

# GUIDE

## Notifying the Regulator of a high risk activity

September 2022

### About high risk activities notifications

High risk activities have the potential for major safety implications if not planned and carried out in a systematic and integrated manner, taking into account the risks associated with the activity and the methods available to manage those risks. These activities can be performed in many ways so the operator of a mine or petroleum site has the latitude to design the method of carrying them out and implementing controls.

The high risk activities scheme under the [Work Health and Safety \(Mines and Petroleum Sites\) Regulation 2022](#) allows the NSW Resources Regulator to review the arrangements for the proposed activity to assess the adequacy of the planning and controls. However, the scheme does not require the Regulator to approve activities and the responsibility for ensuring that activities are conducted safely remains with the operator of a mine or petroleum site.

An operator of a mine or petroleum site is prohibited from undertaking high risk activities unless they have notified the Regulator of the proposed high risk activity and the waiting period for that activity has expired (unless the Regulator has waived or reduced the waiting period). When undertaking the high risk activity, the operator must carry out the activity in the manner set out in the notification. The operator of a coal mine must also ensure that a copy of any high risk notification is sent to an industry safety and health representative and a site safety and health representative for the mine.

The Regulator may require the operator of a mine or petroleum site to submit a new notification if the content of the notice is inadequate to enable the Regulator to assess the manner in which the operator proposes to undertake the high risk activity. If the Regulator reviews a notification and is not satisfied that the activity as described in the notification can be undertaken safely, the Regulator may take a range of actions, including issuing a prohibition notice.

**Notification can be made online by logging into the [Regulator Portal](#) and completing the high risk activity notification. Should you require a user account for the portal or to add a mine you operate to your existing user account then please submit a request to add a PCBU or operator.**

## What is an adequate notification?

A notification will be adequate if:

- the requirements of [section 35 Notification of high risk activities](#) within the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022 are provided within the notification.
- all required sections are completed within the portal, including the declaration and list of attachments.
- the notification includes the hazards identified as having the potential to arise from the activity.
- the notification is supported by an assessment of the risks associated with the activity that assesses the potential risk of identified hazards to health and safety of people (not business interruption)
- evidence of consultation in accordance with Part 5 of the Work Health and Safety Act 2011
- the notification is to include relevant parts of the safety management system for the mine or petroleum site that describe the systems, procedures, plans and other means that will be used to control risks to health and safety associated with the carrying out of the activity
- the information is sufficient for the Regulator to assess whether the activity can be carried out, so far as reasonably practicable, without risk to the health and safety of workers and others.

For some activities there are additional mandatory requirements that are listed within the corresponding section of Schedule 3 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022.

A further guide to each individual HRA follows later in this document that sets out additional mandatory requirements together with recommendations to help ensure that information provided is adequate. It is not mandatory to address the matters that are listed as recommendations. The use of the word 'must' indicates that information or attachments are mandatory. The use of the term 'should' indicates a recommendation. In some cases, guidance is provided in relation to the content or structure of mandatory information or attachments. For example, for mining in an outburst control zone, there is:

- a mandatory requirement to attach relevant parts of the safety management system, and
- a recommendation that this should address all relevant matters, including the development of mine or petroleum site specific threshold limits to determine the type of mining that can be used.

**Note:** Survey plans are required for some activities (and recommended for others). Mining surveys must be conducted and prepared in accordance with the *Surveying and Spatial Information Act 2002* and its Regulations and relevant survey and drafting directions made under that Act. To the extent of any inconsistency in this guidance with that legislation or the survey and drafting directions, that legislation and the directions must be followed.

## What are high risk activities?

A list of high risk activities is in Schedule 3 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022. It is arranged by classes of mine or petroleum site. An activity is only a high risk activity for the type of mine or petroleum site specified.

## What happens when the notification is submitted?

The Regulator will issue an acknowledgement that the notification has been received, including the date of receipt. The waiting period for the activity begins the day after the notification is received by the Regulator. The Regulator's acknowledgement of receipt is NOT confirmation that the notice is complete or adequate.

The Regulator may review the notification when received. Any review undertaken will consider if all required information has been submitted, the adequacy of the planning and the proposed method of carrying out the activity.

## What if the notification is not adequate?

If the Regulator decides that the notification is inadequate, the Regulator will inform the mine or petroleum site operator and give reasons for the decision. The Regulator will normally advise the mine or petroleum site operator in writing but, in some cases, the Regulator may first advise the nominated contact person for the notification by telephone and confirm this in writing later.

If the Regulator has notified the operator of a mine or petroleum site that the notification is inadequate the notification is taken not to have been given and the activity cannot proceed. The operator may submit a new notification in relation to the activity. The waiting period for the activity begins when the new notification is received by the Regulator.

## Can a notification be amended?

The operator of a mine or petroleum site may submit additional information about the notification. For example, if an alternative method of working is identified or further relevant information has arisen.

In some cases, the Regulator may identify issues with the information or the planned arrangements and indicate that the notification is currently inadequate. The operator can amend the notification by submitting additional information.

