NSW Resources Regulator

Compliance priorities

July - December 2018



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Purpose

This report follows on from the NSW Resources Regulator's Compliance Priorities January to June 2018 report by continuing to set out our key priorities for the next six months. In general terms, these are the identified areas of concern that we aim to focus our attention on.

By publishing our compliance priorities, we aim to provide increased transparency and community and industry confidence in our regulatory activities and increase levels of voluntary compliance.

Our objectives

The NSW Resources Regulator aims to:

- → ensure a safe, sustainable and innovative mining, extractive and petroleum industry in NSW
- → provide information and guidance about safety, environmental and other regulatory obligations to protect and support industry, workers, the community and the state
- → promote confidence in how the industry is regulated
- → make regulation transparent
- → engage with and educate both industry and the community about best practice
- → support industry to meet its regulatory obligations.

About us

The NSW Resources Regulator is a stand-alone regulator within the Department of Planning and Environment and is responsible for compliance and enforcement activities across the mining, extractive and petroleum industry.

The NSW Resources Regulator was created to ensure that the regulatory functions of the department have clear separation from industry development activities. This framework is designed to ensure a consistent and responsive regulatory approach and to provide increased transparency and community confidence in relation to our regulatory activities.

The primary focus of the NSW Resources Regulator is on compliance activities in relation to the following:

- → compliance with the Mining Act
- → regulating safety and health performance at NSW mines and petroleum sites (Mine Safety)

| Vision | Mission |
|--|---|
| A safe and responsible mining, extractive and petroleum industry | To enable and support industry to understand and fulfil its obligations |



Our regulatory activities are guided by the following documents:

- → Strategic approach
- → Compliance and enforcement approach

Compliance priorities

Every six months the NSW Resources Regulator will identify priorities for compliance and enforcement activities, some of which have carried over from the previous period.

Listed below are the new compliance priorities for July to December 2018.

Drill rigs - isolation of energy

A review of Electrical Engineering Control Plans at metalliferous mines during 2017 identified a number issues with procedures and systems for isolation of energy on drilling equipment.

The Regulator expects that equipment designers and mine operators provide isolation systems for drilling equipment that reduce the risk of harm for drill rig operators and maintainers to as low as is reasonably practicable.

An assessment program will be conducted targeting underground metalliferous mines. The intent of this program is to establish whether:

- → Isolation of energy procedures used to manage risks to drill rig operators and maintainers are in place and effective.
- → The hierarchy of controls is being appropriately considered and applied regarding isolation of energy procedures for drilling equipment.

Sector: Metalliferous Period: July – December 2018

Articulated truck roll-overs and falls from mobile plant

A number of recent incidents at NSW mines have highlighted the need for suitable controls to manage the risk of falls from mobile plant and the risks associated with the rollover of mobile plant.

Resulting from these incidents the regulator has identified that appropriate safe systems of work have not been developed, implemented or maintained for the activities associated with the operation of articulated trucks at some mine sites in NSW.

The Resources Regulator will undertake a compliance campaign across all sectors targeting mines utilising articulated trucks, with a specific focus on articulated water tankers and service trucks.

The campaign will also focus on how manufacturers and suppliers of articulated trucks are managing the risks associated with falls from height and truck rollovers, specifically addressing the design, manufacture and supply phases of an articulated truck's lifecycle.



An education program on articulated truck safety will be rolled out by the Small Mines Team as part of safety roadshow.

Sector: All sectors Period: July – December 2018

Ground and strata control

The Resources Regulator will be targeting risk management in relation to ground and strata hazards in the underground coal sector following a number of roof and rib failures in underground coal mines that have resulted in injuries to workers.

Ground and strata failure is a principal mining hazard under the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014 with a significant risk posed to workers from unplanned movement of ground.

The inspection campaign will continue to examine the management of change in relation to changing geological conditions or change of area being mined, as well as management of work in front of longwall pan line.

Sector: Underground coal Period: July – December 2018

Surface coal vehicle interactions

Vehicle interactions continue to be a source of concern for the Resources Regulator. Due to the number of recently reported incidents involving vehicle interactions, the Regulator published a <u>safety bulletin</u> to highlight issues with positive communications.

Failures of positive communications is only one aspect that can give rise to collisions. Other matters include road design, surface conditions and exclusion zones.

