ML90178, ML 5435, ML 5446, ML 5447, ML 5448, ML 6474 and ML 5476.)

Contaminant trigger limits are based on site specific background data and are to be analysed as total metals (unfiltered), These trigger limits are set for the Lady Annie Lease only (ML90179).

Schedule C - Table 3 (Receiving Water Contaminant Limits)

Parameter	Units	. Minimum	Maximum	Trigger Type
ρH	рH	6	9	Range
TDS ²	mg/L	N/A	4000	Maximum
Sulphate ¹	mg/L	N/A	1000	Maximum
Aluminium ⁶	mg/!	N/A	5	Maximum
Aluminium ⁶	mg/L	N/A	23	Maximum
Arsenic ¹	mg/L	N/A	0.5	Maximum
Boron	mg/L	N/A	5	Meximum
Cadmium ¹	mg/L	N/A	0.01	Maximum
Chromium ¹	mg/L	N/A	1	Maximum
Cobalt ¹	mg/L	N/A	1	Meximum
Copper ⁵	mg/L	N/A	1	Maximum
Copper ⁶	mg/L	N/A	1.66	Maximum
Fluoride ¹	mg/L	N/A	2	Maximum
Lead ⁵	mg/L	N/A	0.1	Maximum
Lead ^e	mg/L	N/A	0.13	Maximum
Manganese ³	. mg/L	N/A	2.5	Maximum
Mercury ¹	mg/L	N/A	0.002	Maximum
Mølybdenum ¹	mg/L	N/A	0.15	Maximum
Nickel ¹	mg/L	N/A	1	Maximum
Selenium [†]	mg/L	N/A	0.02	Maximum
Zine	mg/L	N/A	20	Maximum

Contaminant limits based on table 4.3.2 ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unfiltered)

Contaminant limits based on Table 3.3.4 of Aquatic Ecosystems ANZECC (2000)

End of Pipe Release

(C1-3) End of pipe release limits for storm water contaminated by mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 4 and Schedule I - Map 3, 4 and 5 and comply with the contaminant limits defined in Schedule C - Table 5.

ha soft for

² Contaminant limits are based on Table 4.3.1 Livesiock drinking water quality and are analysed as Total metals (unfiltered)

³ Contaminant limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) 80% and are to be analysed as filtered metals.

⁵ Contaminant limits are based on table 4.3.2 ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unfiltered). This limit is set for the Mount Kelly Leases only (ML 5426, ML 5478, ML90168, ML90169, ML90170, ML90178, ML 5435, ML 5446, ML 5447, ML 5448, ML 5474 and ML 5476.)

⁶ Contaminant limits are based on site specific background data and are to be analysed as total metals (unfiltered). These trigger limits are set for the Lady Annie Lease only (ML90179).

Schedule C - Table 4 (End of pipe monitoring locations and frequency)

Monttpling paint	Easting (AMG 84, Zone 54)	A Northing (AMG 84; Zone 54)	Monitoring frequency
Mount Clarke ROM Area Sediment Dam	303834	7799496	Each flow event
Mount Clarke Pit Area Sediment Dam	305336	7799592	Each flow event
Mount Clarke/Flying Horse Sediment Dam	305887	7798726	Each flow event
Process Plant ROM Pad Sediment Dam 1	303040	7798656	Each flow event
Process Plant ROM Pad Sediment Dam 2	302905	7798900	Each flow event
Process Plant ROM Pad Sediment Dam 3	302771	7799010	Each flow event
Lady Annie Sediment Dam	295307	7811464	Each flow event

NOTE: This does not apply to dams containing hazardous waste.

Schedule C - Table 5 (End of pipe contaminant release limits

Parameter	Unite	Minimum	* Maximum *	Limit Type
рН	pH	6	9	Range
TDS	mg/L	N/A	4000	Maximum
Sulphate	mg/L	N/A	1000	Maximum
Arsenic	mg/L	N/A	5	Maximum
Cadmium	mg/L	NA	0.01	Maximum
Chromium	mg/L	N/A		Maximum
Cobalt	mg/L	N/A		Meximum
Copper	mg/L	N/A	1	Meximum
Lead	mg/L	N/A	0.1	Maximum
Mercury	mg/L	N/A	0.002	Maximum
Zinc	mg/L	N/A	20	Maximum

Contaminant limits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unfiltered) NOTE: This does not apply to dams containing hazardous waste.

Dams Containing Hazardous Waste

(C1-4) Water storages containing process water and storm water contaminated by mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 6 and Schedule I - Map 6 and samples analysed for the parameters defined in Schedule C - Table 7.

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Schedule C - Table 6 (Water Storage Monitoring Locations of Hazardous Dams)

Monitoring point	Easting (Zone 54, AMG 84)	Northing (Zone 54, AMG-84)	Monitoring frequency
PLS Ponds	302000	7797450	Annually, March
ILS Pond	301900	7797450	Annually, March
Raffinate Pond Pre-Settler	301850	7797450	Annually, March
Raffinate Pond	301800	7797450	Annually, March
Storm water Pond 1	301750	7797450	Annually, March
Storm water Pond 2	301750	7797350	Annually, March

(C1-5) In the event that the water quality within any dam containing hazardous waste does not comply with the contaminant limits defined in Schedule C - Table 7, implement measures to prevent access by all livesto and minimise access by fauna to the dam.

Schedule C - Table 7 (Water Quality Limits for Dams Containing Hazardous Waste)

Parameter	Units	Conteminant Limit	Limit Type
рН	рН	4-9	Range
TDS	mg/L	5,000	Maximum
Boron	mg/L.	5 .	Maximum
Sulphate	mg/L	1000	Maximum
Aluminum	mg/L	5	Maximum
Arsenic	mg/L	0,5	Maximum
Cobalt	mg/L	1	Maximum
Copper	mg/L	1	Maximum
Lead	mg/L	0.1	Maximum
Nickel	mg/L.		Maximum
Zine	mg/L	20	Maximum

Contaminant limits based on ANZECC (2000 Livestock drinking water quality and are analysed as total metals (unfiltere

(C1-6) The design storage allowance on 1 November of each year for any dam containing hazardous waste constructed or operated within the operational land must comply with Schedule C - Table 8.

Schedule C - Table 8 (Storage Design for Dams Containing Hazardous Waste)

 Storage Type	Design Storage Allowance (1)	Splitway Critical Design Storm ⁽²⁾	Mandatory Reporting Level ⁽⁸⁾
Stormwater Pond 1	1: 100 Year ARI 2 month wet season	1: 1000 Year ARI	1: 100 year ARI
Stormwater Pond 2	1: 100 Year ARI 2 month wet season plus process inputs for the 2 month wet season	1: 1000 Year ARI	1: 100 year ARI

Note (1): The design storage allowance on 1 November of each year for any dam containing hazardous waste constructed within the operational land must be equivalent to the run-off from a 1 in 100 ARI 2 month wet season plus process inputs for the equivalent wet season. Process inputs refers to hazardous mineral process waste and water, which is being disposed of in the storage facility.

Note (2): The critical design storm has a duration that produces the peak discharge for the catchments.

Note ⁽⁸⁾: The mandatory reporting level refers to the volume below the splliway crest, either the 1: 100 ARI 72 hour storm or the 1:100 ARI wave allowance, whichever is lower.

(C1-7) The spillway for any dam containing hazardous waste, constructed or operated within the operational land must be designed and maintained to withstand the peak flow from the spillway critical design storm defined in Schedule C - Table 8.

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This Environmental Authority takes effect 30 April 2007

- The holder of the environmental authority must mark the mandatory reporting level defined in Schedule C -(C1-8) Table 8 on the spillway of all dams containing hazardous waste within the operational land.
- The holder of the environmental authority must notify the administering authority when the pondage level of the (C1-9)dam containing hazardous waste, reaches the mandatory reporting level defined in Schedule C - Table 8.

Stream Sediment Contaminant Levels

- All reasonable and practicable erosion protection measures and sediment control measures must be (C2-1)implemented and maintained to minimise erosion and the release of sediment.
- The bed of the receiving waters, affected by the release of process water and storm water contaminated by the (C2-2)mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 9 and Schedule I - Map 7 & 8.

Schedule C - Table 9 (Receiving Stream Sediment Monitoring Locations and Freque

Monitoring point	Easting (AGD 84 Zone 54)	Northing (AGD 84 Zone 54)	Monitoring frequency
MKUS 1- reference site *	305625	7797450	May each year
MKUS 2- reference site*	TBD	TBD	May each year
MKDS 1- test site	301160	7800135	May each year
MKDS 2≃test site	306366	7798356	May each year
MKDS 3- test site	306370	7798363	May each year
MKDS 4- fest site	301300	7797255	May each year
A- US1- reference site*	295150	7812680	Each flow event
A- US2- reference site*	295750	7812480	Each flow event
A- DS1- test site	294000	7810100	Each flow event
A- DS2- test site	295500	7810400	Each flow event

NOTE: This does not apply to dams containing hazardous waste *Fleference sites must:

be from the same biogeographical and climatic region;

have similar geology, soil types and topography b)

contain a range of habitats similar to those at the test site C)

be of similar flow regime; and

not be so close to the test sites that any disturbances at the test site also result in a change at the reference site. TBD- to be determined and provided to the QEPA prior to commencement of mining.

Subject to Condition (C2-2), if the stream sediment contaminant trigger levels defined in Schedule C - Table 10 (C2-3)are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

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Schedule C - Table 10 (Receiving Stream Sediment Contaminant Trigger Levels)

Parameter	Units	Contaminant trigger levels	Trigger Type
Antimony ¹	mg/kg dry wt	2 `	Maximum
Arsenic¹	mg/kg dry wt	20	Meximum
Cadmium ¹	rng/kg dry wt	1.5	Maximum
Chromium ¹	mg/kg dry wt	80	Maximum
Copper ²	mg/kg dry wt	100	Maximum
Copper ³	mg/kg dry wt	400	Maximum
Lead ¹	mg/kg dry wt	50	Maximum
Nickel ¹	mg/kg dry wt	21	Maximum
Silver ¹	mg/kg dry wt	1	Maximum
Mercury ¹	mg/kg dry wt	0.15	Maximum
Zinc ¹	mg/kg dry wt	200	Maximum

ANZECC (2000): ISOG Low trigger values, Sediment Quality Guidelines, Aquatic Ecosystems, Table 3.5.1.

(C2-4) Subject to Condition (C2-2), stream sediment contaminant limits must not exceed the contaminant limits defined in Schedule C -Table 11.

Schedule C - Table 11 (Receiving Stream Sediment Contaminant Limits)

 5 This limit is set for the Lady Annie Lease only (ML90179).

Parameter	Units *	Contaminant limits	Limit Type
Antimony ¹	mg/kg dry wt	25	Maximum
Arsenic ¹	mg/kg dry wt	70	Maximum
Cadmium ¹	mg/kg dry wt	10	Maximum
Chromium ¹	mg/kg dry wt	370	Maximum
Copper ²	mg/kg dry wt	120	Maximum
Copper ³	mg/kg dry wt	500	Maximum
Lead ¹	mg/kg dry wt	220	Maximum
Nickel ¹	mg/kg dry wt	52	Maximum
Sliver ¹	mg/kg dry wt	3.7	Maximum
Mercury ¹	rng/kg dry wt	1	Maximum
,.⊲Zihc¹	mg/kg dry wt	410	Maximum

ANZECC (2000): ISQG High trigger values, Sediment Quality Guidelines, Aquatic Ecceystems, Table 3.5.1.

(C2-5) All stream sediment sampling must be undertaken in accordance with AS 5667.1 Guidance on Sampling of Bottom Sediments of 1998

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This Environmental Authority takes effect 30 April 2007

² Site specific trigger value as calculated in section 3.7 of EM Plan September 2006 is for the Mount Kelly Leases only. (ML 5426, ML 5478, ML90168, ML90169, ML90170, ML90178, ML 5435, ML 5446, ML 5447, ML 5448, ML 5474 and ML 5476,)

² Site specific trigger value as calculated in section 3.6 of EM Plan July 2006 is for the Mount Kelly Leases only. (ML 5426, ML 5478, ML90168, ML90169, ML90170, ML90178, ML5436, ML 5446, ML 5447, ML 5448, ML 5474 and ML 5476.)

³ This limit is set for the Lady Annie Lease only (ML90179).

Sewage effluent

**

- All effluent released from the treatment plant must be monitored at the frequency and for the parameters specified in Schedule C - Table 12.
- Sewage effluent used for dust suppression must not exceed sewage effluent release limits defined in Schedule C -(C3-2)
- Sewage Effluent used for dust suppression must not cause spray drift or over spray to any sensitive or commercial (C3-3)place, and must not be applied at a rate that causes pooling, ponding and/or runoff of any effluent irrigated.
- Subject to Conditions (C3-1) to (C3-3) inclusive, sewage effluent from sewage treatment facilities must be reused or evaporated and must not be directly released from the sewage treatment plant to any water way or drainage line other than in accordance with Schedule C - Table 12.

Schedule C - Table 12 (Sewage effluent quality targets for dust suppres

Faecal Coliforms (organisms/100mL)		1000 ¹		
pH (pH Units)	63		8.5 ²	Quarterly
Quality characteristics	Minimum	Median	Meximum	
Tops VIII	A Comment	Release Limi		Monitoring/Fraquency

¹ A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling ² A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling with four out of five samples must be less than the maximum

A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling with four out of five samples must be higher than the minimum but lower than the meximum limit.

Release limits sourced from Queensland Water Recycling Guidelines December 2005 Table 6:2b



Groundwater

(04-1)Groundwater, affected by the mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 13 and Schedule I - Map 9 & 10.

Schedule C - Table 13 (Groundwater Monitoring			ermanan erritari	
Monitéring point		Northings (AGD 84 Zone 54)	Swiece RL	Monitoring frequency
LA MB01 (Process Plant)- reference site	302484	7796800	TBD	Monthly
LA MB02 (Process Plant) - reference site	302891	7797385	TBD	Monthly
LA MB03 (Process Plant) - reference site	302128	7797950	TBD	Monthly
LA MB04 (Process Plant)	# TBD	TBD	TBD	Monthly
LA MB05 (Process Plant)	TBD	TBD	TBD	Monthly
A MB06 (Process Plant)	TED	TBD	TBD	Monthly
A MB07 (Process Plant)	TBD	TBD	TBD	Monthly
A MB08 (Process Plant)	TBD	TBD	TBD	Monthly
A MB09 (Process Plant)	TBD	TBD	TBD	Monthly
A MB010 (Process Plant)	TBD	TBD	TBD	Monthly
A MB011 (Process Plant)	TBD	TBD	TBD	Monthly
A MB012 (Process Plant)	TBD	TBD	TBD	Monthly
A MB013 (Process Plant)	TBD	TBD	TBD	Monthly
A MB014 (Process Plant)	TBD	TBD	TBD	Monthly
/IK MB01 (Mount Kelly pit area)	305360	7799013	315.467	Quarterly
1K PB01 (Mount Kelly pit area)	305356	7799019	315,424	Quarterly
A-TB07 (Lady Annie pit area)	295790	7812280	TBD	Quarterly
A-TB08 (Lady Annie pit area)	295855	7812247	TBD	Quarterly
A-TB09 (Lady Annie pit area)	295770	7812179	TBD	Quarterly
A-TB010 (Lady Annie pit area)	295194	7812022	TBD	Quarterly
A-TB011 (Lady Annie pit area)	295205	7811904	TBD	Quarterly
A-TB012 (Lady Annie pit area)	295124	7811933	TBD	Quarterly

NOTE: This does not apply to dams containing hazardous waste

TBD- To be determined

Reference sites must:

- be from the same biogeographical and climatic region;
- have similar geology, soil types and topography contain a range of habitats similar to those at the test site
- be of similar flow regime; and not be so close to the test sites that any disturbances at the test site also result in a change at the reference site.
- (C4-2) Subject to Condition (C4-1), if the groundwater contaminant trigger levels defined in Schedule C - Table 14 are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

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Schedule C - Table 14 (Groundwater Contaminant Trigger Levels)

Parameter	Units	Minimum	Maximum 📇	Trigger type
pH ¹	pH	.6	8	Range
TD8 ²	mg/L	N/A	2000	Maximum
Sulphate 2	mg/L	N/A	500	Maximum
Aluminiùm ²	mg/L	N/A	2.5	Maximum
Arsenic ²	mg/L	N/A	0.25	Meximum
Boron ²	mg/L	N/A	0.37	Maximum
Cadmium ²	mg/L	N/A	0.005	Maximum
Chromium ²	mg/L	N/A	0.5	Maximum
Cobalt ²	mg/L	N/A	0.5	Meximum
Copper ²	mg/L	N/A	0,5	Maximum
Fluoride ²	mg/L	N/A		Maximum
Lead ²	mg/L	N/A	0.05	Maximum
Manganese ³	mg/L	N/A	1.9	Maximum
Mercury ²	mg/L	N/A	0.001	Maximum
Molybdenum ²	mg/L	N/A	0.075	Maximum
Nickel ²	mg/L	N/A	0,5	Maximum
Selenium ²	rng/L	. NA	0.01	Maximum
Zinc ²	mg/L	N/A	10	Maximum

Subject to Condition (C4-1), groundwater contaminant limits must not exceed the contaminant limits defined in (C4-3)Schedule C -Table 15.

Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000)

Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking

Water and are to be analysed as total metals (unfiltered).

Sometimes of the contemporary of the state of the Metals

chedule C — Tabl	e 15 (Groundwa	er Contaminant Limits)	97.	, Limit Type
Parameter	Units	Minimum ***	Maximum	100
pH ¹	pH	6	9	Range
TDS ¹	mg/L	N/A	4000	Maximum
the state of the s	mg/L	N/A	1000	Maximum
Sulphate 1	mg/L	N/A	5	Maximum
Aluminum ¹	mg/L	N/A	·0.5	Maximum
Arsenic		N/A	. 5	Maximum
Beron ¹	mg/L mg/L	N/A	0.01	Maximum
Cadmium 1	mg/L	N/A	1	Meximum
Chromium'	mg/L	NA NA		Meximum '
Cobalt ¹	mg/L	N/A	1	Maximum
Copper ¹	mg/L	N/A	Ž	Maximum
Fluoride ¹	م <u>ستونونا آخین درهای</u>	N/A	0.1	Maximum
Lead ¹	mg/L mg/L	N/A	2.5	Maximum
Manganese ²	mg/L	N/A	0.002	Maximum
Mercury ¹	mg/L	N/A	0.15	Maximum
Molybdenum ¹	mg/L	N/A	1	Maximum
Nickel		N/A	0.02	Maximum
Selenium ¹	mg/L	N/A	20	Maximum
Zine ¹	mg/L			rsed as Total Metals (unfiltered)

Contaminant limits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total Metals (unfiltered) ² Contaminant limits based on Table 3,4.1 of Aquatic Ecosystems ANZECC (2000) and are analysed as Filtered Metals.

The method of water sampling required by this environmental authority must comply with that set out in the latest edition of the Environmental Protection Agency's Water Quality Sampling Manual. (C4-4)

Voids

- Water quality in mining voids and final voids must be monitored at the locations and frequencies defined in Schedule C - Table 16 and for the parameters detailed in Schedule C - Table 17. (05-1)
- In the event that water quality within the mining voids or final voids does not comply with the contaminant limits defined in Schedule C Table 17, implement measures to prevent access by all livestock and minimise access (C5-2) by fauna to the void.

Schedule C - Table 16 (Volds Monitoring Locations and Frequency)

Monitoring frequency
Annually
Attricially
Annually
Annually

Schedule C - Table 17 (Vold Water Quality Limits)

Perameter	Units :	. Limit	Limit Type
рH	pH	6-9	Range
TDS	mg/L	4000	Maximum
Sulphate	mg/L	1000	Maximum
Arsenic	mg/L	0.5	Meximum
Cadmium	mg/L	0.01	Meximum
Chromium	mg/L	1	Maximum
Copper	mg/L	1	Meximum
Lead	mg/L	0.1	Maximum
Mercury	mg/L	0.002	Maximum
Zinc	mg/L	20	Maximum

Contaminant limits are based on ANZECC (2000 Livestock drinking water quality and analysed for total metals (unfiltered))

Acid Rock Drainage and Leachate Management

(C6-1) Subject to limits defined in Schedule C all reasonable and practicable measures must be implemented to prevent hazardous leachate being directly or indirectly released or likely to be released as a result of the activity to any groundwater, watercourse and waters.

END CONDITIONS FOR SCHEDULE C

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Schedule D - Noise and Vibration

Noise Nuisance

- (D1-1) Subject to Conditions (D1-2) and (D1-3) noise from the mining activity must not cause an environmental nuisance to an affected building.
- (D1-2) When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (D1-3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Vibration nuisance

- (D2-1) Subject to Conditions (D2-2) and (D2-3) vibration from the mining activity must not cause an environmental nulsance to an affected building.
- (D2-2) When requested by the administering authority, vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.

END CONDITIONS FOR SCHEDULE D

Schedule E - Waste

Storage of Tyres

- (E1-1) Tyres stored awaiting disposal or transport for take-back and, recycling, or waste-to-energy options should be stockpiled in volumes less than 3m in height and 200m² in area and at least 10m from any other tyre storing area.
- (E1-2) All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10m radius of the scrap tyre storage area.

Disposal of Tyres

- (E2-1) Disposing of scrap tyres resulting from the mining activities in spoil emplacements is acceptable, provided tyres are placed as deep in the spoil as reasonably practicable.
- (E2-2) Scrap tyres resulting from the mining activities disposed within the operational land must not impede saturated aquifers or compromise the stability of the consolidated landform.

Waste Management

(E3-1) A Waste Management Program, in accordance with the Environmental Protection (Waste Management) Policy 2000, must be included in the Plan of Operations.

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Regulated Waste

- (E 4-1) All regulated waste received and removed from the site, that is over 250kg in weight, must be transported by a person who holds a current authority to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (E4-2) Except as otherwise provided by the conditions of this authority, all waste removed from the site must be taken to a facility that is lawfully allowed to accept such waste under the provisions of the *Environmental Protection Act 1994*.
- (E4-3) Where regulated waste is removed from the Project (other than by a release as permitted under another schedule of this environmental authority), records must be kept of the following:

a) the date, quantity and type of waste removed, and

- b) name of the waste transporter that removed the waste; and
- c) the intended treatment/disposal destination of the waste.

Note: Records of documents maintained in compliance with a waste tracking system established under the Environmental Protection Act 1994 or any other law for regulated waste will be deemed to satisfy this condition.

Waste Rock Characterisation

(E5-1) All areas to be mined must undergo a waste rock characterisation survey (where waste rock is to be disposed of on the surface) and a report submitted to the administering authority prior to mining where this survey has not previously been carried out.

END CONDITIONS FOR SCHEDULE E

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Schedule F - Land

Rehabilitation Landform Criteria

(F1-1) All areas significantly disturbed by mining activities must be rehabilitated to a stable landform with a self-sustaining vegetation cover in accordance with Schedule F — Table 1 and 2. (m. 27. 27.5

Disturbance Wax Land Use	Max. Area		and Use	Land Capability	Capability	Analogue Site	io Site
	(Ma)	PRE DISTURBANCE	POST DISTURBANCE	PRE DISTURBANCE	POST DISTURBANG		Lattitide
Mount Kelly/Flying Horse Pit	13.2	Habitat	Water Storage	Class 5	Water Storage		
Mount Kelly/Flying Horse Waste Rock Dump	28	Habitet	Habitat	Class 5	Class 5	TBD	TBD
Mount Kelly/Flying Horse Topsoil Stockpile	Ţ	Habitat	Habitat	Class 5	Class 5	TBD	TBD ·
Mount Kelly/Flying Horse Sediment Dams	6.7	Habitat	Water Storage	Olass 5	Water Storage		
Mount Kelly/Flying Horse Diversion Drains	<u> </u>	Habitat	LIG or diversion Habitat	Class 5	Class 5	180	OBT
Mount Clarke Pit	9.6	Habitat	Water Storage	Class 5	Water Storage		
Mount Clarke Waste Rock Dump	16.3	Habitat/LIG	Habitat/LIG	Class 4 - 5	Class 4 -5	Cat	TBD
Mount Clarke Low Grade Stockpile	5.4	Habitat/LlG	Habitat/LiG	Class 4 - 5	Class 4 - 5	130	TBD
Mount Clarke/Flying -forse/Mount Kelly -forse/Mount Kelly -forse & Live -fehandle	5.5	Habitat	HabitatulG	Class 4 - 5	Class 4 - 5	TBD	a

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4.5 Habitat/LIG Habitat/LIG Class 4 - 5 0.6 Habitat Water Storage Class 4 - 5 0.4 Habitat Water Storage Class 4 - 5 18.8 Existing tracks or Tracks for grazier or LIG Class 4 - 5 5 LIG LIG Class 4 - 5 7.8 LIG LIG Class 4 - 5 3.3 LIG LIG Class 4 - 5 2.9 LIG LIG Class 4 - 5 43.2 LIG Habitat/LIG Class 4 - 5 43.2 LIG Habitat/LIG Class 4 - 5 11.4 LIG Water storages Class 4 - 5 0.7 LIG Water storages Class 4 - 5 0.6 LIG LIG or diversion Class 4 - 5 0.6 LIG LIG or diversion Class 4 - 5 0.6 LIG LIG or diversion Class 4 - 5 0.6 LIG LIG or diversion Class 4 - 5	Visitirance Category	Mex. Area		Tand Usio		Land Capability	Anate	and of the
Class of Pit Area Libration Water Storage Class 4+5 Water Storage TBD Clark DRAM 0.4 Habitat Water Storage Class 4+5 Water Storage TBD Sediment Dam 3.2 Habitat Lide or diversion Habitat Class 4+5 TBD All Clark Canding Includes or Tracks for grazier or Lide Lide Class 4+5 TBD All Clark Canding Includes 5 Lide Lide Class 4+5 TBD And Conveyor 1.8 Existing tracks for grazier or Lide Class 4+5 TBD TBD Pad - at and Conveyor 1.8 Lide Lide Class 4+5 TBD TBD Pad - at and Conveyor 1.8 Lide Lide Class 4+5 TBD TBD Pad - at and Conveyor 1.8 Lide Lide Class 4+5 TBD TBD Pad - at and Conveyor 1.8 Lide Lide Class 4+6 TBD TBD Solicuti Area 2.9 Lide Water storages Class 4+6 TBD	Mount Clarke Topsoil Stocknile	6,5	Habitat/LIG	Habitat/LiG	lass 4 - 6			
Consist and Definition of the Pathiat Consist Active ROM 0.4 Habiliart Habitat Log or diversion Habitat Colass 4 - 5 Water Storage Class 4 - 5 TBD Additionary Dam on the Dam of	ount Clarke Pit Area	0.6	Habitat	Water Storage	Class 4 - 5	World St.	OBT	TBD
Colarion- Institution 3.2 Thatlitet Habitet Lig Lig or diversion Habitet Class 4 - 5 Class 4 - 5 TBD Mondation- Institutions 18.8 Thatleton Existing tracks or Lig Lig Class 4 - 5 Class 4 TBD Pad - at splant and conveyor 7.8 Thatleton Lig Class 4 - 5 Class 4 - 5 TBD Mother storages Class 4 - 5 Class 4 - 5 Cla	ount Clarke ROM	0.4	Habitat	Water Storage	Class 4-5	Water Storage		
Affracks 18.8 Existing tracks or Lig Tracks for grazier or Lig Class 4 - 5 TBD Immodation 5 Lig Lig Class 4 Class 4 TBD Sie Plant and Pacifilies 0.2 Lig Lig Class 4 - 5 TBD Se plant and Facilities 0.2 Lig Lig Class 4 - 5 TBD Se plant and Facilities 3.3 Lig Lig Class 4 - 5 TBD Se plant and Facilities 2.9 Lig Lig Lig TBD Active Sport and Conveyor 1.8 Lig Lig Habitat/Lig Class 4 TBD Active Ponde 43.2 Lig Habitat/Lig Class 4 Class 4.5 TBD Acter Ponde 0.7 Lig Lig or diversion Class 4 Class 4 or water storages TBD Acter Pond 0.6 Lig Lig or diversion Class 4 Class 4 or water storages TBD Acter Pond 0.6 Lig Lig or diversion Class 4 Class 4 or	unt Clarke – ersion/Interception diment Dam	8. 2.	Habitat	LIG or diversion Habitat	Class 4 - 5	Class 4 - 5	OBT OBT	GEL
minodation and facilities 5 Lig Lig Class 4 Class 4 TBD Pelant and 2 and Facilities 2.2 Lig Lig Class 4 - 5 Class 4 - 5 TBD Pad - at 2 as plant and 2 as plant and 2 as plant and 2 as plant and 3.3 Lig Lig Class 4 - 5 Class 4 - 5 TBD Acticut Man Lidings 2.9 Lig Lig Class 4 TBD TBD Acticut Man Lidings 2.9 Lig Lig Class 4 TBD TBD Acticut Man Lidings 2.9 Lig Habitat/Lig Class 4 TBD TBD Acticut Man Lidings 2.9 Lig Habitat/Lig Class 4 TBD TBD Acticut Man Lidings 3.4 Lig Water storages Class 4 Water storages Class 4 TBD Action Mater Pond 0.7 Lig Lig Ord West 4 Class 4 TBD TBD Action Towal 0.6 Lig Lig Class 4 TBD TBD Action Towal	ads/Tracks	18.8	Existing tracks or	Tracks for grazier or LIG	Class 4 - 5	Class 4 - 5		
Plant and 0.2 LiG LiG Class 4 Class 4 TBD See Jeant	commodation mp and Facilities	ŝ	ΠG	ē T	Class 4	Class 4		<u> </u>
Pad – at Sep lant 7.8 LIG LIG Class 4 - 5 TBD Sep lant 3.3 LIG LIG Class 4 TBD Ind Conveyor 1.8 LIG LIG Class 4 TBD Ind Conveyor 2.9 LIG Habitat/LIG Class 4 TBD Ind Conveyor 43.2 LIG Habitat/LIG Class 4 Class 4 Ind Conveyor 1.8 LIG Weter storages Class 4 TBD Ind Conveyor 1.8 LIG Weter storages Class 4 TBD Ind Conveyor 1.1 LIG Weter storages Class 4 Class 4 TBD Ind Conveyor 1.1 LIG Weter storages Class 4 Class 4 TBD Ind Conveyor 1.1 LIG LIG or diversion Class 4 Class 4 TBD Ind Conveyor 1.1 LIG or diversion Class 4 Class 4 TBD Ind Conveyor 1.1 LIG or diversion Class 4	wage Plant and nd	0.2	<u>o</u>	917	Class 4	Class 4	081	8
se plant and stated buildings 3.3 Lig Lig Class 4 TBD Ind Conveyor 1.8 TBD TBD TBD Ind Conveyor 2.9 Lig Habitat/Lig Class 4 TBD Index Ponds 3.4 Lig Water storages Class 4 TBD Ins Water Ponds 3.4 Lig Water storages Class 4 Water storages Ins Water Ponds 1.1.4 Lig Water storages Class 4 Water storages water Ponds 0.7 Lig Lig or diversion Class 4 Class 4.5 TBD Area Topsoil 9.7 Lig Lig or diversion Class 4 Class 4.5 TBD Inc Lig Lig Class 4 Class 4.5 TBD	M Pad – at cess plant	7.8	DIT	- Ing	Class 4 - 5	Class 4.5	180	<u>1</u>
rand Conveyor 1.8 LIG LIG Class 4 TBD hop/Office 2.9 LIG Habitat/LIG Class 4 Class 4.5 TBD Leach Pads – dach Pads – land 2 and 1 and 2 and 1 and 2 and	cess plant and	3.3	FIG	B] T	Class 4	Clace 1	TBD	TBD
hop/Offices 2.9 LiG LiG Habitat/LiG Class 4 TBD Leach Pads – Leach Pads – Lig Habitat/LiG Class 4 Class 4 TBD 1 and 2 swater Ponds 1 swater Ponds 1 LiS and atter Ponds 1 LiS and water Ponds 1 LiG Water storages Class 4 Water storages TBD water Pond 0.7 LiG LiG or diversion Class 4 Class 4 TBD v channel rater Pond 0.6 LiG LiG water storage Class 4 Class 4 or water storage TBD rater Pond 0.6 LiG LiG water storage Class 4 Class 4 or water storage TBD rater Pond 0.6 LiG LiG LiG water storage Class 4 TBD rater Pond 0.6 LiG LiG water storage Class 4 TBD	arland Conveyor	1.8				20	OBT	TBD
Leach Pads— leach Pads— date Pads— date Ponds 43.2 LiG Habitat/LiG Class 4 Class 4-5 TBD ss Water Ponds 3.4 LiG Water storages Class 4 Water storages TBD water Ponds 1 11.4 LiG Water storages Class 4 Water storages TBD water Pond 0.7 LiG LiG or diversion Class 4 Class 4.5 TBD // water Pond 0.6 LiG LiG/Water storage Class 4 Class 4 or water storage TBD s Area Topsoil 9.7 LiG LiG LiG Class 4 Class 4 or water storage TBD iles LiG LiG Class 4 Class 4 TBD	rkshop/Office	2.9	ΠG	ПG	Class 4	Class 4	OBT CE	TBD
ss Water Ponds 3.4 Lig Water storages Class 4 Water storages Class 4 Water storages **** **LiS and water Ponds 0.7 LiG Water storages Class 4 Water storages TBD *** Area Topsoil 0.6 LiG LiG/Water storage Class 4 Class 4 or water storage TBD *** Area Topsoil 9.7 LiG LiG LiG Class 4 Class 4 TRD *** Area Topsoil 9.7 LiG LiG Class 4 Class 4 TRD	ip Leach Pads –	43.2	<u></u> 9	Habitat/LIG	Class 4	Class 4- 5		<u> </u>
water Ponds 1 11.4 LiG Water storages Class 4 Water storages TBD water Pond 0.7 LiG LiG or diversion Class 4 Class 4.5 TBD y channel 0.6 LiG LiG/Water storage Class 4 Class 4 or water storage TBD iles LiG LiG Class 4 Class 4 TRD	cess Water Ponds -S, ILS and Inate	3.4	917	Water storages	Class 4	Water storages		3
0.7 LIG LIG or diversion Class 4 Class 4-5 TBD 0.6 LIG LIG/Water storage Class 4 Class 4 or water storage TBD 9.7 LIG LIG Class 4 Class 4 Class 4 TRD	mwater Ponds 1 2	11.4	οη	Water storages	Class 4	Water storages		
0.6 LIG LIG/Water storage Class 4 Class 4 or water storage TBD 9.7 LIG LIG Class 4 Class 4 TRD	mwater Pond way channel	0.7	PIT	LIG or diversion	Class 4	Class 4-5	18D	TBD
9.7 LIG Class 4 Class 4 TRD	Water Pond	0.6	FIG	LIG/Water storage	Class 4	Clase 4 or water strength		
	cess Area Topsoil	5.6	ПС	- Tie	Class 4	Class 4	186	180

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Calegory	Area			200	Land Capability	Anales	Artelognie Cha
Process Plant Drainage Diversions	2.7	917	LIG or diversion	Class 4	ass 4 - 5	TBD CBT	
Process Plant Sediment Ponds	14 c 1 c est	<u>9</u>	LIG or ponds	Class 4 - 5	Class 4 - 5	.w * - a 25 to 34 to	- 0.3
Bulk Fill Stockpile	2.6	917		Class 4	Class 4	E	Ter
Pipelines and Powerlines (on lease)	₩.	91	97	Class 4 -5	Class 4 - 5	TBD	TBD
Pipelines and Powerlines on	88	LIG/Habitat	Permanent Structure	Class 4 -5	Permanent Structure		
infrastructure ML		A SECTION AND A SECTION ASSESSMENT ASSESSMEN			, de	f ₀ ;	
Rubbish Dumps	0.2	Lig	٦	Class 4 - 5	Chass 4 - 5	TBO	
Concrete Batch Plant	0.3	<u>9</u>	9]]	Class 4	Cass 4		190
Fuel Storage Area	0.3	<u>a</u>	917	Class 4	Cass 4		160
Contractor Laydown Area	4.3	91	97	Class 4	Class 4	780	
Exploration	g	9	LIG/Habitat	Class 4 - 5	Class 4 - 5	Tan	100
Construction Access (net of specific areas)	5.65 5.65	97	LIG/Habitat	Class 4 - 5	Class 4 - 5		2 2
Gravel Borrow Pits (on and off ML)	6.7	LIG/Habitat	LIG/Habitat	Class 4 -5	Class 4 - 5	TBD	GBL
Upgrade to Access Road (off ML)	5.0	LIG/Habitat	Permanent access road	Class 4 -5	Permanent access road for		
	368.1				landholder		
Lady Annie Mining ML90179	90179						
ady Annie Pit	36.1	Disturbed	Water Storage	Class 5	Water Storage		
ROM pad	1.5	91	LIG/Habitat	· Class 4	Class 4	Car	Cal
Waste Rock Dump	61.8	PIG	LIG/Habitat	Class 4-5	Class 4		
Top soil Stores	12.1	E.G	LIG/Habitat	Class 4-5	Class 4	E	Ca Ca
Low Grade Ore Stockpile	9.5	917	LIG/Habitat	Class 4	Class 4	TBD	3 2
Sediment Pond	1.9	917	LIG/Habitat	· Class 4	Wafer Storage		
Retention Basin	0.4	LIG/Habitat	LIG/Habitat	Class 4-5	Water Storage		
Fit Haul Road	67	L (G/Hahitat	- Callahitet	1.	0		

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Reefway Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No MIN100401006

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Disfurbance Category	Max. Area		Land Use		Land Capabilly		
Diversion Channels	1.7	LIG/Habitat	ICANACAMENT				ue Site
Lady Annie Mine	22.3			Class 4-5	Permanent Diversion		
Construction Area (net of specific areas)		L/G/Habitat	LIG/Habitat	Class 4-5	Class 4-5	dell	
Upgrade to Access Road (off MI.	0.0 0.0	LIG/Habitat	Permanent access road				<u>3</u>
Old Open Cut and		Existing	for landholder	Class 4-5	Familiania access road for		
Sanderson's Shaft	20	Disturbance	Habitat/LIG	Existing Disturbance			
Old Lallings Areas	9.	Existing	Habitat/I IC		Vass 4-0	9	9
Exploration Tracks		Existing		Existing Disturbance	Class 4 -5	OBT.	TBD
and Drill Pads	12.4	Disturbance	Habitat/LIG	Existing Disturbance	0		
Hubbish Tip	0.4	Existing	in the recognition		CHSS 4 -5	OB)	TBD
Core Shed		Disturbance		Existing Disturbance	Class 4 -5	Car	To.
	O.3	Disturbance	Habitat/LiG	Existing Dieturbanas			707
Exploration Sample	80	Existing		Palitan Imera Burana	Class 4 -5	TBD	180
Total	2007	Disturbance	Habitat/LIG	Existing Disturbance	Class 4 -5	COL	
	0.00						<u> </u>

*Analogue sites and disturbance description are to be identified and the environmental authority holder must amend the environmental authority to include analogue sites in

LiG- Low Intensity Grazing

Classes are derived from the Department of Minerals and Energy's Land Suitability Assessment Techniques (1995)

- Progressive rehabilitation must commence when areas become available within the operational land. (F1-2)
- Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in Schedule F Table 1 and landform design criteria in Schedule F Table 2 by 30 June 2007 F1-3)
- The holder of this environmental authority must rehabilitate all existing land disturbances facated within the boundary leases of ML90179 (Lady Annie) as identified in Table 1. The holder of this environmental authority must ensure these areas of existing land disturbance, where not otherwise disturbed and rehabilitated under (F1.4)

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Schedule F + Table 2 (Landform Design)

	Disturbange type	Slape range (%)	Projective surface area
	Waste Rock Dumps	33%-76% (1:3 to angle of repose)	121
	Heap Leach Pads	<33% or 1:3	43.2
ĿĽ	ROM Pads	33%-76% (1:3 to angle of repose)	14.8

Residual Void Outcome

(F2-1) Residual voids must not cause any serious environmental harm to land, surface waters or any recognised groundwater aquifer, other than the environmental harm constituted by the existence of the residual void itself and subject to any other condition within this environmental authority.

Dams Containing Hazardous Waste

Description of Dam

(F3-1) The construction or operation of any dam containing hazardous waste within the operational land must comply with Schedule F - Table 3.

Schedule F — Table 3 (Size and Purpose of Dams Containing Hazardous Waste)

Name of dam contairing hazardous waste (1)	Maximum surface grea of dam (ha)	Maximum volume of dam (m)	Maximum depth of dam (m) ⁽²⁾	Total Distriction of dam (0)
Process Water Ponds (Raffinate Pre-Settler, Raffinate, ILS and PLS)	3.4	63,475	4.5	Storage of Process Solutions
Heap Leach Pads	43.2	N/A	N/A	Storage of Process Solutions
Stormwater Pond 1 (Stage 1 only)	6.47	303,625	6,35	Storage of storm water runoff from processing area
Stormwater Pond 1 & 2 (Stage 2)	10.4	467,720	6.35	Storage of storm water runoft from processing area

Note (1): The name of the dam containing hazardous waste should refer to the name of the dam e.g. process residue facility and decant dam.

Note (a): For dams that do not require a dam wall, input the maximum void depth e.g. where dams are formed by excavating below the land surface or backfilling a residual void.

Note (9): Purpose of the dam should outline the designed function, e.g. "the permanent containment of tallings resulting from the extraction of nickel, cobalt and other metals at the XYZ Refinery".

Carrier September

This environmental authority takes effect on X 2006



Location of Dam

(F3-2) The location of any dam containing hazardous waste within the licensed place must be located within the polygonal area defined by the co-ordinates defined in Schedule C- Table 4 -Map 4.

Schedule F - Table 4 (Location of Dams Containing Hezardous Waste)

, Name of dam containing hazardous waste	Easting(AMG 84, Zone 54) (9)	Northing (AMG 84, Zone 54) (6)
PLS Ponds, ILS, Raffinate Pre-settler and Raffinate Pond	301760 302065 302035 301760	7797640 7797640 7797310 7797310
Stormwater Pond 1 and 2	301470 301760 301760 301470	7797640 7797640 7797110 7797110
Heap Leach Pads	302065 302720 302720 302035	7797945 7797945 7796825 7796825

Note (1): A minimum of 3 control points is required to constrain the location of all activities associated with the dam containing hazardous waste. Additional infrastructure which forms part of any dam containing hazardous waste may include appurtenant works consisting of tailings discharge pipelines, seepage collection systems, runoff diversion bunds, containment systems, pressure relief wells, decant and recycle water systems.

Standards and Criteria

- (F3-3) The holder of the environmental authority must design, construct, repair, maintain, operate and decommission the dams defined in Schedule F Table 3 and 4 in accordance with an acknowledged design plan that must comply with the standard environmental conditions in the "Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste".
- (F3-4) The holder of the environmental authority must design, construct, and operate all low hazardous dams containing hazardous waste and non-hazardous dams in accordance with the criteria outlined in Appendix B of the Code of Environmental Compliance for Mining Activities.

inspection of Dams

- (F3-5) High hazard dams containing hazardous waste shall be inspected by a Registered Professional Engineer Queensland (RPEQ) prior to 1 November each year or at any time if alarming, unusual or otherwise unsatisfactory conditions are observed.
- (F3-6) For each inspection, the engineer shall assess the condition of the dam and its foundations, determine the hydraulic adequacy of the dam and assess the adequacy of the works with respect to dam safety.
- (F3-7) For each inspection, two copies of the engineer's report and any recommendations as to measures to be taken to ensure the integrity of the dam shall be furnished to the administering authority within 28 days of the inspection.

Decommissioning of Dam - Objective

(F3-8)

Dams containing hazardous waste must not be abandoned and must be decommissioned to a situation where water can no longer be stored in the dams. The dams and their contained waste(s) must be stable, whereafter the dams are no longer dams and they become landforms on the operational land and must comply with the rehabilitation requirements of this environmental authority.

Decommissioning of Dam - Documentation and Compliance

(F3-9) Decommissioning activities for dams must be documented in detail in the plan of operations under which the activities are to occur. Where the detailed documentation is not already contained in the Design Plan for the

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dam, the detailed documentation is considered to be an amendment to the design plan and must be submitted as an amendment to the design plan required by the "Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste".

Infrastructure

- (F4-1)All infrastructure, constructed by or fer the environmental authority holder during the mining activities including water storage structures, must be removed from the site prior to mining lease surrender, except where agreed in writing by the post mining landowner / holder.
 - NOTE: This is not applicable where the landowner/holder is also the environmental authority holder.

Contaminated Lands

- (F5-1)A register and map of all potentially contaminated sites and any remediation details, must be kept on site. updated regularly, and included in each Plan of Operations.
- A Spillage Management Plan and an Emergency Plan for all hazardous materials stored on-site, together with a (F5-2)description of suitable equipment and training must be updated and included with each Plan of Operations,

END CONDITIONS FOR SCHEDULE F

Schedule G - Community

Complaint Response

(G1-1)All complaints received must be recorded including details of complainant, reasons for the complaint. investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority on request.

END CONDITIONS FOR SCHEDULE G

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Schedule H - Definitions

"acceptance criteria" means the measures by which the actions implemented to rehabilitate the land are deemed to be complete. The acceptance criteria indicate the success of the rehabilitation outcome or remediation of areas which have been significantly been disturbed by the mining activities. Acceptance criteria may include information regarding:

vegetation establishment, survival and succession;

vegetation productivity, sustained growth and structure development;

fauna colonisation and habitat development;

 ecosystem processes such as soil development and nutrient cycling, and the recolonisation of specific fauna groups such as collembola, mites and termites which are involved in these processes;

microbiological studies including recolonisation by mycorrhizal fungl, microbial biomass and respiration;

 effects of various establishment treatments such as deep ripping, topsoil handling, seeding and fertiliser application on vegetation growth and development;

resilience of vegetation to disease, insect attack, drought and fire;

vegetation water use and effects on ground water levels and catchment yields.

"affected building"

for noise means any building or any part of a building, for example the building from which the noise is made, at which the noise can be heard.

 for vibration means any building or any part of a building, for example the activity from which the vibration is made, at which the vibration can be felt.

"ambient (or total) noise" at a place, means the level of noise at the place from all sources (near and far), measured as the Leq for an appropriate time interval.

"appropriately qualified person" means any person who conforms to the EPA operational policy for an "appropriately qualified person (analyst)" in accordance with Section 490(7) of the Environmental Protection Act 1994.

"ARD" means acid rock drainage and refers to the low pH, high heavy metal pollutant typical of sulphidic mine wastes, and most commonly associated with the production of ferrous iron and sulphuric acid through the oxidation of sulphide minerals.

"authority" means environmental authority (mining activities) under the Environmental Protection Act 1994.

"blasting" means the use of explosive materials to fracture-

(a) rock, coal and other minerals for later recovery; or

(b) structural components or other items to facilitate removal from a site or for reuse.

"building" includes a structure of any type and part of a building or structure.

"commercial place" means a work place used as an office or for business or commercial purposes, which is not part of the mining activity and does not include employees accommodation or public roads.

"competent person" means a person with the demonstrated skill and knowledge required to carry out the task to a standard necessary for the reliance upon collected data or protection of the environment.

"dam" means a containment or proposed containment whether permanent or temporary, which is designed to contain, divert or control flowable substances. However this does not include a fabricated or manufactured tank or container designed to a recognised standard.

"design plan" in the context of a dam design is the documentation required under the Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, the procedures and criteria to be used for operating the dam and the decommissioning and rehabilitation objectives in terms of procedures, works and outcomes at the end of dam life, The documents can include design and investigation reports, drawings, specifications and certifications.

"environmental authority holder" means the holder of this environmental authority,

"flow event" means a flow event producing sufficient water to permit a monitoring creek bed flow of 30cm or more at the sampling station.

"flowable substance" means matter or mixture of materials which can be forced to or otherwise flow under any conditions possible in a situation. It includes water, other liquids or a mixture that includes water or any other liquid or suspended solids.

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Reefway Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No MIN100401006

"infrastructure" means water storage dams, roads and tracks, buildings and other structures built for the purpose of mining activities but does not include facilities required for the long term management of mining impacts or the protection of potential resources. Such facilities include dams containing hazardous waste, waste rock dumps, voids, or ore stockpiles and buildings or other structures whose ownership can be transferred and which have a residual beneficial use for the next owner of the operational land or the background land owner.

"LA 10, oil, 10 mins" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound)
exceeded for 10% of any 10-minute measurement period, using Fast response.

"La 1, adj, 10 mins" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10-minute measurement period, using Fast response.

"L_{A, max} _{adj}, r" means the average maximum A-weighted sound pressure level, adjusted for noise character and measure over any 10 minute period, using Fast response.

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.

"land capability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land suitability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land use" term to describe the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

"leachate" means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

"mandatory reporting level" means the volume below the spillway crest, equivalent to the lower of the AEP, 72 hour storm or the AEP wave allowance (AEP is the annual exceedence probability).

