

ANNEXURE A – CONDITIONS OF APPROVAL OF WPV 2015



Department of Economic Development,
Jobs, Transport & Resources

Ref: D2015/35665

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Dear Mr Jackson

**AGL LOY YANG MINE WORK PLAN VARIATION APPLICATION – APPROVAL WITH
CONDITIONS**

I refer to the work plan variation submitted by AGL to the Department of Economic Development, Jobs, Transport and Resources (DEDJTR) on 5 October 2015.

In accordance with section 41AAB(1)(a) of the *Mineral Resources (Sustainable Development) Act 1990* (MRSDA) I approve the work plan variation with conditions.

I am concerned that the work plan variation submitted by AGL has various shortcomings, despite four iterations and numerous discussions between your officers and officers from Earth Resources Regulation over the last 12 months. Accordingly, I have decided to approve the work plan variation subject to conditions. Those conditions include actions to address those issues.

I have asked Mr Ross McGowan, Executive Director Earth Resources Regulation, to meet with Mr Steve Rieniets to discuss with him the conditions of the work plan variation approval and give him the opportunity to seek any clarification about the conditions.

Yours sincerely

Richard Bolt
Secretary

27 / 11 / 2015

cc: Mr Steve Rieniets, General Manager Loy Yang

WORK PLAN CONDITIONS

Mining Licence 5189

These conditions shall apply to the Approved Work Plan as varied on:

Date: 27/11 /2015

1. Definitions:

- 1.1 'Risk Assessment and Management Plan' means the Risk Assessment and Management Plan the Licensee is required to conduct in accordance with condition 1A of the Schedule of Conditions to Mining Licence No. 5189.
- 1.2 'WPV' means the Work Plan Variation lodged on 5 October 2015.
- 1.3 'Trigger Action Response Plans' means the Trigger Action Response Plans set out in section 5.5 of the WPV.
- 1.4 'Department Head' bears the same meaning as that term is defined in section 4(1) of the *Mineral Resources (Sustainable Development) Act 1990*.

2. Proposed developments (Schedule 15 - 4)

- 2.1 The Licensee must undertake works in accordance with the statements of current practices described in WPV, unless the current practice is specifically stated to change in the future within the WPV. Sections of the WPV that include statements of current practices where a departure from that practice in the future is not specifically mentioned include, but are not limited to:
 - a) Table 1.3.2.1 Key changes in this work plan variation
 - b) Section 3.3 Mine development
 - c) Section 3.4 Site infrastructure.
 - d) Section 3.4.1 Ash system and disposal
 - e) Section 3.4.2 Fencing and security
 - f) Section 3.4.3 Parking
 - g) Section 3.4.4 Roads
 - h) Section 3.4.5 Fire service system
 - i) Section 3.4.6 Surface drainage
 - j) Section 3.4.7 Drainage
 - k) Section 3.4.8 Overburden runoff system
 - l) Section 3.4.12 Current Heritage Sites
 - m) Section 3.5 Risk Management approach
 - n) Section 4.3 Revised mine development plan
 - o) Section 4.3.9 Overburden on the Northern Batters
 - p) Section 5.3 Assessment of Geotechnical and Hydrogeological risks
 - q) Section 5.3.1 Ground Control Management Plan
 - r) Section 5.3.4 Undertaking regular Loy Yang Mine geotechnical stability analysis.
 - s) Section 5.3.7 Permanent Batter design
 - t) Section 5.4.2 Assessing overburden dump stability.
 - u) Section 5.4.3 Excavation controls
 - v) Section 5.4.7 Groundwater Targets
 - w) Section 5.5 Geotechnical and hydrogeological risk controls
 - x) Section 7.5 Environmental Auditing
 - y) Section 8.3 Identification of affected community
 - z) Section 9.3 Systems and procedures

3. Extent of extraction (Schedule 15 - 4(b))

- 3.1 The Licensee shall not:
 - a) extend the mine development (Extraction Limit), or permit the mine development (Extraction Limit) to be extended, beyond the areas approved for mining in the WPV;

- b) excavate the mine crest, or permit the mine crest to be excavated, outside of the Extraction Limit into the Coal Operational Area as shown on Figure 10 of the WPV either as part of mining or rehabilitation;
- c) undertake any activities, or permit any activities to be undertaken, outside the Extraction Limit within the Coal Operational Area as shown on Figure 10 of the WPV, other than as set out in the WPV;
- d) increase the area of land covered by the external overburden dump as described in Figure 4A of the WPV, or permit this area of land to be increased, other than as set out in the WPV;
- e) dump overburden, or permit the dumping of overburden, above the northern batters other than the overburden already in place and rehabilitated at the date of approval of the WPV.