Amending the notification does not restart the waiting period, but the Regulator has the right to extend the waiting period by a reasonable time to assess any additional material.

**Note:** A notification cannot be amended if the Regulator has informed the operator in writing that the notification is inadequate. In that case, a new notification must be submitted.

## Can the waiting period be reduced?

The operator may apply for the Regulator to reduce or waive the waiting period. This would normally be granted if the Regulator has reviewed the notification and does not propose to take any action. If the proposed high risk activity is at a coal mine, the Regulator must also consult with an industry safety and health representative before granting any waiver or reduction in the waiting period. Any reduction or waiving of the waiting period will be communicated in writing to the operator of a mine or petroleum site.

**Note:** The decisions of the Regulator that a notification is inadequate or to extend a waiting period are reviewable decisions under Part 11.1 of the Work Health and Safety Regulation 2017 (see clause 186 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022).

# Guide to each individual high risk activity notification

Please note that section numbers used below directly to the relevant sections of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022 Schedule 3.

## Section 2: Electrical work on energised electrical equipment

No additional documents required apart from that included in Section 35 WHS (MPS) Regs 2022.

## Section 3: Winding systems

The information and documents that must be provided in relation to the activity are as follows—

- the name of the commissioning verifier for the commissioning of the winding system, and
- a written statement signed by a commissioning verifier that states the commissioning plan for the winding system is appropriate.

In this section—

commissioning plan means a plan—

- prepared by the person responsible for the commissioning or recommissioning of the winding system, and
- that describes the process for commissioning or decommissioning the winding system.

commissioning verifier means a person who—

- is a competent person, and
- is not involved in the commissioning or recommissioning of the winding system.

## Section 5: Development of a new mine entry

Development of a new mine entry (including by sinking a shaft or drift or raise boring) other than at an opal mine

1. You must provide details of the method of working, and details of the plant to be used.

**Recommendations to help ensure the notification provides adequate information:**

2. Consider all relevant hazards including
  - strata/ground instability

- atmospheric contaminants
  - inrush
  - spontaneous combustion.
3. The assessment of the strata/ground risks should be based on a comprehensive geotechnical report.
  4. **Details of the method of working, and details of the plant to be used** should address the suitability of the plant for the proposed grades.

## Section 6: Connected voltage becoming greater than 12,000 volts

No additional documents required apart from that included in Section 35 WHS (MPS) Regs 2022

## Section 7: Raise boring

1. You must provide details of the method of working, and details of the plant to be used.

**Recommendations to help ensure the notification provides adequate information:**

2. Consider all relevant hazards including
  - strata/ground instability
  - atmospheric contaminants
  - inrush
  - spontaneous combustion.
3. The assessment of the strata/ground risks should be based on a comprehensive geotechnical report.

## Section 9: Working in inrush control zone

1. You must attach an engineering drawing of the activity endorsed by the mining engineering manager at the mine.

**Recommendations to help ensure the notification provides adequate information:**

2. Extracts of **relevant part of the safety management system** should address the following:
  - the identification of inrush control zones
  - the controls to be in place while mining activities are taking place in those zones
  - the monitoring of the inrush hazard
  - the surveying controls
  - the training for people who will be working in the inrush control zones.

- Details of the:
  - Fluid Type
  - Potential Flow Rate
  - Pressure Head
- Where appropriate:
  - Width of Barrier
  - Strength of Barrier
  - Factor of Safety of the Barrier

## Section 10: Roadway or drift without intersection for 250 metres

1. You must attach:
  - an engineering drawing of the development endorsed by the mining engineering manager at the mine
  - details of the explosion suppression measures to be taken
  - details of the escape strategy to be implemented
  - details of ventilation arrangements in respect of the activity.

### Recommendations to help ensure the notification provides adequate information:

Consider all relevant hazards, including entrapment by an outbye occurrence such as strata failure or fire.

## Section 11: Shotfiring

1. You must attach:
  - details of the competency of each person carrying out the activity, and if the person has undertaken the activity at the mine before, details of any training undertaken by the person since that time.
  - details of ventilation arrangements in respect of the activity.

### Recommendations to help ensure the notification provides adequate information:

2. **Relevant parts of the safety management system** should address consideration of appropriate refresher training for the shotfirer and others with responsibilities for the task.

## Section 12: Sealing

1. You must attach:

- details of the proposed location of the seals and the areas of the mine to be sealed
- details of the proposed sealing procedure and type of seals
- details of any evidence of ignition sources being present in the areas to be sealed
- predictions of the rates at which methane and other gases will accumulate in the sealed areas
- details of the gas monitoring procedures to be carried out during and after sealing.

**Recommendations to help ensure the notification provides adequate information:**

2. Consider all relevant hazards including:

- explosive atmosphere
- windblast
- spontaneous combustion

3. **Details of the proposed sealing procedure and type of seals** should include:

- the rating of the seal, (the rating of the seal should be based on accepted testing methodologies and include the seal to strata interface and the provision of any pipes and sample tubes. The design of the seal should take into account the life span of the seal, the environment the seal is built in, e.g., water retention and strata)
- installation procedures including sequencing
- the ventilation arrangements for the seal
- the inspection system
- the quality control system or other arrangements to ensure the seal is installed as designed
- the strata support required in the area.