"mineral" means a substance which normally occurs naturally as part of the earth's crust or is dissolved or suspended in water within or upon the earth's crust and includes a substance which may be extracted from such a substance, and includes—

- (a) clay if mined for use for its ceramic properties, kaolin and bentonite:
- (b) foundry sand;
- (c) hydrocarbons and other substances or matter occurring in association with shale or coal and necessarily mined, extracted, produced or released by or in connection with mining for shale or coal or for the purpose of enhancing the safety of current or future mining operations for coal or the extraction or production of mineral oil therefrom:
- (d) Ilmestone if mined for use for its chemical properties;
- (e) marble;
- (f) mineral oil or gas extracted or produced from shale or coal by in situ processes;
- (g) peat;
- (h) salt including brine:
- (I) shale from which mineral oil may be extracted or produced:
- (i) silica, including silica sand, if mined for use for its chemical properties;
- (k) rock mined in block or slab form for building or monumental purposes:
- but does not include
- (I) living matter;
- (m) petroleum within the meaning of the Petroleum Act 1923;
- (n) soil, sand, gravel or rock (other than rock mined in block or slab form for building or monumental purposes) to be used or to be supplied for use as such, whether intact or in broken form:
- (o) water.

"noxious" means harmful or injurious to health or physical well being, other than trivial harm.

"offensive" means causing reasonable offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive, other than trivial harm.

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"peak particle velocity (ppv)" means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time, usually measured in millimetres/second (mms⁻¹).

"protected area" means - a protected area under the Nature Conservation Act 1992; or

- a marine park under the Marine Parks Act 1992; or
- a World Heritage Area.

"progressive rehabilitation" means rehabilitation (defined below) undertaken progressively or a staged approach to rehabilitation as mining operations are ongoing.

"reference site" (or analogue site) may reflect the original location, adjacent area or another area where rehabilitation success has been completed for a similar biodiversity. Details of the reference site may be as photographs, computer generated images and vegetation models etc.

"rehabilitation" the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

"representative" means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

"residual void" means an open pit resulting from the removal of ore and/or waste rock which will remain following the cessation of all mining activities and completion of rehabilitation processes.

"self sustaining" means an area of land which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

"sensitive place" means:

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- an educational institution; or
 - a medical center or hospital; or
 - a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
 - a public park or gardens.

"significant disturbance" - includes land

- (a) if it is contaminated land; or
- (b) It has been disturbed and human intervention is needed to rehabilitate it.
 - to a state required under the relevant environmental authority; or
 - If the environmental authority does not require the land to be rehabilitated to a particular state to its state immediately before the disturbance.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpiled;
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining activities occur;
- areas submerged by tailings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining activities have ceased; or
- areas where land has been contaminated and a sultability statement has not been issued.

However, the following areas are not included:

- areas off lease (e.g. roads or tracks which provide access to the mining lease);
- areas previously significantly disturbed which have achieved the rehabilitation outcomes;
- by agreement with the EPA, areas previously significantly disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the EPA;
- disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tonuro.

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"spillway" means passage or outlet from the dam through which surplus water flows.

"stable" means land form dimensions are or will be stable within tolerable limits now and in the foreseeable future. Stability includes consideration of geotechnical stability, settlement and consolidation allowances, bearing capacity (traffic ability), erosion resistance and geochemical stability with respect to seepage and contaminant generation.

"suitably qualified and experienced person" means a person who is a Registered Professional Engineer of Queensland under the provisions of the *Professional Engineers Act 1988* or a Corporate Member of the Institution of Engineers Australia or holds equivalent professional qualifications and has the following:

- (a) knowledge of engineering principles related to the structures, geomechanics, hydrology, hydraulics, chemistry and environmental impact of dams; and
- (b) at least a total of five years of suitable experience and demonstrated expertise in at least four of the following areas:
- investigation, design or construction of dams;
- operation and maintenance of dams;
- geomechanics with particular emphasis stability, geology and geochemistry;
- hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorol
- hydraulics with particular reference to sediment transport and deposition, erosion control, beach processes;
- hydrogeology with particular reference to seepage, groundwater,
- solute transport processes and monitoring thereof; or
- dam safety.

"tolerable limits" means that a range of values could be accepted to achieve an overall environmental management objective (eg a range of settlement of a tailing capping could still meet the objective of draining the cap quickly, preventing pendage and limiting infiltration and percolation).

"trivial harm" means environmental harm which is not material or serious environmental harm and will not cause actual or potential loss or damage to property of an amount of, or amounts totalling more than \$5,000.

"watercourse" - Means a river, creek or stream in which water flows permanently or intermittently in a visibly defined channel (natural, artificial or artificially improved) with:

- (a) continuous bed and banks;
- (b) an extended period of flow for some months after rain ceases, and
- (c) an adequacy of flow that sustains basic ecological processes and maintains biodiversity.

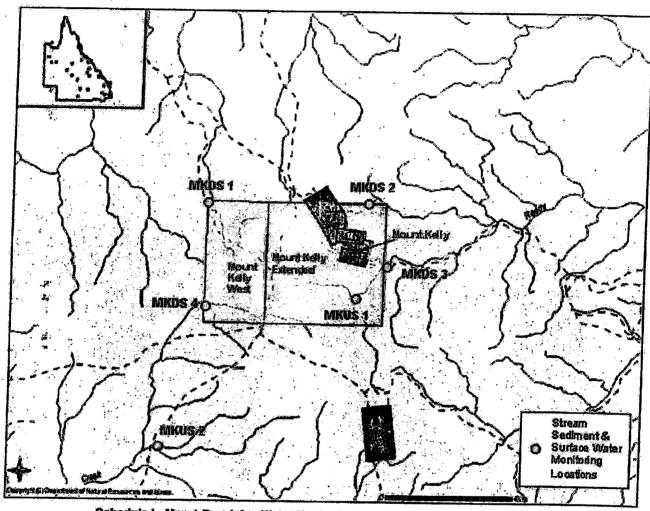
"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea) or any part-thereof.

END CONDITIONS FOR SCHEDULE H

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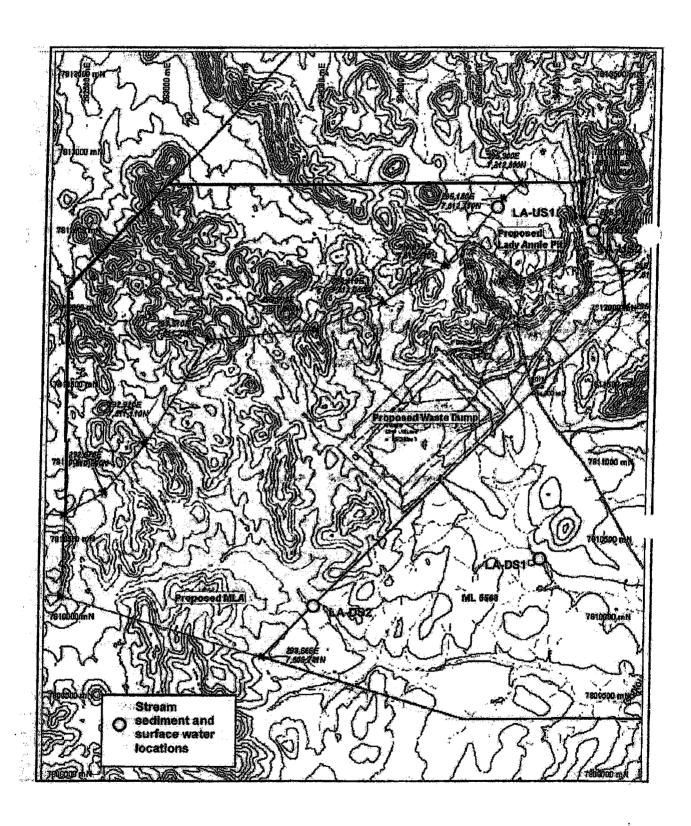


Schedule I - Maps / Plans



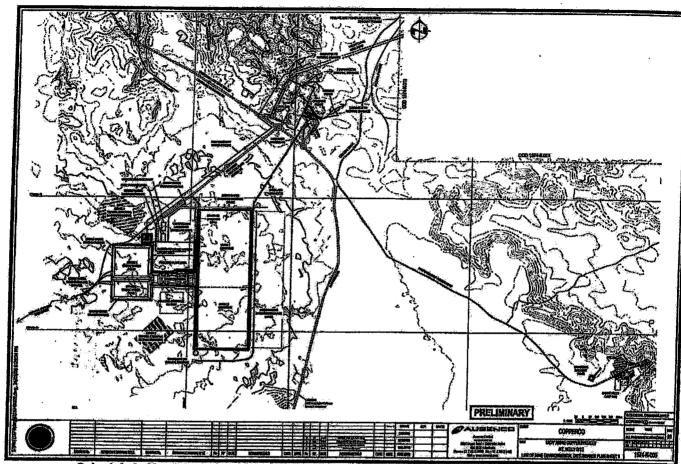
Schedule I - Map 1 Receiving Water Monitoring Locations (Mount Kelly Leases)



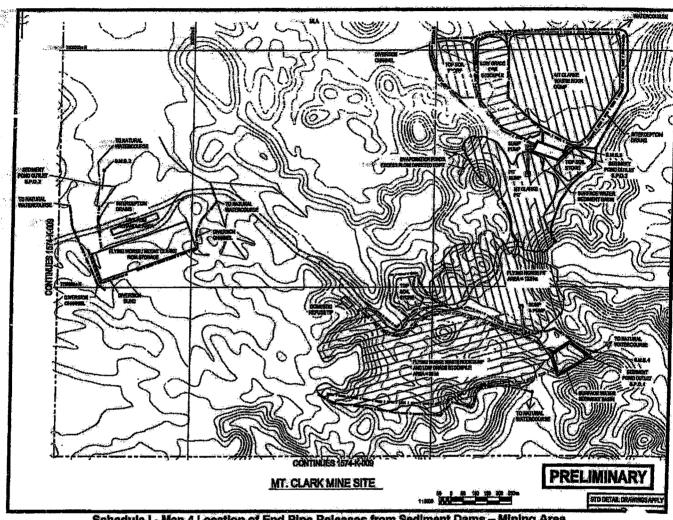


Schedule I - Map 2 Receiving Water Monitoring Locations (Lady Annie)

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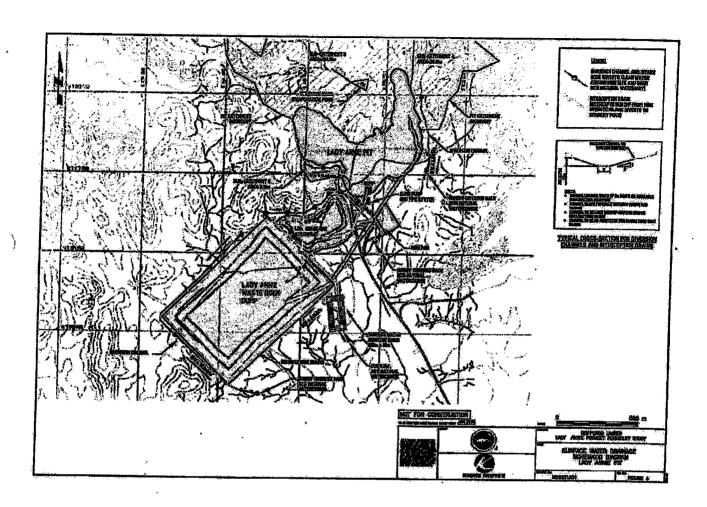


Schedule I - Map 3 Location of End Pipe Releases from Sediment Dams — Processing Area



Schedule I - Map 4 Location of End Pipe Releases from Sediment Dams - Mining Area

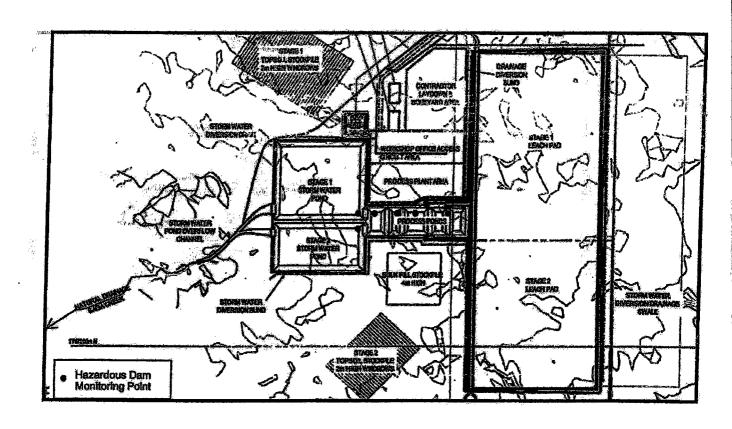
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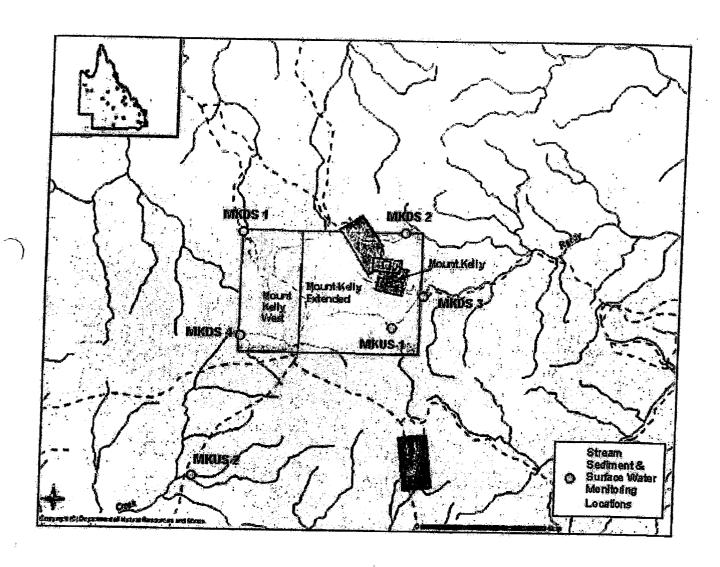
Schedule I - Map 5 Location of End Pipe Releases from Sediment Dams - Lady Annie

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Environmental Authority No MIN100401006



Schedule I - Map 6 Location of Hazardous Dams

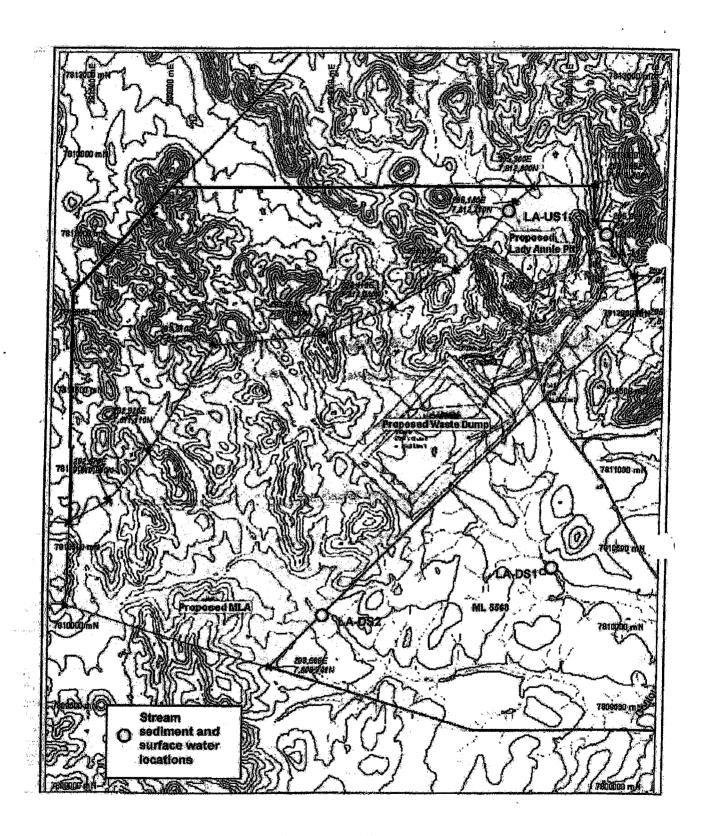


Schedule I - Map 7 Stream Sediments Monitoring Locations (Mount Kelly)

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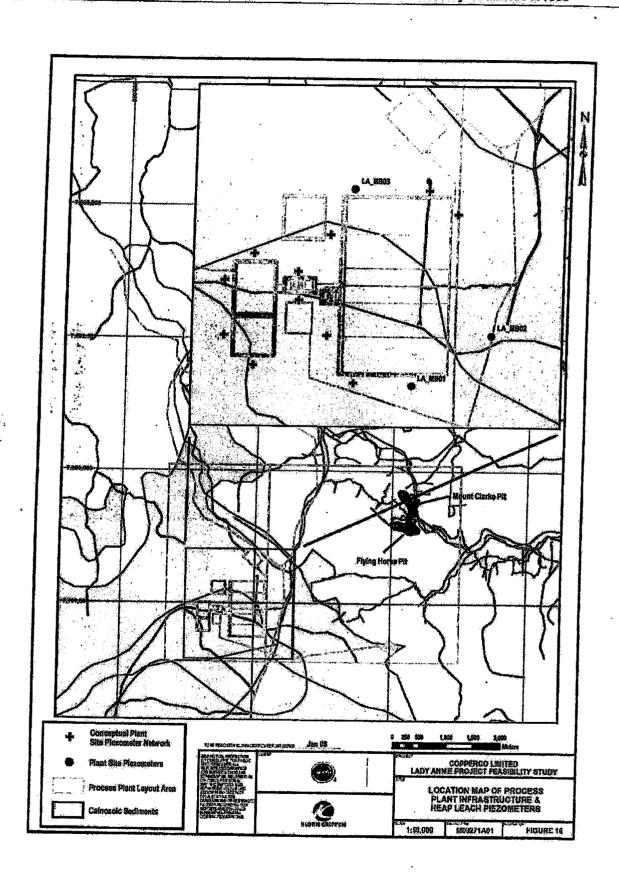
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Schedule I - Map & Stream Sediments Monitoring Locations (Lądy Annie)

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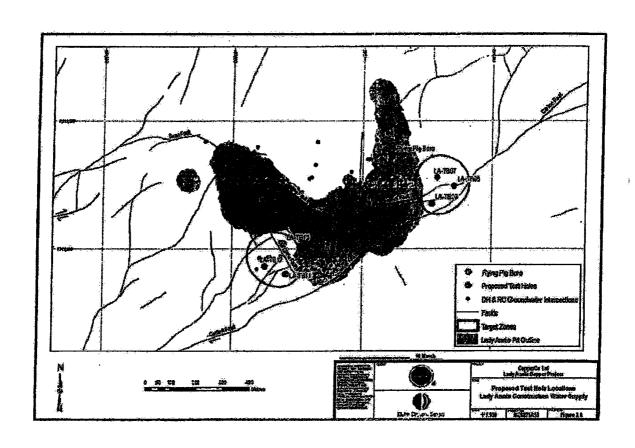


Schedule I - Map 9 Groundwater Monitoring Locations (Mount Kelly)

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Schedule I - Map 10 Groundwater Monitoring Locations (Lady Annie)

END OF EVIRONMENTAL AUTHORITY

6- 20/9/20

ML 5426



Enquiries Telephone Your reference Our reference

Neil Mayer (07) 4744 7820 MÍN100401006

ISA658

Environmental Protection Agen

incorporating the Queensland Parks and Wildlife

30 March 2006

Reefway Pty Ltd Level 22, Allendale Square 77 St Georges Terrace Perth WA 6000.

CC/ Savannah Resources Pty. Ltd Level 22, Allendale Square 77 St Georges Terrace Perth WA 6000

Dear Sir/Madam

Re: Amendment of Environmental Authority MIN100401006.

I refer to the application for amendment of Environmental Authority (Mining Activities) MIN100401006 received at the Brisbane EPA office on 14 September 2006.

Please find attached the amended Environmental Authority (EA) MIN100401006. This EA takes effect from 30 March 2007 and the anniversary date of this authority is 24 July of each year.

If you have any inquiries in relation to the above details please contact Neil Mayer on (07) 4744 7820.

Yours faithfully

s.49 - Signature

Geoff Metcalfe **District Manager Environmental Operations** Mount Isa District, Northern Region

C/c Mining Registrar

Natural Resources, Mines and Water

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Chr Campoweal & Mary Streets Mount Is Queensland 4825 Australia PO Box 2316 Mount Isa Queensiand 4825 Australia

Telephone (07) 4744 7886 Facsimile (07) 4744 7860 Website www.epa.qld.gov.au ABN 87 221 158 786



Environmental Authority No. MIN100401006 (mining activities)

Section 228 Environmental Protection Act 1994

This environmental authority is granted under the Environmental Protection Act 1994 and includes conditions to minimise environmental harm caused, or likely to be caused, by the authorised mining activities. An environmental authority (mining activities) may be for mining activities authorised (under the Mineral Resources Act 1989) to occur under one of the following mining tenements: a prospecting permit; mining claim; exploration permit; mineral development licence; or mining lease. In general, a mining activity means: prospecting, exploring, mining; or processing minerals; remediation; rehabilitation; and includes facilitation and supporting activities and any action

Under the provisions of the Environmental Protection Act 1994 this environmental authority is

Reefway Pty Ltd Level 22 Allendale Square 77 St Georges Terrace Perth WA 6000

Savannah Resources Pty Ltd Level 22, Allendale Square 77 St Georges Terrace Perth WA 6000

in respect of carrying out activities as part of the following mining project:

Type of environmental authority (mining activities)	Authorised mining tenements	Location				
Mining Leases	ML 5426 ML 5435 ML 5446	100km north of Mount Isa				
•	ML 5447 ML 5448 ML 5474 ML 5476					
	ML 5478 ML90168 ML90169 ML90170 ML90178					

The mining activities are authorised to the extent defined in Schedule 6 Section 14(c) of the Environmental

This environmental authority is subject to the conditions set out in the attached schedules. The anniversary date of this environmental authority is 24 July each year.

This environmental authority takes affect from 30 March 2007.

s.49 - Signature

Geor Mercaire **District Manager** Mt Isa District, Northern Region Delegate of Administering Authority Environmental Protection Act 1994

Definitions

Words and phrases used throughout this environmental authority are defined in Schedule H - Definitions. (A5-1)Where a definition for a term used in this environmental authority is sought and the term is not defined within this environmental authority, the definitions in the Environmental Protection Act 1994, its Regulations and Environmental Protection Policies must be used.

END CONTIONS FOR SCHEDULE A

Schedule B - Air

Dust Nuisance

- Subject to Conditions (B1-2) and (B1-3) the release of dust or particulate matter or both resulting from the (B1-1) mining activity must not cause an environmental nuisance at any sensitive or commercial place.
- When requested by the administering authority, dust and particulate monitoring must be undertaken within a (B1-2)reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of . . environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- If the environmental authority holder can provide evidence through monitoring that the following limits are not (B1-3) being exceeded then the holder is not in breach of (B1-1): 34
 - Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air - Determination of particulates - Deposited matter - Gravimetric method of 1991.
- If monitoring indicates exceedence of the relevant limits in Condition (B1-3), then the environmental authority (B1-4)holder must:
 - address the complaint including the use of appropriate dispute resolution if required; or
 - immediately implement dust abatement measures so that emissions of dust from the activity do not result b) in further environmental nuisance.

Odour Nuisance

- Subject to condition (B2-2), the release of noxious or offensive odour(s) or any other noxious or offensive (B2-1)airbome contaminant(s) resulting from the mining activity must not cause an environmental nuisance at any sensitive or commercial place.
- When requested by the administering authority, odour monitoring must be undertaken within a reasonable and (B2-2)practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- If monitoring Indicates Condition (B2-1) is not being met then the environmental authority holder must: (B2-3)
 - address the complaint including the use of appropriate dispute resolution if required; or
 - immediately implement odour abatement measures so that emissions of odour from the activity do not result in further environmental nuisance.

END CONDITIONS FOR SCHEDULE B

Schedule C - Table 2 (Receiving Water Trigger Levels)

Parameter	Units · ·	r≈ Minimum	Maximum	Trigger Type
pH ¹	рН	6.0	8.0	Range
EC ¹	μS/cm	N/A	250	Maximum
Sulphate 2	mg/L	N/A	500	Maximum
Aluminium ²	mg/L	N/A	2.5	Maximum
Arsenic ²	mg/L	N/A	0.25	Maximum
Boron ²	mg/L	N/A	0.37	Maximum
Cadmium ²	mg/L	N/A	0.005	Maximum
Chromium ²	mg/L	N/A	0.5	Maximum
Cobalt ²	mg/L	N/A	0.5	Maximum
Copper ²	mg/L	N/A	0.5	Maximum
Fluoride ²	mg/L	N/A	1	Maximum
Lead ²	mg/L	N/A	0.05	Meximum
Manganese ³	mg/L	N/A	1.9	Maximum
: Mercury ²	mg/L	· N/A	0.001	Maximum
Molybdenum ²	mg/L	N/A	0,075	Maximum
: Nickel ²	mg/L	N/A	0.5	Maximum
Selenium ²	mg/L	N/A	0.01	Maximum
. Zinc²	mg/L	N/A	10	Maximum

Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000).

Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking Water and are to be analysed as total metals (unfiltered).

Contaminant trigger limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) 95% and are to be analysed as

filtered metals.

Schedule C - Table 4 (End of pipe monitoring locations and frequency)

Monitoring point.	Easting (AMG 84, Zone 54)	Northing (AMG 84, Zone 54)	Monitoring frequency
Mount Clarke ROM Area Sediment Dam	303834	7799496	Each flow event
Mount Çlarke Pit Area Sediment Dam	305336	7799592	Each flow event
Mount Clarke/Flying Horse Sediment Dam	305887	7798726	Fach flow event
Process Plant ROM Pad Sediment Dam 1	303040	7798656	Each flow event
Process Plant ROM Pad Sediment Dam 2	302905	7798900	Each flow event
Process Plant ROM Pad Sediment Dam 3	302771	7799010	Each flow event

NOTE: This does not apply to dams containing hazardous waste.

Schedule C - Table 5 (End of pipe contaminant release limits)

Parameter	Units	. Minimum.	Maximum	- Umit Type '		
ρΗ.	рН	6	9	Range		
TDS	mg/L	N/A	4000	Maximum		
Sulphate	mg/L	N/A	1000	Maximum		
Arsenic	mg/L	NA	, 5	Maximum		
Cadmium	mg/L	N/A	0.01	Maximum		
Chromium	mg/L	N/A	1	Maximum		
Cobalt	mg/L	N/A		Maximum		
Copper	mg/L	N/A	1	Meximum		
Lead	mg/L	N/A	0.1	Meximum		
Mercury mg/L		N/A	0.002	Maximum		
- Zinc	mg/L	N/A	20	Maximum		

Contaminant limits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unfiltered) NOTE: This does not apply to dams containing hazardous waste.

Dams Containing Hazardous Waste

(C1-4) Water storages containing process water and storm water contaminated by mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 6 and Schedule I - Map 4 and samples analysed for the parameters defined in Schedule C - Table 7.

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Environmental Protection Agency

- (C1-8) The holder of the environmental authority must mark the mandatory reporting level defined in Schedule C Table 8 on the spillway of all dams containing hazardous waste within the operational land.
- (C1-9) The holder of the environmental authority must notify the administering authority when the pondage level of the dam containing hazardous waste, reaches the mandatory reporting level defined in Schedule C Table 8.

Stream Sediment Contaminant Levels

- (C2-1) All reasonable and practicable erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.
- (C2-2) The bed of the receiving waters, affected by the release of process water and storm water contaminated by the mining activities must be monitored at the locations and frequencies defined in Schedule C Table 9 and Schedule I Map 5.

Schedule C - Table 9 (Receiving Stream Sediment Monitoring Locations and Frequency)

- Monitoring point	Easting (AGD 84 Zone 54)	Northing (AGD)84 Zone 54)	Monitoring frequency
MKUS 1- reference site *	305625	7797450	May each year
MKUS 2- reference site*	TBD	TBD	May each year
MKDS 1- test site	301160	7800135	May each year
MKDS 2- test site	306366	7798356	May each year
MKDS 3- test site	306370	7798363	May each year
MKDS 4- test site	301300	7797255	May each year

NOTE: This does not apply to dams containing hazardous waste Reference sites must:

a) be from the same biogeographical and climatic region;

b) have similar geology, soil types and topography

c) contain a range of habitats similar to those at the test site

d) be of similar flow regime; and

- e) not be so close to the test sites that any disturbances at the test site also result in a change at the reference site. TBD- to be determined and provided to the QEPA prior to commencement of mining.
- (C2-3) Subject to Condition (C2-2), if the stream sediment contaminant trigger levels defined in Schedule C Table 10 are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

Schedule C - Table 10 (Receiving Stream Sediment Contaminant Trigger Levels)

Parameter -	Units	Contaminant trigger levels	Ifigger Type
Antimony ¹	mg/kg dry wt	2	Maximum
Arsenic ¹	mg/kg dry wt	20	Maximum
Cadmium ¹	mg/kg dry wt	1.5	Maximum
Chromlum ¹	mg/kg dry wt	80	Maximum
. Copper ²	mg/kg dry wt	100	Meximum
Lead ¹	mg/kg dry wt	50	Maximum
Nickel ¹	mg/kg dry wt	21	Maximum
Silver ¹	mg/kg dry wt		Maximum
Mercury ¹	mg/kg dry wt	0.15	Maximum
Zinc ¹	mg/kg dry wt	200	Maximum

ANZECC (2000): ISQG Low trigger values, Sediment Quality Guidelines, Aquatic Ecosystems, Table 3.5.1.
Site specific trigger value as calculated in section 3.6 of EM Plan July 2006

(C2-4) Subject to Condition (C2-2), stream sediment contaminant limits must not exceed the contaminant limits defined in Schedule C -Table 11.

in referer

Page \$20549 • 0002

This environmental authority takes effect of 30 March 2007

Environmental Protection Agency

Groundwater

Groundwater, affected by the mining activities must be monitored at the locations and frequencies defined in (C4-1)Schedule C - Table 13 and Schedule I - Map 6.

Schedule C - Table 13 (Groundwater M	onitoring Locations and Frequency)
--------------------------------------	------------------------------------

Monitoring point	Easting (AGD 84 Zone 54)	Northings (AGD 84 Zone Ein)	Monitoring frequency
LA MB01 (Process Plant)- reference site	302484	7796800	Monthly
LA MB02 (Process Plant) - reference site	302891	7797885	Monthly
LA MB03 (Process Plant) - reference site	302128	7797950	Monthly
LA MB04 (Process Plant)	TBD	TBD	Monthly
LA MB05 (Process Plant)	TBD	TBD	Monthly
LA MB06 (Process Plant)	TED	TBD	Monthly
LA MB07 (Process Plant)	TBD	TBD	Monthly
LA MB08 (Process Plant)	TBD	TBD	Monthly
LA MB09 (Process Plant)	TBD	TBD	Monthly
LA MB010 (Process Plant)	TBD	TBD	Monthly
LA MB011 (Process Plant)	TBD	TBD	Monthly
LA MB012 (Process Plant)	TBD	TBD	Monthly
LA MB013 (Process Plant)	TBD	TBD	Monthly
LA MB014 (Process Plant)	TBD	TBD	Monthly
MK MB01 (pit area)	305360	7799013	Quarterly
MK PB01 (pit area)	305356	7799019	Quarterly

NOTE: This does not apply to dams containing hazardous waste

TBD- To be determined Reference sites must:

be from the same biogeographical and climatic region; have similar geology, soil types and topography contain a range of habitats similar to those at the test site

- d) be of similar flow regime; and not be so close to the test sites that any disturbances at the test site also result in a change at the reference site.
- Subject to Condition (C4-1), iff the groundwater contaminant trigger levels defined in Schedule C Table 14 are (C4-2)exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

Schedule C - Table 15 (Groundwater Contaminant Limits)

: Parameter	Units	Minimum :	🚁 Maximum 🗦 🗸	Limit Type
pH ¹	pH,	6	9	Range
TDS ¹	mg/L	N/A	4000	Maximum
Sulphate ¹	mg/L	N/A	1000	Maximum
Aluminum ¹	mg/L	N/A	5	Meximum
Arsenic ¹	mg/L	N/A	0.5	
Beron ¹	mg/L	N/A	5.	Maximum
Cadmium ¹	mg/L	N/A	0.01	Maximum
Chromium ¹	mg/L	N/A	1	Meximum
Cobalt ¹	mg/L	N/A		Maximum
Copper ¹	mg/L	N/A		Maximum
Fluoride ¹	mg/L	N/A	2	Maximum
Lead ¹	mg/L	N/A	0.1	Maximum
Manganese ²	mg/L	N/A	2.5	Maximum
Mercury ¹	mg/L	N/A	0.002	Maximum
Molybdenum ¹	mg/L	N/A		Meximum
Nickel ¹	mg/L	N/A	0.15	Maximum
Selenium ¹	the state of the s		1	Maximum
Zinc ¹	mg/L	N/A	0.02	Maximum
		19/A	20	Maximum

¹ Contaminant limits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total Metals (unfiltered)
² Contaminant limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) and are analysed as Filtered Metals.

(C4-4) The method of water sampling required by this environmental authority must comply with that set out in the latest edition of the Environmental Protection Agency's Water Quality Sampling Manual.

Voids

(C5-1) Water quality in mining voids and final voids must be monitored at the locations and frequencies defined in Schedule C - Table 16 and for the parameters detailed in Schedule C - Table 17.

(C5-2) In the event that water quality within the mining voids or final voids does not comply with the contaminant limits defined in Schedule C – Table 17, implement measures to prevent access by all livestock and minimise access by fauna to the void.

Schedule C - Table 16 (Voids Monitoring Locations and Frequency)

Menilloring point	Monitoring frequency
Mount Kelly/Flying Horse Pit	Annually
Mount Clarke Pit	Annually

Schedule D - Noise and Vibration

Noise Nuisance

- (D1-1) Subject to Conditions (D1-2) and (D1-3) noise from the mining activity must not cause an environmental nulsance to an affected building.
- (D1-2) When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (D1-3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Vibration nuisance

- (D2-1) Subject to Conditions (D2-2) and (D2-3) vibration from the mining activity must not cause an environmental nulsance to an affected building.
- (D2-2) When requested by the administering authority, vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nulsance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of menitoring.

END CONDITIONS FOR SCHEDULE D

Schedule E - Waste

Storage of Tyres

- (E1-1) Tyres stored awaiting disposal or transport for take-back and, recycling, or waste-to-energy options should be stockpiled in volumes less than 3m in height and 200m² in area and at least 10m from any other tyre storage area.
- (E1-2) All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10m radius of the scrap tyre storage area.

Disposal of Tyres

- (E2-1) Disposing of scrap tyres resulting from the mining activities in spoil emplacements is acceptable, provided tyres are placed as deep in the spoil as reasonably practicable.
- (E2-2) Scrap tyres resulting from the mining activities disposed within the operational land must not impede saturated aquifers or compromise the stability of the consolidated landform.

Waste Management

(E3-1) A Waste Management Program, in accordance with the Environmental Protection (Waste Management) Policy 2000, must be included in the Plan of Operations.

En 30/3/07



Reefway Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No MiN100401006

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Schedule F - Land

Rehabilitation Landform Criteria

(F1-1)

All areas significantly disturbed by mining activities must be rehabilitated to a stable landform with a self-sustaining vegetation cover in accordance with Schedule F – Schedule F - Table 1 (Final Land Use and Rehabilitation Approval Schedule)

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i de la companya de l		Habitat	Habitat	Habitat	Lokem		Habitat	Habitat	Habitat/LiG	Habitat/LiG	Habitat		
Artes	2	13.2	28	73	8,		<u> </u>	9.5	16.3	5.4	5.5		
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		Hors	Horse Dump	Horse	Mount Ke	Dams	Horse Drains	Mount	Rock Dump	Grade	Horse/A ROM St	Rehandle	Cin rada

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This environmental authority takes effect on 18 December 2006

Environmental Protection Agency www.epa.qid.gov.au ASN 87 221 158 788

ECOACCESSenvironmental licences and pennits

Reefway Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No MIN100401006

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Distumence	Process Plant Drainage Diversions	Frocess Plant Sediment Ponds	Bulk Fill Stockpile	Powerlines (on lease)	Pipelines and Powerlines on	Infrastructure ML	Hubbish Dumps	Concrete Batch Plant	Fuel Storage Area	Contractor Laydown Area	Exploration	Construction Access	Gravel Borrow Pits	(on and off ML)	Road (off ML)	rom

*Analogue sites and disturbance description are to be identified and the environmental authority to include analogue sites in

LiG-Low Intensity Grazing

Classes are derived from the Department of Minerals and Energy's Land Sultability Assessment Techniques (1995)

- Progressive rehabilitation must commence when areas become avallable within the operational land. F1-2)
- Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in Schedule F Table 1 and landform design oriteria in Schedule F Table 2 by 30 June 2007

A Vi

(F1-3)

Page 82 of 250

This environmental authority takes effect on 30 March 2007

Location of Dam

(F3-2) The location of any dam containing hazardous waste within the licensed place must be located within the polygonal area defined by the co-ordinates defined in Schedule C- Table 4 -Map 4.

Schedule F — Table 4 (Location of Dams Containing Hazardous Waste)

Name of dam containing hazardous waste	Easting(AMG 84, Zone 54) ⁽¹⁾	Northing (AMG/84, Zone 54) (0)
PLS Ponds, ILS, Raffinate Pre-settler and Raffinate Pond	301760 302065 302035 301760	7797640 . 7797640 7797310 7797310
Stormwater Pond 1 and 2	301470 301760 301760 301470	7797640 7797640 7797110 7797110
Heap Leach Pads	302065 302720 302720 302035	7797945 7797945 7796825 7796825

Note (1): A minimum of 3 control points is required to constrain the location of all activities associated with the dam containing hazardous waste. Additional infrastructure which forms part of any dam containing hazardous waste may include appurtenant, works consisting of tailings discharge pipelines, seepage collection systems, runoff diversion bunds, containment systems, pressure relief wells, decant and recycle water systems.

Standards and Criteria

- (F3-3) The holder of the environmental authority must design, construct, repair, maintain, operate and decommission the dams defined in Schedule F Table 3 and 4 in accordance with an acknowledged design plan that must comply with the standard environmental conditions in the "Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste".
- (F3-4) The holder of the environmental authority must design, construct, and operate all low hazardous dams containing hazardous waste and non-hazardous dams in accordance with the criteria outlined in Appendix B of the Code of Environmental Compliance for Mining Activities.

Inspection of Dams

- (F3-5) High hazard dams containing hazardous waste shall be inspected by a Registered Professional Engineer Queensland (RPEQ) prior to 1 November each year or at any time if alarming, unusual or otherwise unsatisfactory conditions are observed.
- (F3-6) For each inspection, the engineer shall assess the condition of the dam and its foundations, determine the hydraulic adequacy of the dam and assess the adequacy of the works with respect to dam safety.
- (F3-7) For each inspection, two copies of the engineer's report and any recommendations as to measures to be taken to ensure the integrity of the dam shall be furnished to the administering authority within 28 days of the inspection.

Decommissioning of Dam - Objective

(F3-8) Dams containing hazardous waste must not be abandoned and must be decommissioned to a situation where water can no longer be stored in the dams. The dams and their contained waste(s) must be stable, whereafter the dams are no longer dams and they become landforms on the operational land and must comply with the rehabilitation requirements of this environmental authority.

Decommissioning of Dam - Documentation and Compliance

(F3-9) Decommissioning activities for dams must be documented in detail in the plan of operations under which the activities are to occur. Where the detailed documentation is not already contained in the Design Plan for the dam, the detailed documentation is considered to be an amendment to the design plan and must be submitted

Pane 21 of 32 • none

Schedule H - Definitions

"acceptance criteria" means the measures by which the actions implemented to rehabilitate the land are deemed to be complete. The acceptance criteria indicate the success of the rehabilitation outcome or remediation of areas which have been significantly been disturbed by the mining activities. Acceptance criteria may include information regarding:

vegetation establishment, survival and succession;

vegetation productivity, sustained growth and structure development;

fauna colonisation and habitat development:

ecosystem processes such as soil development and nutrient cycling, and the recolonisation of specific fauna groups such as collombola, mitos and termites which are involved in these processes;

microbiological studies including recolonisation by mycorrhizal fungi, microbial biomass and respiration;

effects of various establishment treatments such as deep ripping, topsoil handling, seeding and fertiliser application. on vegetation growth and development;

resilience of vegetation to disease, insect attack, drought and fire;

vegetation water use and effects on ground water levels and catchment yields.

"affected building"

for noise means any building or any part of a building, for example the building from which the noise is made, at which the noise can be heard.

for vibration means any building or any part of a building, for example the activity from which the vibration is made, at which the vibration can be felt.

"ambient (or total) noise" at a place, means the level of noise at the place from all sources (near and far), measured as the Leg for an appropriate time interval.

"appropriately qualified person" means any person who conforms to the EPA operational policy for an "appropriately qualified person (analyst)" in accordance with Section 490(7) of the Environmental Protection Act 1994.

"ARD" means acid rock drainage and refers to the low pH, high heavy metal pollutant typical of sulphidic mine wastes, and most commonly associated with the production of ferrous iron and sulphuric acid through the oxidation of sulphide minerals.

"authority" means environmental authority (mining activities) under the Environmental Protection Act 1994.

"blasting" means the use of explosive materials to fracture-

(a) rock, coal and other minerals for later recovery; or(b) structural components or other items to facilitate removal from a site or for reuse.

"building" includes a structure of any type and part of a building or structure.

"commercial place" means a work place used as an office or for business or commercial purposes, which is not part of the mining activity and does not include employees accommodation or public roads.

"competent person" means a person with the demonstrated skill and knowledge required to carry out the task to a standard necessary for the reliance upon collected data or protection of the environment.

"dam" means a containment or proposed containment whether permanent or temporary, which is designed to contain, divert or control flowable substances. However this does not include a fabricated or manufactured tank or container designed to a recognised standard.

"design plan" in the context of a dam design is the documentation required under the Code of Environmental Compilance for High Hazard Dams Containing Hazardous Waste to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, the procedures and criteria to be used for operating the dam and the decommissioning and rehabilitation objectives in terms of procedures, works and outcomes at the end of dam life, The documents can include design and investigation reports, drawings, specifications and certifications.

"environmental authority holder" means the holder of this environmental authority.

"flow event" means a flow event producing sufficient water to permit a monitoring creek bed flow of 30cm or more at the sampling station.

"flowable substance" means matter or mixture of materials which can be forced to or otherwise flow under any conditions possible in a situation. It includes water, other liquids or a mixture that includes water or any other liquid or suspended solids.

"peak particle velocity (ppv)" means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time, usually measured in millimetres/second (mms-1).

"protected area" means - a protected area under the Nature Conservation Act 1992; or

- a marine park under the Marine Parks Act 1992; or
- a World Heritage Area.

"progressive rehabilitation" means rehabilitation (defined below) undertaken progressively or a staged approach to rohabilitation as mining operations are ongoing.

"reference site" (or analogue site) may reflect the original location, adjacent area or another area where rehabilitation success has been completed for a similar biodiversity. Details of the reference site may be as photographs, computer generated images and vegetation models etc.

"rehabilitation" the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

"representative" means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

"residual void" means an open pit resulting from the removal of ore and/or waste rock which will remain following the cessation of all mining activities and completion of rehabilitation processes.

"self sustaining" means an area of land which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

"sensitive place" means:

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel: or
- an educational institution: or
- a medical center or hospital; or
- a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- a public park or gardens.

"significant disturbance" - includes land

- (a) if it is contaminated land; or
- it has been disturbed and human intervention is needed to rehabilitate it.
 - i. to a state required under the relevant environmental authority; or
 - if the environmental authority does not require the land to be rehabilitated to a particular state to its state H. immediately before the disturbance.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpiled;
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining activities occur;
- areas submerged by tailings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining activities have ceased; or
- areas where land has been contaminated and a sultability statement has not been issued.

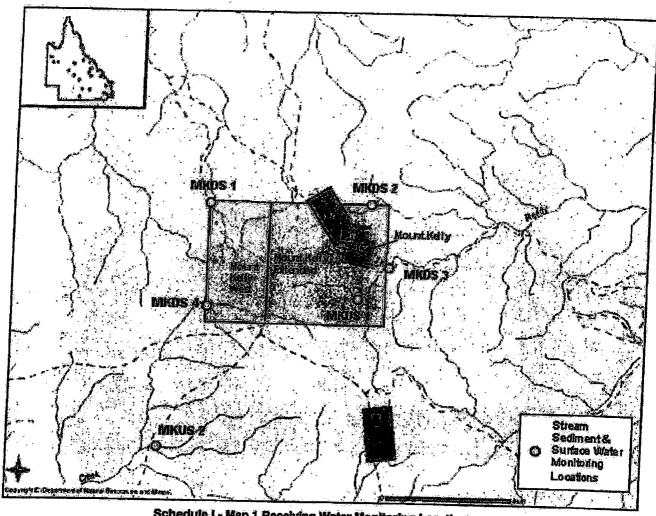
However, the following areas are not included:

- areas off lease (e.g. roads or tracks which provide access to the mining lease);
- areas previously significantly disturbed which have achieved the rehabilitation outcomes;
- by agreement with the EPA, areas previously significantly disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the EPA;
- disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

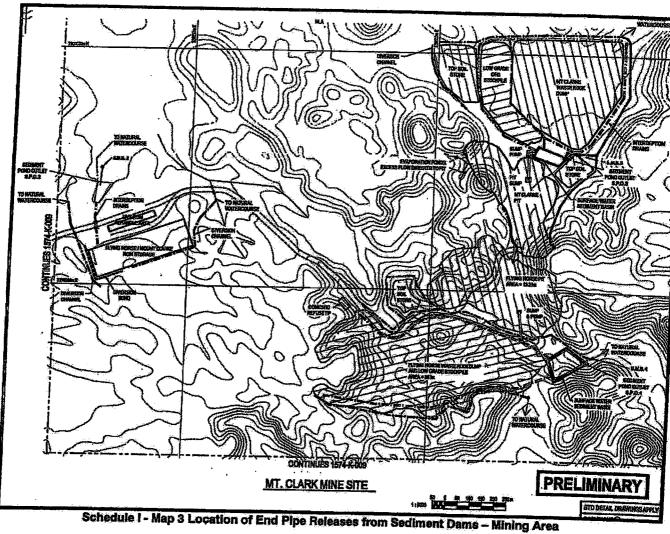
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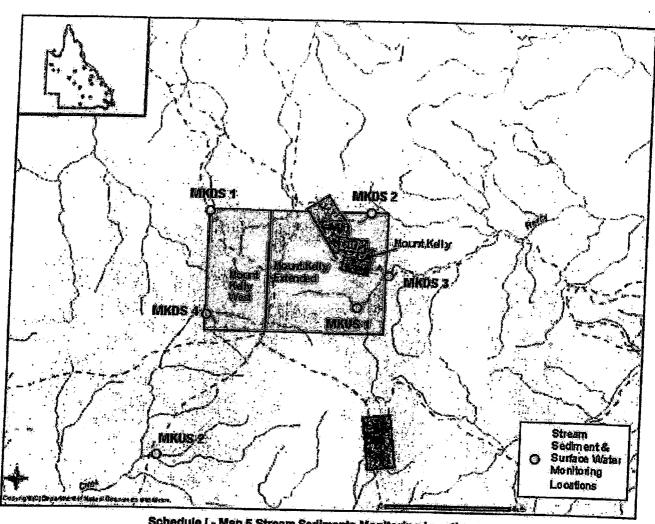
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Schedule I - Maps / Plans



Schedule I - Map 1 Receiving Water Monitoring Locations





Schedule I - Map 5 Stream Sediments Monitoring Locations





Notice

Environmental Operations

Decision to realise or claim on financial assurance

This statutory notice is issued by the administering authority pursuant to section 367 of the Environmental Protection Act 1994, to advise you of a decision to realise or claim on financial assurance for your licence.

Savannah Resources Pty Ltd (ACN 096358735) Lady Annie Operations Pty Ltd (ACN076289097) Attention Messrs Gary Peter Doran and David John Frank Lomb

Receiver Managers for Savannah Resources Pty Ltd, Lady Anni Operations Pty Ltd

Deloitte Touche Tohmatsu Woodside Plaza Level 14 240 St George Terrace PERTH WA 6000

Your reference: MIN100401006

Our reference : ISA658

Attention: Gary Doran,

Re: Decision to realise financial assurance for a licence held by Lady Annie Operations Pty Ltd (ACN 076289097) and Savannah Resources Pty Ltd (ACN 096358735).

I refer you to the notice dated 30 June 2009 proposing to realise financial assurance in the amount of \$41,998 from Lady Annie Operations Pty Ltd (ACN 076289097) and Savannah Resources Pty Ltd (ACN 096358735).

The notice detailed that you may provide written representations to show why this financial assurance should not be realised by 30 July 2009. No written representation has been made to the Department of Environment and Resource Management.

The administering authority has decided to realise the above mentioned financial assurance as it has incurred costs in the amount of \$41,998 as a result of taking the following action to investigate the discharge of contaminated waters from Lady Annie mine site to Saga and Inca Creeks on 20 January 2009 and 7 February 2009:

Undertaking the service of external environmental consultants to assess and report on;

- · Water management on the mine site,
- Integrity of Stormwater Pond 2 wall/s,
- Downstream impacts resulting from the release of contaminants from the minesite:

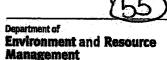
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DEPARTMENT OF



Enquiries Telephone Your reference Our reference

Warwick Fegan (07) 4046 6724 Lady Annie Mine Site ISA658 DEPARTMENT OF MINES AND ENERGY MOUNT ISA



4 August 2009

Lady Annie Operations Pty Ltd and Savannah Resources Pty Ltd Attention Messrs Gary Peter Doran and David John Frank Lombe Receiver Managers for Lady Annie Operations Pty Ltd Deloitte Touche Tohmatsu Woodside Plaza Level 14
240 St George Terrace
PERTH WA 6000

Dear Sirs,

I refer you to the letter and notice dated 30 June 2009 detailing the Department of Environment and Resource Management's (DERM) intent to realise part of the Financial Assurance held against Lady Annie Operations Pty Ltd and Savannah Resources Pty Ltd in relation to activities on Lady Annie Mine Site.

