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FISHERIES MANAGEMENT ACT 1994
FISHERIES MANAGEMENT (AQUACULTURE) REGULATION 2017

Clause 39 (4) - Notice of Aquaculture Lease Renewal

The Minister has renewed the following class 1 Aquaculture Leases:-

OL59/144 within the estuary of the Hawkesbury River, having an area of 1.3785 hectares to Peter O'Sullivan of Mooney Mooney, NSW, for a term of 15 years expiring on 15 August 2037.

OL76/037 within the estuary of the Macleay River, having an area of 2.0935 hectares to Adflow Pty Ltd of South West Rocks, NSW, for a term of 15 years expiring on 30 June 2037.

OL90/018 within the estuary of the Clyde River, having an area of 0.7062 hectares to Jim and John Yiannaros of Batemans Bay, NSW, for a term of 15 years expiring on 31 August 2037.

OL76/128 within the estuary of the Clyde River, having an area of 0.7366 hectares to Jim & John Pty Ltd of Batemans Bay, NSW, for a term of 15 years expiring on 5 July 2037.

OL76/105 within the estuary of the Tuross Lake, having an area of 1.5464 hectares to Glenn Jones of Tuross Head, NSW, for a term of 15 years expiring on 21 June 2037.

AL05/029 within the estuary of the Pambula River, having an area of 0.6904 hectares to Jason and Jasmine Moore of Pambula Beach, NSW, for a term of 15 years expiring on 2 July 2037.

OL78/034 within the estuary of the Hastings River, having an area of 1.5834 hectares to Port Oyster Company Pty Ltd, Kevin Marks and Whittens Organic Oyster Farms Pty Ltd of Port Macquarie, NSW, for a term of 15 years expiring on 13 June 2037.

OL76/189 within the estuary of the Manning River, having an area of 0.3316 hectares to Gary and Belinda Binskin of Mt Colah, NSW, for a term of 15 years expiring on 26 June 2037.

AL05/001 within the estuary of the Clyde River, having an area of 1.6833 hectares to Raymond Wilcox of Surf Beach, NSW, for a term of 15 years expiring on 15 December 2036.

OL77/116 within the estuary of the Wallis Lake, having an area of 0.9213 hectares to East 33 Farming Pty Limited of Tuncurry, NSW, for a term of 15 years expiring on 19 August 2037.

OL61/136 within the estuary of the Manning River, having an area of 0.3973 hectares to East 33 Farming Pty Limited of Tuncurry, NSW, for a term of 15 years expiring on 15 August 2037.

PETER TURNELL
Director Fisheries and Aquaculture Management
Fisheries Division
NSW Department of Primary Industries

FISHERIES MANAGEMENT ACT 1994
FISHERIES MANAGEMENT (AQUACULTURE) REGULATION 2017

Clause 37 (3) – Notice of Granting of Class 1 Aquaculture Lease

The Minister has granted the following Class 1 Aquaculture Lease:

OL57/001 within the estuary of Port Stephens, having an area of 0.8753 hectares to Dean and Stephen Cole of Karuah, NSW, for a term of 15 years expiring on 20 June 2037.

OL67/117 within the estuary of Port Stephens, having an area of 1.5082 hectares to Karuah River Oysters Pty Ltd of Karuah, for a term of 15 years expiring on 12 July 2037.

OL66/235 within the estuary of Port Stephens, having an area of 0.8633 hectares to Phillips Oysters Pty Ltd of Karuah, NSW, for a term of 15 years expiring on 21 June 2037.

OL80/081 within the estuary of Port Stephens, having an area of 0.4464 hectares to Phillips Oysters Pty Ltd of Karuah, NSW, for a term of 15 years expiring on 21 June 2037.

OL57/075 within the estuary of Port Stephens, having an area of 0.6418 hectares to Nelson Bay Oysters Pty Ltd of Karuah, NSW, for a term of 15 years expiring on 14 June 2037.

OL72/082 within the estuary of Port Stephens, having an area of 0.6369 hectares to Nelson Bay Oysters Pty Ltd of Karuah, NSW, for a term of 15 years expiring on 14 June 2037.

OL74/155 within the estuary of Port Stephens, having an area of 1.9937 hectares to Nelson Bay Oysters Pty Ltd of Karuah, NSW, for a term of 15 years expiring on 14 June 2037.

OL75/123 within the estuary of Port Stephens, having an area of 0.6315 hectares to Nelson Bay Oysters Pty Ltd of Karuah, NSW, for a term of 15 years expiring on 14 June 2037.

OL81/118 within the estuary of Port Stephens, having an area of 1.9676 hectares to Nelson Bay Oysters Pty Ltd of Karuah, NSW, for a term of 15 years expiring on 14 June 2037.

PETER TURNELL
Director Fisheries and Aquaculture Management
Fisheries Division

WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES) REGULATION 2022

Registration of Braking Systems on Plant Used in Underground Coal Mine Transport Design Order 2022

I, **Garvin Burns**, Chief Inspector, with the delegated authority of the Secretary, Regional NSW, pursuant to section 187(5) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, make the following Order.

Dated this 29th day of August 2022

Garvin Burns
Chief Inspector
Regional NSW

1. Name of Order

This Order is the *Registration of Braking Systems on Plant Used in Underground Coal Mine Transport Design Order 2022*.

2. Commencement

This Order commences on the day it is published in the NSW Government Gazette.

3. Interpretation

In this Order:

TRG is a reference to technical reference guide produced by the NSW Government and published on the Department of Regional NSW Resources Regulator website.

braking system includes all components which combine to stop or hold the transport.

transport means mobile plant used for the purpose of transporting persons and includes:

- (a) a locomotive, or
- (b) a rubber tyred or tracked vehicle propelled by electrical and/or mechanical means.

4. Revocation

The *Registration of Braking Systems on Plant Used in Underground Coal Mine Transport Design Order 2018* published in the NSW Government Gazette No 144 of 21 December 2018 at pages 10075-10076 is revoked.

5. Design requirements

5.1. Except as provided in paragraphs 5.3 and 5.4, all braking systems used in underground coal mines must be designed to meet the design requirements of paragraphs 5.2.

5.2. General:

- (a) the design of the braking system must control all reasonably foreseeable unintended movements events.
- (b) without limiting 5.3, all braking systems used in underground coal mines must be designed in accordance with the relevant parts of Section 1 of *TRG Braking systems used in underground transport* as amended from time to time.

5.3. Where a design does not fully comply with the requirements in paragraph 5.2, the designer must specify the published technical standards or the engineering principles used to identify controls, in accordance with the hierarchy of risk control measures in Part 3.1 of the Work Health and Safety Regulation 2017, that have been incorporated in the design to achieve at least an equivalent level of safety as the requirements of paragraph 5.2.

5.4. If the design of a braking system that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered and the alteration may affect health or safety:

- (a) the altered parts of the braking system must be designed to comply with the design requirements in paragraphs 5.1 – 5.2 of this Order.
- (b) an assessment must be undertaken, and documented, by the designer to assess the impact that the design alteration has on unaltered parts of the braking system and the impact on braking system performance.
- (c) where the assessment undertaken in paragraph 5.4(b) shows there has been a reduction in the effectiveness of existing control measures of any other parts of the braking system, that is, there has been a detrimental effect on health and safety caused by the alteration or performance, these parts must comply with the design requirements in paragraphs 5.1 – 5.2 and meet testing and performance requirements in paragraphs 6.1 – 6.2 of this Order.
- (d) any parts of the braking system which are not affected by the alteration must continue to comply with the design and performance requirements of the design order that was in effect on the date that the registration for the design of the braking system was granted.

6. Testing and performance requirements

- 6.1. All braking systems used in underground coal mines must meet the relevant performance requirements of Sections 1 and 3 of *TRG: Transport braking systems used in underground transport*, as amended from time to time.
- 6.2. All braking systems used in underground coal mines must be tested in accordance with the relevant requirements of Sections 1 and 3 of *TRG: Transport braking systems used in underground transport*, as amended from time to time.

7. Determination of applications for registration of design made before commencement of this Order

If an application for the registration of design of braking system made in accordance with clause 250 of the Work Health and Safety Regulation 2017 to which the standards specified in the *Registration of Braking Systems on Plant Used in Underground Coal Mine Transport Design Order 2018* applies is made before the commencement of this Order, and the application has not been finally determined before that commencement, the application is to be determined as if this Order had not commenced.

WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES) REGULATION 2022

Registration of Canopies of Continuous Miners Design Order 2022

I, **Garvin Burns**, Chief Inspector, with the delegated authority of the Secretary, Regional NSW, pursuant to section 187(5) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, make the following Order.

Dated this 29th day of August 2022

Garvin Burns
Chief Inspector
Regional NSW

1. Name of Order

This Order is the *Registration of Canopies of Continuous Miners Design Order 2022*.

2. Commencement

This Order commences on the day it is published in the NSW Government Gazette.

3. Interpretation

In this Order:

AS is a reference to Australian Standards.

AS/NZS is a reference to Australian/New Zealand Standards.

canopy means a canopy on a continuous miner used in underground coal mines.

canopy roof means the plate-work and any associated bracing commonly utilised to provide protection above the driver's enclosure.

lateral means the side edge of the canopy roof, usually located at 90 degrees to the centreline running from the head to the tail of the continuous miner.

longitudinal means the lengthways edge of the canopy roof, usually located parallel to the centreline.

support includes the support legs and any associated steel work, other than the canopy roof, which interconnects the support legs.

support leg means the vertical or near vertical member connecting the continuous miner chassis or driver's enclosure to the canopy roof.

4. Revocation

The *Registration of Canopies of Continuous Miners Design Order 2018* published in the NSW Government Gazette No.144 of 21 December 2018 at pages 10071-10074 is revoked.

5. Design requirements

5.1. Except as provided in paragraphs 5.2 and 5.9, all canopies used in underground coal mines must be designed to meet the design requirements of paragraphs 5.3, 5.5 – 5.8.

5.2. Where a design does not fully comply with the requirements in paragraph 5.1, the designer must specify the published technical standards or the engineering principles used to identify controls, in accordance with the hierarchy of risk control measures in Part 3.1 of the Work Health and Safety Regulation 2017, that have been incorporated in the design to achieve at least an equivalent level of safety as the requirements of paragraph 5.1.

5.3. General:

- (a) all canopies on continuous miners used in underground coal mines must be designed and tested in accordance with this Order.
- (b) without limiting paragraph 5.2, all canopies on continuous miners used in underground coal mines must be designed in accordance with the relevant parts of the following standards, as amended from time to time:
 - (i) AS/NZS 1554.1:2014 Structural steel welding- Welding of steel structures
 - (ii) AS 3990-1993 Mechanical equipment- Steelwork
 - (iii) AS 4100-2020 Steel structures.

5.4. Notes (informative):

- (a) in the event of the canopy being subjected to a fall of roof which exceeds the elastic limit of the canopy design, then the canopy should be designed such that the yielding should be progressive and limited to the extent that the driver can safely remain within the operator compartment i.e. 1000mm minimum headroom space remains between the seat and canopy roof. Consideration should be given to suspending the driver's seat from the underside of the canopy roof.
- (b) the canopy design should consider access into the operator compartment and the driver's visibility in all directions, particularly to

the driver's front and rear and as far as is reasonably practicable, to the sides.

- (c) the design of the canopy roof and seat should consider that when the driver leans slightly to the right, as is customary by many drivers, the driver's head remains underneath the canopy roof.

5.5. Canopy design:

- (a) the canopy roof should be attached to the support legs by either bolted or welded connections.
- (b) the base of the canopy support legs must be securely bolted or welded to the main frame of the continuous miner or driver enclosure.
- (c) the canopy roof must be designed by utilising a substantial one-piece solid plate devoid of uneven structural protrusions above the roofline (including cable support structures).

5.6. Design loads:

- (a) the protective canopy must be designed to have a minimum structural capacity to support elastically a static uniform load of 8.2 tonnes or a force equivalent to a static load of 105 kilopascals distributed uniformly over the greatest plan view area of the canopy roof.
- (b) the protective canopy must be designed to have a minimum structural capacity to support elastically a static uniform load of 2 tonnes applied horizontally to the edge of the canopy roof. The horizontal loading must be applied in both the longitudinal and lateral directions separately.
- (c) larger test loads should be considered by the applicant where appropriate for conditions where canopy is to be used.

