

Mine Safety

NSW Mine Safety Summary Performance Report

2014-2015

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NSW Mine Safety Summary Performance Report

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More information

- 1. Refer to Appendix 8 for sources of data.
- 2. Frequency rates are per million hours worked.
- 3. Data is as at 30 October 2015.
- 4. All data is subject to continuous improvement due to internal audit and validation processes and updates from external sources. Incorrectly classified information from past years is sometimes found and reclassified in source databases. NSW Department of Industry reporting employs the best available data at the time, which may differ from previously published figures. Workforce and lost time injury figures, which are used to produce frequency rates, may include some estimation and cross-referencing to external sources where data is incomplete or unavailable.

www.resourcesandenergy.nsw.gov.au/info/safety

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (January 2016). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the NSW Department of Industry, Skills and Regional Development or the user's independent advisor.

Contents

DEF	FINITIONS	
	Injury classifications	
	Frequency rates Enforcement and Advice Notices	6
Tori	rminology	
	ecutive summary	
1.	Introduction	
	Mines	
2.		
3.	Hours worked	
4.	Fatalities	
	4.1. Fatalities by sector	
	4.3. Metalliferous & extractives fatalities since 1989-90	20
	4.4. Annual fatal injury frequency rate (FIFR)	21
	4.5. Five year average fatal injury frequency rate (FIFR)	
5.	Lost time injuries (LTIs)	
	5.1. Lost time injuries by sector	
	5.2. Annual lost time injury frequency rate (LTIFR)	2323 24
6.	Total recordable injuries (TRIs)	
0.	6.1. Total recordable injuries by sector	
	6.2. Total recordable injuries by injury type	
	6.3. Annual total recordable Injury frequency rate (TRIFR)	29
7.	Serious bodily injuries (SBIs)	
	7.1. Serious bodily injuries by sector	
	7.2. Annual serious bodily injury frequency rate (SBIFR)	32 22
	7.4. Serious bodily injuries by event subtype	
	7.5. Serious bodily injuries by mechanism	
	7.6. Serious bodily injuries by agency	
	7.7. Serious bodily injuries by nature of injury	
	7.8. Serious bodily injuries by bodily location	
	7.10. Serious bodily injuries by employment type	41
8.	Injuries with a notifiable outcome	
	8.1. Notifiable injury outcomes by injury outcome	43
	8.2. Injuries with a notifiable outcome by event subtype	
	8.3. Injuries with a notifiable outcome by mechanism	
	8.5. Injuries with a notifiable outcome by agency	40 49
	8.6. Injuries with a notifiable outcome by bodily location	
	8.7. Injuries with a notifiable outcome by age group	53
	8.8. Injuries with a notifiable outcome by employment type	
9.	Notifiable incidents	
	9.1. All Notifiable incidents	
	9.3. Metalliferous notifiable incidents	
	9.4. Extractives notifiable incidents	62
	9.5. Non-coal other notifiable incidents	
	9.6. Petroleum notifiable incidents	
10.		
11.		
12.		
	12.1. Assessments by sector	
13.	•	
13.	13.1. Notices by sector	
	13.3. Notices by notice category	
App	pendices – Additional information	
	Appendix 1 Mine types and mine operation types	80
	Appendix 2 Incident event subtypes	
	Appendix 3 Incident types and relevant legislation	82

Appendix 4	Serious bodily injury types and relevant legislation	83
Appendix 5	Notifiable injury outcomes and relevant legislation	84
Appendix 6	Assessment event subtypes	
Appendix 7	Enforcement and advice/improvement notice categories and relevant legislation	
Appendix 8	Sources of data	89

Figures

,	0 1 11 1 2010 11 10011 15	
Figure 1	Comparison of key performance indicators 2013-14 and 2014-15	
Figure 2	Number of Mines by Mining Sector and Mine Operation Type June 2015	13
Figure 3	Coal, Metalliferous & Extractives hours worked 2005-06 to 2014-15	1/
Figure 4	Coal hours worked 2005-06 to 2014-15	
Figure 5	Coal underground hours worked 2005-06 to 2014-15	15
Figure 6	Coal surface hours worked 2005-06 to 2014-15	16
Figure 7	Metalliferous & Extractives hours worked 2005-06 to 2014-15	
Figure 8	Metalliferous hours worked 2005-06 to 2014-15	
Figure 9	Extractives hours worked 2005-06 to 2014-15	
Figure 10	All fatalities by sector 2005-06 to 2014-15	18
Figure 11	NSW Coal fatalities 1900 to 2014-15	
	NSW Metalliferous & Extractives fatalities 1989-90 to 2014-15	00
Figure 12		
Figure 13	Coal, Metalliferous & Extractives annual fatal injury frequency rate (FIFR) 2005-06 to 2014-15	21
Figure 14	Coal, Metalliferous & Extractives Mining 5 year average fatal injury frequency rate (FIFR) 2005-06 to 2014-15	21
Figure 15	Coal, Metalliferous & Extractives lost time injuries by sector 2005-06 to 2014-15	22
Figure 16	Coal, Metalliferous & Extractives annual lost time injury frequency rate (LTIFR) 2005-06 to 2014-15	
Figure 17	Coal Annual Lost Time Injury Frequency Rate (LTIFR) 2005-06 to 2014-15	23
Figure 18	Metalliferous and Extractives Annual Lost Time Injury Frequency Rate (LTIFR) 2005-06 to 2014-15	24
Figure 19	Coal, Metalliferous & Extractives Mining 5 year average lost time injury frequency rate (LTIFR) 2005-06 to 2014-15	
Ciaura 20	Coal Mining E year gyers at least time injury frequency rate (LTIED) 2005 OC to 2014 15	25
Figure 20	Coal Mining 5 year average lost time injury frequency rate (LTIFR) 2005-06 to 2014-15	25
Figure 21	Metalliferous & Extractives Mining 5 year average lost time injury frequency rate (LTIFR) 2005-06 to 2014-15	25
Figure 22	Coal, Metalliferous & Extractives total recordable injuries (TRIs) by sector 2007-08 to 2014-15	26
Figure 23	NSW Coal, Metalliferous & Extractives total recordable injuries (TRIs) by injury type 2007-08 to 2014-15	
Figure 24	Coal total recordable injuries (TRIs) by injury type 2007-08 to 2014-15	27
	Coal total recordable injuries (TRIS) by injury type 2007-06 to 2014-15.	21
Figure 25	Metalliferous Total Recordable Injuries (TRIs) by Injury Type 2008-09 to 2014-15	
Figure 26	Extractives Total Recordable Injuries (TRIs) by Injury Type 2008-09 to 2014-15	28
Figure 27	Coal, Metalliferous & Extractives annual total recordable injury frequency rate (TRIFR) 2007-08 to 2014-15	
F: 20		
Figure 28	Coal annual total recordable injury frequency rate (TRIFR) 2007-08 to 2014-15	29
Figure 29	Metalliferous & Extractives annual total recordable injury frequency rate (TRIFR) 2007-08 to 2014-15	30
Figure 30	Coal, Metalliferous & Extractives serious bodily injuries by sector 2005-06 to 2014-15	31
Figure 31	Coal, Metalliferous & Extractives annual serious bodily injury frequency rate (SBIFR) 2005-06 to 2014-15	
Figure 32	Coal annual serious bodily injury frequency rate (SBIFR) 2005-06 to 2014-15	
		32
Figure 33	Metalliferous and Extractives annual serious bodily injury frequency rate (SBIFR) 2005-06 to 2014-15	33
Figure 34	Coal, Metalliferous & Extractives Mining 5 year average serious bodily injury frequency rate (SBIFR) 2005-06 to 2014-15	33
Figure 35	Coal 5 year average serious bodily injury frequency rate (SBIFR) 2005-06 to 2014-15	34
Figure 36	Metalliferous and Extractives 5 year average serious bodily injury frequency rate (SBIFR) 2005-06 to	
- : 0-	2014-15	34
Figure 37	Serious bodily injuries by event subtype 2005-06 to 2014-15	
Figure 38	Serious bodily injuries by event subtype 2012-13 to 2014-15	35
Figure 39	Serious bodily injuries by mechanism 2005-06 to 2014-15	36
Figure 40	Serious bodily injuries by mechanism 2012-13 to 2014-15	38
	Octions be difficultied by meeting 1005 004 0044 45	27
Figure 41	Serious bodily injuries by agency 2005-06 to 2014-15	
Figure 42	Serious bodily injuries by agency 2012-13 to 2014-15	
Figure 43	Serious bodily injuries by nature of injury 2005-06 to 2014-15	38
Figure 44	Serious bodily injuries by nature of injury 2012-13 to 2014-15	
	Serious bodily injuries by bodily location 2005-06 to 2014-15	20
Figure 45		
Figure 46	Serious bodily injuries by bodily location 2012-13 to 2014-15	
Figure 47	Serious bodily injuries by age group 2005-06 to 2014-15	40
Figure 48	Serious bodily injuries by age group 2012-13 to 2014-15	
Figure 49	Serious bodily injuries by employment type 2005-06 to 2014-15	//1
Figure 50	Serious bodily injuries by employment type 2012-13 to 2014-15	
Figure 51	Coal and Non-coal (excl Petroleum) injuries with a notifiable outcome by sector 2006-07 to 2014-15	42
Figure 52	Coal and Non-coal (excl Petroleum) notifiable injury outcomes 2006-07 to 2014-15	
Figure 53	Coal notifiable injury outcomes mid 2006-07 to 2014-15	
•	Ooal Holinable Injury Outcomes thin 2000-07 to 2014-10	+3
Figure 54	Matallifanassa matifiala la la la la matalanasa Onda manda 20000 004 2004 4.45	
•	Metalliferous notifiable injury outcomes 2nd quarter 2008-09 to 2014-15	
Figure 55	Extractives notifiable injury outcomes 2nd quarter 2008-09 to 2014-15	44
Figure 55	Extractives notifiable injury outcomes 2nd quarter 2008-09 to 2014-15	44
Figure 55 Figure 56	Extractives notifiable injury outcomes 2nd quarter 2008-09 to 2014-15	44 45
Figure 55	Extractives notifiable injury outcomes 2nd quarter 2008-09 to 2014-15	44 45 45