The notice of proposal to realise or claim financial assurance dated 30 June 2009 detailed that written representation objecting to the proposal to realise financial assurance was required by 30 June 2009. No submissions were received by DERM.

Please find attached a notice of decision to realise or claim financial assurance. DERM will realise \$41,998 of financial assurance.

If you have any queries with regards to the content of this letter please contact Warwick Fegan on (07) 4046 6724.

Yours sincerely

s.49 - Signature

Rob Lawrence
Regional Manager
North Region
Regional Services
Department of Environment and Resource Management

Page 1 of 2

5b Sheridan Street Calms Queensland 4870 Australia PO Box 2086 Calms Queensland 4870 Australia Telephone (07) 4046 6734 Facalpalle (070 4046 6606 Website www.derm.qld.gov.au ABN 46 640 294 486

RECEIVED 25 0 1 0 AUG 2009

Queensland Government

Management

Enquiries
Telephone
Your reference
Our reference

Warwick Fegan (07) 4046 6724 Lady Annie Mine Site ISA658 DEPARTMENT OF MINES AND ENERGY MOUNT ISA



4 August 2009

Lady Annie Operations Pty Ltd and Savannah Resources Pty Ltd Attention Messrs Gary Peter Doran and David John Frank Lombe Receiver Managers for Lady Annie Operations Pty Ltd Deloitte Touche Tohmatsu Woodside Plaza Level 14
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If you have any queries with regards to the content of this letter please contact Warwick Fegan on (07) 4046 6724.

Yours sincerely

s.49 - Signature

Rob Lawrence
Regional Manager
North Region
Regional Services
Department of Environment and Resource Management

Page 1 of 2

5b Sheridan Street Cairns Queensland 4870 Australia PO Box 2066 Cairns Queensland 4870 Australia Telephone (07) 4046 6734 Facaimile (070 4046 6606 Website www.derm.qld.gov.au ABN 46 640 294 485





Notice

Environmental Operations

Decision to realise or claim on financial assurance

This statutory notice is issued by the administering authority pursuant to section 367 of the Environmental Protection Act 1994, to advise you of a decision to realise or claim on financial assurance for your licence.

Savannah Resources Pty Ltd (ACN 096358735) Lady Annie Operations Pty Ltd (ACN076289097) Attention Messrs Gary Peter Doran and David John Frank Lomb

Receiver Managers for Savannah Resources Pty Ltd, Lady Anni Operations Pty Ltd

Deloitte Touche Tohmatsu Woodside Plaza Level 14 240 St George Terrace PERTH WA 6000

Your reference: MIN100401006

Our reference : ISA658

Attention: Gary Doran,

Re: Decision to realise financial assurance for a licence held by Lady Annie Operations Pty Ltd (ACN 076289097) and Savannah Resources Pty Ltd (ACN 096358735).

I refer you to the notice dated 30 June 2009 proposing to realise financial assurance in the amount of \$41,998 from Lady Annie Operations Pty Ltd (ACN 076289097) and Savannah Resources Pty Ltd (ACN 096358735).

The notice detailed that you may provide written representations to show why this financial assurance should not be realised by 30 July 2009. No written representation has been made to the Department of Environment and Resource Management.

The administering authority has decided to realise the above mentioned financial assurance as it has incurred costs in the amount of \$41,998 as a result of taking the following action to investigate the discharge of contaminated waters from Lady Annie mine site to Saga and Inca Creeks on 20 January 2009 and 7 February 2009:

Undertaking the service of external environmental consultants to assess and report on;

- · Water management on the mine site.
- Integrity of Stormwater Pond 2 wall/s,
- Downstream impacts resulting from the release of contaminants from the minesite;



Enquiries
Telephone
Your reference
Our reference

Neil Maver (07) 4046 6731 MIN100401006 ISA658

Environmental Protection Agency

incorporating the

Queensland Parks and Wildlife Service

17 July 2007

Mining Registrar
Department of Mines & Energy
PO Box 334
MOUNT ISA QLD 4825

Department of Mines and Energy 31605 19 JUL 2007

Dear Sir / Madam

Re: Application submitted by Lady Annie Operations Pty Ltd & Savannah Resources Pty Ltd to amend Environmental Authority MIN100401006

I refer to the application to amend Environmental Authority MIN100401006, received at this office on 14 May 2007.

Please find attached the draft amended Environmental Authority MIN100401006 for the Mount Kelly / Lady Annie Project. The amendment application involves the addition of MLA90184 to the project for water & power infrastructure.

Please note that the Environmental Authority holder is now required under s254 of the Environmental protection Act 1994 to give notice of their application to amend the Environmental Authority to each effected person for each mining lease and publish the notice at least once in a newspaper circulating in the locality of the land to which the mining lease applies.

Should you have any questions please contact Neil Maver on (07) 4046 6731.

Yours sincerely

s.49 - Signature

Ralph Riese
District Manager
Environmental Operations
North West District, Northern region

Page 1 of 1

PO Box 2316 MOUNT ISA Queensland 4825 Australia Telephone (07) 4744 7820 Facsimile (07) 4744 7800 Website www.epa.qid.gov.au ABN 87 221 158 786

DRAFT

Environmental Authority No. MIN100401006 (mining activities)

Section 258 Environmental Protection Act 1994

This environmental authority is granted under the Environmental Protection Act 1994 and includes conditions to minimise environmental harm caused, or likely to be caused, by the authorised mining activities. An environmental authority (mining activities) may be for mining activities authorised (under the *Mineral Resources Act 1989*) to occur under one of the following mining tenements: a prospecting permit; mining claim; exploration permit; mineral development licence; or mining lease. In general, a mining activity means: prospecting, exploring, mining; or processing minerals; remediation; rehabilitation; and includes facilitation and supporting activities and any action

Under the provisions of the Environmental Protection Act 1994 this Environmental Authority is

Lady Annie Operations Pty Ltd Level 22 Allendale Square 77 St Georges Terrace Perth WA 6000

Savannah Resources Pty Ltd Level 22, Aliendale Square 77 St Georges Terrace Perth WA 6000

in respect of carrying out activities as part of the following mining project:

Type of Environmental **Authority** (mining activities)

Authorised mining tenements

Location

Mining Leases

ML5426, ML5495, ML5446, ML5447, ML5448, ML 5474, ML5476, ML5478, ML90168 ML90169, ML90170, ML90178, ML90179, ML90184

100km north of Mount Isa

The mining activities are authorized to the extent defined in Schedule 6 Section 14(c) of the Environmental Protection Regulation 1998.

This Environmental Authority is subject to the conditions set out in the attached schedules.

The anniversary date of this Environmental Authority is 24 July each year.

This Environmental Authority takes effect from XX X 2007.

Geoff Metcaffe District Manager Mount Isa District, Northern Region Delegate of Administering Authority Environmental Protection Act 1994

This Environmental Authority incorporates the following schedules:

- Schedule A General
- Schedule B Air
- Schedule G Water
- Schedule D Noise and Vibration
- Schedule E Waste
- Schedule F Land
- Schedule G Community
- Schedule H Definitions
 - Schedule t Maps / Plans

Schedule A - General

Financial Assurance

(A1-1) Provide a financial assurance in the amount and form required by the administering authority prior to the commencement of activities proposed under this environmental authority.

NOTE: The calculation of financial assurance for condition (A1-1) must be in accordance with Guideline 17 and may include a performance discount. The amount is defined as the maximum total rehabilitation cost for complete rehabilitation of all disturbed areas, which may vary on an annual basis due to progressive rehabilitation. The amount required for the financial assurance must be the highest Total Rehabilitation Cost calculated for any year of the Plan of Operations and calculated using the formula: (Financial Assurance = Highest Total Annual Rehabilitation Cost x Percentage Required).

(A1-2) The financial assurance is to remain in force until the administering authority is satisfied that no claim on the assurance is likely.

NOTE: Where progressive rehabilitation is completed and acceptable to the administering authority, progressive reductions to the amount of financial assurance will be applicable where rehabilitation has been completed in accordance with the acceptance criteria defined within this environmental authority.

Maintenance of Measures, Plant and Equipment

- (A2-1) The environmental authority holder must ensure:
 - that all measures, plant and equipment necessary to ensure compliance with the conditions of this
 environmental authority are installed;
 - . that such measures, plant and equipment are maintained in a proper condition; and
 - that such measures, plant and equipment are operated in a proper manner.

Monitoring

- (A3-1) Record, compile and keep for a minimum of five years all monitoring results required by this environmental authority and make available for inspection all or any of these records upon request by the administering authority.
- (A3-2) Where monitoring is a requirement of this environmental authority, ensure that a competent person(s) conducts all monitoring.

Storage and Handling of Flammable, Combustible and Corrosive Liquids

- (A4-1) Spillage of all flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm (other than trivial harm) and maintained in accordance with Section 5.8 of AS 1940 Storage and Handling of Flammable and Combustible Liquids of 2094.
- (A4-2) The on-site storage of corrosive liquids must be in accordance with Section 5.7 of AS 3780 Storage and Handling of Corrosive Substances 1994.

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Definitions

Words and phrases used throughout this environmental authority are defined in Schedule H - Definitions. (A5-1)Where a definition for a term used in this environmental authority is sought and the term is not defined within this environmental authority, the definitions in the Environmental Protection Act 1994, its Regulations and

END CONTIONS FOR SCHEDULE A

Schedule B - Air

Dust Nuisance

- Subject to Conditions (B1-2) and (B1-3) the release of dust or particulate matter or both resulting from the (B1-1)mining activity must not cause an environmental nuisance at any sensitive or commercial place.
- When requested by the administering authority, dust and particulate monitoring must be undertaken within a (B1-2) reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nulsance at any sensitive or commercial place, and the results must be notified within 14 days to (B1-3)
- If the environmental authority holder can provide evidence through monitoring that the following limits are not
 - Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air - Determination of
- if monitoring indicates exceedence of the relevant limits in Condition (B1-3), then the environmental authority (B1-4)a)
 - address the complaint including the use of appropriate dispute resolution if required; or
 - immediately implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nuisance.

Odour Nuisance

- Subject to condition (B2-2), the release of noxious or offensive odour(s) or any other noxious or offensive (B2-1)airborne contaminant(s) resulting from the mining activity must not cause an environmental nuisance at any (B2-2)
- When requested by the administering authority, odour monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the
- If monitoring indicates Condition (B2-1) is not being met then the environmental authority holder must (B2-3)
 - address the complaint including the use of appropriate dispute resolution if required; or
 - immediately implement odour abatement measures so that emissions of odour from the activity do not

END CONDITIONS FOR SCHEDULE B

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This Environmental Authority takes effect XX X 2007

Environmental Protection Agency

Schedule C - Water

Release to Waters

Receiving waters affected by the release of process water or storm water contaminated by the mining activities or both must be monitored at the locations and frequencies defined in Schedule C - Table 1 and Schedule I - Map 1 & 2, and the results of the test sites comply with the contaminant limits defined in Schedule C - Table 3.

Monitoring point	Easting (AMG 84 Zone 54)	Northing (AMG 84 Zone 54)	Monitoring trequency
MKUS 1- reference site *	305625	7797450	Each flow event
MKUS 2- reference site*	300451	7793920	Each flow event
MKDS 1- test site	301160	7800135	Each flow event
MKDS 2- test site	306046	7800375	Each flow event
MKDS 3- test site	306370	7798363	Each flow event
MKDS 4- test site	301300	7797255	Each flow event
LA- US1- reference site*	295150	7812680	Each flow event
LA- US2- reference site*	295750	7812480	Each flow event
LA- DS1- test site	294000	7810100	Each flow event
LA- DS2- test site	295500	7810400	Each flow event

NOTE: This does not apply to dams containing hazardous waste

*Reference sites must:

a) be from the same biogeographical and climatic region;

have similar geology, soil types and topography contain a range of habitats similar to those at the test site C)

be of similar flow regime; and

not be so close to the test sites that any disturbances at the test site also result in a change at the reference site.

Subject to Condition (C1-1), if the receiving water contaminant trigger levels defined in Schedule C - Table 2 are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

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Schedule C - Table 2 (Receiving Water Trigger Limits)

Parameter	Units	Minimum		
pH ¹	рН	6	Maximum	Trigger Type
EC1	μS/cm	N/A	8.5	Range
Sulphate 2	mg/L	N/A	250	Maximum
Aluminium ⁴	mg/L	N/A	500	Maximum
Aluminium ⁵	mg/L	N/A	2.5	Maximum
Arsenic ²	mg/L		11.5	Maximum
Boron ²	mg/L	N/A	0.25	Maximum
Cadmium ²	mg/L	N/A	0.37	Maximum
Chromium ²	mg/L		0.006	Maximum
Cobalt ²	mg/L	N/A	0.5	Maximum
Copper ⁴	mg/L	N/A	0.5*	Maximum
Copper ⁵	mg/L	N/A	0.5	Maximum
Fluoride ²	mg/L	N/A .	0.83	Maximum
Lead ⁴	mg/L	N/A		Maximum
Lead ⁵		N/A	0.05	Maximum
langanese ³	mg/L	N/A	0.065	Maximum
Mercury ²	mg/L	N/A	1.9	Maximum
olybdenum ²	mg/L	N/A	0.001	Maximum
Nickel ²	mg/L	N/A	0.075	Maximum
Selenium ²	mg/L	N/A	0.5	
Zinc ²	mg/L	N/A	0.01	Maximum
	mg/L	N/A ed on Table 3.3.4 and 3.3.5 of Aqu		. Maximum Maximum

Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000).

Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking water and are to be analysed as total metals (unfiltered).

Contaminant trigger limits based on ANZECC (2000) trigger levels for aquatic ecosystems of slightly - moderately disturbed systems — table 3.4.1 level of protection 95% / Table 3.3.4 / 3.3.5 — Tropical Australia upland rivers.

4 Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking Water and are to be analysed as total metals (unfiltered). These limits are set for the Mount Kelly Leases only (ML 5426, ML 5478, ML90168, ML90169, ML90170, ML90178, ML 5435, ML 5446, ML 5447, ML 5448, ML 5474 and ML 5476.)

These trigger limits are set for the Lady Annie Lease only (ML90179).

अस्तर क्षेत्रक र लेक्ट्रीय स्टब्स्ट

Schedule C -	Table 3 /Re	celvina	Water Co	onteminant	Limits)
Schedule L -	i ache 3 inc	CCIVHIU	AACHEL CA	TO LEGISTRE BELLEVIEW IN	· r-20 0 20 0 7-2

Parameter	Units	Minimum	Maximum	Trigger Type
pH	pH	6	9	Range
· TDS ²	mg/L	N/A	4000	Maximum
Sulphate 1	mg/L	N/A	1000	Maximum
Aluminium	mg/L	N/A	5 .	Maximum
Aluminium ⁸	mg/L	N/A	23	Maximum
Arsenic ¹	mg/L	N/A	0.5	Maximum
Boron	mg/L	N/A	5	Maximum
Cadmium ¹	mg/L	N/A	0.01	· Maximum
Chromium ¹	mg/L	NA	1	Maximum
Cobalt ¹	mg/L	· N/A	1	Maximum
Copper ⁵	mg/L	N/A	1	Maximum
Copper ⁶	mg/L	N/A	1.66	Maximum
Fluoride ¹	mg/L	N/A	2	Maximum
Lead ⁶	mg/L	N/A	0.1	Maximum
Lead ⁶	mg/L	N/A	0.13	Maximum
Manganese ³	mg/L	N/A	2.5	· Maximum
Mercury ¹	. mg/L	N/A	0.002	Maximum
Molybdenum ¹	mg/L	N/A	0.15	Maximum
Nickel [†]	mg/L	N/A	1	Maximum
Selenium ¹	mg/L	N/A	0.02	Maximum
Zinc¹	mg/L	N/A	20	Maximum

Contaminant limits based on table 4.3.2 ANZECC (2000) Livestock drinking water quality and are analysed as Total metals

Contaminant limits based on Table 3.3.4 of Aquatic Ecosystems ANZECC (2000)

Contaminant limits are based on site specific background data and are to be analysed as total metals (unfiltered). These trigger limits are set for the Lady Annie Lease only (ML90179).

End of Pipe Release

End of pipe release limits for storm water contaminated by mining activities must be monitored at the locations (C1-3)and frequencies defined in Schedule C - Table 4 and Schedule I - Map 3, 4 and 5 and comply with the contaminant limits defined in Schedule C - Table 5.

This Environmental Authority takes effect XX X 2007

Environmental Protection Agency

Contaminant limits are based on Table 4.3.1 Livestock drinking water quality and are analysed as Total metals (unfiltered) Contaminant limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) 80% and are to be analysed as filtered

S Contaminant limits are based on table 4.3.2 ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unfiltered). This limit is set for the Mount Kelly Leases only (ML 5426, ML 5478, ML90168, ML90169, ML90170, ML90178, ML 5435, ML 5446, ML 5447, ML 5448, ML 5474 and ML 5476.)

Schedule C - Table 4 (End of pipe monitoring locations and frequency)

Monitoring point	Easting (AMG 84, Zone 54)	Northing (AMG 84, Zone 54)	Monitoring frequency
Mount Clarke ROM Area Sediment Dam	303834	7799496	Each flow event
Mount Clarke Pit Area Sediment Dam	305336	7799592	Each flow event
Mount Clarke/Flying Horse Sediment Dam	305887	7798726	· Each flow event
Process Plant ROM Pad Sediment Dam 1	303040	7798656	Each flow event
Process Plant ROM Pad Sediment Dam 2	302905	7798900	Each flow event.
Process Plant ROM Pad Sediment Dam 3	302771	7799010	Each flow event
Lady Annie Sediment Dam	295307	7811464	Each flow event

NOTE: This does not apply to dams containing hazardous waste.

Schedule C - Table 5 (End of pipe contaminant release limits)

Parameter	Units	Minimum 🖟	Maximum	. Limit Type
pH	pН	6	9 .	
TDS	mg/L	N/A	4000	Hange
Sulphate	mg/L	N/A	1000	Maximum
Arsenic	mg/L	N/A	5	Maximum
Cadmium	mg/L	N/A	0.01	Maximum
Chromium	mg/L	N/A	V.01	Maximum
Cobalt	mg/L;	N/A		Maximum
Copper	mg/L	N/A		Maximum
Lead	mg/L	N/A	1	Maximum
Mercury	mg/L		0.1	Maximum
The second second	-7'	N/A	0.002	Maximum
Zinc	mg/L	N/A	20	Meximum

Contaminant limits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unfiltered) NOTE: This does not apply to dams containing hazardous waste.

Dams Containing Hazardous Waste

(C1-4) Water storages containing process water and storm water contaminated by mining activities must be monitored at the locations and frequencies defined in Schedule C. Table 6 and Schedule I - Map 6 and samples analysed for the parameters defined in Schedule C. Table 7.

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Schedule C - Table 6 (Water Storage Monitoring Locations of Hazardous Dams)

Monitoring point	Easting (Zone 54, AMG 84)	Northing (Zone 54, AMG 84)	Monitoring frequency
PLS Ponds	302000	7797450	Annually, March
ILS Pond	301900	7797450	Annually, March
Raffinate Pond Pre-Settler	301850	7797450	Annually, March
Raffinate Pond	301800	7797450	Annually, March
Storm water Pond 1	301750	7797450	Annually, March
Storm water Pond 2	301750	7797350 *	Annually, March

(C1-5) In the event that the water quality within any dam containing hazardous waste does not comply with the contaminant limits defined in Schedule C - Table 7, implement measures to prevent access by all livestock and minimise access by fauna to the dam.

Schedule C - Table 7 Water Quality Limits for Dams Containing Hazardous Waste)

Parameter	Units	Contaminant Limit	Limit Type
pH	pH	4-9	Range
TDS	mg/L	5,000	Maximum
Boron	mg/L	5	Maximum
Sulphate	mg/L	1000	Maximum
Aluminum	mg/L	5	Maximum
Arsenic	mg/L	0.5	Maximum
Cobalt	mg/L	1	Maximum
Copper	mg/L	1	Maximum
Lead	mg/L	8.1	Maximum
Nickel	mg/L	1	Maximum
Zinc	mg/L	20	Maximum

Contaminant limits based on ANZECC (2000 Livestock drinking water quality and are analysed as total metals (unfiltered).)

(C1-6) The design storage allowance on 1 November of each year for any dam containing hazardous waste constructed or operated within the operational land must comply with Schedule C - Table 8.

Schedule C - Table 8 (Storage Design for Dams Containing Hazardous Waste)

Storage Type	Design Storage Allowance (f)	Spillway Critical Design Storm ⁽⁹⁾	Mandatory Reporting Level (4)
Stormwater Pond 1	t: 100 Year ARI 2 month wet season plus process inputs for the 2 month wet season	1; 1000 Year ARI	1: 100 year ARI
Stormwater Pond 2	t: 100 Year ARI 2 month wet season plus process inputs for the 2 month wet season	1: 1000 Year ARI	1: 100 year ARI

Note (1): The design storage allowance on 1 November of each year for any dam containing hazardous waste constructed within the operational land must be equivalent to the run-off from a 1 in 100 ARI 2 month wet season plus process inputs for the equivalent wet season. Process inputs refers to hazardous mineral process waste and water, which is being disposed of in the storage facility.

Note (2): The critical design storm has a duration that produces the peak discharge for the catchments.

Note (s): The mandatory reporting level refers to the volume below the spillway crest, either the 1: 100 ARI 72 hour storm or the 1:100 ARI wave allowance, whichever is lower.

(C1-7) The spillway for any dam containing hazardous waste, constructed or operated within the operational land must be designed and maintained to withstand the peak flow from the spillway critical design storm defined in Schedule C - Table 8.

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- (C1-8) The holder of the environmental authority must mark the mandatory reporting level defined in Schedule C Table 8 on the spillway of all dams containing hazardous waste within the operational land.
- (C1-9) The holder of the environmental authority must notify the administering authority when the pondage level of the dam containing hazardous waste, reaches the mandatory reporting level defined in Schedule C Table 8.

Stream Sediment Contaminant Levels

- (C2-1) All reasonable and practicable erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.
- (C2-2) The bed of the receiving waters, affected by the release of process water and storm water contaminated by the mining activities must be monitored at the locations and frequencies defined in Schedule C Table 9 and Schedule I Map 7 & 8.

Schedule C - Table 9 (Receiving Stream Sediment Monitoring Locations and Frequency)

Monitoring point	Easting (AGD 84 Zone 54)	Northing (AGD 84.Zone 54)	Monitoring frequency
MKUS 1- reference site *	305625	7797450	May each year
MKUS 2- reference site*	300451	7793920	May each year
MKDS 1- test site	301160	7800135	May each year
MKDS 2- test site	306046	7800375	May each year
MKDS 3- test site	306370	7798363	May each year
MKDS 4- test site	301300	7797255	May each year
A- US1- reference site*	295150	7812680	May each year
A- US2- reference site*	295750	7812480	May each year
A- DS1- test site	294000	7810100	
A- DS2- test site	295500	7810400	May each year May each year

NOTE: This does not apply to dams containing hazardous waste *Reference sites must:

- a) be from the same biogeographical and climatic region;
- b) have similar geology, soil types and topography
- c) contain a range of habitats similar to those at the test site
- d) be of similar flow regime; and
- e) not be so close to the test sites that any disturbances at the test site also result in a change at the reference site.
- (C2-3) Subject to Condition (C2-2), if the stream sediment contaminant trigger levels defined in Schedule C Table 10 are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

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Schedule C - Table 10 (Receiving Stream Sediment Contaminant Trigger Levels)

Parameter	Units	Contaminant trigger levels	Trigger Type
Antimony [†]	. mg/kg dry wt	2.	Maximum
Arsenic ¹	mg/kg dry wt	20	Maximum
Cadmium	mg/kg dry wt	1,5	Meximum
Chromium ¹	mg/kg dry wt	80	Meximum
Copper ²	mg/kg dry wt	100	Maximum
Copper ³	mg/kg dry wt	400	Maximum
Lead ¹	mg/kg dry wt	50	Maximum
Nickel ¹	mg/kg dry wt	21	Maximum
Silver ¹	mg/kg dry wt	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Maximum
Mercury ¹	mg/kg dry wt	0,15	Maximum
Zinc ¹	mg/kg dry wt	200	Maximum

¹ANZECC (2000): ISQG Low trigger values, Sediment Quality Guidelines, Aquatic Ecosystems, Table 3.5.1.
² Site specific trigger value as calculated in section 3.7 of EM Plan September 2006 is for the Mount Kelly Leases only. (ML 5426, ML 5478, ML90168, ML90169, ML90170, ML90178, ML 5435, ML 5446, ML 5447, ML 5448, ML 5474 and ML 5476.)
³ This limit is set for the Lady Annie Lease only (ML90179).

(C2-4) Subject to Condition (C2-2), stream sediment contaminant limits must not exceed the contaminant limits defined in Schedule C -Table 11.

Schedule C - Table 11 (Receiving Stream Sediment Contaminant Limits)

Parameter	, Units	Contaminant limits	Limit Type
Aritimony [†]	Antimony [†] mg/kg dry wt		Maximum
Arsenic [†]	mg/kg dry wt	70	Maximum
Cadmium ¹	mg/kg dry wt	10	Maximum
Chromlum ⁷	mg/kg dry wt	370	Maximum
Copper ²	mg/kg dry wt	120	Maximum
Copper ³	mg/kg dry wt	500	Maximum
Lead	mg/kg dry wt	220	Maximum
Nickel ¹ mg/kg dry wt		52	Maximum
Silver ^t mg/kg dry wt		3.7	Maximum
Mercury			Maximum
Zinc ¹	rng/kg dry wt	410	Maximum

ANZECC (2000): ISOG High trigger values, Sediment Quality Guidelines, Aquatic Ecosystems, Table 3.5.1.

Site specific trigger value as calculated in section 3.6 of EM Plan July 2006 is for the Mount Kelly Leases only. (ML 5426, ML 5478, ML90168, ML90169, ML90170, ML90178, ML 5435, ML 5446, ML 5447, ML 5448, ML 5474 and ML 5476.)

This limit is set for the Lady Annie Lease only (ML90179).

(C2-5) . All stream sediment sampling must be undertaken in accordance with AS 5667.1 Guidance on Sampling of Bottom Sediments of 1998

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Sewage effluent

- All effluent released from the treatment plant must be monitored at the frequency and for the parameters specified in Schedule C - Table 12.
- Sewage effluent used for dust suppression must not exceed sewage effluent release limits defined in Schedule C -(C3-2)
- Sewage Effluent used for dust suppression must not cause spray drift or over spray to any sensitive or commercial (C3-3) place, and must not be applied at a rate that causes pooling, ponding and/or runoff of any effluent irrigated.
- Subject to Conditions (C3-1) to (C3-3) inclusive, sewage effluent from sewage treatment facilities must be reused or evaporated and must not be directly released from the sewage treatment plant to any water way or drainage line other than in accordance with Schedule C - Table 12.

Schedule C - Table 12 (Sewage effluent quality targets for dust suppression)

	;	10001	1	
Faecal Coliforms (organisms/100mL)		40001		
pH (pH Units)	63	,	8.52	Quarterly
Quality characteristics	Minimum	Median	Meximum	
		Release Lim		Monitoring Frequency

A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling with four out of live samples must be less than the maximum

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A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling with four out of five samples must be higher than the minimum but lower than the maximum limit. Release limits sourced from Queensland Water Recycling Guidelines December 2005 Table 6:2b



Groundwater

Groundwater, affected by the mining activities must be monitored at the locations and frequencies defined in (C4-1)Schedule C - Table 13 and Schedule I - Map 9 & 10.

Schedule C - Table 13 (Groundwater Monitoring Monitoring point	Easting (AGD 84 Zone 54)	Northings (AGD 84 Zone 54)	Surface RL	Monitoring frequency
LA MB01 (Process Plant) - reference site	302484	7796800	्∜TBD	Monthly
LA MB02 (Process Plant) - reference site	302891	7797385	TED	Monthly
LA MB03 (Process Plant) - reference site	302128	7797950	твр	Monthly
LA MB04 (Process Plent)	TBD	TBD	TBD	Monthly
LA MB05 (Process Plant)	TBD	TBD	TBD	Monthly
LA MB06 (Process Plant)	TBD	TBD	TBD	Monthly
LA MB07 (Process Plant)	TBD	TBD	TBD .	Monthly
LA MB08 (Process Plant)	TBD	TBD	TBD	Monthly
LA MB09 (Process Plant)	TBD	TBD ·	TBD	Monthly ·
LA MB010 (Process Plant)	TBD ·	TBD	TBD	Monthly
LA MB011 (Process Plant)	TBD	TBD	TBD	Monthly
LA MB012 (Process Plant)	TBD	TBD	TBD	Monthly
LA MB013 (Process Plant)	TBD	TBD	TBD	Monthly
LA MB014 (Process Plant)	TBD	TBD	TBD	Monthly
MK MB01 (Mount Kelly pit area)	305360	7799013	315.467	Quarterly
MK PB01 (Mount Kelly pit area)	305356	7799019	315,424	Quarterly
LA - TE07 (Lady Annie pit area)	295790	7812280	⁵ TBD	Quarterly
LA - TB08 (Lady Annie pit area)	296855	7812247	TBD	Quarterly
LA - TB09 (Lady Annie pit area)	295770	7812179	TBD	Quarterly
LA - TB010 (Lady Annie pit area)	295194	7812022	TBD	Quarterly
LA - TB011 (Lady Annie pit area)	295205	7811904	TBD	Quarterly
LA - TB012 (Lady Annie pit area)	295124	7811933	TBD	Quarterly

NOTE: This does not apply to dams containing hazardous waste

TBD- To be determined Reference sites must:

be from the same biogeographical and climatic region;

have similar geology, soil types and topography contain a range of habitats similar to those at the test site

be of similar flow regime; and not be so close to the test sites that any disturbances at the test site also result in a change at the reference site.

Subject to Condition (C4-1), if the groundwater contaminant trigger levels defined in Schedule C - Table 14 are (C4-2)exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

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Parameter	Units	Minimum	Meximum	Trigger type
pH ¹	рН	6	8	
TDS ²	mg/L	N/A	2000	Range
Sulphate 2	mg/L	N/A	500	Maximum
Aluminium ²	mg/L	N/A	2.5	Maximum
Arsenic ²	mg/L	N/A	0.25	Maximum
Boron ²	mg/L	N/A	0.37	Maximum
Cadmium ²	mg/L	N/A	0.005	
Chromlum ²	mg/L	N/A	0.5	Maximum
Cobatt ²	mg/L	N/A	0.5	Maximum
Copper ²	mg/L	N/A	0.5	
Fluoride ²	mg/L	N/A	1	Maximum Maximum
Lead ²	mg/L	N/A	0.05	
Manganese ³	mg/L	NA	1.9	Maximum Maximum
Mercury ²	mg/L	N/A	0.001	Maximum
Molybdenum ²	mg/L	N/A	0.075	Maximum
Nickel ²	mg/L	N/A	0.5	Maximum
Selenium ²	mg/L	N/A	0.01	Maximum
Zinc ²	mg/L	N/A	10	Maximum

Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000) ² Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking

Subject to Condition (C4-1), groundwater contaminant limits must not exceed the contaminant limits defined in (C4-3)Schedule C -Table 15.

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Water and are to be analysed as total metals (unfiltered).

Sometimes are to be analysed as total metals (unfiltered).

Contaminant trigger limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) and are analysed as Filtered Metals

Schedule C - Table 15 (Groundwater Contaminant Limits)

Parameter Units		Minimum Maximum		Limit Type	
pH [†]	рН	.6	9	Range	
TDS ¹	mg/L	N/A	4000	Maximum	
Sulphate ¹	mg/L	N/A	1000	Maximum	
Aluminum ¹	mg/L	N/A	5	Maximum	
Arsenic ¹	mg/L	N/A	0.5	Meximum	
Boron ¹	mg/L	N/A	5	Maximum	
. Cadmium¹	mg/L	NA	. 0.01.	Maximum .	
Chromium ¹	mg/L	NA.	1	Maximum	
Cobalt ¹	mg/L	WAND STA	. 1	Maximum	
Copper ¹	mg/L	N/A	1	Maximum	
Fluoride ¹	mg/L	N/A	2	Maximum	
Lead ¹	mg/L	N/A	0.1	Maximum	
Manganese ²	mg/L	N/A	2.5	Maximum	
Mercury ¹	mg/L	N/A	0.002	Maximum	
Molybdenum ¹	mg/L	N/A	0.15	Maximum	
Nickel ¹	rng/L	N/A	1	Maximum	
Selenium ¹	mg/L	N/A	0.02	Maximum	
Zinc ¹	mg/L.	N/A	20	Maximum	

¹ Contaminant limits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total Metals (unflitered) ² Contaminant limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) and are analysed as Filtered Metals.

(C4-4) The method of water sampling required by this environmental authority must comply with that set out in the latest edition of the Environmental Protection Agency's Water Quality Sampling Manual.

Voids

- (C5-1) Water quality in mining voids and final voids must be monitored at the locations and frequencies defined in Schedule C Table 16 and for the parameters detailed in Schedule C Table 17.
- (C5-2) In the event that water quality within the mining voids or final voids does not comply with the contaminant limits (defined in Schedule C Table 17, implement measures to prevent access by all livestock and minimise access by fauna to the void.

Schedule C - Table 16 (Voids Monitoring Locations and Frequency)

Lady Annie Pit	Annually	
Mount Clarke Pit	Annually	
Mount Kelly/Flying Horse Pit	Annually	
Monitoring point	Monitoring frequency	

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Schedule C - Table 17 (Void Water Quality Limits)

Parameter	Units	Umit	Limit Type
pH _{ings}	рН	6-9	Range
TDS	mg/L	4000	Maximum //
Sulphate :-	mg/L	. 1000	Maximum
Arsenic	mg/L	0.5	Maximum
Cadmium	mg/L	0.01	Maximum
Chromium : 100	mg/L	1	Maximum
Copper	mg/L	1	Maximum
Lead	mg/L	0.1	Maximum
Mercury	mg/L	0.002	Maximum
Zinc	mg/L	20	Maximum

Contaminant limits are based on ANZECC (2000 Livestock drinking water quality and analysed for total metals (unfiltered))

Acid Rock Drainage and Leachate Management

(C6-1) Subject to limits defined in Schedule C all reasonable and practicable measures must be implemented to prevent hazardous leachate being directly or indirectly released or likely to be released as a result of the activity to any groundwater, watercourse and waters.

END CONDITIONS FOR SCHEDULE C

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Schedule D - Noise and Vibration

Noise Nuisance

- (D1-1) Subject to Conditions (D1-2) and (D1-3) noise from the mining activity must not cause an environmental nuisance to an affected building.
- (D1-2) When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (D1-3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Vibration nuisance

(D2-1) Subject to Conditions (D2-2) and (D2-3) vibration from the mining activity must not cause an environmental nulsance to an affected building.

(D2-2) When requested by the administering authority, vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.

END CONDITIONS FOR SCHEDULE D

Schedule E - Waste

Storage of Tyres

- (E1-1) Tyres stored awaiting disposal or transport for take-back and, recycling, or waste-to-energy options should be stockpiled in volumes less than 3m in height and 200m² in area and at least 10m from any other tyre storage area.
- (E1-2) All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10m radius of the scrap tyre storage area.

Disposal of Tyres

- (E2-1) Disposing of scrap tyres resulting from the mining activities in spoil emplacements is acceptable, provided tyres are placed as deep in the spoil as reasonably practicable.
- (E2-2) Scrap tyres resulting from the mining activities disposed within the operational land must not impede saturated aquifers or compromise the stability of the consolidated landform.

Waste Management

(E3-1) A Waste Management Program, in accordance with the Environmental Protection (Waste Management) Policy 2000, must be included in the Plan of Operations.

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Regulated Waste

- All regulated waste received and removed from the site that is over 250kg in weight, must be transported by a (E 4-1) person who holds a current authority to transport such waste under the provisions of the Environmental Protection Act 1994.
- Except as otherwise provided by the conditions of this authority, all waste removed from the site must be taken (E4-2)to a facility that is lawfully allowed to accept such waste under the provisions of the Environmental Protection
- Where regulated waste is removed from the Project (other than by a release as permitted under another (E4-3)schedule of this environmental authority), records must be kept of the following: the date, quantity and type of waste removed, and

 - name of the waste transporter that removed the waste; and b)
 - the intended treatment/disposal destination of the waste.

Note: Records of documents maintained in compliance with a waste tracking system established under the Environmental Protection Act 1994 or any other law for regulated waste will be deemed to satisfy this condition.

Waste Rock Characterisation

All areas to be mined must undergo a waste rock characterisation survey (where waste rock is to be disposed (E5-1) of on the surface) and a report submitted to the administering authority prior to mining where this survey has not

END CONDITIONS FOR SCHEDULE E



Lady Annie Operations Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No. MIN100401006

Schedule F - Land

Rehabilitation Landform Criteria

(F1-1) All areas significantly disturbed by mining activities must be rehabilitated to a stable landform with a self-sustaining vegetation cover in accordance with Schedule F—Table 1 and 2.

Schedule F - Table 1 (Final Land Use and Rehabilitation Approval Schedule)

Disturbance Caregony	Max. Area		rand Usp		Land Capability	Reference Site	ce Site
	2	DISTURBANCE	POST DISTURBANCE	DISTURBANCE	POST DISTURBANCE	Longifude	Latiflude
Mount Kelly Mining Lease & Infrastructure							
Mount Kelly/Flying Horse Pit	13.2	Habitat	Water Storage	Class 5	Water Storage		
Mount Kelly/Hying Horse Waste Rock Dump	28	Habitat	Habitat	Class 5	Class 5	Hilltop	
•					•	304745	7799087
					•	Mid Slope	
						304800	7798974
		•				Bottom Slope	ec.
						304851	7798977
Mount Kelly/Flying Horse Topsoil Stockpile	1.1	Habitat	Habitat	Class 5	Class 5	304851	7798977
Mount Kelly/Flying Horse Sediment Dams	1.3	Habitat	Water Storage	Class 5	Water Storage		
Mount Kelly/Flying Horse Diversion Drains	5.	Habitat	LIG or diversion Habitat	Class 5	Class 5	304851	7798977
Mount Clarke Pit	9.5	Habitat	Water Storage	Class 5	Water Storage		
Mount Clarke Waste Rock Dump	16.3	Habitat/LIG	Habiltat/LIG	Olass 4 - 5	Class 4 -5	Hillton	
	P					305806	7799695
				. marie - ma		Mid Slope	
				•		305760	7799718
•		•			e. Singa	Bottom Slope	36
	,-	•			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	305741	7799750
Mount Clarke Low Grade Stockpile	5.4	HabitaVI.IG	Habitet/LiG	Class 4 - 5	Class 4 - 5	305741	7799750
Mount Clarke/Flying Horse/Mount Kelly ROM Storage & Live Rehandle	بن تئ	Habitat	Habitat/LIG	Class 4 - 5	Class 4 - 5	302766	7799144

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Lady Annie Operations Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No. MiN100401006 y W

Mount Clarke Topsoil Stockpile	Bally V	2.2			Land Capability	Refere	Reference Site
Mount Glarke Pit Area Sodiment F	o,	Habitat/LiG	Habitat/LiG	Cass 4 - 5	3		
Mount Clarks Don x	9 0	Habitat	Water Storage	Class 4 - 6	Water Storage	305741	7799750
Wount Clarke	4.0	Habitat	Water Storage	Class 4 - 5	Water Storage		
Diversion/Interception/Sediment Dam Drains	3.2	Habitat	LIG or diversion Habitat	Class 4 - 5	Class 4 - 5		
Section 1 Course	8. 8.	Existing tracks or	Tracks for grazier or	- Class 4 - 5	Class 4 . 5	305741	7799750
Seware Blost of the Actinies	က	0 1		Z 2000		303422	7797704
orașe i analia rolla	0.2	97	9	Ciass +	Class 4	303422	7797704
now rad — at process plant.	7.8	517	2 9	Ciass 4	Class 4	303422	7797704
recess plant and associated buildings	3.3	SIT	<u> </u>	Class 4 - 5	Class 4 -5	302766	7799144
Overland Conveyor	1.8			Class 4	Class 4	302766	7799144
Workshop/Unice Access Circuit Area	9	T.G	<u>=</u>	Č		303422	7797704
Heap Leach Pads - Stage 1 and 2	43.2	1.16	0 2 2 2 2 2 2 3	Class 4	Class 4	302659	7797575
Process Water Ponds PLS, ILS and	3.4	977	Mathematics	Class 4	Class 4-5	302659	7797575
Stormwater Ponds 1 and 2	7.7	<u>.</u>	water storages	Class 4	Water storages		
Stormweler Dond - III.	1111	5	Water storages	Class 4	Water storages		
Raw Water Pond	0.7	FIG	LIG or diversion	Class 4			
	9 Ö	רפ	LIG/Water storage	Class 4	in.	302659	7797575
Process Alex Lopson Stockpiles	9.7	TIG.	917	Case A		200	rrarara
Drown of latter Diameter Diversions	2.7	97	LIG or diversion	Class 4		302659	7797575
Rult Ellica III.	-	5]7	LG or pends	Class 4		302659.	7797575
V TIII SUCKPIIIE	2.6	DI LIG		Class 4 - 5	Class 4 - 5		
Powerings and Powerings (on Mt Kelly MLs)	-	LIG/Habitat	Permanent	Class 4		302659	7797575
Pipelines and Power lines on ML90178	88	LIG/Hahitat	Infrastructure	Crass 4 - 0	Permanent infrastructure		
			Leumanem	Class 4 - 5	Dermonne		

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Disturbance	Max. Area				Land Capability	Reference Sife	se Sife
12	6	LIG/Habitat	Permanent Infrastructure	Class 4 - 5	Permanent infrastructure		
Rubbish Dumps	0.2	רופ	91	Class 4 - 5	Class 4 - 5	303422	7797704
Concrete Batch Plant	0.3	PI TIE	9J	Class 4	Class 4	302659	7797575
Fuel Storage Area	0.3	97	FIG	Class 4	Class 4	302659	7797575
Contractor Laydown Area	4.3	. LIG	୭୮	Class 4	Class 4	302659	7797575
Exploration	ī	PIG	LIG/Habitat	Class 4 - 5	Class 4 - 5	303422	7797704
Construction Access (net of specific areas)	59.9	91	LIG/Habitat	Class 4 - 5	Class 4 - 5	303422	7797704
Gravel Borrow Pits (on and off MIL)	6.7	LIG/Habitat	LIG/Habitat	Class 4 - 5	Class 4 - 5	303422	7797704
Upgrade to Access Road (off ML)	2.0	LIG/Habitat	Permanent access road for landholder	Class 4 - 5	Permanent access road for landholder		
Total	377.1						
Lady Annie Mining Lease				· ·			
Lady Annie Pit	36.1	Disturbed	Water Storage	Class 5	Water Storage		
FIOM pad	1.5	DO.	LIG/Habitat	Class 4	Class 4	295496	7810802
Waste Rock Dump	61.8	ΘΠ	LIG/Habitat	Class 4 - 5	Class 4	295496	7810802
Top Soll Stores	12.1	97	LIG/Habitat	Class 4 - 5	Class 4	295496	7810802
Low Grade Ore Stockpile	9.5	EG	LIG/Habitat	Class 4	Class 4	295496	7810802
Sediment Pond	6.	e l	LIG/Habitat	Class 4	Water Storage		
Retention Basin	9.0	LIG/Habitat	LIG/Habitat	Class 4-5	Water Storage		
Pit Haul Road	8,	LIG/Habitat	LIG/Habitat	Class 4-5	Class 4-5	295496	7810802
Diversion Channels	1.7	LIG/Habitat	LIG/Habitat	Class 4-5	Permanent Diversion		-
Lady Armie Mine Construction Area (net of specific areas)	22.3	LIG/Habitat	LIG/Habitat	Class 4-5	Class 4-5	295496	7810802
Upgrade to Hauf / Access Road (off ML)	14.0	LIG/Habitat	Permanent access road for landholder	Class 4-5	Permanent access road for landholder		
Old Open Cut and Sanderson's Shaft	D.3	Existing Disturbance	Habitat/LIG	Existing Disturbance	Class 4-5	295496	7810802
Old Tailings Areas	0,1	Existing Disturbance	Habitat/LIG	Existing Disturbance	Class 4 -5	295496	7810802
	•		•				

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Environmental Authority No. MINT08401006 Lady Annie Operations Pty Ltd & Savannah Resources Pty Ltd

Disturbance Mas. Land Use Land Use Land Capability Reference Site Exploration Tracks and Drill Pads 12.4 Existing Habitat/Lig Existing Class 4 -5 295496 781080 Rubbish Tip 0.4 Existing Habitat/Lig Existing Class 4 -5 295496 781080 Exploration Sample Yand 0.3 Existing Habitat/Lig Existing Class 4 -5 295496 781080 Total 0.6 Existing Habitat/Lig Existing Class 4 -5 295496 781080 Total 0.6 Existing Habitat/Lig Existing Class 4 -5 295496 781080 Total 177.6 Disturbance Habitat/Lig Existing Class 4 -5 295496 781080	1		20	22	N	N
Disturbance Category May Land Use Land Use Poloration Tracks and Drill Pads 12.4 Existing Habitat/LiG Existing Class 4-5 2 Individence of Shed 0.4 Existing Habitat/LiG Existing Class 4-5 2 Individence of Shed 0.3 Existing Habitat/LiG Existing Class 4-5 2 Individence of Shed 0.6 Existing Habitat/LiG Existing Class 4-5 2 Individence of Shed 0.6 Existing Habitat/LiG Existing Class 4-5 2 Individence of Shed 0.6 Existing Habitat/LiG Existing Class 4-5 2 Individual of Sample Yard 0.6 Existing Habitat/LiG Existing Class 4-5 2		tce Site	7810802	7810802	7810802	7810802
Disturbance Cefegory May Land Use Ploration Tracks and Drill Pads 12.4 Existing Habitat/LiG Existing Indication Tracks and Drill Pads 12.4 Existing Habitat/LiG Existing Indication Sample Yard 0.3 Existing Habitat/LiG Existing Indication Sample Yard 0.6 Existing Existing		Referen	295496	295496	295496	295496
Disturbance Category Max. Existing Habitat/LiG Existing Poloration Tracks and Drill Pads 12.4 Existing Habitat/LiG Existing Industry Tip 0.4 Existing Habitat/LiG Existing Industry Sample Yard 0.6 Existing Habitat/LiG Existing Industribance tall 0.6 Existing Habitat/LiG Existing Insturbance tall 0.6 Existing Habitat/LiG Existing	d Cepebilin		Class 4 -5	Class 4 -5	Class 4 -5	Class 4 -5
Disturbance Area Existing bloish Tip Caregory Area Existing bbish Tip Care Caregory Care Care Care Care Care Care Care Care	4	Existing	Disturbance	Disturbance	Disturbance	Disturbance
Disturbance Max. Category Ploration Tracks and Drill Pads 12.4 Existing Industry In Shed 0.3 Existing Industries Shed Instrumence O.3 Existing Industries Instrumence O.3 Existing Industries Instrumence O.6 Existing Industries Instrumence Instr		Habitat/LiG	Hahitetti		nabrar/LiG	naoitat/LG
Disturbance Category Ploration Tracks and Drill Pads Ibbish Tip re Shed cloration Sample Yard tal		Existing Disturbance	Existing	Existing	Existing	Listurbance
Disturbal Categor Ploration Tracks and Disturbal Districts and Districts		12.4	0.4	0.3	9.0	177.6
	Disturbance <u>Category</u> Exploration Tracks and Drill Pads		Core Shed	Exploration S	Total	

LIG- Low Intensity Grazing

Classes are derived from the Department of Minerals and Energy's Land Suitability Assessment Techniques (1995)

Progressive refiabilitation must commence when areas become available within the operational land. (F1-3)

Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the The holder of this environmental authority must rehabilitate all existing land disturbances located within the boundary leases of ML90179 (Lady Annie) as identified in Table 1. The holder of this environmental authority must ensure these areas of existing land disturbance, where not otherwise disturbed and rehabilitated under

(F)



Lady Annie Operations Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No. MIN100401006

Schedule F - Table 2 (Landform Design)

Disturbance type	Slope range (%)	Projective surface area (ha)
Waste Rock Dumps	33%-76% (1:3 to angle of repose)	121
Heap Leach Pads	<33% or 1:3	43.2
ROM Pads	33%-76% (1:3 to angle of repose)	14.8

Residual Void Outcome

(F2-1) Residual voids must not cause any serious environmental harm to land, surface waters or any recognised groundwater aquifer, other than the environmental harm constituted by the existence of the residual void itself and subject to any other condition within this environmental authority.

Dams Containing Hazardous Waste

Description of Dam

(F3-1) The construction or operation of any dam containing hazardous waste within the operational land must comply with Schedule F - Table 3.

