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REGULATION VICTORIA

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earth resources

## Schedule 19: Annual Activity and Expenditure Return

*Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2013 - Regulation 35*

Section 1: Mining licence number and operation name: (One licence only per form)

Mining Licence Number      MIN5189  
 Operation Name                AGL Loy Yang Pty Ltd  
 Licensee                         LYP Partner 4 BV  
 Operator (if not licensee)  
 Reporting Period

Declaration: To the best of my knowledge and belief the particulars entered on this return and in the attachments are correct and no figures, information or diagrams required under Regulation 35 of the *Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2013* have been omitted.

Signature:

Date:

Name: (Block letters)

Job Title:

Telephone

Paul Barrand

Infrastructure, Civil and Environmental (ICE) Manager

### REPORT

Section 2: Expenditure (Schedule 19, Section 4 to 9)

<b>Wages and Salaries</b>	\$	██████████
<b>Land Access Compensation</b> - Access to land (Private) - Native Title Compensation	\$	██████████
<b>Expenditure on equipment, plant or machinery</b>	\$	██████████
<b>Overheads*</b> (should not exceed 20% of the total expenditure)	\$	1,478,935
<b>Expenditure on rehabilitation</b>		
<b>Expenditure on exploration</b> (as distinct from mining) if any; under the following headings:		
Office Studies		
Airborne exploration surveys		

Remote sensing imagery  
 Ground exploration - mapping, surveying etc...  
 Expenditure on mining work undertaken.  
 Drilling  
 Surface Development - costeaning or bulk sampling  
 Total expenditure for licence

\*Allowable overhead costs include rent, office supplies, photocopying, tenement management, Aboriginal Heritage Surveys, equipment maintenance, accommodation, construction materials, field materials and administrative costs. An acceptable level of overheads should not be more than 20% of the total claim. Accommodation claims should include attaching details eg: period of accommodation, number of people, location of accommodation etc.

### Section 3: Production (Schedule 19, Section 10b)

Specific ore or mineral produced for Period	Total quantity of ore or mineral produced (tonnes, m3, ounces, grams)	Total value of ore or minerals produced (\$000)	Metallic content of production (%)
Brown Coal	26,966,652 tonnes		

Important note: if your operation includes more than one title you may choose to complete the following pages of this report using combined data for all titles at your site. If doing so please indicate the title numbers below.

Title Numbers:

### Section 4: Mining Works (Schedule 19, 10a,c,d)

ARE YOUR MINING WORKS IN ACCORDANCE WITH YOUR APPROVED WORK PLAN?

Yes  No

#### 4.1 Underground Mining

ARE THERE ANY UNDERGROUND MINE WORKINGS AT THE SITE?

YES Complete this section

NO Go to section 4.2

#### Details of underground workings

1. Attach a detailed current plan of any underground mine to this report. Plans should clearly indicate dimensions, structural features, access points, ventilation, services and security measures.
2. Provide a description of any shaft or underground development during the reporting period, including the depth or distance developed. (*Attach additional pages if necessary*)

#### 4.2 Surface mine facilities and works

1. Describe any development or extensions to surface mine facilities and works; (Attach additional pages if necessary)
2. If there have been significant changes a scale plan of the site should be attached to clearly indicate developments or extensions to the site over the reporting period. (eg Infrastructure, dams, plant, etc)

Please see attached site plan of AGL Loy Yang. The plan shows areas which have been cleared in preparation for mining.

### Section 5: Land Disturbance and Land Rehabilitation (Schedule 19, sections 11,a,b,c,d)

#### 5.1 Details of land disturbance and rehabilitation

<b>A</b>	the total current area of land disturbed	1156.51 ha
	The proportion of this area that has been disturbed in relation to each of the following:	
<b>i</b>	Pits	841.71 ha
<b>ii</b>	Overburden and waste rock dumps	314.8 ha
<b>iii</b>	Tailings storage facilities	ha
<b>iv</b>	Infrastructure	ha
<b>B</b>	Area of land disturbed during the last reporting period	29.11 ha
<b>C</b>	Area rehabilitated over the last reporting period	6.78 ha
	The proportion of this area that has been disturbed in relation to each of the following:	
<b>i</b>	Pits	23.61 ha
<b>ii</b>	Overburden and waste rock dumps	5.5 ha
<b>iii</b>	Tailings storage facilities	ha

iv	Infrastructure	
D	Proportion of the area rehabilitated over the reporting period (C above) that was revegetated with local native species:	ha
		%

### 5.2 Estimate of rehabilitation liability

What is the current bond for the site

\$ 15,000,000

What is the current estimated rehabilitation liability for the site

\$

Describe any methods and assumptions used in calculation

The current mining licence states the rehabilitation liability for the site is \$15,000,000. AGL Loy Yang is currently revising the Rehabilitation Plan with DSDBI.

^  
of work plan

## Section 6: Dams and Waste Streams (Schedule 16, section 12a,b)

ARE THERE ANY TAILINGS DAMS WITHIN THE LICENSED AREA?