4. **Details of any evidence of ignition sources being present in the areas to be sealed** should include consideration of the potential of lightning strike and the possibility of conductors within the sealed area including surface to seam boreholes.

**Predictions of the rates at which methane and other gases will accumulate in the sealed areas** should take into account the use of techniques to generate an inert atmosphere.

## Section 13: Conduct of hot work in a hazardous zone

**Recommendations to help ensure the notification provides adequate information:**

- A plan endorsed by the mining engineering manager showing the location of the proposed hot work
- Details of the precautions to be taken to ensure the prevention of fire or explosion during the conduct of the hot work



## Section 14: Driving an underground roadway that is wider than 5.5 metres

1. You must attach:

- engineering drawings of the activity endorsed by the mining engineering manager at the mine
- a geotechnical report on the activity
- details of relevant strata control in respect of the activity.

**Recommendations to help ensure the notification provides adequate information:**

2. The **risk assessment** should show that the experience and performance of any previous wide roadways at the mine has been considered and compared to the proposed wide road.
3. The geotechnical Report on the activity should provide:
  - An assessment of the proposed geotechnical conditions
  - The determination of the support density requirements through a comprehensive review of the lithology
  - Recommended levels of strata support for the area to be widened
  - Recommended levels of monitoring to assess the performance of the proposed strata support.

## Section 15: Use of high voltage plant and cables in a hazardous zone

No additional documents required apart from that included in Section 35 WHS (M&PS) Regs 2022

## Section 16: Formation of non-conforming pillars

1. You must attach:

- engineering drawings of the activity endorsed by the mining engineering manager at the mine
- a geotechnical report on the activity.

**Recommendations to help ensure the notification provides adequate information:**

2. The **geotechnical report on the activity** must address the life cycle of the pillar, the width-to-height ratio, probability of failure and the characteristics of surrounding strata.

## Section 17: Secondary extraction

1. A copy of this notification, including a comprehensive report and all plans must be submitted. Electronic versions of plans are preferred. (See recommended content and structure of plans below).
2. You must attach:

- details of the authoritative sources used in determining that the proposed method of work can be done safely in the form of a comprehensive report.
- engineering plans showing the manner and sequence of extraction, endorsed by the person exercising the statutory function of mining engineering manager at the mine
- information about the land above or in the vicinity of the proposed activity including land use and details of who owns or occupies any land that may be affected by subsidence
- in the case of a pillar extraction, details of the procedures for the recovery of buried and immobile mining plant in or around a goaf
- details of how the risks to the health and safety of workers and other persons from subsidence caused by the activity will be managed.

**Note:** Recommendations in relation to plans that should be supplied with the notification are set out below. The suggested plan 5 would serve to provide “information about the land above or in the vicinity of the proposed secondary extraction pillar extraction, splitting or reduction”.

To help ensure your notification provides adequate information:

3. The mine is to supply a risk assessment. The risks identified and the control measures are to be provided in the comprehensive report. The mine has nominated the specific elements of the safety management system that deal with the following:
  - strata failure
  - subsidence
  - spontaneous combustion
  - methane
  - oxygen deficiency
  - frictional ignition
  - windblast
  - periodic weighting (i.e., strata pressure increases ahead of the face of the longwall)
  - inrush
  - gas outburst
  - airborne dust
  - coal dust explosion.
4. In providing details of the **authoritative sources used in determining that the proposed method of work can be done safely** – where the proposed extraction method is other than “wall” type mining it is recommended that the manager of mining engineering make an assessment of the proposal against the principles and design issues presented in the Resource Regulator’s MDG 1005 *Manual on pillar extraction in NSW underground coal mines* and the known experiences and performance of similar workings in the mine or another mine in like conditions. In particular, safety issues that have been experienced should be addressed in some detail.

5. The notification should address any situations where the proposed extraction of coal could result in safety issues for the general public, mine workers or others engaged in surface activities. Examples of these situations could be:
- the likelihood of rocks being dislodged and falling or rolling down escarpments or slopes
  - the need for special considerations where interruptions to use of normal speeds on railways or roads could be likely
  - any changes likely in the state or condition of road surfaces.

### Recommended content and structure of plans

All plans need to be clear, uncluttered and legible. It is recommended that up to seven plans and two survey plans are provided. While drawings and plans need not be supplied in exactly the formats recommended, all the information required should be supplied. If fewer engineering plans are supplied, care will need to be taken to ensure they are clear while still containing all relevant information. If necessary to clarify understanding, plans additional to those specified below should be included in the notification. Note that if the manner and sequence of extraction is obvious, such as for a longwall extraction, no additional highlighting of the manner and sequence will be required. However, for pillar extraction, splitting or reduction the manner and sequence of extraction must be set out in a specific plan as detailed in plan 9.