Schedule F - Table 3 (Size and Purpose of Dams Containing Hazardous Waste)

Name of dam containing hazardous waste ⁽⁸⁾	Maximum surface area of dam (ha)	Maximum volume of dam (m²)	Maximum depth of dam (m) ^(e)	Purpose of dam ⁽⁴⁾
Process Water Ponds (Raffinate Pre-Settler, Raffinate, ILS and PLS)	3.4	53,475	4.5	Storage of Process Solutions
Heap Leach Pads	43.2	N/A	N/A	Storage of Process Solutions
Stormwater Pond 1 (Stage 1 only)	6.47	303,625	6.35	Storage of storm water runoff from processing area
Stormwater Pond 1 & 2 (Stage 2)	10.4	467,720	6.35	Storage of storm water runoff from processing area

Note ⁽¹⁾: The name of the dam containing hazardous waste should refer to the name of the dam e.g. process residue facility and decant dam.

Note (2): For dams that do not require a dam wall, input the maximum void depth e.g. where dams are formed by excavating below the land surface or backfilling a residual void.

Note (3): Purpose of the dam should outline the designed function, e.g. "the permanent containment of tailings resulting from the extraction of nickel, cobalt and other metals at the XYZ Refinery".



Environmental Protection Agency

Location of Dam

(F3-2) The location of any dam containing hazardous waste within the licensed place must be located within the polygonal area defined by the co-ordinates defined in Schedule C-Table 4 -Map 4.

Schedule F — Table 4 (Location of Dams Containing Hazardous Waste)

Name of dam containing hazardous waste	Easting(AMG 84, Zone 54). ⁽¹⁾	Northing (AMG, 84, Zone 54). ⁽⁰⁾
PLS Ponds, ILS. Raffinate Pre-settler and Raffinate Pond	301760 302065 302035 301760	7797640 7797640 7797310 7797310
Stormwater Pond 1 and 2	301470 301760 301760 301470	7797640 7797640 7797110
Heap Leach Pads	302065 302720 302720 302720 302035	7797110 7797945 7797945 7796825 7796825

Note (11): A minimum of 3 control points is required to constrain the location of all activities associated with the dam containing hazardous waste. Additional infrastructure which forms part of any dam containing hazardous waste may include appurtenant works consisting of tailings discharge pipelines, seepage collection systems, runoff diversion bunds, containment systems, pressure relief wells, decant and recycle water systems.

Standards and Criteria

- (F3-3) The holder of the environmental authority must design, construct, repair, maintain, operate and decommission the dams defined in Schedule F Table 3 and 4 in accordance with an acknowledged design plan that must comply with the standard environmental conditions in the "Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste".
- (F3-4) The holder of the environmental authority must design, construct, and operate all low hazardous dams containing hazardous waste and non-hazardous dams in accordance with the criteria outlined in Appendix B of the Code of Environmental Compliance for Mining Activities.

inspection of Dams

- (F3-5) High hazard dams containing hazardous waste shall be inspected by a Registered Professional Engineer Queensland (RPEQ) prior to 1 November each year or at any time if alarming, unusual or otherwise unsatisfactory conditions are observed.
- (F3-6) For each inspection, the engineer shall assess the condition of the dam and its foundations, determine the hydraulic adequacy of the dam and assess the adequacy of the works with respect to dam safety.
- (F3-7) For each inspection, two copies of the engineer's report and any recommendations as to measures to be taken to ensure the integrity of the dam shall be furnished to the administering authority within 28 days of the inspection.

Decommissioning of Dam - Objective

(F3-8) Dams containing hazardous waste must not be abandoned and must be decommissioned to a situation where water can no longer be stored in the dams. The dams and their contained waste(s) must be stable, whereafter the dams are no longer dams and they become landforms on the operational land and must comply with the rehabilitation requirements of this environmental authority.

Decommissioning of Dam - Documentation and Compliance

(F3-9) Decommissioning activities for dams must be documented in detail in the plan of operations under which the activities are to occur. Where the detailed documentation is not already contained in the Design Plan for the



dam, the detailed documentation is considered to be an amendment to the design plan and must be submitted as an amendment to the design plan required by the "Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste".

Infrastructure

(F4-1) All infrastructure, constructed by or for the environmental authority holder during the mining activities including water storage structures, must be removed from the site prior to mining lease surrender, except where agreed in writing by the post mining landowner / holder.

NOTE: This is not applicable where the landowner / holder is also the environmental authority holder.

Contaminated Lands

- (F5-1) A register and map of all potentially contaminated sites and any remediation details, must be kept on site, updated regularly, and included in each Plan of Operations.
- (F5-2) A Spillage Management Plan and an Emergency Plan for all hazardous materials stored on-site, together with a description of suitable equipment and training must be updated and included with each Plan of Operations.

END CONDITIONS FOR SCHEDULE F

Schedule G - Community

Complaint Response

(G1-1) All complaints received must be recorded including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority on request.

END CONDITIONS FOR SCHEDULE G

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Schedule H - Definitions

"acceptance criteria" means the measures by which the actions implemented to rehabilitate the land are deemed to be complete. The acceptance criteria indicate the success of the rehabilitation outcome or remediation of areas which have been significantly been disturbed by the mining activities. Acceptance criteria may include information regarding

- vegetation establishment, survival and succession;
- vegetation productivity, sustained growth and structure development;
- fauna colonisation and habitat development;
- ecosystem processes such as soil development and nutrient cycling, and the recolonisation of specific fauna groups such as collembola, mites and termites which are involved in these processes;
- microbiological studies including recolonisation by mycorrhizal fungi, microbial biomass and respiration;
- effects of various establishment treatments such as deep ripping, topsoil handling, seeding and fertiliser application on vegetation growth and development; erigitation per season de la company
- resilience of vegetation to disease, insect attack, drought and fire;
- vegetation water use and effects on ground water levels and catchment yields.

affected building"

- for noise means any building or any part of a building, for example the building from which the noise is made, at which the noise can be heard.
- for vibration means any building or any part of a building, for example the activity from which the vibration is made, at which the vibration can be felt.

"ambient (or total) noise" at a place, means the level of noise at the place from all sources (near and far), measured as the Leg for an appropriate time interval.

"appropriately qualified person" means any person who conforms to the EPA operational policy for an "appropriately qualified person (analyst)" in accordance with Section 490(7) of the Environmental Protection Act 1994.

"ARD" means acid rock drainage and refers to the low pH, high heavy metal pollutant typical of sulphidic mine wastes, and most commonly associated with the production of ferrous iron and sulphuric acid through the oxidation of sulphide minerals.

"authority" means environmental authority (mining activities) under the Environmental Protection Act 1994.

"blasting" means the use of explosive materials to fracture-

- (a) rock, coal and other minerals for later recovery; or
- (b) structural components or other items to facilitate removal from a site or for reuse.

"building" includes a structure of any type and part of a building or structure.

"commercial place" means a work place used as an office or for business or commercial purposes, which is not part of the mining activity and does not include employees accommodation or public roads.

"competent person" means a person with the demonstrated skill and knowledge required to carry out the task to a standard necessary for the reliance upon collected data or protection of the environment.

"dam" means a containment or proposed containment whether permanent or temporary, which is designed to contain, divert or control flowable substances. However this does not include a fabricated or manufactured tank or container designed to a recognised standard.

"design plan" in the context of a dam design is the documentation required under the Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, the procedures and criteria to be used for operating the dam and the decommissioning and rehabilitation objectives in terms of procedures, works and outcomes at the end of dam life, The documents can include design and investigation reports, drawings, specifications and certifications.

"environmental authority holder" means the holder of this environmental authority.

"flow event" means a flow event producing sufficient water to permit a monitoring creek bed flow of 30cm or more at the sampling station.

"flowable substance" means matter or mixture of materials which can be forced to or otherwise flow under any conditions possible in a situation. It includes water, other liquids or a mixture that includes water or any other liquid or suspended

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"hazardous waste" means any substance, whether liquid, solid or gaseous, derived by or resulting from, the processing of minerals that tends to destroy life or impair or endanger health.

"infrastructure" means water storage dams, roads and tracks, buildings and other structures built for the purpose of mining activities but does not include facilities required for the long term management of mining impacts or the protection of potential resources. Such facilities include dams containing hazardous waste, waste rock dumps, voids, or ore stockpiles and buildings or other structures whose ownership can be transferred and which have a residual beneficial use for the next owner of the operational land or the background land owner.

"LA 10, adj. 10 mins" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10-minute measurement period, using Fast response.

"LA 1, adj, to mins" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10-minute measurement period, using Fast response.

"L_{A, max adj, T}" means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response.

"land" in the "land schedule" of this document means land excluding waters and the almosphere.

"land capability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land suitability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land use" term to describe the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

"leachate" means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

"mandatory reporting level" means the volume below the spillway crest, equivalent to the lower of the AEP, 72 hour storm or the AEP wave allowance (AEP is the annual exceedence probability).

"mineral" means a substance which normally occurs naturally as part of the earth's crust or is dissolved or suspended in water within or upon the earth's crust and includes a substance which may be extracted from such a substance, and includes—

- (a) clay if mined for use for its ceramic properties, kaolin and bentonite;
- (b) foundry sand;
- (c) hydrocarbons and other substances or matter occurring in association with shale or coal and necessarily mined, extracted, produced or released by or in connection with mining for shale or coal or for the purpose of enhancing the safety of current or future mining operations for coal or the extraction or production of mineral oil therefrom;
- (d) limestone if mined for use for its chemical properties;
- (e) marble;
- (f) mineral oil or gas extracted or produced from shale or coal by in situ processes;
- (q) peat;
- (h) salt including brine;
- (i) shale from which mineral oil may be extracted or produced;
- (i) silica, including silica sand, if mined for use for its chemical properties;
- (k) rock mined in block or slab form for building or monumental purposes;
- but does not include-
- (i) living matter;
- (m) petroleum within the meaning of the Petroleum Act 1923;
- (n) soil, sand, gravel or rock (other than rock mined in block or slab form for building or monumental purposes) to be used or to be supplied for use as such, whether intact or in broken form;
- (o) water.

"noxious" means harmful or injurious to health or physical well being, other than trivial harm.

"offensive" means causing reasonable offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive, other than trivial harm.

"peak particle velocity (ppv)" means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time; usually measured in millimetres/second (mms 1)

"protected area" means - a protected area under the Nature Conservation Act 1992; or

- a marine park under the Marine Parks Act 1992; or
- a World Heritage Area.

"progressive rehabilitation" means rehabilitation (defined below) undertaken progressively or a staged approach to rehabilitation as mining operations are ongoing.

"reference site" (or analogue site) may reflect the original location, adjacent area or another area where rehabilitation success has been completed for a similar biodiversity. Details of the reference site may be as photographs, computer generated images and vegetation models etc.

"rehabilitation" the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

"representative" means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

"residual void" means an open pit resulting from the removal of ore and/or waste rock which will remain following the cessation of all mining activities and completion of rehabilitation processes.

"self sustaining" means an area of land which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

"sensitive place" means:

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- an educational institution; or
- a medical center or hospital; or
- a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- a public park or gardens.

significant disturbance" - includes land

- (a) If it is contaminated land; or
- It has been disturbed and human intervention is needed to rehabilitate it
 - to a state required under the relevant environmental authority; or Ĭ.
 - if the environmental authority does not require the land to be rehabilitated to a particular state to its state Ħ. immediately before the disturbance.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpiled
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to crosion; (vegetation & topsoil)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or take where mining activities occur-
- areas submerged by tailings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining activities have ceased: or
- areas where land has been contaminated and a sultability statement has not been issued.

However, the following areas are not included:

- areas off lease (e.g. roads or tracks which provide access to the mining lease)
- areas previously significantly disturbed which have achieved the rehabilitation outcomes:
- by agreement with the EPA, areas previously significantly disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (reads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the EPA;
- disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

"spillway" means passage or outlet from the dam through which surplus water flows.

"stable" means land form dimensions are or will be stable within tolerable limits now and in the foreseeable future. Stability includes consideration of geotechnical stability, settlement and consolidation allowances, bearing capacity (traffic ability), erosion resistance and geochemical stability with respect to seepage and contaminant generation.

"sultably qualified and experienced person" means a person who is a Registered Professional Engineer of Queensland under the provisions of the *Professional Engineers Act 1988* or a Corporate Member of the Institution of Engineers Australia or holds equivalent professional qualifications and has the following:

- (a) knowledge of engineering principles related to the structures, geomechanics, hydrology, hydraulics, chemistry and environmental impact of dams; and
- (b) at least a total of five years of suitable experience and demonstrated expertise in at least four of the following areas:
 investigation, design or construction of dams;
 - operation and maintenance of dams;
 - geomechanics with particular emphasis stability, geology and geochemistry;
- hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology;
- hydraulics with particular reference to sediment transport and deposition, erosion control, beach processes;
- hydrogeology with particular reference to seepage, groundwater,
- solute transport processes and monitoring thereof; or
- dam safety.

"tolerable limits" means that a range of values could be accepted to achieve an overall environmental management objective (eg. a range of settlement of a tailing capping could still meet the objective of draining the cap quickly, preventing pondage and limiting infiltration and percolation).

"trivial harm" means environmental harm which is not material or serious environmental harm and will not cause actual or potential loss or damage to property of an amount of, or amounts totalling more than \$5,000.

"watercourse" - Means a river, creek or stream in which water flows permanently or intermittently in a visibly defined channel (natural, artificial or artificially improved) with:

- (a) continuous bed and banks;
- (b) an extended period of flow for some months after rain ceases, and
- (c) an adequacy of flow that sustains basic ecological processes and maintains biodiversity.

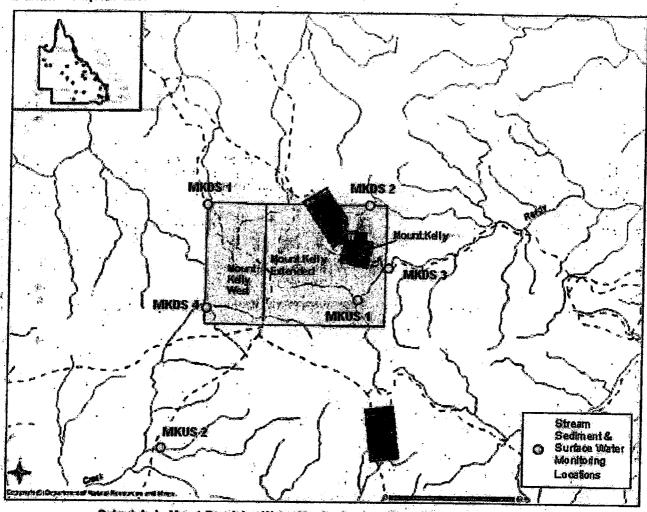
"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea) or any part-thereof.

END CONDITIONS FOR SCHEDULE H

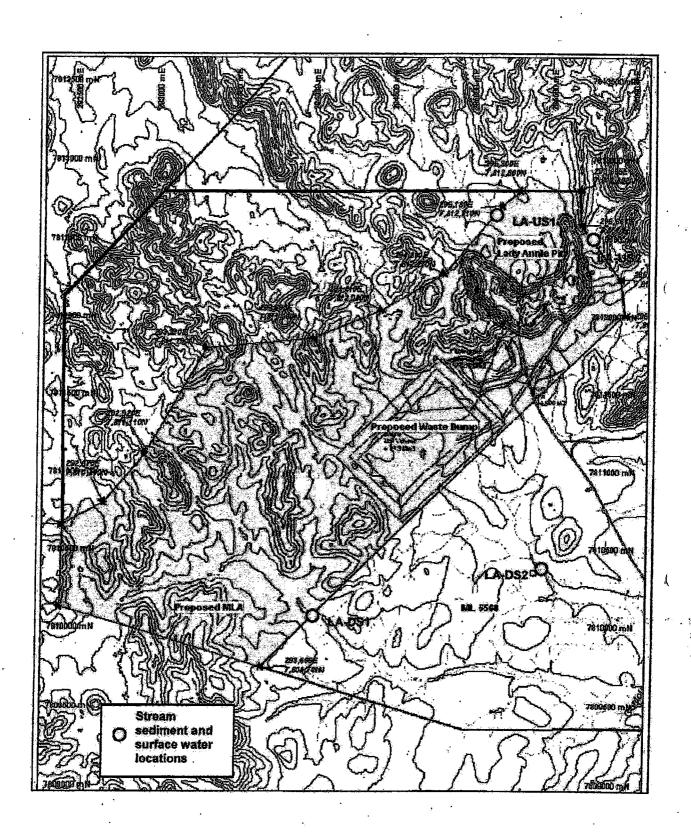
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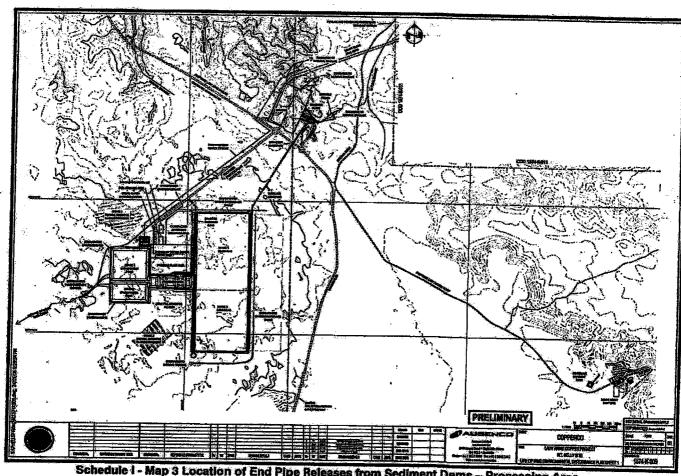
Schedule I - Maps / Plans



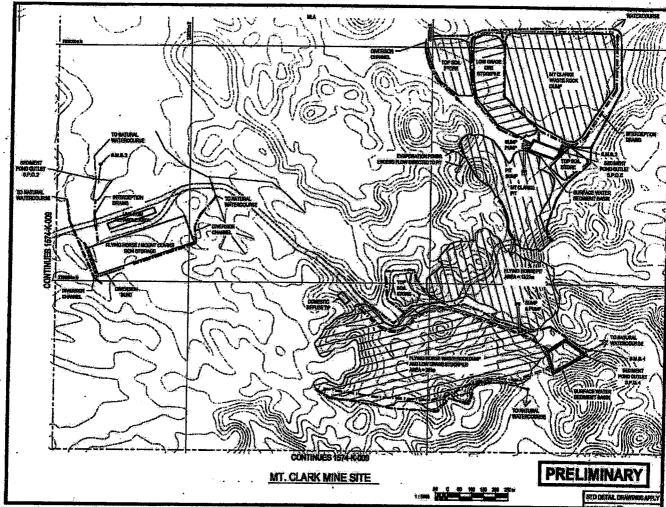
Schedule I - Map 1 Receiving Water Monitoring Locations (Mount Kelly Leases)



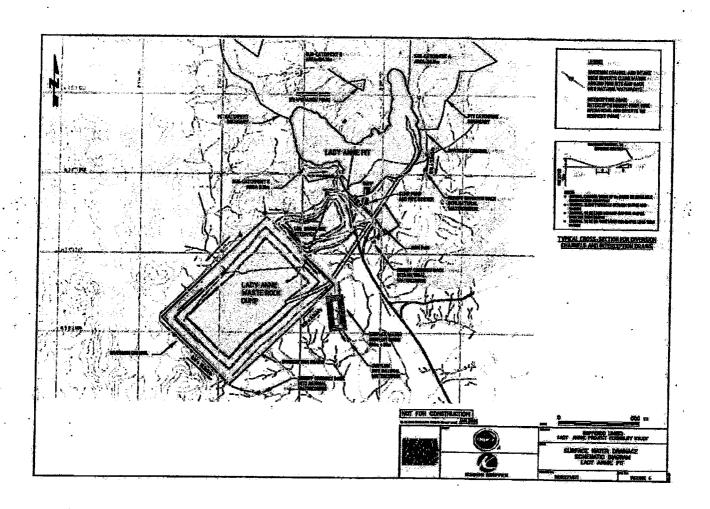
Schedule I - Map 2 Receiving Water Monitoring Locations (Lady Annie)



Schedule I - Map 3 Location of End Pipe Releases from Sediment Dams

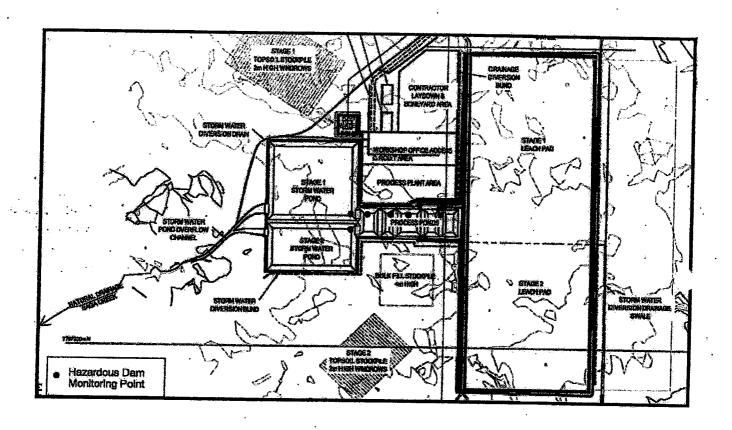


Schedule I - Map 4 Location of End Pipe Releases from Sediment Dams - Mining Area



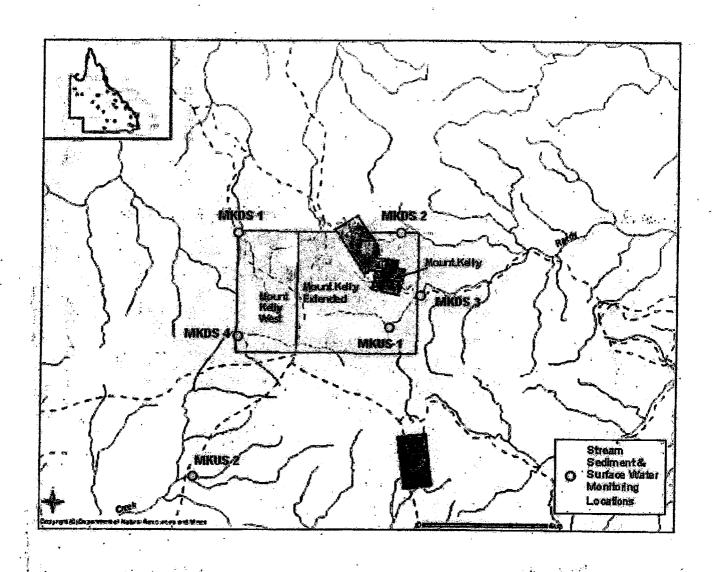
Schedule I - Map 5 Location of End Pipe Releases from Sediment Dams - Lady Annie





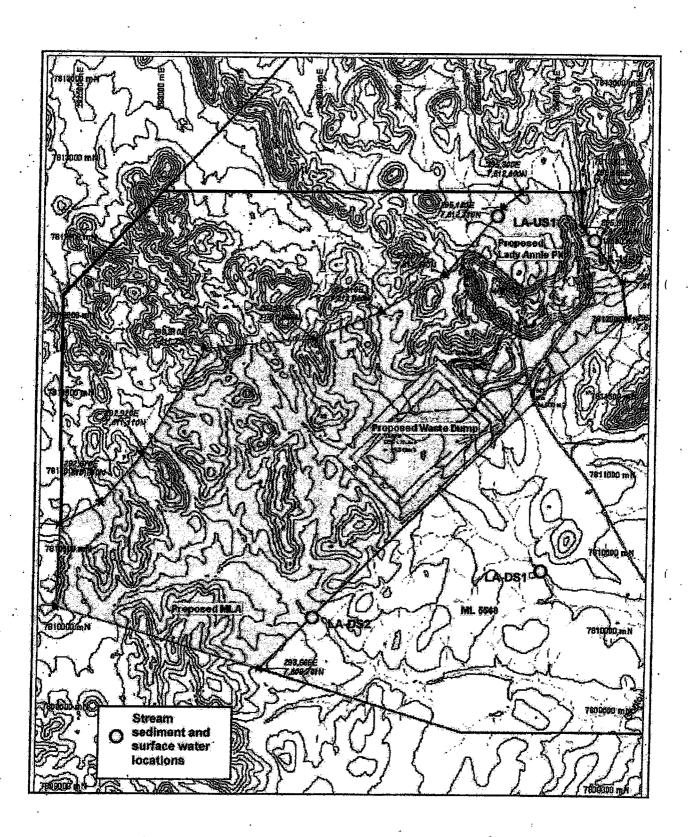
Schedule I - Map 6 Location of Hazardous Dams





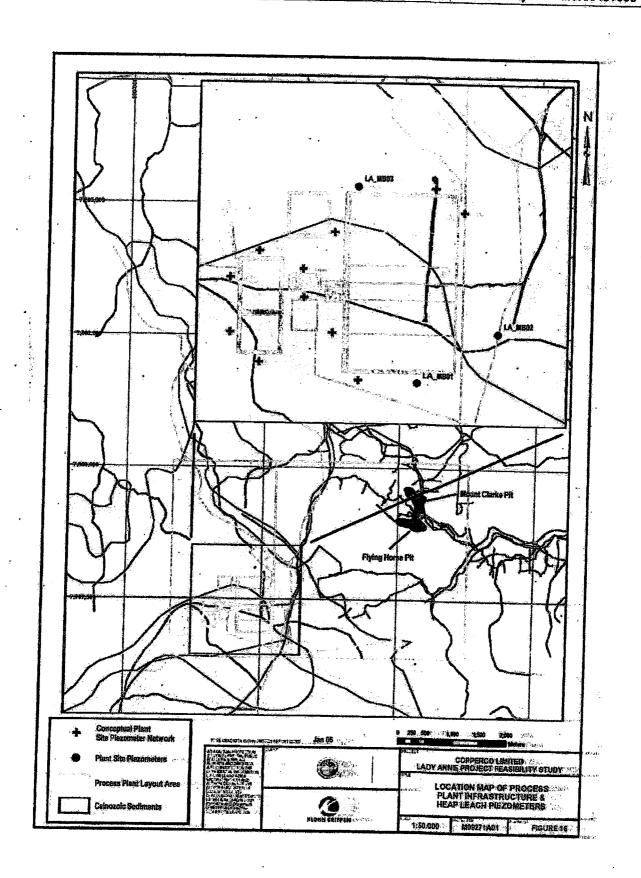
Schedule I - Map 7 Stream Sediments Monitoring Locations (Mount Kelly)



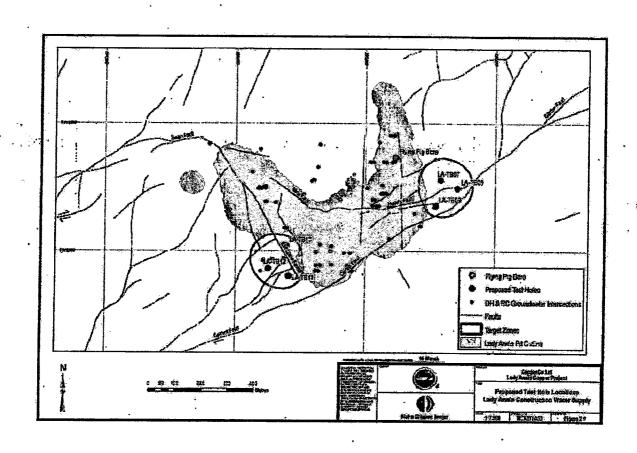


Schedule I - Map 8 Stream Sediments Monitoring Locations (Lady Annie)





Schedule I. Map 9 Groundwater Monitoring Locations (Mount Kelly)



Schedule I - Map 10 Groundwater Monitoring Locations (Lady Annie)

END CONDITIONS FOR SCHEDULE I



Enquiries
Telephone
Your reference
Our reference

Jodie Marlow (07) 4744 7820 MIN100401006 ISA658

Environmental Protection Agency

Incorporating the Queensland Parks and Wildlife Servic

26 September 2006

Wayne Frampton
Mining Registrar
Department of Natural Resources Mines and Water
PO BOX 334
Mount Isa Old 4825

Dear Wayne

Re: Mount Kelly Amendment Application- EA MIN100401006 Reefway Pty Ltd and Savannah Resources Pty Ltd

The Environmental Protection Agency (EPA) received an amendment application on 14 September 2006.

A draft environmental authority (MIN100401006) for this application has been prepared by this agency and is attached. The environmental authority holder is now required under section 254 of the *Environmental Protection Act 1994* to give notice of their application to amend the environmental authority to each affected person for each mining lease and publish the notice at least once in a newspaper circulating in the locality of the land to which the mining lease is subject.

This amendment application includes the addition of mining lease application 90178 to the Mount Kelly Project which consists of the following mining leases: ML 5426, ML 5435, ML 5446, ML 5447 ML 5448, ML 5474, ML 5476, ML 5478, ML 90168, ML 90169, and ML 90170. The attached environmental authority is also the draft environmental authority for this mining lease application.

Should you have any further enquiries please do not hesitate to contact Jodie Marlow on 07 4744 7820.

Yours sincerely

s.49 - Signature

District Manager
Environmental Operations Division
North West District
Enc

Natural Resources, Mines and Water

2 7 SEP 2006

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. ABN 87 221 158 786

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Environmental Authority No. MIN100401006 (mining activities)

Section 228 Environmental Protection Act 1994

This environmental authority is granted under the Environmental Protection Act 1994 and includes conditions to minimise environmental harm caused, or likely to be caused, by the authorised mining activities. An environmental authority (mining activities) may be for mining activities authorised (under the Mineral Resources Act 1989) to occur under one of the following mining tenements: a prospecting permit; mining claim; exploration permit; mineral development licence; or mining lease. In general, a mining activity means: prospecting, exploring, mining; or processing minerals; remediation; rehabilitation; and includes facilitation and supporting activities and any action taken to prevent environmental harm.

Under the provisions of the *Environmental Protection Act 1994* this environmental authority is issued to:

Reefway Pty Ltd Level 22 Allendale Square 77 St Georges Terrace Perth WA 6000

Savannah Resources Pty Ltd Level 22, Allendale Square 77 St Georges Terrace Perth WA 6000

in respect of carrying out activities as part of the following mining project:

Type of environmental authority (mining activities)	Authorised mining tenements	Location
Mining Leases	ML 5426	100km north of Mount Isa
	ML 5436	
	ML 5446	
	ML 5447	÷
	ML 5448	
	ML 5474	
	ML 5476	
	ML 5478	
	ML90168	
	ML90189	
	ML90170	
	ML90178	

The mining activities are authorized to the extent defined in Schedule 6 Section 14(c) of the Environmental Protection Regulation 1998.

This environmental authority is subject to the conditions set out in the attached schedules. The anniversary date of this environmental authority is 24 July each year.

This environmental authority takes effect from **X 2006** for granted tenements and will take effect for ML 90168, . 90170, 90169 and ML90178 upon date of grant of tenure.

Geoff Metcaife
District Manager
Mt Isa District, Northern Region
Delegate of Administering Authority
Environmental Protection Act 1994

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environmental licences and permits

This environmental authority incorporates the following schedules:

Schedule A

General

Schedule B

Air

Schedule C

Water

Schedule D

Noise and Vibration

Schedule E

Waste

Schedule F

Land

Schedule G

Community

Schedule H

Definitions

Schedule I

Maps / Plans

Schedule A - General

Financial Assurance

Provide a financial assurance in the amount and form required by the administering authority prior to the (A1-1)commencement of activities proposed under this environmental authority.

NOTE: The calculation of financial assurance for condition (A1-1) must be in accordance with Guideline 17 and may include a performance discount. The amount is defined as the maximum total rehabilitation cost for complete rehabilitation of all disturbed areas, which may vary on an annual basis due to progressive rehabilitation. The amount required for the financial assurance must be the highest Total Rehabilitation Cost calculated for any year of the Plan of Operations and calculated using the formula: (Financial Assurance = Highest Total Annual Rehabilitation Cost x Percentage Required).

The financial assurance is to remain in force until the administering authority is satisfied that no claim on the (A1-2)assurance is likely.

NOTE: Where progressive rehabilitation is completed and acceptable to the administering authority, progressive reductions to the amount of financial assurance will be applicable where rehabilitation has been completed in accordance with the acceptance criteria defined within this environmental authority.

Maintenance of Measures, Plant and Equipment

- (A2-1)The environmental authority holder must ensure:
 - that all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority are installed;
 - that such measures, plant and equipment are maintained in a proper condition; and
 - that such measures, plant and equipment are operated in a proper manner.

Monitoring

- Record, compile and keep for a minimum of five years all monitoring results required by this environmental (A3-1)authority and make available for inspection all or any of these records upon request by the administering authority.
- (A3-2)Where monitoring is a requirement of this environmental authority, ensure that a competent person(s) conducts all monitoring.

Storage and Handling of Flammable, Combustible and Corrosive Liquids

- Spillage of all flammable and combustible liquids must be contained within an on-site containment system and (A4-1)controlled in a manner that prevents environmental harm (other than trivial harm) and maintained in accordance with Section 5.8 of AS 1940 - Storage and Handling of Flammable and Combustible Liquids of 2004.
- The on-site storage of corrosive liquids must be in accordance with Section 5.7 of AS 3780 Storage and (A4-2)Handling of Corrosive Substances 1994.

Definitions

(A5-1) Words and phrases used throughout this environmental authority are defined in Schedule H — Definitions. Where a definition for a term used in this environmental authority is sought and the term is not defined within this environmental authority, the definitions in the *Environmental Protection Act 1994*, its Regulations and Environmental Protection Policies must be used.

END CONTIONS FOR SCHEDULE A

Schedule B - Air

Dust Nuisance

- (B1-1) Subject to Conditions (B1-2) and (B1-3) the release of dust or particulate matter or both resulting from the mining activity must not cause an environmental nulsance at any sensitive or commercial place.
- (B1-2) When requested by the administering authority, dust and particulate monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nulsance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B1-3) If the environmental authority holder can provide evidence through monitoring that the following limits are not being exceeded then the holder is not in breach of (B1-1):
 - a) Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air Determination of particulates Deposited matter Gravimetric method of 1991.
- (B1-4) If monitoring indicates exceedence of the relevant limits in Condition (B1-3), then the environmental authority holder must:
 - a) address the complaint including the use of appropriate dispute resolution if required; or
 - b) immediately implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nulsance.

Odour Nuisance

- (B2-1) Subject to condition (B2-2), the release of noxious or offensive odour(s) or any other noxious or offensive airborne contaminant(s) resulting from the mining activity must not cause an environmental nulsance at any sensitive or commercial place.
- (B2-2) When requested by the administering authority, odour monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nulsance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B2-3) If monitoring indicates Condition (B2-1) is not being met then the environmental authority holder must:
 - address the complaint including the use of appropriate dispute resolution if required; or
 - b) immediately implement odour abatement measures so that emissions of odour from the activity do not result in further environmental nulsance.

END CONDITIONS FOR SCHEDULE B

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Schedule C - Water

Release to Waters

Receiving waters affected by the release of process water or storm water contaminated by the mining activities or both must be monitored at the locations and frequencies defined in Schedule C - Table 1 and Schedule I - Map 1, and comply with the contaminant limits defined in Schedule C - Table 3.

Schedule C - Table 1 (Receiving Water Monitoring Locations and Frequency)

Monitoring point	Easting (AMG 84 Zone 54)	Northing (AMG 84 Zone 54)	Monitoring frequency
MKUS 1- reference site *	305625	7797450	Each flow event
MKUS 2-reference site*	TBD	TBD	Each flow event
MKDS 1- test site	301160	7800135	Each flow event
MKDS 2- test site	306366	7798356	Each flow event
MKDS 3- test site	306370	7798363	Each flow event
MKDS 4- test site	301300	7797255	Each flow event

NOTE: This does not apply to dams containing hazardous waste Reference sites must:

be from the same biogeographical and climatic region;

b)

have similar geology, soil types and topography contain a range of habitats similar to those at the test site

be of similar flow regime; and

not be so close to the test sites that any disturbances at the test site also result in a change at the reference site. TBD- to be determined and provided to the QEPA prior to commencement of mining.

Subject to Condition (C1-1), if the receiving water contaminant trigger levels defined in Schedule C - Table 2 are C1-2 exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

Schedule C - Table 2 (Receiving Water Trigger Levels)

Parameter	Units	Minimum	Maximum	Trigger Type
pH ¹	рН	6.0	8.0	Range
EC ¹	μS/cm	N/A	250	Maximum
Sulphate ²	mg/L	N/A	500	Maximum
Aluminium ²	mg/L	N/A	2.5	Maximum
Arsenic ²	mg/L	N/A	0.25	Maximum
Boron ²	mg/L	N/A	0.37	Maximum
Cadmium ²	mg/L	N/A	0.005	Maximum
Chromjum ²	mg/L	N/A	0.5	Maximum
Cobalt ²	mg/L	N/A	0.5	Maximum
Copper ²	mg/L	N/A	0.5	Maximum
Fluoride ²	mg/L	N/A	1	Maximum
Lead ²	mg/L	N/A	0.05	Maximum
Manganese ³	mg/L	N/A	1.9	Maximum
Mercury ²	mg/L.	N/A	0.001	Maximum
Molybdenum ²	mg/L	N/A	0.076	Maximum
Nickel ²	mg/L	N/A	0.5	Maximum
Selenium ²	mg/L	N/A	0.01	Maximum
Zinc ²	mg/L	N/A	10	Maximum

Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000).

Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking Water and are to be analysed as total metals (unfiltered).

Contaminant trigger limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) 95% and are to be analysed as

filtered metals.



Schedule C - Table 3 (Receiving Water Contaminant Limits)

Parameter	Units	Minimum	Maximum	Trigger Type
рН 4	рН	6.0	9.0	Range
TDS ²	mg/L	N/A	4000	Maximum
Sulphate 1	mg/L	N/A	1000	Maximum
Aluminium ¹	mg/L.	N/A	5	Maximum
Arsenic ¹	mg/L	N/A	0.5	Maximum
Boron ¹	mg/L	N/A	5	Maximum
Cadmium ¹	mg/L	N/A	0.01	Maximum
Chromlum ¹	mg/L	N/A	1	Meximum
Cobalt ¹	mg/L	N/A	1 1	Meximum
Copper	mg/L	N/A	1	Maximum
Fluoride ¹	mg/L	N/A	2	Maximum
Lead	mg/L	N/A	0.1	Maximum
Manganese ³	mg/L	N/A	2.5	Meximum
Mercury ¹	mg/L	N/A	0.002	Maximum
Molybdenum ¹	mg/L	N/A	0.15	Meximum
Nickel ¹	mg/L	N/A	1	Maximum
Selenium ¹	mg/L	N/A	0.02	Maximum
Zinc ¹	. mg/L	N/A	20	Maximum

Contaminant limits based on table 4.3.2 ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unflitered)

End of Pipe Release

End of pipe release limits for storm water contaminated by mining activities must be monitored at the locations (C1-3)and frequencies defined in Schedule C - Table 4 and Schedule I - Map 2 and 3 and comply with the contaminant limits defined in Schedule C - Table 5.

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Contaminant limits are based on Table 4.3.1 Livestock drinking water quality and are analysed as Total metals (unfiltered) ³ Contaminant limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) 80% and are to be analysed as filtered metals.

Gontaminant limits based on Table 3.3.4 of Aquatic Ecosystems ANZECC (2000)



Schedule C - Table 4 (End of pipe monitoring locations and frequency)

Monitoring point	Easting (AMG 84, Zone 54)	Northing (AMG 84, Zone 54)	Monitoring frequency
Mount Clarke ROM Area Sediment Dam	303834	7799496	Each flow event
Mount Clarke Pit Area Sediment Dam	305336	7799592	Each flow event
Mount Clarke/Flying Horse Sediment Dam	305887	7798726	Each flow event
Process Plant ROM Pad Sediment Dam 1	303040	7798656	Each flow event
Process Plant ROM Pad Sediment Dam 2	302905	7798900	Each flow event
Process Plant ROM Pad Sediment Dam 3	302771	7799010	Each flow event

NOTE: This does not apply to dams containing hazardous waste.

Schedule C - Table 5 (End of pipe contaminant release limits)

Parameter	Units	Minimum	Maximum	- Unit Type
рН	рН	6	9	Range
TDS	mg/L	N/A	4000	Maximum
Sulphate	mg/L	N/A	1000	Meximum
Arsenic	mg/L	N/A	5	Maximum
Cadmium	mg/L	N/A	0.01	Maximum
Chromium	mg/L	N/A	1	Maximum
Cobalt	mg/L	N/A		Maximum
Copper	mg/L	N/A	1	Maximum
Lead	mg/L	N/A	0.1	Maximum
Mercury	mg/L	N/A	0.002	Maximum
Zinc	mg/L	N/A	20	Maximum

Contaminant limits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unfiltered) NOTE: This does not apply to dams containing hazardous waste.

Dams Containing Hazardous Waste

(C1-4) Water storages containing process water and storm water contaminated by mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 6 and Schedule I - Map 4 and samples analysed for the parameters defined in Schedule C - Table 7.

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Schedule C - Table 6 (Water Storage Monitoring Locations of Hazardous Dams)

. Monitoring point	Easting (Zone 54, AMG 84)	Northing (Zone 54, AMG 84)	Monitoring frequency
PLS Ponds	302000	7797450	Annually, March
ILS Pond	301900	7797450	Annually, March
Raffinate Pond Pre-Settler	301850	7797450	Annually, March
Raffinate Pond	301800	7797450	Annually, March
Storm water Pond 1	301750	7797450	Annually, March
Storm water Pond 2	301750	7797350	Annually, March

In the event that the water quality within any dam containing hazardous waste does not comply with the contaminant limits defined in Schedule C - Table 7, implement measures to prevent access by all livestock and minimise access by fauna to the dam.

Schedule C - Table 7 (Water Quality Limits for Dame Containing Marandayo Woods)

Parameter	Units	Contaminant Limit	Limit Type
pH	. pH	4-9	Range
TDS	mg/L	5,000	Maximum
Boron	mg/L	5 .	Maximum
Sulphate	mg/L	1000	Maximum
Aluminum	mg/L	5	Maximum
Arsenic	mg/L	0.5	Maximum
Cobalt	mg/L	1	Maximum
Copper	mg/L	1	Maximum
Lead	mg/L	0.1	Maximum
Nickel	mg/L	1	Maximum
Zine	mg/L	20	Maximum

Contaminant limits based on ANZECC (2000 Livestock drinking water quality and are analysed as total metals (unfiltered).)

The design storage allowance on 1 November of each year for any dam containing hazardous was (C1-6)constructed or operated within the operational land must comply with Schedule C - Table 8.

Schedule C - Table 8 (Storage Design for Dams Containing Hazardous Wa

	Sall transfer of the Party Committing	TRAZBIUDUS TVASTEJ	*
Storage Type	Design Storage Allowance (4)		Mandatory Reporting Level (3)
Stormwater Pond 1	1: 100 Year ARI 2 month wet season plus process inputs for the 2 month wet season	1: 1000 Year ARI	1: 100 year AR
Stormwater Pond 2	1: 100 Year ARI 2 month wet season plus process inputs for the 2 month wet season	1: 1000 Year ARI	1: 100 year ARI

The design storage allowance on 1 November of each year for any dam containing hazardous waste Note (1): constructed within the operational land must be equivalent to the run-off from a 1 in 100 ARI 2 month wet season plus process inputs for the equivalent wet season. Process inputs refers to hazardous mineral process waste and water, which is being disposed of in the storage facility.

Note (2) The critical design storm has a duration that produces the peak discharge for the catchments. Note (3).

The mandatory reporting level refers to the volume below the spillway crest, either the 1: 100 ARI 72 hour storm or the 1:100 ARI wave allowance, whichever is lower.

The spillway for any dam containing hazardous waste, constructed or operated within the operational land must (C1-7)be designed and maintained to withstand the peak flow from the spillway critical design storm defined in Schedule C - Table 8.

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- The holder of the environmental authority must mark the mandatory reporting level defined in Schedule C -(C1-8)Table 8 on the spillway of all dams containing hazardous waste within the operational land.
- The holder of the environmental authority must notify the administering authority when the pondage level of the (C1-9)dam containing hazardous waste, reaches the mandatory reporting level defined in Schedule C - Table 8.

Stream Sediment Contaminant Levels

- All reasonable and practicable erosion protection measures and sediment control measures must be (C2-1)implemented and maintained to minimise erosion and the release of sediment.
- The bed of the receiving waters, affected by the release of process water and storm water contaminated by the (C2-2)mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 9 and Schedule I - Map 5.

Schedule C - Table 9 (Receiving Stream Sediment Monitoring Locations and Frequency)

Monitoring polat	Easting (AGD 84 Zone 54)	Northing (AGD 84 Zone 54)	Monitoring frequency
MKUS 1- reference site *	305825	7797450	May each year
MKUS 2- reference site*	TBD	TBD	May each year
MKDS 1- test site	301160	7800135	May each year
MKDS 2- test site	306366	7798356	May each year
MKDS 3- test site	306370	7798363	May each year
MKDS 4- test site	301300	7797255	May each year

NOTE: This does not apply to dams containing hazardous waste

Reference sites must:

- be from the same biogeographical and climatic region;
- have similar geology, soil types and topography contain a range of habitats similar to those at the test site c)
- be of similar flow regime; and
- not be so close to the test sites that any disturbances at the test site also result in a change at the reference site. TBD- to be determined and provided to the QEPA prior to commencement of mining.
- Subject to Condition (C2-2), if the stream sediment contaminant trigger levels defined in Schedule C Table 10 (C2-3)are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

Schedule C - Table 10 (Receiving Stream Sediment Contaminant Trigger Levels)

Parameter	Units	Contaminant trigger levels	Trigger Type
Antimony ¹	mg/kg dry wt	2	Maximum
Arsenic¹	mg/kg dry wt	20	Meximum
Cadmium ¹	mg/kg dry wt	1.5	Maximum
Chromium ¹	mg/kg dry wt	80	Maximum
Copper ²	mg/kg dry wt	100	Maximum
Lead ¹	mg/kg dry wt	50	Maximum
Nickel ¹	mg/kg dry wt	21	Maximum
Silver ¹	mg/kg dry wt	1	Maximum
Mercury ¹	mg/kg dry wt	0.15	Maximum
Zine ¹	mg/kg dry wt	200	Maximum

ANZECC (2000): ISQG Low trigger values, Sediment Quality Guidelines, Aquatic Ecosystems, Table 3.5.1. ² Site specific trigger value as calculated in section 3.6 of EM Plan July 2006

Subject to Condition (C2-2), stream sediment contaminant limits must not exceed the contaminant limits defined (02-4)in Schedule C -Table 11.

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Schedule C - Table 11 (Receiving Stream Sediment Contaminant Limits)

Parameter	Units	Contaminant/limits	Limit Type
Antimony ¹	mg/kg dry wt	25	Maximum
Arsenic ¹	mg/kg dry wt	70	Maximum
Cadmium ¹	mg/kg dry wt	10	Meximum
Chromium ¹	mg/kg dry wt	370	Maximum
Copper ²	mg/kg dry wt	120	Maximum
Lead ¹	mg/kg dry wt	220	Maximum
Nickel ¹	mg/kg dry wt	52	Maximum
Silver ¹	mg/kg dry wt	3.7	Maximum
Mercury ¹	mg/kg dry wt	1	Maximum
Zinc ¹	mg/kg dry wt	410	Maximum

ANZECC (2000): ISQG High trigger values, Sediment Quality Guidelines, Aquatic Ecosystems, Table 3.5.1. ² Site specific trigger value as calculated in section 3.6 of EM Plan July 2006

(C2-5)All stream sediment sampling must be undertaken in accordance with AS 5667.1 Guidance on Sampling of **Bottom Sediments of 1998**

Sewage effluent

- All effluent released from the treatment plant must be monitored at the frequency and for the parameters specified in Schedule C - Table 12.
- Sewage effluent used for dust suppression must not exceed sewage effluent release limits defined in Schedule C -(03-2)Table 12.
- Sewage Effluent used for dust suppression must not cause spray drift or over spray to any sensitive or commercial (C3-3)place, and must not be applied at a rate that causes pooling, ponding and/or runoff of any effluent irrigated.
- Subject to Conditions (C3-1) to (C3-3) inclusive, sewage effluent from sewage treatment facilities must be reused (C3-4)or evaporated and must not be directly released from the sewage treatment plant to any water way or drainage line other than in accordance with Schedule C - Table 12.

Schedule C - Table 12 (Sewage effluent quality targets for dust suppression)

Faecal Goliforms (organisms/100mL)		10001		Quarterly
pH (pH Units)	63		8.5 ²	Quarterly
Quality characteristics	Minimum	Median	Maximum	
		RefesseLimit		Monitoring/Frequency 1

A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling

Release limits sourced from Queensland Water Recycling Guidelines December 2005 Table 6:2b

² A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling with four out of five samples must be less than the maximum

A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling with four out of five samples must be higher than the minimum but lower than the maximum limit.



Groundwater

(C4-1)Groundwater, affected by the mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 13 and Schedule I - Map 6.

