



Government of **Western Australia**
Department of **Mines and Petroleum**
Resources Safety

Resources Safety achievements and performance 2015-16

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Postal address: Mineral House, 100 Plain Street, East Perth WA 6004
Telephone: (08) 9358 8002
ResourcesSafety@dmp.wa.gov.au
www.dmp.wa.gov.au

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1 Introduction

The Department of Mines and Petroleum's Resources Safety Division is the State's specialist regulator for occupational health and safety in the minerals and petroleum sectors, and administers legislation for the safe use of dangerous goods. Resources Safety is also responsible for implementing the State Government's safety reform strategy (known as Reform and Development at Resources Safety or RADARS).

The Department's current approach to safety regulation represents a balance between promoting safety outcomes, monitoring compliance and enforcement. Under RADARS, the Department moves beyond compliance monitoring to engage with duty holders to improve their management of risk, independent of the issue of compliance.

Significant investment and growth within the mining and petroleum sectors over the past decade has required a proportionate response by Government. In order to maintain an appropriate level of safety regulatory service and implement the safety reform strategy for Resources Safety, funding is obtained through cost recovery from the relevant industry sectors.

For the mining industry, this came into effect in May 2010 through a levy imposed under the *Mines Safety and Inspection Act 1994* (MSIA) and the Mines Safety and Inspection Levy Regulations 2010. For the petroleum industry, this came into effect in January 2012 through levies imposed under the *Petroleum and Geothermal Energy Safety Levies Act 2011* and associated regulations. Cost recovery in the dangerous goods sector was implemented through increases in major hazard facility fees and user fees for explosives reserves.

This report details expenditure of the mines safety and inspection levy and the petroleum and geothermal energy safety levies. Safety inspectorate performance across the mining, petroleum and dangerous goods sectors, and achievements under the RADARS strategy, are also discussed.

The form and content of this report were determined in 2011 in consultation with the Ministerial Advisory Panel on Best Practice Safety Strategies, which comprises representatives from industry, unions and the regulator.

2 Mining safety and health

2.1 Auditing of revenue and expenditure

A Special Purpose Account holds monies collected through the Mines Safety and Inspection Levy. The monies in this account can only be used for the purpose of paying costs associated with administering and enforcing laws enshrined in the *Mines Safety and Inspection Act 1994*. Compliance with this and all other statutory and policy requirements applicable to Government funds is subject to an annual audit by the Office of the Auditor General.

2.2 Income and expenditure statement

Table 2.1 indicates income and expenditure against the Mines Safety and Inspection Levy. Full year expenditure figures are reported for the years 1 July 2010 to 30 June 2016.

Table 2.1: Income and expenditure 2010 to 2016

	2010-11 July-June ACTUALS \$'000s	2011-12 July-June ACTUALS \$'000s	2012-13 July-June ACTUALS \$'000s	2013-14 July-June ACTUALS \$'000s	2014-15 July-June ACTUALS \$'000s	2015-16 July-June ACTUALS \$'000s	2016-17 July-June BUDGET \$'000s
Opening balance	1,932	2,013	11,352	10,459	7,865	1,779	(3,696)
EXPENSES							
Salaries and Superannuation	11,473	14,346	14,353	15,168	15,702	16,321	16,536
Training and development	370	39	316	556	319	308	388
Supplies and services	4,104	4,621	4,484	4,930	4,653	7,055	6,441
Office accommodation	551	660	824	979	1,749	1,583	1,515
Depreciation	133	419	209	210	98	101	94
Other expenses	9	43	151	55	21	167	155
Corporate costs	3,583	4,651	4,799	5,317	6,677	5,502	5,419
	20,223	24,779	25,136	27,215	29,219	31,037	30,548
INCOME							
Funds raised by Levy	20,304	34,118	24,243	24,621	23,133	25,160	28,690
Balance for the period	81	9,339	(893)	(2,594)	(6,086)	(5,877)	(1,858)
Accumulated balance	2,013	11,352	10,459	7,865	1,779	(4,098)	(5,554)

2.3 Performance

Table 2.2 reports on work of the mines safety inspectorate during 2015-16. Additional functions are undertaken by the Department to meet its obligations as a safety regulator.

