



Regional
NSW

WHS undertaking

Undertaking to the Secretary,
Regional NSW
given for the purposes of Part 11 of the *Work Health and Safety Act 2011*

by

Maules Creek Coal Pty Limited

ACN 140 533 875
ABN 70 140 533 875

Purpose

The purpose of this WHS undertaking is to document the undertaking given to the **regulator**, the Secretary of Regional NSW, for the purposes of Part 11 of the *Work Health and Safety Act 2011 (WHS Act)* in connection with a matter relating to a contravention or alleged contravention by the person of the WHS Act.

Section A - general information

1. details of the company or individual proposing the undertaking

Name of company or individual	Maules Creek Coal Pty Limited (MCCPL)		
Registered address	[REDACTED]		
Mailing address (if different from above)	[REDACTED]		
Telephone	[REDACTED]		
Email address	[REDACTED]		
Legal structure	Australian proprietary company, limited by shares		
Type of business	Coal mine operator of the Maules Creek Coal Mine, located near Boggabri, NSW		
Commencement date of the entity	12 November 2009		
Workers	Full time: 424	Part time: 3	Other: 274
Products and services	Coal		
Comments	[REDACTED]		

2. the details of the alleged contravention

It is alleged that on 21 April 2018, MCCPL being a person conducting a business or undertaking at the Maules Creek Coal Mine, NSW (the **Mine**), failed to discharge its obligations under section 19(1) of the *Work Health and Safety Act 2011 (NSW)* (the **WHS Act**) to ensure, so far as is reasonably practicable, the health and safety of workers at the Mine while the workers were at work in the business or undertaking conducted by MCCPL.

3. details of the events surrounding the alleged contravention, e.g. incident details

Just before 8am on 21 April 2018, a Caterpillar 773 service truck and a fully-laden Hitachi EH5000 haul truck collided at a major four-way intersection on the Mine haul road. At the time of the incident, the service truck was travelling east. The haul truck was fully loaded and travelling north.

The intersection road signs were changed during the day shift the day before the incident, to allow haul trucks to drive straight through the intersection from the Mine's production area. To give effect to this change, the intersection's stop signs were relocated to the eastern haul road, requiring traffic travelling east and west to stop and give way to other traffic.

The change to the intersection road signs was not communicated to all workers.

The haul truck driver was aware of the change to the intersection signs as he had driven through the intersection earlier that morning. He understood that he had right of way.

The 100-tonne GVM service truck collided with the side of the 500-tonne GVM haul truck, resulting in catastrophic damage to the service truck and physical injuries to the service truck driver. The haul truck stopped about 100 metres past the impact point.

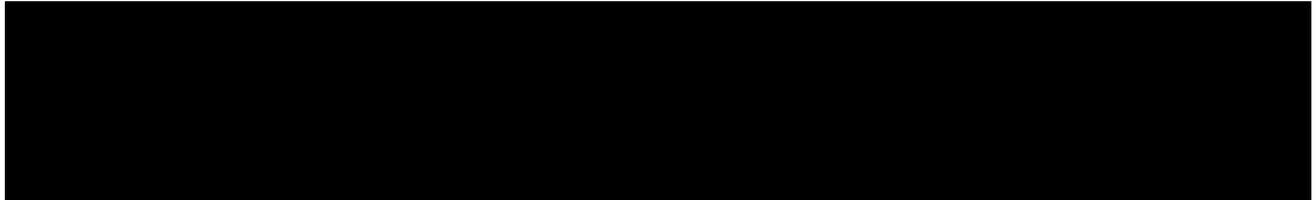
WHS undertaking

Hereafter the above will be referred to as 'the **Incident**'.

4. an acknowledgement that the regulator alleged a contravention has occurred

It is acknowledged that the regulator has alleged that MCCPL contravened the WHS Act in respect of the Incident.

5. the details of any injury that arose from the alleged contravention



6. the details of any enforcement notices issued that relate to the alleged contravention

Notices received:

