

Muswellbrook Coal

MP 36

Spontaneous Combustion Management Plan

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Approved by	Head of HSECT	Signature	<i>Liam Wilson</i> 69D8B28ACF7C4319939D3F5955E033B5 readysign	Date: 13/07/2026

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1.0 INTRODUCTION

On September 1, 2003, Development Consent for DA 205/2002 was granted by Muswellbrook Shire Council (MSC) to extend the former MCC No.1 Open Cut. An additional modification to the consent was granted on 27 February 2024 to align rehabilitation requirements with updated mining lease conditions and other administrative changes.

Mining activities ceased at MCC in December 2022 with the last coal hauled from site in March 2023. Rehabilitation (bulk shaping, topsoiling, mulching, seeding) at the Muswellbrook mine has been completed and is now monitoring and maintaining the rehabilitation, progressing towards mining lease relinquishment and closure.

1.1 SCOPE

The Development Consent requires the preparation, approval and implementation of an Environmental Management Strategy (EMS) and subordinate Environmental Management Plans (EMP). One of these EMPs is the Spontaneous Combustion Management Plan (SCMP). Whilst this plan specifically addresses issues related to the management of spontaneous combustion, it should be read in conjunction with other EMP's.

This SCMP has been prepared by MCC to the satisfaction of MSC (see **Appendix** for copies of correspondence). The SCMP has been reviewed by a suitably qualified expert.

1.2 OBJECTIVES

The main objective of the SCMP is to manage the residual spontaneous combustion risk associated with the rehabilitated landforms stemming from encapsulated carbonaceous material.

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2.0 LEGISLATION AND STATUTORY REQUIREMENTS

The relevant approval and licence conditions are shown in **Table 1** along with information on where they are addressed in this plan.

Table 1: Statutory Requirements

Approval/ Licence Condition No.	Condition	Section
Development Consent		
31	The applicant must prepare a detailed Spontaneous Combustion Management Plan to the satisfaction of Council, and carry out the development in accordance with this plan. The plan must:	This plan
31(a)	Be prepared or reviewed by a suitably qualified expert/s;	Appendix 1
31(b)	Describe what measures are to be undertaken to minimise the occurrence of spontaneous combustion. Should spontaneous combustion occur, describe what methods would be employed to extinguish, or reduce the size and duration of the outbreak. This is to include details of the times, areas, locations etc. that will trigger actions, and criteria provided to indicate success or further works being required. The plan must break these activities up to be specific to the following areas: i. Pit 1; ii. Pit 2; and iii. Elsewhere with the disturbance area.	8.0
31(c)	Defines what constitutes a spontaneous combustion incident, and includes a protocol for notifying Council and other relevant stakeholders of spontaneous combustion incidents.	7.0
31(d)	Defines what will trigger a review of the Spontaneous Combustion Management Plan. This is to include a Trigger Action Response Plan resulting from a spontaneous combustion incident that has as one of its outcomes a review of this Management Plan.	10.0

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3.0 REFERENCES

- *Environmental Planning and Assessment Act 1979. Protection of Environment Operations Act 1997.*
- Development Consent DA 205/2002.
- Continuation Project Statement of Environmental Effects (EMM) 2016.
- Work Health and Safety (Mines and Petroleum Sites) Act 2013
- Work Health and Safety (Mines and Petroleum Sites) Regulation 2022

4.0 DEFINITIONS/ACRONYMS

DA	Development Application
MCC	Muswellbrook Coal Company Ltd
MSC	Muswellbrook Shire Council
NSW	New South Wales

5.0 SUPPORTING DOCUMENTS

- Development Consent DA 205/2002.
- MP 30 Environmental Management Strategy.
- MOP 15-01 Complaint Handling Procedure.
- F1553 Community Complaint Record Form.
- Spontaneous Combustion TARP (Appendix 2)

6.0 COMPLAINT MANAGEMENT

Spontaneous combustion related complaints by the community can be directed to the 24-hour toll-free telephone Environmental Contact Line 1800 600 205. Complaints shall be recorded and responded to in accordance with the Environmental Management Strategy.

7.0 INCIDENT MANAGEMENT

A spontaneous combustion incident occurs when coal self-heats due to oxidation and ignites. Spontaneous combustion has the potential to cause significant harm to health and the surrounding environment.

If a spontaneous combustion incident is occurring or is found to have occurred, then it will be reported to HSECT department within 24 hours.

Within seven days of confirming the incident, MCC will submit a written report to MSC that:

- Describes the date, time, and nature of the incident,
- Identifies the cause (or likely cause) of the incident,
- Describes what action has been taken to date, and
- Describes the proposed measures to address the incident.

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8.0 MANAGEMENT MEASURES

If a spontaneous combustion event occurs in any area within the mine disturbance area (including Pit 1 and Pit 2) the SCMP will be activated. Personnel will comply with all instructions outlined in the SCMP and will use the associated spontaneous combustion TARP to develop a response to the incident.

The Spontaneous Combustion TARP can be found in appendix 2.