Figure 59	Injuries with a notifiable outcome by mechanism 2012-13 to 2014-15	47
Figure 60	Injuries with a notifiable outcome by agency 2006-07 to 2014-15	48
Figure 61	Injuries with a notifiable outcome by agency 2012-13 to 2014-15	48
Figure 62	Injuries with a notifiable outcome by nature of injury 2006-07 to 2014-15	
Figure 63	Injuries with a notifiable outcome by nature of injury 2012-13 to 2014-15	50
Figure 64	Injuries with a notifiable outcome by bodily location 2006-07 to 2014-15	51
Figure 65	Injuries with a notifiable outcome by bodily location 2012-13 to 2014-15	51
Figure 66	Injuries with a notifiable outcome by age group 2006-07 to 2014-15	53
Figure 67	Injuries with a notifiable outcome by age group 2012-13 to 2014-15	53
Figure 68	Injuries with a notifiable outcome by employment type 2006-07 to 2014-15	54
Figure 69	Injuries with a notifiable outcome by employment type 2012-13 to 2014-15	54
Figure 70	All notifiable incidents by sector 2005-06 to 2014-15	55
Figure 71	All notifiable incidents by investigation level 2005-06 to 2014-15	
Figure 72	All notifiable incidents by event subtype 2005-06 to 2014-15	56
Figure 72	All notifiable incidents by 2014-15 top 10 categories 2005-06 to 2014-15	
Figure 75	Coal notifiable incidents by operation type 2005-06 to 2014-15	
Figure 76	Coal notifiable incidents by investigation level 2005-06 to 2014-15	
Figure 77	Coal notifiable incidents by event subtype 2005-06 to 2014-15	
Figure 72	Coal notifiable incidents by 2014-15 top 10 categories 2005-06 to 2014-15	
Figure 79	Metalliferous notifiable incidents by operation type 2005-06 to 2014-15	60
Figure 80	Metalliferous notifiable incidents by investigation level 2005-06 to 2014-15	60
Figure 81	Metalliferous notifiable incidents by event subtype 2005-06 to 2014-15	61
Figure 72	Metalliferous notifiable incidents by 2014-15 top 10 categories 2005-06 to 2014-15	
Figure 83	Extractives notifiable incidents by investigation level 2005-06 to 2014-15	62
Figure 84	Extractives notifiable incidents by event subtype 2005-06 to 2014-15	62
Figure 72	Extractives notifiable incidents by 2014-15 top 10 categories 2005-06 to 2014-15	
Figure 86	Non-Coal Other notifiable incidents by investigation level 2005-06 to 2014-15	
Figure 87	Non-Coal Other notifiable incidents by event subtype 2005-06 to 2014-15	
Figure 88	Petroleum notifiable incidents by investigation level 2005-06 to 2014-15	
Figure 89	Petroleum incidents by event subtype 2005-06 to 2014-15	
Figure 90	Non-Notifiable incidents by sector 2005-06 to 2014-15	
Figure 91	Non-Notifiable incidents by investigation level 2005-06 to 2014-15	
Figure 92	Non-notifiable incidents by event subtype 2005-06 to 2014-15	
Figure 93	Complaints by sector 2005-06 to 2014-15	
Figure 94	Complaints by investigation level 2005-06 to 2014-15	
Figure 95	Complaints by event subtype 2005-06 to 2014-15	69
Figure 96	All assessments by sector 2005-06 to 2014-15	70
Figure 97		
Figure 98	Coal assessments by event subtype 2005-06 to 2014-15	
Figure 99		
Figure 100	Extractives assessments by event subtype 2005-06 to 2014-15	12 72
Figure 101	Non-Mine assessments by event subtype 2005-06 to 2014-15	
Figure 102	Petroleum assessments by event subtype 2005-06 to 2014-15	13 71
Figure 103 Figure 104	All notices by sector 2005-06 to 2014-15	
Figure 104	All notices by notice category 2005-06 to 2014-15	75 76
Figure 106	Coal notices by notice category 2005-06 to 2014-15	
Figure 107	Metalliferous notices by notice category 2005-06 to 2014-15	
Figure 108	Extractives notices by category 2005-06 to 2014-15	, , 77
Figure 109	Non-Coal Other notices by category 2005-06 to 2014-15	
Figure 110	Non-Mine notices by category 2005-06 to 2014-15	
Figure 111	Petroleum notices by category 2005-06 to 2014-15	
Figure 112	Mine types	
Figure 113	Mine operation types	
Figure 114	incident event subtypes	
Figure 115	Incident types under former and current legislation	82
Figure 116	Coal and Non-Coal serious bodily injury (SBI)/serious injury (SI) clauses under former and current	
	legislation	83
Figure 117	Petroleum (Onshore) serious injury (SI) clauses under current legislation	
Figure 118	Notifiable injury outcomes under former and current legislation	
Figure 119	Assessment event subtypes	
Figure 120	Enforcement and advice/improvement notice categories and types under former and current	
J =	legislation	88
Figure 121	Sources of data	

DEFINITIONS

Injury classifications

Fatal Injury (FI)	An injury that results in death.
Lost Time Injury (LTI)	An injury that results in a minimum of one full shift's absence (AS1885.1 – 1990).
Restricted Duty Injury (RDI)	An injury resulting in the injured person returning to alternative/restricted duties.
Medical Treatment Injury (MTI)	An injury requiring medical treatment.
Total Recordable Injuries (TRI)	The total number of fatal injuries, lost time injuries, restricted duty injuries and medical treatment injuries
Serious Bodily Injury (SBI)	An injury whose nature of injury is notifiable under the relevant legislation is classified as a Serious Bodily Injury (SBI) in this report.
	Refer to Appendix 4 for details of serious bodily injury types and relevant legislation.
Notifiable Injury Outcomes	An injury may result in one or more of the following notifiable injury outcomes:
	Fatality
	 At least seven days of lost time and/or alternative duties
	 Medical treatment
	 Hospital inpatient admission
	 Entrapment
	 Loss of consciousness
	Refer to Appendix 5 for details of notifiable injury outcomes and relevant legislation.

Frequency rates

Fatal Injury Frequency Rate (FIFR)	The number of fatal injuries per million hours worked
Lost Time Injury Frequency Rate (LTIFR)	The number of lost time injuries per million hours worked
Serious Bodily Injury Frequency Rate (SBIFR)	The number of serious bodily injuries per million hours worked.
Total Recordable Injury Frequency Rate (TRIFR)	The total number of fatal injuries, lost time injuries, medical treatment injuries and restricted duty injuries per million hours worked.
Five-Year Average	A statistical technique which charts the average annual value for the last five years. It enables a long-term trend to be produced directly from raw data even where it varies widely from year to year.
	Note: Frequency rates in this report are provided for the coal, metalliferous and extractives sectors only, as hours worked cannot be reliably sourced for the non-coal other and petroleum (onshore) sectors.

Enforcement and advice notices

Advice/Improvement notice	Notice bringing concerns regarding health, safety or welfare to the attention of operators and Improvement notices.
Prohibition notice	Notice imposing a prohibition, restriction or direction to evacuate or close a mine.
Investigation notice	Notice requiring stoppage of plant or non- disturbance of premises or in regard to the removal of any item or obtaining of information /documents/evidence by an inspector
Explosives notice	Notice regarding certain powers of inspectors in relation to explosives.

Refer to Appendix 7 for details of enforcement and advice/improvement notice categories and relevant legislation.

Terminology

Event	Notifications from mines and mine safety activities involving mines/mining organisations are recorded as events.
Event type	This report covers incident and assessment events.
Event subtype	The event subtype reflects the general hazard area related to an incident event or the scope of an assessment event.
	Refer to Appendix 2 for details of incident event subtypes and Appendix 6 for details of assessment event subtypes.
Incident	An occurrence that was required to be notified to NSW Department of Industry under the relevant legislation, or a non-notifiable matter which has been reported, such as a NEC or complaint.
Notifiable incident	An incident where the incident cause, nature of injury and/or injury outcome requires notification to NSW Department of Industry according to the relevant legislation.
Non-notifiable incident – NEC	An incident where the incident cause, nature of injury and/or injury outcome does not require notification according to the relevant legislation. i.e. NEC or complaint.
Incident Type	For a notifiable incident, the incident type identifies the clause of the relevant legislation relating to the 'cause' of the incident e.g. WHSMR 2014 CI 179(a) Dangerous Incident.
	For a non-notifiable incident, the incident type will be either NEC or complaint.
	Refer to Appendix 3 for details of incident types and relevant legislation
Incident subtype	For a notifiable incident, the incident subtype identifies the sub-clause of the relevant legislation relating to the 'cause' of the incident e.g. CMHSR 2006 Clause 55(j).
	When the cause of an incident is not notifiable, but the nature of injury and/or outcome of the injury is notifiable, the incident is recorded with an incident type of "non-specific accident ending in fatality/injury" and an incident subtype of "notifiable injury/outcome".
	For a non-notifiable incident, the incident sub-type further identifies the nature of the NEC or complaint.

Incident category	A grouping of incident subtypes
Incident investigation level	All incidents are investigated by an inspector or Mine Safety officer. An Incident Investigation Level is then assigned to an incident in order to trigger a follow-up site investigation where necessary:
	 Level 1 – No need to attend. Mine to investigate and report.
	 Level 2 – Official to attend mine.
	 Level 3 – Detailed investigation suitable for further action.
Assessment	An assessment is an inspection, audit, assessment or review by an NSW Department of Industry inspector or Mine Safety officer of compliance with relevant legislation, standards, codes, guidance or advice.
Mine type	The mine type identifies the mining sector e.g. coal, metalliferous, extractives.
	Refer to Appendix 1 for details of mine types, mining sectors and operation types
Mine operation type	The operation type identifies the nature of the mining work e.g. underground, open cut, processing.
	All operations types other than underground are considered to be surface operations.
	Note that in this report, both surface and underground activity occurring at an underground operation, is considered as underground activity.
	Refer to Appendix 1 for details of mine types, mining sectors and operation types.

Executive summary

This report summarises the incidents and injuries notified to NSW Department of Industry by the NSW mining and extractives industry, and the assessments conducted and enforcements and advice issued by the NSW Mine Safety inspectorate in the 2014-2015 financial year, set against a decade of data.

It classifies data into the coal, metalliferous, extractives, non-coal other and petroleum (onshore) mining sectors, and into underground and surface operations. It also analyses serious bodily injuries and injury outcomes by mechanism, agency, nature of injury, bodily location, age group and employment type.

The report provides annual and five-year rolling average frequency rates for fatalities, lost time injuries and serious bodily injuries, annual frequency rates for total recordable injuries and documents the growth of the mining workforce based on the number of hours worked as notified each quarter by mine operators in the coal, metalliferous and extractives sectors.

Key performance - comparison of 2014-15 to 2013-14

Hours worked:

• Coal sector hours worked decreased by 14.7%, metalliferous sector hours worked decreased by 17.7% and extractives sector hours worked decreased by 3.5%

Fatalities:

- There were two fatalities in the extractives surface sector
- The five-year average fatal injury frequency rate remained constant for coal and metalliferous, but increased for extractives and overall, the five-year average fatal injury frequency rate (FIFR) increased by 33%.

Lost time injuries:

Although the number of LTIs increased 15% from 295 to 340, the overall five-year average frequency rate of lost time injuries continued the downward trend of the past decade and reached a record low of 5.06.

Total recordable injuries

• The number of TRIs decreased 15.5% from 1243 to 1050

Serious bodily injuries:

- The number of serious bodily injuries increased 75% from 29 to 51
- The five year average serious bodily injury frequency rate (SBIFR) increased slightly by 1.6% to 0.63

Both national OHS strategy targets, to reduce fatalities by 20% and serious injuries by 40% in the 10 years 2005-06 to 2014-2015, were achieved. Similar 10-year targets to 2022 have been set.

Injury characteristics:

Serious bodily injuries were again predominantly associated with people falling, and fractures were the most common nature of injury. The majority of serious bodily injuries were to direct mine employees, two-thirds occurred in underground operations and most were related to the work environment or mobile mechanical plant.

The most common causes of injuries with notifiable outcomes (mainly hospital inpatient admission or seven days of lost time and/or alternative duties) were muscular stressing, falls (including slips and trips) or being hit by moving or falling objects. The most common natures of injury were sprains and strains. Hand and finger injuries featured prominently, 73% occurred in underground operations and the majority were related to either the work environment.

Incidents:

• The number of notifiable incidents decreased 18% from 2596 to 2126

Assessments:

• The number of assessments increased 24% from 2164 to 2689

Notices:

- The number of notices increased 17.8% from 1190 to 1402
- 89% of notices issued were advice/improvement notices

Figure 1 Comparison of key performance indicators 2013-14 and 2014-15

Key Performance	Coal Und	Coal Underground	Coal S	Coal Surface	Coal Total	Total	Metalliferous Underground	erous	Metalliferous Surface	us Surface	Me talliferous Total	ous Total	Extractives	tives	Total	ial
Indicators	2013-14	2014-15	2013-14	2014-15	2013-14	2014-15	2013-14	2014-15	2013-14	2014-15	2013-14	2014-15	2013-14	2014-15	2013-14	2014-15
Million hours worked	18,998,770	13,302,421	29,103,472	27,733,899	48,102,242	41,036,320	11,812,653	9,952,636	2,601,261	1,917,058	14,413,914	11,869,694	5,120,544	4,942,107	67,636,700	57,848,121
Fatalities	2	0	2	0	4	0	1	0	0	0	1	0	0	2	2	2
LTIs	161	137	55	80	216	217	21	48	7	9	28	24	51	69	295	340
RDIs	318	198	<i>L</i> 9	89	385	266	139	108	10	9	149	114	70	61	604	441
MTIs	160	113	48	41	208	154	75	88	4	Н	79	29	52	54	339	267
TRIS	641	448	172	189	813	637	236	214	21	13	257	722	173	186	1,243	1,050
SBIs	14	21	2	13	19	34	17	7	4	П	22	_∞	5	2	29	47
FIFR	0.11	0.00	0.07	0.00	0.08	0.00	0.08	0.00	0.00	0.00	0.07	00:00	0.00	0.40	0.07	0.03
LTIFR	8.47	10.30	1.89	2.88	4.49	5.29	1.78	4.82	5.69	3.13	1.94	4.55	96.6	13.96	4.36	5.88
TRIFR	33.74	33.68	5.91	6.81	16.90	15.52	19.98	21.50	8.07	6.78	17.83	19.12	33.79	37.64	18.38	18.15
SBIFR	0.74	1.58	0.17	0.47	0.39	0.83	0.08	0.70	1.54	0.52	0.35	0.67	0.98	1.01	0.43	0.81
FIFR 5 Yr Average	0.03	0.03	0.01	0.01	0.02	0.02	0.04	0.04	0.00	0.00	0.03	0.03	00:00	0.08	0.02	0.03
LTIFR 5 Yr Average	9.55	9.27	2.51	2.44	5.47	5.10	3.07	2.93	1.91	5.09	2.63	2.67	11.17	11.72	5.26	5.06
SBIFR 5 Yr Average	1.06	1.13	0.32	0.32	0.63	0.63	0.45	0.48	0.71	0.71	0.49	0.51	0.83	0.88	0.62	0.63
Notifiable Incidents	1639	1350	929	446	7722	1796	159	162	48	37	207	199	103	128	2587	2123
Assessments	593	719	392	603	985	1322	178	211	29	89	237	279	764	668	1986	2500
Notices	421	525	230	254	651	779	52	29	23	56	27	82	439	512	1165	1373

1. Introduction

This report provides a breakdown of hours worked, fatalities, lost time injuries, total recordable injuries, serious bodily injuries and injury outcomes that were notified to NSW Department of Industry by the NSW mining and extractives industry.