5.7. Materials:

All main load-bearing components used in the construction of protective canopies must be in accordance with AS 4100-2020 or AS 3990-1993.

5.8. Welding:

All welding must comply with Category SP welds as set out in AS/NZS 1554.1:2014.

5.9. If the design of a canopy that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered and the alteration may affect health or safety:

- (a) the altered parts of the canopy must be designed to comply with the design requirements in paragraphs 5.1 – 5.3 and 5.5 – 5.8 of this Order

- (b) an assessment must be undertaken, and documented, by the designer to assess the impact that the design alteration has on unaltered parts of the canopy.
- (c) where the assessment undertaken in paragraph 5.9(b) shows there has been a reduction in the effectiveness of existing control measures of any other parts of the canopy, that is, there has been a detrimental effect on health and safety caused by the alteration, these parts must comply with the design requirements in paragraphs 5.1 – 5.2 of this Order.
- (d) any parts of the canopy which are not affected by the alteration must continue to comply with the design requirements of the design order that was in effect on the date that the registration for the design of the canopy was granted.

6. Testing and performance requirements

6.1. Except as provided in paragraph 6.6, all canopies used in underground coal mines must be tested and meet the relevant performance requirements specified in paragraphs 6.2 – 6.5.

6.2. Loading method:

- (a) when testing in the vertical plane, an acceptable method of test provides for the test load to be distributed within the middle ninth of the roof's plan view area.
- (b) when testing in the horizontal plane, an acceptable method of test provides for the test load to be distributed along the middle third of the longitudinal and middle third of the lateral edge of the roof separately.

6.3. Test method:

- (a) all testing must be carried out with the canopy fully extended, unless stated otherwise.
- (b) a dial indicator or other suitable measuring instrument with an accuracy of 0.01 of a millimetre shall be used for measurement of the maximum deflection and the residual deflection, caused by the application of the test load. The dial indicator or other suitable measuring instrument shall have a current calibration certificate at time of use issued by:
 - (i) a laboratory in Australia that is accredited by the National Association of Testing Authorities Australia (NATA) for performing the test; or
 - (ii) where a NATA-accredited laboratory is not available, a suitably qualified and experienced independent facility having regard to test

equipment, equipment calibration, quality processes, work methods, past test experience and independent technical verification.

- (c) apply vertical test load (per paragraph 5.7) to middle ninth plan view area i.e. to one third span of width and length:
- (i) for fixed type canopy apply preload of between 300-500 kg to remove slack from joints, set dial indicator or other suitable measuring instrument as per paragraph 6.3 (b) to zero then apply test load. Record deflection "A" under the test load and the residual deflection "B" on removal of the test load. "B" divided by "A" gives the residual deflection to maximum deflection ratio.
Note: it may be necessary to repeat this test or other tests in order to further eliminate any initial movement in pinned or bolted connections.
 - (ii) for canopies initially supported by hydraulic cylinders, measure pressure and load at hydraulic cylinders when the full test load is applied, then increase test load until the cylinders yield, record yield pressure and load. Ensure that pressure relief system reseats when load is reduced i.e. reload a second time.
 - (iii) if the yield testing of the hydraulics requires a load which is beyond the elastic limit of the canopy, then separate bench testing of the hydraulics may be required.
 - (iv) with canopy lowered to its minimum height and oil removed from the support cylinders i.e. canopy resting on its mechanical stops apply test load as per paragraph 6.3(c)(i).
Note: this test is only applicable for canopies with hydraulic height adjustment where the support cylinders are required to elastically support the test load without pressure relief occurring.
- (d) re-extend canopy to maximum height and apply horizontal test load (per paragraph 5.7) along the middle one third of the canopy edge directing the load away from the centreline of the machine. Apply the preload and record deflection measurements as in paragraph 6.3 (c)(i).
- (e) repeat test 4 (per paragraph 6.3(d) but with the load applied towards the centreline of the machine. This test is only necessary if there is a significant difference in the strength of the canopy supports between the two directions. Apply the preload and record deflection measurements as in paragraph 6.3(c)(i).
- (f) apply horizontal test load along the middle one third of the canopy edge directing the load from the rear to the front of the machine. Apply the preload and record deflection measurements as in 6.3(c)(i).
- (g) for canopies fitted with rear hydraulic cylinders, the cylinder must not be the component that stops any upward movement that may occur i.e. a mechanical stop should prevent over extension of the canopy.

- (h) repeat test 6 (per paragraph 6.3(f)) but with the load applied directed from the front to the back of the machine. This test is only necessary if there is a significant difference in the strength of the canopy supports between the two directions. Apply the preload and record deflection measurements as in paragraph 6.3(c)(i).

6.4. Canopy performance:

When tested in accordance with the test method in paragraph 6.3, the residual deflection "B" must be less than 10% of the maximum deflection "A" measured with the load applied. That is: $(B/A) \times 100\%$ is less than 10%.

6.5. Welded joints:

All welded joints must be non-destructively examined in accordance with AS/NZS 1554.1:2014.

- 6.6. If the design of a canopy that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered, and the alteration may affect health or safety, the altered parts of the canopy, including those parts that may have been redesigned due to detrimental effects identified in the assessment undertaken in paragraph 5.9(b), must be tested and meet the performance requirements in paragraphs 6.1 – 6.5 of this Order.

- 6.7. Any parts of the canopy which are not affected by the alteration must continue to comply with the performance requirements of the design order that was in effect on the date that the registration for the design of the canopy was granted.

7. Determination of applications for registration of design made before commencement of this Order

If an application for the registration of design of a canopy made in accordance with clause 250 of the Work Health and Safety Regulation 2017 to which the standards specified in the *Registration of Canopies on Continuous Miners Design Order 2018* applies is made before the commencement of this Order, and the application has not been finally determined before that commencement, the application is to be determined as if this Order had not commenced.

WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES) REGULATION 2022

Registration of Conveyor Belting Design Order 2022

I, **Garvin Burns**, Chief Inspector, with the delegated authority of the Secretary, Regional NSW, pursuant to section 187(5) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, make the following Order.

Dated this 29th day of August 2022

Garvin Burns
Chief Inspector
Regional NSW

1. Name of Order

This Order is the *Registration of Conveyor Belting Design Order 2022*.

2. Commencement

This Order commences on the day it is published in the NSW Government Gazette.

3. Interpretation

In this Order:

Australian Standard or AS is a reference to a standard published by or on behalf of Standards Australia.

4. Revocation

The *Registration of Conveyor Belting Design Order 2018* published in the NSW Government Gazette No.134 of 7 December 2018 at pages 9253-9254 is revoked.

5. Design requirements

- 5.1. Except as provided in paragraph 5.3, all conveyor belting used in underground coal mines must be designed to be fire resistant and antistatic. The designer must specify the published technical standards, or the engineering principles used to identify controls, in the order of the hierarchy of risk controls in Part 3.1 of Work Health and Safety Regulation 2017, incorporated in the design.
- 5.2. Where a design does not fully comply with the requirements in paragraph 5.1, the designer must specify the published technical standards or the

engineering principles used to identify controls, in accordance with the hierarchy of risk control measures in Part 3.1 of the Work Health and Safety Regulation 2017, that have been incorporated in the design to achieve at least an equivalent level of safety as the requirements of paragraph 5.1.

- 5.3. If the design of conveyor belting that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered and the alteration may affect health or safety:
- (a) the altered parts of the conveyor belting must be designed to comply with the design requirements in paragraphs 5.1-5.2 of this Order
 - (b) an assessment must be undertaken, and documented, by the designer to assess the impact that the design alteration has on unaltered parts of the conveyor belting.
 - (c) where the assessment undertaken in paragraph 5.3(b) shows there has been a reduction in the effectiveness of existing control measures of any other parts of the conveyor belting, that is, there has been a detrimental effect on health and safety caused by the alteration, these parts must comply with the design requirements in paragraphs 5.1 – 5.2 of this Order.
 - (d) any parts of the conveyor belting which are not affected by the alteration must continue to comply with the design requirements of the design order that was in effect on the date that the registration for the design of the conveyor belting was granted.

6. Testing and performance requirements

- 6.1. Except as provided in paragraph 6.2, all conveyor belting used in underground coal mines must be tested and retested, in accordance with the requirements of clauses 5.2 and 5.3 'Type testing' and clause 6.3 'Retesting for type tests' of AS 4606-2012 Grade S fire resistant and antistatic requirements for conveyor belting and conveyor accessories as amended from time to time.
- 6.2. If the design of conveyor belting that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered, and the alteration may affect health or safety, the altered parts of conveyor belting, including those parts that may have been redesigned due to detrimental effects identified in the assessment undertaken in paragraph 5.3(b) above, must be tested and meet the performance requirements in paragraph 6.1 of this Order.
- 6.3. Conveyor belts must comply with the requirements of Grade S conveyor belting as set out in AS 4606-2012.
- 6.4. Despite the performance requirements of clause 6.1.3 of AS 4606-2012, 'ignitability and maximum surface temperature of belting subjected to friction (Drum friction test)', conveyor belts for use in applications where they are too

inflexible to wrap around the drum, need not comply with those requirements, provided:

- (a) it can be demonstrated that it is not reasonably practicable to comply, and
- (b) specify the published technical standards, or the engineering principles used to identify controls, in the order of the hierarchy of risk controls in Part 3.1 of the Work Health and Safety Regulation 2017, to protect from the risk of heating of the conveyor belt due to belt slip and/or friction between the conveyor belt and a metal object.
- (c) any parts of the conveyor belting which are not affected by the alteration must continue to comply with the performance requirements of the design order that was in effect on the date that the registration for the design of the conveyor belting was granted.

7. Test facility

- 7.1. The test facility used for testing conveyor belting must be a test facility which is independent of the designer, manufacturer or supplier.
- 7.2. The test facility must have test equipment, with calibration traceable to the International System of Units (SI) by reference to national measurement standards, quality processes and work methods for performing the specific tests described in the standards referred to in this Order. This must be demonstrated through:
 - (a) accreditation by the National Association of Testing Authorities (NATA); or
 - (b) where demonstrated to the regulator that a NATA-accredited facility is not available,
 - (i) through accreditation by an organisation that is a signatory to the ILAC MRA (International Laboratory Accreditation Cooperation Mutual Recognition Arrangement); or
 - (ii) a suitably qualified and experienced testing facility along with past test experience with conveyor belting, which has been independently audited within the last 2 years.

8. Determination of applications for registration of design made before commencement of this Order

If an application for the registration of design of conveyor belting made in accordance with clause 250 of the Work Health and Safety Regulation 2017 to which the standards specified in the Registration of Conveyor Belting Design Order 2018 applies is made before the commencement of this Order, and the application has not been finally determined before that commencement, the application is to be determined as if this Order had not commenced.

WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES) REGULATION 2022

Registration of Diesel Engine Systems Design Order 2022

I, **Garvin Burns**, Chief Inspector, with the delegated authority of the Secretary, Regional NSW, pursuant to section 187(5) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, make the following Order.

Dated this 29th day of August 2022

Garvin Burns
Chief Inspector
Regional NSW

1. Name of Order

This Order is the *Registration of Diesel Engine Systems Design Order 2022*.

2. Commencement

This Order commences the day it is published in the NSW Government Gazette.

3. Interpretation

In this Order:

AS is a reference to Australian Standards.

4. Revocation

The *Registration of Diesel Engine Systems Design Order 2018* published in the NSW Government Gazette No.119 of 9 November 2018 at pages 8457-8458 is revoked.