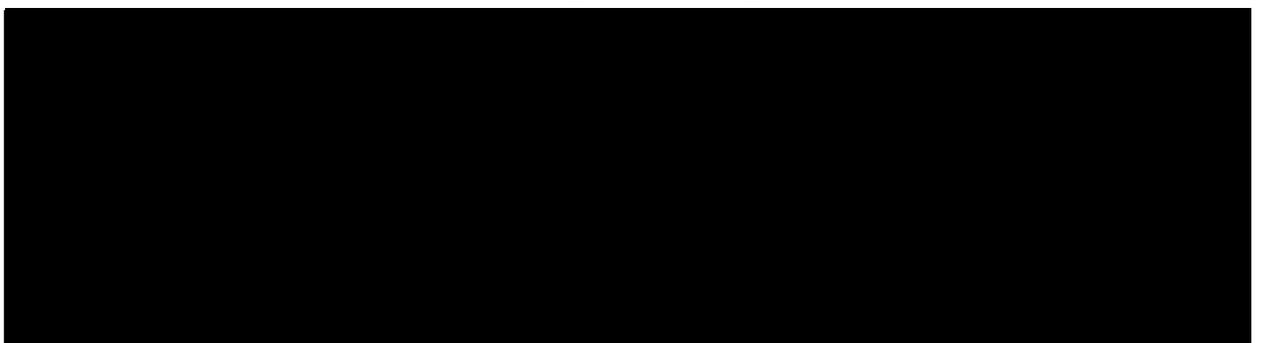
Yes (provide details) No

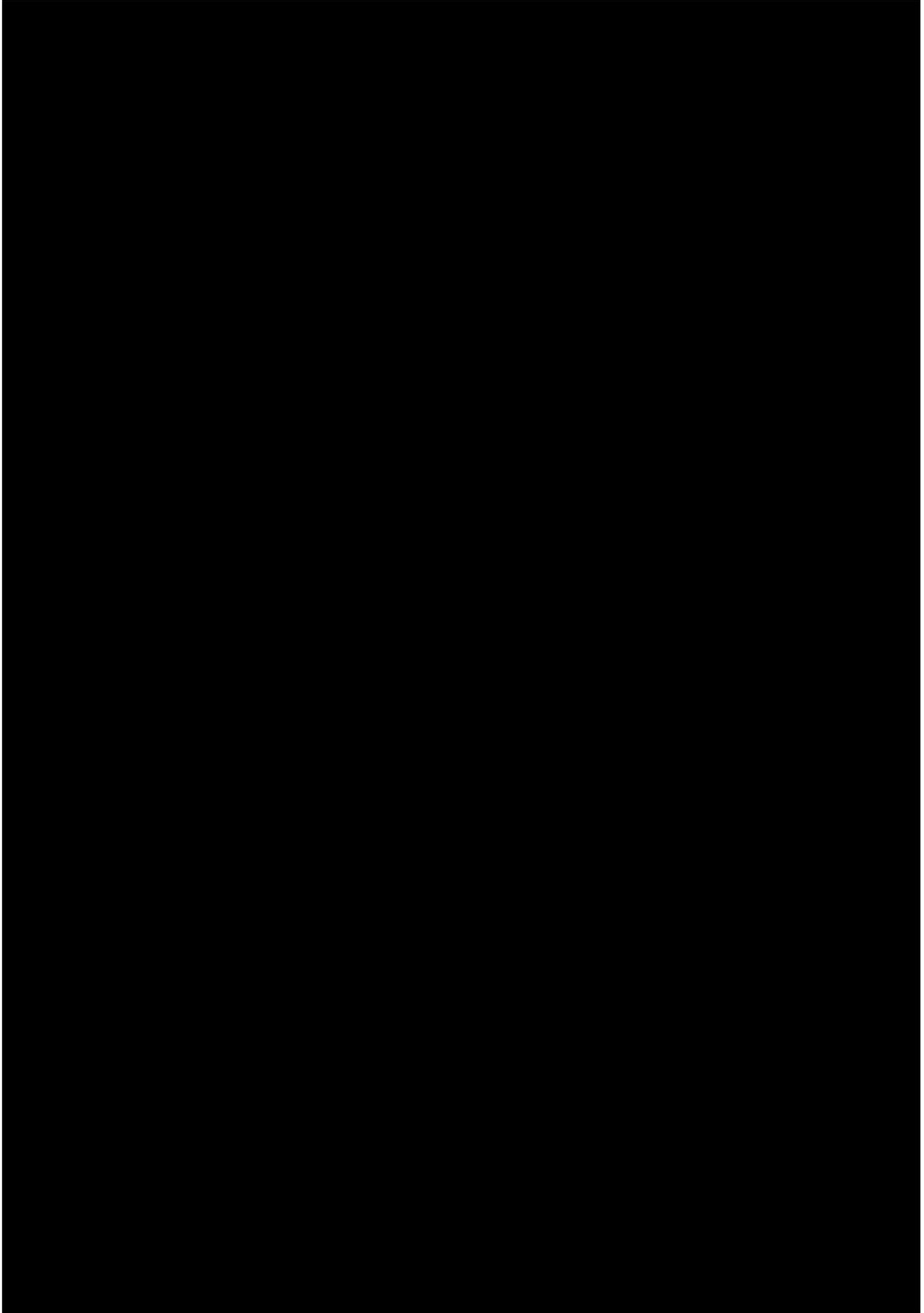
Date issued	Notice type	Notice number	Contravention	Action taken to respond to notice
24 April 2018	section 191	2018/00237	Improvement notice	Complied with directions
24 June 2018	section 171	180424-AT002	Seizure requirement notice	Complied with direction
22 June 2018	section 155	180622TF001	Notice to give information or records to the NSW Resources Regulator	Information provided as requested
17 December 2018	section 155	181217TF001	Notice to give information or records to the NSW Resources Regulator	Information provided as requested
4 October 2019	section 155	191004SB01	Notice to give information or records to the NSW Resources Regulator	Information provided as requested

7. a statement of assurance about future work health and safety behaviour

MCCPL is committed to complying with its obligations under the WHS Act and the *Work Health and Safety (Mines and Petroleum Sites) Act 2013 (NSW)* (the **WHS Mines Act**) and their applicable regulations to ensure, as far as is reasonable practicable, the health and safety of all workers engaged or caused to be engaged by MCCPL and all workers whose activities are influenced or directed by MCCPL while the workers are at work in the business or undertaking.

- 8.





WHS undertaking

9. the details of any existing safety management systems at the workplace including the level of auditing currently undertaken

MCCPL has a safety management system (**SMS**) in place in accordance with the WHS Act, WHS Mines Act (including their applicable regulations), other applicable legislative requirements and Australia Standards.

The SMS covers the range of work health and safety matters applicable to open cut mining. It is comprised of Policies, Standards, Management Plans, Procedures, Permits, Forms, TARPs and Checklists.

The SMS is designed in line with Whitehaven Coal's overarching Risk Management Standard. It includes the Seven Safehaven Rules for managing critical risks, namely:

1. Never work at heights above 2 metres without fall protection.
2. Always confirm equipment is correctly isolated and de-energised before commencing work.
3. Never operate maintenance of operational equipment unless trained and authorised.
4. Never work on a tyre without first deflating the tyre to a safe working pressure.
5. Always follow positive communication requirements.
6. Never enter designated exclusion or no go zones without appropriate authorisations.
7. Always ensure you are not standing or working within the fall zone of a suspended load, unsupported roof, unstable high wall or inadequately supported load.

The SMS includes a number of processes for conducting audits to verify that the SMS meets MCCPL's legislative requirements and is being complied with. Such audits include:

- (a) shift OCE inspections;
- (b) weekly Mine Engineering Manager inspections;
- (c) planned task observations and safety observations undertaken on a frequent basis;
- (d) specific task observations;
- (e) critical control monitoring;
- (f) the Document Control Standard which forms part of the SMS;
- (g) internal and external audits;
- (h) monthly health and safety meetings with representatives from the workforce.

In addition to the above audits, the SMS utilises processes to identify hazards in the workplace which include defect management and hazard identification.

A number of changes and additions have been made to the SMS around managing intersections, including the design, risk assessment, construction and communication (as described in Item 12 below).