Schedule C - Table 13 (Groundwater Monitoring Locations and Frequency)

Monitoring point	Easting (AGD 84 Zone 54)	Northings (AGD 84 Zone 54)	Monitoring frequency
LA MB01 (Process Plant)- reference site	302484	7796800	Monthly
LA MB02 (Process Plant) - reference site	302891	7797385	Monthly
LA MB03 (Process Plant) - reference site	302128	7797950	Monthly
LA MB04 (Process Plant)	TED	TBD	Monthly
LA MB05 (Process Plant)	TBD	TBD	Monthly
LA MB06 (Process Plant)	TBD	TBD	Monthly
LA MB07 (Process Plant)	TBD	TBD	Monthly
LA MB08 (Process Plant)	TBD	TBD	Monthly
LA MB09 (Process Plant)	TBD	TBD	Monthly
LA MB010 (Process Plant)	TBD	TBD	Monthly
LA MB011 (Process Plant)	TBD	TBD	Monthly
LA MB012 (Process Plant)	TBD	TBD	Monthly
LA MB013 (Process Plant)	TBD	TBD	Monthly
LA MB014 (Process Plant)	TBD	TBD	Monthly
MK MB01 (pit area)	305360	7799013	Quarterly
MK PB01 (pit area)	305356	7799019	Quarterly

NOTE: This does not apply to dams containing hazardous waste

TBD- To be determined

Reference sites must:

- be from the same biogeographical and climatic region; have similar geology, soil types and topography
- contain a range of habitats similar to those at the test site
- be of similar flow regime; and not be so close to the test sites that any disturbances at the test site also result in a change at the reference site.
- (C4-2)Subject to Condition (C4-1), iff the groundwater contaminant trigger levels defined in Schedule C - Table 14 are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

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Schedule C - Table 14 (Groundwater Contaminant Trigger Levels)

Parameter	Units '	Minimum	Maximum	Trigger type
pH ¹	рН	6	8	Range
TDS ²	mg/L	N/A	2000	Maximum
Sulphate 2	mg/L	N/A	500	Maximum
Aluminium ²	mg/L	N/A	2.5	Maximum
Arsenic ²	mg/L	N/A	0.25	Maximum
Boron ²	mg/L	N/A	0.37	Maximum
Cadmlum ²	mg/L	N/A	0.005	Maximum
Chromlum ²	mg/L	N/A	0.5	Maximum
Cobalt ²	mg/L	N/A	0.5	Maximum
Copper ²	mg/L	N/A	0.5	Maximum
Fluoride ²	mg/L	N/A	1	Maximum
Lead ²	mg/L	N/A	0.05	Maximum
Manganese ³	mg/L	N/A	1.9	. Maximum
Mercury ²	mg/L	N/A	0.001	Maximum
Molybdenum ²	mg/L	N/A	0.075	Maximum
Nickei ²	mg/L	N/A	0.5	Maximum
Selenium ²	mg/L	N/A	0.01	Maximum
Zinc²	mg/L	N/A	. 10	Maximum

Subject to Condition (C4-1), groundwater contaminant limits must not exceed the contaminant limits defined in (C4-3)Schedule C -Table 15.

Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000)

Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking Water and are to be analysed as total metals (unfiltered).

Contaminant trigger limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) and are analysed as Filtered

Metals

Schedule C - Table 15 (Groundwater Contaminant Limits)

Parameter	Units	Minimum	Maximum	Limit Type
pH ¹	рН	6	9	Range
TDS ¹	mg/L	N/A	4000	Maximum
Sulphate ¹	mg/L	N/A	1000	Maximum
Aluminum ¹	mg/L	N/A	5	Maximum
Arsenic ¹	mg/L	N/A	0.5	Maximum
Boron ¹	mg/L	N/A	5	Maximum
Cadmlum ¹	mg/L	N/A	0.01	Maximum
Chromlum ¹	mg/L	N/A	1	Maximum
Cobait ¹	mg/L	N/A	1	Maximum
Copper ¹	mg/L	N/A	1	Maximum
Fluoride ¹	mg/L	N/A	2	Maximum
Lead ¹	mg/L	N/A	0.1	Maximum
Manganese ²	mg/L	N/A	2.5	Maximum
Mercury ¹	mg/L	N/A	0.002	Maximum
Molybdenum ¹	mg/L	N/A	0.15	Maximum
Nickel ¹	mg/L	N/A	1	Maximum
Selenium ¹	mg/L	N/A	0.02	Maximum
Zinc ¹	mg/L	N/A	20	Maximum

¹ Contaminant ilmits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total Metals (unfiltered)
² Contaminant ilmits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) and are analysed as Filtered Metals.

(C4-4) The method of water sampling required by this environmental authority must comply with that set out in the latest edition of the Environmental Protection Agency's Water Quality Sampling Manual.

Voids

- (C5-1) Water quality in mining voids and final voids must be monitored at the locations and frequencies defined in Schedule C Table 16 and for the parameters detailed in Schedule C Table 17.
- (C5-2) In the event that water quality within the mining voids or final voids does not comply with the contaminant limits defined in Schedule C Table 17, implement measures to prevent access by all livestock and minimise access by fauna to the void.

Schedule C - Table 16 (Voids Monitoring Locations and Frequency)

Mount Clarke Pit	Annually
Mount Kelly/Flying Horse Pit	Annually
Monitoring point	Monitoring/frequency

Schedule C - Table 17 (Void Water Quality Limits)

Parameter	Units	Limit	Limit Type
Hg	рH	6-9	Range
TDS	mg/L	4000	Maximum 199
Sulphate	mg/L===	1000	Maximum
Arsenic	mg/L	0.5	Meximum
Cadmium	mg/L	0.01	Maximum
Chromium	mg/L	1	Maximum
Copper	mg/Lu	1	Maximum ***
Lead	mg/L	0.1	Meximum - 7
Mercury	mg/L	0.002 .	Meximum
Zino	mg/L	20	Meximum

Contaminant limits are based on ANZECC (2000 Livestock drinking water quality and analysed for total metals (unfiltered)).

Acid Rock Drainage and Leachate Management

(C6-1) Subject to limits defined in Schedule C all reasonable and practicable measures must be implemented to prevent hazardous leachate being directly or indirectly released or likely to be released as a result of the activity to any groundwater, watercourse and waters.

END CONDITIONS FOR SCHEDULE C





Schedule D - Noise and Vibration

Noise Nuisance

- (D1-1) Subject to Conditions (D1-2) and (D1-3) noise from the mining activity must not cause an environmental nuisance to an affected building.
- (D1-2) When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (D1-3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Vibration nuisance

- (D2-1) Subject to Conditions (D2-2) and (D2-3) vibration from the mining activity must not cause an environmental nulsance to an affected building.
- (D2-2) When requested by the administering authority, vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.

END CONDITIONS FOR SCHEDULE D

Schedule E - Waste

Storage of Tyres

- (E1-1) Tyres stored awaiting disposal or transport for take-back and, recycling, or waste-to-energy options should be stockpiled in volumes less than 3m in height and 200m² in area and at least 10m from any other tyre storage area.
- (E1-2) All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10m radius of the scrap tyre storage area.

Disposal of Tyres

- (E2-1) Disposing of scrap tyres resulting from the mining activities in spoil emplacements is acceptable, provided tyres are placed as deep in the spoil as reasonably practicable.
- (E2-2) Scrap tyres resulting from the mining activities disposed within the operational land must not impede saturated aquifers or compremise the stability of the consolidated landform.

Waste Management.

(E3-1) A Waste Management Program, in accordance with the Environmental Protection (Waste Management) Policy 2000, must be included in the Plan of Operations.

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Regulated Waste

- (E 4-1) All regulated waste received and removed from the site, that is over 250kg in weight, must be transported by a person who holds a current authority to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (E4-2) Except as otherwise provided by the conditions of this authority, all waste removed from the site must be taken to a facility that is lawfully allowed to accept such waste under the provisions of the *Environmental Protection Act 1994*.
- (E4-3) Where regulated waste is removed from the Project (other than by a release as permitted under another schedule of this environmental authority), records must be kept of the following:
 - a) the date, quantity and type of waste removed, and
 - b) name of the waste transporter that removed the waste; and
 - c) the intended treatment/disposal destination of the waste.

Note: Records of documents maintained in compliance with a waste tracking system established under the Environmental Protection Act 1994 or any other law for regulated waste will be deemed to satisfy this condition

Waste Rock Characterisation

(E5-1) All areas to be mined must undergo a waste rock characterisation survey (where waste rock is to be disposed of on the surface) and a report submitted to the administering authority prior to mining where this survey has not previously been carried out.

END CONDITIONS FOR SCHEDULE E



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Schedule F - Land

Rehabilitation Landform Criteria

(F1-1) All areas significantly disturbed by mining activities must be rehabilitated to a stable landform with a self-sustaining vegetation cover in accordance with Schedule F — Table 1 and 2.

Schedule F - Table 1 (Final Land Use and Rehabilitation Approval Schedule)

Disturbance Category	Mex. Area		Bull like		Ama de de la companya della companya de la companya de la companya della companya	Analogue Sita	ie Site
	PB	DISTURBANCE	POSTIDISTURBANCE	PRE DISTURBANCE	POST DISTURBANCE	Longitude	Lafftude
Mount Kelly/Flying Horse Pit	13,2	Habitat	Water Storage	Class 5	Water Storage		
Mount Kelly/Flying Horse Waste Rock Dump	. 58	Habitat	Habitat	Class 5	Class 5	TBD	TBD
Mount Kelly/Flying Horse Topsoil Stockpile	:	Habitat	Habitat	Class 5	Class 5	180	TBD
Mount Kelly/Flying Horse Sediment Dams	<u>.</u>	Habitat	Water Storage	Class 5	Water Storage		
Mount Kelly/Flying Horse Diversion Drains	1.3	Habitat	LIG or diversion Habitat	Class 5	Class 5	18D	TBD
Mount Clarke Pit	0 0	Habitat	Water Storage	Class 5	Water Storage		
Mount Clarke Waste Rock Dump	16.3	Habitat/LIG	Habitat/LIG	Class 4 - 5	Class 4-5	TBD	TBD
Mount Clarke Low Grade Stockpile	4.8	Habitat/LIG	Habitat/LIG	Class 4 - 5	Class 4 - 5	TBD	1 08
Mount Clarke/Flying Horse/Mount Kelly ROM Storage & Live Rehandle	5.5	Habitat	Habitaf/LIG	Class 4 - 5	Class 4 - 5	Q81	180

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Category	Area					Amai	Analogue Site
Mount Clarke Tepsoil Stockpile	4.5	Habitat/LIG	Habitat/LIG	Class 4 - 5	Class 4 - 5	TED	
Mount Clarke Pit Area Sediment Dam	9'0	Habitat	Water Storage	Class 4 - 5	Water Storage		3
Mount Clarke ROM Area Sediment Dam	6,4	Habitat	Water Storage	Class 4 - 5	Water Storage		
Mount Clarke – Diversion/Interception /Sediment Dam Drains	32	Habitat	LIG or diversion Habitat	Class 4 - 5	Class 4 - 5	QET COL	130
Roads/Tracks	18.8	Existing tracks or	Tracks for grazier or LIG	Class 4-5	Class 4 - 5	L Car	Į.
Accommodation Camp and Facilities	ಬ	ΠG	917	Class 4	Class 4	1 CE	
Sewage Plant and Pond	0.2	. LiG	9 T	Class 4	Class 4	180	
ROM Pad – at process plant	7.8	917	917	Class 4 - 5	Class 4 -5	SE SE	Gar
Process plant and associated buildings	3.3	ΓΙΘ	917	Class 4	Class 4	TBD	
Overland Conveyor	1.8					Tab.	f
Workshop/Office Access Circuit Area	2.9	ÐJT	9	Class 4	Class 4		
Heap Leach Pads – Stage 1 and 2	43.2	ΠG	Habitat/LIG	Class 4	Class 4-5	GBT	E E
Process Water Ponds - PLS, ILS and Raffinate	3.4	97	Water storages	Class 4	Water storages		
Stormwater Ponds 1 and 2	11.4	9П	Water storages	Class 4	Water storages		
Stormwater Pond spillway channel	0.7	LIG	LIG or diversion	Class 4	Class 4 -5	TBD	<u>B</u>
Raw Water Pond	0.6	9 1	LIG/Water storage	Class 4	Class 4 or water storage	Tan	ंदि
Process Area Topsoil Stockpiles	9.7	9/1	SIT	Class 4	Class 4	TED OFF	
		J			-		

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Area Area				Came Cappa Buildy	Analo	Analogue Site
1 '		LIG or diversion	Class 4	Class 4 - 5	TBD	1BD
1	FIG	LIG or ponds	Class 4 - 5	Class 4 - 5		
2.6	FIG	91	Class 4	Class 4	TBD	TRO
	97	ΠG	Class 4 -5	Class 4 - 5	TBD	CE LE
88	LIG/Habitat	Permanent Structure	Class 4 -5	Permanent Structure		
0.2	FIG	DIT CIE	Class 4 - 5	Class 4 - 5	E CE	TBD
0.3	BIT	CIG	Class 4	Class 4	18 CB	<u> </u>
0.3	ΠG	רופ	Class 4	Class 4	180	
4.3	דופ	nie.	Class 4	Class 4	180	
ro	DIG	LIG/Habitat	Class 4 - 5	Class 4 - 5	TBD	Lat
59.9	9	LIG/Habitat	Class 4 - 5	Class 4 - 5	TBD	OBT OB
6.7	LIG/Habitat	LIG/Habitat	Class 4 -5	Class 4 - 5	TBD	TBD
2.0	LIG/Habitat	Permanent access road for landholder	Class 4 -5	Permanent access road for		
368.1						

File D Part 2

*Analogue sites and disturbance description are to be identified and the environmental authority holder must amend the environmental authority to include analogue sites in Schedule F – Table 1 by 30 June 2007.

TBD. To be determined

LIG-Low Intensity Grazing Classes are derived from the Department of Minerals and Energy's Land Sultability Assessment Techniques (1995)

Progressive rehabilitation must commence when areas become available within the operational land. (F1-2)

Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in Schedule F - Table 1 and landform design criteria in Schedule F - Table 2 by 30 June 2007 (F1-3)

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Schedule F - Table 2 (Landform Design)

Disturbance type	Slope range (%)	Projective surface area
Waste Rock Dumps	33%-76% (1:3 to angle of repose)	(ha). *** 49.7
Heap Leach Pads ROM Pads	<33% or 1:3	43.2
I OM Faus	33%-76% (1:3 to angle of repose)	13.3

Residual Void Outcome

(F2-1) Residual voids must not cause any serious environmental harm to land, surface waters or any recognised groundwater aquifer, other than the environmental harm constituted by the existence of the residual void itself and subject to any other condition within this environmental authority.

Dams Containing Hezardous Waste

Description of Dam

(F3-1) The construction or operation of any dam containing hazardous waste within the operational land must comply with Schedule F - Table 3.

Schedule F - Table 3 (Size and Purpose of Dams Containing Hazardous Waste)

Name of dam containing hazardous waste ⁽¹⁾	Maximum surface area of dam (ha)	Maximum volume of dam (m³)	Maximum depth of dam	Purpose of dam ^(a)
Process Water Ponds (Raffinate Pre-Settler, Raffinate, ILS and PLS)	3.4	51,100	(m) ⁽²⁾ 4.5	Storage of Process Solutions
Heap Leach Pads	43.2	N/A	N/A	Storage of Process Solutions
Stormwater Pond 1 (Stage 1 only)	6.47	302,760	6.35	Storage of storm water runoff
Stormwater Pond 1 & 2 (Stage 2) Ite (1): The name of the	10.4	467,720	6.35	from processing area Storage of storm water runoff from processing area

Note (1): The name of the dam containing hazardous waste should refer to the name of the dam e.g. process residue

Note (e):
For dams that do not require a dam wall, input the maximum void depth e.g. where dams are formed by excavating below the land surface or backfilling a residual void.

Note (9): Purpose of the dam should outline the designed function, e.g. "the permanent containment of tallings resulting from the extraction of nickel, cobalt and other metals at the XYZ Refinery".

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Location of Dam

(F3-2) The location of any dam containing hazardous waste within the licensed place must be located within the polygonal area defined by the co-ordinates defined in Schedule C- Table 4 --Map 4.

Schedule F — Table 4 (Location of Dams Containing Hazardous Waste)

Name of dam containing hazardous waste	Easting(AMG 84, Zone 54) ⁽¹⁾	Northing (AMG 84, Zone 54) ⁽⁽¹⁾
PLS Ponds, ILS, Raffinate Pre-settler and Raffinate Pond	301760 302065 302035 301760	7797640 7797640 7797310 7797310
Stormwater Pond 1 and 2	301470 301760 301760 301470	7797640 7797640 7797110 7797110
Heap Leach Pads	302065 302720 302720 302035	7797945 7797945 7796825 7796825

Note ⁽¹⁷⁾: A minimum of 3 control points is required to constrain the location of all activities associated with the dam containing hazardous waste. Additional infrastructure which forms part of any dam containing hazardous waste may include appurtenant works consisting of tailings discharge pipelines, seepage collection systems, runoff diversion bunds, containment systems, pressure relief wells, decant and recycle water systems.

Standards and Criteria

- (F3-3) The holder of the environmental authority must design, construct, repair, maintain, operate and decommission the dams defined in Schedule F Table 3 and 4 in accordance with an acknowledged design plan that must comply with the standard environmental conditions in the "Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste".
- (F3-4) The holder of the environmental authority must design, construct, and operate all low hazardous dams containing hazardous waste and non-hazardous dams in accordance with the criteria outlined in Appendix B of the Code of Environmental Compliance for Mining Activities.

Inspection of Dams

- (F3-5) High hazard dams containing hazardous waste shall be inspected by a Registered Professional Engineer Queensland (RPEQ) prior to 1 November each year or at any time if alarming, unusual or otherwise unsatisfactory conditions are observed.
- (F3-6) For each inspection, the engineer shall assess the condition of the dam and its foundations, determine the hydraulic adequacy of the dam and assess the adequacy of the works with respect to dam safety.
- (F3-7) For each inspection, two copies of the engineer's report and any recommendations as to measures to be taken to ensure the integrity of the dam shall be furnished to the administering authority within 28 days of the inspection.

Decommissioning of Dam - Objective

(F3-8) Dams containing hazardous waste must not be abandoned and must be decommissioned to a situation where water can no longer be stored in the dams. The dams and their contained waste(s) must be stable, whereafter the dams are no longer dams and they become landforms on the operational land and must comply with the rehabilitation requirements of this environmental authority.

Decommissioning of Dam - Documentation and Compliance

(F3-9) Decommissioning activities for dams must be documented in detail in the plan of operations under which the activities are to occur. Where the detailed documentation is not already contained in the Design Plan for the dam, the detailed documentation is considered to be an amendment to the design plan and must be submitted

as an amendment to the design plan required by the "Code of Environmental Compliance for High Hazard Dams Containing Hazardeus Waste":

Infrastructure

(F4-1) All infrastructure, constructed by or for the environmental authority holder during the mining activities including water storage structures, must be removed from the site prior to mining lease surrender, except where agreed in writing by the post mining landowner / holder.

NOTE: This is not applicable where the landowner / holder is also the environmental authority holder.

Contaminated Lands

- (F5-1) A register and map of all potentially contaminated sites and any remediation details, must be kept on site, updated regularly, and included in each Plan of Operations.
- (F5-2) A Spillage Management Plan and an Emergency Plan for all hazardous materials stored on-site, together with a description of suitable equipment and training must be updated and included with each Plan of Operations.

END CONDITIONS FOR SCHEDULE F

Schedule G - Community

Complaint Response

(G1-1) All complaints received must be recorded including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority on request.

END CONDITIONS FOR SCHEDULE G

Reefway Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No MIN100401006

Schedule H - Definitions

"acceptance criteria" means the measures by which the actions implemented to rehabilitate the land are deemed to be complete. The acceptance criteria indicate the success of the rehabilitation outcome or remediation of areas which have been significantly been disturbed by the mining activities. Acceptance criteria may include information regarding:

- vegetation establishment, survival and succession;
- vegetation productivity, sustained growth and structure development;
- fauna colonisation and habitat development;
- ecosystem processes such as soil development and nutrient cycling, and the recolonisation of specific fauna groups such as collembola, mites and termites which are involved in these processes:
- microbiological studies including recolonisation by mycorrhizal fungi, microbial biomass and respiration;
- effects of various establishment treatments such as deep ripping, topsoil handling, seeding and fertiliser application on vegetation growth and development;
- resilience of vegetation to disease, insect attack, drought and fire;
- vegetation water use and effects on ground water levels and catchment yields.

"affected building"

- for noise means any building or any part of a building, for example the building from which the noise is made, at which the noise can be heard.
- for vibration means any building or any part of a building, for example the activity from which the vibration is made, at which the vibration can be felt.

"ambient (or total) noise" at a place, means the level of noise at the place from all sources (near and far), measured as the Leg for an appropriate time interval.

"appropriately qualified person" means any person who conforms to the EPA operational policy for an "appropriately qualified person (analyst)" in accordance with Section 490(7) of the Environmental Protection Act 1994.

"ARD" means acid rock drainage and refers to the low pH, high heavy metal pollutant typical of sulphidic mine wastes, and most commonly associated with the production of ferrous iron and sulphuric acid through the oxidation of sulphide minerals.

"authority" means environmental authority (mining activities) under the Environmental Protection Act 1994.

"blasting" means the use of explosive materials to fracture-

- (a) rock, coal and other minerals for later recovery; or
- (b) structural components or other items to facilitate removal from a site or for reuse.

"building" includes a structure of any type and part of a building or structure.

"commercial place" means a work place used as an office or for business or commercial purposes, which is not part of the mining activity and does not include employees accommodation or public roads.

"competent person" means a person with the demonstrated skill and knowledge required to carry out the task to a standard necessary for the reliance upon collected data or protection of the environment.

"dam" means a containment or proposed containment whether permanent or temporary, which is designed to contain, divert or control flowable substances. However this does not include a fabricated or manufactured tank or container designed to a recognised standard.

"design plan" in the context of a dam design is the documentation required under the Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, the procedures and criteria to be used for operating the dam and the decommissioning and rehabilitation objectives in terms of procedures, works and outcomes at the end of dam life, The documents can include design and investigation reports, drawings, specifications and certifications.

"environmental authority holder" means the holder of this environmental authority.

"flow event" means a flow event producing sufficient water to permit a monitoring creek bed flow of 30cm or more at the sampling station.

"flowable substance" means matter or mixture of materials which can be forced to or otherwise flow under any conditions possible in a situation. It includes water, other liquids or a mixture that includes water or any other liquid or suspended solids.

Reefway Pty Ltd & Savannah Resources Pty Ltd **Environmental Authority No MIN100401006**

"hazardous waste" means any substance, whether liquid, solid or gaseous, derived by or resulting from, the processing of minerals that tends to destroy life or impair or endanger health.

"Infrastructure" means water storage dams, roads and tracks, buildings and other structures built for the purpose of mining activities but does not include facilities required for the long term management of mining impacts or the protection of potential resources. Such facilities include dams containing hazardous waste, waste rock dumps, voids, or ore stockpiles and buildings or other structures whose ownership can be transferred and which have a residual beneficial use for the next owner of the operational land or the background land owner.

"La to, adj, to mine" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10-minute measurement period, using Fast response.

"La 1, adj, to mins" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10-minute measurement period, using Fast response.

"La, max adj, T" means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute pariod, using Fast response.

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.

"land capability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land suitability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land use" term to describe the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

"leachate" means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

"mandatory reporting level" means the volume below the spillway crest, equivalent to the lower of the AEP, 72 hour storm or the AEP wave allowance (AEP is the annual exceedence probability).

"mineral" means a substance which normally occurs naturally as part of the earth's crust or is dissolved or suspended in water within or upon the earth's crust and includes a substance which may be extracted from such a substance, and includes

- clay if mined for use for its ceramic properties, kaolin and bentonite;
- foundry sand:
- hydrocarbons and other substances or matter occurring in association with shale or coal and necessarily mined, extracted, produced or released by or in connection with mining for shale or coal or for the purpose of enhancing the safety of current or future mining operations for coal or the extraction or production of mineral oil therefrom:
- limestone if mined for use for its chemical properties;
- marble: (e)
- mineral oil or gas extracted or produced from shale or coal by in situ processes;
- peat;
- salt including brine:
- shale from which mineral oil may be extracted or produced;
- silica, including silica sand, if mined for use for its chemical properties;
- rock mined in block or slab form for building or monumental purposes;
- but does not include-
- (I) living matter;
- (m) petroleum within the meaning of the Petroleum Act 1923;
- soll, sand, gravel or rock (other than rock mined in block or slab form for building or monumental purposes) to be used or to be supplied for use as such, whether intact or in broken form;
- water.

"noxious" means harmful or injurious to health or physical well being, other than trivial harm.

"offensive" means causing reasonable offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive, other than trivial harm.

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This environmental authority takes effect on X 2096

Environmental Protection Agency

Reefway Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No MIN100401006

"peak particle velocity (ppv)" means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time, usually measured in millimetres/second (mms⁻¹).

"protected area" means - a protected area under the Nature Conservation Act 1992; or

- a marine park under the Marine Parks Act 1992; or
- a World Heritage Area.

"progressive rehabilitation" means rehabilitation (defined below) undertaken progressively or a staged approach to rehabilitation as mining operations are engoing.

"reference site" (or analogue site) may reflect the original location, adjacent area or another area where rehabilitation success has been completed for a similar biodiversity. Details of the reference site may be as photographs, computer generated images and vegetation models etc.

"rehabilitation" the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

"representative" means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

"residual void" means an open pit resulting from the removal of ore and/or waste rock which will remain following the cessation of all mining activities and completion of rehabilitation processes.

"self sustaining" means an area of land which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

"sensitive place" means;

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- an educational institution; or
- a medical center or hospital; or
- a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- a public park or gardens.

"significant disturbance" - includes land

- (a) if it is contaminated land; or
- (b) It has been disturbed and human intervention is needed to rehabilitate it.
 - I. to a state required under the relevant environmental authority; or
 - If the environmental authority does not require the land to be rehabilitated to a particular state to its state immediately before the disturbance.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpiled:
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil)
- areas where land use suffability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining activities occur:
- areas submerged by tallings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining activities have ceased; or
- areas where land has been contaminated and a suitability statement has not been issued.

However, the following areas are not included:

- areas off lease (e.g. roads or tracks which provide access to the mining lease);
- areas previously significantly disturbed which have achieved the rehabilitation outcomes;
- by agreement with the EPA, areas previously significantly disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the EPA;
- disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

File D Part 2

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This environmental authority takes effect on X 2006

Environmental Protection Agency

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Reefway Pty Ltd & Savannah Resources Pty Ltd **Environmental Authority No MIN100401006**

"spillway" means passage or outlet from the dam through which surplus water flows.

"stable" means land form dimensions are or will be stable within tolerable limits now and in the foreseeable future. Stability includes consideration of geotechnical stability, settlement and consolidation allowances, bearing capacity (traffic ability). erosion resistance and geochemical stability with respect to seepage and contaminant generation.

"suitably qualified and experienced person" means a person who is a Registered Professional Engineer of Queensland under the provisions of the Professional Engineers Act 1988 or a Corporate Member of the Institution of Engineers Australia or holds equivalent professional qualifications and has the following:

knowledge of engineering principles related to the structures, geomechanics, hydrology, hydraulics, chemistry and environmental impact of dams; and

at least a total of five years of suitable experience and demonstrated expertise in at least four of the following areas: (b)

investigation, design or construction of dams:

operation and maintenance of dams:

geomechanics with particular emphasis stability, geology and geochemistry;

hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology;

hydraulics with particular reference to sediment transport and deposition, erosion control, beach processes;

hydrogeology with particular reference to seepage, groundwater,

solute transport processes and monitoring thereof; or

dam safety.

"tolerable limits" means that a range of values could be accepted to achieve an overall environmental management objective (eg a range of settlement of a talling capping could still meet the objective of draining the cap quickly, preventing pondage and limiting infiltration and percolation).

"trivial harm" means environmental harm which is not material or serious environmental harm and will not cause actual or potential loss or damage to property of an amount of, or amounts totalling more than \$5,000.

"watercourse" - Means a river, creek or stream in which water flows permanently or intermittently in a visibly defined channel (natural, artificial or artificially improved) with:

continuous bed and banks:

an extended period of flow for some months after rain ceases, and

an adequacy of flow that sustains basic ecological processes and maintains biodiversity.

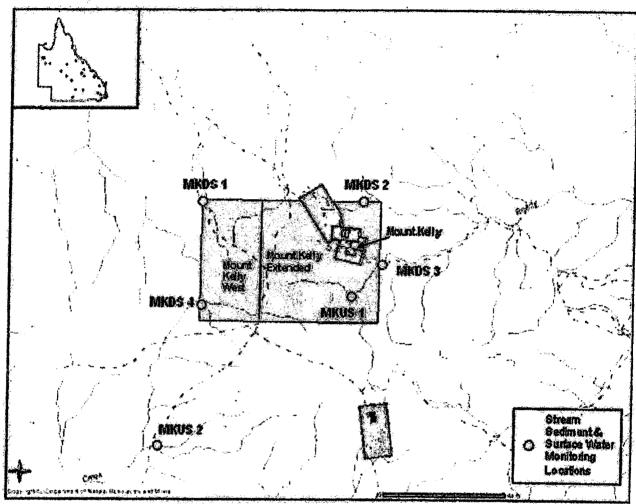
"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea) or any part-thereof.

END CONDITIONS FOR SCHEDULE H

12-513

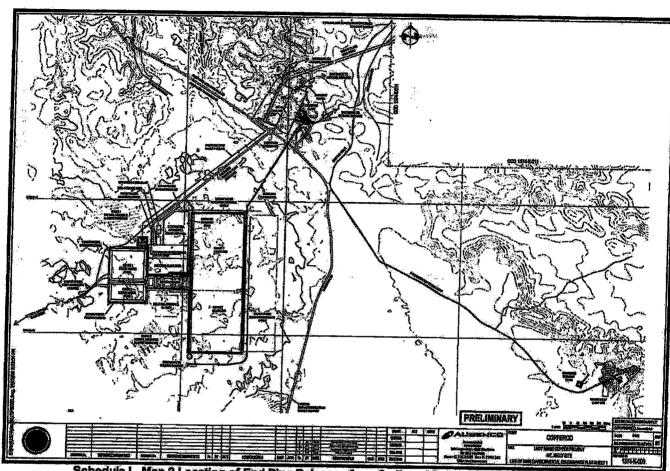


Schedule I - Maps / Plans



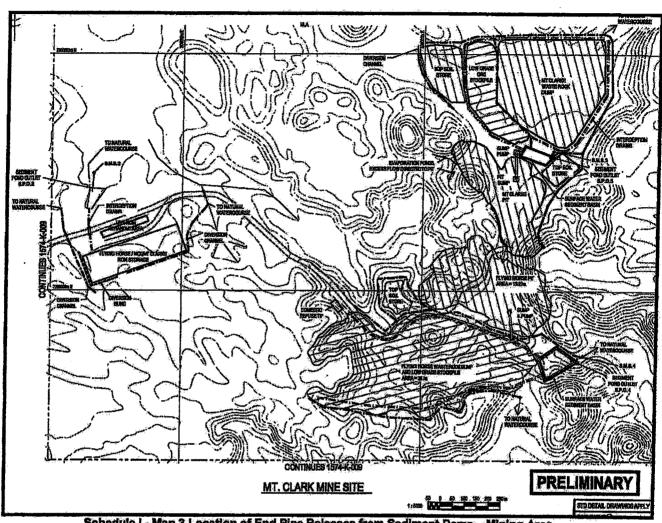
Schedule I - Map 1 Receiving Water Monitoring Locations





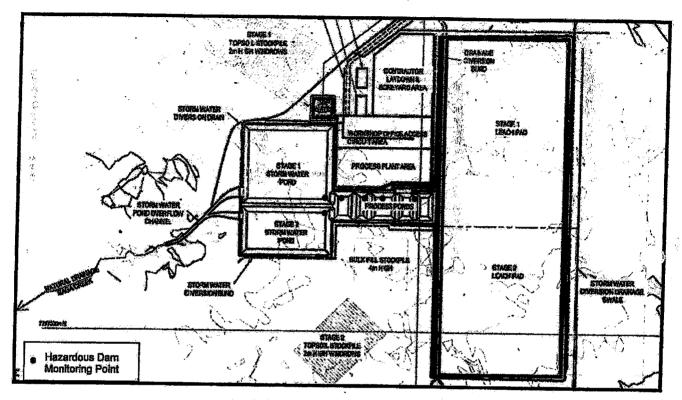
Schedule I - Map 2 Location of End Pipe Releases from Sediment Dams - Processing Area



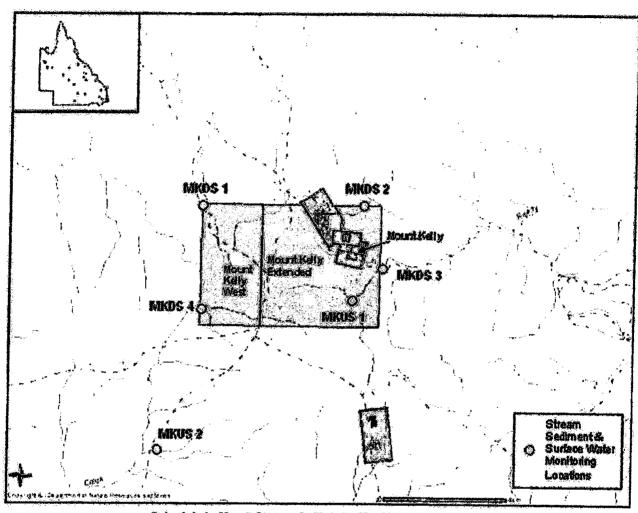


Schedule I - Map 3 Location of End Pipe Releases from Sediment Dams - Mining Area



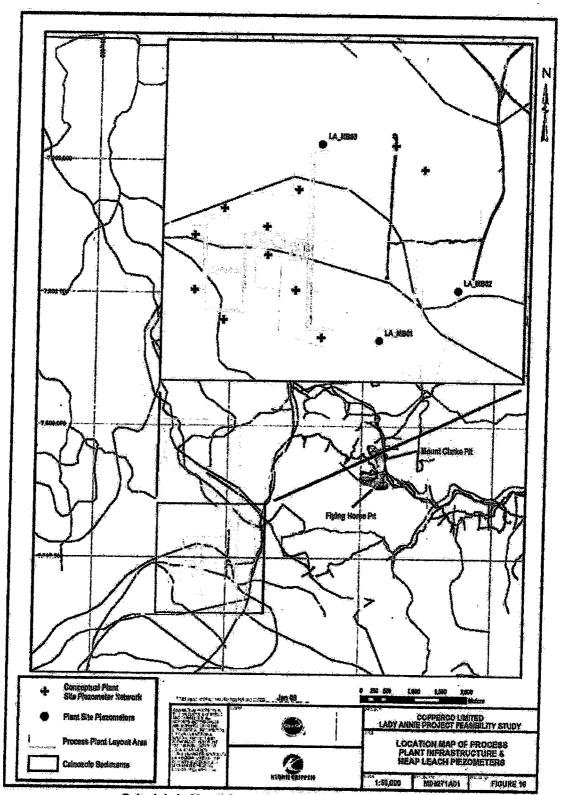


Schedule I - Map 4 Location of Hazardous Dams



Schedule I - Map 5 Stream Sediments Monitoring Locations





Schedule I - Map 6 Groundwater Monitoring Locations

END CONDITIONS FOR SCHEDULE I



Enquiries
Telephone
Your reference
Our reference

Neil Maver (07) 4744 7820 MIN100401006 ISA658

Environmental Protection Agency

incorporating the

Queensland Parks and Wildlife Service

31 January 2007

Wayne Frampton
Mining Registrar
Department of Mines & Energy
PO BOX 334
MOUNT ISA QLD 4825

Natural Resources, Mines and Water

30583 1 FEB 2007

MOUNT ISA RECEIVED

Dear Wayne

Re: Application submitted by Reefway Pty Ltd and Savannah Resources Pty Ltd to amend Environmental Authority MIN100401006 (Mount Kelly Project)

The Environmental Protection Agency (EPA) received the application to amend Environmental Authority MIN100401006 on 2 October 2006.

Attached is a draft amended Environmental Authority MIN100401006 prepared by this agency. The Environmental Authority holder is now required under Section 254 of the *Environmental Protection Act 1994* to give notice of their application to amend the Environmental Authority to each affected person for each mining lease and publish the notice at least once in a newspaper circulating in the locality of the land to which the mining lease is subject.

This amendment application includes the addition of mining lease application 90179 to the Mount Kelly Project which consists of the following mining leases: ML5426, ML5435, ML5446, ML5447 ML5448, ML5474, ML5476, ML5478, ML90168, ML90169, ML90170 & ML90178. The attached Environmental Authority is also the draft Environmental Authority for this mining lease application.

Should you have any further enquiries please do not hesitate to contact Neil Maver on (07) 4744 7820.

Yours sincerely

s.49 - Signature

District Manager
Environmental Operations
North West District

Page 1 of 1

Cnr Camooweal & Mary Streets Mount isa Queensland 4826 Australia PO Box 2316 Mount isa Queensland 4825 Australia Telephone (07) 4744 7888 Facsimile (07) 4744 7800 Website www.epa.qld.gov.au ABN 87 221 158 206 165 of 250



Mt Isa District Office PO Box 2316 MOUNT ISA QLD 4825 Phone: (07) 4744 7888 Fax: (07) 4744 7800 www.env.gld.gov.au ABN: 87221158786

Notice of specified objection period for application for amendment of environmental authority (mining lease)

Section 255 Environmental Protection Act 1994

This notice is issued by the administering authority pursuant to section 255 of the Environmental Protection Act 1994, to advise you of the objection period for an application for an amendment to an environmental authority (mining lease).

Enquires to : Nell Maver Telephone

: (07) 4744 7820

Your reference : MIN100401006 Our reference : ISA658

Reefway Pty Ltd Level 22 Aliendale Square 77 St Georges Terrace Perth WA 6000

Attention: Phillip Hartog,

Re: Application to amend environmental authority (mining lease) number MIN100401006, in relation to the Mount Kelly Project.

Thank you for the above mentioned application received by this office on 2 October 2006.

A draft environmental authority has been prepared by this agency and is attached.

Please note that section 254 of the Environmental Protection Act 1994 requires that within 10 business days of your receipt of the draft environmental authority, you must give notice of your application to amend the environmental authority to each affected person for each mining lease and publish the notice at least once in a newspaper circulating in the locality of the land to which the mining lease is subject. The definition of "affected person", as prescribed by the Act, is attached.

You are advised that any person/entity may make an objection to the administering authority about the application, the draft environmental authority for the application or a condition included in the draft environmental authority.

The objection period for this application, during which objections may be given, concludes on date prescribed under the Mineral Resources Act 1989.

During this time you are required to make application documents available for inspection by interested and or affected persons and to provide copies of application documents upon request.



An application notice template, titled "Public Notice of application for amendment of environmental authority (mining lease), Section 254", is available from all Environmental Protection Agency (EPA) offices or via the EPA web site, and should be used to produce the application notice.

s.49 - Signature

Signed

Geoff Metcalfe
District Manager
Delegate of Administering Authority
Environmental Protection Act 1994



Definitions of "affected person" and "interested person", as prescribed by the Act

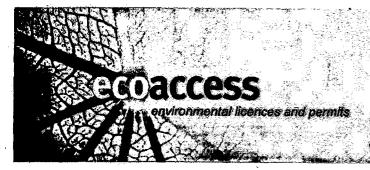
Who is an "affected person" for a project

38.(1) A person is an "affected person" for a project if the person is —

- (a) a person mentioned in subsection (2) for the operational land or any land joining it; or
- (b) any of the following under the Native Title Act 1993 (Cwlth) for the operational land or for an area that includes any of the land
 - (i) a registered native title body corporate;
 - (ii) a registered native title claimant:
 - (iii) a representative Aboriginal/Torres Strait Islander body; or
- (c) a relevant local government for the operational land.
- (2) For subsection (1)(a), the persons are as follows
 - (a) for freehold land a registered proprietor;
 - (b) for land that is held from the State for an estate or interest less than fee simple and for which the interest is recorded in a register mentioned in the Land Act 1994 ("Land Act"), section 276—a person recorded in the register as the registered holder of the interest;
 - (c) for land subject to a mining claim, mineral development licence or mining lease a holder of, or an applicant for, the tenement;
 - (d) for land subject to an authority to prospect or a lease or licence under the Petroleum Act 1923
 - (i) a holder of the authority; or
 - (ii) a lessee under the lease; or
 - (iii) a licensee under the licence:
 - (e) for land under the Land Act or the Nature Conservation Act 1992 ("NCA") for which there are trustees a trustee of the land;
 - (f) for Aboriginal land under the *Aboriginal Land Act 1991* ("ALA") that is taken to be a reserve because of section 87(2) or 87(4)(b) of that Act a grantee of the land;
 - (g) for DOGIT land under the ALA or the *Torres Strait Islander Land Act 1991* a trustee for the land;
 - (h) for land held under a lease under the Local Government (Aboriginal Lands) Act 1978, section 6 a relevant local government;
 - (i) for Torres Strait Islander land under the *Torres Strait Islander Land Act 1991* that is taken to be a reserve because of section 84(2) or 84(4)(b) of that Act a grantee of the land:
 - (j) for land under a lease from the State under the Aborigines and Torres Strait Islanders (Land Holding) Act 1985 that has been excised from land granted in trust for Aboriginal or Torres Strait Islander purposes under the Land Act a trustee of the land;
 - (k) for land that is any of the following, the State -
 - (i) unallocated State land;
 - (ii) a reserve under the Land Act for which there is no trustee:
 - (iii) a national park, national park (Aboriginal land), national park (scientific), national park (Torres Strait Islander land), national park (recovery) or forest reserve under the NCA;
 - (iv) a conservation park under the NCA for which there are no trustees:
 - (v) a State forest or timber reserve under the Forestry Act 1959:
 - (vi) a State controlled road under the Transport Infrastructure Act 1994:
 - (vii) a fish habitat area under the Fisheries Act 1994.
 - (I) another person prescribed under a regulation.

"interested person" means an interested person proposed by the proponent under section 41(3)(b).

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Statutory declaration

Mining

Statutory declaration for public notice requirements

A statutory declaration is a written statement of facts that is swom or declared under the Oaths Act 1867. This statutory declaration should be completed and forwarded to the administering authority within 5 business days after the objection period, in accordance with section 214 of the Environmental Protection Act 1994. You must attach a copy of the application notice to this statutory declaration.

OATHS ACT 1867	•	
QUEENSLAND		
TO WIT		
4 v.	ed for the application for:	
(please tick one of the following	· · · - ·	
environmental auth	ority (mining lease); or	
onvironmental auth	ority (mining claim); or	
amendment of envi	ronmental authority (mining lease)	
Described as:		•
On land described as:	•	· · · · · · · · · · · · · · · · · · ·
		,,, ,
	· · · · · · · · · · · · · · · · · · ·	
1		.,
	Insert the name of the person making this declaration	
of		÷
	Insert the street address of the person making this declaration	
	do solemnly and sincerely declare that in accordance with section 214 of the Act 1994, in relation to the above mentioned application:	
Min' o' making a salah dalah salah basa salah s	- Alder - Andrew Control of the Cont	
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Environmental Protection Agency www.epa.qld.gov.au ABN 87 221 158 786

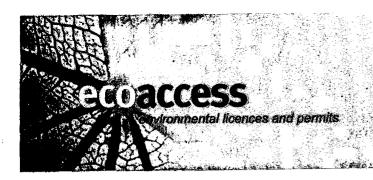




	Statutory declaration for public notice requirement
-,,	
•	Proponent/company name
a	ve (please tick only one of the following):
]	fully complied with the public notice requirements of either: sections 211 and 212 of the <i>Environmental Protection Act 1994</i> , in the case of an application for an environmental authority (mining lease or mining claim); or sections 254 and 212 of the <i>Environmental Protection Act 1994</i> ; in the case of an application to amend an environmental authority (mining lease).
R	
]	not fully complied with the public notification requirements of sections 211 and 212 or sections 254 and 212 of the <i>Environmental Protection Act 1994</i> and the details of non compliance are as follows:
	•
	•
_	
e	application notice (attached) was published in the following media:
¥:	
	·
í.	
	Insert publication name insert publication date
d	the application notice has been given to the following persons
•	
•	
•	•
	Insert name, address and dates



Statutory declaration Statutory declaration for public notice requirements Taken and declared before me, at Insert location this day of in the year Insert day (e.g. 18th) Insert month Insert year Signed Signed (Person making this declaration) (Delete whichever are not applicable - Justice of the Peace / Commissioner for Declarations / Solicitor / Barrister) Printed name and registration number (if applicable)



Public Notice

PUBLIC NOTICE OF APPLICATION FOR AMENDMENT OF ENVIRONMENTAL AUTHORITY (MINING LEASE)

Page 2 of this document contains the form and format to be used for a PUBLIC NOTICE OF APPLICATION FOR AMENDMENT OF ENVIRONMENTAL AUTHORITY (MINING LEASE). All version information for this notice is contained on this page only

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Environmental Protection Agency www.epa.qld.gov.au ABN 87 221 158 786





Environmental Authority No. MIN100401006 (mining activities)

Section 258 Environmental Protection Act 1994

This environmental authority is granted under the Environmental Protection Act 1994 and includes conditions to minimise environmental harm caused, or likely to be caused, by the authorised mining activities. An environmental authority (mining activities) may be for mining activities authorised (under the Mineral Resources Act 1989) to occur under one of the following mining tenements: a prospecting permit; mining claim; exploration permit; mineral development licence; or mining-lease. In general, a mining activity means: prospecting, exploring, mining; or processing minerals; remediation; rehabilitation; and includes facilitation and supporting activities and any action taken to prevent environmental harm.

Under the provisions of the *Environmental Protection Act* 1994 this Environmental Authority is issued to:

Reefway Pty Ltd Level 22 Allendale Square 77 St Georges Terrace Perth WA 6000 Savannah Resources Pty Ltd Level 22, Allendale Square 77 St Georges Terrace Perth WA 6000

In respect of carrying out activities as part of the following mining project:

Type of Environmental Authority (mining activities)

Authorised mining tenements

Location

Mining Leases

ML 5426, ML 5478, ML90168 ML90169, ML90170, ML90178 ML90179, ML 5435, ML 5446 ML 5447, ML 5448, ML 5474 ML 5476. 100km north of Mount Isa

The mining activities are authorized to the extent defined in Schedule 6 Section 14(c) of the Environmental Protection Regulation 1998.

This Environmental Authority is subject to the conditions set out in the attached schedules.

The anniversary date of this Environmental Authority is 24 July each year.

This Environmental Authority takes effect from \times 2007 for granted tenements and will take effect for ML90178 and ML90179 upon date of grant of tenure.

Geoff Metcalfe
District Manager
Mt Isa District, Northern Region
Delegate of Administering Authority
Environmental Protection Act 1994

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Reefway Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No MIN100401006

Definitions

(A5-1) Words and phrases used throughout this environmental authority are defined in Schedule H – Definitions. Where a definition for a term used in this environmental authority is sought and the term is not defined within this environmental authority, the definitions in the *Environmental Protection Act 1994*, its Regulations and Environmental Protection Policies must be used.

END CONTIONS FOR SCHEDULE A

Schedule B - Air

Dust Nuisance

- (B1-1) Subject to Conditions (B1-2) and (B1-3) the release of dust or particulate matter or both resulting from the mining activity must not cause an environmental nuisance at any sensitive or commercial place.
- (B1-2) When requested by the administering authority, dust and particulate monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B1-3) If the environmental authority holder can provide evidence through monitoring that the following limits are not being exceeded then the holder is not in breach of (B1-1):
 - a) Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580,10.1 Methods for sampling and analysis of ambient air Determination of particulates Deposited matter Gravimetric method of 1991.
- (B1-4) If monitoring indicates exceedence of the relevant limits in Condition (B1-3), then the environmental authority holder must:
 - a) address the complaint including the use of appropriate dispute resolution if required; or
 - b) Immediately implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nulsance.

Odour Nuisance

- (B2-1) Subject to condition (B2-2), the release of noxious or offensive advocate an environmental nulsance at any sensitive or commercial place.
- (B2-2) When requested by the administering authority, odour monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nulsance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B2-3) If monitoring indicates Condition (B2-1) is not being met then the environmental authority holder must:
 - a) address the complaint including the use of appropriate dispute resolution if required; or
 - immediately implement odour abatement measures so that emissions of odour from the activity do not result in further environmental nulsance.

END CONDITIONS FOR SCHEDULE B



Schedule C - Table 2 (Receiving Water Trigger Limits)

Parameter	Units	Minimum	mumikeM	Trigger Type
рН. ¹	pН	.6	8.5	Range
EC!	μS/cm	N/A	250	Maximum
Sulphate ²	mg/L	N/A	500	Maximum
Aluminium ⁴	mg/L	N/A	2.5	Maximum
Aluminium ⁵	mg/L	N/A	11.5	Maximum
Arsenic ²	mg/L	N/A	0.25	Maximum
Boron ²	mg/L	N/A	0.37	Maximum
Cadmium ²	mg/L	N/A	0.005	Maximum
Chromlum ²	mg/L	N/A	0,5	Maximum
Cobatt ²	mg/L	N/A	0.5	Maximum
Copper ⁴	mg/L	N/A	0,5	Maximum
Copper ⁵	mg/L	N/A	0.83	Maximum
Fluoride ²	mg/L	N/A	1	Maximum
Lead ⁴	mg/L	N/A	0.05	Maximum
Lead ⁵	mg/L	N/A	0.065	Maximum
Manganese ^a	mg/L	N/A	1.9	Maximum
Mercury ²	mg/L	N/A	0.001	Maximum
Molybdenum ²	mg/L	N/A	0.075	Maximum
Nickel ²	mg/L	N/A	0.5	Maximum
Selenium ²	mg/L	N/A	0.01	Maximum
Zinc ²	mg/L	N/A	10	Meximum

Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000).