It includes annual frequency rates for fatalities, lost time injuries and serious bodily injuries and corresponding five year average frequency rates.

The report also includes a breakdown of incidents, assessments and enforcement and advice notices issued by NSW Department of Industry.

Important note regarding the source of hours worked, lost time injuries and frequency rates

Coal hours worked and lost time injuries were sourced from Coal Services Pty Ltd until 2006-07 and from Quarterly Workplace Injury Reports reported to NSW Department of Industry from 2007-08 onwards.

Metalliferous and extractives hours worked and lost time injuries were compiled from several sources (see Appendix 6) until 2008-09 and included some estimation. From 2009-10, metalliferous and extractives hours worked, lost time injuries, medical treatment injuries and restricted duty injuries are sourced from Quarterly Workplace Injury Reports as supplied to NSW Department of Industry.

It is thought likely that mines under-report lost time injuries to non-employees such as contractors, unless the injured worker's external employer has advised the mine of any lost time.

These factors should be considered when comparing lost time injuries before and after the change in the method of data collection.

Note that in order to ensure accuracy, hours worked and frequency rates are only updated for a complete financial year following an annual audit of quarterly workplace injury data.

2. Mines

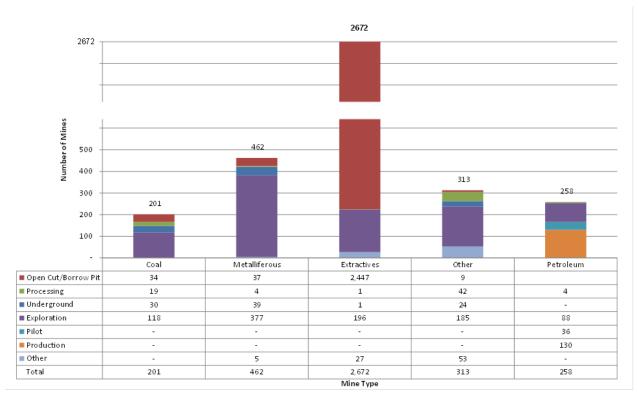
This section reports the numbers of open, and intermittently open, mines that are overseen by the NSW Department of Industry and recorded in the Mine Safety database.

For administrative purposes, the number of small mines and quarries recorded in the Mine Safety database may vary slightly from the actual number of operational small mines and quarries.

At June 2015, there were also approximately 3288 opal claims, including 800 residential claims, registered in NSW, of which fewer than 1000 were worked during a typical year. These were not included in the number of mines below.

Refer to Appendix 1 for definitions of mine types, mining sectors, and mine operation types.

Number of mines by mining sector and mine operation type June 2015



Refer to Appendix 1 for details of mine types, mining sectors and mine operation types

3. Hours worked

This section provides details of hours worked in the coal, metalliferous and extractives mining sectors only, as hours worked cannot be reliably sourced for the non-coal other and petroleum (onshore) mining sectors.

Due to legislative changes, these details became reportable to NSW Department of Industry on Quarterly Workplace Injury Reports for coal, from the beginning of 2007-08 and for non-coal, from the second quarter of 2008-09.

Figure 3 Coal, metalliferous and extractives hours worked 2005-06 to 2014-15

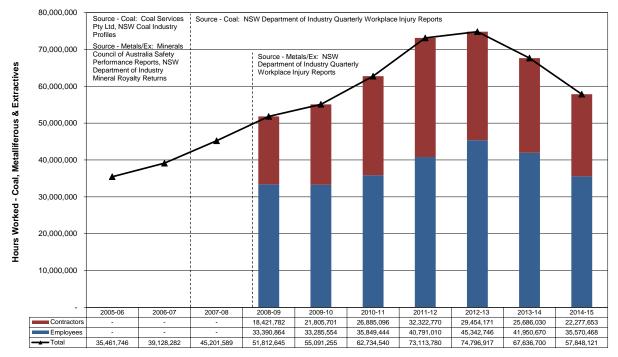


Figure 4 Coal hours worked 2005-06 to 2014-15

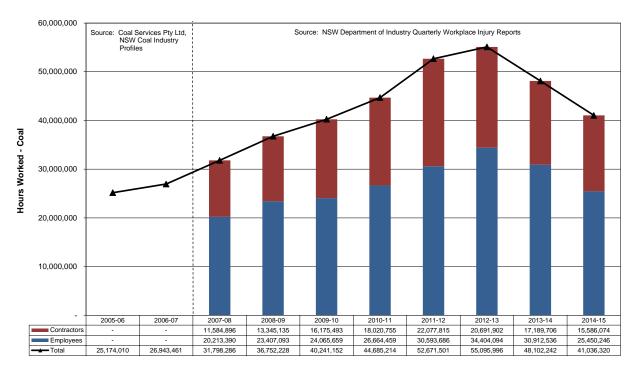


Figure 5 Coal underground hours worked 2005-06 to 2014-15

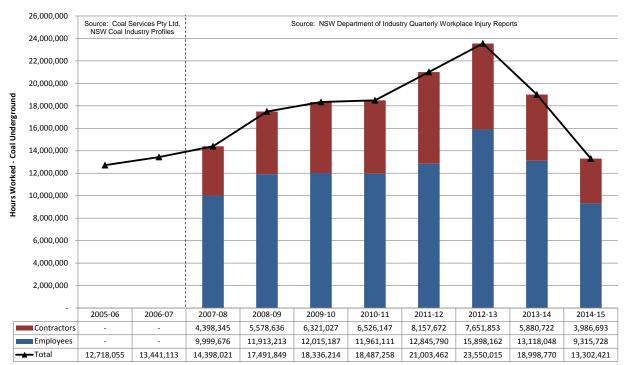


Figure 6 Coal surface hours worked 2005-06 to 2014-15

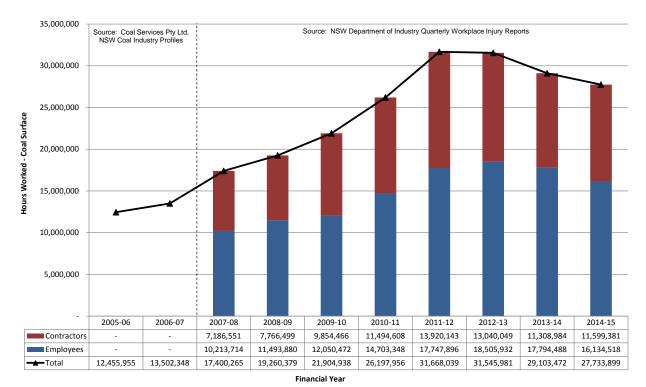


Figure 7 Metalliferous and extractives hours worked 2005-06 to 2014-15

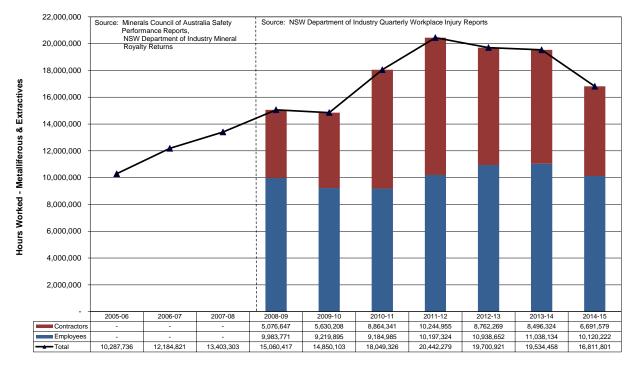


Figure 8 Metalliferous hours worked 2005-06 to 2014-15

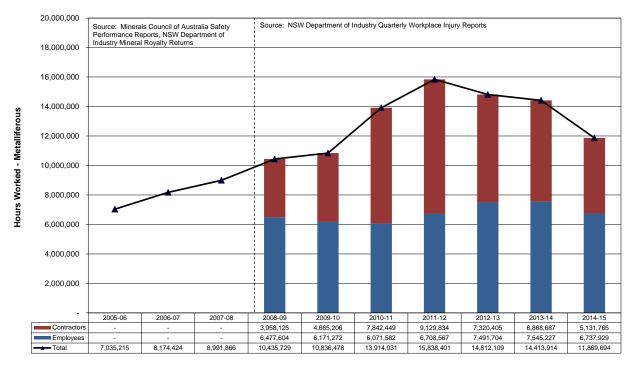
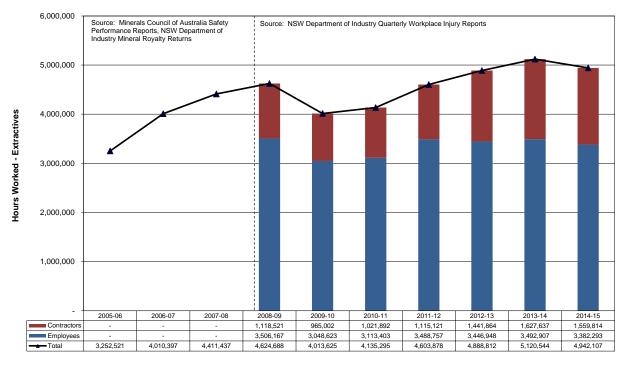


Figure 9 Extractives hours worked 2005-06 to 2014-15



4. Fatalities

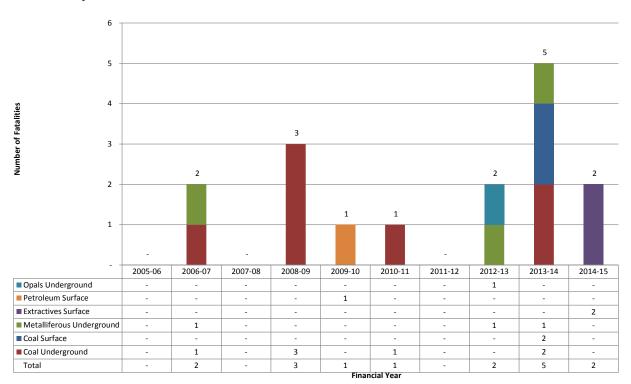
This section provides a breakdown of fatalities in the NSW mining and extractives industry.

While the coal and metalliferous sectors were fatality free in 2014-15, there were two fatalities in the extractives surface sector.

- 27 August 2014 A resident was electrocuted after coming into contact with an energised water tap. The residence was supplied with electricity from a nearby quarry. It was identified that the neutral-earth link at the quarry's main switchboard was not fitted, resulting in an increase in the earth fault loop impedance from the motor of the crushing plant to the supply transformer. Subsequently, an earth fault on the drive motor cable has resulted in a rise of voltage of the neutral conductors at the quarry and the residence. This rise in voltage also appeared on bonded metal work within the residence such as water pipes and taps. Earth leakage protection at the quarry did not operate at the time of the fault.
- 9 September 2014 An excavator operator was using a track-type hydraulic excavator above a quarry bench. The excavator was on uneven ground with a cross gradient. The excavator tipped over resulting in the death of the operator.