5. Design requirements

5.1. General:

All diesel engine system must be fitted with a compliance plate as identified in:

- (a) AS 3584.1 – Section 4 – ‘Compliance plate’
- (b) AS 3584.2 – Section 4 – ‘Marking’

(c) AS 3584.4 – Section 5 – ‘Compliance plate’

5.2. Fire-protected diesel engine system (FpDES):

Except as provided in paragraphs 5.4 and 5.5, fire-protected diesel engine systems used in underground coal mines must be designed in accordance with AS 3584.1:2021 as identified in Section 3 – ‘Design and construction’

5.3. Explosion-protected diesel engine system (ExDES):

Except as provided in paragraphs 5.4 and 5.5, explosion-protected diesel engine systems used in underground coal mines must be designed in accordance with AS 3584.2:2021 as identified in Section 3 – ‘Design and construction’

5.4. Where a design does not fully comply with the requirements in paragraph 5.2 or 5.3, the designer must specify the published technical standards or the engineering principles used to identify controls, in accordance with the hierarchy of risk control measures in Part 3.1 of the Work Health and Safety Regulation 2017, that have been incorporated in the design to achieve at least an equivalent level of safety as the requirements of paragraph 5.2 or 5.3.

5.5. If the design of a diesel engine system that is registered under Part 5.3 of the WHS Regulations is altered and the alteration may affect health or safety:

- (a) the altered parts of the diesel engine system must be designed to comply with the requirements of paragraphs 5.2 or 5.3 of this Order.
- (b) an assessment must be undertaken, and documented, by the designer to assess the impact that the design alteration has on unaltered parts of the diesel engine system.
- (c) where the assessment undertaken in paragraph 5.5(b) shows there has been a reduction in the effectiveness of existing control measures of any other parts of the diesel engine system caused by the alteration, that is, there has been a detrimental effect on health and safety caused by the alteration or performance, these parts must comply with the design requirements in paragraphs 5.2 or 5.3 of this Order.
- (d) any parts of the diesel engine system which are not affected by the alteration must continue to comply with the design requirements of the design order that was in effect on the date that the registration for the design of the diesel engine system was granted.

6. Testing and performance requirements

6.1. Fire-protected diesel engine system (FpDES):

- (a) except as provided in paragraph 6.4, fire-protected diesel engine systems used in underground coal mines must be tested and meet the relevant performance requirements specified in AS 3584.1:2021 as identified in Section 5 – ‘Testing’.
- (b) determination of maximum surface temperature in accordance with AS 3584.1:2021 Appendix C is to be reported from data logging instruments.
- (c) minimum ventilation rate for the purpose of WHS(MPS)R cl 71(3)(a)(i) is the greater of:
 - (i) AS 3584.4 section 4.1
 - (ii) volume of air required to dilute brake specific duty cycle NRSC if greater than AS 3584.4 section 2.10

6.2. Explosion-protected diesel engine system (ExDES):

- (a) except as provided in paragraph 6.4, Explosion-protected diesel engine systems used in underground coal mines must be tested and meet the relevant performance requirements specified in AS 3584.2:2021 as identified in Section 5 – ‘Testing’.
- (b) determination of maximum surface temperature in accordance with AS 3584.2 Appendix C is to be reported from data logged instruments and supported by thermographic images.
- (c) minimum ventilation rate for the purpose of WHS(MPS)R cl 71(3)(a)(i) is the greater of
 - (i) AS 3584.4 section 4.1
 - (ii) volume of air required to dilute brake specific duty cycle NRSC if greater than AS 3584.4 section 2.10

6.3. Emissions – Diesel engine systems for underground coal mines:

Except as provided in paragraph 6.4, all diesel engine systems used in underground coal mines must be tested and meet the relevant performance requirements specified in AS 3584.4:2021 as identified in the following parts:

- (a) Section 2 – ‘Test cycles’
- (b) Section 3 – ‘Particulate filter tests’
- (c) Section 4 – ‘Determination of ventilation requirements’

6.4. If the design of a diesel engine system that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered, and the alteration may affect health or safety, the altered parts of the diesel engine system, including those parts that may have been redesigned due to detrimental

effects identified in the assessment undertaken in paragraph 5.5 (b) above, must be tested and meet the relevant performance requirements in paragraphs 6.1 – 6.3 of this Order.

- 6.5. Any parts of the diesel engine system which are not affected by the alteration must continue to comply with the performance requirements of the design order that was in effect on the date that the registration for the design of the diesel engine system was granted.

7. Test facility

- 7.1. The test facility used for testing the diesel engine system must be a test facility which is independent of the designer, manufacturer or supplier.
- 7.2. The test facility must have test equipment with calibration traceable to the International System of Units (SI) by reference to national measurement standards, quality processes and work methods for performing the specific tests described in the standards referred to in this Order. This must be demonstrated through:
- (a) accreditation by the National Association of Testing Authorities (NATA); or
 - (b) where demonstrated to the regulator that a NATA-accredited facility is not available,
 - (i) through accreditation by an organisation that is a signatory to the ILAC MRA (International Laboratory Accreditation Cooperation Mutual Recognition Arrangement); or
 - (ii) a suitably qualified and experienced testing facility along with past test experience with diesel engine systems, which has been independently audited within the last 2 years.

8. Determination of applications for registration of design made before commencement of this Order

If an application for the registration of design of a diesel engine system made in accordance with clause 250 of the Work Health and Safety Regulation 2017 to which the standards specified in the *Registration of Diesel Engine Systems Design Order 2018* applies is made before the commencement of this Order, and the application has not been finally determined before that commencement, the application is to be determined as if this Order had not commenced.

WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES) REGULATION 2022

Registration of Breathing Apparatus to Assist Escape (Including Self-Rescuers) Design Order 2022

I, **Garvin Burns**, Chief Inspector, with the delegated authority of the Secretary, Regional NSW, pursuant to clause 187(5) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, make the following Order.

Dated this 29th day of August 2022

Garvin Burns
Chief Inspector
Regional NSW

1. Name of Order

This Order is the *Registration of Breathing Apparatus to Assist Escape (Including Self-Rescuers) (No.2) Design Order 2022*.

2. Commencement

This Order commences on the day it is published in the NSW Government Gazette.

3. Interpretation

In this Order:

breathing apparatus is a reference to breathing apparatus to assist escape (including self-rescuers) used in underground coal mines.

TRG is a reference to a technical reference guide produced by the Department of Regional NSW's Resources Regulator and published on its website.

4. Revocation

The *Registration of Breathing Apparatus to Assist Escape (including Self-Rescuers) Design Order 2022* published in the NSW Government Gazette No.183 of 29 April 2022 is revoked.

5. Design requirements

- 5.1. Except as provided in paragraphs 5.2 and 5.3, all breathing apparatus used in underground coal mines must be designed in accordance with the *TRG*:

Escape breathing apparatus for underground mining applications, as identified in the following parts as amended from time to time:

- (a) Section 2 – design requirements
- (b) Section 3 – additional design requirements for chemical and compressed oxygen apparatus
- (c) Section 4 – additional design requirements for chemical and compressed oxygen apparatus

5.2. Where a design does not fully comply with the requirements in paragraph 5.1, the designer must specify the published technical standards or the engineering principles used to identify controls, in accordance with the hierarchy of risk control measures in Part 3.1 of the Work Health and Safety Regulation 2017, that have been incorporated in the design to achieve at least an equivalent level of safety as the requirements of paragraph 5.1.

5.3. If the design of breathing apparatus that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered and the alteration may affect health or safety:

- (a) the altered parts of the breathing apparatus must be designed to comply with the design requirements in paragraphs 5.1 – 5.2 of this Order.
- (b) an assessment must be undertaken, and documented, by the designer to assess the impact that the design alteration has on unaltered parts of the breathing apparatus.
- (c) where the assessment undertaken in paragraph 5.3(b) shows there has been a reduction in the effectiveness of existing control measures of any other parts of the breathing apparatus, that is, there has been a detrimental effect on health and safety caused by the alteration, these parts must comply with the design requirements in paragraphs 5.1 – 5.2 of this Order.
- (d) Any parts of the breathing apparatus which are not affected by the alteration must continue to comply with the design requirements of the design order that was in effect on the date that the registration for the design of the breathing apparatus was granted.

6. Test facility

6.1. The test facility used for testing the breathing apparatus must be a test facility which is independent of the designer, manufacturer or supplier.

6.2. The test facility must have test equipment with calibration traceable to the International System of Units (SI) by reference to national measurement standards, quality processes and work methods for performing the specific

tests described in the standards referred to in this Order. This must be demonstrated through:

- (a) accreditation by the National Association of Testing Authorities (NATA);
or
- (b) where demonstrated to the regulator that a NATA-accredited facility is not available
 - (i) through accreditation by an organisation that is a signatory to the ILAC MRA (International Laboratory Accreditation Cooperation Mutual Recognition Arrangement); or
 - (ii) a suitably qualified and experienced testing facility along with past test experience with breathing apparatus, which has been independently audited within the last 2 years.

7. Determination of applications for registration of design made before commencement of this Order

If an application for the registration of design of breathing apparatus made in accordance with clause 250 of the Work Health and Safety Regulation 2017 to which the standards specified in the *Registration of Breathing Apparatus to Assist Escape (including Self-Rescuers) Design Order 2022* applies is made before the commencement of this Order, and the application has not been finally determined before that commencement, the application is to be determined as if this Order had not commenced.

WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES) REGULATION 2022

Registration of Booster Fans Design Order 2022

I, **Garvin Burns**, Chief Inspector, with the delegated authority of the Secretary, Regional NSW, pursuant to section 187(5) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, make the following Order.

Dated this 29th day of August 2022

Garvin Burns
Chief Inspector
Regional NSW

1. Name of Order

This Order is the *Registration of Booster Fans Design Order 2022*.

2. Commencement

This Order commences six months from the day it is published in the NSW Government Gazette.

3. Interpretation

In this Order:

TRG is a reference to Technical Reference Guide produced by the NSW Government and published on the Department of Regional NSW's Resources Regulator website.

booster fan is a fan installed in such a way that the total ventilation flow in the place where the fan is installed passes through it.

Note: for the purposes of design registration of a booster fan, ventilation control devices including doors are not considered to be part of the booster fan design registration.

4. Revocation

The *Registration of Booster Fans Design Order 2018* published in the NSW Government Gazette No 130 of 30 November 2018 at page 9147 is revoked.

5. Design requirements

- 5.1. Except as provided in paragraphs 5.2 and 5.3, all booster fans used in underground coal mines must be designed in accordance with relevant parts of Sections 3 and 4.2 of *TRG: Main fans, booster fans and auxiliary fans in underground coal mines*, as amended from time to time.
- 5.2. Where a design does not fully comply with the requirements in paragraph 5.1, the designer must specify the published technical standards or the engineering principles used to identify controls, in accordance with the hierarchy of risk control measures in Part 3.1 of the Work Health and Safety Regulation 2017, that have been incorporated in the design to achieve at least an equivalent level of safety as the requirements of paragraph 5.1.
- 5.3. If the design of a booster fan that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered and the alteration may affect health or safety:
- (a) the altered parts of the booster fan must be designed to comply with the design requirements in paragraphs 5.1 – 5.2 of this Order.
 - (b) an assessment must be undertaken, and documented, by the designer to assess the impact that the design alteration has on unaltered parts of the booster fan.
 - (c) where the assessment undertaken in paragraph 5.3(b) shows there has been a reduction in the effectiveness of existing control measures of any other parts of the booster fans, that is, there has been a detrimental effect on health and safety caused by the alteration, these parts must also be altered to comply with the design requirements in paragraphs 5.1 – 5.2 of this Order.
 - (d) any parts of the booster fan which are not affected by the alteration must continue to comply with the design requirements of the design order that was in effect on the date that the registration for the design of the booster fan was granted.

6. Determination of applications for registration of design made before commencement of this Order

If an application for the registration of design of the booster fan made in accordance with clause 250 of the Work Health and Safety Regulation 2017 to which the standards specified in the *Registration of Booster Fans Design Order 2018* applies is made before the commencement of this Order, and the application has not been finally determined before that commencement, the application is to be determined as if this Order had not commenced.

WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES) REGULATION 2022

Registration of Explosive-Powered Tools Design Order 2022

I, **Garvin Burns**, Chief Inspector, with the delegated authority of the Secretary, Regional NSW, pursuant to section 187(5) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, make the following Order.