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² Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking

Water and are to be analysed as total metals (unfiltered).

3 Contaminant trigger limits based on ANZECC (2000) trigger levels for aquatic ecosystems of slightly - moderately disturbed systems - table 3.4.1 level of protection 95% / Table 3.3.4 / 3.3.5 - Tropical Australia upland rivers.

4 Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking Water and are to be analysed as total metals (unfiltered). These limits are set for the Mount Kelly Leases only (ML 5426, ML 5478, ML90168, ML90169, ML90170, ML90176, ML 5435, ML 5446, ML 5447, ML 5448, ML 5474 and ML 5476.)

Contaminant trigger limits are based on site specific background data and are to be analysed as total metals (unfiltered). These trigger limits are set for the Lady Annie Lease only (ML90179).

Schedule C - Table 4 (End of pipe monitoring locations and frequency)

Monitoring point	Easting (AMG 84, Zone 54)	Northing (AMO 84, Zone 54)	Monitoring frequency
Mount Clarke ROM Area Sediment Dam	303894	7799496	Each flow event
Mount Clarke Pit Area Sediment Dam	305336	7799592	Each flow event
Mount Clarke/Flying Horse Sediment Dam	305887	7798726	Each flow event
Process Plant ROM Pad Sediment Dam 1	303040	7798656	Each flow event
Process Plant ROM Pad Sediment Dam 2	302905	7798900	Each flow event
Process Plant ROM Pad Sediment Dam 3	302771	7799010	Each flow event
Lady Annie Sediment Dam	295307	7811464	Each flow event

NOTE: This does not apply to dams containing hazardous waste.

Schedule C - Table 5 (End of pipe contaminant release limits)

Parameter	Units	Minimum	Maximum	. Limit Type
pH ["]	рН	6	9	Renge
TDŜ	mg/L	N/A	4000	Maximum
Sulphate	mg/L	N/A	1000	Maximum
Arsenic	mg/L	N/A	5	Maximum
Cadmium	mg/L	N/A	0.01	Maximum
Chromium	mg/L	N/A	1	Maximum
Cobalt	mg/L	NA	1	Maximum
Copper	mg/L	N/A	1	Maximum
Lead	mg/L	N/A	0.1	Meximum
Mercury	mg/L	N/A	0.002	Maximum
Zinc	mg/L	N/A	20	Maximum

Contaminant limits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unfiltered) NOTE: This does not apply to dams containing hazardous waste.

Dams Containing Hazardous Waste

(C1-4) Water storages containing process water and storm water contaminated by mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 6 and Schedule I - Map 6 and samples analysed for the parameters defined in Schedule C - Table 7.

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Reefway Pty Ltd & Savannah Resources Pty Ltd **Environmental Authority No MIN100401006**

- (C1-8)The holder of the environmental authority must mark the mandatory reporting level defined in Schedule C -Table 8 on the spillway of all dams containing hazardous waste within the operational land.
- The holder of the environmental authority must notify the administering authority when the pondage level of the (C1-9)dam containing hazardous waste, reaches the mandatory reporting level defined in Schedule C - Table 8.

Stream Sediment Contaminant Levels

- All reasonable and practicable erosion protection measures and sediment control measures must be (C2-1)implemented and maintained to minimise erosion and the release of sediment.
- The bed of the receiving waters, affected by the release of process water and storm water contaminated by the (C2-2)mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 9 and Schedule ! - Map 7 & 8.

Sabadula C., Table 9 /Receiving Stream Sediment Monitoring Locations and Frequency

Monitoring point	Easting Northing (AGD 84 Zone 54)		Monitoring frequency	
MKUS 1- reference site *	305625	7797450	May each year	
MKUŞ 2- reference site*	TBD	TBD	May each year	
MKDS 1- test site	301160	7800135	May each year	
MKDS 2- tést site	306366	7798356	May each year	
MKDS 3- test site	306370	7798363	May each year	
MKDS 4- test site	301300	. 7797255	May each year	
LA- US1- reference site*	295150	7812680	Each flow event	
LA- US2- reference site*	295750	7812480	Each flow event	
LA- DS1- test site	294000	7810100	Each flow event	
LA- DS2- test site	295500	7810400	Each flow event	

NOTE: This does not apply to dams containing hazardous waste

*Reference sites must:

- be from the same biogeographical and climatic region;
- b)
- have similar geology, soil types and topography contain a range of habitats similar to those at the test site c)
- be of similar flow regime: and d)
- not be so close to the test sites that any disturbances at the test site also result in a change at the reference site. TBD- to be determined and provided to the QEPA prior to commencement of mining.
- Subject to Condition (C2-2), if the stream sediment contaminant trigger levels defined in Schedule C Table 10 (C2-3)are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

Reefway Pty Ltd & Savannah Resources Pty Ltd **Environmental Authority No MIN100401006**

Sewage effluent

35

- All effluent released from the treatment plant must be monitored at the frequency and for the parameters specified in Schedule C - Table 12.
- Sewage effluent used for dust suppression must not exceed sewage effluent release limits defined in Schedule C -(C3-2)Table 12.
- Sewage Effluent used for dust suppression must not cause spray drift or over spray to any sensitive or commercial (C3-3)place, and must not be applied at a rate that causes pooling, ponding and/or runoff of any effluent irrigated.
- Subject to Conditions (C3-1) to (C3-3) inclusive, sewage effluent from sewage treatment facilities must be reused (C3-4)or evaporated and must not be directly released from the sewage treatment plant to any water way or drainage line other than in accordance with Schedule C - Table 12.

Schedule C - Table 12 (Sewage effluent quality targets for dust suppression)

Faecal Collforms (organisms/100mL)		10001		Quarterly
pH (pH Units)	63		8.5 ²	Quarterly
Quality characteristics	Minimum	Median	Maximum	
		Release Limit		Monitoring Frequency

Release limits sourced from Queensland Water Recycling Guidelines December 2005 Table 6:2b

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¹ A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling ² A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling with four out of five samples must be less than the maximum

A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling with four out of five samples must be higher than the minimum but lower than the maximum limit.

Parameter	Units	Minimum	Maximum	Trigger type
pH ¹	pH	6	8	Range
TD\$2	mg/L	N/A	2000	Maximum
Sulphate 2	mg/L	N/A	500	Maximum
Aluminium ²	mg/L	N/A	2.5	Maximum
Arsenic ²	mg/L	N/A	0.25	Maximum
Boron ²	mg/L	N/A	0.37	Maximum
Cadmlum ²	mg/L	N/A	0.005	Maximum
Chromium ²	mg/L.	N/A	0.5	Maximum
Cobalt ²	mg/L	N/A	0.5	Maximum
Copper ²	mg/L	N/A	0.5	Maximum
Fluoride ²	mg/L	N/A	1	Maximum
Lead ²	mg/L	N/A	0.06	Maximum
Manganese ³	mg/L.	N/A	1.9	Maximum
Mercury ²	mg/L	N/A	0.001	Maximum
Molybdenum ²	mg/L	N/A	0.075	Maximum
Nickel ²	mg/L	N/A	0.5	Maximum
Selenium ²	mg/L	N/A	0.01	Maximum
Zinc ²	mg/L	N/A	10	Maximum

Subject to Condition (C4-1), groundwater contaminant limits must not exceed the contaminant limits defined in Schedule C-Table 15. (C4-3)

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Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000)

Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking Water and are to be analysed as total metals (unfiltered).

Contaminant trigger limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) and are analysed as Filtered

Metals

Schedule C - Table 17 (Void Water Quality Limits)

Parameter	Units	Limit	Limit Type
рН	рH	6-9	Renge
TDS	mg/L	4000	Maximum
Sulphate	mg/L	1000	Maximum
Arsenic	mg/L	0.5	Maximum
Cadmium	mg/L	0.01	Maximum
Chromium	mg/L	1	Maximum .
Copper	mg/L	1	. Meximum
Lead	mg/L	0.1	Maximum
Mercury	mg/L	0.002	Meximum
Zinc	mg/L	20	Maximum .

Contaminant limits are based on ANZECC (2000 Livestock drinking water quality and analysed for total metals (unfiltered))

Acid Rock Drainage and Leachate Management

(C6-1) Subject to limits defined in Schedule C all reasonable and practicable measures must be implemented to prevent hazardous leachate being directly or indirectly released or likely to be released as a result of the activity to any groundwater, watercourse and waters.

END CONDITIONS FOR SCHEDULE C

. 12-513

Regulated Waste

- (E 4-1) All regulated waste received and removed from the site, that is over 250kg in weight, must be transported by a person who holds a current authority to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (E4-2) Except as otherwise provided by the conditions of this authority, all waste removed from the site must be taken to a facility that is lawfully allowed to accept such waste under the provisions of the *Environmental Protection Act 1994*.
- (E4-3) Where regulated waste is removed from the Project (other than by a release as permitted under another schedule of this environmental authority), records must be kept of the following:
 - a) the date, quantity and type of waste removed, and
 - b) name of the waste transporter that removed the waste; and
 - c) the intended treatment/disposal destination of the waste.

Note: Records of documents maintained in compliance with a waste tracking system established under the Environmental Protection Act 1994 or any other law for regulated waste will be deemed to satisfy this condition.

Waste Rock Characterisation

(E5-1) All areas to be mined must undergo a waste rock characterisation survey (where waste rock is to be disposed of on the surface) and a report submitted to the administering authority prior to mining where this survey has not previously been carried out.

END CONDITIONS FOR SCHEDULE E

	Disturbance Category	A Max		Land Use	5	Land Capability	Amale	Analogue Site
Hebitet Water Storage Class 4 · 5 Water Storage Hebitet Water Storage Class 4 · 5 Water Storage Hebitet LiG or diversion Habitet Class 4 · 5 Class 4 · 5 TBD LiG LiG Class 4 · 5 Class 4 · 5 TBD LiG LiG Class 4 · 5 Class 4 · 7 TBD LiG LiG Class 4 · 5 Class 4 · 7 TBD LiG LiG Class 4 · 5 Class 4 · 7 TBD LiG LiG Class 4 · 7 TBD TBD LiG Water storages Class 4 · 7 Class 4 · 7 TBD LiG Water storages Class 4 · 7 TBD LiG Water storages Class 4 · 7 TBD LiG LiG or diversion Class 4 · 7 TBD LiG Water storages Class 4 · 5 TBD LiG LiG or diversion Class 4 · 5 TBD LiG LiG or diversion Class 4 · 5 TBD LiG <th>Mount Clarke Topsoil Stockpile</th> <th>4. G</th> <th>Habitat/∕LIG</th> <th>Habitat/LIG</th> <th>Class 4 - 5</th> <th>Class 4 - 5</th> <th>Cight</th> <th>TBO</th>	Mount Clarke Topsoil Stockpile	4. G	Habitat/∕LIG	Habitat/LIG	Class 4 - 5	Class 4 - 5	Cight	TBO
0.4 Hebitet Weiter Storage Class 4 - 5 Water Storage Class 4 - 5 TBD 18.8 Existing tracks or Thacks for grazier or LIG Class 4 - 5 Class 4 - 5 TBD 5 LIG LIG Class 4 - 5 TBD 5.2 LIG LIG Class 4 - 5 TBD 7.8 LIG LIG Class 4 - 5 TBD 1.8 LIG LIG Class 4 - 5 TBD 1.8 LIG LIG Class 4 - 5 TBD 2.9 LIG LIG Class 4 - 5 TBD 4.3.2 LIG LIG Class 4 - 5 TBD 4.3.2 LIG Habiteafl. Class 4 - 5 TBD 4.3.2 LIG Water storages Class 4 - 5 TBD 1.1.4 LIG Water storages Class 4 - 5 TBD 0.7 LIG Ulder storages Class 4 - 5 TBD 0.7 LIG LIG or dilversion Class 4 - 5 TBD	Mount Clarke Pit Area Sediment Dam	0.6	Habitat	Water Storage	Class 4 - 5	Water Storage		
3.2 Habitat LiG or diversion Habitat Class 4 - 5 Class 4 - 5 TBD 18.3 Existing tracks or LiG Tracks for grazler or LiG Class 4 - 5 TBD 0.2 LiG LiG Class 4 Class 4 TBD 7.8 LiG LiG Class 4 TBD TBD 1.8 LiG LiG Class 4 TBD TBD 2.9 LiG LiG Class 4 TBD TBD 4.3.2 LiG LiG Class 4 TBD TBD 4.3.2 LiG Habitay LiG Class 4 Class 4 TBD 4.3.2 LiG Water storages Class 4 TBD TBD 1.1.4 LiG Water storages Class 4 Class 4.5 TBD 0.7 LiG LiG or diversion Class 4 Class 4.5 TBD 0.6 LiG LiG or diversion Class 4 Class 4.5 TBD 0.7 LiG LiG or diversion general <td< td=""><td>Mount Clarke ROM Area Sediment Dam</td><td>6.4</td><td>Habitat</td><td>Water Storage</td><td>Class 4 - 5</td><td>Water Storage</td><td></td><td></td></td<>	Mount Clarke ROM Area Sediment Dam	6.4	Habitat	Water Storage	Class 4 - 5	Water Storage		
18.8 Existing tracks or Tracks for grazler or LIG Class 4 - 5 Class 4 - 5 TBD 5.2 LIG LIG Class 4 Class 4 TBD 0.2 LIG LIG Class 4 - 5 TBD 7.8 LIG LIG Class 4 - 5 TBD 1.8 LIG Class 4 Class 4 TBD 2.9 LIG Habitat/LIG Class 4 Class 4 TBD 43.2 LIG Habitat/LIG Class 4 Class 4 TBD 43.2 LIG Water storages Class 4 Water storages TBD 0.7 LIG Water storages Class 4 Water storages TBD 0.7 LIG LIG or diversion Class 4 Class 4 or water storage TBD 0.6 LIG LIG Class 4 Class 4 or water storage TBD	Mount Clarke — Diversion/Interception Sediment Dam Drains	3.2	Habitat	LIG or diversion Habitat	Class 4 - 5	Class 4 - 5	OBT	CET
6 LIG LIG Class 4 Class 4 TBD 0.2 LIG LIG Class 4 - 5 TBD 7.8 LIG Class 4 - 5 TBD 1.8 LIG Class 4 TBD 2.9 LIG LIG Class 4 TBD 43.2 LIG Habitat/LIG Class 4 Class 4 TBD 11.4 LIG Water storages Class 4 Water storages TBD 0.7 LIG Water storages Class 4 Water storages TBD 0.7 LIG LIG withersion Class 4 Class 4 TBD 0.6 LIG LIG withersion Class 4 TBD TBD 0.6 LIG LIG withersion Class 4 Class 4 TBD 0.7 LIG LIG withersion Class 4 TBD 0.7 LIG LIG withersion Class 4 TBD	Roads/Tracks	18.8	Existing tracks or LIG	Tracks for grazier or LIG	Class 4 - 5	Class 4 - 5	TBD	DBT
0.2 LiG LiG Class 4 F TBD 7.8 LiG LiG Class 4 TBD 3.3 LiG LiG Class 4 TBD 1.8 LiG LiG Class 4 TBD 2.9 LiG Habitat/LiG Class 4 Class 4 TBD 3.4 LiG Water storages Class 4 Water storages Class 4 TBD 0.7 LiG LiG or diversion Class 4 Class 4 TBD 0.6 LiG LiG or diversion Class 4 Class 4 TBD 9.7 LiG LiG or diversion Class 4 Class 4 TBD 9.7 LiG LiG or diversion Class 4 Class 4 TBD	Accommodation Camp and Facilities	io.	רופ	ΘΠ	Class 4	Class 4	TBD	CBT
7.8 LIG LIG Class 4 - 5 TBD 3.3 LIG LIG Class 4 TBD 1.8 LIG LIG Class 4 TBD 2.9 LIG Habitet/LIG Class 4 TBD 43.2 LIG Water storages Class 4 TBD 1.1.4 LIG Water storages Class 4 Water storages Class 4 0.7 LIG LIG or diversion Class 4 Class 4 or water storage TBD 0.6 LIG LIG or diversion Class 4 Class 4 or water storage TBD 9.7 LIG LIG Class 4 Class 4 TBD	Sewage Plant and Pond	0.2	917	917	Class 4	Class 4	TBD	CEL
3.3 LIG LIG Class 4 TBD 1.8 LIG LIG Class 4 TBD 2.9 LIG Habitat/LIG Class 4 Class 4.5 TBD 43.2 LIG Water storages Class 4 Water storages TBD 11.4 LIG Water storages Class 4 Water storages TBD 0.7 LIG LIG widkersion Class 4 Class 4 TBD 0.6 LIG LIG widkersion Class 4 Class 4 or water storage TBD 0.6 LIG LIG widkersion Class 4 Class 4 or water storage TBD 9.7 LIG LIG widkersion Class 4 Class 4 or water storage TBD	ROM Pad – at process plant	7.8	97	97	Class 4 * 5	Class 4 -5	TBO	TBD
1.8 LIG Class 4 TBD 2.9 LIG Habitat/LiG Class 4 TBD 43.2 LIG Water storages Class 4 TBD 11.4 LIG Water storages Class 4 Water storages TBD 0.7 LIG UiG or diversion Class 4 Class 4-5 TBD 0.6 LIG LIG/Water storage Class 4 Class 4-5 TBD 9.7 LIG LIG Class 4 Class 4-5 TBD 9.7 LIG LIG Class 4 Class 4-5 TBD	Process plant and associated buildings	8. 8.		9	Class 4	Class 4	TBD	CIBIT
2.9 LiG LiG Habitat/LiG Class 4 Class 4-5 TBD 43.2 LiG Water storages Class 4 Class 4-5 TBD 11.4 LiG Water storages Class 4 Water storages Class 4 0.7 LiG LiG or diversion Class 4-5 TBD 0.6 LiG LiG/Water storage Class 4-5 TBD 9.7 LiG LiG Class 4-6 Class 4-6 TBD	Overland Conveyor	1.8					TBD	TBD
43.2 LiG Habitat/LiG Class 4 Class 4-5 TBD 3.4 LiG Water storages Class 4 Water storages FBD 11.4 LiG Water storages Class 4 Water storages TBD 0.7 LiG LiG or diversion Class 4 Class 4-5 TBD 0.6 LiG LiG Class 4 Class 4 or water storage TBD 9.7 LiG LiG Class 4 Class 4 Class 4 or water storage TBD	Workshop/Office Access Circuit Area	2.9	9 7	ΘΠ	Class 4	Class 4	TBD	GE
3.4 LIG Water storages Class 4 Water storages TBD 11.4 LIG Water storages Class 4 Water storages TBD 0.7 LIG or diversion Class 4 Class 4 -5 TBD 0.6 LIG LIG/Water storage Class 4 Class 4 or water storage TBD 9.7 LIG LIG Class 4 Class 4 TBD	Heap Leach Peds – Stage 1 and 2	43.2	9]]	Habitat/LIG	Class 4	Class 4-5	180	TBD
11.4 LiG Water storages Class 4 Water storages TBD 0.7 LiG LiG or diversion Class 4 Class 4 -5 TBD 0.6 LiG LiG/Water storage Class 4 or water storage TBD 9.7 LiG LiG Class 4 Class 4 TBD	Process Water Ponds - PLS, ILS and Raffinate	3.4	517	Water storages	Class 4	Water storages		
0.7 LIG or diversion Class 4 TBD 0.6 LIG LIG/Water storage Class 4 Class 4 or water storage TBD 9.7 LIG LIG Class 4 Class 4 Class 4 TBD	Stormwater Ponds 1 and 2	11.4	רופ	Water storages	Class 4	Water storages		
0.6 LIG LIG/Water storage Class 4 Class 4 or water storage TBD 9.7 LIG Class 4 Class 4 TBD	Stormwater Pond spillway channel	0.7	LIG	LIG or diversion	Class 4	Class 4 -5	TBD	TBD
9.7 LIG Class 4 Class 4 TBD	Raw Water Pond	9:0	ଆ	LIG/Water storage	Class 4	Class 4 or water storage	留	TBD
	Process Area Topsoil Stockpiles	7.6	917	91	Class 4	Class 4	OBT.	Œ

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COACCESS orvitoring it licences and permits

Reefway Pty Ltd & Savannah Resources Pty Ltd Environmental Authority No MIN100401006

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Disturbance Category	Max. Area		Jana Use		Land Capability	Analogue Site	ue Site
Diversion Channels	1,7	LIG/Habitat	LIG/Habitat	Class 4-5	Permanent Diversion		
Lady Annie Mine Construction Area (net of specific areas)	22.3	LIG/Habitat	LIG/Habitat	Class 4-5	Class 4-5	TB 0	CELL.
Upgrade to Access Road (off ML	3.0	LIG/Habitat	Permanent access road for landholder	Class 4-5	Permanent access road for landholder		
Old Open Cut and Sanderson's Shaft	0.3	Existing Disturbance	Habitat/LIG	Existing Disturbance	Class 4 -5	TBD	TBD
Old Tailings Areas	1.0	Existing Disturbance	Habitat/LiG	Existing Disturbance	Class 4 -5	TBD	TBD
Exploration Tracks and Drill Pads	12.4	Existing Disturbance	Habitat/LiG	Existing Disturbance	Class 4 -5	Œ	TBD
Rubbish Tip	0.4	Existing Disturbance	Habitat/LIG	Existing Disturbance	Class 4 -5	TBD	TB D
Core Shed	6.0	Existing Disturbance	Habitat/LiG	Existing Disturbance	Class 4 -5	TBD	TBD
Exploration Sample Yard	0.6	Existing Disturbance	Habitat/LiG	Existing Disturbance	Class 4 -5	TBD	TBD
Total	166.6						

Analogue sites and disturbance description are to be identified and the environmental authority to include analogue sites in Schedule F - Table 1 by 30 June 2007

TBD- To be determined

LIG- Low Intensity Grazing

Classes are derived from the Department of Minerals and Energy's Land Suitability Assessment Techniques (1995)

Progressive rehabilitation must commence when areas become available within the operational land. (F1-2) Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in Schedule F - Table 1 and landform design criteria in Schedule F - Table 2007 (F1-3)

The holder of this environmental authority must rehabilitate all existing land disturbances located within the boundary leases of ML90179 (Lady Annie) as identified in Table 1. The holder of this environmental authority must ensure these areas of existing land disturbance, where not otherwise disturbed and rehabilitated under this authority, are rehabilitated to the final land descriptions identified in Tables 1 and 2. (F14)

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Location of Dam

(F3-2) The location of any dam containing hazardous waste within the licensed place must be located within the polygonal area defined by the co-ordinates defined in Schedule C-Table 4 -Map 4.

Schedule F - Table 4 (Location of Dams Containing Hazardous Waste)

Easting(AMG 84, Zone 54) (1)	Northing (AMG 84, Zone 54) ⁽⁴¹⁾
301760	7797640 7797640
302035	7797310
	7797310 7797640
301760	7797640
301760 301470	7797110 7797110
302065	7797945 7797945
302720	7796825 7796825
	301760 302065 302035 301760 301470 301760 301760 301470 302065 302720

Note (1): A minimum of 3 control points is required to constrain the location of all activities associated with the dam containing hazardous waste. Additional infrastructure which forms part of any dam containing hazardous waste may include appurtenant works consisting of tailings discharge pipelines, seepage collection systems, runoff diversion bunds, containment systems, pressure relief wells, decant and recycle water systems.

Standards and Criteria

- (F3-3) The holder of the environmental authority must design, construct, repair, maintain, operate and decommission the dams defined in Schedule F Table 3 and 4 in accordance with an acknowledged design plan that must comply with the standard environmental conditions in the "Code of Environmental Compliance for High Hazard Dame Containing Hazardous Waste".
- (F3-4) The holder of the environmental authority must design, construct, and operate all low hazardous dams containing hazardous waste and non-hazardous dams in accordance with the criteria cutlined in Appendix B of the Code of Environmental Compliance for Mining Activities.

Inspection of Dams

- (F3-5) High hazard dams containing hazardous waste shall be inspected by a Registered Professional Engineer Queensland (RPEQ) prior to 1 November each year or at any time if alarming, unusual or otherwise unsatisfactory conditions are observed.
- (F3-6) For each inspection, the engineer shall assess the condition of the dam and its foundations, determine the hydraulic adequacy of the dam and assess the adequacy of the works with respect to dam safety.
- (FS-7) For each inspection, two copies of the engineer's report and any recommendations as to measures to be taken to ensure the integrity of the dam shall be furnished to the administering authority within 28 days of the inspection.

Decommissioning of Dam - Objective

(F3-8) Dams containing hazardous waste must not be abandoned and must be decommissioned to a situation where water can no longer be stored in the dams. The dams and their contained waste(s) must be stable, whereafter the dams are no longer dams and they become landforms on the operational land and must comply with the rehabilitation requirements of this environmental authority.

Decommissioning of Dam - Documentation and Compliance

(F3-9) Decommissioning activities for dams must be documented in detail in the plan of operations under which the activities are to occur. Where the detailed documentation is not already contained in the Design Plan for the

Schedule H - Definitions

"acceptance criteria" means the measures by which the actions implemented to rehabilitate the land are deemed to be complete. The acceptance criteria indicate the success of the rehabilitation outcome or remediation of areas which have been significantly been disturbed by the mining activities. Acceptance criteria may include information regarding:

- vegetation establishment, survival and succession;
- vegetation productivity, sustained growth and structure development;
- · fauna colonisation and habitat development;
- ecosystem processes such as soil development and nutrient cycling, and the recolonisation of specific fauna groups such as collembola, mites and termites which are involved in these processes;
- microbiological studies including recolonisation by mycorrhizal fungi, microbial biomass and respiration;
- effects of various establishment treatments such as deep ripping, topsoil handling, seeding and fertiliser application on vegetation growth and development;
- resilience of vegetation to disease, insect attack, drought and fire;
- vegetation water use and effects on ground water levels and catchment yields.

"affected building"

- for noise means any building or any part of a building, for example the building from which the noise is made, at which the noise can be heard.
- for vibration means any building or any part of a building, for example the activity from which the vibration is made, at which the vibration can be felt.

"ambient (or total) noise" at a place, means the level of noise at the place from all sources (near and far), measured as the Leg for an appropriate time interval.

"appropriately qualified person" means any person who conforms to the EPA operational policy for an "appropriately qualified person (analyst)" in accordance with Section 490(7) of the Environmental Protection Act 1994.

"ARD" means acid rock drainage and refers to the low pH, high heavy metal poliutant typical of sulphidic mine wastes, and most commonly associated with the production of ferrous iron and sulphuric acid through the oxidation of sulphide minerals.

"authority" means environmental authority (mining activities) under the Environmental Protection Act 1994.

"blasting" means the use of explosive materials to fracture-

- (a) rock, coal and other minerals for later recovery; or
- (b) structural components or other items to facilitate removal from a site or for reuse.

"building" includes a structure of any type and part of a building or structure.

"commercial place" means a work place used as an office or for business or commercial purposes, which is not part of the mining activity and does not include employees accommodation or public roads.

"competent person" means a person with the demonstrated skill and knowledge required to carry out the task to a standard necessary for the reliance upon collected data or protection of the environment.

"dam" means a containment or proposed containment whether permanent or temporary, which is designed to contain, divert or control flowable substances. However this does not include a fabricated or manufactured tank or container designed to a recognised standard.

"design plan" in the context of a dam design is the documentation required under the Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, the procedures and criteria to be used for operating the dam and the decommissioning and rehabilitation objectives in terms of procedures, works and outcomes at the end of dam life, The documents can include design and investigation reports, drawings, specifications and certifications.

"environmental authority holder" means the holder of this environmental authority.

"flow event" means a flow event producing sufficient water to permit a monitoring creek bed flow of 30cm or more at the sampling station.

"flowable substance" means matter or mixture of materials which can be forced to or otherwise flow under any conditions possible in a situation. It includes water, other liquids or a mixture that includes water or any other liquid or suspended solids.

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"peak particle velocity (ppv)" means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time, usually measured in millimetres/second (mms⁻¹).

"protected area" means - a protected area under the Nature Conservation Act 1992; or

a marine park under the Marine Parks Act 1992; or

a World Heritage Area.

"progressive rehabilitation" means rehabilitation (defined below) undertaken progressively or a staged approach to rehabilitation as mining operations are ongoing.

"reference site" (or analogue site) may reflect the original location, adjacent area or another area where rehabilitation success has been completed for a similar biodiversity. Details of the reference site may be as photographs, computer generated images and vegetation models etc.

"rehabilitation" the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

"representative" means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

"residual void" means an open pit resulting from the removal of ore and/or waste rock which will remain following the cessation of all mining activities and completion of rehabilitation processes.

"self sustaining" means an area of land which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

"sensitive place" means;

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- an educational institution; or
- a medical center or hospital; or
- a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- a public park or gardens.

"significant disturbance" - includes land

- (a) if it is contaminated land; or
- (b) It has been disturbed and human intervention is needed to rehabilitate it.
 - i. to a state required under the relevant environmental authority; or
 - ii. If the environmental authority does not require the land to be rehabilitated to a particular state to its state immediately before the disturbance.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpiled;
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining activities occur:
- areas submerged by tallings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining activities have ceased; or
- areas where land has been contaminated and a sultability statement has not been issued.

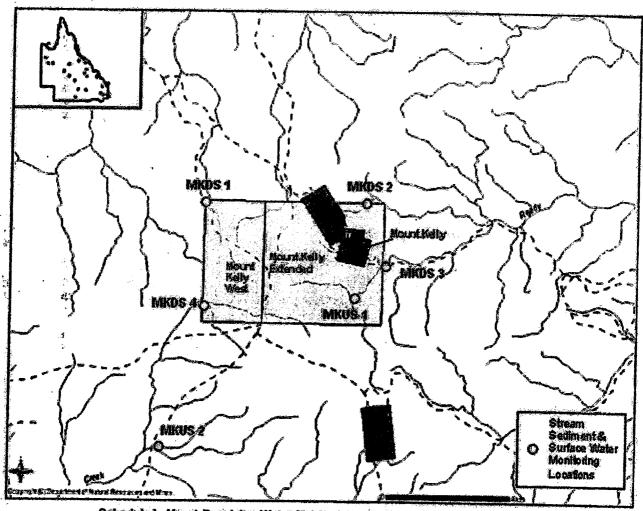
However, the following areas are not included:

- areas off lease (e.g. roads or tracks which provide access to the mining lease);
- areas previously significantly disturbed which have achieved the rehabilitation outcomes;
- by agreement with the EPA, areas previously significantly disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, hellpads etc) which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the EPA;
- disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

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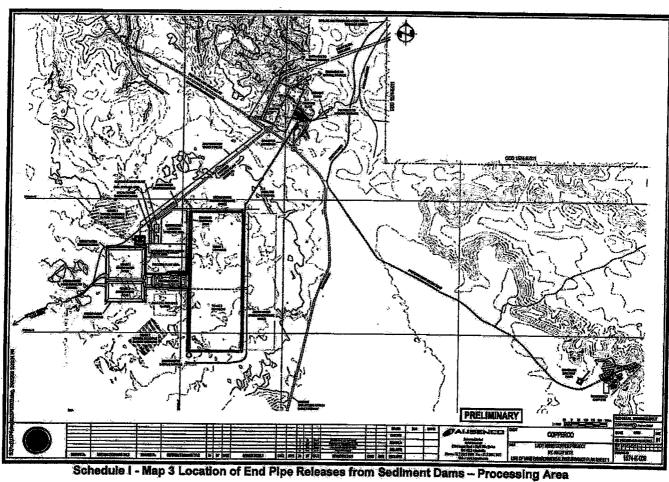


Schedule I - Maps / Plans

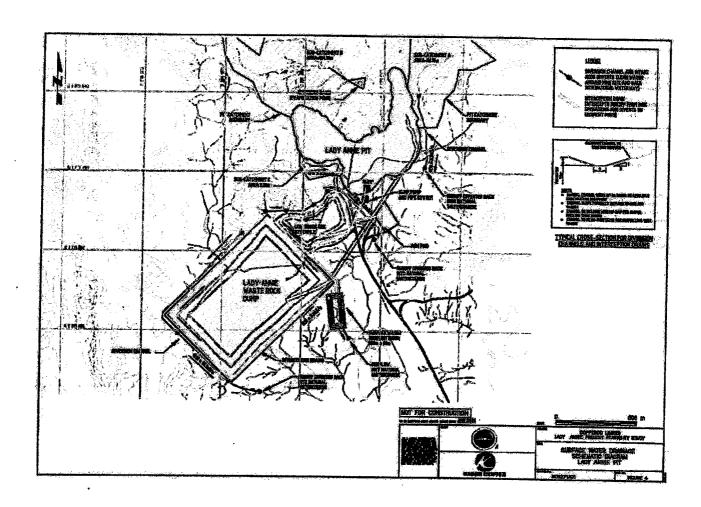


Schedule I - Map 1 Receiving Water Monitoring Locations (Mount Kelly Leases)

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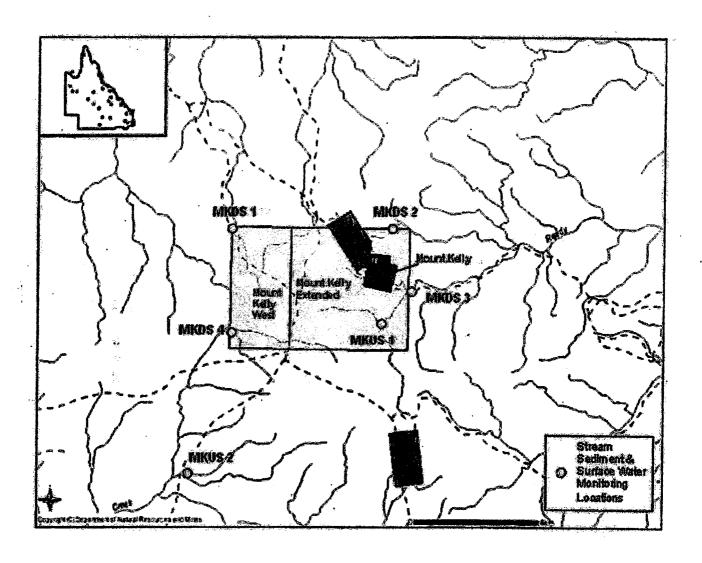


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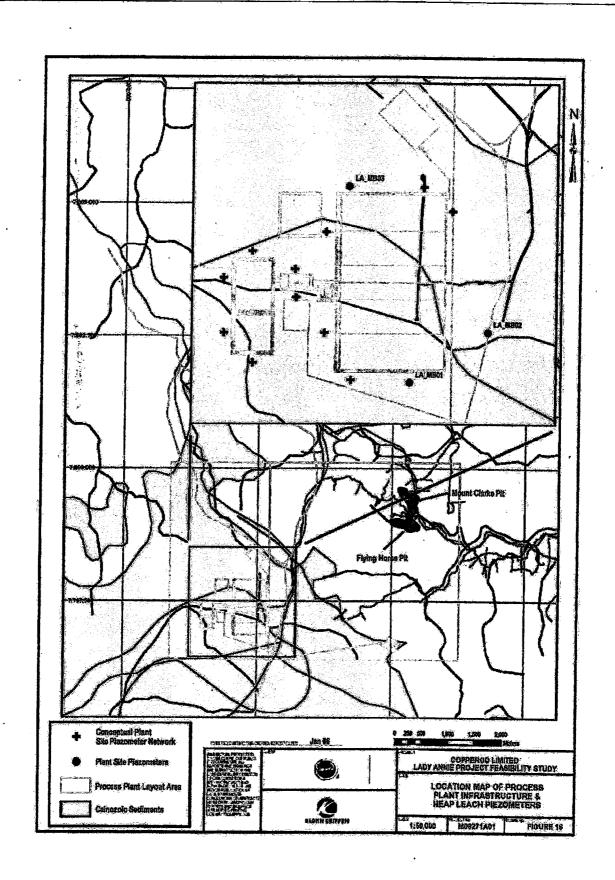


Schedule I - Map 5 Location of End Pipe Releases from Sediment Dams - Lady Annie





Schedule I - Map 7 Stream Sediments Monitoring Locations (Mount Kelly)



Schedule I - Map 9 Groundwater Monitoring Locations (Mount Kelly)



Enquiries Telephone Your reference Our reference

Jodie Marlow (07) 4744 7820 MIN00401001 **ISA65R**

Environmental Protection Agency

incorporating the Queensland Parks and Wildlife Service

31 May 2006

Wayne Frampton Mining Registrar Department of Natural Resources Mines and Water **PO BOX 334** Mount Isa Old 4825

Dear Wayne

RE: Mount Kelly Project EA MIN00401001 Reefway Pty Ltd and Savannah Resources Pty Ltd

The Environmental Protection Agency (EPA) received an amendment application on the 25 January 2006.

A draft environmental authority (MIN00401001) for this application has been prepared by this agency and is attached. The environmental authority holder is now required under section 254 of the Environmental Protection Act 1994 to give notice of their application to amend the environmental. authority to each affected person for each mining lease and publish the notice at least once in a newspaper circulating in the locality of the land to which the mining lease is subject.

This amendment application also included the addition of three mining lease applications: 90168, 90169 and 90170. The attached environmental authority is also the draft environmental authority for these mining lease applications.

Should you have any further enquiries please do not hesitate to contact Jodie Marlow on 07 4744 7820.

Yours sincerely

s.49 - Signature

Geoff Metcalfe **District Manager Environmental Operations Division North West District** Enc

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ABN 87 221 158 786



Environmental Authority No. MIN00401001 (mining activities)

Section 228 Environmental Protection Act 1994

This environmental authority is granted under the *Environmental Protection Act 1994* and includes conditions to minimise environmental harm caused, or likely to be caused, by the authorised mining activities. An environmental authority (mining activities) may be for mining activities authorised (under the *Mineral Resources Act 1989*) to occur under one of the following mining tenements: a prospecting permit; mining claim; exploration permit; mineral development licence; or mining lease. In general, a mining activity means: prospecting, exploring, mining; or processing minerals; remediation; rehabilitation; and includes facilitation and supporting activities and any action taken to prevent environmental harm.

Under the provisions of the *Environmental Protection Act 1994* this environmental authority is issued to:

Reefway Pty Ltd Level 22 Allendale Square 77 St Georges Terrace Perth WA 6000

Savannah Resources Pty Ltd Level 22, Allendale Square 77 St Georges Terrace Perth WA 6000

in respect of carrying out activities as part of the following mining project:

Type of environmental authority (mining activities)	Authorised mining teneme	nts Location
Mining Leases	ML 5426	100km north of Mount Isa
	ML 5435	
	ML 5446	
	ML 5447	
	ML 5448	- 11911
	ML 5474	$=$ \bigcirc $)///$
	ML 5476	
•	ML 5478	101101000
	ML90168	
	ML90169	
	ML90170	

The mining activities are authorized to the extent defined in Schedule 6 Section 12(c) of the Environmental Protection Regulation 1998.

This environmental authority is subject to the conditions set out in the attached schedules. The anniversary date of this environmental authority is X each year.

This environmental authority takes effect from X for granted tenements and will take effect for ML 90168, 90170 and 90169 upon date of grant of tenure.

Geoff Metcalfe
District Manager
Mt Isa District, Northern Region
Delegate of Administering Authority
Environmental Protection Act 1994

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This environmental authority incorporates the following schedules:

Schedule A - General
 Schedule B - Air

Schedule C - Water

Schedule D - Noise and Vibration

Schedule E - Waste
 Schedule F - Land
 Schedule G - Community
 Schedule H - Definitions
 Schedule I - Maps / Plans

Schedule A - General

Financial Assurance

(A1-1) Provide a financial assurance in the amount and form required by the administering authority prior to the commencement of activities proposed under this environmental authority.

NOTE: The calculation of financial assurance for condition (A1-1) must be in accordance with Guideline 17 and may include a performance discount. The amount is defined as the maximum total rehabilitation cost for complete rehabilitation of all disturbed areas, which may vary on an annual basis due to progressive rehabilitation. The amount required for the financial assurance must be the highest Total Rehabilitation Cost calculated for any year of the Plan of Operations and calculated using the formula: (Financial Assurance = Highest Total Annual Rehabilitation Cost x Percentage Required).

(A1-2) The financial assurance is to remain in force until the administering authority is satisfied that no claim on the assurance is likely.

NOTE: Where progressive rehabilitation is completed and acceptable to the administering authority, progressive reductions to the amount of financial assurance will be applicable where rehabilitation has been completed in accordance with the acceptance criteria defined within this environmental authority.

Maintenance of Measures, Plant and Equipment

- (A2-1) The environmental authority holder must ensure:
 - that all measures, plant and equipment necessary to ensure compliance with the conditions of this
 environmental authority are installed;
 - that such measures, plant and equipment are maintained in a proper condition; and
 - that such measures, plant and equipment are operated in a proper manner.

Monitorina

- (A3-1) Record, compile and keep for a minimum of five years all monitoring results required by this environmental authority and make available for inspection all or any of these records upon request by the administering authority.
- (A3-2) Where monitoring is a requirement of this environmental authority, ensure that a competent person(s) conducts all monitoring.

Storage and Handling of Flammable, Combustible and Corrosive Liquids

- (A4-1) Spillage of all flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm (other than trivial harm) and maintained in accordance with Section 5.8 of AS 1940 Storage and Handling of Flammable and Combustible Liquids of 2004.
- (A4-2) The on-site storage of corrosive liquids must be in accordance with Section 5.7 of AS 3780 Storage and Handling of Corrosive Substances 1994

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Definitions

(A5-1) Words and phrases used throughout this environmental authority are defined in Schedule H – Definitions. Where a definition for a term used in this environmental authority is sought and the term is not defined within this environmental authority, the definitions in the Environmental Protection Act 1994, its Regulations and Environmental Protection Policies must be used.

END CONTIONS FOR SCHEDULE A

Schedule B - Air

Dust Nuisance

- (B1-1) Subject to Conditions (B1-2) and (B1-3) the release of dust or particulate matter or both resulting from the mining activity must not cause an environmental nuisance at any sensitive or commercial place.
- (B1-2) When requested by the administering authority, dust and particulate monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B1-3) If the environmental authority holder can provide evidence through monitoring that the following limits are not being exceeded then the holder is not in breach of (B1-1):
 - a) Dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with AS 3580.10.1 Methods for sampling and analysis of ambient air Determination of particulates Deposited matter Gravimetric method of 1991.
- (B1-4) If monitoring indicates exceedence of the relevant limits in Condition (B1-3), then the environmental authority holder must:
 - a) address the complaint including the use of appropriate dispute resolution if required; or
 - immediately implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nuisance.

Odour Nuisance

- (B2-1) Subject to condition (B2-2), the release of noxious or offensive odour(s) or any other nexious or offensive airborne contaminant(s) resulting from the mining activity must not cause an environmental nulsance at any sensitive or commercial place.
- (B2-2) When requested by the administering authority, odour monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (B2-3) If monitoring indicates Condition (B2-1) is not being met then the environmental authority holder must:
 - a) address the complaint including the use of appropriate dispute resolution if required; or
 - immediately implement odour abatement measures so that emissions of odour from the activity do not result in further environmental nuisance.

END CONDITIONS FOR SCHEDULE B

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This environmental authority takes effect on X

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Schedule C - Water

Release to Waters

(C1-1) Receiving waters affected by the release of process water or storm water contaminated by the mining activities or both must be monitored at the locations and frequencies defined in Schedule C - Table 1 and Schedule I - Map 1, and comply with the contaminant limits defined in Schedule C - Table 3.

Schedule C - Table 1 (Receiving Water Monitoring Locations and Frequency)

Scriedule C - able Receiving Wa		Northing.	Monitoring frequency
MKUS 1- reference site *	305625	7797450	Each flow event
MKUS 2- reference site*	TBD	TBD	Each flow event
MKDS 1- test site	301160	7800135	Each flow event
MKDS 2- test site	306366	7798356	Each flow event
MKDS 3- test site	306370	7798363	Each flow event
MKDS 4- test site	301300	7797255	Each flow event

NOTE: This does not apply to dams containing hazardous waste Reference sites must:

- a) be from the same biogeographical and climatic region;
- b) have similar geology, soli types and topography
- c) contain a range of habitats similar to those at the test site
- d) be of similar flow regime; and
- e) not be so close to the test sites that any disturbances at the test site also result in a change at the reference site. TBD- to be determined and provided to the QEPA prior to commencement of mining.
- C1-2 Subject to Condition (C1-1), if the receiving water contaminant trigger levels defined in Schedule C Table 2 are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

Schedule C - Table 2 (Receiving Water Trigger Levels)

aramoter	Units 🧠 😘	Minimum	Maximum	* Trigger Type
pH 1	рН	6.0	8.0	Range
EC ¹	μS/cm	N/A	250	Maximum
Sulphate ²	mg/L	N/A	500	. Maximum
Aluminium ²	mg/L	N/A	2.5	Maximum '
Arsenic ²	mg/L	N/A	0.25	Maximum
Boron ²	mg/L	N/A	0.37	Maximum
Cadmlum ²	mg/L	N/A	0.005	Maximum
Chromlum ²	mg/L	N/A	0.5	Maximum
Cobalt ²	mg/L	N/A	0.5	Maximum
Copper ²	mg/L	N/A	0.5	Meximum
Fluoride ²	mg/L	N/A	1	Maximum
Lead ²	mg/L	N/A *	0.05	Maximum
Manganese ⁸	mg/L	N/A	1.9	Maximum
Mercury ²	mg/L	N/A	0.001	Maximum
Molybdenum ²	mg/L	N/A	0.075	Maximum
Nickel ²	mg/L	N/A	0.5	Maximum
Selenium ²	mg/L	N/A	0.01	Maximum
Zinc²	mg/L	N/A	10	Maximum

¹Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000).
²Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking

Water and are to be analysed as total metals (unfiltered).

Sometimes of the contemporary of the contempor filtered metals.

Schedule C - Table 3 (Receiving Water Contaminant Limits)

Parameter	Units	Minimum	Meximum	Trigger Type
pH ⁴	pН	6,0	9.0	Range
TDS ²	mg/L	N/A	4000	Maximum
Sulphate 1	mg/L	N/A	1000	Meximum
Aluminium ¹	mg/L	N/A	5	Meximum
Arsenic ¹	mg/L	N/A	0.5	Meximum
Boron ¹	mg/L	N/A	5	Maximum
Cadmlum ¹	mg/L	N/A	0.01	Maximum
Chromium ¹	mg/L	N/A	1	Maximum
Cobalt ¹	mg/L	N/A	1	Maximum
Copper ¹	mg/L	N/A	1	Maximum
Fluoride ¹	mg/L	N/A	2	Maximum
Lead ¹	mg/L	N/A	0.1	Maximum
Manganese ³	mg/L	N/A	2.5	Maximum
Mercury ¹	mg/L	N/A	0.002	Maximum
Molybdenum ¹	mg/L	N/A	0.15	Maximum
Nickel ¹	mg/L	N/A		Meximum
Selenium ¹	rng/L	N/A	0.02	Maximum
Zinc¹	mg/L	N/A	20	Maximum

Contaminant limits based on table 4.3.2 ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unfiltered)

End of Pipe Release

End of pipe release limits for storm water contaminated by mining activities must be monitored at the locations (C1-3)and frequencies defined in Schedule C - Table 4 and Schedule I - Map 2 and 3 and comply with the contaminant limits defined in Schedule C - Table 5.

Contaminant limits are based on Table 4.3.1 Livestock drinking water quality and are analysed as Total metals (unfiltered) ³ Contaminant limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) 80% and are to be analysed as filtered metals.

⁴ Contaminant limits based on Table 3.3.4 of Aquatic Ecosystems ANZECC (2000)

Schedule C - Table 4 (End of pipe monitoring locations and frequency)

Monitoring point	Easting (AMG 84, Zone 54)	Northing (AMG 84, Zone 54)	Monitoring frequency
Mount Clarke ROM Area Sediment Dam	303834	7799496	Each flow event
Mount Clarke Pit Area Sediment Dam	305336	7799592	Each flow event
Mount Clarke/Flying Horse Sediment Dam	305887	7798726	Each flow event
Process Plant ROM Pad Sediment Dam 1	303040	7798656	Each flow event
Process Plant ROM Pad Sediment Dam 2	302905	7798900	Each flow event
Process Plant ROM Pad Sediment Dam 3	302771	7799010	Each flow event

NOTE: This does not apply to dams containing hazardous waste.

Schedule C - Table 5 (End of pipe contaminant release limits)

Parameter	Units	Minimum	Maximum	Limit Type
pH	рН	6	9	Range
TDS	mg/L	N/A	4000	Maximum
Sulphate	mg/L	N/A	1000	Maximum
Arsenic	mg/L	N/A	5	Meximum
Cadmium	mg/L	N/A	0.01	Maximum
Chromium	mg/L	N/A	1	Maximum
Cobalt	mg/L	N/A	1	Maximum
Copper	mg/L	N/A	1	Maximum
Lead	mg/L	N/A	0.1	Maximum
Mercury	mg/L	NA	0.002	Maximum
Zinc	mg/L	N/A	20	Maximum

Contaminant limits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total metals (unfiltered) NOTE: This does not apply to dams containing hazardous waste.