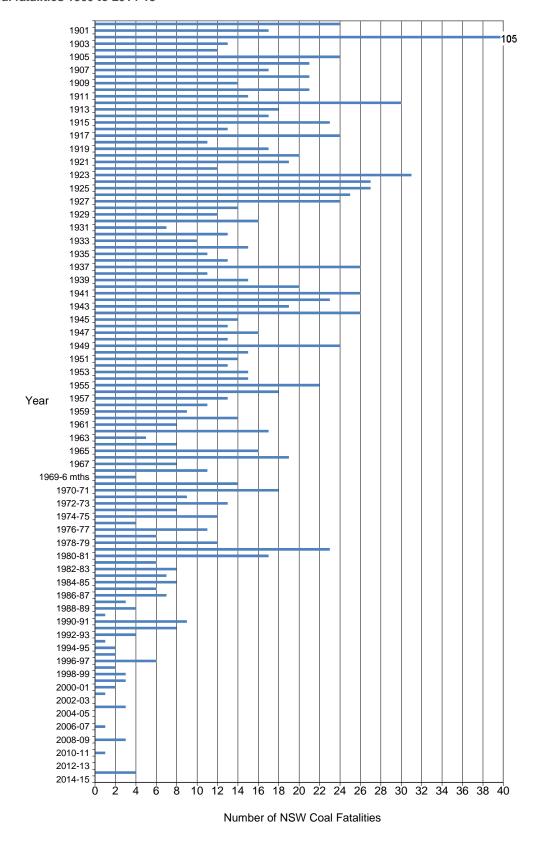
4.1. **Fatalities by sector**

Figure 10 All fatalities by sector 2005-06 to 2014-15



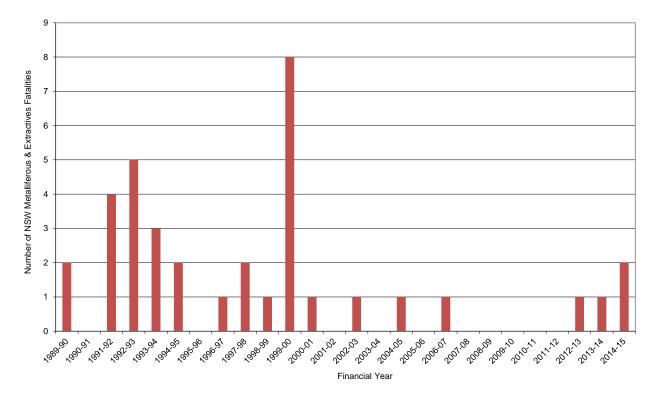
Coal fatalities since 1900 4.2.

Figure 11 NSW Coal fatalities 1900 to 2014-15



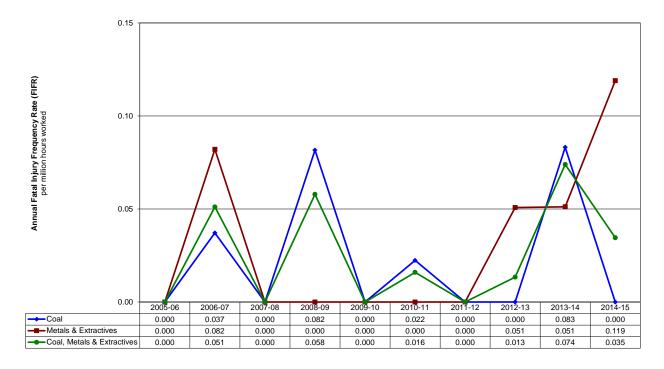
4.3. Metalliferous and extractives fatalities since 1989-90

Figure 12 NSW metalliferous and extractives fatalities 1989-90 to 2014-15



4.4. Annual fatal injury frequency rate (FIFR)

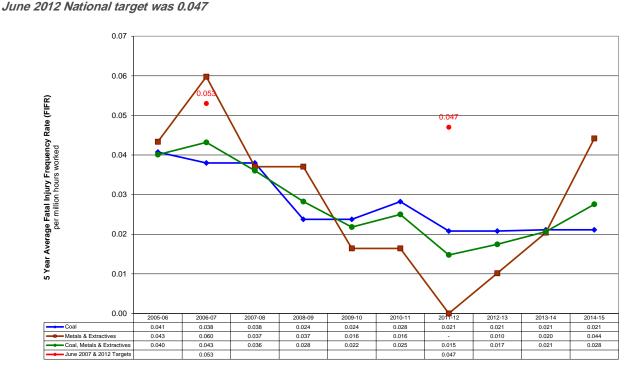
Figure 13
Coal, metalliferous and extractives annual fatal injury frequency rate (FIFR) 2005-06 to 2014-15



Financial Year

4.5. Five year average fatal injury frequency rate (FIFR)

Figure 14 Coal, metalliferous and extractives mining five-year average fatal injury frequency rate (FIFR) 2005-06 to 2014-15



5 Year Period Ending

5. Lost time injuries (LTIs)

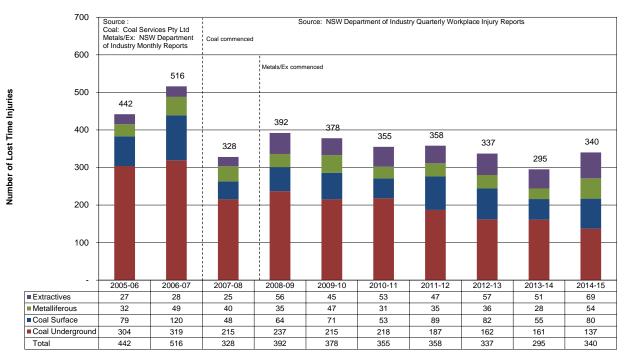
This section provides a breakdown of lost time injuries (LTIs) in the coal, metalliferous and extractives sectors. A lost time injury is an injury that results in a minimum of one full shift's absence.

Due to legislative changes, these details became reportable to NSW Department of Industry on Quarterly Workplace Injury Reports for coal, from the beginning of 2007-08 and for non-coal, from the second quarter of 2008-09.

Refer to "Important note regarding the source of hours worked and lost time injuries" in Section 1 Introduction

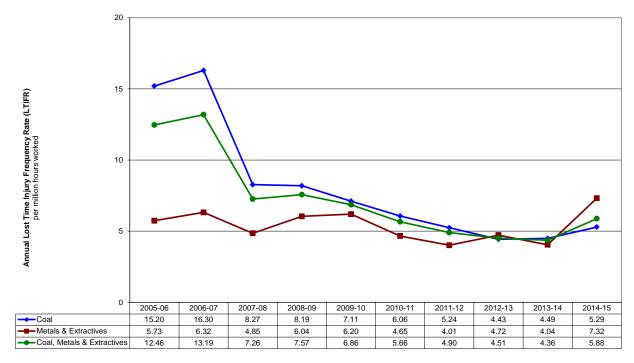
5.1. Lost time injuries by sector

Figure 15 Coal, metalliferous and extractives lost time injuries by sector 2005-06 to 2014-15



5.2. **Annual lost time injury frequency rate (LTIFR)**

Figure 16 Coal, metalliferous and extractives annual lost time injury frequency rate (LTIFR) 2005-06 to 2014-15



Financial Year

Figure 17 Coal annual lost time injury frequency rate (LTIFR) 2005-06 to 2014-15

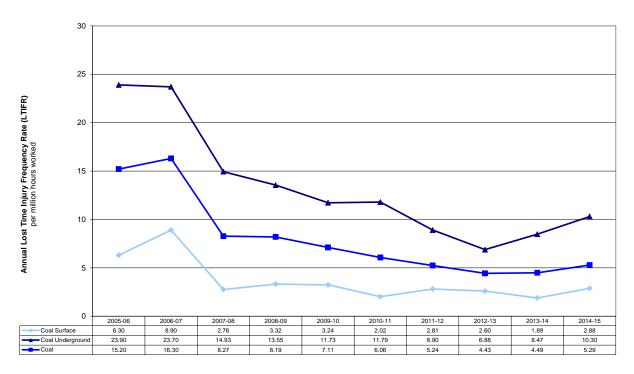
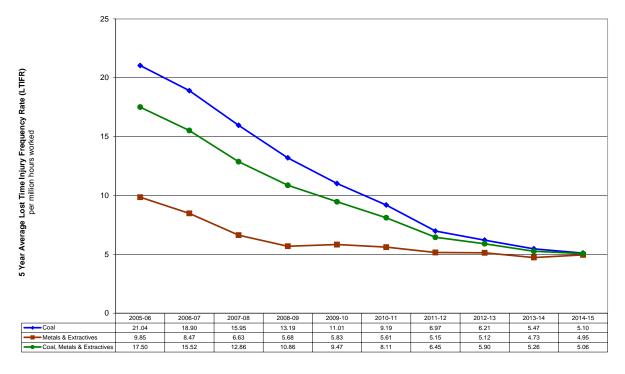


Figure 18 Metalliferous and extractives annual lost time injury frequency rate (LTIFR) 2005-06 to 2014-15



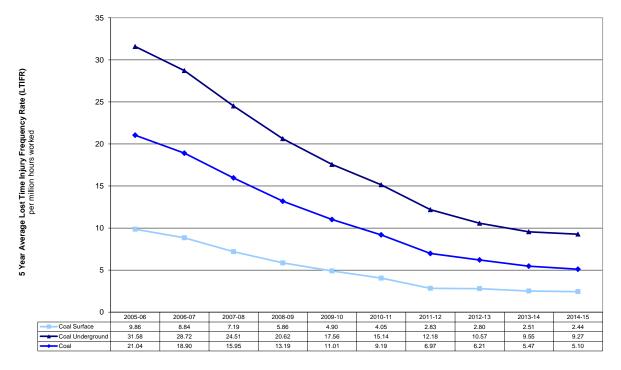
5.3. Five-year average lost time injury frequency rate (LTIFR)

Figure 19 Coal, metalliferous and extractives mining five-year average lost time injury frequency rate (LTIFR) 2005-06 to 2014-15



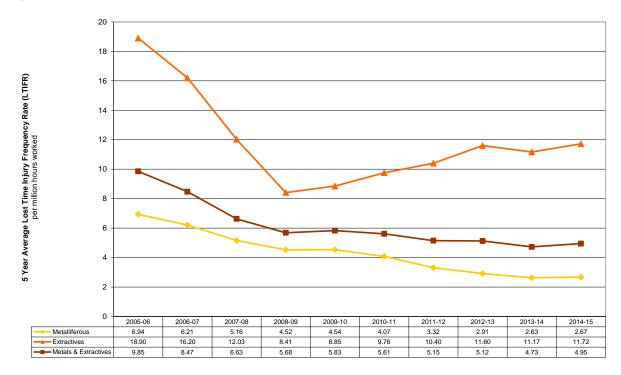
5 Year Period Ending

Figure 20 Coal mining five-year average lost time injury frequency rate (LTIFR) 2005-06 to 2014-15



5 Year Period Ending

Figure 21 Metalliferous and extractives mining five-year average lost time injury frequency rate (LTIFR) 2005-06 to 2014-15



5 Year Period Ending

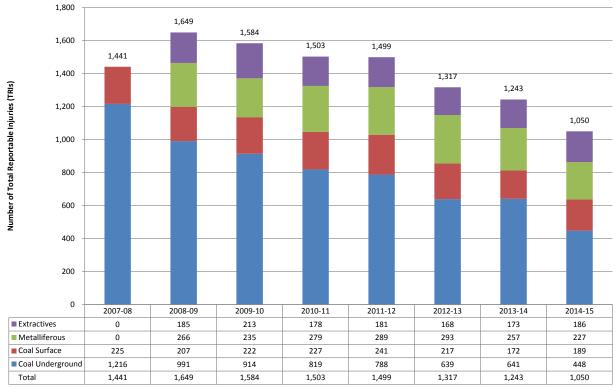
6. Total recordable injuries (TRIs)

This section provides a breakdown of the total recordable injuries in the coal, metalliferous and extractives sectors. Total Recordable Injuries (TRIs) are the total number of fatalities and injuries resulting in lost time (LTI), restricted duties (RDI) or medical treatment (MTI).

Due to legislative changes, these details became uniformly reportable to NSW Department of Industry on Quarterly Workplace Injury Reports for coal, from the beginning of 2007-08 and for non-coal, from the second quarter of 2008-09.