10. the details of any consultation undertaken within the workplace regarding the proposal of a WHS undertaking (including workers and work health and safety representatives)

MCCPL has undertaken a significant amount of consultation in relation to this WHS undertaking, including:

- (a) MCCPL's WHS Committee;
- (b) Site Safety and Health Representative;
- (c) with members of Whitehaven Coal's (MCCPL's parent company) executives and leadership team (including the Chief Executive Officer, Executive General Manager - Operations, General Manager for Health Safety and Environment);
- (d) at the Mine with members of MCCPL's management team, including General Manager, Mining Engineering Manager, HSEC Manager and Safety Officer; and
- (e) Whitehaven Coal's Manager, Aboriginal Community Relations.

In addition, MCCPL reached out to the workforce through the pre-starts seeking suggestions for safety projects that would improve safety at the Mine, particularly relating to vehicle interactions.

The workforce were requested to provide suggestions through the Site Safety and Health Representative, elected Crew Health and Safety Representatives, the Mining Engineering Manager and an anonymous suggestion box in the work area.

Following this consultation a number of suggestions were received from the workforce. The suggestions were assessed by the MCCPL management team who decided the suggestions were of a nature of not exceeding compliance and, as result, MCCPL has not included them in this WHS undertaking but will explore them separately.

Further, MCCPL reached out to the Industry Safety and Health Representative for any suggestions or safety initiatives with regard to the Incident that could potentially improve safety at the Mine.

Separately, MCCPL reached out to the injured workers to ask if they would like to be involved in the WHS undertaking.

11. a statement of regret that the incident occurred (i.e. not an admission of guilt)

MCCPL regrets that the Incident occurred and the workers suffered injury as a result of the Incident.

12. any rectifications made as a result of the alleged contravention

Procedural Changes

Following the Incident, MCCPL undertook the following steps to rectify the alleged contravention:

- (a) improved its pre-start presentation pack to include intersection changes that have occurred prior to the shift;
- (b) made it a requirement for field maintenance personnel to attend the production pre-start;
- (c) improved its risk assessment process for evaluating changes to intersections;
- (d) implemented a process which requires an engineering review to be conducted when changes to intersections are proposed;
- (e) trained its relevant employees in the above improvements; and
- (f) purchased and utilised warning signs of changed traffic conditions.

The rectification measures detailed above were undertaken internally by MCCPL.

Autonomous Haulage System

Separate to the Incident and not as a rectification arising from the Incident, MCCPL has been collaborating with Hitachi on the development and implementation of an innovative autonomous haulage system (**AHS**) at the Mine. The Mine is the first open cut mine in New South Wales to implement an AHS and the first commercial scale implementation of the Hitachi AHS. The Hitachi AHS is the only AHS operating on ultra-class haul trucks.

An AHS comprises a number of components, including:

- (a) haul trucks fitted with hardware and software to manage the operation of the trucks;
- (b) vehicles (such as graders, water carts, dozers, excavators, light vehicles) installed with GPS and operator interface to be able to operate within the autonomous area;
- (c) software system to manage the location of the trucks and manage interactions from other GPS installed vehicles;
- (d) improved wireless network to ensure coverage over the entire autonomous working area;
- (e) a control room where dispatchers and controllers manage the AHS; and
- (f) secondary safety systems installed on haul trucks.

The collaboration commenced in 2017, prior to the Incident, and has included MCCPL providing Hitachi with a dedicated and segregated area on the Mine to further develop the AHS.

One of the key purposes of the AHS is to increase safety performance by allowing autonomous trucks to accurately interact with manned trucks and vehicles through GPS and other sensors and instruments, thereby allowing the autonomous trucks to stop if an interaction or collision is likely.

To enable the implementation of the AHS MCCPL has invested in a number of different requirements and activities, including:

- (a) **Employee Training:** Vehicle operators have been trained in how to interact with AHS haul trucks. Excavator and dozer operators are trained to create and manage loading and dumping bays where haul trucks are to reverse into position to enable them to be loaded and dump. In addition, control room operators have been recruited and trained in the system and network so that they have a clear understanding of the rules based system by which the AHS operates.
- (b) **Hardware and Technology:** MCCPL has invested in the fit out of a specialty control room and training room to enable operators to trained in and operate the AHS.
- (c) **Road Maintenance:** The AHS operates more effectively where roads are cleaned and maintained regularly. This allows the AHS to operate while minimising delays through poor road conditions or rocks that have dropped from other trucks.

WHS undertaking

- (d) Mine Design: An AHS is not able to be implemented at a mine without the need to modify the mine design. A key consideration is the size and design of roadways to enable the AHS to operate with minimal interruptions from intersections, undesirable gradients, turning circles at corners and roadway widths which are too small. If not designed correctly, these issues may trigger the AHS safety systems resulting in the trucks stopping.
- (e) Mine Planning: AHS production is expected to be better than or comparable to a manned operation. However AHS is not a plug-and-play system and requires an implementation period where an understanding of the AHS is gained. During the implementation period there is a reduction in productivity and this needs to be included in the mine plan.

The implementation of the AHS at the Mine goes beyond MCCPL's compliance obligations.

Apart from the investment in the project proposed in Item 4 of Section B below, MCCPL's investment in the AHS at the Mine does not form part of this WHS undertaking.

13. an acknowledgement that the WHS undertaking may be published and publicised

MCCPL acknowledges that the undertaking will be published on the regulator's website and may be referenced in NSW Resources Regulator material.

MCCPL acknowledges that the undertaking may be publicised in newspapers or other publications (where applicable, as specified in Section B – enforceable terms).

14. a statement of ability to comply with the terms of the undertaking

MCCPL has the resources and financial ability to comply with the terms of this WHS undertaking and have provided evidence with this undertaking to support this declaration.

15. statement regarding relationships with beneficiaries

MCCPL acknowledges that there are no known current relationships with any of the beneficiaries outlined in the WHS undertaking, other than the current workers of MCCPL, MCCPL's contractors and the broader industry.

16. intellectual property licence

MCCPL grants the regulator a permanent, irrevocable, royalty-free, world-wide, non-exclusive licence to use, reproduce, publish, distribute, electronically transmit, electronically distribute, adapt and modify any materials developed as a result of this WHS undertaking.

17. the company or individual may be required to provide information of any prior work health and safety convictions

The regulator requests a list outlining details of any prior work health and safety convictions or findings of guilt under work health and safety legislation² or work health and safety related legislation.

Does MCCPL have any such prior convictions or findings?