Dams Containing Hazardous Waste

(C1-4) Water storages containing process water and storm water contaminated by mining activities must be monitored at the locations and frequencies defined in Schedule C - Table 6 and Schedule I - Map 4 and samples analysed for the parameters defined in Schedule C - Table 7.

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Schedule C - Table 6 (Water Storage Monitoring Locations of Hazardous Dams)

Monitoring point	Easting (Zone 54, AMG 84)	Northing (Zene 54, AMG 84)	Monitoring frequency
PLS Ponds	302000	7797450	Annually, March
ILS Pend	301900	7797450	Annually, March
Raffinate Pond Pre-Settler	301850	7797450	Annually, March
Raffinate Pond	301800	7797450	Annually, March
Storm water Pond 1	301750	7797450	Annually, March
Storm water Pond 2	301750	7797350	Annually, March

(C1-5) In the event that the water quality within any dam containing hazardous waste does not comply with the contaminant limits defined in Schedule C - Table 7, implement measures to prevent access by all livestock and minimise access by fauna to the dam.

Schedule C - Table 7 (Water Quality Limits for Dams Containing Hazardous Waste)

Parameter	Units	Contaminant Limit	Limit Type
pH	рН	4-9	Range
TDS	mģ/L	5,000	Meximum
Boron	mg/L	5	Maximum
Sulphate	rng/L	1000	Maximum
Aluminum	rng/L	5	Maximum
Arsenic	mg/L	0.5	Maximum
Cobalt	mg/L	ŧ.	Meximum
Copper	mg/L		Maximum
Lead	mg/L	0:1	Maximum
Nickel	mg/L	1	Maximum
Zinc	mg/L	20	Maximum

Contaminant limits based on ANZECC (2000 Livestock drinking water quality and are analysed as total metals (unfiltered).)

(C1-6) The design storage allowance on 1 November of each year for any dam containing hazardous was constructed or operated within the operational land must comply with Schedule C - Table 8.

Schedule C - Table 8 (Storage Design for Dams Containing Hazardous Waste)

Storage Type	Design Storage Allowance	Spillway Critical Design Storm (2)	Mandatory Reporting Level
Stormwater Pond 1	1: 100 Year ARI 2 month wet season plus process inputs for the 2 month wet season	1: 1000 Year ARI	1: 100 year ARI
Stormwater Pond 2	1: 100 Year ARI 2 month wet season plus process inputs for the 2 month wet season	1: 1000 Year ARI	1: 100 year ARI

Note (1): The design storage allowance on 1 November of each year for any dam containing hazardous waste constructed within the operational land must be equivalent to the run-off from a 1 in 100 ARI 2 month wet season plus process inputs for the equivalent wet season. Process inputs refers to hazardous mineral process waste and water, which is being disposed of in the storage facility.

Note (9): The critical design storm has a duration that produces the peak discharge for the catchments.

Note ⁽⁹⁾: The mandatory reporting level refers to the volume below the spillway crest, either the 1: 100 ARI 72 hour storm or the 1:100 ARI wave allowance, whichever is lower.

(C1-7) The spillway for any dam containing hazardous waste, constructed or operated within the operational land must be designed and maintained to withstand the peak flow from the spillway critical design storm defined in Schedule C - Table 8.

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- (C1-8) The holder of the environmental authority must mark the mandatory reporting level defined in Schedule C Table 8 on the spillway of all dams containing hazardous waste within the operational land.
- (C1-9) The holder of the environmental authority must notify the administering authority when the pondage level of the dam containing hazardous waste, reaches the mandatory reporting level defined in Schedule C Table 8,

Stream Sediment Contaminant Levels

- (C2-1) All reasonable and practicable erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment.
- (C2-2) The bed of the receiving waters, affected by the release of process water and storm water contaminated by the mining activities must be monitored at the locations and frequencies defined in Schedule C Table 9 and Schedule I Map 5.

Schedule C - Table 9 (Receiving Stream Sediment Monitoring Locations and Frequency)

Monitoring point	Easting (AGD 84 Zone 54)	Northing (AGD 84 Zone 54)	Monitoring frequency
MKUS 1- reference site *	305625	7797450	May each year
MKUS 2- reference site*	TBD	TBD	May each year
MKDS 1- test site	301160	7800135	May each year
MKDS 2- test site	306366	7798356	May each year
MKDS 3- test site	306370	7798363	May each year
MKDS 4- test site	301300	7797255	May each year

NOTE: This does not apply to dams containing hazardous waste Reference sites must:

- a) be from the same biogeographical and climatic region;
- b) have similar geology, soil types and topography
- c) contain a range of habitats similar to those at the test site
- d) be of similar flow regime; and
- e) not be so close to the test sites that any disturbances at the test site also result in a change at the reference site. TBD- to be determined and provided to the QEPA prior to commencement of mining.
- (C2-3) Subject to Condition (C2-2), if the stream sediment contaminant trigger levels defined in Schedule C Table 10 are exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

Schedule C - Table 10 (Receiving Stream Sediment Contaminant Trigger Levels)

Parameter	Units	Contaminant trigger levels	Trigger Type
Antimony ¹	. mg/kg dry wt	. 2	Maximum
Arsenic ¹	mg/kg dry wt	20	Maximum
Cadmlum ¹	mg/kg dry wt	1.5	Maximum
Chromium ¹	mg/kg dry wt	80	Maximum
. Copper ²	mg/kg dry wt	100	Meximum
Lead [†]	mg/kg dry wt	50	Maximum
Nickel ¹	mg/kg dry wt	21	Maximum
Silver ¹	mg/kg dry wt	í	Maximum
Mercury ¹	mg/kg dry wt	0.15	Maximum
Zinc ¹	mg/kg dry wt	200	Maximum

ANZECC (2000): ISQG Low trigger values, Sediment Quality Guidelines, Aquatic Ecosystems, Table 3.5.1.
Site specific trigger value as calculated in section 3.5 of EM Plan January 2006

(C2-4) Subject to Condition (C2-2), stream sediment contaminant limits must not exceed the contaminant limits defined in Schedule C -Table 11.

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Schedule C - Table 11 (Receiving Stream Sediment Contaminant Limits)

Parameter	Units	Contaminant limits	Limit Type
Antimony ¹	mg/kg dry wt	25	Maximum
Arsenic ¹	mg/kg dry wt	70	Maximum
Cadmium ¹	mg/kg dry wt	10	Maximum
Chromlum ¹	mg/kg dry wt	370	Maximum
Copper ²	mg/kg dry wt	120	Maximum
Lead ¹	rng/kg dry wt	220	Maximum
Nickel ¹	mg/kg dry wt	52	Maximum
Silver ^t	mg/kg dry wt	3.7	Maximum .
Mercury ¹	mg/kg dry wt	1	Maximum
Zinc [†]	mg/kg dry wt	410	Maximum

ANZECC (2000): ISQG High trigger values, Sediment Quality Guidelines, Aquatic Ecosystems, Table 3.5.1.

Site specific trigger value as calculated in section 3.5 of EM Plan January 2006

(C2-5) All stream sediment sampling must be undertaken in accordance with AS 5667.1 Guidance on Sampling of Bottom Sediments of 1998

Sewage effluent

- (C3-1) All effluent released from the treatment plant must be monitored at the frequency and for the parameters specified in Schedule C - Table 12.
- (C3-2) Sewage effluent used for dust suppression must not exceed sewage effluent release limits defined in Schedule C Table 12.
- (C3-3) Sewage Effluent used for dust suppression must not cause spray drift or over spray to any sensitive or commercial place, and must not be applied at a rate that causes pooling, ponding and/or runoff of any effluent irrigated.
- (C3-4) Subject to Conditions (C3-1) to (C3-3) inclusive, sewage effluent from sewage treatment facilities must be reused or evaporated and must not be directly released from the sewage treatment plant to any water way or drainage line other than in accordance with Schedule C Table 12.

Schedule C - Table 12 (Sewage effluent quality targets for dust suppression)

A COUNTY LAND AND AND AND AND AND AND AND AND AND		Release Limit	• At Lagran	Monitoring Frequency
**************************************	a Minimum	Mediah Wasa	Media M	
pH (pH Units)	6 ⁹		8.52	Quarterly
Faecal Coliforms (organisms/100mL)		1000 ¹	•	" Quarterly

A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling

Release limits sourced from Queensland Water Recycling Guidelines December 2005 Table 6:2b

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² A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling with four out of five samples must be less than the maximum

³ A minimum of five samples must be collected at not less than a weekly interval for the quarterly sampling with four out of five samples must be higher than the minimum but lower than the maximum limit.

Groundwater

Groundwater, affected by the mining activities must be monitored at the locations and frequencies defined in (C4-1)Schedule C - Table 13 and Schedule I - Map 6.

Schedule C - Table 13 (Groundwater Monitoring Locations and Fr

Monitoring point	Easting (AGD 84 Zone 54)	Northings (AGD 84 Zone 54)	Monitoring frequency
LA MB01 (Process Plant)- reference site	302484	7796800	Monthly
LA MB02 (Process Plant) - reference site	302891	7797385	Monthly
LA MB03 (Process Plant) reference site	302128	7797950	Monthly
LA MB04 (Process Plant)	TBD	TED	Monthly
LA MB05 (Process Plant)	TBD	TBD	Monthly
LA MB06 (Process Plant)	TBD	TBD	Monthly
LA MB07 (Process Plant)	TBD	TBD	Monthly
LA MB08 (Process Plant)	TBD	TBD	Monthly
LA MB09 (Process Plant)	TBD	TBD	Monthly
LA MB010 (Process Plant)	TBD	TBD	Monthly
LA MB011 (Process Plant)	TBD	TBD	Monthly
LA MB012 (Process Plant)	TBD	TBD	Monthly
A MB013 (Process Plant)	TBD	TBD	Monthly
A MB014 (Process Plant)	TBD	TBD	Monthly
VIK MB01 (pit area)	305360	7799013	Quarterly
MK PB01 (pit area)	305356	7799019	Quarterly

NOTE: This does not apply to dams containing hazardous waste

TBD- To be determined

Reference sites must:

- be from the same biogeographical and climatic region; have similar geology, soil types and topography contain a range of habitats similar to those at the test site
- be of similar flow regime; and not be so close to the test sites that any disturbances at the test site also result in a change at the reference site.
- Subject to Condition (C4-1), if the groundwater contaminant trigger levels defined in Schedule C Table 14 are (C4-2)exceeded then the environmental authority holder must complete an investigation into the potential for environmental harm and notify the administering authority within 3 months of receiving the analysis results.

Schedule C - Table 14 (Groundwater Contaminant Trigger Levels)

Parameter	Units	Minimum	Maximum	Trigger type
pH ¹	Hq	6	8	Range
TDS ²	mg/L	ŃA	2000	Maximum
Sulphate 2	mg/L	N/A	500	Meximum
Aluminium ²	mg/L	N/A	2,5	Meximum
Arsenic ²	mg/L	N/A	0.25	Maximum
Boron ²	mg/L	N/A	0.37	Maximum
Cadmium ²	mg/L	N/A	0.005	Maximum
Chromlum ²	mg/L	N/A	0.5	Maximum
Cobalt ²	mg/L	N/A	0.5	Meximum
Copper ²	mg/L	N/A	0.5	Maximum
Fluoride ²	mg/L	N/A	1	Maximum
Lead ²	mg/L	N/A	0.05	Maximum
Manganese ³	mg/L	N/A	1.9	Maximum
Mercury ²	mg/L	N/A	0.001	Maximum
/lolybdenum²	mg/L	NA	0.075	Maximum
Nickel ²	mg/L	N/A	0.5	Maximum
Selenium ²	mg/L	NA	0.01	Maximum
Zinc ²	mg/L	N/A	10	Maximum

Subject to Condition (C4-1), groundwater contaminant limits must not exceed the contaminant limits defined in (C4-3)Schedule C-Table 15.

Contaminant triggers limits are based on Table 3.3.4 and 3.3.5 of Aquatic Ecosystems ANZECC (2000)

Contaminant trigger limits are based on 50% of the contaminant limits defined in the ANZECC (2000) Livestock Drinking Water and are to be analysed as total metals (unfiltered).

Contaminant trigger limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) and are analysed as Filtered

Metals

Schedule C - Table 15 (Groundwater Contaminant Limits)

Parameter	Units	Minimum	Maximum	Limit Type
pH ¹	рН	6	9	Range
TDS ¹	mg/L	N/A	4000	Maximum
Sulphate ¹	mg/L	N/A	1000	Maximum
Aluminum¹	mg/L	N/A	5	Meximum .
Arsenic ¹	mg/L	N/A	0.5	Maximum
Boron ¹	mg/L	N/A	5	Maximum
Cadmlum ¹	mg/L	N/A	0.01	Meximum
Chromlum ¹	mg/L	N/A	1	Maximum
Cobalt ¹	mg/L	N/A	1.	Maximum
Copper ¹	mg/L	N/A	1	Maximum
Fluoride ¹	mg/L	N/A	2	Maximum
Lead ¹	mg/L	N/A	0.1	Maximum
Manganese ²	mg/L	N/A	2.5	Maximum
Mercury ¹	mg/L	N/A	0.002	Maximum
Molybdenum ¹	mg/L	N/A	0.15	Maximum
Nickel ¹	mg/L	N/A	1	Maximum
Selenium ¹	mg/L	N/A	0.02	Maximum
Zine'	mg/L	N/A	20	Maximum

¹ Contaminant limits based on ANZECC (2000) Livestock drinking water quality and are analysed as Total Metals (unfiltered)
² Contaminant limits based on Table 3.4.1 of Aquatic Ecosystems ANZECC (2000) and are analysed as Filtered Metals.

(C4-4) The method of water sampling required by this environmental authority must comply with that set out in the latest edition of the Environmental Protection Agency's Water Quality Sampling Manual,

Voids

- (C5-1) Water quality in mining voids and final voids must be monitored at the locations and frequencies defined in Schedule C Table 16 and for the parameters detailed in Schedule C Table 17.
- (C5-2) In the event that water quality within the mining voids or final voids does not comply with the contaminant limits defined in Schedule C Table 17, implement measures to prevent access by all livestock and minimise access by fauna to the void.

Schedule C - Table 16 (Voids Monitoring Locations and Frequency)

T	Mount Clarke Pit	Annually
	Mount Kelly/Flying Horse Pit	Annually
	of the same of the	
ŀ	Monitoring point	Monitoring frequency
1		

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Schedule C - Table 17 (Void Water Quality Limits)

Cr. Legation 1			PERSONAL PROPERTY OF THE PERSON OF THE PERSO
pH	рH	6-9	Range
TDS	mg/L	4000	Maximum
Sulphate	mg/L	1000	Maximum
Arsenic	mg/L	0.5	Maximum
Cadmium	mg/L	0.01	Miximum
Chromium	mg/L	1	Maximum
Copper	mg/L	1	Meximum
Lead	mg/L	0.1	Maximum
Mercury	mg/L	0,002	Maximum
Zinc	mg/L	20	Maximum

Contaminant limits are based on ANZECC (2000 Livestock drinking water quality and analysed for total metals (unfiltered))

Acid Rock Drainage and Leachate Management

(C6-1) Subject to limits defined in Schedule C all reasonable and practicable measures must be implemented to prevent hazardous leachate being directly or indirectly released or likely to be released as a result of the activity to any groundwater, watercourse and waters.

END CONDITIONS FOR SCHEDULE C

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Schedule D - Noise and Vibration

Noise Nuisance

- (D1-1) Subject to Conditions (D1-2) and (D1-3) noise from the mining activity must not cause an environmental nuisance to an affected building.
- (D1-2) When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.
- (D1-3) The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency's Noise Measurement Manual.

Vibration nuisance

- (D2-1) Subject to Conditions (D2-2) and (D2-3) vibration from the mining activity must not cause an environmental nuisance to an affected building.
- (D2-2) When requested by the administering authority, vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring.

END CONDITIONS FOR SCHEDULE D

Schedule E - Waste

Storage of Tyres

- (E1-1) Tyres stored awaiting disposal or transport for take-back and, recycling, or waste-to-energy options should be stockpiled in volumes less than 3m in height and 200m² in area and at least 10m from any other tyre storage area.
- (E1-2) All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10m radius of the scrap tyre storage area.

Disposal of Tyres

- (E2-1) Disposing of scrap tyres resulting from the mining activities in spoil emplacements is acceptable, provided tyres are placed as deep in the spoil as reasonably practicable.
- (E2-2) Scrap tyres resulting from the mining activities disposed within the operational land must not impede saturated aquifers or compromise the stability of the consolidated landform.

Waste Management

(E3-1) A Waste Management Program, in accordance with the Environmental Protection (Waste Management) Policy 2000, must be included in the Plan of Operations.

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Regulated Waste

- (E 4-1) All regulated waste received and removed from the site, that is over 250kg in weight, must be transported by a person who holds a current authority to transport such waste under the provisions of the *Environmental Protection Act 1994*.
- (E4-2). Except as otherwise provided by the conditions of this authority, all waste removed from the site must be taken to a facility that is lawfully allowed to accept such waste under the provisions of the *Environmental Protection Act 1994*.
- (E4-3) Where regulated waste is removed from the Project (other than by a release as permitted under another schedule of this environmental authority), records must be kept of the following:
 - a) the date, quantity and type of waste removed, and
 - b) name of the waste transporter that removed the waste; and
 - c) the intended treatment/disposal destination of the waste.

Note: Records of documents maintained in compliance with a waste tracking system established under the Environmental Protection Act 1994 or any other law for regulated waste will be deemed to satisfy this condition.

Waste Rock Characterisation

(E5-1) All areas to be mined must undergo a waste rock characterisation survey (where waste rock is to be disposed of on the surface) and a report submitted to the administering authority prior to mining where this survey has not previously been carried out.

END CONDITIONS FOR SCHEDULE E

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Schedule F - Land

Rehabilitation Landform Criteria

(F1-1) All areas significantly disturbed by mining activities must be rehabilitated to a stable landform with a self-sustaining vegetation cover in accordance with Schedule F — Table 1 and 2.

Schedule F - Table 1 (Final Land Use and Rehabilitation Approval Schedule)

(ka) PREDISTURBANCE PREDISTURBANCE PREDISTURBANCE Longflude Longflude	Disturbande Catedory	÷ Max. ≻ Area		A CONTRACTOR OF THE PROPERTY O	Land Capability	Capability	Analogue Site	ie Site
28 Habitat Water Storage Class 5 Water Storage Class 5 Water Storage Longitude 1.1 Habitat Water Storage Class 5 Class 5 TBD 1.3 Habitat Water Storage Class 5 Class 5 TBD 1.3 Habitat Water Storage Class 5 Class 5 TBD 1.3 Habitat Water Storage Class 5 Class 5 TBD 1.3 Habitat/LiG Habitat/LiG Class 5 Class 6 TBD 1.3 Habitat/LiG Habitat/LiG Class 5 Class 6 TBD 1.3 Habitat/LiG Class 5 Class 4-5 TBD 5.5 Habitat/LiG Class 4-5 Class 4-5 TBD 5.5 Habitat Habitat/LiG Class 4-5 Class 4-5 TBD 5.5 Habitat Habitat/LiG Class 4-5 Class 4-5 TBD		Theol						
Kelly/Flying 13.2 Habitat Water Storage Class 5 Water Storage TBD Kelly/Flying 28 Habitat Habitat Habitat TBD TBD Kelly/Flying 1.1 Habitat Habitat Mater Storage Class 5 TBD Kelly/Flying 1.3 Habitat Water Storage Class 5 Water Storage TBD Kelly/Flying 1.3 Habitat Water Storage Class 5 Water Storage TBD Kelly/Flying 1.3 Habitat Water Storage Class 5 TBD Merine Pit 9.5 Habitat Water Storage Class 4 - 5 TBD Clarke Pit 9.5 Habitat/LiG Habitat/LiG Habitat/LiG Class 4 - 5 TBD Stockpile 5.4 Habitat Habitat/LiG Class 4 - 5 TBD Mount Kelly 5.5 Habitat Habitat/LiG Class 4 - 5 TBD Mount Kelly 5.5 Habitat/LiG Class 4 - 5 TBD		8			PRE DISTURBANCE	POST DISTURBANCE	Longitude	Laditude
28 Habitat Habitat Class 5 TBD 1.1 Habitat Habitat Class 5 TBD 1.3 Habitat Water Storage Class 5 Water Storage 9.5 Habitat/LiG Class 5 Water Storage Class 6 TBD 16.3 Habitat/LiG Habitat/LiG Class 4 - 5 TBD TBD 5.4 Habitat/LiG Habitat/LiG Class 4 - 5 TBD TBD 5.5 Habitat Habitat/LiG Class 4 - 5 TBD 5.5 Habitat Habitat/LiG Class 4 - 5 TBD 5.5 Habitat Habitat/LiG Class 4 - 5 TBD	Mount Kelly/Flying Horse Pit	13.2	Habitat	Water Storage	Class 5	Water Storage		
1-1 Habitat Habitat Class 5 Class 5 TBD 1.3 Habitat LIG or diversion Habitat Class 5 Vivater Storage TBD 9.5 Habitat/LIG Habitat/LIG Class 4 - 5 TBD 5.4 Habitat/LIG Class 4 - 5 TBD 5.5 Habitat/LIG Class 4 - 5 TBD 7BD TBD TBD	Mount Kelly/Flying Horse Waste Rock Dump	58	Habitat	Habitat	Class 5	Class 5	TBD	TBD
1.3 Habitat Water Storage Class 5 Water Storage TBD 9.5 Habitat/LiG Habitat/LiG Class 5 Class 4 - 5 TBD 5.5 Habitat/LiG Habitat/LiG Class 4 - 5 Class 4 - 5 TBD 5.5 Habitat Habitat/LiG Class 4 - 5 Class 4 - 5 TBD 7.80	Mount Kelly/Flying Horse Topsoil Stockpile		Habitat	Habitat	Class 5	Class 5	180	TBD
1.3 Habitat LiG or diversion Habitat Class 5 Class 5 TBD 9.5 Habitat/LiG Habitat/LiG Class 4 - 5 Class 4 - 5 TBD 5.4 Habitat/LiG Class 4 - 5 Class 4 - 5 TBD 5.5 Habitat Habitat/LiG Class 4 - 5 TBD 9.5 Habitat Habitat/LiG Class 4 - 5 TBD 18D TBD TBD TBD	Mount Kelly/Flying Horse Sediment Dams	1.3	Habitat	Water Storage	Class 5	Water Storage		
9.5 Habitat/LiG Water Storage Class 4 - 5 Water Storage TBD 16.3 Habitat/LiG Class 4 - 5 Class 4 - 5 TBD 5.4 Habitat/LiG Class 4 - 5 TBD 5.5 Habitat Habitat/LiG Class 4 - 5 TBD 3 5.5 Habitat Habitat/LiG Class 4 - 5 TBD	Mount Kelly/Flying Horse Diversion Drains	1.3	Habitat	LIG or diversion Habitat	Class 5	Class 5	TBD	TBD
16.3 Hebitat/LiG Class 4 - 5 Class 4 - 5 TBD 5.4 Habitat/LiG Class 4 - 5 TBD 5.5 Habitat Habitat/LiG Class 4 - 5 TBD 3 5.5 Habitat/LiG Class 4 - 5 TBD 3 TBD TBD	Mount Clarke Pit	9,5	Habitat	Water Storage	Class 5	Water Storage		
5.4 Habitat/LiG Class 4 - 5 TBD 5.5 Habitat Habitat/LiG Class 4 - 5 TBD 3 TBD TBD	Mount Clarke Waste Rock Dump	16.3	Habitat/LIG	Habitat/LIG	Class 4 - 5	Class 4 -5	TBD	TBD
5,5 Habitat Habitat/LIG Class 4 - 5 Class 4 - 5 TBD	Mount Clarke Low Grade Stockpile	5,4	Habitat/LIG	Habitat/LIG	Class 4 - 5	Class 4 - 5	TBD	TBD
	Mount Clarke/Flying Horse/Mount Kelly ROM Storage & Live Reherrolle	ທີ່	Habitat	Habitavi	Class 4 - 5	Class 4 - 5	TBD	TBD

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E Disfurbanto	Max. Area		nd Use		Land Capability	Analogue Site	s Sile
Mount Clarke Topsoil Stockpile	4,5	Habitat/LIG	Habitat∕LIG	Class 4 - 5	Class 4 - 5	TBD	TBD
Mount Clarke Pit Area Sediment Dam	9.0	Habitat	Water Storage	Class 4 - 5	Water Storage		
Mount Clarke ROM Area Sediment Dam	0.4	Habitet	Water Storage	Class 4 - 5	Water Storage		
Mount Clarke — Diversion/Interception /Sediment Dam Drains	3.2	Habitat	LIG or diversion Habitat	Olass 4 - 5	Class 4 - 5	TBD	GBT
Roads/Tracks	18.8	Existing tracks or LIG	Tracks for grazier or LIG	Class 4 - 5	Class 4 - 5	TBD	TBD
Accommodation Camp and Facilities	ιο	อก	ng.	Class 4	Class 4	TBD	TBD
Sewage Plant and Pond	0.2	רופ	PI	Class 4	Class 4	TBD	TBD
ROM Pad – at process plant	7.8	. Lig	<u> </u>	Class 4 - 5	Class 4 -5	TBD	TBD
Process plant and associated buildings	3.3	PIO	LIG	Class 4	Class 4	TBD	TBD
Overland Conveyor	1.8					TBD	TBD
Workshop/Office Access Circuit Area	2.9	רופ	<u> </u>	Class 4	Class 4	TBD	TBD
Heap Leach Pads – Stage 1 and 2	43.2	911	Habitet/LIG	Class 4	Class 4-5	TBD	TBD
Process Water Ponds - PLS, ILS and Raffinate	3.4	<u>8</u>	Water storages	Class 4	Water storages		
Stormwater Ponds 1 and 2	11.4	רופ	Water storages	Class 4	Water storages		
Stormwater Pond spillway channel	0.7	<u>5</u> 7	LIG or diversion	Class 4	Class 4 -5	TBD	TBD
Raw Water Fond	9.0	ΠG	LIG/Water storage	Class 4	Class 4 or water storage	TBD	TBD
Process Area Topsoil Stockpiles	9.7	רופ	ΠG	Class 4	Class 4	TBD	TBD

Disturbance	Mex. Area		4mc U3a z		Land Capability	Anal	Analogue Site 🚁
Process Plant Drainage Diversions	2.7	917	LIG or diversion	Class 4	Class 4 - 5	CGET	081
Process Plant Sedliment Ponds	,	LIG	LIG or pands	Class 4 - 5	Class 4 - 5		
Bulk Fill Stockpile	2.6	S)I	- NG	Class 4	Class 4	CEL	Zal-
Pipelines and Powerlines (on lease)	,	9	91	Class 4 -5	Class 4 - 5	<u> </u>	200
Rubbish Dumps	0.2	FIG		Class 4 - 5	Cace A. A.	COL	Ç
Concrete Batch Plant	0.3	ଆ		Class 4	Class 4	1007	<u> </u>
Fuel Storage Area	0.3	DI'I	917	Class 4	Clare	1 gg.	ומר
Contractor Laydown Area	4.3		ВП	Olesss 4	Class 4	<u>a</u> <u>e</u>	TBD 08T
Exploration	un	ଧ୍ୟ	LIG/Habitat	Class 4 - 5	Class 4 . E		100
Construction Access (net of specific areas)	6.65	9	LIG/Habitat	Class 4 - 5	Olass 4 - 5	180	18D
Total	276.4						
							٠.

*Analogue shes and disturbance description are to be identified and the environmental authority to include analogue sites in Schedule F - Table 1 by 30 June 2007 TBD- To be determined

LIG- Low Intensity Grazing Classes are derived from the Department of Minerals and Energy's Land Suitability Assessment Techniques (1995)

Progressive rehabilitation must commence when areas become available within the operational land. (F1-2)

Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in Schedule F - Table 1 and landform design criteria in Schedule F - Table 2 by 30 June 2007. (F1-3)

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Schedule F - Table 2 (Landform Design)

Disturbance type	Slope range (%)	Projective surface area (ha)
Waste Rock Dumps	33%-76% (1:3 to angle of repose)	49.7
Heap Leach Pads	<33% or 1:3	43.2
ROM Pads	33%-76% (1:3 to angle of repose)	13.3

Residual Void Outcome

(F2-1) Residual volds must not cause any serious environmental harm to land, surface waters or any recognised groundwater aquifer, other than the environmental harm constituted by the existence of the residual vold itself and subject to any other condition within this environmental authority.

Dams Containing Hazardous Waste

Description of Dam

(F3-1) The construction or operation of any dam containing hazardous waste within the operational land must comply with Schedule F - Table 3.

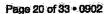
Schedule F — Table 3 (Size and Purpose of Dams Containing Hazardous Waste)

Name of dam containing hazardous waste	Maximum surface area of dam (hn)	Mædmum velume of dam (m³)	Maximum depth of dam (m) (m)	Purpose of dam ⁽⁰⁾
Process Water Pends (Raffinate Pre-Settler, Raffinate, ILS and PLS)	3.4	51,100	4.5	Storage of Process Solutions
Heap Leach Pads	43.2	N/A	N/A	Storage of Process Solutions
Stormwater Pond 1 (Stage 1 only)	6.47	302,760	6.35	Storage of storm water runoff from processing area
Stormwater Pond 1 & 2 (Stage 2)	10.4	467,720	6.35	Storage of storm water runoff from processing area

Note (1): The name of the dam containing hazardous waste should refer to the name of the dam e.g. process residue facility and decant dam.

Note (2): For dams that do not require a dam wall, input the maximum void depth e.g. where dams are formed by excavating below the land surface or backfilling a residual void.

Note (9): Purpose of the dam should outline the designed function, e.g. "the permanent containment of tailings resulting from the extraction of nickel, cobalt and other metals at the XYZ Refinery".



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Location of Dam

The location of any dam containing hazardous waste within the licensed place must be located within the (F3-2) polygonal area defined by the co-ordinates defined in Schedule C- Table 4 -- Map 4.

1	Schedule F — Table 4 (Location of Dams Containing Hezerdous Waste)
ı	The Containing nazardous Wastel

Name of dam containing hezardous waste	Easting(AMG 84, Zone 54) ⁽¹⁾	Northing (AMG 84, Zone 54) (1)
PLS Ponds, ILS, Raffinate Pre-settler and Raffinate Pond	301760 302065 302035 301760	7797640 7797640 7797310
Stormwater Pond 1 and 2	301470 301760 301760 301470	7797310 7797640 7797640 7797110
Heap Leach Pads	302065 302720 302720	7797110 7797945 7797945 7796825 7796825

Note (1): A minimum of 3 control points is required to constrain the location of all activities associated with the dam containing hazardous waste. Additional infrastructure which forms part of any dam containing hazardous waste may include appurtenant works consisting of tailings discharge pipelines, seepage collection systems, runoff diversion bunds, containment systems, pressure relief wells, decant and recycle water systems.

Standards and Criteria

- (F3-3) The holder of the environmental authority must design, construct, repair, maintain, operate and decommission the dams defined in Schedule F - Table 3 and 4 in accordance with an adknowledged design plan that must comply with the standard environmental conditions in the "Code of Environmental Compliance for High Hazard
- The holder of the environmental authority must design, construct, and operate all low hazardous dams (F3-4)containing hazardous waste and non-hazardous dams in accordance with the criteria outlined in Appendix B of the Code of Environmental Compliance for Mining Activities.

Inspection of Dams

- High hazard dams containing hazardous waste shall be inspected by a Registered Professional Engineer (F3-5)Queensland (RPEQ) prior to 1 November each year or at any time if alarming, unusual or otherwise unsatisfactory conditions are observed.
- (F3-6)For each inspection, the engineer shall assess the condition of the dam and its foundations, determine the hydraulic adequacy of the dam and assess the adequacy of the works with respect to dam safety.
- For each inspection, two copies of the engineer's report and any recommendations as to measures to be taken (F3-7)to ensure the integrity of the dam shall be furnished to the administering authority within 28 days of the inspection. Decemmissioning of Dam - Objective

Dams containing hazardous waste must not be abandoned and must be decommissioned to a situation where (F3-8)water can no longer be stored in the dams. The dams and their contained waste(s) must be stable, whereafter the dams are no longer dams and they become landforms on the operational land and must comply with the rehabilitation requirements of this environmental authority.

Decommissioning of Dam - Documentation and Compliance

Decommissioning activities for dams must be documented in detail in the plan of operations under which the (F3-9)activities are to occur. Where the detailed documentation is not already contained in the Design Plan for the dam, the detailed documentation is considered to be an amendment to the design plan and must be submitted

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as an amendment to the design plan required by the "Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste".

Infrastructure

(F4-1) All infrastructure, constructed by or for the environmental authority holder during the mining activities including water storage structures, must be removed from the site prior to mining lease surrender, except where agreed in writing by the post mining landowner / holder.

NOTE: This is not applicable where the landowner / holder is also the environmental authority holder.

Contaminated Lands

- (F5-1) A register and map of all potentially contaminated sites and any remediation details, must be kept on site, updated regularly, and included in each Plan of Operations.
- (F5-2) A Spillage Management Plan and an Emergency Plan for all hazardous materials stored on-site, together with a description of suitable equipment and training must be updated and included with each Plan of Operations.

END CONDITIONS FOR SCHEDULE F

Schedule G - Community

Complaint Response

(G1-1) All complaints received must be recorded including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority on request.

END CONDITIONS FOR SCHEDULE G

Schedule H - Definitions

"acceptance criteria" means the measures by which the actions implemented to rehabilitate the land are deemed to be complete. The acceptance criteria indicate the success of the rehabilitation outcome or remediation of areas which have been significantly been disturbed by the mining activities. Acceptance criteria may include information regarding:

vegetation establishment, survival and succession;

vegetation productivity, sustained growth and structure development;

fauna colonisation and habitat development;

ecosystem processes such as soil development and nutrient cycling, and the recolonisation of specific fauna groups such as collembola, mites and termites which are involved in these processes;

microbiological studies including recolonisation by mycorrhizal fungi, microbial biomass and respiration;

effects of various establishment treatments such as deep ripping, topsoil handling, seeding and fertiliser application on vegetation growth and development;

resilience of vegetation to disease, insect attack, drought and fire;

vegetation water use and effects on ground water levels and catchment yields.

"affected building"

for noise means any building or any part of a building, for example the building from which the noise is made, at which the noise can be heard.

for vibration means any building or any part of a building, for example the activity from which the vibration is made, at which the vibration can be felt.

"ambient (or total) noise" at a place, means the level of noise at the place from all sources (near and far), measured as the Leq for an appropriate time interval.

"appropriately qualified person" means any person who conforms to the EPA operational policy for an "appropriately qualified person (analyst)" in accordance with Section 490(7) of the Environmental Protection Act 1994.

"ARD" means acid rock drainage and refers to the low pH, high heavy metal pollutant typical of sulphidic mine wastes, and most commonly associated with the production of ferrous iron and sulphuric acid through the oxidation of sulphide minerals.

"authority" means environmental authority (mining activities) under the Environmental Protection Act 1994.

"blasting" means the use of explosive materials to fracture-

(a) rock, coal and other minerals for later recovery; or

(b) structural components or other items to facilitate removal from a site or for reuse.

"building" includes a structure of any type and part of a building or structure.

"commercial place" means a work place used as an office or for business or commercial purposes, which is not part of the mining activity and does not include employees accommodation or public roads.

"competent person" means a person with the demonstrated skill and knowledge required to carry out the task to a standard necessary for the reliance upon collected data or protection of the environment.

"dam" means a containment or proposed containment whether permanent or temporary, which is designed to contain, divert or control flowable substances. However this does not include a fabricated or manufactured tank or container designed to a recognised standard.

"design plan" in the context of a dam design is the documentation required under the Code of Environmental Compliance for High Hazard Dams Containing Hazardous Waste to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, the procedures and criteria to be used for operating the dam and the decommissioning and rehabilitation objectives in terms of procedures, works and outcomes at the end of dam life, The documents can include design and investigation reports, drawings, specifications and certifications.

"environmental authority holder" means the holder of this environmental authority.

"flow event" means a flow event producing sufficient water to permit a monitoring creek bed flow of 30cm or more at the

"flowable substance" means matter or mixture of materials which can be forced to or otherwise flow under any conditions possible in a situation. It includes water, other liquids or a mbaure that includes water or any other liquid or suspended

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"hazardous waste" means any substance, whether liquid, solid or gaseous, derived by or resulting from, the processing of minerals that tends to destroy life or impair or endanger health.

"infrastructure" means water storage dams, roads and tracks, buildings and other structures built for the purpose of mining activities but does not include facilities required for the long term management of mining impacts or the protection of potential resources. Such facilities include dams containing hazardous waste, waste rock dumps, voids, or ore stockpiles and buildings or other structures whose ownership can be transferred and which have a residual beneficial use for the next owner of the operational land or the background land owner.

"LA 10, adj. 10 mins" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10-minute measurement period, using Fast response.

"La 1, ed), to mins" means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10-minute measurement period, using Fast response.

"L_{A, max ed), T}" means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over any 10 minute period, using Fast response.

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.

"land capability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land suitability" as defined in the DME 1995 Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland.

"land use" term to describe the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

"leachate" means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

"mandatory reporting level" means the volume below the spillway crest, equivalent to the lower of the AEP, 72 hour storm or the AEP wave allowance (AEP is the annual exceedence probability).

"mineral" means a substance which normally occurs naturally as part of the earth's crust or is dissolved or suspended in water within or upon the earth's crust and includes a substance which may be extracted from such a substance, and includes—

- (a) clay if mined for use for its ceramic properties, kaolin and bentonite;
- (b) foundry sand;
- (c) hydrocarbons and other substances or matter occurring in association with shale or coal and necessarily mined, extracted, produced or released by or in connection with mining for shale or coal or for the purpose of enhancing the safety of current or future mining operations for coal or the extraction or production of mineral oil therefrom;
- (d) limestone if mined for use for its chemical properties;
- (e) marble:
- (f) mineral oil or gas extracted or produced from shale or coal by in situ processes;
- (g) peat;
- (h) salt including brine;
- (I) shale from which mineral oil may be extracted or produced;
-) silica, including silica sand, if mined for use for its chemical properties;
- (k) rock mined in block or slab form for building or manumental purposes;
- but does not include-
- (I) living matter;
- (m) petroleum within the meaning of the Petroleum Act 1923;
- (n) soil, sand, gravel or rock (other than rock mined in block or slab form for building or monumental purposes) to be used or to be supplied for use as such, whether intact or in broken form;
- (o) water.

"noxious" means harmful or injurious to health or physical well being, other than trivial harm.

"offensive" means causing reasonable offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive, other than trivial harm.

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"peak particle velocity (ppv)" means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time, usually measured in millimetres/second (mms⁻¹).

"protected area" means - a protected area under the Nature Conservation Act 1992; or

- a marine park under the Marine Parks Act 1992; or
- a World Heritage Area.

"progressive rehabilitation" means rehabilitation (defined below) undertaken progressively or a staged approach to rehabilitation as mining operations are ongoing.

"reference site" (or analogue site) may reflect the original location, adjacent area or another area where rehabilitation success has been completed for a similar bicdiversity. Details of the reference site may be as photographs, computer generated images and vegetation models etc.

"rehabilitation" the process of reshaping and revegetating land to restore it to a stable landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

"representative" means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

"residual void" means an open pit resulting from the removal of ore and/or waste rock which will remain following the cessation of all mining activities and completion of rehabilitation processes.

"self sustaining" means an area of land which has been rehabilitated and has maintained the required acceptance criteria without human intervention for a period nominated by the administering authority.

"sensitive place" means:

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- an educational institution; or
- a medical center or hospital; or
- a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area; or
- a public park or gardens.

"significant disturbance" - includes land

- (a) if it is contaminated land; or
- (b) It has been disturbed and human intervention is needed to rehabilitate it.
 - to a state required under the relevant environmental authority; or i.
 - if the environmental authority does not require the land to be rehabilitated to a particular state to its state ii. immediately before the disturbance.

Some examples of disturbed land include:

- areas where soil has been compacted, removed, covered, exposed or stockpilled;
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining activities occur;
- areas submerged by tailings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining activities have ceased; or
- areas where land has been contaminated and a suitability statement has not been issued.

However, the following areas are not included:

- areas off lease (e.g. roads or tracks which provide access to the mining lease);
- areas previously significantly disturbed which have achieved the rehabilitation outcomes; by agreement with the EPA, areas previously significantly disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the EPA;
- disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

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"spillway" means passage or outlet from the dam through which surplus water flows.

"stable" means land form dimensions are or will be stable within tolerable limits now and in the foreseeable future. Stability includes consideration of geotechnical stability, settlement and consolidation allowances, bearing capacity (traffic ability), erosion resistance and geochemical stability with respect to seepage and contaminant generation.

"sultably qualified and experienced person" means a person who is a Registered Professional Engineer of Queensland under the provisions of the *Professional Engineers Act 1988* or a Corporate Member of the Institution of Engineers Australia or holds equivalent professional qualifications and has the following:

- (a) knowledge of engineering principles related to the structures, geomechanics, hydrology, hydraulics, chemistry and environmental impact of dams; and
- (b) at least a total of five years of suitable experience and demonstrated expertise in at least four of the following areas:
- investigation, design or construction of dams;
- operation and maintenance of dams;
- geomechanics with particular emphasis stability, geology and geochemistry;
- hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology;
- hydraulics with particular reference to sediment transport and deposition, erosion control, beach processes;
- hydrogeology with particular reference to seepage, groundwater,
- solute transport processes and monitoring thereof; or
- dam safety.

"tolerable limits" means that a range of values could be accepted to achieve an overall environmental management objective (eg a range of settlement of a tailing capping could still meet the objective of draining the cap quickly, preventing pendage and limiting infiltration and percolation).

"trivial harm" means environmental harm which is not material or serious environmental harm and will not cause actual or potential loss or damage to property of an amount of, or amounts totalling more than \$5,000.

"watercourse" - Means a river, creek or stream in which water flows permanently or intermittently in a visibly defined channel (natural, artificial or artificially improved) with:

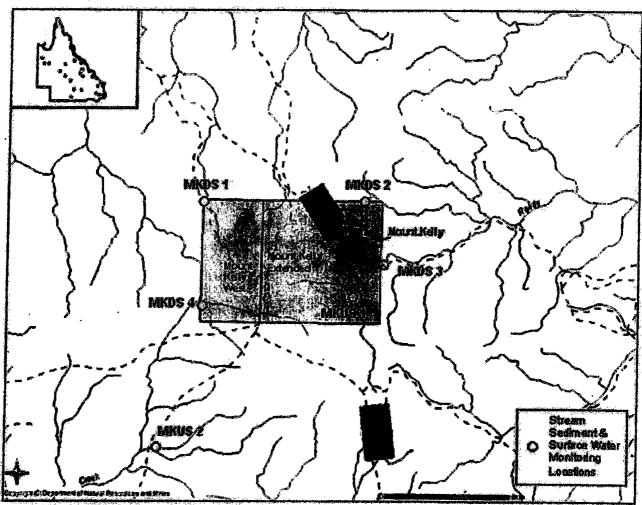
- (a) continuous bed and banks;
- (b) an extended period of flow for some months after rain ceases, and
- (c) an adequacy of flow that sustains basic ecological processes and maintains biodiversity.

"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea) or any part-thereof.

END CONDITIONS FOR SCHEDULE H

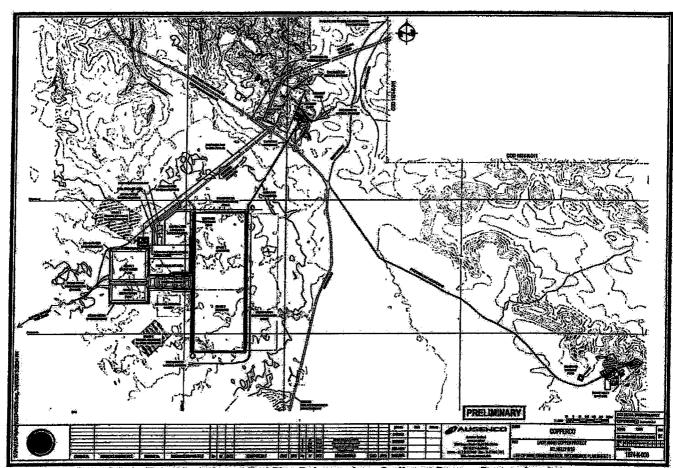
12-513

Schedule I - Maps / Plans



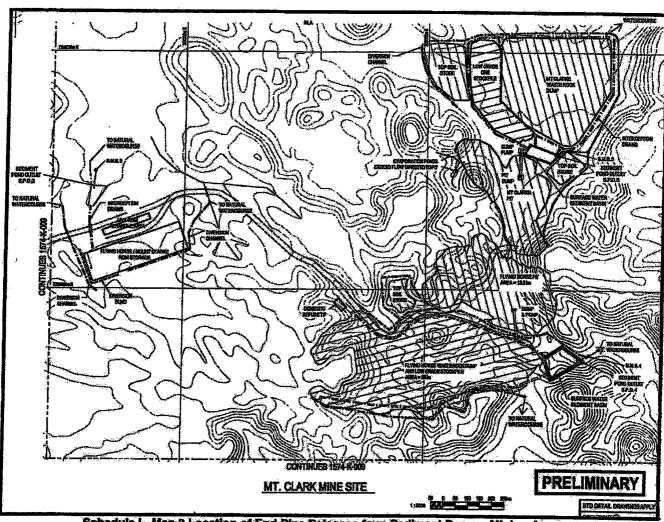
Schedule I - Map 1 Receiving Water Monitoring Locations

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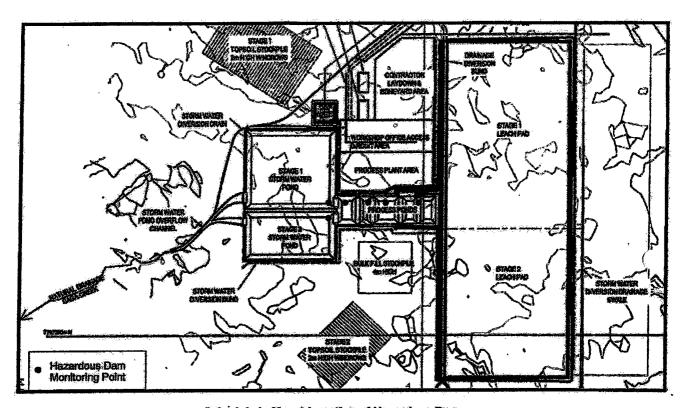
Schedule I - Map 2 Location of End Pipe Releases from Sediment Dams - Processing Area

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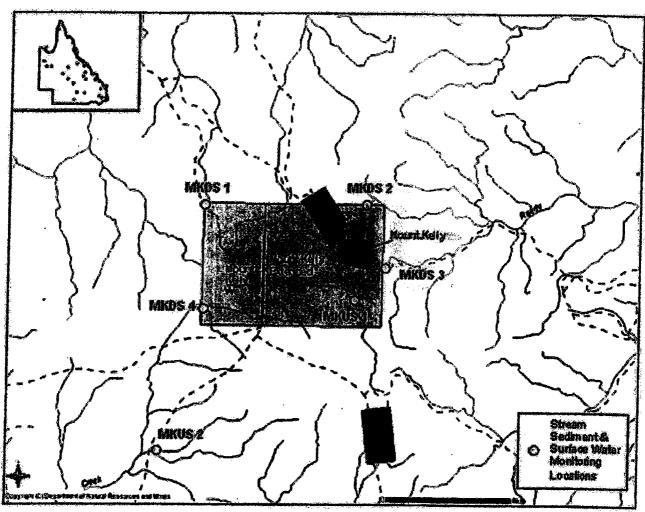
Schedule I - Map 3 Location of End Pipe Releases from Sediment Dams - Mining Area

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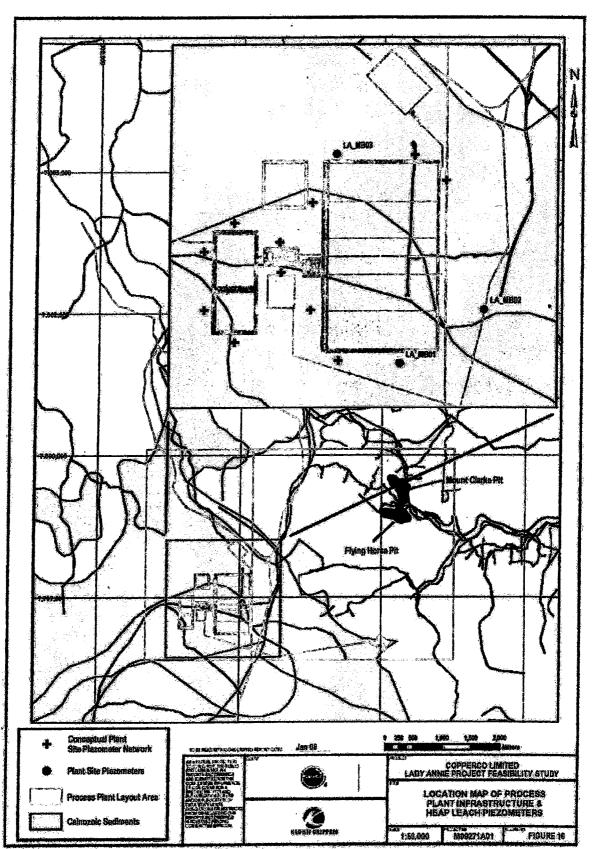
Schedule I - Map 4 Location of Hazardous Dams

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Schedule I - Map 5 Stream Sediments Monitoring Locations

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Schedule I - Map 6 Groundwater Monitoring Locations

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END CONDITIONS FOR SCHEDULE I END OF EVIRONMENTAL AUTHORITY

Lady Annie Off Lease Discharge

Note: Statewide Services have had no direct involvement in this issue and all the information has been sourced from S&H and EPA staff members. The relevant S&H staff members involved have recorded details of their involvement in their notebooks and a mine record of the S&H site inspection has been recorded on the CopperCo mine record book at Lady Annie mine site.