Table 2.2: Performance of mines safety inspectorate 2015-16

Function or activity	Indicator	Activity	Additional comment(s)
Complaints about workplace health and safety	Number of complaints received and resolved	89 formal complaints dealt with	Complaints now managed through the Safety Regulation System (SRS)
Notifiable incidents	Number of incident reports received and processed	2319 notifiable incidents received and entered into the SRS (reporting database)	All incident reports processed within agreed timeframe
Investigations	Number of investigations conducted	22 formal investigations undertaken and finalised (closed level 1 and 2 investigations)	All investigations completed within appropriate timeframes
Inspections and audits	Rate of close-out of Notices issued by inspectors	2404 site inspections carried out 404 Improvement Notices issued and 574 closed out 101 Prohibition Notices issued 221 site audits carried out 1113 formal contacts with Safety and Health Representatives by an inspector	
Approvals	Technical assessments and response concluded within 30 working days for: - Project Management Plans - Radiation Management Plans - Mechanical, Structural and Geotechnical Engineering	875 technical assessments and reviews undertaken This includes: 56 Project Management Plans 21 Radiation Management Plans 13 Classified Plant Registrations	
Training	Number of inspectors who have completed scheduled training	65 inspectors completed 285 training events 228 Certificates of Competency issued	

3 Petroleum and geothermal energy safety and health

3.1 Auditing of revenue and expenditure

A Special Purpose Account holds monies collected through the petroleum and geothermal energy safety levies. The monies in this account can only be used for the purposes of administering and enforcing laws enshrined in the *Petroleum and Geothermal Energy Safety Levies Act 2011*. Compliance with this and all other statutory and policy requirements applicable to Government funds is subject to an annual audit by the Office of the Auditor General.

3.2 Income and expenditure statement

Table 3.1 indicates income and expenditure against the Petroleum and Geothermal Energy Safety Levies. Half year expenditure figures are reported for January to June 2012 and full year expenditure figures are reported for the years 1 July 2012 to 30 June 2016.

Table 3.1: Income and expenditure 2012 to 2016

	2012 Jan-June ACTUALS \$'000s	2012-13 July-June ACTUALS \$'000s	2013-14 July-June ACTUALS \$'000s	2014-15 July-June ACTUALS \$'000s	2015-16 July-June ACTUALS \$'000s	2016-17 July-June BUDGET \$'000s
Opening balance		425	1,216	1,065	917	242
EXPENSES						
Salaries and Superannuation	1,287	2,892	3,229	2,776	2,689	2,955
Training and development	11 *	178	134	105	77	277
Supplies and services	82 *	727	330	318	596	1,229
Office accommodation	14	71	168	339	350	353
Depreciation	21	5	3	0	0	0
Other expenses	4	1	0	0	3	5
Corporate costs	559	1,052	963	1,272	1,050	990
	1,978	4,926	4,827	4,810	4,765	5,809
INCOME						
Funds raised by Levy	2,403	5,717	4,676	4,662	4,592	5,607
Balance for the period	425	791	(151)	(148)	(173)	(202)
Accumulated balance		1,216	1,065	917	744	40

3.3 Performance

Table 3.2 reports on work of the petroleum safety inspectorate during 2015-16. Additional functions are undertaken by the Department to meet its obligations as a safety regulator.

Table 3.2: Performance of petroleum safety inspectorate 2015-16

Function or activity	Indicator	Activity	Additional comment(s)
Investigations and reviewed investigations	Number of Investigations and investigations reviewed	0 formal investigations undertaken 36 investigations reviewed	All investigations reviewed within appropriate timeframes
Audits	Number of audits conducted by inspectors	40 audits completed or reviewed	See note below
Safety Case	Safety Case assessments - New	5 new safety case assessments completed	All completed within required timeframes
Safety Management System	Safety Management System assessment – New	6 new safety management system assessments completed	All completed within required timeframes
	Safety Case / Safety Management System assessment – Revised	1 revised safety case / safety management system assessments completed	All completed within required timeframes
	Safety Case / Safety Management System assessment - Maintenance	21 maintenance safety case / safety management system assessments completed	All completed within required timeframes
Training	Number of inspectors who have completed scheduled training	28 inspectors completed 89 training events	

4 Dangerous goods

4.1 Performance

Table 4.1 reports on work of the dangerous goods safety inspectorate during 2015-16. Additional functions are undertaken by the Department to meet its obligations as a safety regulator.