Yes No

2 Subject to any local legal constraints such as spent conviction legislation.

The list is attached (if applicable)

Yes No

18. a commitment to participate constructively in all compliance monitoring activities of the undertaking

MCCPL acknowledges that responsibility for demonstrating compliance with this enforceable undertaking rests with the organisations who have given this enforceable undertaking. Evidence to demonstrate compliance with the terms will be provided to the regulator by the due date for the term.

MCCPL acknowledges that the regulator may undertake other compliance monitoring activities to verify the evidence that is provided and compliance with the relevant terms of this enforceable undertaking. The evidence provided to demonstrate compliance with the enforceable undertaking will be retained by

the organisations who have given this enforceable undertaking until advised by the regulator that the enforceable undertaking has been completely discharged.

MCCPL acknowledges that the regulator may initiate additional compliance monitoring activities of compliance with the terms of the enforceable undertaking, such as inspections, as considered necessary at the regulator's expense.

19. a commitment that the behaviour that led to the alleged contravention has ceased and will not reoccur

MCCPL commits that the behaviour that led to the alleged contravention has ceased and that it will take steps to prevent recurrence of the Incident, so far as is reasonably practicable.

20. a commitment to the ongoing effective management of work health and safety risks

MCCPL is committed to the ongoing effective management of WHS risks in accordance with the WHS Act, the WHS Mines Act and their applicable regulations.

21. acknowledgment of WHS undertaking guidelines

MCCPL has read and understood:

NSW Resources Regulator Enforceable undertakings guidelines version March 2020.

Section B – enforceable terms

1. Publication of information about the undertaking

MCCPL must, within 30 days of receiving notification from the regulator of the acceptance of the WHS undertaking, cause a public notice to be published in the Northern Daily Leader and Sydney Morning Herald which will be drafted using the script provided in Attachment A.

2. A commitment to disseminate information about the undertaking to workers, and other relevant parties (which may include work health and safety representatives), and in the annual report (if applicable)

MCCPL must disseminate information by implementing the following:

- (a) within 30 days of receiving notification from the regulator of the acceptance of the WHS undertaking, issue a written communication to all Whitehaven Coal workers Australia-wide in relation to the WHS undertaking. The written communication will provide information about the WHS undertaking and the initiatives;
- (b) display a summary of the WHS undertaking on all mine, mine office and contractor notice boards at the Mine for a period of at least 30 days commencing within 30 days of receiving notification from the regulator of the acceptance of the WHS undertaking;
- (c) review the implementation and progress of the WHS undertaking each month at the Site Leadership Team meeting; and
- (d) review the implementation and progress of the WHS undertaking each month at the Workplace Health and Safety Committee meeting.

The reviews in paragraphs (c) and (d) must continue throughout the life of the WHS undertaking.

3. Strategies that will deliver worker benefits

MCCPL:

- (a) In recognising the mental health challenges faced in regional communities, in March 2020 the Australian Government encouraged regional Australians to access the additional mental health and wellbeing services on offer during the COVID-19 pandemic to help them get through uncertain times.

MCCPL also recognises the difficulties regional communities encounter in obtaining mental health support.

To assist in bridging this gap, MCCPL will partner with Gotcha4Life for the implementation of a Mine and Narrabri community-wide mental fitness initiative.

Gotcha4Life was established to reverse the tide of declining mental health and to reduce suicide throughout Australia and is a non-for-profit foundation dedicated to taking action and having a positive outcome on mental health.

The mental health facilitated by Gotcha4Life is aimed at breaking down the stigma surrounding mental ill-health and seeking out support, to facilitate a mentally well community and reduce suicide rates.

In providing benefits to workers MCCPL will:

- (i) promote the program around the Mine;
- (ii) encourage any workers to seek support through the program; and
- (iii) run some of the workshops at the Mine.

This project goes beyond MCCPL's compliance obligations and MCCPL embraces the opportunity to partner with Gotcha4Life in implementing this initiative.

A more detailed description of the objectives, benefits and deliverables from this program is set out in Attachment B.

The cost of this program is \$150,000

- (b) will develop a mentoring program to support the progression of its indigenous employees to management roles within MCCPL. A description of the scope and objectives for the mentoring program is set out in Attachment B to this WHS undertaking.

The cost of this program is \$100,000

These strategies will improve worker benefits by:

- (a) equipping workers with the tools to assist in managing mental health risks; and
- (b) facilitating the longer-term retention of indigenous employees.

4. Strategies that will deliver industry benefits

MCCPL will:

- (a) partner with the University of Queensland to support a project in assessing human-system interaction risks in autonomous mining operations.

This partnering includes funding the entire project as well providing as information from MCCPL on its risk assessments associated with the implementation of the AHS at the mine and access to its employees.

Previous incidents, such as the Pike River and Hazelwood mine disasters and more recently the Dreamworld event, have shone the spotlight on deficiencies in current risk assessment and risk treatment practices. Traditional failure-based hazard identification approaches have also been shown to be insufficient to understand the risks associated with software-enabled technologies embedded within socio-technical systems.

Recently ACARP has invested in risk treatment/control research that has subsequently been endorsed by the ICMM and others and is being implemented across the mining and other industries.

The techniques that are currently used to assess human-technology interactions in mining tend to be general such as Broad Brush Risk Assessment, energy focused like HAZIDs, or component-failure focused methods such as a Failure Mode and Effects Analysis (FMEA). However, these techniques have not been designed to capture the novel and emergent hazards associated with the introduction of new technology, nor with dysfunctional interactions that can occur in software-enabled, socio-technical systems where accidents happen even though no individual component failed.

The introduction of automation to mining systems changes the roles that people play. Some safety risks will be reduced while new hazards may be introduced. Risk analysis methods currently employed by the mining industry such as HAZOP, LOPA, FMEA and Functional Safety analysis techniques remain important, however these techniques incorporate linear causation assumptions in which undesirable outcomes arise as the consequence of the failure of an element of the system. The additional complexity introduced by automation, and particularly by the addition of substantial software subcomponents, means that undesirable outcomes may occur because of unexpected interactions rather than the failure of any component. Additional systems safety risk analysis techniques such as Systems-theoretic process analysis (STPA) and Strategies Analysis for Enhancing Resilience (SAfER) are required. These techniques do not assume linear causation and treat system safety as a control problem, rather than a failure prevention problem. Such techniques are increasingly being utilised in other industries (particularly aviation, rail and health) however they are not widely used in the mining industry.