Plans should be provided in the same scale so that they can be overlain to compare surface and underground features. All plans should cover the same area and be of the same size. Where indicated a coordinate grip to the map grid of Australia (MGA) should be provided, that is, a rectangular co-ordinate system using a Universal Transverse Mercator projection with zones 6 degrees wide and based on the Geocentric Datum of Australia (GDA).

All plans must be endorsed by the mining engineering manager at the mine and survey plans should be certified by a registered mining surveyor.

The recommend sheet size is AO and recommended scale is 1:4000. The plans should be contained within a border. There should be a title block on the plans containing:

- name of mine operator
- name of mine
- plan title
- scale
- plan number
- revision number
- date of revision
- manager of mining engineering's signature and date of signing
- mining lease number that covers the notification area.

**Plan 1 – Workings and dimensions, displaying:**

- the existing workings and proposed workings within the seam being mined relevant to the notification
- all existing workings within a distance of 500 m of the voids to be created by the mining proposed under notification
- all future workings (with full dimensions) including the formation of all roadways and pillars, that are required for the extraction to take place
- the final dimensions of abutment pillars adjacent to the extracted voids
- the dimensions of all voids to be created as part of the proposal
- all other areas previously approved or notified for extraction within the area of the plan
- the mining heights in first and second workings (indicated in numbers rather than contour lines)
- areas on the plan which may have heightened exposure of spontaneous combustion or outburst risk
- a coordinate grid to MGA.

**Plan 2 – Surface features, showing:**

- all natural and man-made surface features that may be affected by subsidence resulting from the proposed mining under notification
- an outline showing the extent of the surface area that may be affected by subsidence resulting from the proposed mining under notification
- surface contour lines
- boundaries and identifications of any mine subsidence districts
- the proposed and existing workings as shown in plan 1
- a co-ordinate grid (MGA).

**Plan 3 – Geological, showing:**

- geological and seam data relevant to the proposed workings under notification
- the proposed and existing workings as shown in Plan 1
- overburden thickness isopachs
- seam thickness isopachs
- all known geological structures
- a co-ordinate grid (MGA).

**Plan 4 – Other seams, showing:**

- all existing and/or planned future workings in seams above and/or below the proposed workings under notification
- overburden thickness isopachs relevant to the existing and/or planned future workings in the seams above and/or below the proposed workings

- seam thickness isopachs relevant to the existing and/or planned future workings in the seams above and/or below the proposed workings
- all known geological structures relevant to the existing and/or planned future workings in the seams above and/or below the proposed workings
- a co-ordinate grid (MGA).

**Plan 5 – Title and ownership plan or survey plan, showing:**

- details of mining titles and land ownership
- a schedule of leases should be included
- the owners of all land effected by the proposal, other than for individual domestic dwellings and very small commercial properties
- the proposed and existing workings as shown in plan 1
- a co-ordinate grid (MGA).

**Note 1:** This plan or survey plan may be used to provide information about the land above or in the vicinity of the proposed activity including land use and details of who owns or occupies any land that may be affected by subsidence (see dot point 3 above).

**Note 2:** If a survey plan is prepared, it should include a registered mining surveyor's signature certifying the accuracy of the plan.

**Note 3:** This information assists in assessing risks to others arising from the mining operation. Department officers or consultants engaged by the department to assist in reviewing a notification may visit the land above any proposed secondary extraction as part of the process of assessing the application.

**Plan 6 – Geological logs, this plan should show:**

- geological sections and/or borehole illustrations of the overburden strata representative of the area. Where there is significant variation across the area of the proposal, adequate information should be given to demonstrate the variation
- the existence of any soft strata such as mudstones or claystones (in thickness greater than 150 mm) within 20 m of the seam (roof or floor) and a detailed geological log should be provided.

**Plan 7 - Subsidence monitoring survey plan, showing:**

- the proposed and existing workings as shown on plan 1
- surface features as shown on plan 2
- the proposed and existing locations and layout of subsidence survey grids/marks and any other subsidence monitoring devices (e.g., tiltmeters, strain gauges, etc.)
- surface contour lines
- a co-ordinate grid (MGA)
- registered mining surveyor's signature certifying the accuracy of the plan.

### Plan 8 – Extraction area plan

The plan detailed below, known as the ‘extraction area plan’ becomes part of the permanent record of the details of the notification and will be provided to the Subsidence Authority NSW. It is important that this plan is of a high standard and clearly shows all the pertinent details of the coal being nominated for extraction.

Workings to be shown on the plan include:

#### Actual workings:

- all workings which are necessary for the formation of the area to be extracted
- all existing workings at the date of notification are to be clearly indicated but do not require dimension
- all future workings required for the mining system are to be indicated showing all dimensions
- the final dimensions of abutment pillars adjacent to the extracted voids
- the dimensions of all voids created by the extraction process.

#### Workings adjacent to the nominated extraction area:

- all existing workings within a distance of at least 500 m from any extraction the subject of the notification should include goaf areas or areas not yet extracted that have been previously the subject of a high risk activity notification (including those notified under the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022 or an approval that was granted under clause 88 of the former Coal Mine Health and Safety Regulation 2006) for secondary extraction.