For the period January 2017 to February 2018 there have been 20 incidents reported to the Regulator where it has been identified that overwatering or water on roads has led to the loss of control of a vehicle. This represents almost one-third of the total number of loss-of-control incidents reported during this period. A <u>safety bulletin</u> on this issue was published in May 2018.

The Regulator will continue the compliance campaign looking at management of risks associated with vehicle interactions including positive communications, exclusion zones, road design, road surfaces and wet road protocols.

Sector: Surface coal Period: July – December 2018

Construction, operation and decommissioning of tailings dams

The construction, operation and decommissioning of tailings dams include key issues that have the potential to affect the sustainable development of the mining industry. There are many publicised cases of tailings dam failures across the world resulting in the escape of tailings materials off site and or significant landform stability issues.



Safety consequences range from the displacement of downstream communities through to significant injuries and the death to both mine workers and the public.

Environmental impacts have included the pollution of downstream rivers and land, contamination of groundwater, poisoning of native wildlife through exposure of adverse tailings as well as the generation of dust from exposed tailings material.

A recent example of this was the failure of the North Tailings Dam wall at the Cadia Mine near Orange. Although the tailings material was contained on site, the incident is currently being investigated to determine the likely causes so that further controls can be implemented to prevent future occurrences.

This project is a continuation of the Compliance Priority Project that commenced during the January to June 2018 period. The project will seek to develop a cross-agency awareness campaign, facilitated by the regulator, across both the coal and metalliferous mining sectors to ensure that titleholders and mine operators are aware of their obligations and promote best practice tailings management.

Sector: Coal and metalliferous mining sectors Period: July – December 2018

Operational Rehabilitation – Compliance & Reporting Reforms

The implementation of best-practice mine site rehabilitation is critical to ensuring NSW has a sustainable minerals industry. As the lead regulator for mine rehabilitation activities under the *Mining Act 1992*, the Resources Regulator within the Department of Planning and Environment is making a series of operational improvements (the Reforms).

The overall objective is to improve the regulatory mechanism for achieving best practice rehabilitation by improving the clarity and enforceability of mining lease conditions, and the quality of technical standards and guidance. These operational improvements apply throughout the mine life, reflecting the importance of rehabilitation from the mine design stage through to closure. The Reforms also recognise that rehabilitation strategies and management measures need to be dynamic with robust mechanisms that provide for continuous improvement as data and capability grow over time.

Following initial consultation with key government agencies in 2017-18, the Resources Regulator will be seeking feedback from Industry on the proposed Reforms. The Resources Regulator is providing a three-month consultation period so that mining lease holders, agents and Industry groups have the time to review documents and provide feedback. Two face-to-face workshops throughout this period will also be conducted with industry to explain and receive feedback on the Reforms.

The Reforms are proposed to commence in early 2019, subject to transitional arrangements.

Sector: All sectors Period: July – December 2018



Targeted assessment program

The NSW Resources Regulator's safety assessment programs focus on assessing mine operator's control of critical risks and evaluate the effectiveness of control measures in the operator's safety management system. The assessment typically involves sampling specific elements of the safety management system, rather than a holistic, audit-based approach.

Read the Targeted assessment program (TAP) overview fact sheet for more information on the program.

Diesel exhaust emissions

Diesel exhaust emissions contain a range of chemical, gases and diesel particulate matter (DPM). The International Agency for Research on Cancer reclassified diesel exhaust emissions as a carcinogen to humans in 2012.

Targeted assessments will continue at underground coal mines focusing on how the mine prevents worker exposure to harmful diesel exhaust emission.

Read the <u>Diesel exhaust emissions</u> and <u>Diesel exhaust emissions – underground coal mines</u> fact sheets.

Fatigue

Fatigue can be a significant hazard in the mining industry due to the 24-hour nature of mining operations and long working shifts. The management of fatigue at mines will be the subject of targeted assessments that will focus on how worker exposure to fatigue is prevented. Key areas that will be assessed are site processes for identification, assessment and development of risk controls for fatigue and associated risks including preventative and mitigating controls, monitoring for worker exposure and verifying the effectiveness of controls.

Targeted assessments will be carried out at underground coal mines focusing on how worker exposure to fatigue is prevented.

Read the Managing fatigue in the workplace fact sheet.

Airborne contaminants

Airborne contaminants are generated during mining activities such as extraction, drilling, crushing, hauling and stockpiling of coal and other rock containing minerals. Workers in coal mines may be exposed to both coal dust and crystalline silica, which, at the respirable fraction, can cause pneumoconiosis (in the case of coal) or silicosis (in the case of crystalline silica). Both conditions are disabling, and often result in fatal lung diseases.