YES Complete this section

NO Go to section 7

### 6.1 Tailings Dams

Status and area of tailings dams

	Operational	Care and maintenance	Partially rehabilitated	Rehabilitated	Totals
Number in each status category					
Total area in each category (ha)					

### 6.2 Volume and composition of tailings produced Section 12a

Please complete and attach a Tailings Storage Data Sheet (separate) for each tailings storage facility at the site.

### 6.3 Volume and composition of tailings produced Section 12b

Where possible, quantify other significant waste streams generated on-site during the reporting period: (Attach additional pages if necessary).

Waste Stream	Composition	Quantity	Management measures

## Section 7: Environmental Management (Schedule 19, Section 12)

### 7.1 Environment Monitoring

DO YOUR APPROVED WORK PLAN AND/OR THE ASSOCIATED WORK PLAN CONDITIONS REQUIRE YOU TO CARRY OUT ENVIRONMENTAL MONITORING?

YES Complete this section

NO

Provide a statements outlining whether the licensee has complied with environmental monitoring requirements during the reporting period as outlined under the work plan and conditions, including details of any non-compliances that have not otherwise been reported in accordance with regulation 33 (reportable events).

AGL Loy Yang in the last 12 month period has complied with all environmental monitoring requirements outlined under the work plan. There was one non-compliance which occurred in August when a storm event occurred resulting in a breach of turbidity at our Licenced discharge point. As required by EPA licence EM31241 this was reported to the EPA.

Please refer to the attached

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Land disturbed at the start of reporting period

Land disturbed during the reporting period

## Section 7 Environmental Monitoring

### Issues

#### Monitoring Program Summary

Monitoring Program	Monitoring AGL Loy Yang	Details	Data collection
Fugitive Dust	8 monitoring stations measure dust emission	7 Measure environmental compliance and internal emission targets onsite. 1 station on a neighbouring property to address dust concerns.  Dust trak Deposition guage Directional data collected.	Samples are collected once a month by NATA accredited laboratory which provides a quality assured results report. 2 Dust traks can be accessed online
Waste water discharge	2 active licensed discharge points EPA	Temperature pH Turbidity Colour EC	Sampled weekly for licenced parameters by independent NATA approved laboratory. Quarterly analysis and a full chemical analysis. Online telemetry gives continual measurements.
Ground water	Licensed	Volumes of ground water are extracted to maintain mine stability Water is transferred to the Power station for use in the LQW system.	Weekly, monthly, quarterly information is collected by contractors.

### Results

Table 1 - Loy Yang Mine Dust Monitoring – Total Deposition

Site	Units		2012-13	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	2013-14
D1	(g/m2/mth)	Total	6.8	18	7.2	3.6	4.6	4.8	5.9	6.7	7.6	2.1	9.8	6.5	4.9	6.8
		Insoluble	2.4	5.4	1.7	1.4	1.6	1.4	2.7	2.8	3.8	0.5	2.8	1.6	0.8	
D2	(g/m2/mth)	Total	6.4	3.9	6.8	6.2	4.1	3.7	5.1	7.6	9.6	6.3	9.7	5.2	6.6	6.2
		Insoluble	1.5	0.8	0.7	0.8	0.5	0.9	0.9	2.7	5.4	2.1	3.2	0.5	0.3	
D3	(g/m2/mth)	Total	8.1	3.9	7.8	4.2	3.8	4.1	3.6	6.2	6.7	6.8	10	5.6	7.7	5.9
		Insoluble	1.8	0.8	0.7	0.9	0.8	1.2	0.9	2.3	2.9	1.6	1.3	0.9	0.4	
D4	(g/m2/mth)	Total	6.8	5.9	7.9	4.6	4.6	4.8	4.7	7.7	7.8	6.2	8.1	6.3	5.8	6.2
		Insoluble	2.3	2	1.7	1.5	1.4	2.8	1.8	2.9	4.3	2.4	2.7	2.3	1.3	
D5	(g/m2/mth)	Total	5.6	5.7	7.7	5.5	6	5.8	5.5	7.5	5.7	6.8	4.2	6.4	5.3	6.0
		Insoluble	1.9	1.6	1.2	1.3	2.7	2.8	1.8	4.4	3	2	1.1	2.2	1	
D6	(g/m2/mth)	Total	4.9	5.3	8	7.8	3.3	5.4	4.9	5.1	4.7	7.2	4.8	5.1	5.4	5.6
		Insoluble	1.0	0.9	0.8	1.2	0.9	1.3	1.1	1.4	1.9	0.9	0.6	0.9	0.3	
D7	(g/m2/mth)	Total	5.0	4.1	7.4	5	5.3	5.2	4.7	6	5.6	9.1	6	5.1	5.4	5.7
		Insoluble	1.1	1.2	1.3	1.3	4.2	2.3	0.7	2.3	2	0.4	1.1	0.9	0.3	
D8	(g/m2/mth)	Total	4.0	4.1	7.7	4.8	6.5	7	4.8	5.8	4.8	7.5	5.3	5.1	5.8	
		Insoluble	0.9	1.2	0.9	1.5	2.1	3.1	0.6	1.5	2.3	0.8	0.9	0.5	0.3	
Average		Total	6.0	5.7	6.7	4.6	4.2	4.5	4.4	5.8	5.9	5.5	6.7	5.1	5.1	5.4
		Insoluble	1.7	1.7	1.1	1.2	1.8	2.0	1.3	2.5	3.2	1.3	1.7	1.2	0.6	