#### Identification of areas nominated for extraction:

- all areas that are subject of the HRA notification for extraction should be marked as such
- all areas to be mined by either longwall or pillar extraction as part of the notification should be coloured in a distinctive manner and clearly identified as such in the plan legend.

### Plan 9 – Mining sequence plan (only required for pillar extraction, splitting or reduction). (Scale 1:4000) showing:

- the sequence of extraction
- the dimensions of stooks and other remnant pillars
- the support sequence including breaker line support sequencing.

## Section 18: Shallow depth of cover mining

You must attach:

- an engineering drawing of the activity endorsed by the mining engineering manager at the mine

- survey plans certified by a mining surveyor at the mine
- a geotechnical report on the activity
- information on how the risks to the health and safety of workers and other people from the potential formation of sinkholes will be managed.

**Recommendations to help ensure the notification provides adequate information:**

- consider all relevant hazards including plug failure
- the **geotechnical report on the activity** should address the geology, spanning characteristics and any unconsolidated surface material
- consider the recommended content and structure below when providing engineering drawings and survey plans.

**Recommended content and structure of plans**

All drawings and plans need to be clear, uncluttered and legible. While drawings and plans need not be supplied in exactly the formats recommended, all the information required should be supplied. If a single engineering drawing is supplied, care will need to be taken to ensure it is clear while still containing all relevant information. If necessary to clarify understanding, plans additional to those specified below should be included in the notification.

Drawings and plans should be provided in the same scale. All drawings and plans should cover the same area and be of the same size. Where indicated a coordinate grid to the map grid of Australia (MGA) should be provided, that is, a rectangular co-ordinate system using a Universal Transverse Mercator projection with zones 6 degrees wide and based on the Geocentric Datum of Australia (MGA).

The recommend sheet size is AO and recommended scale is 1:4000. The drawings and plans should be contained within a border. There should be a title block on the plans containing:

- name of mine operator
- name of mine
- plan title
- scale
- plan number
- revision number
- date of revision
- manager of mining engineering's signature and date of signing
- mining lease number that covers the notification area.

**1 – Mining area drawing, endorsed by the mining engineering manager for the mine**

The plan detailed below, known as the 'mining area drawing' becomes part of the permanent record of the details of the notification and will be provided to the Subsidence Advisory NSW. It is important that

this drawing is of a high standard and clearly shows all of the pertinent details of the coal proposed to be mined.

Workings to be shown include:

- actual workings nominated for mining under the notification, including full dimensions
- all existing and future workings within a distance of at least 500 m from any mining the subject of the notification should be shown
- areas that are subject of the notification for mining should be marked as such by colouring in a distinctive manner and clearly identified as such in the plan legend.

**2 – Workings and surface features, endorsed by the mining engineering manager for the mine displaying:**

- the workings (with full dimensions) proposed under the notification
- all existing and/or future workings within a distance of 500 m of the workings proposed under the notification
- mining heights in the proposed workings (indicated in numbers rather than contour lines)
- all natural and man-made surface features within a distance of 500 m of the workings proposed under the notification
- surface contour lines
- boundaries and identifications of any mine subsidence districts
- a co-ordinate grid (MGA).

**3 – Geology, endorsed by the mining engineering manager for the mine displaying:**

- geological and seam data relevant to the proposed workings under the notification
- the proposed and existing workings as shown in 2 above
- overburden thickness isopachs
- seam thickness isopachs
- all known geological structures
- a co-ordinate grid (MGA).

**4 – Other seams, endorsed by the mining engineering manager for the mine displaying:**

- all existing and/or planned future workings in seams above and/or below the proposed workings under notification
- overburden thickness isopachs relevant to the existing and/or planned future workings in the seams above and/or below the proposed workings
- a co-ordinate grid (MGA).

**5 – Title and ownership survey plan certified by a mining surveyor at the mine showing:**



- details of mining titles and land ownership
- a schedule of leases should be included
- the owners of all land affected by the proposal, other than for individual domestic dwellings and very small commercial properties
- the proposed and existing workings as shown in 2 above
- a co-ordinate grid (MGA).

**Note 1:** This information assists in assessing risks to others arising from the mining operation. Department officers or consultants engaged by the department to assist in reviewing a notification may visit the land above any proposed mining as part of the process of assessing the application.

## Section 19: Mining in outburst control zones

**Note:** The mine operator may notify for an area of the mine such as a longwall block or a development panel.

1. You must attach:
  - an analysis of how the risk of gas outbursts will be managed in undertaking the activity
  - an engineering drawing of the activity endorsed by the mining engineering manager at the mine
  - survey plans certified by a mining surveyor at the mine
  - the parts of the mine's emergency plan relevant to outbursts.

**Recommendations to help ensure the notification provides adequate information:**

2. **Relevant parts of the safety management system** should address the development of mine specific threshold limits to determine the type of mining that can be used.