Table 4.1: Performance of dangerous goods safety inspectorate 2015-16

Function or activity	Indicator	Activity	Additional comment(s)
Investigations	Number of investigations conducted	105 formal investigations undertaken and finalised	All investigations completed within appropriate timeframes
	Number of major hazard facility (MHF) investigations reviewed	26 major hazard facility investigations reviewed	
Inspections and audits	Number of inspections conducted	608 site inspections conducted	
	Number of audits conducted	39 site audits conducted	
	Number of major hazard facility (MHF) inspections conducted	73 major hazard facility inspections conducted	
	Number of major hazard facility (MHF) audits reviewed	22 major hazard facility audits reviewed	
Technical assessments and reviews	<ul style="list-style-type: none"> - DG licence applications or amendments - Exemption requests - Explosives / fireworks authorisations - Explosive licence applications or amendments (all types) - Explosives management plans - Fireworks display permit applications - Major hazard facility (MHF) screenings - Security plans (SRS) - Port Special berth approvals - Transport container design approvals - Training courses and exemption requests 	<p>558 technical assessments and reviews undertaken</p> <p>8 major hazard facility technical assessments and reviews undertaken</p>	All completed within required timeframes
MHF Safety Report assessments - New/Update	Number of new/updated major hazard facility (MHF) safety report assessments conducted	11 safety report assessments conducted	All completed within required timeframes
Training	Number of inspectors who have completed scheduled training	11 inspectors, explosives reserves officers and graduate officers were provided with 44 training opportunities	

5 Achievements

Safety legislation reform

The proposed Work Health and Safety (Resources and Major Hazards) legislation consolidates resources safety provisions from six Acts and eleven sets of regulations for mining, petroleum and major hazard facilities (MHFs) into a single Act and associated set of regulations.

The resources sector increasingly uses a risk-based approach to safety and continues to introduce new technologies and innovation, and this is reflected in the proposed legislation that will be less prescriptive and more adaptable to change. While recognising industry-specific safety requirements, the legislation is being modernised to meet the needs of the WA resources sector.

The legislation is incorporating applicable elements from the national model Work Health and Safety (WHS) legislation and the National Mine Safety Framework, which should result in improved consistency between the industry sectors, as well as with the Commonwealth. The accompanying regulations will be customised for Western Australia's resources sector, and supported by codes of practice and guidance material.

The Department has maintained a full and open consultation process with industry and union stakeholders during development of the draft legislation. In 2014, the first Decision Regulatory Impact Statement (RIS) recommended consolidation of resources safety legislation for mining, petroleum and MHFs under a single regulator, the Department of Mines and Petroleum. In 2015, the second Decision RIS recommended that the Work Health and Safety (Resources) Bill be developed and considered by Parliament. A further independent RIS process, concluded in September 2016, provided consultation on content of the proposed Work Health and Safety (Resources and Major Hazards) Regulations.

It is now expected that the draft Bill will be finalised by November 2016. Following the State Election in March 2017, the elected Government will decide the timing for introducing the Bill into Parliament.

Ministerial Advisory Panel on Safety Legislation Reform

The Ministerial Advisory Panel on Safety Legislation Reform (MAP) continues to provide input into the development of the work health and safety legislation for the Western Australian resources sector.

The Panel, comprising representatives from industry, unions and the regulator, met five times in 2015-16. Meeting minutes for the Panel can be found on the Department's website at: www.dmp.wa.gov.au/Dangerous-Goods/What-is-the-Ministerial-Advisory-6539.aspx

Mining Industry Advisory Committee

The Mining Industry Advisory Committee (MIAC) comprises representatives from industry, unions and the regulator, as well as technical experts. Meeting minutes are available on the Department's website at: www.dmp.wa.gov.au/Safety/What-is-the-Mining-Industry-8578.aspx

MIAC has developed a three-year strategic plan for the 2015-2018 period. The Committee will continue to consider matters relating to occupational safety and health in the mining industry, as well as continue the development of guidance material for the mining and exploration sectors.

MIAC met five times in 2015-16 to discuss key projects and issues. Meetings covered a wide range of subjects, including:

- Government responses to the enquiry into the impact of fly in, fly out (FIFO) work on mental health
- guidance requirements for principal hazard management plans
- hazards of nano diesel particulate matter in underground mining
- mines safety statistics
- safety in design – collision avoidance
- working in isolated areas.

Three guidance documents were endorsed for publication in the year:

- Tyre safety for earth-moving machinery on Western Australian mining operations – guideline

- Safe autonomous mining in Western Australia – code of practice
- Isolation of hazardous energies associated with plant in Western Australian mining operations – guideline.

The following working groups were established to perform detailed work and provide advice and strategies to the Committee:

- Mental Health Strategies Working Group
- Nano Diesel Particulate Matter Working Group.

Safety Regulation System

During 2015-16, the Safety Regulation System (SRS) continued to be refined and enhanced. Modifications were made and new modules brought online to ensure the systems meet the needs of the inspectorate and external stakeholders.