9.0 EXTERNAL REPORTING

Within 2 weeks of approval of this SCMP, a copy will be made available for public viewing via the MCC website.

The performance of MCC's SCMP will be reported through a number of external reporting requirements, which include;

- Annual Environmental Management Report (AEMR); and
- Annual Rehabilitation Report (report on management of any spontaneous combustion outbreaks in rehabilitated areas).

The last AEMR for MCC will be the 2027 AEMR.

10.0 REVIEW OF THE SCMP

The SCMP will be reviewed:

- Within 6 months of changes to Development Consent or licence conditions relating to spontaneous combustion management,
- Following a reportable incident at MCC relating to spontaneous combustion management, and
- Following an independent environmental audit which recommends changes to the SCMP.

11.0 ACCOUNTABILITIES

Table 2 outlines the responsibilities relating to the SCMP.

Table 2: Organisational Responsibilities

Role	Accountability
Suitably Qualified or Experienced Person	• Provide adequate resources to implement the requirements of the SCMP • Oversee the implementation of the SCMP • Coordinate reviews of the SCMP • Coordinate reporting as required in SCMP

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12.0 LIST OF APPENDICES

Appendix 1: Correspondence Regarding Spontaneous Combustion Management Plan
Appendix 2: Spontaneous Combustion TARP

13.0 REFERENCES

Briefing Note on Spontaneous Combustion Related Issues at Muswellbrook Coal Company. Mining Operation Services. May 2026.

14.0 REVISION DETAILS

Revision No.	Date	Reviewed By	Details/Reason for Revision
1	February 2005	MCC Technical Services Department, Carbon Based Environmental	Original Management Plan
2	December 2010	MCC Technical Services Department, Carbon Based Environmental	5 Yearly Review
3	December 2015	MCC Environmental, Technical Services and Production Departments	5 Yearly Review
4	June 2017	MCC Environmental, Technical Services and Production Departments Peer review by approved Technical Expert	Update following modification for Continuation Project
5	October 2020	MCC Environmental Department	3 Yearly Review
6	April 2023	Environmental, Production, Administration and Maintenance Departments	End of mining operations (not approved by Council due to consent modification process and additional updates required)
7	April 2024	Environmental, Production, Administration and Maintenance Departments Peer review by suitably qualified expert	Consent modification 9
8	August 2025	Environmental Department	Completion of bulk rehabilitation activities
9	July 2026	HSECT Department	Rehabilitation monitoring and maintenance phase.

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Appendix 1: Correspondence Regarding Spontaneous Combustion Management Plan



Mining Operation Services Pty Ltd

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ian.pankhurst@miningop.com.au

12 April 2026

Liam Wilson
Head of HSECT
Idemitsu
Level 9/175 Eagle Street
BRISBANE QLD 4000

Dear Liam

RE: REVIEW OF MUSWELLBROOK COAL COMPANY SPONTANEOUS COMBUSTION MANAGEMENT PLAN

After examining the draft Spontaneous Combustion Management Plan (SCMP) and recommending various changes I confirm that, as the recognised suitably qualified expert, I have reviewed the final SCMP and find it suitable for use during the post mining phase of Muswellbrook Coal Company's open cut areas.

Yours Faithfully



Ian Pankhurst
Director
Mining Operation Services

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Appendix 2: Spontaneous Combustion Trigger Action Response Plan (TARP)

Stage	Green	Yellow	Amber	Red
Conditions	No water vapour (steam) No smoke No odour No heat No gas	Water Vapour ("steam") given off particularly early in the morning in wintertime No Smoke Temperatures ambient to 70°C No odour No CO O ₂ > 15.5-16% Possible die off of vegetation	Presence of: Dead vegetation Water Vapour (steam) Smoke (white or bluish white) Odour (sulphurous) Heat (> ambient, < 100°C) Gas – CO 40ppm	Presence of: Considerable blue smoke Temperature > 100°C Odour generation detected +300m downstream +40ppm CO Strong sulphurous odour
Action	Ongoing inspection as per Schedule.	Is vegetation die off in surface grasses/shrubs or larger trees. Grasses & shrubs indicate near surface low level heatings. Trees indicate more deep seated heating. Inspections to be increased to three monthly Do not undertake any surface disturbance activity	Review inspection frequency and increased to inspections every 2 months. Leave to burn out.	Inspection required by personnel trained in the use of and equipped with gas monitors/heat guns etc. Water sprayed/ injected in the area to remove the heat, stop gas generation, eliminate odour and stop any smoke generation. Continue to monitor until controlled and returns to Amber/Green. If not successful cap area with clay and compact.
Inspections	Inspection by personnel with minimal spontaneous combustion training	Inspections required by personnel using casebook examples as reference	Inspections required by personnel trained in the use of and equipped with gas monitors/heat guns etc.	Inspection by experienced and qualified mining person before remedial work commenced Audit inspection by subject expert

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Inspection Frequency	6 monthly and 6 monthly flyovers (where possible, minimum 12 monthly)	3 monthly	2 Months	Fortnightly until conditions improve and reduced to orange level
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