## Section 20: First application of explosion inhibitors

1. You must attach:
  - the results of a physical test, other than a laboratory test, showing the inhibitor's effectiveness at suppressing a coal dust explosion, that is carried out by a nationally accredited testing facility (being an individual or corporation that has accreditation by the National Association of Testing Authorities, Australia (or an equivalent body) to perform the test)
  - the standards or test methods used
  - details of other control measures used to restrict propagation of a coal dust explosion
  - the method of sampling and testing of the treated dust to determine the effectiveness of the inhibitor and the need for further treatments.

**Recommendations to help ensure the notification provides adequate information:**

Details of other control measures to restrict propagation of a coal dust explosion should include how the inhibitor will interact with any explosion barriers.

## Section 21: Use of explosives designed for use in an underground coal mine

*Note: 'Coal mine explosive' means an explosive or detonator that is manufactured and supplied for use in an underground coal mine.*

1. You must attach:
  - details of the type of explosive to be used
  - evidence that the explosive is suitable for use in an underground coal mine including the testing regimes used to determine that suitability and the results of the tests. It should include details of the criteria against which the explosive has been assessed and any limitations to its use.
  - details of the manner in which the explosive is to be used
  - details of the coal dust explosion suppression methods to be used, including stone dust and explosion barriers
  - details of the gas regime at the mine
  - if the explosive is to be used in a manner inconsistent with the conditions for which use of the explosive is suitable - analysis of any alternative method that could be used to achieve the task.

**Recommendations to help ensure the notification provides adequate information:**

2. Further the mine has provided information on the control of the following hazards:
  - ignition of methane
  - ignition of coal dust
  - misfires.
3. **Relevant parts of the safety management system** should address:
  - transport arrangements
  - underground storage arrangements (if required)
  - training and competency arrangements
  - environmental controls
  - procedures for misfires
  - methods of disposal.
  - Addresses the location of people on the surface or underground during shotfiring activities
4. **Details of the manner in which the explosive is to be used** should include:
  - method of firing (delay or simultaneous)

- maximum number of shots per round
- maximum charge
- detonator type
- circuit testing procedures.

**If the explosive is to be used in a manner inconsistent with the conditions for which use of the explosive is suitable, the analysis of alternative methods** that could be used to achieve the task should be addressed through the risk assessment (that must be attached), and appropriate controls identified and documented. For example, Senatel Permitted 1000 has been tested against the criteria of the Health and Safety Executive (UK) Testing Memorandum No 2 (TM2) and classified as a P1 explosive for use in underground coal mines. This means that it has been identified to be suitable for:

- single firing in coal or stone
- simultaneous firing (up to 6 shots) in coal or stone, and
- delay firing in stone drifts and shafts.

Where it is intended to use Senatel Permitted 1000 in a manner other than that listed above, or any other explosive in a manner inconsistent with the conditions for which used of the explosive is suitable then this section of the guidance applies.

**Note:** The *Explosives Act 2003*, which regulates the control and handling of explosives and explosive precursors, may also apply.

## Section 22: Use of an explosive not designed for use in underground coal mines

1. You must attach:

- details of the type of explosive to be used
- details of the manner in which the explosive is to be used
- details of the coal dust explosion suppression methods to be used, including stone dust and explosion barriers
- details of the gas regime at the mine
- analysis of any alternative method that could be used to achieve the task.

**Recommendations to help ensure the notification provides adequate information:**

2. Consider all relevant hazards including:

- ignition of methane
- ignition of coal dust
- misfires.

3. Details in the manner in which the explosive is to be used should include:

- method of firing (delayed or simultaneous)
  - maximum number of shots per round
  - maximum charge
  - detonator type
  - Circuit testing procedures
4. **Relevant parts of the safety management system**
- address the location of people on the surface or underground during shotfiring activities.
  - transport arrangements
  - underground storage arrangements (if required)
  - training and competency arrangements
  - environmental controls
  - procedures for misfires
  - methods of disposal
5. **Analysis of any alternative methods that could be used to achieve the task** should include consideration of the use of coal mine explosives.
- Note:** The *Explosives Act 2003*, which regulates the control and handling of explosives and explosive precursors, may also apply.

## Section 23: First use of a vehicle with fire protected diesel engine

### Recommendations to help ensure the notification provides adequate information:

- That part of the safety management system that provides for the ongoing monitoring, testing and reporting of the effectiveness of the fire protection system including but not limited to:
  - mechanical engineering control plan
  - electrical engineering control plan
  - fire and explosion management plan
  - diesel emission management plan
  - introduction to site procedures
  - plans and controls for limiting the operating locations of fire protected diesel equipment

## Section 24: Explosion barrier other than a water barrier or bagged stonedust

1. You must attach:

- the results of a physical test, other than a laboratory test, showing the explosion barrier's effectiveness at suppressing a coal dust explosion, that has been carried out by a nationally accredited testing facility (being an individual or corporation that has accreditation by the National Association of Testing Authorities, Australia (or an equivalent body) to perform the test)
- the standards or test methods used in respect of the test
- details of how other explosion suppression methods interact with the explosion barrier
- the installation and maintenance standards for the explosion barrier.

## Section 25: Booster fans

The information and documents that must be provided in relation to the activity are as follows—

- the name of the commissioning verifier for the commissioning of the booster fan, and
- a written statement signed by a commissioning verifier that states the commissioning plan for the booster fan is appropriate.