Key deliverables and enhancements implemented during 2015-16 include:

- online site visit mine record book
- mine site combined operations structure
- ability to submit applications online for Dangerous Goods Driver Licences, Shot Firing and Explosives Driver licence types
- Dangerous Goods Safety Compliance (audits and notices) functionality
- SRS user interface review and modernisation.

Recruitment and training – building competency in safety regulation

Forty-four inspectors have been awarded the Diploma of Government (Workplace Inspection), which, until March 2016, was the national standard for government workplace inspectors. It has now been replaced with the Diploma of Government, with electives covering the inspectors' role.

In view of the proposed regulatory framework for Resources Safety, a more unified approach to training inspectors is being developed. The emphasis on customised, competency-based training benchmarked to national standards is continuing.

Diploma of Government Investigations training has been provided to subject matter expert inspectors who will lead investigations. Certificate IV in Government Investigations will be provided to all new recruits. Customised training responses to emerging issues continue, for example, psychosocial harms.

Dangerous goods safety activities

During 2015-16, following a number of incidents relating to uncontrolled releases of chlorine and ammonia gases, the Dangerous Goods and Petroleum Safety Branch (DGPSB) initiated a targeted inspection campaign on chlorine and ammonia sites to reduce the likelihood of reoccurrence.

In addition, a number of high risk sites, including explosives manufacturing plants, dangerous goods transport companies and unlicensed dangerous goods sites, were inspected.

The DGPSB recently gazetted an indigenous Dangerous Goods Officer to manage safety and compliance with the dangerous goods requirements at remote Aboriginal communities. Part of this initiative is to provide dangerous goods education and awareness opportunities to those living in the communities.

Legislation

As indicated under Safety Legislation Reform, the proposed Work Health and Safety (Resources and Major Hazards) legislation consolidates resources safety provisions for mining, petroleum and MHFs. This has necessitated the DGPSB to prepare amendments to the Dangerous Goods Regulations to remove regulation of MHFs from their legislation.

The DGPSB has developed drafting instructions for dangerous goods pipelines, and has also made significant progress on a number of key dangerous goods standards reviews, including AS 1940, AS 1596 and AS 2927, and a review of the Western Australia Dangerous Goods Storage & Handling Code of Practice.

Stakeholder Engagement

During 2015-16, the DGPSB continued to focus on engaging with stakeholders through a number of industry events and Departmental driven initiatives, including:

- the Annual West Australian Dangerous Goods Accredited Consultants Forum that saw high numbers of attendees and industry presentations
- the Australian Institute of Occupational Hygiene (AIOH) Conference, where DGPSB shared a booth with Mines Safety and presented a workshop on Dangerous Goods
- the Chief Dangerous Goods Officer being part of a conference discussion panel commenting on Globally Harmonised System of Classification and Labelling of Chemicals (GHS) in Brisbane
- taking part in the inter-agency emergency exercise conducted in the Northbridge Tunnel and on the Graham Farmer Freeway.

Publications

Resources Safety staff were involved in producing 65 publications during the year. Of particular note were the two publications:

Safe mobile autonomous mining in Western Australia

Western Australia continues to be at the forefront in the development of autonomous mining technology, with the State Government giving approval for the world's first code of practice for safe autonomous mining, which was gazetted in September 2015.

The code of practice was developed because autonomous mining systems are not specifically covered in the *Mines Safety and Inspection Act 1994* and its associated regulations. The code describes the expected safety outcomes for new or existing mobile autonomous mining systems.

Developed by the Department through a working group comprising representatives from equipment manufacturers, mining companies, technology experts and the Department, the code of practice drew the attention of international technical experts from the International Organisation for Standardisation (ISO).

Psychosocial harm audit and guide

In 2015-16, as part of the Department's ongoing mental health strategy for the resources industry, Resources Safety worked collaboratively with MIAC and psychologists to develop a psychosocial harm audit and guide for company use.

Training on psychosocial harm and its potential health and safety effects was provided to Department safety inspectors, who began auditing a wide range of companies from the resources sector. The audit program will continue into 2016-17.

This audit was designed to provide baseline data relating to the management of the risks associated with psychosocial harm in the workplace. Preliminary results will be used by the Department and industry to raise awareness and address identified issues.

Information and education forums

Resources Safety staff were involved in 141 seminars, roadshows, presentations and expos for the resources sector, attended by 5,138 people.

Know Your Hazards video series

In an effort to reduce accidents in the workplace, this safety video series aims to help supervisors and workers recognise common workplace hazards that have injured or killed people.