6.1. Total recordable injuries by sector

Figure 22
Coal, metalliferous and extractives total recordable injuries (TRIs) by sector 2007-08 to 2014-15



6.2. Total recordable injuries by injury type

Figure 23 NSW coal, metalliferous and extractives total recordable injuries (TRIs) by injury type 2007-08 to 2014-15

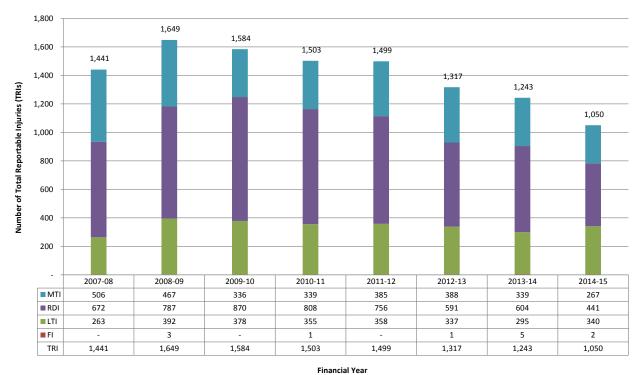


Figure 24 Coal total recordable injuries (TRIs) by injury type 2007-08 to 2014-15



Figure 25 Metalliferous total recordable injuries (TRIs) by injury type 2008-09 to 2014-15

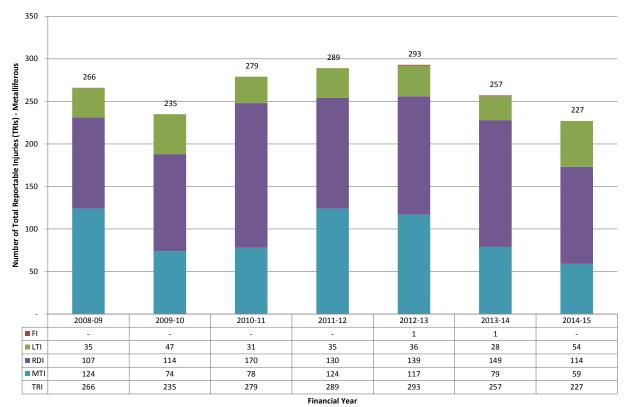


Figure 26 Extractives total recordable injuries (TRIs) by injury type 2008-09 to 2014-15



6.3. Annual total recordable Injury frequency rate (TRIFR)

Figure 27
Coal, metalliferous and extractives annual total recordable injury frequency rate (TRIFR) 2007-08 to 2014-15

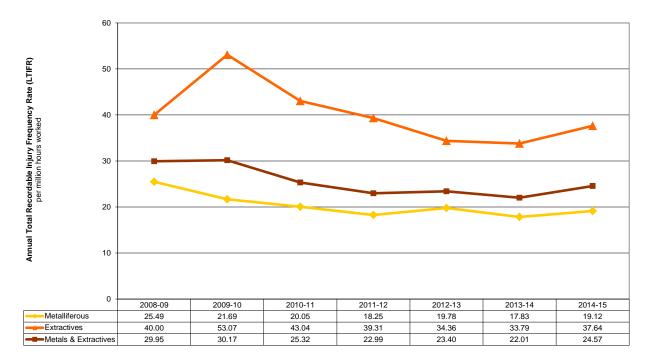


Financial Year

Figure 28 Coal annual total recordable injury frequency rate (TRIFR) 2007-08 to 2014-15



Figure 29
Metalliferous and extractives annual total recordable injury frequency rate (TRIFR) 2007-08 to 2014-15



7. Serious bodily injuries (SBIs)

This section provides a breakdown of injuries that were required to be notified to NSW Department of Industry under the relevant coal and non-coal legislation because of the nature of injury and under the relevant petroleum (onshore) legislation where the injury required immediate attention by a medical practitioner.

The classification of serious bodily injuries (SBIs) is as per the relevant legislation.

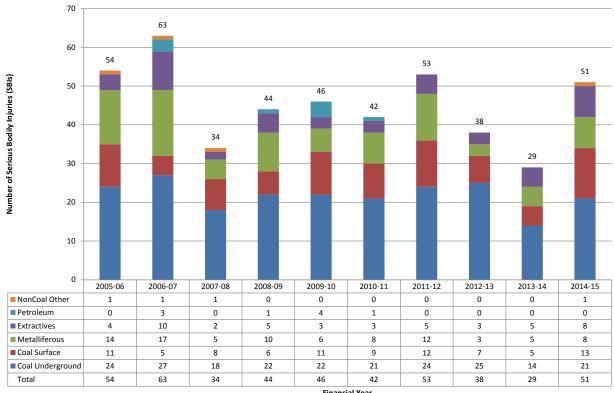
Note that petroleum (onshore) serious bodily injuries are notified at a lower threshold than for the rest of the industry

Note also that the measure of serious bodily injuries is not directly comparable to other mining jurisdictions or the WorkCover Authority of NSW, which use varying definitions for disability injuries.

Refer to Appendix 4 for details of serious bodily injury types and relevant legislation

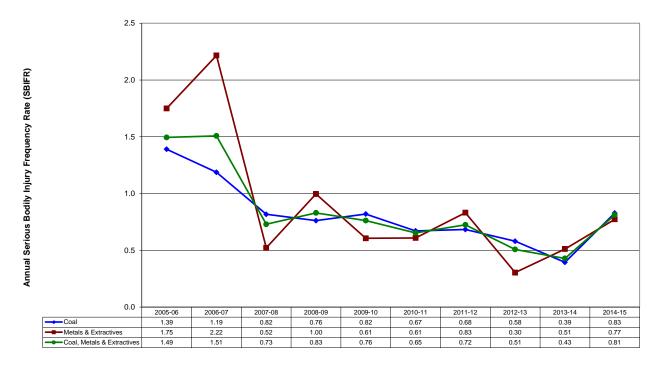
Serious bodily injuries by sector

Figure 30 Coal, metalliferous and extractives serious bodily injuries by sector 2005-06 to 2014-15



7.2. Annual serious bodily injury frequency rate (SBIFR)

Figure 31 Coal, metalliferous and extractives annual serious bodily injury frequency rate (SBIFR) 2005-06 to 2014-15



Financial Year

Figure 32 Coal annual serious bodily injury frequency rate (SBIFR) 2005-06 to 2014-15

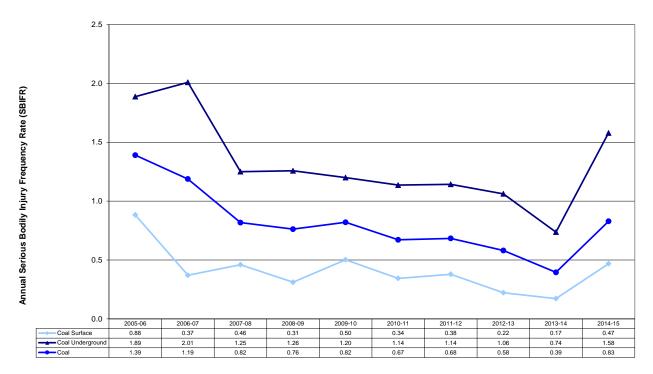
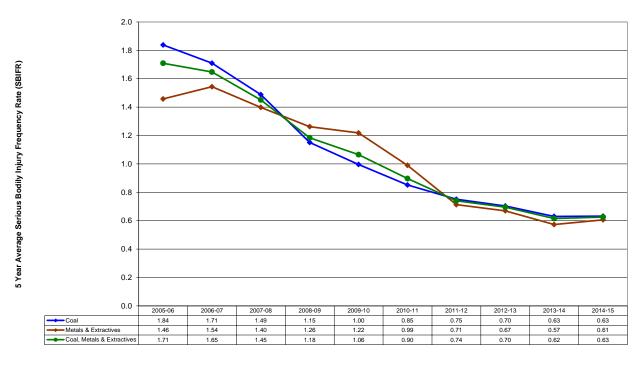


Figure 33 Metalliferous and extractives annual serious bodily injury frequency rate (SBIFR) 2005-06 to 2014-15



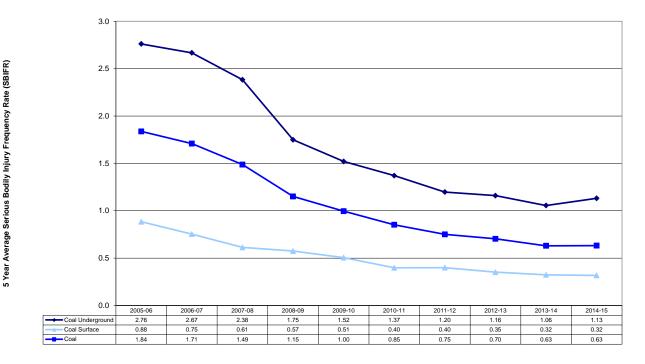
7.3. Five year average serious bodily injury frequency rate (SBIFR)

Figure 34 Coal, metalliferous and extractives mining five-year average serious bodily injury frequency rate (SBIFR) 2005-06 to 2014-15



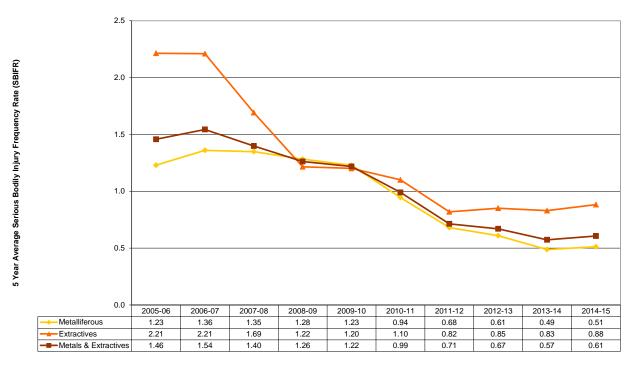
5 Year Period Ending

Figure 35 Coal five-year average serious bodily injury frequency rate (SBIFR) 2005-06 to 2014-15



5 Year Period Ending

Figure 36 Metalliferous and extractives five-year average serious bodily injury frequency rate (SBIFR) 2005-06 to 2014-15



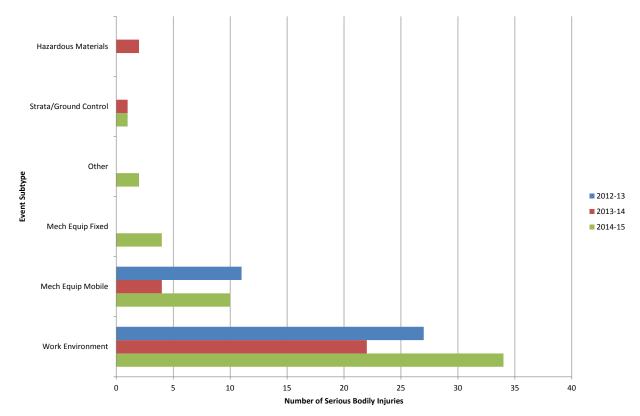
5 Year Period Ending

Serious bodily injuries by event subtype 7.4.