In this section—

commissioning plan means a plan—

- prepared by the person responsible for the commissioning or recommissioning of the booster fan, and
- that describes the process for commissioning or decommissioning the booster fan.

commissioning verifier means a person who—

- is a competent person, and
- is not involved in the commissioning or recommissioning of the booster fan.

## Section 27: Highwall mining – entry of people

You must attach:

- details of the competency of the person appointed to control the mining operation while the person is inside the mining excavation
- details of the competency of the person entering the mining excavation
- details of self-rescue equipment to be carried by the person entering the mining excavation

- details of the time for which the person will be in the mining excavation, including the time of first entry of people into the excavation to the time of final departure of people from the excavation
- confirmation that the direct supervision of any person within the mining excavation will be undertaken by an individual nominated to exercise the statutory functions of deputy for the mine.

**Recommendations to help ensure the notification provides adequate information:**

1. Consider all relevant hazards including:
  - strata instability
  - atmospheric contaminants.
2. **Relevant parts of the safety management system** should address the following:
  - ventilation and air quality
  - emergency plan
  - communication system
  - high wall support
  - underground strata/ground support.
3. In relation to the **details of the competencies of the person appointed to control the mining operation, while the person is inside the mining excavation** the person in control should have competence in underground coal entry, such as the mining engineering manager's certificate of competence for an underground coal mine.

## Section 29: Emplacement areas

1. You must attach:
  - an overview of the life cycle of the emplacement area, including time frames for each stage of that life cycle, the design and construction of the emplacement area, any reject at the emplacement area, the transport of reject to or from the emplacement area, the treatment of reject at the emplacement area, inspections of the emplacement area and details of any decommissioning of the emplacement area
  - details of the ongoing monitoring of the emplacement area
  - dam break studies
  - engineering reports of the emplacement area showing all existing and proposed emplacement areas and the geotechnical design of those areas, endorsed by the mining engineering manager at the mine
  - survey plans of the emplacement area showing all existing and proposed emplacement areas at the mine, endorsed by a mining surveyor at the mine.

**Note:** The *Dams Safety Act 2015* may apply. Notifiers should check whether any notification to Dam Safety NSW is required. Further information about dam safety is available at [www.damsafety.nsw.gov.au](http://www.damsafety.nsw.gov.au).

## Section 30: Highwall mining

### 1. You must attach:

- an engineering drawing detailing the activity and endorsed by the mining engineering manager at the mine
- a plan of the activity certified by a mining surveyor at the mine
- information on how the risks to the health and safety of workers and other people from subsidence caused by the activity will be managed.

### Recommendations to help ensure the notification provides adequate information:

1. Consider all relevant hazards including:
  - strata failure
  - spontaneous combustion
  - frictional ignition
  - gas make (the rate at which gas finds its way into the workings of the mine)
  - subsidence
  - highwall stability
  - dust
  - location of people in relation to the operations and the highwall.
2. The **risk assessment** should include issues of geology, geotechnical design, the mining operation and mining parameters.
3. In answering in relation to the **nature of the proposed activity including particulars of how the activity is to be carried out**, you should include:
  - operational work procedures for major tasks associated with the work
  - the implementation of mechanical and electrical engineering standards for the operations
  - the measures for covering or sealing of the entries and the timing of this activity
  - procedures to prevent inadvertent entry to the excavations.
4. Consider relevant geotechnical controls including:
  - strength of the webs used in the layout
  - the maximum span across a panel of webs to maintain strata and web stability
  - inter-panel barriers between panels of webs

- identification of geological or structural factors that may affect web stability and inter-panel barrier stability.
5. Consider arrangements to ensure that the equipment used in the underground excavation is fit for that use. In the case of coal extraction this should include equipment suitable for use in an underground coal hazardous zone or an equivalent level of safety.
  6. **Relevant parts of the safety management system** should address the following:
    - procedures for recovery of equipment if it cannot be withdrawn under its own power and any other required emergency procedures
    - appropriate survey techniques to determine bearing, distance and elevation.
  7. The **engineering drawings detailing the activity and endorsed by the mining engineering manager at the mine** should include:
    - web dimensions
    - excavation dimensions, including maximum penetration distance
    - barrier dimensions
    - highwall exclusion zones.
  8. The **plan of the activity certified by a mine surveyor** should identify:
    - the area covered by the right to mine
    - adjacent mining rights
    - the location and extent of the highwall mining extraction area
    - any other past, current and proposed extraction areas
    - surface features, drainage and water storages.

## Section 31: Barrier mining

1. You must attach:
  - details of how risks from the activity will be managed
  - survey plans certified by a mining surveyor at the mine.

**Note:** Barrier distances are measured by actual distance, including in a vertical direction.

## Section 33: Construction of a well

The information and documents that must be provided in relation to the activity are as follows—

- the type of well to be drilled,
- the proposed name of the well,
- the proposed survey of the well,



- the expected depth of the well,
- an assessment by the mine operator that indicates that the equipment is fit for purpose,
- the way in which the well control is to be managed during the activity.