There has been no research conducted to determine the best approaches for identifying, analysing and evaluating risks associated with the introduction of autonomous or semi-autonomous technologies into socio-technical mining environments.

The aim of the project is to determine which combination of risk assessment techniques delivers the most effective means of identifying risks associated with human-system interactions in remote and autonomous mining operations.

The project is innovative and in that it assesses the application of additional systems safety risk analysis techniques to the emerging risks from autonomous operations and goes beyond MCCPL's compliance obligations because it looks to inform the industry on the different risk assessment techniques or combination of techniques that can be applied to autonomous operations.

WHS undertaking

A more detailed description of the objectives, benefits and deliverables from the project is set out in Attachment B.

The outcomes of the project will be disseminated in the form of publications, presentations and a project website (controlled by the University of Queensland).

The project will provide evidence to the industry so they can select risk assessment techniques that give them greater assurance regarding their due-diligence obligations around safety management, by knowing with more certainty the types of risks identified by different individual and combinations of techniques.

The cost for this project is \$225,500

- (b) in consultation with the regulator, MCCPL will share its experiences and learnings associated with the implementation of an autonomous haulage system at the Mine at the one of the regulator's safety seminars within 18 months (but no earlier than 6 months) after the date the WHS undertaking is accepted by the regulator.

This presentation goes beyond MCCPL's compliance obligations as it will explore some of the key challenges and learnings MCCPL has experienced on its journey so far, some of these include; rules and regulations, planning for integration, management of change and operational considerations and will increase the industry's understanding and knowledge of the implementation of autonomous haulage systems.

There is no cost for this presentation

5. Strategies that will deliver community benefits

MCCPL will:

- (a) provide funding to the Narrabri Shire Interagency Group for the running of a mental health 'Community Connect Day' for the Narrabri community;

An amount of \$25,000 in funds

- (b) consult with the local SES to identify emergency life-saving equipment for purchase and fund the purchase of that equipment; and

An amount of \$20,000 in funds

- (c) consult with the Boggabri Hospital (including Ochre Health as the health providers at the Boggabri Hospital) to identify plant and equipment that can be upgraded or purchased to assist the Boggabri Hospital.

An amount of \$80,000 in funds

These strategies will allow a broad range of people in the local community to receive a benefit from this WHS undertaking.

MCCPL will undertake the consultation and provide the funding within 6 months after the date this WHS undertaking is accepted by the regulator.

WHS undertaking

6. A commitment regarding linking the strategy and promotion of benefits to the WHS undertaking
MCCPL is committed to linking any promotion of a benefit arising from this WHS undertaking to the WHS undertaking.
7. Reimbursement of the regulator's agreed costs associated with, and any monitoring of, the enforceable undertaking

MCCPL must pay the regulators recoverable costs associated with the undertaking, as itemised below, and acknowledges that payment is due **30 days** after receipt of the regulator's invoice:

<input checked="" type="checkbox"/> investigative, legal and administrative costs	\$193,113
<input checked="" type="checkbox"/> compliance monitoring costs	\$10,000
<input checked="" type="checkbox"/> publication costs	\$0

Total amount **\$203,113**

Insert case, if any, for why the regulator would not seek to recover costs.

Nil

8. Minimum spend

MCCPL must spend a minimum of \$803,613, excluding GST, in carrying out its obligations as set out in this WHS undertaking, inclusive of the regulator's recoverable costs.

MCCPL acknowledges the minimum spend comprises of:

Activities to deliver	Total estimated cost
Benefits to workers	\$250,000 (excl GST)
Benefits to industry	\$225,500 (excl GST)
Benefits to community	\$125,000 (excl GST)
Regulator recoverable costs	\$203,113 (excl GST)
Estimated total value of the undertaking	\$803,613 (excl GST)

WHS undertaking

9. Project of undertaking

Where a project or projects are proposed to deliver benefits to workers, industry and community MCCPL offers and will carry out the projects set out in Attachment B to this WHS undertaking.

10. Timeframe for delivery

The strategies set out in this WHS undertaking must be completed as follows with final completion of the WHS undertaking on or before 26 months following acceptance of this enforceable undertaking by the regulator.

Strategy	Timeframe for completion
Implementation of a Workforce and Community Mental Health Fitness Program	24 months after the WHS undertaking has been accepted by the regulator
Development of MCCPL Indigenous Mentoring Program	12 months after the WHS undertaking has been accepted by the regulator
Assessing human-system interaction risks in autonomous mining operations	24 months after the WHS undertaking has been accepted by the regulator
Present on the MCCPL autonomous haulage system at the mine at the one of the regulator's safety seminars	18 months (but no earlier than 6 months) after the date the WHS undertaking is accepted by the regulator
Provision of \$25,000 in funding to the Narrabri Shire Interagency Group for the running of a mental health 'Community Connect Day' for the Narrabri community	6 months after the WHS undertaking has been accepted by the regulator
Provision of \$20,000 funding to the local SES for emergency life-saving equipment	6 months after the WHS undertaking has been accepted by the regulator
Provision of \$80,000 funding to the Boggabri Hospital (including Ochre Health as the health providers at the Boggabri Hospital) for emergency equipment	6 months after the WHS undertaking has been accepted by the regulator

Section C - Offer of undertaking

BY AN INDIVIDUAL

I offer this undertaking and commit to the terms herein.

Signed:
[Person]

Name:
[Print name]

Position:

Dated at this
..... day of, 20.....

BY A CORPORATION

As a duly appointed and authorised officer or agent of
Maules Creek Coal Pty Limited (ACN 140 533 875)

I offer this undertaking and commit
Maules Creek Coal Pty Limited (ACN 140 533 875)
to the terms herein.

Signed:
[Director]

Name: IAN HUMPHRIS
[Print name]

Position: Director

Dated at SYDNEY this
6 day of JULY, 2020

Signed:
[Director or company secretary]

Name: TIM BURT
[Print name]

Position: COMPANY SECRETARY

Dated at SYDNEY this
6 day of JULY, 2020

Section D – Regulator's acceptance of undertaking

I accept this undertaking as an enforceable undertaking under section 216 of the *Work Health and Safety Act 2011*.