Figure 37 Serious bodily injuries by event subtype 2005-06 to 2014-15

Event Subtype	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Work Environment	17	20	17	19	23	25	44	27	22	34	248
Mech Equip Mobile	24	33	15	22	16	14	9	11	4	10	158
Mech Equip Fixed	6	6	2	2	3	1	0	0	0	4	24
Strata/Ground Control	3	1	0	0	2	0	0	0	1	1	8
Electrical Energy	2	0	0	0	2	1	0	0	0	0	5
Hazardous Materials	0	0	0	1	0	0	0	0	2	0	3
Gas	1	1	0	0	0	0	0	0	0	0	2
Other	0	0	0	0	0	0	0	0	0	2	2
Structural Failure	0	2	0	0	0	0	0	0	0	0	2
Explosives	0	0	0	0	0	1	0	0	0	0	1
Water	1	0	0	0	0	0	0	0	0	0	1
Total	54	63	34	44	46	42	53	38	29	51	454

Figure 38 Serious bodily injuries by event subtype 2012-13 to 2014-15

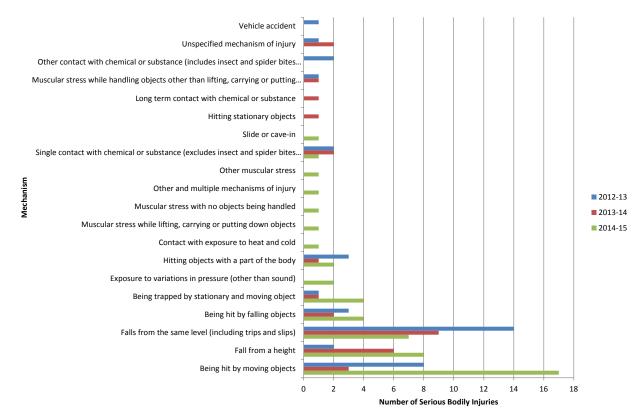


7.5. Serious bodily injuries by mechanism

Figure 39 Serious bodily injuries by mechanism 2005-06 to 2014-15

Mechanism	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Falls from the same level (including trips and slips)	9	15	12	7	11	11	19	14	9	7	114
Being hit by moving objects	6	12	0	8	5	8	13	8	3	17	80
Fall from a height	9	13	7	5	10	8	5	2	6	8	73
Being hit by falling objects	6	7	1	3	5	2	2	3	2	4	35
Being trapped by stationary and moving object	1	6	2	5	2	2	3	1	1	4	27
Hitting objects with a part of the body	3	2	3	3	1	1	3	3	1	2	22
Unspecified mechanism of injury	1	1	4	1	2	3	1	1	2	0	16
Vehicle accident	1	0	2	4	3	3	2	1	0	0	16
Contact with exposure to heat and cold	7	3	0	0	0	0	0	0	0	1	11
Hitting moving objects	2	1	2	5	0	1	0	0	0	0	11
Single contact with chemical or substance (excludes insect and spider bites and stings)	2	0	0	2	2	0	0	2	2	1	11
Exposure to variations in pressure (other than sound)	0	0	0	0	2	1	0	0	0	2	5
Other and multiple mechanisms of injury	0	2	1	0	0	0	1	0	0	1	5
Contact with electricity	2	0	0	0	1	1	0	0	0	0	4
Muscular stress while lifting, carrying or putting down objects	0	1	0	0	0	1	1	0	0	1	4
Other contact with chemical or substance (includes insect and spider bites and stings	2	0	0	0	0	0	0	2	0	0	4
Contact with hot objects	0	0	0	1	2	0	0	0	0	0	3
Muscular stress while handling objects other than lifting, carrying or putting down	0	0	0	0	0	0	1	1	1	0	3
Slide or cave-in	2	0	0	0	0	0	0	0	0	1	3
Hitting stationary objects	0	0	0	0	0	0	1	0	1	0	2
Muscular stress with no objects being handled	0	0	0	0	0	0	1	0	0	1	2
Other muscular stress	1	0	0	0	0	0	0	0	0	1	2
Long term contact with chemical or substance	0	0	0	0	0	0	0	0	1	0	1
Total	54	63	34	44	46	42	53	38	29	51	454

Figure 40 Serious bodily injuries by mechanism 2012-13 to 2014-15

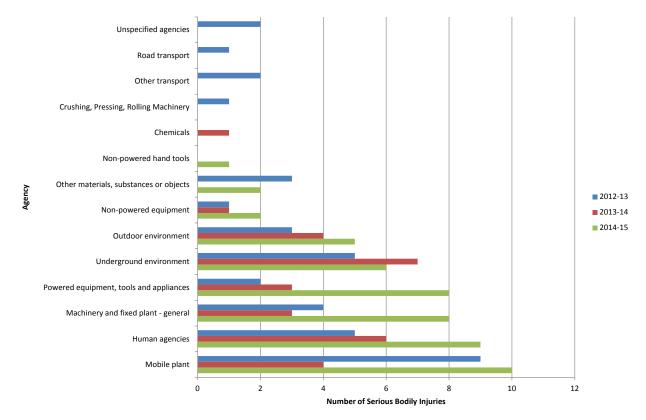


7.6. Serious bodily injuries by agency

Figure 41 Serious bodily injuries by agency 2005-06 to 2014-15

Agency	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Mobile plant	18	14	7	13	11	6	6	9	4	10	98
Underground environment	11	16	11	3	8	10	12	5	7	6	89
Other materials, substances or objects	4	4	2	5	9	5	14	3	0	2	48
Machinery and fixed plant - general	6	7	4	4	1	2	3	4	3	8	42
Human agencies	1	1	2	2	2	4	4	5	6	9	36
Outdoor environment	5	5	2	2	2	2	6	3	4	5	36
Powered equipment, tools and appliances	3	2	1	2	6	4	3	2	3	8	34
Non-powered equipment	2	2	1	5	1	0	1	1	1	2	16
Unspecified agencies	1	0	1	2	1	3	2	2	0	0	12
Crushing, Pressing, Rolling Machinery	0	4	1	1	1	2	1	1	0	0	11
Road transport	0	4	0	2	3	0	1	1	0	0	11
Indoor environment	0	4	1	0	1	1	0	0	0	0	7
Other transport	0	0	1	1	0	2	0	2	0	0	6
Non-powered hand tools	1	0	0	2	0	1	0	0	0	1	5
Chemicals	2	0	0	0	0	0	0	0	1	0	3
Total	54	63	34	44	46	42	53	38	29	51	454

Figure 42 Serious bodily injuries by agency 2012-13 to 2014-15

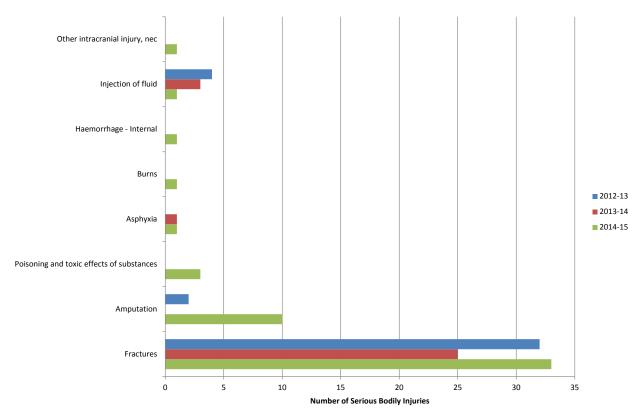


Serious bodily injuries by nature of injury 7.7.

Figure 43 Serious bodily injuries by nature of injury 2005-06 to 2014-15

Nature of Injury	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Fractures	30	49	27	34	38	38	47	32	25	33	353
Amputation	1	3	2	5	1	2	4	2	0	10	30
Burns	13	3	0	2	3	1	0	0	0	1	23
Injection of fluid	1	1	2	1	2	0	1	4	3	1	16
Dislocations	7	3	3	1	0	0	0	0	0	0	14
Asphyxia	1	0	0	0	0	0	1	0	1	1	4
Haemorrhage - Internal	0	0	0	1	1	1	0	0	0	1	4
Multiple injuries (only to be used where no principal injury can be identified)	1	2	0	0	0	0	0	0	0	0	3
Poisoning and toxic effects of substances	0	0	0	0	0	0	0	0	0	3	3
Intracranial injury, including concussion	0	1	0	0	0	0	0	0	0	0	1
Other intracranial injury, nec	0	0	0	0	0	0	0	0	0	1	1
Sprain and strains of joints and adjacent muscles (include acute trauma sprains and strains only)	0	1	0	0	0	0	0	0	0	0	1
Superficial injury	0	0	0	0	1	0	0	0	0	0	1
Total	54	63	34	44	46	42	53	38	29	51	454

Figure 44 Serious bodily injuries by nature of injury 2012-13 to 2014-15

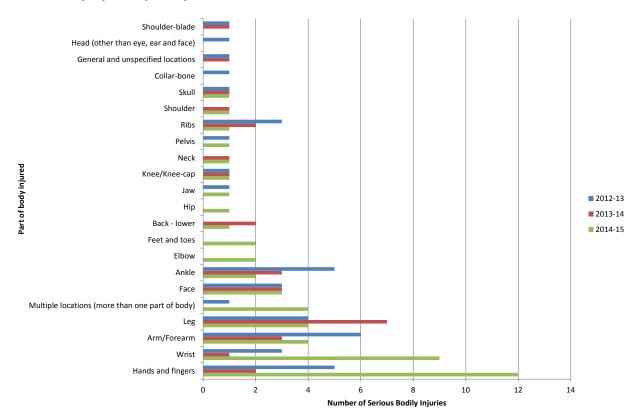


7.8. Serious bodily injuries by bodily location

Figure 45 Serious bodily injuries by bodily location 2005-06 to 2014-15

Part of Body	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Leg	11	11	7	9	8	5	7	4	7	4	73
Arm/Forearm	11	8	4	2	1	6	6	6	3	4	51
Wrist	0	7	4	5	5	8	6	3	1	9	48
Ribs	4	6	4	5	5	6	8	3	2	1	44
Hands and fingers	5	4	1	4	4	2	3	5	2	12	42
Ankle	1	6	2	1	5	4	6	5	3	2	35
Face	2	1	1	3	5	2	5	3	3	3	28
Multiple locations (more than one part of body)	3	3	0	2	4	0	1	1	0	4	18
Shoulder	0	2	4	2	1	1	1	0	1	1	13
Elbow	4	0	0	0	3	0	3	0	0	2	12
Skull	1	5	1	0	0	2	0	1	1	1	12
Back - unspecified	2	3	2	0	0	1	1	0	0	0	9
Pelvis	0	2	1	2	1	0	1	1	0	1	9
Shoulder-blade	4	1	0	1	1	0	0	1	1	0	9
Knee/Knee-cap	1	1	0	0	0	0	2	1	1	1	7
Back - lower	0	0	1	0	2	0	0	0	2	1	6
Feet and toes	0	0	1	2	0	0	1	0	0	2	6
Head (other than eye, ear and face)	0	1	0	2	0	1	1	1	0	0	6
Neck	0	0	0	1	0	2	0	0	1	1	5
Jaw	1	0	0	0	1	0	0	1	0	1	4
Thigh	2	0	1	0	0	1	0	0	0	0	4
Collar-bone	0	1	0	0	0	0	1	1	0	0	3
General and unspecified locations	0	0	0	0	0	1	0	1	1	0	3
Eye	1	0	0	1	0	0	0	0	0	0	2
Internal organs (located in the trunk)	0	1	0	1	0	0	0	0	0	0	2
Hip	0	0	0	0	0	0	0	0	0	1	1
Respiratory system	1	0	0	0	0	0	0	0	0	0	1
Trunk (other than back and excluding internal organ)	0	0	0	1	0	0	0	0	0	0	1
Total	54	63	34	44	46	42	53	38	29	51	454

Serious bodily injuries by bodily location 2012-13 to 2014-15

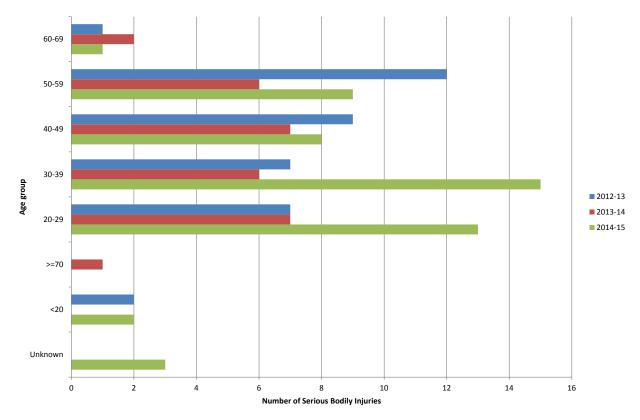


7.9. Serious bodily injuries by age group

Figure 47 Serious bodily injuries by age group 2005-06 to 2014-15

Age Group	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Unknown	0	7	1	0	0	0	0	0	0	3	11
<20	1	1	1	1	0	2	1	2	0	2	11
>=70	1	0	1	0	0	0	0	0	1	0	3
20-29	12	11	7	7	10	8	5	7	7	13	87
30-39	11	17	5	9	13	11	16	7	6	15	110
40-49	18	12	7	13	12	12	12	9	7	8	110
50-59	10	13	9	11	9	9	16	12	6	9	104
60-69	1	2	3	3	2	0	3	1	2	1	18
Total	54	63	34	44	46	42	53	38	29	51	454

Figure 48 Serious bodily injuries by age group 2012-13 to 2014-15

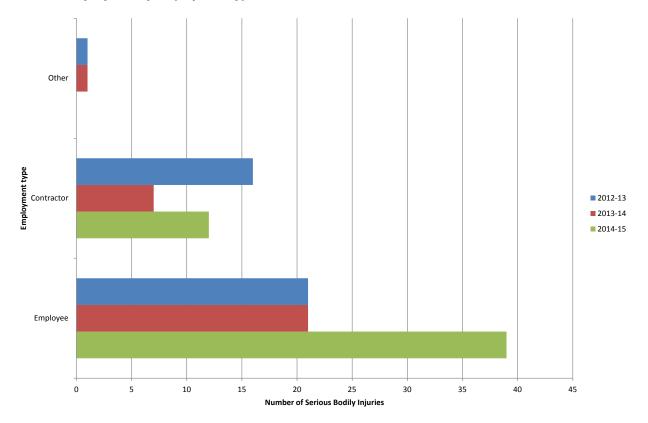


7.10. Serious bodily injuries by employment type

Figure 49 Serious bodily injuries by employment type 2005-06 to 2014-15

Employment Type	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Employee	37	36	23	26	29	24	37	21	21	39	293
Contractor	17	27	11	18	17	16	16	16	7	12	157
Other	0	0	0	0	0	1	0	1	1	0	3
No Data	0	0	0	0	0	1	0	0	0	0	1
Total	54	63	34	44	46	42	53	38	29	51	454

Figure 50 Serious bodily injuries by employment type 2012-13 to 2014-15



8. Injuries with a notifiable outcome

This section provides a breakdown of injuries with outcomes that were required to be notified to NSW Department of Industry.