Dated this 29th day of August 2022

Garvin Burns
Chief Inspector
Regional NSW

1. Name of Order

This Order is the *Registration of Explosive-Powered Tools Design Order 2022*.

2. Commencement

This Order commences on the day it is published in the NSW Government Gazette.

3. Interpretation

In this Order:

AS/NZS is a reference to Australian/New Zealand Standard.

4. Revocation

The *Registration of Explosive-Powered Tools Design Order 2018* published in the NSW Government Gazette No.134 of 7 December 2018 at pages 9255-9256 is revoked.

5. Design requirements

5.1. Except as provided in paragraphs 5.2 and 5.3, all explosive-powered tools used in underground coal mines must be designed in accordance with the following standards, as amended from time to time:

- (a) AS/NZS 1873.1:2003 Powder-actuated (PA) hand-held fastening tools - Selection, operation and maintenance.
- (b) AS/NZS 1873.2:2003 Powder-actuated (PA) hand-held fastening tools - Design and construction.

- (c) AS/NZS 1873.3:2003 Powder-actuated (PA) hand-held fastening tools – Charges.
- (d) AS/NZS 1873.4:2003 Powder-actuated (PA) hand-held fastening tools - Fasteners.
- (e) without limiting 5.1(a) – (d) above, all explosive-powered tools including its associated range of explosive charges and fasteners, must be designed such that the tool itself is not an effective ignition source of a methane-enriched atmosphere.

5.2. Where a design does not fully comply with the requirements in paragraph 5.1(a) – (e), the designer must specify the published technical standards or the engineering principles used to identify controls, in accordance with the hierarchy of risk control measures in Part 3.1 of the Work Health and Safety Regulation 2017, that have been incorporated in the design to achieve at least an equivalent level of safety as the requirements of paragraphs 5.1(a) – (e).

5.3. If the design of an explosive-powered tool that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered and the alteration may affect health or safety:

- (a) the altered parts of an explosive-powered tool must be designed to comply with the design requirements in paragraphs 5.1— 5.2 of this Order.
- (b) an assessment must be undertaken, and documented, by the designer to assess the impact that the design alteration has on unaltered parts of the explosive-powered tool.
- (c) where the assessment undertaken in paragraph 5.3(b) shows there has been a reduction in the effectiveness of existing control measures of any other parts of the explosive-powered tool, that is, there has been a detrimental effect on health and safety caused by the alteration, these parts must comply with the design requirements in paragraphs 5.1— 5.2 of this Order.
- (d) any parts of the explosive-powered tool which are not affected by the alteration must continue to comply with the design requirements of the design order that was in effect on the date that the registration for the design of the explosive-powered tool was granted.

6. Testing and performance requirements

6.1. General:

Except as provided in paragraph 6.2, all explosive-powered tools, including its associated range of explosive charges and fasteners as intended for use in underground coal mines, must be tested to determine if the explosive-powered tool is likely to ignite an explosive atmosphere.

6.2. Test method:

- (a) all explosive-powered tools must be tested as follows:
 - (i) the explosive-powered tool is to be placed in a small flameproof test chamber which is filled with a mixture of 7.5% volume ethylene in air,
 - (ii) the tool is to be loaded with the range of relevant strip-mounted cartridges and range of relevant sized fasteners for which registration is sought,
 - (iii) testing is to be performed at maximum and minimum power selections, using short and long fasteners firing into a range of target materials,
 - (iv) testing is to be performed with a range of expected target materials including industry brick, concrete and steel plate,
 - (v) where applicable, the tool is to be tested with supplied extension trigger assembly fitted and with magazine.
- (b) testing must be repeated at least five times for each combination to be able to demonstrate the repeatability of the results.
- (c) testing must be repeated to simulate all reasonably foreseeable operating conditions of the explosive-powered tool.

6.3. If the design of an explosive-powered tool that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered, and the alteration may affect health or safety, the altered parts of the explosive-powered tool, including those parts that may have been redesigned due to detrimental effects identified in the assessment undertaken in paragraph 5.3(2) above, must be tested and meet the performance requirements in paragraphs 6.2(a) – (c) of this Order.

6.4. Any parts of the explosive-powered tool which are not affected by the alteration must continue to comply with the performance requirements of the design order that was in effect on the date that the registration for the design of the explosive-powered tool was granted.

7. Test facility

7.1. The test facility used for testing the explosive-powered tool must be a test facility which is independent of the designer, manufacturer or supplier.

7.2. The test facility must have test equipment with calibration traceable to the International System of Units (SI) by reference to national measurement

standards, quality processes and work methods for performing the specific tests described in the standards referred to in this Order. This must be demonstrated through:

- (a) accreditation by the National Association of Testing Authorities (NATA); or
- (b) where demonstrated to the regulator that a NATA-accredited facility is not available,
 - (i) through accreditation by an organisation that is a signatory to the ILAC MRA (International Laboratory Accreditation Cooperation Mutual Recognition Arrangement); or
 - (ii) a suitably qualified and experienced testing facility along with past test experience with explosive-powered tools, which has been independently audited within the last 2 years.

8. Determination of applications for registration of design made before commencement of this Order

If an application for the registration of design of an explosive-powered tool made in accordance with clause 250 of the Work Health and Safety Regulation 2017 to which the standards specified in the *Registration of Explosive-Powered Tools Design Order 2018* applies is made before the commencement of this Order, and the application has not been finally determined before that commencement, the application is to be determined as if this Order had not commenced.

WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES) REGULATION 2022

Registration of Detonators Design Order 2022

I, **Garvin Burns**, Chief Inspector, with the delegated authority of the Secretary, Regional NSW, pursuant to section 187(5) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, make the following Order.

Dated this 29th day of August 2022

Garvin Burns
Chief Inspector
Regional NSW

1. Name of Order

This Order is the *Registration of Detonators Design Order 2022*.

2. Commencement

This Order commences on the day it is published in the NSW Government Gazette.

3. Interpretation

In this Order:

HSE is a reference to the Health and Safety Executive, United Kingdom.

4. Revocation

The *Registration of Detonators Design Order 2018* published in the NSW Government Gazette No.119 of 9 November 2018 at pages 8460-8461 is revoked.

5. Design requirements

5.1. Except as provided in paragraphs 5.2 and 5.3, all detonators used in underground coal mines must be designed to meet the design requirements of paragraphs 5.1 (a) – (c):

- (a) all detonators used in underground coal mines must be copper-cased with leading wires of copper complying with HSE Testing Memorandum No 13 (TM13) Conditions of Test and Approval of Electric Detonators, Appendix 'C' excluded as amended from time to time.

- (b) all detonators, including its associated components, must be designed so that the detonator is capable of satisfactorily initiating detonation in the explosive or explosives in which it is intended to be used, without itself being an effective ignition source of a methane-enriched atmosphere.
 - (c) the detonator must be of such character as not to be liable to deteriorate or to become dangerous under conditions of storage or use.
- 5.2. Where a design does not fully comply with the requirements in paragraph 5.1, the designer must specify the published technical standards or the engineering principles used to identify controls, in accordance with the hierarchy of risk control measures in Part 3.1 of the Work Health and Safety Regulation 2017, that have been incorporated in the design to achieve at least an equivalent level of safety as the requirements of paragraph 5.1.
- 5.3. If the design of a detonator that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered and the alteration may affect health or safety:
- (a) the altered parts of the detonator must be designed to comply with the design requirements in paragraphs 5.1 – 5.2 of this Order
 - (b) an assessment must be undertaken, and documented, by the designer to assess the impact that the design alteration has on unaltered parts of the detonator.
 - (c) where the assessment undertaken in paragraph 5.3(b) shows there has been a reduction in the effectiveness of existing control measures of any other parts of the detonator, that is, there has been a detrimental effect on health and safety caused by the alteration, these parts must comply with the design requirements in paragraphs 5.1 – 5.2 of this Order.
 - (d) any parts of the detonator which are not affected by the alteration must continue to comply with the design requirements of the design order that was in effect on the date that the registration for the design of the detonator was granted.

6. Testing and performance requirements

- 6.1. Except as provided in paragraph 6.2, all detonators used in underground coal mines must be tested and meet the relevant performance requirements specified in paragraphs 6.1(a) – (b):
- (a) when tested, the design of the detonator must provide evidence that it is capable of satisfactorily initiating detonation in the explosive or explosives in which it is intended to be used.
 - (b) all detonators must pass the following performance requirements:

- (i) **fusehead resistance:** the electrical resistance of the fusehead must be not less than 0.9 ohms and not greater than 1.8 ohms.
- (ii) **firing current:** with a current of 0.6 ampere d.c. applied for 50 milliseconds, the probability of a misfire must not exceed 1 in 10 000.
- (iii) **no-fire current:** with a current of 0.25 ampere d.c., applied for 5 seconds, the probability of a detonator firing must not exceed 1 in 10 000.
- (iv) **detonator resistance:** not more than 2% of the detonators of any one type must have a total resistance, inclusive of the leading wires, of more than 2.2 ohms. In addition, for delay detonators, the mean delay time for each delay number should correspond approximately to the nominal delay time. And the tolerance on the delay time should be such that the probability of the delay time of a detonator taken at random from one delay number in series overlapping the delay time of a detonator similarly taken from an adjacent delay number must not exceed 1 in 20 (i.e. an overlap probability less than 0.05).
- (v) **detonator series firing:** when a current of 1.25 amperes d.c. is applied for 4 milliseconds there shall be no failure in 20 consecutive rounds each of 10 detonators connected in series.
- (vi) **detonator incendivity tests:** when fired in the presence of a methane-air mixture containing 9% methane, in a steel lined chamber of approximate dimensions 710mm x 265mm x 50mm sealed along the top by polythene film, using a current of 1.25 amperes d.c. applied for 4 milliseconds, the probability of ignition must be such that not more than 14 ignitions in 200 tests are produced.

6.2. If the design of a detonator that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered, and the alteration may affect health or safety, the altered parts of the detonator, including those parts that may have been redesigned due to detrimental effects identified in the assessment undertaken in paragraph 5.3(b) above, must be tested and meet the performance requirements in paragraph 6.1 of this Order.

6.3. Any parts of the detonator which are not affected by the alteration must continue to comply with the performance requirements of the design order that was in effect on the date that the registration for the design of the detonator was granted.

7. Test facility

7.1. The test facility must be carried out by:

- (a) Health and Safety Laboratory, United Kingdom, or

- (b) a suitably qualified and experienced independent laboratory conducting testing to an equivalent standard.

8. Determination of applications for registration of design made before commencement of this Order

If an application for the registration of design of detonator made in accordance with clause 250 of the Work Health and Safety Regulation 2017 to which the standards specified in the *Registration of Detonators Design Order 2018* applies is made before the commencement of this Order, and the application has not been finally determined before that commencement, the application is to be determined as if this Order had not commenced.

**WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES)
REGULATION 2022**

NOTICE

2022 Other criteria specified by the regulator in respect of the quarry manager statutory function
for Tier-2 quarries

I, **GARVIN BURNS**, Chief Inspector, with the delegated authority of the Secretary, Regional NSW, pursuant to section 138(2)(b) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, make the following Notice.

Dated this 6th day of September 2022.

Garvin Burns
Chief Inspector
Regional NSW

1. Name of Notice

This Notice is the *2022 Other criteria specified by the regulator in respect of the quarry manager statutory function for Tier-2 quarries*.

2. Commencement and expiry

In this Notice:

- (a) Schedule 1 commenced on 28 July 2020 and expires on 30 September 2022, and
- (b) Schedule 2 commences on 1 October 2022 and has effect until revoked.

3. Interpretation

In this Notice:

other criteria means the criteria specified at item 5 below in accordance with section 138(2)(b) of the Regulation.

quarry manager practising certificate means a certificate issued by the regulator enabling a person to exercise the statutory function of a quarry manager as specified in section 31 Schedule 10 of the Regulation.

risk profiling tool means the tool used by the regulator to assess the hazards and complexity of a specified mine.