Signed:
Anthony Keon

Position: Executive Director delegate of the Secretary, Regional NSW

Dated at Newcastle this 31st day of July, 2020.

ATTACHMENT A

(This attachment is incorporated in and considered part of the WHS undertaking given by Maules Creek Coal Pty Limited for the purposes stated herein, and are enforceable terms given under section B of the WHS undertaking by Maules Creek Coal Pty Limited)

Public Notice of regulator's acceptance of WHS Undertaking

Notice of acceptance of a WHC undertaking under Part 11 of the Work Health and Safety Act 2011

On 21 April 2018, at the Maules Creek Coal Mine (the **Mine**), a service cart and fully laden rear dump truck collided at an intersection (the **Incident**). A worker suffered serious injuries.

Maules Creek Coal Pty Limited (**MCCPL**) is the operator of the Mine. The NSW Resources Regulator (a division of Regional NSW) investigated the incident and subsequently alleged MCCPL contravened section 19(1) of the Work Health and Safety Act 2011 (the **WHS Act**) by failing to ensure, as far as reasonably practicable, the health and safety of workers at the Mine.

MCCPL entered into a work health and safety enforceable undertaking with Regional NSW in relation to the Incident (**WHS undertaking**).

This notice has been published under the terms of a WHS undertaking and acknowledges acceptance of an undertaking, that is enforceable under the WHS Act.

The WHS undertaking requires the following actions:

- (a) Partnering with Gotcha4Life for the implementation of a workforce and Community Mental Health Fitness Program.
- (b) The development of a mentoring program to support the progression of its indigenous employees to management roles within MCCPL.
- (c) Partner with the University of Queensland for in the undertaking of a project to provide training to industry practitioners in new socio-technical approaches to risk assessment, assess how to apply HAZID, FMEA, STPA and SAfER to human-system interactions around the introduction of autonomous systems and provide evidence to the industry as they can select risk assessment techniques that give them greater assurance regarding their due-diligence obligations around safety management.
- (d) Present on the Mine's experiences and learnings associated with the implementation of an autonomous haulage system at the one of the regulator's safety seminars.
- (e) Provision of funding to the Narrabri Shire Interagency Group for the running of a mental health 'Community Connect Day' for the Narrabri community.
- (f) Provision of funding to the SES and Boggabri Hospital for the purchase of plant and equipment.

The total value of the WHS undertaking is \$803,613.

The full WHS undertaking and general information about undertakings is available at www.resourcesregulator.nsw.gov.au.

ATTACHMENT B

(This attachment is incorporated in and considered part of the WHS undertaking given by Maules Creek Coal Pty Limited for the purposes stated herein, and are enforceable terms given under section B of the WHS undertaking by Maules Creek Coal Pty Limited)

Project 1: Implementation of Workforce and Community Mental Health Fitness Program

Objectives:

Gotcha4Life is a mental fitness campaign dedicated to challenging stereotypes, getting men better connected and breaking the silence around suicide.

MCCPL will partner with Gotcha4Life for the implementation of a workforce and Narrabri community-wide mental fitness initiative.

The program is aimed at breaking down the stigma surrounding mental ill-health and seeking out support, to facilitate a mentally well community and reduce suicide rates.

Specific objectives associated with the program include:

1. Facilitating a workforce program to be delivered at the mine;
2. Facilitating targeted youth programs within education, sport, workplace and community environments
3. Delivery of the a support skills program to parents and community/sporting club staff (leaders)
4. Delivery of Mental Health First Aid courses to teachers and community champions interested in further increasing their mental health literacy
5. Delivery of a formal Gotcha4Life presentation by program founder, Gus Worland

Expected Outcomes and Benefits:

The expected outcomes and benefits of the project include:

1. The project will provide education and awareness to improve mental health literacy in the workforce and the broader community and breakdown the stigma surrounding mental health and speaking up or seeking out help.
2. The program will extend to community to leaders to provide specific skills in how to identify persons in their community who may be suffering from challenges or a mental health condition, and assist them to access the appropriate support and assistance.
3. The project will provide a platform for the workforce and the Narrabri community to discuss what positive male image (regarding mental health) looks like, connect people within the workforce and community to promote local mental health support services that are available and how to access them.
4. The program will contribute to reducing suicide rates in North West NSW.

Work Program:

The program will begin by confirming participants for the steering committee, MCCPL are invited to be a key stakeholder in this committee.

The second community for program implementation will be nominated and mutually agreed on between MCCPL and the Centre for Regional and Remote Mental Health (CRRMH).

Steering committee meetings will be held at scheduled intervals with participants. The charter of the steering committee includes:

- Formalise the program content and implementation strategy,
- Identification of the targeted schools, community and sporting groups and workplaces,
- Establishing timelines, promotional materials, workshop facilitators and venues,
- Evaluation of the success of the program.

MCCPL will also host Gotcha4Life workshops within the workforce.

A further description of each Stage of the Project is set out in the Timeframe table below.

Program Inclusions (for Narrabri and one other nominated community):

Youth Target

- 2 X Tomorrow Man & 2 X Tomorrow Woman workshops across 2 schools
- 2 X Tomorrow Man & 2 X Tomorrow Woman workshop in 4 sporting clubs (ie cricket/ rugby club and local netball club)

Community Leader's Target

- Delivery of RAMHP's Workplace Support Skills program to parents & sporting club staff
- Delivery of Mental Health First Aid Course to teachers & community champions interested in further increasing their mental health literacy

Whole of Community Target

- 1 X Gotcha 4 Life talk by founder Gus Worland

Resources: Access the RAMHP's extensive resource base including promotion of the recently launched rural men's mental health website [You Got This Mate](#), and tailored information on localsupport services available.