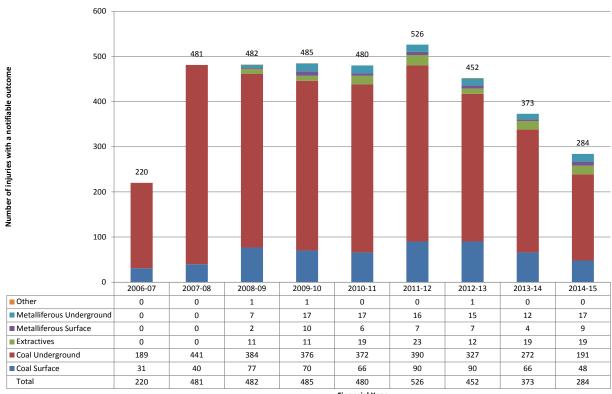
An injury may result in one or more of the following notifiable outcomes:

- fatality
- permanent incapacity
- entrapment
- loss of consciousness
- hospital inpatient admission
- at least seven days of lost time and/or alternative duties
- medical treatment

In addition to fatality, these injury outcomes became reportable from mid-2006-07 for coal and from the second quarter of 2008-09 for non-coal.

Refer to Appendix 5 for details of notifiable injury outcomes and relevant legislation

Figure 51 Coal and non-coal (excl petroleum) injuries with a notifiable outcome by sector 2006-07 to 2014-15



8.1. Notifiable injury outcomes by injury outcome

Figure 52 Coal and non-coal (excl petroleum) notifiable injury outcomes 2006-07 to 2014-15

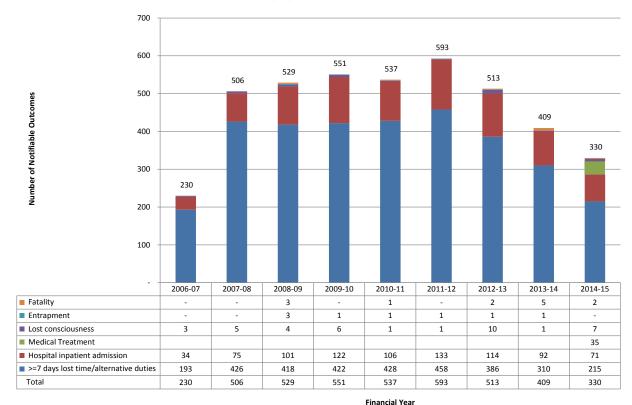
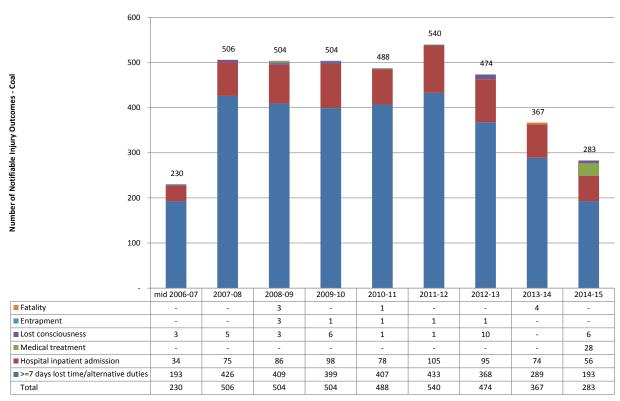
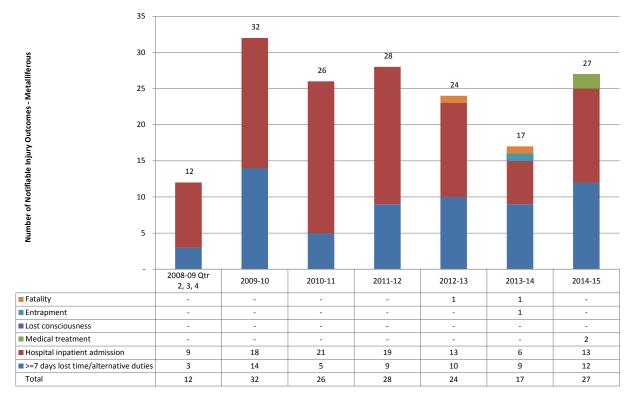


Figure 53 Coal notifiable injury outcomes mid 2006-07 to 2014-15



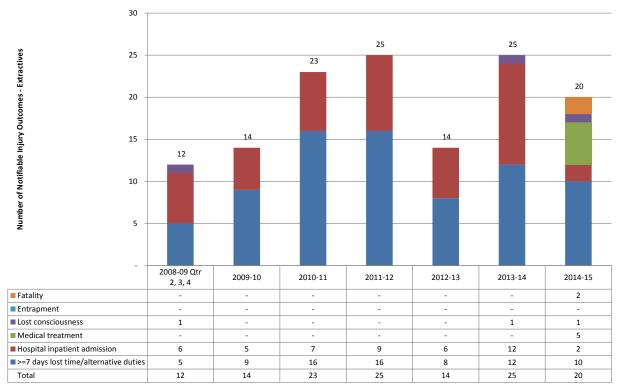
Financial Year

Figure 54 Metalliferous notifiable injury outcomes 2nd quarter 2008-09 to 2014-15



Financial Year

Figure 55 Extractives notifiable injury outcomes 2nd quarter 2008-09 to 2014-15



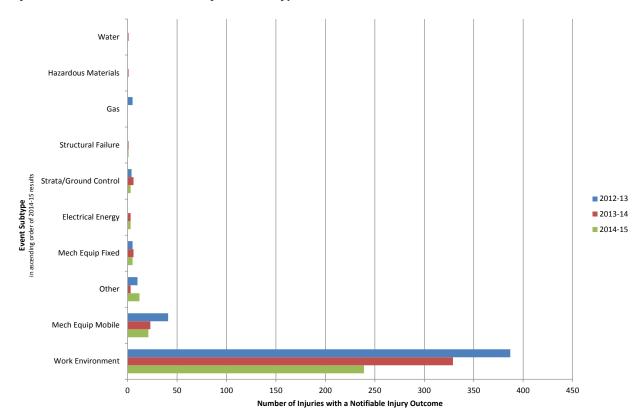
Financial Year

8.2. Injuries with a notifiable outcome by event subtype

Figure 56 Injuries with a notifiable outcome by event subtype 2006-07 to 2014-15

Event Subtype	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Work Environment	124	293	304	328	368	450	387	329	239	2,822
Mech Equip Mobile	84	172	154	131	85	60	41	23	21	771
Mech Equip Fixed	5	8	14	11	14	10	5	6	5	78
Strata/Ground Control	2	2	4	8	5	2	4	6	3	36
Other	0	0	0	0	0	0	10	3	12	25
Electrical Energy	1	2	5	4	2	4	0	3	3	24
Hazardous Materials	3	2	0	2	1	0	0	1	0	9
Gas	0	2	0	0	0	0	5	0	0	7
Explosives	0	0	0	1	3	0	0	0	0	4
Structural Failure	1	0	1	0	0	0	0	1	1	4
Water	0	0	0	0	1	0	0	1	0	2
Self Heating	0	0	0	0	1	0	0	0	0	1
Total	220	481	482	485	480	526	452	373	284	3783

Figure 57 Injuries with a notifiable outcome by event subtype 2012-13 to 2014-15

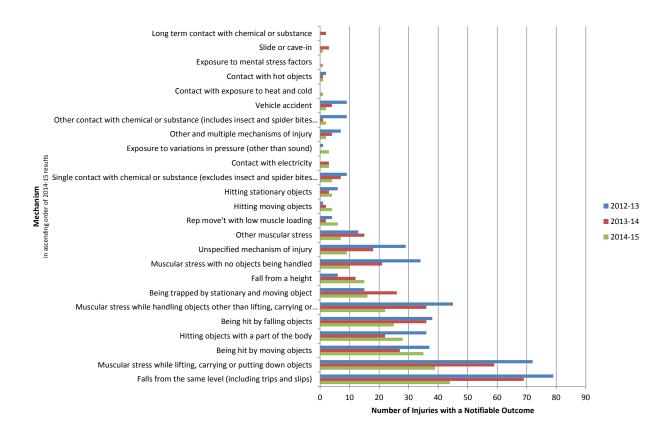


Injuries with a notifiable outcome by mechanism 8.3.

Figure 58 Injuries with a notifiable outcome by mechanism 2006-07 to 2014-15

Mechanism	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Falls from the same level (including trips and slips)	29	50	83	82	79	87	79	69	44	602
Muscular stress while lifting, carrying or putting down objects	8	44	52	71	65	88	72	59	39	498
Other muscular stress	70	107	58	63	50	42	13	15	7	425
Being hit by falling objects	14	46	50	46	46	33	38	36	25	334
Being hit by moving objects	15	35	46	40	39	42	37	27	35	316
Unspecified mechanism of injury	28	57	38	26	32	40	29	18	9	277
Hitting objects with a part of the body	11	29	36	29	44	40	36	22	28	275
Muscular stress with no objects being handled	9	28	27	26	32	55	34	21	10	242
Muscular stress while handling objects other than lifting, carrying or putting down	2	16	15	15	29	29	45	36	22	209
Being trapped by stationary and moving object	4	12	11	25	12	13	15	26	16	134
Fall from a height	8	7	7	18	14	11	6	12	15	98
Hitting stationary objects	6	10	14	13	5	6	6	3	4	67
Vehicle accident	5	6	7	3	4	9	9	4	2	49
Hitting moving objects	0	12	13	7	5	4	1	2	4	48
Single contact with chemical or substance (excludes insect and spider bites and stings)	1	2	6	7	5	0	9	7	4	41
Rep move't with low muscle loading	1	3	4	7	7	6	4	2	6	40
Other and multiple mechanisms of injury	2	4	4	0	4	12	7	4	2	39
Contact with electricity	1	2	6	3	2	3	0	3	3	23
Other contact with chemical or substance (includes insect and spider bites and stings	2	4	1	0	2	2	9	1	2	23
Contact with hot objects	0	1	1	3	2	3	2	1	1	14
Slide or cave-in	2	0	2	1	0	0	0	3	1	9
Contact with exposure to heat and cold	1	1	1	0	0	1	0	0	1	5
Exposure to mechanical vibration	1	3	0	0	0	0	0	0	0	4
Exposure to variations in pressure (other than sound)	0	0	0	0	0	0	1	0	3	4
Long term contact with chemical or substance	0	1	0	0	1	0	0	2	0	4
Exposure to mental stress factors	0	0	0	0	1	0	0	0	1	2
Contact with, or exposure to, biological factors	0	1	0	0	0	0	0	0	0	1
Total	220	481	482	485	480	526	452	373	284	3783

Figure 59 Injuries with a notifiable outcome by mechanism 2012-13 to 2014-15

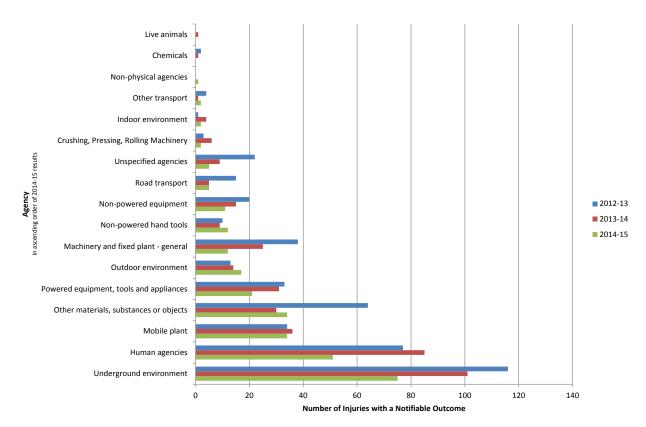


Injuries with a notifiable outcome by agency 8.4.