Targeted assessments will continue at surface coal mines to ensure that they are employing a range of measures to control the exposure risks of workers.

Read the Airborne contaminants; Airborne contaminants – open cut coal mines fact sheets.



Fire and explosion

A fire or explosion at any workplace can have catastrophic consequences, which may result in serious injuries or the death of workers, as well as creating substantial damage to property and significant business disruption. History has shown that mine and petroleum sites are not immune to the realisation of this risk and applicable legislation has identified fire or explosion as a principal hazard, which must be addressed.

Targeted assessments will continue in underground coal and have begun in the Metex sector, to ensure that workplaces are fulfilling their statutory obligations with respect to the identification of fire or explosion hazards and the identification and implementation of risk control measures to prevent or mitigate those risks.

Read the <u>Fire and explosion risks – underground coal operations</u>; and <u>Fire and explosion – underground metalliferous mines</u> fact sheets.

Planned inspection program

The NSW Resources Regulator's planned inspection program is a considered approach to assessing how effectively a mine or petroleum site is controlling risks associated with the operation's principal hazard management plans and principal control plans. Planned inspections are based on industry and sector risk profiles and may be announced or unannounced and may occur on back shifts. Planned inspections will be carried out on the following:

Small mines

- → inspections of underground opal workings roof support and ground control
- → hazards air quality or dust or other airborne contaminants, electricity (electrocution), fire and explosion

Underground metal mines

- → ground or strata failure
- → fire or explosion
- → electricity (electrocution)
- → inundation or inrush of any substance
- → roads or other vehicle operating areas

Surface metal mines

- → roads or other vehicle operating areas
- → ground or strata failure



- → fire or explosion
- → electricity (electrocution)
- → inundation or inrush of any substance
- → explosives

Processing plants

- → air quality, dust or other airborne contaminants
- → electricity (electrocution)
- → fire or explosion
- → roads or other vehicle operating areas
- → confined space
- → working at heights
- → gas outburst (pressure vessels)
- → inundation or inrush of any substance

Underground coal mines

- → air quality, dust or other airborne contaminants
- → fire
- → explosion
- ground or strata failure
- spontaneous combustion
- → electricity (electrocution)
- → inundation or inrush of any substance
- → roads or other vehicle operating areas
- → subsidence

Surface coal mines

- → air quality, dust or other airborne contaminants
- → roads or other vehicle operating areas
- → fire or explosion
- → electricity (electrocution)
- → explosives
- → ground or strata failure



Petroleum sites

- → verification of compliance with decommissioning plans and well-workover plans (HRAs)
- → health and safety risks at legacy well sites

Compliance audits

The NSW Resources Regulator's audit program is a planned approach to assessing compliance against selected requirements of the Mining Act or WHS legislation. In addition, compliance audits assess the operational performance of mining operations and the ability of operators to implement management systems and controls to provide for sustainable and safe management of the operations.

The audit program is developed using a risk review process to identify the audit focus. A risk assessment methodology (broadly based on *AS/NZS ISO 31000:2009 Risk management – Principles and guidelines*) is used to develop a broad risk profile for each sector to facilitate the development of the audit program. The audit program will focus on:

- → community consultation requirements and reports
- → rehabilitation progress and compliance with activity approvals
- → general dip sampling cross sections of each sector
- → mining infrastructure in drinking water catchment special areas.

Investigation priorities

In addition to the priorities identified within this document, the following circumstances or allegations are priority areas for investigations.

Work health and safety obligations¹

- → work-related fatalities and serious injuries or high potential incidents where there is a risk of such outcomes
- → non-compliance with inspectors' notices or directions
- → offences against inspectors
- → offences against health and safety representatives and matters relating to entry permit holders
- → failure to notify incidents

¹ As identified in the Safe Work Australia – National Compliance and Enforcement Policy



Mining Act obligations

- → fitness to hold a mining authorisation
- → failure to pay rehabilitation security deposits
- → failure to rehabilitate land
- → false and misleading information
- → non-compliance with inspectors' notices or directions
- → offences against inspectors
- → non-compliance with title conditions
- → non-compliance with mineral claim conditions

Workshops and seminars

A key role of the NSW Resources Regulator is to ensure all operators and title holders are aware of their obligations and how to meet them. Training workshops and information sessions are used as a valuable way to engage with industry and help to maximise their compliance.