The actual mining operations (copper heap leach) site is Mount Kelly and involves primarily ML 90169 (Savannah Resources Pty Ltd 100%) and ML90170 (Lady Annie Operations Pty Ltd 100%).

EPA is the lead agency for managing mine discharges via the Environmental Management Plan, Environmental Authority No MIN100401006 and Plan of Operations expiring on 1 January 2009 under the *Environmental Protection Act 1994*. The current status of the Plan of Operations has not been advised to DME as at 27 February 2009.

Safety and Health have a responsibility for safety on the mine site under the *Mining* and Quarrying Safety and Health Act 1999.

Statewide Services manages the project financial assurance for the EPA and could provide information on the boundaries of the mining lease/s granted under the *Mineral Resources Act 1989* if required to determine if the issue was on or off the mining lease/s. There does not appear to be an immediate concern with the boundaries as the affected Saga and Inca Creeks are predominantly off lease

- 9 January 2008 EPA advise Plan of Operations for the Lady Annie project approved to expire on 1 January 2009. Revised Financial Assurance of \$7,677,713.00 required for the project.
- 23 January 2008 Macquarie Bank bond for the revised Financial Assurance lodged with the DME Mount Isa office.
- 26 November 2008 Administrators appointed to CopperCo Limited and its associated companies Copperco Queensland Operations Pty Ltd, Lady Annie Operations Pty Ltd, Lady Annie Pty Ltd and Savannah Resources Pty Ltd (CopperCo). The administrators subsequently appointed Ferrier Hodgson as receivers and managers of CopperCo.
- 6 February 2009 ASX listed resource company Cape Lambert Iron Ore Limited (Cape Lambert) assigned the securities of Macquarie Bank Limited in CopperCo. Cape Lambert subsequently appointed Deloitte as new receivers and managers and expressions of interest advertised for the sale of all or part of the project closing on 10 March 2009.
- District Inspector of Mines Hermann Fasching (DIO) was notified at approximately 7.30am on Saturday 21 February 2009 by Member for Mount Isa Mrs Betty Kiernan MP of landholder complaints about possible contaminated discharge from Lady Annie mine site into Saga and Inca Creeks.
- DIO then notified EPA District Manager Cairns, Ingrid Fomiatti Minnesma (EPA DM), of the issue at approximately 8.15 am on the same day.
- DIO then contacted Mrs Kiernan MP to advise of his referral and also gave her the mobile number of the EPA Northern region Director of Environmental Operations, Rob Lawrence.

- EPA Environmental Operations Mount Isa staff attended the site on Monday 23 February 2009 and the investigation is continuing. (pers comms EPA Mount Isa 23-27/2/09)
- Inspector of Mines Chemical, Damien Lee (IMC) drove to the site on Tuesday 24 February 2009 accompanied by District Workers Representative, Desmond Laffin, to inspect the site from a S&H perspective. His findings and recommendations are recorded in the mine record book.
- The issue appeared in the North West Star, Townsville Bulletin and Courier Mail newspapers that circulate in the district.
- The off lease discharge resulted from the failure of Storm Water Pond 2 at the Mount Kelly mine site due to abnormally high rainfall over the past 2 months.
 The low pH discharge flowed into Saga Creek, then into Inca Creek which flows into the Buckley River. (pers comms EPA DM 27/2/09)
- Deloitte posted a media release on the Copperco website on Friday 27
 February 2009 about the incident and their present and future involvement as receivers and managers.
- The Buckley River crosses Northern Territory border about 50 kilometres south south west of Camoweal and flows into the Georgina River system that empties into Lake Eyre.(Merlin and internet)
- The Copperco Lady Annie mine site on ML90179 is located 15 kilometres north west of Mount Kelly and is in the catchment for Gunpowder Creek that flows into the Leichardt River.
- Cape Lambert are presently in the process of replacing the Macquarie Bank EPA Financial Assurance bond for the CopperCo Mount Kelly project PJ 90084 of \$7, 677, 713 with a National Australia Bank bond for the same amount. It is expected this bond will be lodged during the week commencing 2 March 2009.
- There is no security held under section 277 of the *Mineral Resources Act* 1989.

Mount Gordon mine site had nowhere to store process water due to all storages being full and were considering utilising their underground workings. (pers comms IMC 26/2/09) The mine was shut down on or about 25 February 2009 as reported in the North West Star on 26 February 2009.

There have reportedly been off lease discharges from other mine sites but these haven't been reported to Statewide services.

IMC Damien Lee inspected the Great Australia mine discharge adjacent to Cloncurry township and recorded his findings in the mine record book.

Mine closures are always reported to EPA and the Inspectorate due to the environmental and safety impacts.



	Page 1 of 3
Minister's Office File Ref:	Insert number
Department File Ref:	B200902006

Briefing Note
The Honourable Geoff Wilson MP
Minister for Mines and Energy

Requested by:	Regional Director, Northern Date Requested:	27 February 2009 F	For action by: 3 March 2009
For action and r	eturn to department	For retention by I	Minister's office
For approval	For information	Speaking points	
For meeting	With correspondence	Draft media relea	se
BUBJECT L	ady Annie copper mine discharge	into Saga and Inca C	Creeks

Purpose

To advise the Minister of background and issues relating to the discharge of contaminated water from Copperco Limited heap leach copper mining operation known as the Lady Annie Mine.

Urgency

- 1. If urgent, please provide details including -
 - The Minister proposes to visit the site on Tuesday 3 March 2009
 - The issue was known on Saturday 21 February 2009.
 - The situation is still under investigation by EPA
 - The briefing note needs to be actioned by Monday 2 March 2009

Background

- 9 January 2008 Environmental Protection Agency (EPA) advise the Plan of Operations for the Lady Annie project approved to expire on 1 January 2009. Revised Financial Assurance of \$7,677,713.00 required for the project.
- 23 January 2008 Macquarie Bank bond for the revised Financial Assurance lodged with the Department of Mines and Energy (DME) Mount Isa office.
- 26 November 2008 Administrators appointed to CopperCo Limited and its associated companies Copperco Queensland Operations Pty Ltd, Lady Annie Operations Pty Ltd, Lady Annie Pty Ltd and Savannah Resources Pty Ltd (CopperCo). The administrators subsequently appointed Ferrier Hodgson as receivers and managers of CopperCo.
- 6 February 2009 ASX listed resource company Cape Lambert Iron Ore Limited (Cape Lambert) assigned the securities of Macquarie Bank Limited in CopperCo. Cape Lambert subsequently appointed Deloitte as new receivers and managers and expressions of interest advertised for the sale of all or part of the project closing on 10 March 2009. (CopperCo web site http://www.copperco.com.au/)
- District Inspector of Mines Hermann Fasching (DIO) was notified at approximately
 7.30am on Saturday 21 February 2009 by Member for Mount Isa Mrs Betty Kiernan
 MP of landholder complaints about possible contaminated discharge from Lady Annie mine site into Saga and Inca Creeks. (pers comms DIO)
- DIO then notified EPA District Manager Cairns, Ingrid Fomiatti Minnesma (EPA DM), of the issue at approximately 8.15 am on the same day. (pers comms DIO)
- DIO then contacted Mrs Kiernan MP to advise of his referral and also gave her the mobile number of the EPA Northern region Director of Environmental Operations, Rob Lawrence. (pers comms DIO)
- EPA Environmental Operations Mount Isa staff attended the site on Monday 23 February 2009 and the investigation is continuing. (pers comms EPA Mount Isa 23-27/2/09)
- Inspector of Mines Chemical, Damien Lee (IMC) drove to the site on Tuesday 24
 February 2009 accompanied by District Workers Representative, Desmond Laffin, to

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Minister's Office File Ref: Insert number

Department File Ref: B200902006

inspect the site from a S&H perspective. His findings and recommendations are recorded in the mine record book. (pers comms IMC)

- The issue appeared in the North West Star, Townsville Bulletin and Courier Mail newspapers that circulate in the district.
- The off lease discharge resulted from the failure of Storm Water Pond 2 at the Mount Kelly mine site due to abnormally high rainfall over the past 2 months. The low pH discharge flowed into Saga Creek, then into Inca Creek which flows into the Buckley River. (pers comms EPA DM 27/2/09)
- Deloitte posted a media release on the Copperco website on Friday 27 February 2009 about the incident and their present and future involvement as receivers and managers. (CopperCo website http://www.copperco.com.au/)
- The Buckley River crosses Northern Territory border about 50 kilometres south south west of Camooweal and flows into the Georgina River system that empties into Lake Eyre.(Merlin and internet)
- The Copperco Lady Annie mine site on ML90179 is located 15 kilometres north west of Mount Kelly and is in the catchment for Gunpowder Creek that flows into the Leichhardt River.
- Cape Lambert are presently in the process of replacing the Macquarie Bank EPA
 Financial Assurance bond for the CopperCo Mount Kelly project PJ 90084 of \$7, 677,
 713 with a National Australia Bank bond for the same amount. It is expected this
 bond will be lodged during the week commencing 2 March 2009.

Issues

- The EPA is the lead agency for mine site discharges via the Environmental Management Plan, Environmental Authority No MIN100401006 and Plan of Operations expiring on 1 January 20092009 under the *Environmental Protection Act 1994*. The current status of the Plan of Operations has not been advised to DME as at 27 February 2009.
- The Mount Isa office of the Mines Inspectorate is responsible for ensuring that acceptable safety and health standards are established and practised on the mine site. They will continue to monitor the situation on the mining lease following their initial inspection.
- The Mount Isa office of Statewide Service manages the unconditional financial assurance bond for the Lady Annie project for the EPA. This bond can be called up if requested by the EPA. There is no security held under section 277 of the *Mineral Resources Act 1989*.
- 2. Analysis of the issues and assessment of alternative actions or options is the responsibility of the EPA as a result of their ongoing monitoring and investigations.
- 3. No policy initiatives involved due to ongoing monitoring and investigations.

Media Implications

4. Not Applicable.

Consultation

5. Not Applicable as only background information obtained.

Financial Implications

6. Not Applicable. Financial Assurance of \$7, 677, 713 .00 unconditional bank bond held.

Elected Representatives

7. Mount Isa City Council – Mayor John Maloney; State electorate of Mount Isa – Mrs Betty Kiernan MP; Federal electorate of Kennedy – Mr Bob Katter MLA

Remedial Action

8. Not Applicable as EPA investigation ongoing.

Attachments

9. Alphabetically list each attachment to the briefing note by title.

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Minister's Office File Ref:	Insert number
Department File Ref:	B200902006

RECOMMENDATION/S

- 1) The recommendation should be clearly expressed. Briefing notes on policy issues should contain a firm recommendation about the preferred option being proposed together with the pros and cons involved.
- 2) If brief is related to community infrastructure designation/mail merge correspondence, please ensure that the Minister's approval for use of his electronic signature is sought in this section and include in attachments, the draft letter and recipients list.

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NOTED / RECOMMENDED/ NOT RECOMMENDED

GEOFF V Minister		/IP and Energ	у	Senio	r Policy <i>A</i>	Advisor		
i	1	/2008			1	/2008		
COMMENT	<u>s</u>		···					
				•				
								···

Notes:

- 1. All paragraphs should be numbered.
- 2. Font type and style should be Arial 11pt in the body of the briefing note, as shown in this template.
- The brief should not exceed two (2) pages, excluding the recommendations and signing page.
 The 'endorsement' section indicates the brief has been read and supported by each signee.
- 5. No headings should be removed. Enter 'Not applicable' where appropriate.

Action Officer: [Name] [Position] [Division] Tel:	Endorsed by: [Director's Name] [Position] [Division] Tel: Mob:	Endorsed by: [Name] Deputy Director-General [Division] Tel: Mob:	Endorsed by: Dan Hunt Director-General Department of Mines and Energy Tel: 322 42684 Mob: 0418 736 803
Date:	Date	Date:	Date:
(INSERT FILE PATH)		File D Part 2	Page 230 of 250

From: Kadletz Oskar

Sent: Tuesday, 17 March 2009 10:23 AM **To:** Croton Luke; Frampton Wayne

Cc: Fasching Hermann; Lawrence Rob; Cooper Warren

Subject: NOTES FROM MINISTER'S MEETING RE MINE FLOODING WITH LANDHOLDERS IN

MOUNT ISA 16 MARCH 2009

Luke, Wayne,

Present were Rob Lawrence and Hamish Butler from the EPA, myself and Hermann Fasching from DME, Colin Saltmere as a Traditional Owner, Doug Coventry chair of Southern Gulf Catchments, as well as landholders from stations downstream of Lady Annie, Mount Gordon, and Mount Oxide Mines including stations Koolamara, Bonyapadinga??, Flora downs, Yelvertoft, Chidna, Stanbroke, Fort Constantine, Lorraine Station, Camilleroy, Augustus, and Carlton Hills. Betty took a contact list which Hermann Fasching will get a copy of.

Notes from yesterday's meeting between the Minister, Betty Kiernan, and landholders:

- Meeting discussed issues relating to discharges from Lady Annie, Birla Mount Gordon, and Mount Oxide
- Rob Lawrence gave updates on activities for Lady Annie and Mount Gordon, including discussions with the mining companies
- I and the Minister discussed the situation at Mount Oxide as an abandoned mine site; Minster asked that issues be addressed directly to DME for this site
- Betty Kiernan's intent to have most of the graziers in the same room so all could be given the same information
- Landholders downstream of Lady Annie Mine dissatisfied with the level of discharge notification by the mine site
- All wanted more information on water impacts and water safety for stock and potable uses
- There was discussion on stream fencing,
- Concern over media impact on the clean green and organic" nature of their product, but determination to have contamination issues addressed
- Although not specifically said by EPA or Minister, the landholders will need to address immediate response stock management themselves in the first instance. At least one landholder asked this question directly.
- Minister/Agencies will investigate flooding disaster relief options as another form of assistance
- At least one landholder has sent a legal letter of claim to Lady Annie. Minister and Betty supported landholders seeking concurrent legal assistance from Glen Martin on 4687 2934 (set up by DME previously?)
- Brussy Spreadborough from Chidna gave photos of Mount Oxide to the NW Star front page article 16 March 2008
- Financial assurance Minister was asked whether assurance could be used to address downstream issues.
- Discussion on protection of incomes of impacted landholders, strengthening landholder compensation arrangements, immediate response impacts on landholder finances and property saleability

Minister's 7-point action plan:

- 1. EPA will continue with environmental protection orders for Lady Annie Mine
- 2. EPA will review need for supplementary orders
- 3. People at the meeting to provide round table comment to the above before they go out
- 4. Buckley and Gunpowder/Leichhardt Rivers to be tested for impacts further downstream ASAP landholder concern waters are clearer than they should be???
- 5. DPI to assist with stock testing to check for impacts
- 6. The meeting re-convene next week and on a roughly fortnightly basis to address the issues
- 7. DPI to provide guidance and advice. Also role for Biosecurity Queensland?

Mt Oxide Action Points

- 1. DME to liaise directly with landholder of Chidna Station (Vernon "Brussie" Spreadborough)
- 2. DME to investigate ways to "neutralise" the precipitate downstream of Mount Oxide and if possible
- 3. DME to work with EPA on downstream river sampling to provide information for landholder's queries on safety of water for stock and potable uses

- 4. DME to review fencing and exclusion options for affected areas around Mt Oxide Mine (control of cattle access to potentially contaminating areas)
- 5. DME review site risks and remediation requirements with a view to a new funding submission

Mount Gordon Action

1. EPA to bring dam safety expert to site to inspect tailings dam, and report on potential failure risks and their mitigation

Cheers,

Oskar

Oskar Kadletz Manager, Mining Industry Liaison Unit, Northern Region Department of Mines & Energy

First Floor, State Government Building, Corner Walker and Stanley Streets, PO Box 1752 Townsville Queensland **4810**.

Telephone: (07) 4760 7409; QNET 97409 Facsimile: (07) 4760 7400

Mobile: s.49

E-mail: Oskar.Kadletz@dme.gld.gov.au

From:

Frampton Wayne

Sent:

Thursday, 12 March 2009 1:48 PM

To:

Cooper Warren; Kadletz Oskar

Subject:

FW: Lady Annie Mine

Attachments:

Lady Annie (Sites).pdf; sample summary_allIFM.XLS

FYI

Wayne Frampton
Acting Regional Director
Northern Region
Telephone 47472038, Qnet 32038
Mobile s.49 Facsimile 0747437165
Email: wayne.frampton@dme.qld.gov.au

www.dme.qld.gov.au

Department of Mines and Energy 13 Isa Street, Mount Isa Q 4825 PO Box 334, Mount Isa Q 4825

From: Rob Lawrence [mailto:Rob.Lawrence@epa.qld.gov.au]

Sent: Thursday, 12 March 2009 12:21 PM

To: Frampton Wayne

Cc: Crystal Whittaker; Hollie Wakefield

Subject: Lady Annie Mine

Hi Wayne

FYI the attached spreadsheet provided results of the sampling downstream of the Lady Annie Mine. Map attached shows samples sites.

Let me know if you have any questions

Regards

Rob

Rob Lawrence

Director, Environmental Protection Agency Level 2, 5B Sheridan St, Cairns. QLD. 4870.

Ph 07 40466638 Fax 07 404666771

Email: rob.lawrence@epa.qld.gov.au

12-513

Reference	Sulfs	ğ	Method	SECOLE	62900B		Т	62900B	62800B		
Sample				Confines / Buck Ck DS	Conlines / Buck Ck US	1	Dio Hole	183	Ince Ck DS2	Stock	ANZECC
map reference				14	13	1	Т		8		
Date Extracted						2/03/2009	2/03/2009	2/03/2008	٠.		
Date Analysed				2/03/2009		2/03/2009	2/03/2009	2/03/2009	2/03/2008		
Silver, Ag A	mg/l.	40.001	AN318	€0.001	< 0.001		<0.001	<0.001	<0.001		900000
Total Silver, Ag #*	mg/L	90.00	ភ្ជ				10000	<0.001	<0.001		
Auminium, Al A	mg/L	60.00	AN318	0.063		0.32	3,2	83			4d 8000.0 990.0
Totel Aluminium, Al #	mg/l.	40.05	AN318	1.2		0.58	3.9		35六.47	. 5	
Arsenio, As A	mg/L	<0.001	ANS18	<0.001	€0.001		<0.001	0.001	0.001 <0.001		0.013
Total Arsento, As #4	mg/l.	<0.001	AN318		40,001	•	100.00	0.001	€0.001	0.5	
Boron, B.A.	W6VF	40,001	AN318	9:00			0.022	0.019			0.37
Total Boron, B#	mg/L	40.001	AN318	0.039		0.024	0.022	0.021	0.053	10	
Bertum, Be A	me/L	40,001	AN318	0.1		8	0 10	0.030			
Total Barium Re #	Jou.	9	ANSTR	80.0		800	è	2000			
Bendlim Bak	1000	300	ANIONO	01.0		000	3 8	U.U.Z			
Total Donaffron Do #4	men.	38.0	0000	1000		0000	210.0	0.10			
1000	100	300	STORY OF	2000		000	2000	ľ			
Cadminut, So	III GAL	3000	ANOTO	CO.CO.		0.0004	0000				0.0002
local Cetaminan, Cd #7	mg/L	50.0001	ANSTR	-0.0001		0.0003	0.0006	0.0	0.0037	0.01	
Sopari S	mg/L	40.001	AN318	0.036		0.25	0.44				
Total Cobalt, Co #*	mg/L	40.09	AN318	0.062		82	0.48			1	
Chromium, Cr A	mg/L	40,001	AN318	€0.001	<0.001	Ť	<0.001	0.026			0.001
itm, c.#	mg/L	40.001	AN318	0.002	0.002 <0.001	•	<0.001	0.03	0.011	1	
Copper, Cu A	mg/L	40.001	AN318	0,43		1.9	4	52	31		0.0014
Total Copper, Cu #*	mg/L	40.001	AN318	0.44				95		Į.	
Iron, Fe A	mg/L	<0.005	AN318	0.3		0.03	0.04	6.9	7.27		
Total Iron, Fe #*	_1/6m	40.05	AN318	1.8		0.21	0.25	7.8	2.7		
Manganese, Mn A	ma/L	×0.00	AN318	0.34		,	a,c	22			10
Total Mandanese. Mn #*	ma/L	\$0.05	AN318	0.44		00	*	8			
Motybdenum, Mo A	me/L	40,000	AN318		40.601			60.001	800		
Total Molvindem m Mo #	Jou.	é	ANSAB	- CO (O)	100.00			100,00	000	47.0	
Nickel Ni A	llom.	é	ANSAR	0.643		8800	6	1 5	1000	2	0.044
Total Mickel Ni #8	loa	ģ	ANSTR	8000		č	2,0		8		3
Lord Dh.A	200	10000	ANIONO	200	8	-	1	2000	78.0		70000
T-4-11 11-44	10011		or or or		3		20.00	0.004			30.0
a, FD ar	mg/L	1907	ANSTR	0.00	40.00		1	0.004		3	
Ammony, SO	mg/L	1000	ANGIO	40,000	40.00		1		000		
total Autumority, 50 #**	TIGHT.	300	ANOTO	40.001	300	O'COX	20.00	<0.001	40.00		2000
Total Colombins So. #8	1100m	200.00	ANIONO	2000	2000	T	7000	0.002	20.002	50.0	20.00
. O. A.	TOTAL STREET	3	41040		20.000	1	7000	0.002	3		
Total Strantfirm S. 48	1000	3 6	AMONO	0.080		3	in in	0,13			
Thombin Ti At	man.	3 6	ANIONO			3	3 8	0000	200		
Total Thanks Ti 490	man.	100	ANSAB		0.00		1000	8000			
Thellism Th	J/ou	90.00	AN318		900		Γ	1000	6		
Total Thellium Tiv	l/om	60.00	ANSTR	20.00	, do 00.	ľ	1	0000	600		
Venedium. V A	may	00.00	AN318		\$0.00	ľ	800	00.00	2000		
Total Venedium. V #	mo/L	00.00	AN318	0.005	40.001	Ī		0.004	40.001		
Uranium, U.A.	mo/L	40,001	AN318				000.0	0.23	0.1		
Total Uranium. U #*	mov	90.00	AN318	40,001		0000	0.012	0 0	ľ	0.0	
Zno. Zn A	mo/L	40.001	AN318	0.014		0.047	800	0.55			0.008
Total Zino, Zn #	mg/L	9000	AN318	0.00		0.068	200		0.34	20	
Sodium, Na A	mg/L	<0.1	AN318	5.9		2.3	2.8				
Potassium, K A	mg/L	40.2	AN318	3.6		4.8	4.8	8,3			
Celcium, Ca A	mg/L	0.1	AN318	14		19	82				
Magnesium, Mg ^	mg/L	<0.1	AN318	6.4		15	ผ				
Lithium, Li A	mg/L	40.006	AN318	<0.006	€0:00		0.005	0.044	0.029		
Silicon, Si **	mg/L	€0.03	AN318	12		8.1	7.6	13			

resease ANZECS 2000 aloger values - not yet hardness edjuste

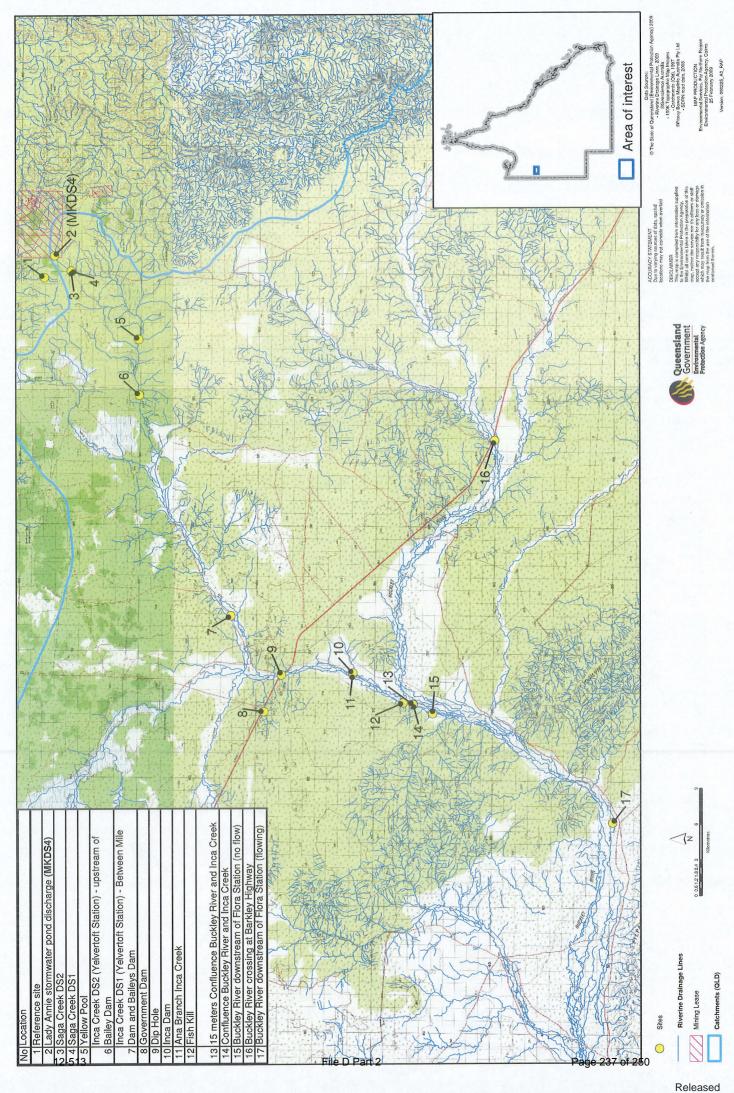
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	ANZECC	ISQG low						2	20	1.5	80	65	50	21	0.15	1	200
		Inca Creek Soll	40		23/02/2009	3/03/2009	5/03/2009	<5	5	<0.5	48	120	14	12	<0.05	<0.5	18
	62900	Dip hole Soil		41	23/02/2009	3/03/2009	5/03/2009	<5	<5	<0.5	46	240	14	14	<0.05	<0.5	28
	62900	Fish Kill 03		26	25/02/2009	3/03/2009	5/03/2009	5 <5	15 <5	<0.5	149	92	8	9	<0.05	<0.5	7
	62900	Discharge 02		20	25/02/2009	3/03/2009	5/03/2009	5	15	<0.5	120	210	62	21	<0.05	<0.5	26
	62900	Saga Ck DS2		18	25/02/2009	3/03/2009	5/03/2009	2	7	<0.5	37	260	15	18	<0.05	<0.5	24
	62900 62	Saga Ck DS1 Sa		16	25/02/2009	3/03/2009	5/03/2009	6 <5	22.	<0.5	84	430	30	19	<0.05	<0.5	33
	62900 62	Reference Site Sa		13	25/02/2009	3/03/2009	5/03/2009		15		62	6	17	4	<0.05	<0.5	11
	62900 62	Yellow Pool Re		11	25/02/2009	3/03/2009	5/03/2009	e <5	26	<0.5	56	92	20	20	<0.05	c0.5	ic.
Ī	62900	Inca Ck DS2		6	25/02/2009	3/03/2009	5/03/2009	8	28	- 0.5	160	120	31	18	<0.05	<0.5	177
	62900	Inca Ck DS1		8	25/02/2009	3/03/2009	5/03/2009	\$	\$2		33	108	14	18			34
	Method							<5 AN304 CEI-201 <5	<5 AN304 CEI-201 <5	AN300 CEI-200	AN300 CEI-200	AN300 CEI-200	AN300 CEI-200	AN300 CEI-200	<0.05 AN312 CEI-202 <0.05	AN300 CEI-200 <0.5	AN300 CEL-200
ŀ	점						-	ξ	v	0.5	\$	8	8	8	<0.05	<0.5	V
	Chilts							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	malka
All soil data	Reference	Sample	map refernce	Sample	Date Sampled	Date Extracted	Date Analysed	Antimony, Sb #	Arsenic, As	Cadmium, Cd mg/kg <0.5 AN300 CEI-200 <0.5	Chromium, Cr mg/kg	Copper, Cu	Lead, Pb	Nickel, Ni	Mercury, Hg	Silver, Ag	Zinc Zn

12-513

	8118							29	1 1	1		5970	1			8					
62900	SWP#1		0	17/02/2009	Water	4/03/2009	4/03/2009		S	Ä			0.17		140	3.8	2.2	0000	0.15		
62900	٠.		O	23/02/2008	Wetter	4/03/2009	4/03/2009				0.71	1200	0.004		14	0.28		990	0.82		
62900	One Mile Cree Inca Creek		0	23/02/2009	Water	4/03/2009	4/03/2009		0.77		0.2	540	100.0>		5.1	0.093	4.1	180	0.41		
62900	Inca Dam		0	23/02/2009	Water	4/03/2009	403/2009	1.1	0.17		0.054	170	0.001 <0.001		1.2	0.03	4.4	8	0.15		
00829			0	23/02/2009	Water	4/03/2009	4/03/2009	1.1	0.27 <0.001	0.014	0.001	27	0.001		€0.05	0.025	9.9	7	0.2 <0.05		
05800	Government D Lower Inca C Ballys Dam		0	23/02/2009	Water	4/03/2009	4/03/2009	0.51	0.27		0.082	270	0.001		2	0.048	4.5	10	0.2		
62900	Government D		0	23/02/2009	Water	6/03/2009	6/03/2009	0.88	0.001	0.001	0.002										
62900	Wide yard		0	25/02/2009	Weter	4/03/2009	4/03/2009				0.81	1400	0.01		13	0.29	3.3	82	0.81		
62900	Blank 01		0	26/02/2009	Water	4/03/2009	4/03/2009	90.08	100.00	100.00	0.00	7						₩			
62900	129 O.1	8	0	25/02/2009	Weder	4/03/2009	403/2008				77.0	28	0.012		11	6.0	3.1	610 <6	0.81		
90000	% D82	8	0	26/02/2009	Water	4/03/2009	4/03/2009	***		.;		2800	0.03	82	Ø	970	2.9	ENI	-	0.002	

00629	62900	62800	00628	62800	62900	62900	62900	00000	62900	62900		
Segra CK DS2	Discharge 01	Blank 01	Wide yard	Government D	Government D Lower Inca C Ballys Dam		hos Dam	One Mile Creelings Creek	Inos Creek	SWP#1	ANZECC	
8	2											low Reliability
0	0	0	O	O	0	0	0	٥	o	O		
25/02/2009	25/02/2009	25/02/2009	26/02/2009	23/02/2009	23/02/2008	23/02/2009	23/02/2008	23/02/2009	23/02/2009	17/02/2009		
Water	Water	Water	Water	Water	Weter	Water	Water	Water	Water	Water		
4/03/2009	4/03/2009	4/03/2009	4/03/2009	5/03/2009	4/03/2009	4/03/2009	4/03/2009	403/2009	4/03/2009	4/03/2009		
4/03/2009	4/03/2009	4/03/2009	4/03/2009	5/09/2008	4/03/2009	800Z/E0/P	4/03/2009	403/2009	4/03/2009	403/2009		
06.		40.05	(1) Mary	98/0	0.51	~	1.1	Sign	VE STATE	96, 260		0.066 0.0008 ph<6.5
4.6		2.5 40,001	2.6	0.001		0.27 40,001	0.17	2.2.0	2.3	31		0.0014
95		60,001	28	0.001		2.3 2.3 0,014	1.9	7.2	22	340	4100.0	
1,6	77.0	0.001	0.84	0.002	0,082	10010	0.054	0.2	0.71	9.7	0.011	
2800	1300	2	1408		270	72	024	540	1200	11000	250	
0.03	9,012		60.0		9.00	0.001	0.001	0.001	0.004	0.17	0.001	
8	Ä		13		2	90.05	5,	5.1	14	140	1.9	
0,58	0.3		0.29		0.046	0.025	60.0	860'0	0.28	3.8	800'0	
2.9	3,4		3.3		4.5	6.6	4.4	4.1		2.2	6-7.5	
E	5/0/45	₩	2002		110	7	09	08)	999	8		

Segg Ct, DG2 Checknege of I Blask of Market yard Weeker (Checknege of I Blask of Market yard) Weeker (Checknege of I Blask of Market yard) Checknege of I Blask of Market yard Definiting Process Process 1 2 2 0	62900	62800	62900	62900	62900	62900	62900	62900	62900	62900	92900			
Health H	acta Ck DS2	Discharge 01	Blank 01	Г	Government D	Lower Inca O	Ballys Dem	Ince Dam	One Mile Crex	Ince Creek	SWP#1	Drinking		recreati
Column C												Health	Aesthetio	
Columbia Columbia	8	8												
The second column The	O	0	ō	O	0	O	0	0	O	0	٥			
Weeker Weeker<	25/02/2009	L			23/02/2009	ι.	23/02/2009			23/02/2009				
4/802000 4/802000	Verter	Water	Weter	Wetter	Water	Water	Water	Water	Weter	Wetter	Water			
4/05/2009 4/05/2009 <t< td=""><td>4/03/2009</td><td> </td><td></td><td>4/03/2009</td><td>6/03/2009</td><td></td><td>4/03/2009</td><td>4/03/2009</td><td>_</td><td>403/2009</td><td>4/03/2009</td><td></td><td></td><td></td></t<>	4/03/2009			4/03/2009	6/03/2009		4/03/2009	4/03/2009	_	403/2009	4/03/2009			
Columbia Columbia	4/03/2009	L	Ľ	4/03/2009	5/03/2009	- 3	ľ	4/03/2009		403/2009	: /			
4.6 2.3 quadratic 0.000 0.001 0.001 0.014 0.017 0.017 0.017 0.017 0.018 0.014 0.017 0.017 0.018 0.018 0.014 0.014 0.017 0.017 0.012 0.012 <th< td=""><td>6</td><td></td><td>50.05</td><td>43</td><td>0.66</td><td></td><td>1.1</td><td>1.1</td><td>7.8</td><td></td><td>590</td><td></td><td>0.2</td><td></td></th<>	6		50.05	43	0.66		1.1	1.1	7.8		590		0.2	
56 62 64 600 28 64 600 29 65 65 65 65 65 65 65 6	4.8		1000	2.6	0.001	0.27	1000	0.17		2.3				
1.0 0.77 0.000 0.81 0.000	56		\$0.001	28	0.00-1	2.3				22	340	2		
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22 11 12 5.1 14 140 0.5 22 12 5.1 14 140 0.5 0.08 0.08 0.08 0.09 0.09 0.09 0.09 2 0.08 0.08 0.09 0.09 0.09 0.09 0.09 2 0.08 0.08 0.09 0.09 0.09 0.09 0.00 3 0.08 0.09 0.09 0.09 0.09 0.00 0.00 4 0.09 0.00 0.00 0.00 0.00 0.00	800			0.01		40.001	1000	100.00	100.00	9.004	0,17	0.05		
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29 3.1 555555 3.9 5555 4.5 6.6 4.4 4.1 55555 2.2 8.0 8.0 80 80 800	0.58			0.29		0.046					İ		8	
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	Ē	510	₩	8		110	2	8		099				



From:

Moussie Jodie

Sent:

Monday, 29 June 2009 12:19 PM

To:

'Jason.Alexander@copperco.com.au'

Cc:

Bell Tara; Wilson Peter (Mt. Isa)

Subject:

Southern Drain Design & Extra Lease area

Tracking:

Recipient Delivery

Read

'Jason.Alexander@copperco.com.a

Bell Tara

Delivered: 29/06/2009 12:19 PM

Read: 29/06/2009 12:22 PM

Wilson Peter (Mt. Isa)

Delivered: 29/06/2009 12:19 PM

Good Afternoon Jason

I refer you to your email regarding the extra area required to accommodation drainage requirements.

The option we would recommend would be to apply for a Mining Lease because the proposed development is consistent with the existing Mining Lease and operations, also this will give you security of tenure over the land, and will not affect the sale of the abutting Mining Lease 90169.

Consideration of the following would be required:

- The term applied for would need to be compatible with the abutting Mining Lease 90169. This Mining Lease expires on 31 December 2027.
- Consent will be required from the holder of Exploration Permit 14384. No consent is required if the holder of the ML and EPM are identical.
- As the Mining Lease will take some time to be granted we would recommend getting consent and or compensation with the landholder and traditional owners to undertake construction of the drain. This was done previously with the power/water/road Mining Lease s 90178 and 90184. However this Mining Lease application would not be for infrastructure and would be required to go through a Right To Negotiate process. For more information on the RTN process, please contact Georgie Lucas on (07) 4799 7676.
- Cultural Heritage clearances by the traditional owners would be required before undertaking any construction. For Cultural Heritage enquires, please contact John Richter on (07) 47997303.

Please do not hesitate to contact me if you have any queries.

Regards,

Jodie Moussie
District Tenures Officer

Queensland Mines and Energy
Department of Employment, Economic Development and Innovation

Telephone: 07 4747 2095 (Ext 32095)

Facsimile: 07 4743 7165

Email: Jodie.Moussie@deedi.qld.gov.au

www.dme.qld.gov.au

13 Isa Street, Mount Isa Qld 4825 PO Box 334, Mount Isa Qld 4825

From: Jason Alexander [mailto:Jason.Alexander@copperco.com.au]

Sent: Friday, 26 June 2009 1:35 PM

To: Moussie Jodie

Cc: Adam Norton

Subject: Southern Drain Design & Extra Lease area

Importance: High

Hi Jodie,

As discussed on the phone, here are two representations of the area we need to look at to accommodate the DERM's drainage requirements.

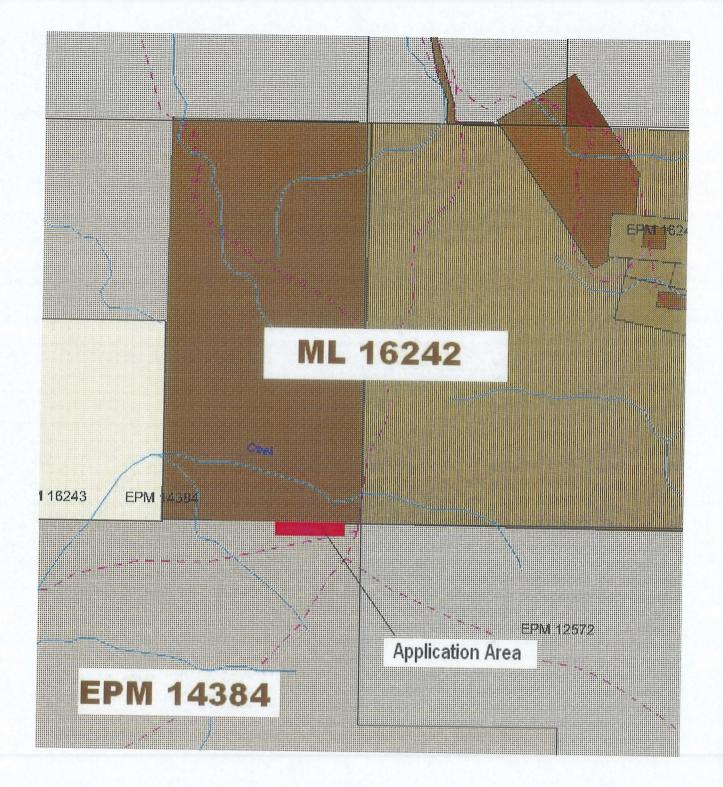
I am not sure the ML shown is correct, my information is that we would have to place an extension onto ML90170, Mount Kelly Extension (dark brown on the left).

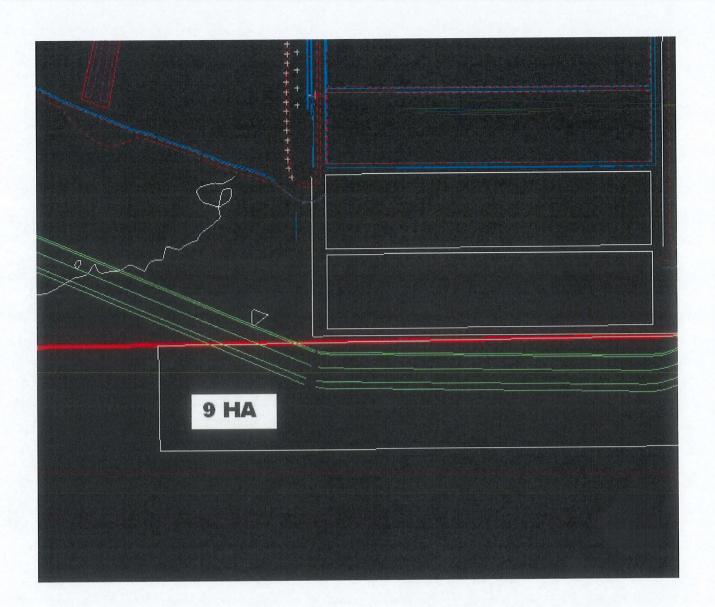
If you could tell me the options available to us in placing either an agreement, lease or easement on this area to secure it for the life of the mine, that would be appreciated.

Also, if you know of any other departments we will need to approach, that would be very helpful.

Thanks for your time, I look forward to hearing from you.

Regards, Jason.





From:

Moussie Jodie

Sent:

Monday, 29 June 2009 12:19 PM

To:

'Jason.Alexander@copperco.com.au'
Bell Tara; Wilson Peter (Mt. Isa)

Cc: Subject:

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Regards,

Jodie Moussie
District Tenures Officer
Queensland Mines and Energy

Department of Employment, Economic Development and Innovation

Telephone: 07 4747 2095 (Ext 32095)

Facsimile: 07 4743 7165

Email: Jodie.Moussie@deedi.gld.gov.au

www.dme.qld.gov.au

13 Isa Street, Mount Isa Qld 4825 PO Box 334, Mount Isa Qld 4825

From: Jason Alexander [mailto:Jason.Alexander@copperco.com.au]

Sent: Friday, 26 June 2009 1:35 PM

To: Moussie Jodie

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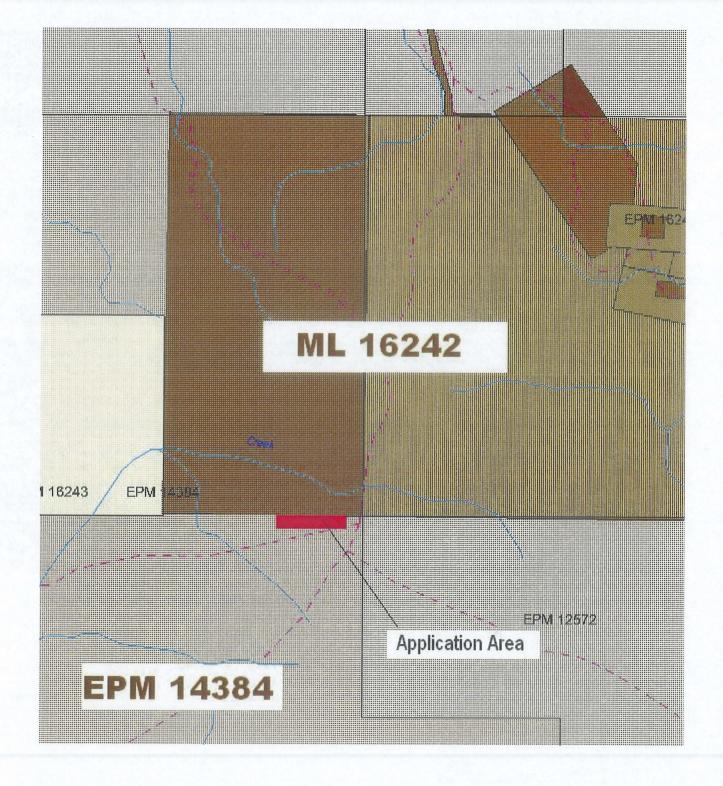
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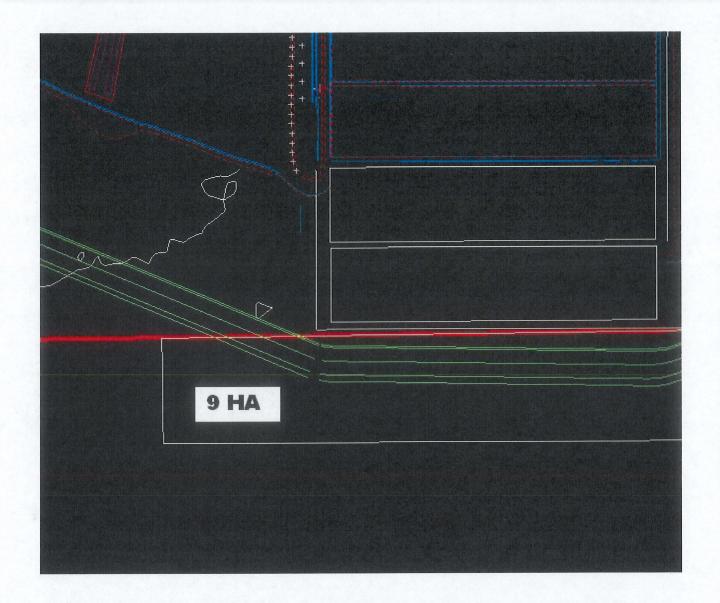
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Thanks for your time, I look forward to hearing from you.

Regards, Jason.





From: Moussie Jodie Sent: Monday, 29 June 2009 12:19 PM To: 'Jason.Alexander@copperco.com.au' Ce: Bell Tara; Wilson Peter (Mt. Isa) Subject: Southern Drain Design & Extra Lease area Good Afternoon Jason

I refer you to your email regarding the extra area required to accommodation drainage requirements.

The option we would recommend would be to apply for a Mining Lease because the proposed development is consistent with the existing Mining Lease and operations, also this will give you security of tenure over the land, and will not affect the sale of the abutting Mining Lease 90169.

Consideration of the following would be required:

- The term applied for would need to be compatible with the abutting Mining Lease 90169. This Mining Lease expires on 31 December 2027.
- Consent will be required from the holder of Exploration Permit 14384. No consent is required if the holder of the ML and EPM are Identical.
- As the Mining Lease will take some time to be granted we would recommend getting consent and or compensation with the landholder and traditional owners to
 undertake construction of the drain. This was done previously with the power/water/road Mining Lease s 90178 and 90184. However this Mining Lease application
 would not be for infrastructure and would be required to go through a Right To Negotiate process. For more information on the RTN process, please contact Georgie Lucas on (07) 4799 7676.
- Cultural Heritage clearances by the traditional owners would be required before undertaking any construction. For Cultural Heritage enquires, please contact John Richter on (07) 47997303.

Please do not hesitate to contact me if you have any queries.

Regards.

Jodie Moussie Joans Moussie

District Tonures Officer

Queensland Mines and Energy

Department of Employment, Economic Development and Innovation
Telephone: 07 4747 2096 (Ext 32096)
Facsimile: 07 4743 7166

Email: Jodie Moussie@deedi.cid.gov.au www.dme.gld.gov.au

13 isa Street, Mount isa Qid 4825 PO Box 334, Mount isa Qid 4825

From: Jason Alexander [mailto:Jason.Alexander@copperco.com.au] Sent: Friday, 26 June 2009 1:35 PM To: Moussie Jodle Cc: Adam Norton Subject: Southern Drain Design & Extra Lease area Importance: High

Hi Jodie.

As discussed on the phone, here are two representations of the area we need to look at to accommodate the DERM's drainage requirements.

I am not sure the ML shown is correct, my information is that we would have to place an extension onto ML90170, Mount Kelly Extension (dark brown on the left).

If you could tell me the options available to us in placing either an agreement, lease or easement on this area to secure it for the life of the mine, that would be

Also, if you know of any other departments we will need to approach, that would be very helpful.

Thanks for your time, I look forward to hearing from you.

Regards,

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From:

Jason Alexander < Jason. Alexander@copperco.com.au>

Sent: To:

Friday, 26 June 2009 1:35 PM

Cc:

Moussie Jodie Adam Norton

Subject:

Southern Drain Design & Extra Lease area

Importance:

High

Hi Jodie,

As discussed on the phone, here are two representations of the area we need to look at to accommodate the DERM's

I am not sure the ML shown is correct, my information is that we would have to place an extension onto ML90170,

If you could tell me the options available to us in placing either an agreement, lease or easement on this area to secure it for the life of the mine, that would be appreciated.

Also, if you know of any other departments we will need to approach, that would be very helpful.

Thanks for your time, I look forward to hearing from you.

Regards, Jason.