In this section—

- *appraisal well* means a well drilled after a discovery of petroleum to confirm the size of the hydrocarbon deposit.
- *construction of a well* includes drilling the well, well testing activities and well stimulation activities.
- *exploration well* means a well-constructed to explore for petroleum and includes an appraisal well.
- *production well* means a well that produces petroleum.
- *well control* means the method used to maintain control, and minimise the risk, of an event that causes the well to flow or kick.

**Recommendations to help ensure the notification provides adequate information:**

- Most of the information required would typically be contained in documentation that has already been developed such as risk assessments and the well drilling program. Submission of such documentation is recommended

Note: Where multiple wells are being constructed of the same type and risk profile (i.e., same drilling rig, same well design, same controls in place). A single HRA notification is acceptable for a representative well. Multiple notifications for each well are not required.

## Section 34: Well workover

1. You must attach:

- a description and a diagram of the well before the workover
- a description and a diagram of the proposed well following the workover
- a brief history of the well.

**Recommendations to help ensure the notification provides adequate information:**

- the description and diagram of the well before the workover should include details of wellhead and surface production assembly. This can be provided by photographs or a diagram.
- most of the information required would typically be contained in documentation that has already been developed such as risk assessments and the well workover/servicing program. Submission of such documentation is recommended.

**Note:** Where multiple wells are being constructed of the same type and risk profile (i.e., same drilling rig, same well design, same controls in place). A single HRA notification is acceptable for a representative well. Multiple notifications for each well are not required.

**Relevant parts of the safety management system** should include:

- the procedure for safely entering and for controlling the well during workover operations
- the pressure rating and relevant technical standards to which the wellhead and surface pressure equipment is designed (e.g., *American Petroleum Institute Purchasing Guidelines*, API Specification 6A Specification for Wellhead and Christmas Tree Equipment, 20th Edition, October 2010)
- emergency response arrangements.

## Section 35: Decommissioning a well

### 1. You must attach

- the name of the well
- the reason for decommissioning the well
- the proposed program for decommissioning the well including details of how the risks to health and safety of workers and other persons from the decommissioned well will be managed.

### Recommendations to help ensure the notification provides adequate information:

#### 2. A **description of the well** should be provided and include:

- details of the well type and classification (e.g., pilot well, frontier hole, production well, stratigraphic drill hole)
- a downhole survey (Please use the *Australian Requirements for the Submission of Digital Exploration Data, Version 4.2, August 2013* (available at: [www.geoscience.gov.au/National\\_Guidelines\\_Version4\\_2\\_10\\_Mar\\_14.pdf](http://www.geoscience.gov.au/National_Guidelines_Version4_2_10_Mar_14.pdf) as a guideline for minimum reporting standard).

#### 3. The **proposed program for decommissioning the well** should include:

- details of cementing, cement slurry, method of batching, mixing, placement and testing
- arrangements for isolating hydrocarbon zones
- arrangements for preventing leakage pathways between zones of differing pressure or water quality (including protection of groundwater aquifers from leakage upward or from the surface)
- arrangements for protecting the well casing from corrosion
- arrangements for pressure testing.

#### 4. **Relevant parts of the safety management system** should include:

- emergency response arrangements.

## Section 36: Suspending a well

1. You must attach:

- the name of the well
- the reason for suspending the well
- the period of the proposed suspension
- the manner in which the well is to be suspended including a diagram of the well showing proposed barriers.

**Recommendations to help ensure the notification provides adequate information:**

2. A **description of the well** should be provided and include details of well type and classification (e.g., pilot well, frontier hole, production well, stratigraphic drill hole)
3. The **manner in which the well is to be suspended** should include:
  - a diagram of the surface equipment
  - arrangements that will allow the well to be re-entered safely following the suspension.
4. **Relevant parts of the safety management system** should include:
  - emergency response arrangements.

## Section 38: Tailings storage facility

1. You must attach:

- an overview of the life cycle of the tailings storage facility (TSF), including time frames for each stage of that life cycle, the design and construction of the TSF, any tailings at the TSF, the transport of tailings to or from the TSF, the treatment of tailings at the TSF, inspections of the TSF and details of any decommissioning of the TSF.
- dam break studies.
- details of the ongoing monitoring of the TSF.
- engineering reports of the TSF showing all existing and proposed TSF areas and the geotechnical design of those areas, endorsed by an individual nominated to exercise the statutory function of:
  - in the case of an underground mine - the mining engineering manager at the mine; or
  - in any other case - the quarry manager.
- either:
  - survey plans of the TSF showing all existing and proposed TSF areas at the mine, endorsed by an individual nominated to exercise the statutory function of mining surveyor at the mine or a mine plan, or
  - if a mine survey plan is not required under Part 5 of the Regulation – a mine plan.

**Note:** The *Dams Safety Act 2015* may apply. Notifiers should check whether any notification to the Dam Safety NSW is required. Further information about dam safety is available at [www.damsafety.nsw.gov.au](http://www.damsafety.nsw.gov.au).

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