Launched at the 2015 Mines Safety Roadshow in October, *Down to Earth* is the second segment in the series, and tackles falls from height, which remains the number one cause of injuries in the mining industry. The first video challenges the perception of some heights being "safe" and explains the effect on the human body. In the second video, three people affected by the consequences of a fall from height share their experiences to raise awareness of the impact of workplace accidents.

The videos are freely available for sharing or download for educational purposes from the departmental website at www.dmp.wa.gov.au/Safety/Hazard-awareness-videos-16435.aspx

Radiation Management Information Session for Industry

Following the AusIMM International Uranium Conference in July 2015, mines inspectors and radiation specialists from the Department ran the Radiation Management Information Session for industry.

Over 80 radiation and field technicians, geologists and environment consultants attended the session that was organised to raise awareness of recent changes to the interpretation of radiation management plans (RMPs) after their re-alignment with legislation.

2015 Truck and Trailer Show

This biennial event was hosted by the Commercial Vehicle Industry Association, a division of the Motor Trades Association of WA, in July 2015.

Dangerous goods officers from Resources Safety attended a joint booth with Main Roads staff to answer questions on transporting dangerous goods safely. The issues covered included documentation, placarding, restraint, segregation, packaging and vehicle requirements.

ChemCentre Open Day

In August 2015, six dangerous goods officers attended the 'Heroes and Hazards' stand to help raise community awareness of the safe management of commonly available dangerous goods such as pool chlorine and LP gas bottles.

Registered Managers Forum

In August 2015, the Department conducted the inaugural Registered Managers Forum as an opportunity to assemble management from organisations from the mining sector to contribute to the development of appropriate strategies.

Almost one hundred managers attended the forum, which covered topics such as:

- Safety performance of Western Australia's mining industry
- The legislative horizon and its effect on management of safety
- How to drive positive safety cultural change.

The Department plans to hold this forum annually to complement the Mines Safety Roadshow, which targets safety and health representatives, supervisors, safety officers and other workers.

2015 Structural Integrity Forum

In September 2015, the Department held its first structural integrity industry forum targeting engineers, registered managers and asset managers involved in structural integrity in the mining industry. There were 151 attendees.

This forum covered topics including:

- controlling risk of exposure to hazards throughout the life cycle of structures
- due diligence or precautionary approaches to structural integrity management
- risk-based approaches that may be adopted by the mining industry to prevent structural failure
- statutory requirements to control risk of exposure to hazards at all stages of the life cycle of plant structures – design, construction, operation and demolition.

2015 Mines Safety Roadshow

The 2015 Mines Safety Roadshow, held during October, was the eleventh in an annual series presented by Resources Safety. The program provided an update on mines safety and health in Western Australia from both a regulatory and industry perspective. The main focus was on the risks associated with height and the selection of appropriate controls, and was not only about working at height, but included falls from height (both high and low), rock falls and fall of ground.

More than 550 industry participants attended 11 sessions at eight locations across the State, including Bunbury, Geraldton, Kalgoorlie, Karratha, Mandurah, Newman, Perth and Port Hedland. The number of sessions at some locations was increased to accommodate industry interest while allowing improved interaction between participants.

Forum for Accommodation Providers in the Minerals Industry

In April 2016, Resources Safety held its inaugural forum for accommodation providers in the minerals industry, with 82 attendees.

This forum was used to launch the draft *Mining infrastructure village checklist* that was developed to improve consistency in village accommodation in the mining industry and encourage operators to achieve minimum legal requirements and provide good practice examples.

This specialised information forum for owner operators and contractors providing accommodation facilities for the mining industry was organised to:

- raise awareness that accommodation villages and exploration camps fall under the MSIA and not the *Occupational Safety and Health Act 1984* (OSH Act)
- raise awareness on the new mining infrastructure checklist for auditing villages
- describe how to apply the hierarchy of control when addressing risks
- discuss health and safety obligations for accommodation villages and exploration camps.

Human Factors Forum for Petroleum and MHF Operators

In April 2016, Resources Safety held the first human factors industry forum in Perth. Operational leaders, operational safety and health professionals, contractors, safety and risk professionals, design engineers, occupational nurses and ergonomists, human factor engineers, and incident investigation professionals were encouraged to attend. There were 131 attendees.

The information session focused on:

- raising awareness of human factors and their role in safety outcomes
- providing information on the ways in which organisational, individual and job factors influence human reliability
- addressing how organisations can minimise or optimise the effect of these factors to:
 - assist in the prevention and mitigation of hazardous events
 - drive continuous improvements in safety, integrity, leadership and performance outcomes through integration into the safety case.