Tier-2 quarry means a mine determined by the regulator using the risk profiling tool to be a Tier-2 quarry.

the Regulation means the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022. Terms used in this Notice have the same meaning as in the *Work Health and Safety Act 2011*, *Work Health and Safety Regulation 2017*, *Work Health and Safety (Mines and Petroleum Sites) Act 2013* and the Regulation.

Explanatory note: An individual who is granted a quarry manager practising certificate in accordance with this Notice is not eligible to exercise the statutory function of quarry manager at a mine determined by the regulator, using the risk profiling tool, to be a Tier-1 quarry. The regulator may be satisfied that the individual is competent to exercise the statutory function of quarry manager at a Tier-1 mine only if the individual holds a certificate of competence in respect of the statutory function. Nothing in this notice prevents the holder of a quarry manager practising certificate applicable to a Tier-1 quarry from exercising the functions of a quarry manager at a Tier-2 quarry.

4. Revocation

The Notice *Other criteria specified by regulator in respect of the quarry manager statutory function for Tier-2 quarries 2021* dated 21 January 2021 and published in the NSW Government Gazette No 23 of 22 January 2021 is revoked on the date this Notice is published in the NSW Government Gazette.

5. Other criteria

The criteria specified in Schedules 1 and 2 below is other criteria in respect of the statutory function of quarry manager listed in section 31 of Schedule 10 of the Regulation.

The regulator may be satisfied that an individual is competent to exercise the statutory function of quarry manager in respect of a Tier-2 quarry, and be granted a practising certificate, if the individual meets the criteria in Column B or Column C in Schedule 1 (before 1 October 2022) or Schedule 2 (on and after 1 October 2022).

The practising certificate may be granted subject to the condition it is applicable only to a specified mine, or mines, that is a Tier-2 quarry or to all Tier-2 quarries. A practising certificate granted to an individual who meets the criteria in Column B of Schedule 1 may be subject to the condition the holder attains the qualification criteria in Column C of Schedule 1 before 1 October 2024.

The regulator may, on application, determine that qualifications held by an individual but not listed in Column C in Schedule 1 (before 1 October 2022) or Schedule 2 (on and after 1 October 2022) are acceptable. An individual who holds a practicing certificate subject to a condition that

it is only applicable to a Tier-2 quarry, may be granted a practicing certificate subject to a condition that it is applicable to all Tier-2 quarries, where the individual's qualifications are determined to be acceptable in vocational outcomes to those listed in Column C in Schedule 1 or Schedule 2.

If an application for a quarry manager practising certificate for a Tier-2 quarry in accordance with section 139 of the Regulation to which the other criteria specified in Schedule 1 applies, is made before the commencement of Schedule 2 in this Order, and the application has not been finally determined before that commencement, the application is to be determined as if Schedule 2 had not commenced.

Schedule 1

Column A	Column B	Column C
Criteria	Requirement	Requirement
Experience	<p>Minimum of:</p> <ol style="list-style-type: none"> 1. One year's experience working in mining operations at a mine, or 2. One year's equivalent experience working in civil works. <p>If the individual is to supervise blasting at a mine, the experience must include experience in personally participating in or managing the loading and firing of production blasts in a surface mine.</p>	<p>At least two years' experience working in mining operations, which includes:</p> <ul style="list-style-type: none"> • six months' experience in a mining operation with similar inherent hazards; and • six months' supervisory experience • may include one year's equivalent experience working in civil works. <p>Evidence to be provided by way of signed confirmation from employer/s in accordance with the requirements of the regulator.</p>
Qualifications	<p>Certificate in first aid (<i>HLTAID003 or HLTAID011 Provide First Aid</i>, equivalent or higher Australian Qualifications Framework level) issued by a registered training organisation no more than three years before the date of application for a practising certificate by the individual, or completion of a refresher course for the certificate conducted by a registered training organisation no more than three years before the date of application.</p>	<p>RII40120 Certificate IV in Surface Extraction Operations or any of the following:</p> <ul style="list-style-type: none"> • RII40113 or RII40115 Certificate IV in Surface Extraction Operations (superseded by but equivalent to RII40120 above). • Bachelor of Mining Engineering issued by an Australian university. • RII60120 Advanced Diploma of Metalliferous Mining issued by a registered training organisation (the superseded equivalent qualification RII60113 or RII60115 Advanced Diploma of Metalliferous Mining is acceptable). • RII50120 Diploma of Surface Operations issued by a registered training organisation (the superseded equivalent qualification RIIERR50113 or RII50115 Diploma of Surface

		<p>Operations Management is acceptable or superseded other equivalent qualification).</p> <ul style="list-style-type: none"> • RII60220 – Advanced Diploma of Extractive Industries Management including the elective unit RIIBLA602E – Establish and maintain explosives safety and security management systems, issued by a registered training organisation (a superseded equivalent qualification and unit are acceptable). • Bachelor of Science issued by an Australian university and a Graduate Diploma in Mining Engineering issued by an Australian university. • Bachelor of Mechanical Engineering issued by an Australian university and evidence of study in mining subjects related to rock mechanics/mine slope stability and blasting. • Bachelor of Civil Engineering issued by an Australian university and evidence of study in mining subjects related to rock mechanics/mine slope stability and blasting. <p>AND</p> <p>the competency unit RIIERR401E <i>Apply and monitor surface operations emergency preparedness and response systems</i> (the unit RIIERR401D or other equivalent superseded unit number is acceptable)</p> <p>or</p> <p>the competency unit RIIERR503D - <i>Implement emergency preparedness and response systems</i> (the superseded units RIIERR503A, or other equivalent superseded unit number is acceptable)</p> <p>or</p>
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		the competency unit RIIERR601E <i>Establish and maintain mine emergency preparedness and response systems</i> (the superseded units RIIERR601D, or other equivalent superseded unit number is acceptable).
Examinations	<p>Be assessed as competent in a quarry manager written examination and oral examination conducted by the Resources Regulator.</p> <p>The quarry manager written examination and oral examination for individuals applying for a practising certificate to exercise the statutory function at a mine where blasting may take place will include examinable content relating to explosives.</p>	

Schedule 2

Criteria	Requirement
Experience	<p>At least two years' experience working in mining operations, which includes:</p> <ul style="list-style-type: none"> • six months' experience in a mining operation with similar inherent hazards; and • six months' supervisory experience • may include one year's equivalent experience working in civil works. <p>Evidence to be provided by way of signed confirmation from employer in accordance with the requirements of the regulator.</p>
Qualifications	<p>RII40120 Certificate IV in Surface Extraction Operations or any of the following:</p>

	<ul style="list-style-type: none"> • RII40113 or RII40115 Certificate IV in Surface Extraction Operations (superseded by but equivalent to RII40120 above) • Bachelor of Mining Engineering issued by an Australian university • RII60120 Advanced Diploma of Metalliferous Mining issued by a registered training organisation (the superseded equivalent qualification RII60113 or RII60115 Advanced Diploma of Metalliferous Mining is acceptable) • RII60220 – Advanced Diploma of Extractive Industries Management including the elective unit RIIBLA602E – Establish and maintain explosives safety and security management systems, issued by a registered training organisation (a superseded equivalent qualification and unit are acceptable) • RII50120 Diploma of Surface Operations issued by a registered training organisation (the superseded equivalent qualification RIIERR50113 or RII50115 Diploma of Surface Operations Management is acceptable or superseded equivalent qualification) • Bachelor of Science issued by an Australian university and a Graduate Diploma in Mining Engineering issued by an Australian university • Bachelor of Mechanical Engineering issued by an Australian university and evidence of study in mining subjects related to rock mechanics/mine slope stability and blasting. • Bachelor of Civil Engineering issued by an Australian university and evidence of study in mining subjects related to rock mechanics/mine slope stability and blasting. <p>AND</p> <p>the competency unit RIIERR401E <i>Apply and monitor surface operations emergency preparedness and response systems</i> (the unit RIIERR401D or another equivalent superseded unit number is acceptable)</p> <p>or</p> <p>the competency unit RIIERR503D - <i>Implement emergency preparedness and response systems</i> (the superseded units RIIERR503A, or other equivalent superseded unit number is acceptable)</p> <p>or</p> <p>the competency unit RIIERR601E <i>Establish and maintain mine emergency preparedness and response systems</i> (the superseded units RIIERR601D, or other equivalent superseded unit number is acceptable)</p>
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Work Health and Safety (Mines and Petroleum Sites) Regulation 2022
Ancillary Reports – Fire related to mobile plant 2022

I, Garvin Burns, Chief Inspector, with the delegated authority of the Secretary of the Department of Regional NSW, under section 127 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022 (the Regulation), do, by this notice, specify that:

- (a) an ancillary report must be provided to the regulator in respect of any incident described in the following sections (but only in respect of such incidents that relate to fires on mobile plant):
 - i. 124(5)(a) of the Regulation, being an event referred to in section 190(1)(b) of the Regulation;
 - ii. 124(5)(u) of the Regulation;
 - iii. 190(1)(b) of the Regulation;
 - iv. 190(2)(a) of the Regulation.
- (b) an ancillary report must include the information specified in Schedule 1 of this notice
- (c) an ancillary report must be provided to the regulator using the Regulator Portal online form available at:
<https://nswresourcesregulator.service-now.com/regulator>
- (d) the notice *Ancillary Reports – Fire Related to Mobile Plant* published in the NSW Government Gazette No 46 of 13 March 2020 is revoked on the day this notice commences.

This notice commences on the date of publication in the NSW Government Gazette and has effect until revoked.

Dated this 5th day of September 2022.

Garvin Burns
Chief Inspector of Mines
NSW Department of Planning, Industry and Environment

Schedule 1

Explanatory notes

As specified in this notice, an ancillary report must be provided to the regulator in respect of the following incidents (**but only in respect of such incidents that relate to fires on mobile plant**):

- an incident described in section 124(5)(a) of the Regulation, being an event referred to in section 190(1)(b) of the Regulation—that is, an uncontrolled implosion, explosion or fire that would have been a dangerous incident if a person were reasonably in the vicinity at the time when the incident or event occurred and in usual circumstances a person could have been in that vicinity at that time (**a high potential incident**);
- an incident described in section 125(5)(u) of the Regulation—that is, an uncontrolled fire on mobile plant that is in operation, whether operated directly, remotely or autonomously, (**a high potential incident**);
- an incident described in section 190(1)(b) of the Regulation—that is, an incident in relation to a workplace that exposes a worker or any other person to a serious risk to a person's health or safety emanating from an immediate or imminent exposure to an uncontrolled implosion, explosion or fire (**a dangerous incident**);
- an incident described in section 190(2)(a) of the Regulation—that is, a fire in the underground parts of a mine, including where the fire is in the form of an oxidation that releases heat and light (**a dangerous incident**).

Ancillary reports are a separate and additional requirement to the initial notification of the incident to the regulator. Ancillary reports must be completed and submitted to the regulator no later than 30 days after the incident was required to be notified to the regulator.

Mobile plant means any item of plant that is self-propelled and ordinarily under the direct control of an operator. This also includes items of plant that are capable of being directly operated but are being operated autonomously or under remote control. Mobile plant does not include transportable plant which is relocated to be operated such as generators, diesel pumps and lighting towers.

Competent person has the same meaning as in clause 5 of the Work Health and Safety Regulation 2017.

The information that must be included in the ancillary report is set out below:

1. Information about the mine where the incident occurred
2. Information about the particulars of the mobile plant
3. Information about the last inspection of the mobile plant
4. Information about the fire suppression system installed on the mobile plant
5. Information about the failure mode of the mobile plant components
6. Information about the fuel source of the fire on the mobile plant
7. Information about the heat source of the fire on the mobile plant
8. Information about the method used to extinguish the fire on the mobile plant

9. Information about any risk assessment/s undertaken in relation to the mobile plant
10. Recommendations for preventing the incident from reoccurring
11. A statement by a competent person certifying that:
 - a. they have reviewed the content of the ancillary report; and
 - b. to the best of their knowledge the information supplied in the ancillary report is true and correct in every particular.

Note In the case of a coal mine, the statement must be made by the person nominated to exercise the statutory function of the mechanical engineering manager or mechanical engineer at the mine. In all other cases, the statement must be made by a competent person (such as the person who develops and periodically reviews the mechanical engineering control plan).