3.2 For avoidance of doubt, Mine Development Areas shown in Figure 9 of the WPV are as indicated in Revision 5 dated 25 September 2015.

4. Sequence of open cut extraction (Schedule 15 - 4(c))

4.1 No later than twelve (12) months of date of approval of the WPV, the Licensee shall provide to the Department a schedule of works the Licensee will commence or complete in Stage C, Table 4.3.1.1 of the WPV that includes:

- a) mine plan milestones and dates by which milestones will be completed;
- b) major components of the mining sequence and mine structures;
- c) details of all geotechnical / hydrogeological / environmental investigations;
- d) reviews of mining hazards risk assessments and reports in relation to risk assessments;
- e) details of any alteration(s) to, or development of, control systems related to aquifer depressurisation and groundwater management, including those that have consequences for groundwater licencing and the environment;
- f) details of alteration(s) to mine risk management control systems including, but not limited to, fire or depressurisation systems; and
- g) progressive rehabilitation works.

4.2 No later than six (6) months prior to the commencement of each of Stages D and E, Table 4.3.1.1 of the WPV, the Licensee shall provide to the Department a schedule of works the Licensee will commence or complete in that stage that includes:

- a) mine plan milestones and dates by which milestones will be completed, and alterations to mining compared with the then current stage;
- b) major components of the mining sequence and mine structures;
- c) details of geotechnical / hydrogeological / environmental investigations;
- d) reviews of mining hazards risk assessments and reports in relation to risk assessments;
- e) details of alteration(s) to, or development of, control systems related to aquifer depressurisation and groundwater management, including those that have consequences for groundwater licencing and the environment;
- f) details of alteration(s) to mine risk management control systems including, but not limited to, fire or depressurisation systems; and
- g) progressive rehabilitation works.

4.3 The schedules referred to in:

- a) Conditions 4.1 and 4.2 shall include the proposed timing of commencement and completion of each major work, major investigation, and major review;
- b) Condition 4.2 shall include a description of any alterations to the schedule of works the Licensee provided in respect of a previous stage.

4.4 The licensee must update the Risk Assessment and Management Plan to include an assessment of the risks and the controls for the activities set out in condition 4.1 and 4.2 prior to commencing any of the works in Stages C, D and E.

4.5 If at any time, the licensee proposes to alter the proposed mine plan, design or operation as set out in Stages C, D and E of the WPV, or the contents of the Schedules required by Conditions 4.1 and 4.2, the licensee must first:

- a) conduct a risk assessment in respect of any alteration(s) and provide the risk assessment to the Department; and
- b) state in a risk management plan the measures that will be used to mitigate and control all risks identified in the risk assessment, and the timeframes for implementation of these measures, and provide the Department with a risk management plan that is to the satisfaction of the Department Head.

4.6 The Licensee must:

- a) implement the measures outlined in the risk management plan provided under condition 4.5(b), within the stated timeframes;
- b) inform the Department as soon as possible if it proposes to not implement a measure outlined in the risk management plan within the stated timeframe, or proposes to change a measure outlined in the risk management plan, and give reasons for the non-implementation or change, and outline the alternative measure the Licensee proposes to implement to address the risk identified in the risk assessment, and the timeframes for implementation of the measure. Any alternative measure the Licensee proposes must be to the satisfaction of the Department Head.

4.7 The Licensee must provide the Department with results of trials conducted in relation to ash disposal as described in Section 4.3.6 of the WPV when they become available.

4.8 The Licensee must not undertake ash disposal as described in Section 4.3.7 of the WPV within the internal overburden dump until it has obtained written approval from the Department Head. When seeking the Department Head's approval, the Licensee must:

- a) have obtained all necessary approvals; and
- b) provide evidence of those approvals to the Department Head three months prior to the date it proposes to commence ash disposal.

4.9 The Licensee must not commence a Sheepwash Creek diversion detailed in Section 4.3.8 of the WPV until it has provided the Department a clear and detailed design of the diversion stage and the preventative monitoring systems relating to stability and the environment in respect of the diversion stage, to the satisfaction of the Department Head.

5. Ground Control Management Plan (Schedule 15 – Parts 2 , 3-6)

5.1 The Licensee shall:

- a) continue to produce the Ground Control Management Plan specified in Section 5.3.1 of the WPV in order to assist it to comply with Schedule 15, Part 2, (3)-(6) of the *Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2013*;
- b) review the Ground Control Management Plan at least annually as stated in Table 5.3.1.1 of the WPV, or more frequently than annually if required by the Department Head.