WHS undertaking

Timeframe:

Key Task	Due
Community 1	
<p>Stage 1: Project Planning</p> <p>This Stage will comprise:</p> <ul style="list-style-type: none"> (a) Establishing a Project Steering Committee (b) Conducting Project Initiation Meeting (c) Develop Communication Strategy, Evaluation Framework and Project Plan 	<p>Within 2 months after the WHS undertaking has been accepted by the regulator.</p>
<p>Stage 2: Community Consultation</p> <p>This Stage will comprise:</p> <ul style="list-style-type: none"> (a) Consult with Narrabri High School regarding project delivery (b) Conduct consultations with sporting clubs regarding project plans 	<p>Within 5 months after the WHS undertaking has been accepted by the regulator.</p>
<p>Stage 3: Event Planning</p> <p>This Stage will comprise:</p> <ul style="list-style-type: none"> (a) Finalise dates and locations of the workshops (including at the Maules Creek Coal Mine) (b) Implement communications strategy to promote event 	<p>Within 6 months after the WHS undertaking has been accepted by the regulator.</p>
<p>Stage 4: Mental Health Literacy Capacity Building</p> <p>This Stage will comprise:</p> <ul style="list-style-type: none"> (a) Delivery mental health literacy training sessions (b) Provision of information packs/advice on local services and support options 	<p>Within 7 months after the WHS undertaking has been accepted by the regulator.</p>
<p>Stage 5: Event Implementation</p> <p>This Stage will comprise:</p> <ul style="list-style-type: none"> (a) Deliver workshops (b) Distribute follow up surveys 	<p>Within 8 months after the WHS undertaking has been accepted by the regulator.</p>
<p>Stage 6: Support & Follow Up</p> <p>This Stage will comprise:</p> <ul style="list-style-type: none"> (a) Conduct debriefing with the Project Steering Committee (b) Provision of feedback to stakeholders 	<p>Within 11 months after the WHS undertaking has been accepted by the regulator.</p>

WHS undertaking

Key Task	Due
Community 2	
The above Stages will be replicated for the second community for the second year of the Project	
Final completion of the Project	Within 24 months after the WHS undertaking has been accepted by the regulator.

Project 2: Development of MCCPL Indigenous Mentoring Program

Overview:

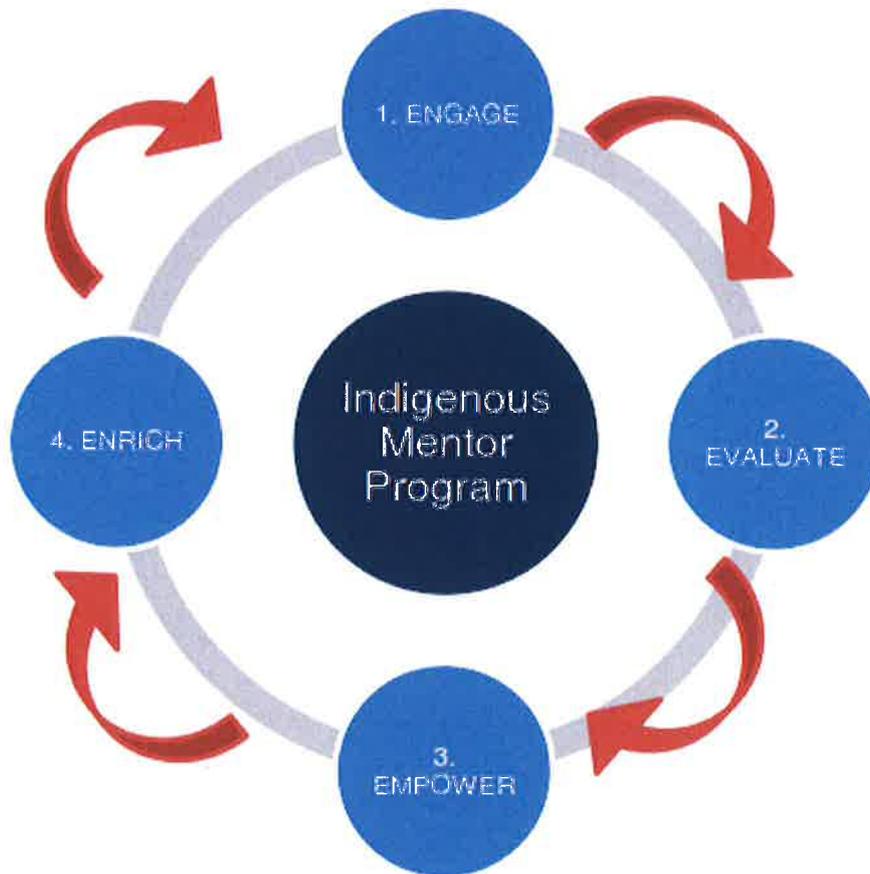
The development of an indigenous mentoring program to support the development of indigenous employees to management roles within the mine.

The program will be developed with the following objectives to achieve the following proposed benefits:

1. **Relationships:** Develop good relationships at work that provide support to mentees encouraging them to feel part of the company and be more engaged with their work.
2. **Support Mechanisms:** Provide an intense one on one model which address the complex social, emotional, cultural and family barriers preventing an individual's engagement in the workforce.
3. **Partnerships:** Build partnerships between Indigenous NGOs, JSAs, industries in the delivery of integrated, coordinated and employee focussed services for Indigenous employees.
4. **Retention:** Setting clear objectives will mean mentees can be comfortable knowing what is expected and how they should deliver it and encouraging employees to remain with the company.
5. **Training:** The delivery of training the delivery with outcomes measured/discussed/further goals set.
6. **Professional and personal development:** A structured, career-focused mentoring process providing professional and personal development with the capacity to assist by creating pathways for Indigenous employees to progress and personally develop within the company's structures.

The Four Pillars

The indigenous mentoring program is based around four pillars:



Pillar 1: Engage:

Genuine engagement with Aboriginal and Torres Strait Islander employees to:

1. Build mutual trust and establish maintain long-term partnerships;
2. Develop the cultural awareness support and understanding of Mentors to better meet the needs of Aboriginal and Torres Strait Islander employees;
3. Seek continuous feedback on the delivery of the program and the appropriateness for local community conditions and challenges; and
4. Promote active involvement and ownership of the issues and proposed solutions throughout program.

Pillar 2: Evaluate

Work with Aboriginal and Torres Strait Islander employees to provide independent and honest advice on the skill set of all employees, the key areas for improvement and the skills and commitment necessary to secure and retain long-term employment.

WHS undertaking

Pillar 3: Empower

The program is committed to empowering Aboriginal and Torres Strait Islander employees through:

1. Identify barriers, challenges and threats to the sustainable employment for employees;
2. Determine any necessary support required to assist and develop the skills of employees to retain sustainable employment; and
3. Ensure employees have access to support services, information, skilled Mentors to assist through the employment process.