Please refer to the Resources Regulator's <u>Events calendar</u> for specific dates and locations of all workshops and seminars as they may be subject to change.

Mine safety awareness course

August and October

This course covers general safety in mining. Persons wanting to apply for a mineral claim in the Lightning Ridge mineral claims district are required to complete this course as part of their application.

Mine operators' workshop

August and October

This course covers the knowledge and skills required to be a mine operator at an opal mine, including safety policy, hazard identification, maintenance, risk management, people management, emergency response plans, and contractors.

Southern region electrical engineers' meeting

August

Meeting of electrical engineers from coal, metalliferous and extractive mines with inspectors of electrical engineering to review emerging issues and trends in the application of electrical engineering in coal, metalliferous and extractive mines. Includes review of recent incidents, site experiences in managing safety and discussions on improving electrical safety.



Hunter region electrical engineers' meeting

August

Meeting of electrical engineers from coal and extractive mines with inspectors of electrical engineering to review emerging issues and trends in the application of electrical engineering in coal and extractive mines. Includes review of recent incidents, site experiences in managing safety and discussions on improving electrical safety.

Mechanical engineering safety seminar

September 26 & 27

The annual mechanical engineering safety seminar will take place at Sofitel Sydney Wentworth in September. The theme for this year's seminar is 'Known risks, known controls'

For further information visit our <u>safety seminars</u> webpage.

Safety and Health Representative Seminar

September

This seminar is recognised as an important professional development opportunity for SSHR's. It brings together Industry Safety and Health Representatives (ISHR) and Site Safety Heath Representatives (SSHR) for a number of technical knowledge sessions, including presentations by representatives of the Resource Regulator, Investigators and selected keynote speakers.

Metals Industry Safety Advisory Committee

November

The Metalliferous Industry Safety Advisory Committee (MISAC) has been established by the regulator to share information and provide advice on safety issues within the metalliferous mining sector. MISAC consists of representatives from industry and the regulator and meets biannually.

Electrical engineering safety seminar

November 7 & 8

The annual electrical engineering safety seminar will take place at Sofitel Sydney Wentworth in November. The theme for this year's seminar is 'Back to basics'

For further information visit our <u>safety seminars</u> webpage.



Reporting compliance activities and outcomes

The NSW Resources Regulator has a strong policy of transparency and we are committed to communicating publicly about our regulatory activities. Regular reports on our activities are published in order to:

- → ensure a consistent and responsive regulatory approach; and
- → provide increased transparency and confidence in our compliance and enforcement activities.

Reports on compliance activities and programs, targeted assessment programs and compliance auditing can be found on our <u>Compliance activities and reports</u> web page. Further information can also be found in our <u>Public comment policy</u>.



Compliance activities calendar July – December 2018

| Compliance priorities | Sector | July | Aug | Sep | Oct | Nov | Dec |
|---|-------------------|------|-----|-----|-----|-----|-----|
| Drill rigs – isolation of energy | Underground metal | | | | | | |
| Articulated truck roll-overs & fall from mobile plant | All | | | | | | |
| Ground and strata control | Underground coal | | | | | | |
| Vehicle interactions | Surface Coal | | | | | | |
| Tailings Dams | All | | | | | | |
| Operational rehabilitation reforms | All | | | | | | |
| Targeted assessments | Sector | July | Aug | Sep | Oct | Nov | Dec |
| Diesel exhaust emissions | Underground coal | | | | | | |
| Fatigue | Underground coal | | | | | | |
| Airborne contaminants | Surface coal | | | | | | |
| Fire and explosion | Underground coal | | | | | | |
| Fire and explosion | Underground metal | | | | | | |
| Workshops and seminars | Sector | July | Aug | Sep | Oct | Nov | Dec |
| Mine safety awareness course | Opal mines | | | | | | |
| Mine Operators workshop | Opal mines | ' | | | | | |
| Metals Industry Safety Advisory Committee | Metal mines | · | ' | ' | ' | | |
| Southern Region Electrical Engineers meeting | All | | | | 1 | 1 | 1 |
| Hunter Region Electrical Engineers meeting | All | | | | ' | | 1 |
| Western Region Electrical Engineers meeting | All | | 1 | | | 1 | 1 |
| Electrical Engineering Safety Seminar | All | | 1 | | | | |
| Mechanical Engineering Safety Seminar | All | | 1 | | | | 1 |