5.2 The Licensee shall, no later than twelve (12) months of the date of approval of the WPV, complete and provide to the Department Head an individual review of each mine domain as shown in Figure 23 of the WPV that is to the satisfaction of the Department Head. In this review the Licensee shall:

- a) define and attach the geological, hydrogeological, geotechnical and environmental characteristics and risks specific to each mine domain in accordance with the Ground Control Management Plan and any other relevant management plans ("Domain Specific Mine Stability Review");
- b) prepare and maintain a mine stability risk register that identifies, assesses, and categorises the risks to public safety, public infrastructure, the environment and rehabilitation arising out of the operations of each mine domain and the consequential impact(s) on mine/ground stability ("Mine Stability Risk Register");
- c) complete and attach an independently facilitated risk assessment that includes input from relevant experts in respect of each risk identified in the Mine Stability Risk Register ("Mine Stability Risk Assessment"). Each Mine Stability Risk Assessment shall:

- I. take into account works the Licensee will undertake in current and future mine stages, including rehabilitation and closure/post-closure;
 - II. detail the management strategies and controls the Licensee will implement to address each risk identified in the Mine Stability Risk Register, taking into account works the Licensee will undertake current and future mine stages, including rehabilitation and closure/post-closure;
 - III. outline the timeframe for implementation by the Licensee of each management strategy and control.
- d) determine Trigger Action Response Plans for each mine stability risk rated as medium or greater in a Mine Stability Risk Assessment and implement the measures in each Trigger Action Response Plan by the timeframe stated in the Trigger Action Response Plan for the implementation of each measure.
- 5.3 The Licensee shall:
- a) within three (3) months of the anniversary of the date of the approval of the WPV and annually thereafter:
 - I. review and update the Mine Stability Risk Register, Domain Specific Mine Stability Review, and Mine Stability Risk Assessment;
 - II. provide the Department with the updated Mine Stability Risk Register, Domain Specific Mine Stability Review, and Mine Stability Risk Assessment that are to the satisfaction of the Department within one month of completion.
- 5.4 The Licensee shall inform the Department as soon as possible, and in any event within one month, if it:
- a) proposes to not implement a management strategy and/or control outlined in the Mine Stability Risk Assessment within the stated timeframe, or proposes to change a management strategy and/or control outlined in the Mine Stability Risk Assessment, and give reasons for the non-implementation or change, and outline the alternative management strategies and/or controls the Licensee proposes to take to address each risk identified in the Mine Stability Risk Register and the timeframes for implementation of each management strategy and/or control;
 - b) does not implement a management strategy and/or control outlined in the Mine Stability Risk Assessment within the stated timeframe, or has changed a management strategy and/or control outlined in the Mine Stability Risk Assessment, and give reasons for the non-implementation or change, and outline the alternative management strategies and/or controls the Licensee implemented to address each risk identified in the Mine Stability Risk Register;
 - c) does not implement a measure in a Trigger Action Response Plans by the timeframe stated in the Trigger Action Response Plan for the implementation of each measure.
- 5.5 The Licensee shall review and address the contents of the Mine Stability Risk Register, Domain Specific Mine Stability Review, and Mine Stability Risk Assessment when updating the Ground Control Management Plan, noting that the Ground Control Management Plan must also contain other matters as set out in section 5.3.1 of the WPV.
- 5.6 The Licensee shall, at the same time as providing a report relating to a declared mine, as required by Regulation 45 of the *Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2013*, also provide the Department with the current version of the Mine Stability Risk Register, and explanatory discussion and comments about the Mine Stability Risk Register.
- 5.7 The Licensee shall not exceed the approved mine depths set out in Figure 15 of the WPV, and must provide evidence to the Department of the maximum depth of the mine floor by 30 June of every second year after the approval of the WPV.
- 5.8 The Licensee shall design and implement a written stability monitoring program to ensure stability monitoring for the period of the licence ("Stability Monitoring Program").
- 5.9 The Licensee must ensure that the Stability Monitoring Program:

- (a) identifies the impact(s) of mining on ground conditions within the Geotechnical Risk Zone (shown in Figure 23 of the WPV) and Urban Coal Buffer (shown in Figure 10 of the WPV) and also for a distance of up to two (2) kilometres to the north of the current and future mine crest, and includes an assessment of those impacts (likelihood and consequence);
- (b) identifies the geotechnical risks to assets listed in Table 5.3.3.1 Asset Identification of the WPV, and any other assets that may be identified in the future within the Geotechnical Risk Zone and Urban Coal Buffer, and includes an assessment of those risks (likelihood and consequence); and
- (c) where possible, includes displacement monitoring instrumentation within the area of up to two (2) kilometres to the north of the current and future mine crest;
- (d) specifically monitors areas extracted beyond the Potential Loy Yang Mine Development (1997) line, and identifies any areas potentially at greater risk due to that extraction, and includes an assessment of those risks (likelihood and consequence);
- (e) identifies all potential risks, and assesses those risks (likelihood and consequence), and outlines management strategies and/or controls to address any potential risks, including through determining frequency and location of current and future monitoring;
- (f) includes monitoring of risks to public safety, public infrastructure and the environment.