12. A sign-off from an authorised person declaring that:
 - a. they have authority from the mine operator to complete and submit the ancillary report on their behalf, and
 - b. to the best of their knowledge, the information provided in the ancillary report is true and correct in every particular.

Note The person completing the sign-off may also be the person completing the statement under section 11.

WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES) REGULATION 2022

Ancillary Reports – In-service Failure of Explosion-protected Diesel Engine Systems - 2022

I, Garvin Burns, Chief Inspector, with the delegated authority of the Secretary of the Department of Regional NSW, under section 127 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022 (the Regulation), do, by this notice, specify that:

- (a) an ancillary report must be provided to the regulator in respect of any incident described in section 124(5)(i) of the regulation, but only in respect of such incidents that relate to diesel engine systems.
- (b) an ancillary report must include the information specified in Schedule 1 of this notice
- (c) an ancillary report must be provided to the regulator using the Regulator Portal online form.
- (d) the notice Ancillary Reports – In-service Failure of Explosion-protected Diesel Engine Systems published in the NSW Government Gazette No 8 of 30 January 2015 is revoked on the day this notice commences.

Schedule 1

Explanatory notes

As specified in this notice, an ancillary report must be provided to the regulator in respect to an incident described in section 124(5)(i) of the Regulation but only in respect of such incident that relate to diesel engine systems in underground coal mines.

Ancillary reports are a separate and additional requirement to the initial notification of the incident to the regulator. Ancillary reports must be completed and submitted to the regulator no later than 30 days after the incident was required to be notified to the regulator.

The failure of the explosion-protection characteristics of explosion-protected plant while that plant is in service in an underground coal mine is not limited to failure while the plant is operating (i.e., turned on and running). It includes any explosion-protection characteristic failures identified during routine maintenance or overhaul, as well as those identified during use. Such failures indicate that an explosion-protected plant has been (or is likely to have previously been) operating in a non explosion-protected condition.

For explosion-protected diesel engine systems this means that the plant may have been operating in a condition that has potential to ignite an explosion of dust or gas, such as coal dust on the surface of the engine, or methane in the surrounding atmosphere.

Examples of such failures include:

- the failure of an explosion-protected open joint or fixed joint.
- the failure of a diesel engine system to shut down when required by the control system. Such as the loss of water in the scrubber, excessive temperature, failure of engine cooling system, loss of engine oil.
- a catastrophic failure of the diesel engine system that protrudes external to the engine system.
- the failure to replace any explosion-protected component, such as a cap, plug, flame trap, gland or other like component, after carrying out maintenance activities.
- evidence of thermal degradation of an exhaust filter.
- evidence of surface temperatures exceeding 150°C.

The information that must be included in the ancillary report is set out below:

1. Information about the mine where the incident occurred.
2. Information about the particulars of the machine.
3. Information about the last inspection of the machine.
4. Information about the failure mode.
5. Information about the component(s) that have failed.
6. Recommendations for preventing the incident from reoccurring.
7. A statement by a competent person certifying that:
 - a. they have reviewed the content of the ancillary report; and
 - b. to the best of their knowledge the information supplied in the ancillary report is true and correct in every particular.
8. A sign-off from an authorised person declaring that:

- a. they have authority from the mine operator to complete and submit the ancillary report on their behalf, and
- b. to the best of their knowledge, the information provided in the ancillary report is true and correct in every particular.

Note 1. *In the case of a coal mine, the statement referred to in point 7 must be made by the person nominated to exercise the statutory function of the mechanical engineering manager or mechanical engineer at the mine. In all other cases, the statement must be made by a competent person.*

Note 2. *The person completing the sign-off may also be the person completing the statement under point 7 above.*

Pursuant to section 136 of the *Mining Act 1992* and section 16 of the *Petroleum (Onshore) Act 1991*

NOTICE is given that the following application has been received:

EXPLORATION LICENCE APPLICATION

(APP-2022-186)

No. 6530, NEWMONT EXPLORATION PTY LTD (ACN 006 306 690), area of 24 units, for Group 1, dated 3 September 2022. (Armidale Mining Division).

NOTICE is given that the following applications have been granted:

(APP-2022-30)

No. 6442, now Exploration Licence No. 9456, NARRABRI COAL PTY LTD (ACN 107 813 963), J-POWER AUSTRALIA PTY LTD (ACN 002 307 682), KORES NARRABRI PTY LIMITED (ACN 138 993 263), NARRABRI COAL AUSTRALIA PTY LTD (ACN 110 262 925), POSCO INTERNATIONAL NARRABRI INVESTMENT PTY LTD (ACN 139 088 967) and UPPER HORN INVESTMENTS (AUSTRALIA) PTY LTD (ACN 129 190 281), County of White, Map Sheet (8837-2-S), area of 1746 hectares, for Group 9, dated 6 September 2022, for a term until 6 September 2028.

(APP-2022-31)

No. 6443, now Exploration Licence No. 9455, NARRABRI COAL PTY LTD (ACN 107 813 963), J-POWER AUSTRALIA PTY LTD (ACN 002 307 682), KORES NARRABRI PTY LIMITED (ACN 138 993 263), NARRABRI COAL AUSTRALIA PTY LTD (ACN 110 262 925), POSCO INTERNATIONAL NARRABRI INVESTMENT PTY LTD (ACN 139 088 967) and UPPER HORN INVESTMENTS (AUSTRALIA) PTY LTD (ACN 129 190 281), County of White, Map Sheet (8837-2-S), area of 1975 hectares, for Group 9, dated 6 September 2022, for a term until 6 September 2028.

NOTICE is given that the following applications for renewal have been received:

(REN595)

Authorisation No. 447, SAXONVALE COAL PTY. LIMITED (ACN 003 526 467), area of 312.7 hectares. Application for renewal received 1 September 2022.

(REN-2022-227)

Exploration Licence No. 8891, COBALT BLUE HOLDINGS LIMITED (ACN 614 466 607), area of 11 units. Application for renewal received 1 September 2022.

(REN-2022-228)

Petroleum Production Lease No. 1 (Act 1991), AGL UPSTREAM INVESTMENTS PTY LIMITED (ACN 115 063 744), area of 634 hectares. Application for renewal received 31 August 2022.

(REN-2022-229)

Petroleum Production Lease No. 2 (Act 1991), AGL UPSTREAM INVESTMENTS PTY LIMITED (ACN 115 063 744), area of 93.92 hectares. Application for renewal received 31 August 2022.

(REN-2022-230)

Petroleum Production Lease No. 4 (Act 1991), AGL UPSTREAM INVESTMENTS PTY LIMITED (ACN 115 063 744), area of 55.4 square kilometres. Application for renewal received 31 August 2022.

RENEWAL OF CERTAIN AUTHORITIES

Notice is given that the following authorities have been renewed:

(TMS-REN238)

Authorisation No. 199, ENDEAVOUR COAL PTY LIMITED (ACN 099 830 476), County of Cumberland, Map Sheet (9029), area of 1072 hectares, for a further term until 27 June 2024. Renewal effective on and from 24 August 2022.

(TMS-REN256)

Authorisation No. 201, ENDEAVOUR COAL PTY LIMITED (ACN 099 830 476), County of Cumberland, Map Sheet (9029), area of 484 hectares, for a further term until 27 June 2024. Renewal effective on and from 24 August 2022.

(TMS-REN259)

Authorisation No. 396, ENDEAVOUR COAL PTY LIMITED (ACN 099 830 476), Counties of Camden and Cumberland, Map Sheet (9029), area of 6549 hectares, for a further term until 27 June 2024. Renewal effective on and from 24 August 2022.

(TMS-REN260)

Authorisation No. 397, ENDEAVOUR COAL PTY LIMITED (ACN 099 830 476), County of Cumberland, Map Sheet (9029), area of 407 hectares, for a further term until 27 June 2024. Renewal effective on and from 24 August 2022.

(TMS-REN428)

Exploration Licence No. 6640, CENTENNIAL MYUNA PTY LIMITED (ACN 101 508 981), County of Northumberland, Map Sheet (9131, 9231), area of 1599 hectares, for a further term until 23 April 2026. Renewal effective on and from 18 August 2022.

(REN-2022-110)

Exploration Licence No. 8112, PEEL (CSP) PTY LTD (ACN 600 550 141), County of Blaxland, Map Sheet (8033), area of 7 units, for a further term until 26 June 2024. Renewal effective on and from 31 August 2022.

(REN-2022-178)

Exploration Licence No. 8872, PEEL MINING LIMITED (ACN 119 343 734), County of Mouramba, Map Sheet (8033, 8034, 8133, 8134), area of 71 units, for a further term until 17 July 2024. Renewal effective on and from 26 August 2022.

(REN-2022-181)

Exploration Licence No. 8877, PEEL FAR WEST PTY LTD (ACN 622 243 850), Counties of Farnell and Yancowinna, Map Sheet (7134), area of 50 units, for a further term until 17 July 2024. Renewal effective on and from 30 August 2022.

(REN-2022-40)

Mining Lease No. 1504 (Act 1992), IMPERIAL MINING (AUST) PTY LTD (ACN 062 193 266), PEREGRINE MINERAL SANDS PTY LTD (ACN 009 307 591) AND PROBO MINING PTY LTD (ACN 079 938 819), Parish of Barrawanna, County of Windeyer; Parish of Erreman, County of Windeyer; and Parish of Quamby, County of Windeyer, Map Sheet (7331-2-N, 7331-2-S, 7331-3-N, 7331-3-S), area of 3381.83 hectares, for a further term until 4 March 2044. Renewal effective on and from 26 August 2022.

APPLICATIONS TO TRANSFER RECEIVED

Notice is given that the following applications to transfer have been received:

(TRF-2022-37)

RIGHT SOLUTIONS AUSTRALIA PTY LTD (ACN 166 199 471) has applied for approval to transfer Exploration Licence No. 9028 to RIGHT RESOURCES PTY LTD (ACN 649 632 744). Application received 2 September 2022.

(TRF-2022-37)

RIGHT SOLUTIONS AUSTRALIA PTY LTD (ACN 166 199 471) has applied for approval to transfer Exploration Licence No. 9029 to RIGHT RESOURCES PTY LTD (ACN 649 632 744). Application received 2 September 2022.

(TRF-2022-37)

RIGHT SOLUTIONS AUSTRALIA PTY LTD (ACN 166 199 471) has applied for approval to transfer Exploration Licence No. 9089 to RIGHT RESOURCES PTY LTD (ACN 649 632 744). Application received 2 September 2022.

(TRF-2022-37)

RIGHT SOLUTIONS AUSTRALIA PTY LTD (ACN 166 199 471) has applied for approval to transfer Exploration Licence No. 9142 to RIGHT RESOURCES PTY LTD (ACN 649 632 744). Application received 2 September 2022.

(TRF-2022-37)

RIGHT SOLUTIONS AUSTRALIA PTY LTD (ACN 166 199 471) has applied for approval to transfer Exploration Licence No. 9170 to RIGHT RESOURCES PTY LTD (ACN 649 632 744). Application received 2 September 2022.

PART CANCELLATION REQUESTS RECEIVED

Notice is given that the following applications for part cancellation have been received:

(PCN49)

AGL UPSTREAM INVESTMENTS PTY LIMITED (ACN 115 063 744) has applied for approval to part cancel Petroleum Production Lease No. 5. Application received 6 September 2022.

WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES) REGULATION 2022

Registration of Design of Plant Used to Determine or Monitor the Presence of Gas Order 2022

I, **Garvin Burns**, Chief Inspector, with the delegated authority of the Secretary, Regional NSW, pursuant to section 187(5) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, make the following Order.

Dated this 29th day of August 2022

Garvin Burns
Chief Inspector
Regional NSW

1. Name of Order

This Order is the *Registration of Design of Plant Used to Determine or Monitor the Presence of Gas Order 2022*.

2. Commencement

This Order commences on the day it is published in the NSW Government Gazette.