Pillar 4: Enrich

The program will work to ensure that its services are best practice by:

1. Taking an holistic approach to Aboriginal and Torres Strait Islander employees to support them in their desire for employment and economic independence;
2. Continuously seek opportunities for Aboriginal and Torres Strait Islander development;
3. Actively fostering co-operative relationships with other service providers including JSAs and other relevant agencies and organisations that support and provide opportunities for Aboriginal employment and training; and
4. Actively promoting the inclusion of Aboriginal and Torres Strait Islander communities and customs, as appropriate, into the employment and Mentor program.

A further description of each Stage of the Project is set out in the Timeframe table below.

Proposed Benefits:

- (a) Increased self-confidence;
- (b) Greater job satisfaction;
- (c) Development of professional direction through mentors and mentees working together over defined periods;
- (d) Provision of career guidance and increased awareness of possible future career opportunities in leadership and management roles for mentees;
- (e) Improved interpersonal and communication skills; and
- (f) Encouragement to identify and participate in training opportunities and development programs or relevant work experience.

WHS undertaking

Timeframe:

Key Task	Due
<p>Stage 1: Project Planning</p> <p>This Stage will involve the development of the project plan</p>	<p>Within 1 month after the WHS undertaking has been accepted by the regulator.</p>
<p>Stage 2: Cultural Awareness Training</p> <p>This Stage will comprise provision of cultural awareness training to the MCCPL senior management team</p>	<p>Within 2 months after the WHS undertaking has been accepted by the regulator.</p>
<p>Stage 3: Employee Consultation</p> <p>This Stage will comprise consulting with the employees at MCCPL regarding the project</p>	<p>Within 3 months after the WHS undertaking has been accepted by the regulator.</p>
<p>Stage 4: Project Implementation</p> <p>This Stage will comprise implementation of the project plan including:</p> <ul style="list-style-type: none"> (a) On the job training and support for the employees participating in the project (b) Identification of barriers that may impact on an employee's work or training (c) Assisting each employee to build relations and develop communication skills (d) Individualise strategies to overcome social and cultural barriers to enable employees to effectively engage in employment (e) Develop tailored individual employment/mentor plans 	<p>Within 9 months after the WHS undertaking has been accepted by the regulator.</p>
<p>Stage 4: Support & Follow Up</p> <p>This Stage will comprise:</p> <ul style="list-style-type: none"> (a) Conduct separate debriefing sessions with the employees and senior management of MCCPL (b) Refer employees to broader support programs (where appropriate) 	<p>Within 12 months after the WHS undertaking has been accepted by the regulator.</p>
<p>Final completion of the Project</p>	<p>Within 12 months after the WHS undertaking has been accepted by the regulator.</p>

Project 3: Assessing human-system interaction risks in autonomous mining operations

Objectives:

The project seeks to produce three full case study demonstrations of HAZID, FMEA, STPA and SAfER on an autonomous haulage system, autonomous longwall miner and a remote processing plant operation.

The focus of the project is to promote the safe implementation of automation and new technologies to mine sites to improve safety and health.

Specific objectives associated with the project include:

1. Training select industry personnel in the application of the techniques.
2. Conducting collaborative workshops to apply the techniques to the proposed case studies.
3. Evaluating the outputs of the techniques identifying technical, human and human-technical interaction risks.
4. Collecting industry participant feedback on the usability and usefulness of each technique in delivering meaningful insights into human-system interaction risks associated with automated haulage and semi-autonomous operations.

Expected Outcomes and Benefits:

The expected outcomes and benefits of the project include:

1. The project will provide training to industry practitioners in new socio-technical approaches to risk assessment, specifically STPA and SAfER, as well as refresher training in HAZID and FMEA.
2. The project will provide full worked examples of how to apply HAZID, FMEA, STPA and SAfER to human-system interactions around the introduction of autonomous systems (for example, in-field troubleshooting of AHT circuits, operation of an automated longwall miner) or the monitoring and control of semi-autonomous systems (for example, remote operation of processing plants).
3. The project will provide evidence to the industry as they can select risk assessment techniques that give them greater assurance regarding their due-diligence obligations around safety management, by knowing with more certainty the types of risks identified by different individual and combinations of techniques.

Work Program:

The project will be a comparative study, where the following four HAZID methods will be tested on three case studies, human-AHT, autonomous longwall mining and remote control of processing plants:

1. Preliminary Hazard Analysis (PHA) (Traditional Method)
2. Failure Mode and Effects Analysis (FMEA) (Traditional Method)
3. System Theoretic Process Analysis (STPA) (Systems-theory Method)
4. Strategies Analysis for Enhancing Resilience (SAfER) (Systems-theory Method)

The project will begin by developing the scope for each case study, collecting relevant information and confirming participants.

WHS undertaking

Risk assessment workshops will be run with participants to perform the risk assessment methods on the case study scenarios. After each workshop, the results from each risk assessment technique will be analysed and a survey/interview conducted with the participants to record their impression of the use of each HAZID method.

The collective feedback from the workshops on the strengths and weaknesses of the different techniques on the usability and utility of each technique in providing meaningful insights into human-system interaction risks will be gathered.

The results from the case studies will also be compared against publically available information on similar type events to assess the efficacy of the approaches in identifying known human-system interaction risks associated with the supervision and control of autonomous and semi-autonomous technologies.

This will provide evidence on which technique or ranges of techniques will identify the most significant risks that need to be managed to assure due-diligence obligations around risk identification obligations.

Timeframe:

Key Task	Due
Stage 1: Project Planning This Stage will developing the scope for each case study, collecting relevant information and confirming participants	Within 6 months after the WHS undertaking has been accepted by the regulator.
Stage 2: Risk Assessment Workshops This Stage will comprise conducting risk assessment workshops with participants to perform the risk assessment methods on the case study scenarios	Within 18 months after the WHS undertaking has been accepted by the regulator.
Stage 3: Feedback This Stage will include collecting feedback from the workshops on the strengths and weaknesses of the different techniques and publishing of the report	Within 24 months after the WHS undertaking has been accepted by the regulator.
Final completion of the Project	Within 24 months after the WHS undertaking has been accepted by the regulator.