5.10 The Licensee must:

- (a) provide the Department, VicRoads, and Latrobe City Council with any reports produced based on the results of the monitoring undertaken in accordance with the Stability Monitoring Program as soon as the reports are available. All such reports must be to the satisfaction of the Department;
- (b) provide the Department with an analysis of the results of the monitoring related to risks to public safety and public infrastructure, and the environment, including but not limited to, an analysis of the surveys and reports outlined in Table 5.4.1 of the WPV. All such analysis must be to the satisfaction of the Department;
- (c) ensure the Stability Monitoring Program includes a schedule of reports that the Licensee will produce based on results of the monitoring undertaken in accordance with the Stability Monitoring Program, including the timeframes for providing the reports to the Department, VicRoads, and Latrobe City Council.

5.11 The Licensee must:

- (a) develop the design and implementation of the Stability Monitoring Program relevant to public infrastructure in consultation with the Department, VicRoads and Latrobe City Council;
- (b) deliver a final Stability Monitoring Program to the Department within six (6) months of the date of the approval of the WPV;
- (c) obtain the written approval of the Department Head to the Stability Monitoring Program.

6. Rehabilitation Plan (Schedule 15 - 6(a))

6.1 Within three (3) months of the date of approval of the WPV, the Licensee shall provide the Department with a detailed plan that is to the satisfaction of the Department Head for rehabilitation of areas extracted beyond the Potential Loy Yang Mine Development (1997) extraction limit as shown on Figure 9 of the WPV. This plan shall:

- (a) show and describe rehabilitation works to be undertaken in areas extracted beyond the Potential Loy Yang Mine Development (1997) extraction limit as shown on Figure 9 of the WPV and;
- (b) state the timing of those works.

6.2 The Licensee must complete the rehabilitation works stated in the plan provided under condition 6.1 no later than 24 months after the date of approval of the WPV to the satisfaction of the Department Head.

6.3 No later than twelve (12) months from the date of approval of the WPV, the Licensee shall:

- (a) Complete a Mine Rehabilitation Risk Review that identifies and analyses the significant or higher risks, including but not limited to fire and mine stability risks, for achievement of the Rehabilitation Plan at section 6 of the WPV and provide to the Department a Mine Rehabilitation Risk Review that is to the satisfaction of the Department Head;
 - (b) review the Rehabilitation Plan at section 6 of the WPV after the Licensee considers the options for short, medium and long term rehabilitation of the Loy Yang mine that will be provided by the Hazelwood Mine Fire Inquiry in March 2016; and
 - (c) provide the Department with a report on the outcomes of the Rehabilitation Plan Review referred to in condition 6.3(b) that is to the satisfaction of the Department Head.
- 6.4 The Licensee shall at least six months prior to the completion of each of Stages C, D and E described in Table 4.3.1.1 of the WPV:
- (a) complete a further Mine Rehabilitation Risk Review that identifies and analyses the significant or higher risks, including but not limited to fire and mine stability risks, for achievement of the Rehabilitation Plan at section 6 of the WPV; and
 - (b) provide the Department with a report on the outcomes of the further Mine Rehabilitation Risk Review that is to the satisfaction of the Department Head.
- 6.5 The Licensee shall prior to the commencement of Stages D and E of Table 4.3.1.1 of the WPV:
- (a) develop and review control measures for risks, including, but not limited to fire and mine stability risks, identified in Mine Rehabilitation Risk Reviews required by Conditions 6.3 and 6.4;
 - (b) set out the specific actions and timing of commencement of those actions to implement rehabilitation risk reduction including, but not limited to, planning for rehabilitation, progressive rehabilitation works, and any relocation of infrastructure affected by the rehabilitation works, consistent with managing rehabilitation risks for each mine domain noted in the Risk Assessment and Management Plan as significant or higher; and
 - (c) provide the Department with proposed control measures, proposed actions and proposed timing of works to address risks identified in the Mine Rehabilitation Risk Reviews required under condition 6.3 and 6.4. The proposed control measures, proposed actions and proposed timing of works must be to the satisfaction of the Department Head.
- 6.6 The Licensee shall:
- (a) prior to the commencement of Stage D of Table 4.3.1.1 of the WPV, in consultation with stakeholders, develop and provide the Department with detailed rehabilitation objectives consistent with Section 6.2 of the WPV and closure acceptance criteria;
 - (b) prior to the completion of Stages D and E of Table 4.3.1.1 of the WPV, review the detailed rehabilitation objectives and closure acceptance criteria provided to the Department pursuant to condition 6.6(a), consider the outcomes of reviews and resultant actions arising from implementing Conditions 6.3 and 6.4 and, and provide the Department with the amended detailed rehabilitation objectives and closure acceptance criteria; and
 - (c) prior to the commencement of Stage D of Table 4.3.1.1 of the WPV, use the outcomes of the Domain Specific Mine Stability Review to inform the rehabilitation plan end use concept and provide the Department domain specific mine rehabilitation closure plans.
- 6.7 The detailed rehabilitation objectives, closure acceptance criteria, amended detailed rehabilitation objectives and amended closure acceptance criteria ("Objectives and Criteria") to be provided by the Licensee pursuant to condition 6.6(a) and (b) must be to the satisfaction of the Department Head.
- 6.8 The Licensee must provide the Department updates annually (by the 30 June each year when a rehabilitation trial has commenced or is in progress during the previous 12 months) on the progress, outcomes and recommendations of the rehabilitation trials as described in Section 6.2 of the WPV and development of rehabilitation objectives and closure acceptance criteria under condition 6.6(a) and (b).
- 6.9 The Licensee must review prior to the completion of each of Stages C, D and E of Table 4.3.1.1 of the WPV, in consultation with, and to the reasonable satisfaction of, of the Department and the relevant water authorities, the water quantity requirements for the lake filling described in Section