3. Interpretation

In this Order:

AS/NZS is a reference to Australian/New Zealand Standards.

equipment with integral monitor means equipment that provides meter indication, alarm functions and/or output contacts using a monitor which is within or directly mounted to the equipment housing.

equipment with remote monitor(s) means a remote monitor control unit, the remote monitor and the interconnecting communications medium. The communications medium may be via copper cable, fibre optic link or some other form such as a radio link.

equipment with integral sensor(s) as defined in clause 3.2.14 in AS/NZS 60079.29.1:2017.

equipment with remote sensor(s) means a gas detection control unit, the remote sensor and the interconnecting communications medium. The communications

medium may be via copper cable, fibre optic link or some other form such as a radio link.

flammable gas as defined in clause 3.1.3 in AS/NZS 60079.29.1:2017.

gas detection control unit as defined in clause 3.2.12 in AS/NZS 60079.29.1:2017.

integral monitor means monitor which is within or directly mounted to the equipment housing.

integral sensor as defined in clause 3.3.3 in AS/NZS 60079.29.1:2017.

monitor as defined in clause 1.3.3.1 in AS/NZS 4641:2018.

plant means electrically powered hand-held plant, fixed installations and installations on mobile plant used to determine or monitor the presence of gas if they are used at an underground coal mine (but does not include tube bundle systems where the analyser is installed at the surface).

remote monitor as defined in clause 1.3.3.2 in AS/NZS 4641:2018.

remote monitor control unit means equipment intended to provide display indication, alarm functions, output contacts and/or alarm signal outputs or any combinations when operated with remote monitor(s).

remote sensor as defined in clause 3.3.4 in AS/NZS 60079.29.1:2017.

sensing element as defined in clause 3.3.1 in AS/NZS 60079.29.1:2017.

sensor as defined in clause 3.3.2 in AS/NZS 60079.29.1:2017.

toxic gas as defined in clause 1.3.1.11 in AS/NZS 4641:2018.

4. Revocation

The *Registration of Design of Plant Used to Determine or Monitor the Presence of Gas Design Order 2022* published in the NSW Government Gazette No 183 of 29 April 2022 is revoked.

5. Design requirements

5.1. Except as provided in paragraphs 5.2 and 5.3, all plant must be designed in accordance with the following:

- (a) For plant designed for flammable gases:
 - (i) through accreditation by an organisation that is a signatory to the ILAC MRA (International Laboratory Accreditation Cooperation Mutual Recognition Arrangement); or

- (ii) a suitably qualified and experienced testing facility along with past test experience with gas detecting plant, which has been independently audited within the last 2 years.
 - (iii) The plant must be designed to comply with the design requirements of the relevant parts of AS/NZS 60079.29.1:2017 Explosive atmospheres – Gas detectors – Performance requirements of detectors for flammable gases;
 - (iv) the plant must be designed to provide a conditioned electronic signal or output indication that can be used by the mine operator to determine the level of a gas.
 - (v) the plant must be designed as:
 - equipment with integral sensor(s), or
 - equipment with remote sensor(s), or
 - equipment with combinations of integral and remote sensor(s).
 - (vi) sensor(s) must include the protective housings and any filters associated with protecting the sensing element.
- (b) For plant designed for oxygen and toxic gases:
- (i) the plant must be designed to comply with the design requirements of the relevant parts of – AS/NZS 4641:2018 Electrical equipment for detection of oxygen and other gases and vapours at toxic levels – General requirements and test methods.
 - (ii) the plant must be designed to provide a conditioned electronic signal or output indication that can be used by the mine operator to determine the level of a gas.
 - (iii) the plant must be designed as:
 - equipment with integral monitor(s), or
 - equipment with remote monitor(s), or
 - equipment with combinations of integral and remote monitor(s).
 - (iv) monitor(s) must include the protective housings and any filters associated with protecting the sensing element.

5.2. Where a design does not fully comply with the requirements in paragraph 5.1, the designer must specify the published technical standards or the engineering principles used to identify controls, in accordance with the hierarchy of risk control measures in Part 3.1 of the Work Health and Safety Regulation 2017, that have been incorporated in the design to achieve at least an equivalent level of safety as the requirements of paragraph 5.1.

5.3. If the design of plant that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered and the alteration may affect health or safety:

- (a) the altered parts of the plant must be designed to comply with the design requirements in paragraphs 5.1— 5.2 of this Order.
- (b) an assessment must be undertaken, and documented, by the designer to assess the impact that the design alteration has on unaltered parts of the plant.
- (c) where the assessment undertaken in paragraph 5.3(b) shows there has been a reduction in the effectiveness of existing control measures of any other parts of the plant, that is, there has been a detrimental effect on health and safety caused by the alteration, these parts must comply with the design requirements in paragraphs 5.1 – 5.2 of this Order.
- (d) any parts of the plant which are not affected by the alteration must continue to comply with the design requirements of the design order that was in effect on the date that the registration for the design of the plant was granted.

5.4. All gas detecting plant must comply with the relevant parts of section 81(2) 'Use of plant in hazardous zone (explosion-protection required)' of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022.

6. Testing and performance requirements

- 6.1. Plant to be tested must include all component parts, including cables, that enables a conditioned electronic signal or output indication to be provided so that a mine operator can determine the level of a gas that the sensor, or monitor, is exposed to. Where digital output signals are provided, this includes any software drivers and the communications protocols necessary for the testing facility to verify the performance of the plant.
- 6.2. Except as provided in paragraph 6.3, all plant must be tested and meet the relevant performance requirements as follows:
 - (a) For plant designed for flammable gases:
 - (i) AS/NZS 60079.29.1:2017 Explosive atmospheres – Gas detectors – Performance requirements of detectors for flammable gases;
 - (ii) catalytic combustion sensors for methane levels up to and including 5% must also be tested by exposure to a volume fraction of 2.0 ± 0.2 % methane in air mixture containing a volume fraction of 50ppm hydrogen sulphide for 20 minutes and a reading taken. The difference between the plant indication and the test gas methane concentration must not exceed ± 0.2 % methane.
 - (b) For plant designed for oxygen and toxic gases:
 - (i) AS/NZS 4641:2018 Electrical equipment for detection of oxygen and other gases and vapours at toxic levels – General requirements and test methods.

- (ii) for hydrogen sulphide, nitrogen dioxide and nitric oxide monitors, clauses 4.6 'Pressure variation', 4.7 'Pressure recovery' and 4.9 'Air velocity', as detailed in AS/NZS 4641:2018, are varied and are only required to be undertaken in clean air (without the standard test gas).
- (iii) for hydrogen sulphide, nitrogen dioxide and nitric oxide monitors, clause 4.12.3 for Vibration testing of portable and machine mounted monitors, as detailed in AS/NZS 4641:2018, is varied and are only required to be undertaken in clean air (without the standard test gas).

6.3. If the design of plant that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered, and the alteration may affect health or safety, the altered parts of the plant, including those parts that may have been redesigned due to detrimental effects identified in the assessment undertaken in paragraph 5.3(b) above, must be tested and meet the performance requirements in paragraph 6.2 of this Order.

6.4. Any parts of the plant which are not affected by the alteration must continue to comply with the performance requirements of the design order that was in effect on the date that the registration for the design of the plant was granted.

7. Test facility

7.1. The test facility used for testing the plant must be a test facility which is independent of the designer, manufacturer or supplier.

7.2. The test facility must have test equipment, equipment calibration (traceable to the International System of Units (SI) by reference to national measurement standards), quality processes and work methods for performing the specific tests described in the standards referred to in this Order. This must be demonstrated through:

- (a) accreditation by the National Association of Testing Authorities (NATA);
or
- (b) where demonstrated to the regulator that a NATA-accredited facility is not available,
 - (i) through accreditation by an organisation that is a signatory to the ILAC MRA (International Laboratory Accreditation Cooperation Mutual Recognition Arrangement); or
 - (ii) a suitably qualified and experienced testing facility along with past test experience with diesel engine systems, which has been independently audited within the last 2 years.

8. Determination of applications for registration of design made before commencement of this Order

If an application for the registration of design of a plant made in accordance with clause 250 of the Work Health and Safety Regulation 2017 to which the standards specified in the *Registration of Design of Plant Used to Determine or Monitor the Presence of Gas Design Order 2022* applies is made before the commencement of this Order, and the application has not been finally determined before that commencement, the application is to be determined as if this Order had not commenced.

WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES) REGULATION 2022

Registration of Powered Winding Systems Design Order 2022

I, **Garvin Burns**, Chief Inspector, with the delegated authority of the Secretary, Regional NSW, pursuant to section 187(5) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, make the following Order.

Dated this 29th day of August 2022

Garvin Burns
Chief Inspector
Regional NSW

1. Name of Order

This Order is the *Registration of Powered Winding Systems Design Order 2022*.

2. Commencement

This Order commences on the day it is published in the NSW Government Gazette.

3. Interpretation

In this Order:

drift means a mine adit or shaft, on slopes of 10 to 30 degrees, for the transport of persons and materials. This term is commonly used in coal mines.

drift winding system means a drum winding system used in a drift.

emergency egress winding system means a winding system that is used solely for emergency egress.

friction (Koepe) winding system means a vertical shaft winding system in which conveyances are raised and lowered by means of multiple ropes passing over a driving sheave, such that the driving force is transmitted from the sheave to the ropes by friction.

shaft, in underground workings, means a mine heading. A shaft may be orientated from 0 to 90 degrees.

shaft sinking winding system means a drum winding system that is used on a short term basis for the development, equipping or refurbishment of vertical shafts. A shaft sinking winding system is relocatable and is not a permanent fixture.

TRG is a reference to Technical Reference Guide produced by the NSW Government and published on the Department of Regional NSW's Resources Regulator website.

small gemstone mine has the same meaning as it has in the Dictionary of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022.

vertical shaft drum winding system means a drum winding system that operates in a vertical shaft.

vertical shaft winding system means a winding system that operates in a vertical shaft and includes vertical shaft drum winding systems; friction (Koepe) winding systems; shaft sinking winding systems; and emergency egress winding systems.

winding system has the same meaning as it has in the Dictionary of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022.

4. Revocation

The *Registration of Powered Winding System (other than a person-riding hoist) Design Order 2020* published in the NSW Government Gazette No. 26 of 7 February 2020 at pages 464-466 is revoked.

5. Design requirements

5.1. Drift winding systems:

- (a) except as provided in paragraphs 5.1(b) and 5.3, all winding systems used in underground mines (other than winding systems used in small gemstone mines) must be designed in accordance with the *TRG: Powered winding systems*, as identified in the following parts as amended from time to time:
 - (i) Part 1 'General requirements' – section 3 'Design'
 - (ii) Part 2 'Drift winders' – section 2 'Drift winders design and construction'
 - (iii) Part 4 'Ropes' – section 2 'Rope design and construction'
 - (iv) Part 5 'Winder control systems':
 - section 2 'Design – Performance requirements'
 - section 3 'Design – General control system requirements'
- (b) where a design does not fully comply with the requirements in paragraph 5.1(a)((i) – (iv)), the designer must specify the published technical standards or the engineering principles used to identify controls, in accordance with the hierarchy of risk control measures in Part 3.1 of the Work Health and Safety Regulation 2017, that have

been incorporated in the design to achieve at least an equivalent level of safety as the requirements of paragraph 5.1(a)((i) – (iv)).

5.2. Vertical shaft winding systems:

- (a) except as provided in paragraph 5.2(b) and 5.3, all vertical shaft winding systems (other than winding systems used in small gemstone mines) must be designed to meet the design requirements of the *TRG: Powered winding systems*, as identified in the following parts as amended from time to time:
 - (i) Part 1 ‘General requirements’ – section 3 ‘Design’
 - (ii) Part 3 ‘Vertical shaft winders (drum, friction, shaft sinking and emergency winders)’ – section 2 ‘Design and construction’
 - (iii) Part 4 ‘Ropes’ – section 2 ‘Rope design and construction’
 - (iv) Part 5 ‘Winder control systems’:
 - section 2 ‘Design – Performance requirements’
 - section 3 ‘Design – General control system requirements’
- (b) where a design does not fully comply with the requirements in paragraph 5.2(a)((i) – (iv)), the designer must specify the published technical standards or the engineering principles used to identify controls, in accordance with the hierarchy of risk control measures in Part 3.1 of the Work Health and Safety Regulation 2017, that have been incorporated in the design to achieve at least an equivalent level of safety as the requirements of paragraph 5.2(a)((i) – (iv)).