\* Indicates contaminated sample



## Wastewater Discharge

Table 2. Monthly Mean Daily Discharge (2013-2014)

Monthly Mean Daily Discharge Flow (2013-2014) (ML/day)			
Licensed Discharge Point	L160	L171	
Licence Limit	>5ML/day	>40ML/day	
Jul-13	0.53	16.2	
Aug-13	1.54	26	
Sep-13	0.42	29.7	
Oct-13	0.54	30.3	
Nov-13	0.66	26.4	
Dec-13	0.26	23.3	
Jan-14	0.0	21.6	
Feb-14	0.0	20.3	
Mar-14	0.0	19.1	
Apr-14	0.0	18.5	
May-14	0.0	17.7	
Jun-14	0.0	17.2	
<b>Average</b>	0.33	22.19	

Table 3. Annual Wastewater Quality results (2013-2014)

Annual Wastewater Quality results (2013-2014)							
Parameter	Unit	Licence Limit		L171		L160	
		Max	Median	Max	Median	Max	Median
Colour	Pt/Co	70	50	55	25	180	110
SS	g/m3	40	20	44	5	67	12
TDS	g/m3	700	500	650	650	280	180
Turbidity	NTU	40	20	40	4	48	14
pH	Units	Range 8.5 - 6.0		6.9 - 6.5		15.0 - 6.7	

**Key**

- L160 Northwest Perimeter Runoff at Traralgon Creek Road
- L171 Loy Yang Discharge to Traralgon Creek
- L201 Downstream -Traralgon Creek at Mattingley Hill Road Bridge
- L203 Upstream -Traralgon Creek at Jones Road, Traralgon Sth

Note: Licence points L203, L171 and L201 sampled once weekly (52 samples). Although L160 is sampled weekly results shown only reflect periods of discharge (28 samples).

**Table 4: Annual Waste and Receiving Water Temperature (2012-13)**

Annual Waste and Receiving Water Temperature (2012-13)				
Monitoring Location	L203 (Upstream)	L171 Licensed Discharge Point	L201 (Downstream)	L160 Licensed Discharge Point
Average (°C)	14.9	16.1	15.5	17.2
Median (°C)	14.0	15.0	14.0	17.0
Maximum (°C)	26.0	27.0	27.0	33.0
	Licence Limit	+8°C		
	Max difference)	+3°C		

**Table 5. Total Groundwater Pumped and Collected 2012-2013**

Month	Pumped ML	Pumped to LYPS ML	Collected %
Jul	977.4	933	95.5%
Aug	936.8	896	95.6%
Sep	894.4	718.7	80.4%
Oct	1017.7	609.3	59.9%
Nov	888.4	838	94.3%
Dec	1049.4	948	90.3%
Jan	823.7	742	90.1%
Feb	855	798	93.3%
Mar	910	861	94.6%
Apr	905.4	898	99.2%
May	903.6	894	98.9%
Jun	1056.5	1,027.20	97.2%

\* pumped – extracted via groundwater pumps

\* collected – volume collected and transferred to Power Station for use in low quality water (LQW) system

**Table 6. Groundwater Pumped M2B, M2C and Traralgon (ML)**  
**GROUNDWATER PUMPED M2B, M2C and TRARALGON (ML)**

Month	Traralgon	M2C	M2B	Total Seepage
Jul	765.0	212.4	0	57.0
Aug	700.9	236.0	0	51.8
Sep	681.4	213.0	0	50.2
Oct	773.8	243.9	0	57.0
Nov	681.7	206.7	0	50.1
Dec	810.9	238.5	0	60.5
Jan	636.7	188.2	0	48.4
Feb	665.1	189.9	0	48.4
Mar	703.7	206.3	0	50.2
Apr	672.1	233.3	0	55.3
May	644.2	259.5	0	51.8
Jun	749.7	306.8	0	55.3
Total	8485.2	2734.5	0	636.0

### Incidents and Complaints

Issue	No. of complaints	Details	Corrective Actions
Fugitive Dust	0		
Noise	0		

Date	Description	Comment	Reference
20 August 2013	High Rainfall caused Elevated Turbidity discharge to Traralgon Creek	An offsite source of contamination was found to be the cause of this incident and therefore this incident was classified as type 2.	Periscope Ref 166