6.4.4 of the WPV. This review shall consider available weather and rainfall data and models. Outcomes of this review are to be considered in requirements of Conditions 6.6, 6.7 and 6.8.

- 6.10 The Licensee must ensure that all exposed coal is covered by non-combustible inert material, and vegetated where applicable, within fifteen (15) years of the date of ceasing mining of coal.
- 6.11 The Licensee must:
- (a) by no later than the completion of Stage C of Table 4.3.1.1 of the WPV, obtain, and provide evidence to the Department that it has obtained the necessary licences and/or contracts for the quantity of water that will be applied to achieve the key objectives set out in section 6.2 of the WPV;
 - (b) not represent, submit or state that, approval by the Department of the WPV represents the granting of a right to the Licensee to use water from aquifer or surface sources for the purposes of mine rehabilitation.

7. Water Resources (Schedule 15)

- 7.1 The Licensee must, prior to rehabilitation works that may impact on Latrobe Catchment water resources, including lake filling and diversion of flows from waterways, develop a Water Resources Risk Assessment in consultation with the West Gippsland Catchment Management Authority. The Water Resources Risk Assessment must be to the satisfaction of the Department Head. The Water Resources Risk Assessment must, as a minimum:
- (a) Include local catchment, and regional assessment of risks to surface water and groundwater resources, and natural ecosystem services; and
 - (b) Be undertaken in accordance with Action 6.8 of the Gippsland Region Sustainable Water Strategy.
- 7.2 Findings and recommendations from the Water Resources Risk Assessment required by Condition 7.1 shall be incorporated into the Mine Rehabilitation Risk Reviews required by Conditions 6.3 and 6.4, and development of rehabilitation objectives and closure acceptance criteria required by conditions 6.6 and 6.7.
- 7.3 The Licensee must, prior to any works on Sheepwash Creek, develop a Waterway Management Plan in consultation with the West Gippsland Catchment Management Authority. The Waterway Management Plan must be to the satisfaction of the Department Head, and must demonstrate that there shall be no net loss to waterway habitat, water resources, or system discharges caused by the loss of Sheepwash Creek and its catchment.

8. Fire Risk

- 8.1 The Licensee shall:
- a) provide the Department with the final Fire Risk Management Plan specified in table 9.8.1 of the WPV by 31 December 2015. The final Fire Risk Management Plan must be to the satisfaction of the Department Head.
 - b) provide the Department with reports of the annual or more frequent reviews of the Fire Risk Management plan set out in table 9.8.1 of the WPV. The reports must be to the satisfaction of the Department Head. The Licensee must complete the annual or more frequent reviews of the fire risk management plan in conjunction with reviews of the Ground Control Management Plan, Environmental Site Plan and Emergency Management Plan and any other relevant management documents referred to in the Risk Assessment and Management Plan.