5.3. If the design of a winding system that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered and the alteration may affect health or safety:

- (a) the altered parts of the winding system must be designed to comply with the design requirements in paragraphs 5.1 – 5.2 of this Order.
- (b) an assessment must be undertaken, and documented, by the designer to assess the impact that the design alteration has on unaltered parts of the winding system.
- (c) where the assessment undertaken in paragraph 5.3(b) shows there has been a reduction in the effectiveness of existing control measures of any other parts of the winding system, that is, there has been a detrimental effect on health and safety caused by the alteration, these parts must comply with the design requirements in paragraphs 5.1 – 5.2 of this Order.
- (d) any parts of the winding system which are not affected by the alteration must continue to comply with the design requirements of the design order that was in effect on the date that the registration for the design of the winding system was granted.

6. Determination of applications for registration of design made before commencement of this Order

If an application for the registration of design of a winding system made in accordance with clause 250 of the Work Health and Safety Regulation 2017 to which the standards specified in the *Registration of Powered Winding System (other than a person-riding hoist) Design Order 2020* applies is made before the commencement of this Order, and the application has not been finally determined before that commencement, the application is to be determined as if this Order had not commenced.

WORK HEALTH AND SAFETY (MINES AND PETROLEUM SITES) REGULATION 2022

Registration of Shotfiring Apparatus Design Order 2022

I, **Garvin Burns**, Chief Inspector, with the delegated authority of the Secretary, Regional NSW, pursuant to section 187(5) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, make the following Order.

Dated this 29th day of August 2022

Garvin Burns
Chief Inspector
Regional NSW

1. Name of Order

This Order is the *Registration of Shotfiring Apparatus Design Order 2022*.

2. Commencement

This Order commences on the day it is published in the NSW Government Gazette.

3. Interpretation

In this Order:

AS is a reference to Australian Standards.

AS/NZS is a reference to Australian/New Zealand Standards.

circuit tester means apparatus for testing the continuity, and indicating the condition (resistance), of a detonator circuit.

exploder means a self-contained portable apparatus designed and constructed for producing an electric current for firing detonators.

exploder tester means apparatus for testing the output characteristics of an exploder on a routine basis as a means of assessing its continued ability to perform its design function.

intrinsically safe means being certified as explosion protected using intrinsic safety techniques as identified in AS/NZS 60079.11 :2011 *Explosive atmospheres-Part 11: equipment protection by intrinsic safety (i)* (as amended from time to time) for use in Group I applications.

shotfiring apparatus is a collective term encompassing circuit testers, exploders and exploder testing devices.

special tool means a tool that is designed to be used with a specific type of fastener and which is intended to discourage unauthorised interference with the apparatus (not a general purpose tool that is intended to be used on a range of fasteners for instance, pliers, multigrip pliers, shifting spanners, adjustable wrenches, etc.).

4. Revocation

The *Registration of Shotfiring Apparatus Design Order 2018* published in the NSW Government Gazette No.130 of 30 November 2018 at pages 9148-9151 is revoked.

5. Design outcomes

5.1 All shotfiring apparatus used in underground coal mines must be designed to achieve the following outcomes:

- (a) withstand the arduous nature of use below ground, without damage or impairment to correct operational performance, and
- (b) be reliable in performance, and
- (c) not sustain mechanical or electrical damage likely to affect the safe operation of the equipment, when dropped or impacted, and
- (d) ensure that the electrical circuits within the apparatus are adequately insulated, as specified in 6.1(b), from the outer case of the apparatus, and
- (e) ensure that where the exploder and the circuit tester are integrated into a single unit, it is provided with adequate segregation between the circuits of the exploder and the circuit tester to prevent electrical leakage and/or interference from the exploder to the circuit tester circuits; and
- (f) achieve, as a minimum, the performance requirements as detailed in the relevant sections of paragraphs 6.1—6.4.

5.2 If the design of shotfiring apparatus that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered and the alteration may affect health or safety:

- (a) the altered parts of the shotfiring apparatus must be designed to achieve the design requirements in paragraph 5.1 of this Order
- (b) an assessment must be undertaken, and documented, by the designer to assess the impact that the design alteration has on unaltered parts of the shotfiring apparatus.

- (c) where the assessment undertaken in paragraph 5.2(b) shows there has been a reduction in the effectiveness of existing control measures of any other parts of the shotfiring apparatus, that is, there has been a detrimental effect on health and safety caused by the alteration, these parts must comply with the design requirements in paragraphs 5.1 of this Order.
- (d) any parts of the shotfiring apparatus which are not affected by the alteration must continue to comply with the design requirements of the design order that was in effect on the date that the registration for the design of the shotfiring apparatus was granted.

6. Testing and performance requirements

6.1 General requirements:

The design of the shotfiring apparatus used in underground coal mines must be tested and achieve, as a minimum, the following performance requirements:

- (a) prevent being disassembled without the use of special tools, and
- (b) provide an insulation resistance between the shotfiring circuit and the exploder case of greater than 50 MΩ at 1000V when measured after conditioning for 24 hours in an ambient temperature of maximum 20 degrees Celsius and relative humidity of at least 90%, and
- (c) ensure that external parts of the enclosure must not be made of:
 - (i) aluminium, or
 - (ii) an aluminium alloy containing more than 15% by mass of aluminium, magnesium and titanium, provided that the content of magnesium and titanium does not exceed 6% by mass, and
- (d) ensure that if constructed of non-metallic materials, all shotfiring apparatus must be:
 - (i) anti-static in accordance with clause 7.4.2 of AS/NZS 60079.0:2019 Explosive atmospheres - Equipment- General requirements (as amended from time to time), or
 - (ii) contained within a leather carrying case having provision to prevent its unauthorised removal, and
- (e) provide means of carrying that does not involve the use of the hand(s). This may be incorporated on a case provided to contain the shotfiring apparatus, and
- (f) display any essential operating and safety instructions via inscription on the apparatus, and

- (g) withstand, without physical or electrical impairment, a vertical drop of 1 metre onto a concrete floor. Each test must be carried out five times, and
- (h) withstand, without sustaining mechanical damage likely to affect the safe operation of the equipment, a vertical impact test with energy of 20 joules, and
- (i) have a degree of ingress protection of not less than IP54 in accordance with AS 60529:2004 Degrees of protection provided by enclosures (IP Code), as amended from time to time.

6.2 Specific requirements for exploders:

In addition to the requirements of 6.1, all exploders must be designed to:

- (a) be prominently inscribed with the shot limit capacity. The shot limit must not exceed 100, and
- (b) where integrated with a continuity circuit tester, have a circuit tester which conforms with the requirements for performance as detailed at 6.4 below, and
- (c) initiate the firing current only by operation of a key or similar device, and the removal of this key or other initiation device must only be permitted when in the "off" or "safe" position, and
- (d) provide a mechanism that causes the firing key to return to the off position when not physically held in an alternate position, or contain equivalent safety features, and
- (e) provide output connection terminals that allow a convenient and secure attachment of the shotfiring cable and are arranged so that the exploder can be operated without making unintended contact with the output connections, and
- (f) allow the firing sequence to be abandoned at any point up to the final firing position without producing an output greater than 50 milliamperes, and
- (g) ensure that removal of the firing handle or key or failure to promptly initiate the firing sequence, must cause all stored energy within the exploder, excluding supply batteries, to be promptly discharged, and
- (h) ensure adequate firing energy is available:
 - (i) for capacitor-discharge type exploders:
 - electric current is prevented from being available to the output terminals until the capacitor is adequately charged, and

- when fired, provide a 4 millisecond burst of firing current at 1.25 amperes \pm 15%, or
 - (ii) for rotating armature excited type exploders, an RMS current is provided that achieves 1.6 amperes and sustains an output current of 1.4 amperes for at least 1 millisecond, and
- (i) provide the required firing current with a connected resistance of $2.2n + 4L$ ohms, where n is the number of shots the unit is rated to fire and L is the number of 100 metre lengths (for test purposes L must equal 12), and
- (j) after initiation of the firing output, limit the output in the shotfiring circuit so that no firing currents exist for greater than 5 milliseconds, and that no energy greater than two thirds of Group I intrinsically safe ignition energy exist after 12 milliseconds, and
- (k) prevent any possible manipulation of the firing controls to produce a firing output less than specified in 6.2(h) above; and
- (l) once fired, prevent additional firing charge being produced before the firing control is returned to the "off" position, and
- (m) where integrated with a continuity circuit tester, ensure no output other than the continuity test is available at the firing terminals, when a single component malfunction occurs; and

Note: For the purpose of this paragraph, malfunction includes the mechanical or electrical malfunction of a switch, an earth fault on any part of the equipment, and an open circuit or short circuit occurring on any component or any part of the electrical circuit.
- (n) ensure that any circuit or component contained within the exploder that produces open sparking during normal operation is intrinsically safe or contains equivalent explosion protection safeguards.

6.3 Specific requirements for exploder testers:

In addition to the requirements of 6.1, all exploder testers must be designed to achieve the performance measures detailed in 6.2(h), (i) and (j).

Note: The exploder tester may be an integral part of the exploder or a standalone test unit.

6.4 Specific requirements for circuit testers:

In addition to the requirements of 6.1, all circuit testers must be designed to:

- (a) be intrinsically safe or alternately meet the requirements to allow use in accordance with any requirements pursuant to section 81(1) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022, and

- (b) be incapable of firing a low-tension detonator, that is, the maximum short-circuit current output must be less than 50 milliamperes, and
- (c) be reliable in performance, accurate to 1 ohm or within 5% of true resistance and capable of indicating the condition of a detonator circuit and provide a suitable range to indicate an external resistance exceeding $3n$ ohms, where n is the maximum number of detonators the exploder is designed to fire, and
- (d) ensure the electrical circuit is adequately insulated from the outer case, and
- (e) where housed within the same enclosure as the exploder ignition circuit, be constructed with adequate segregation to prevent electrical leakage or interference from a charged exploder circuit transferring to the terminals of the circuit tester; and
- (f) ensure that simultaneous operation of the circuit tester and exploder output must be inhibited and fail safe in design.

6.5 If the design of shottfiring apparatus that is registered under Part 5.3 of the Work Health and Safety Regulation 2017 is altered, and the alteration may affect health or safety, the altered parts of the shottfiring apparatus, including those parts that may have been redesigned due to detrimental effects identified in the assessment undertaken in paragraph 5.2(b) above, must be tested and achieve the performance requirements in paragraphs 6.1—6.4, as applicable, of this Order.

6.6 Any parts of the shottfiring apparatus which are not affected by the alteration must continue to comply with the performance requirements of the design order that was in effect on the date that the registration for the design of the shottfiring apparatus was granted.

7. Test facility

7.1 The test facility used for testing the shottfiring apparatus must be a test facility which is independent of the designer, manufacturer or supplier.

7.2 The test facility must have test equipment with calibration traceable to the International System of Units (SI) by reference to national measurement standards, quality processes and work methods for performing the specific tests described in the standards referred to in this Order. This must be demonstrated through:

- (a) accreditation by the National Association of Testing Authorities (NATA); or
- (b) where demonstrated to the regulator that a NATA-accredited facility is not available,

- (iii) through accreditation by an organisation that is a signatory to the ILAC MRA (International Laboratory Accreditation Cooperation Mutual Recognition Arrangement); or
- (iv) a suitably qualified and experienced testing facility along with past test experience with shot firing apparatus, which has been independently audited within the last 2 years.

8. Determination of applications for registration of design made before commencement of this Order

If an application for the registration of design of shotfiring apparatus made in accordance with clause 250 of the Work Health and Safety Regulation 2017 to which the standards specified in the *Registration of Shotfiring Apparatus Design Order 2018* applies is made before the commencement of this Order, and the application has not been finally determined before that commencement, the application is to be determined as if this Order had not commenced.