Figure 60 Injuries with a notifiable outcome by agency 2006-07 to 2014-15

Agency	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Underground environment	81	187	164	137	143	178	116	101	75	1,182
Mobile plant	48	110	121	106	68	53	34	36	34	610
Other materials, substances or objects	15	57	61	93	120	107	64	30	34	581
Human agencies	12	17	12	14	20	31	77	85	51	319
Powered equipment, tools and appliances	7	12	17	24	25	36	33	31	21	206
Machinery and fixed plant - general	4	18	22	19	21	20	38	25	12	179
Unspecified agencies	17	15	20	24	17	31	22	9	5	160
Non-powered equipment	4	9	17	25	22	12	20	15	11	135
Outdoor environment	10	15	17	12	13	23	13	14	17	134
Non-powered hand tools	3	6	8	9	14	10	10	9	12	81
Road transport	7	14	6	9	5	8	15	5	5	74
Crushing, Pressing, Rolling Machinery	4	6	5	5	3	6	3	6	2	40
Indoor environment	4	5	5	2	4	4	1	4	2	31
Other transport	1	4	5	3	5	6	4	1	2	31
Chemicals	2	3	0	1	0	0	2	1	0	9
Non-physical agencies	1	2	2	1	0	1	0	0	1	8
Live animals	0	0	0	1	0	0	0	1	0	2
Biological agencies	0	1	0	0	0	0	0	0	0	1
Total	220	481	482	485	480	526	452	373	284	3783

Injuries with a notifiable outcome by agency 2012-13 to 2014-15

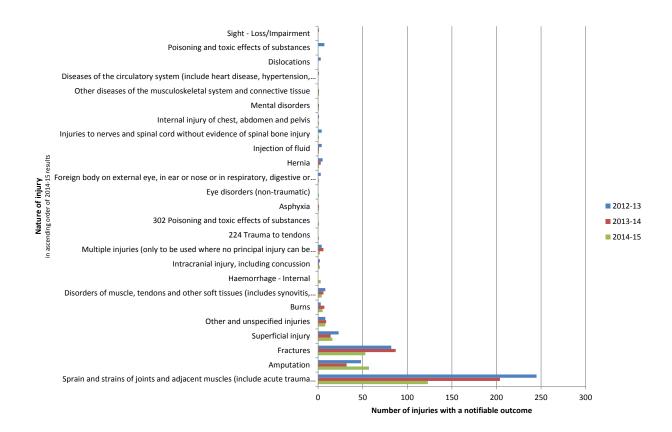


Injuries with a notifiable outcome by nature of injury 8.5.

Figure 62 Injuries with a notifiable outcome by nature of injury 2006-07 to 2014-15

Nature of injury	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Sprain and strains of joints and adjacent muscles	129	288	273	269	274	285	245	204	123	2,090
(include acute trauma sprains and strains only)										
Fractures	11	70	79	108	94	105	82	87	53	689
Amputation	7	29	53	50	55	51	48	32	57	382
Superficial injury	25	47	38	22	15	24	23	14	16	224
Other and unspecified injuries	21	18	5	6	12	17	8	9	8	104
Disorders of muscle, tendons and other soft tissues (includes synovitis, tenosynovitis, bursitis)	9	5	3	2	3	18	8	6	4	58
Burns	4	3	9	6	6	5	3	7	5	48
Hernia	2	2	4	4	3	6	5	3	1	30
Dislocations	3	5	2	1	6	4	3	0	0	24
Multiple injuries (only to be used where no principal injury can be identified)	1	2	3	2	3	1	4	6	2	24
Intracranial injury, including concussion	0	3	2	5	1	1	2	1	2	17
Foreign body on external eye, in ear or nose or in respiratory, digestive or reproductive systems (include choking)	3	2	1	2	1	3	3	0	1	16
Injection of fluid	0	1	1	2	0	1	4	1	1	11
Injuries to nerves and spinal cord without evidence of spinal bone injury	1	0	1	2	2	0	4	0	1	11
Mental disorders	0	0	6	1	1	0	0	1	1	10
Poisoning and toxic effects of substances	0	1	0	1	0	0	7	0	0	9
Eye disorders (non-traumatic)	2	0	1	0	2	0	0	0	1	6
Dermatitis and other eczema	1	2	0	0	1	1	0	0	0	5
Haemorrhage - Internal	0	0	1	1	0	0	0	0	3	5
Asphyxia	0	0	0	0	0	1	0	1	1	3
Diseases of the circulatory system (include heart disease, hypertension, varicose veins)	0	0	0	0	0	2	1	0	0	3
Internal injury of chest, abdomen and pelvis	0	0	0	0	0	1	1	0	1	3
Other diseases of the musculoskeletal system and connective tissue	0	0	0	1	0	0	0	1	1	3
Other diseases	0	2	0	0	0	0	0	0	0	2
Sight - Loss/Impairment	0	1	0	0	0	0	1	0	0	2
224 Trauma to tendons	0	0	0	0	0	0	0	0	1	1
302 Poisoning and toxic effects of substances	0	0	0	0	0	0	0	0	1	1
Effects of weather (incl lightning, static), exposure, air										
pressure and other external causes, not elsewhere classified (includes bends, drowning, electrocution, electric shock)	1	0	0	0	0	0	0	0	0	1
Infectious and parasitic diseases	0	0	0	0	1	0	0	0	0	1
Total	220	481	482	485	480	526	452	373	284	3783

Figure 63 Injuries with a notifiable outcome by nature of injury 2012-13 to 2014-15

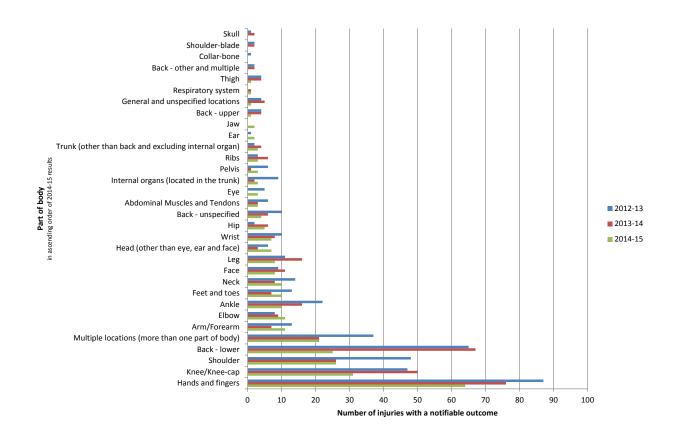


8.6. Injuries with a notifiable outcome by bodily location

Figure 64 Injuries with a notifiable outcome by bodily location 2006-07 to 2014-15

Part of Body	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Hands and fingers	22	94	87	88	84	100	87	76	64	702
Knee/Knee-cap	36	62	49	47	64	61	47	50	31	447
Back - lower	0	0	22	64	57	63	65	67	25	363
Shoulder	17	48	41	37	42	50	48	26	26	335
Back - unspecified	45	72	67	17	12	17	10	6	4	250
Ankle	15	38	24	31	30	39	22	16	10	225
Multiple locations (more than one part of body)	3	14	21	29	27	28	37	21	21	201
Feet and toes	9	27	26	27	21	23	13	7	10	163
Neck	9	30	23	28	24	16	14	8	10	162
Leg	10	23	24	16	18	15	11	16	8	141
Arm/Forearm	12	12	15	8	20	23	13	7	11	121
Wrist	6	6	10	14	16	12	10	8	7	89
Elbow	3	6	5	6	15	11	8	9	11	74
Head (other than eye, ear and face)	6	8	10	11	6	5	6	3	7	62
Face	4	5	6	6	4	8	9	11	8	61
Ribs	0	6	7	12	5	10	3	6	3	52
Trunk (other than back and excluding internal organ)	8	5	9	5	6	6	2	4	3	48
General and unspecified locations	2	3	11	4	5	4	4	5	1	39
Abdominal Muscles and Tendons	0	0	1	11	5	9	6	3	3	38
Hip	2	5	4	9	3	2	2	6	5	38
Thigh	1	5	5	3	5	7	4	4	1	35
Eye	6	4	5	1	3	5	5	0	3	32
Internal organs (located in the trunk)	0	2	3	1	0	1	9	2	3	21
Pelvis	1	1	2	2	0	2	6	1	3	18
Back - upper	0	0	0	2	2	3	4	4	1	16
Shoulder-blade	3	1	2	2	1	1	2	2	0	14
Back - other and multiple	0	0	1	1	1	4	2	2	0	11
Ear	0	2	1	1	1	0	1	0	2	8
Skull	0	1	1	0	3	0	1	2	0	8
Collar-bone	0	1	0	0	0	1	1	0	0	3
Jaw	0	0	0	1	0	0	0	0	2	3
Respiratory system	0	0	0	1	0	0	0	1	1	3
Total	220	481	482	485	480	526	452	373	284	3783

Figure 65 Injuries with a notifiable outcome by bodily location 2012-13 to 2014-15

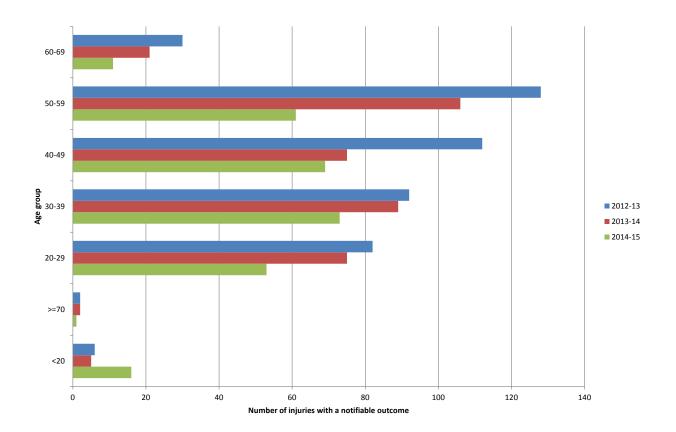


8.7. Injuries with a notifiable outcome by age group

Figure 66 Injuries with a notifiable outcome by age group 2006-07 to 2014-15

Age group	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
<20	2	5	4	6	15	7	6	5	16	66
>=70	0	1	0	0	0	1	2	2	1	7
20-29	27	67	70	86	70	89	82	75	53	619
30-39	45	108	129	128	116	132	92	89	73	912
40-49	70	134	125	127	136	121	112	75	69	969
50-59	71	149	137	118	126	135	128	106	61	1,031
60-69	5	17	17	20	17	41	30	21	11	179
Total	220	481	482	485	480	526	452	373	284	3783

Figure 67 Injuries with a notifiable outcome by age group 2012-13 to 2014-15

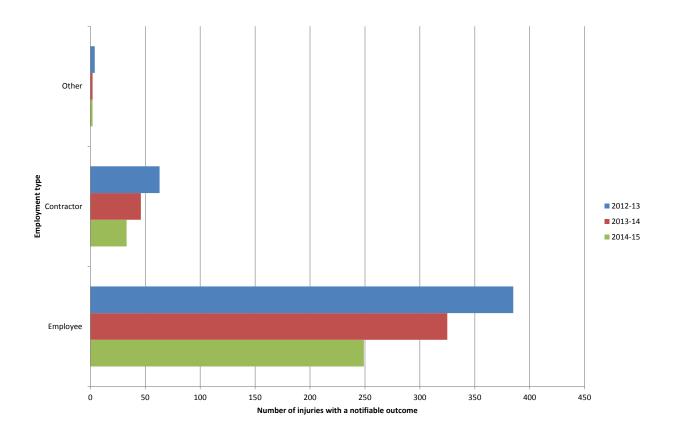


8.8. Injuries with a notifiable outcome by employment type

Figure 68 Injuries with a notifiable outcome by employment type 2006-07 to 2014-15

Employment Type	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Total
Employee	189	409	403	386	385	434	385	325	249	3,165
Contractor	31	72	79	99	94	92	63	46	33	609
Other	0	0	0	0	1	0	4	2	2	9
Total	220	481	482	485	480	526	452	373	284	3783

Figure 69 Injuries with a notifiable outcome by employment type 2012-13 to 2014-15

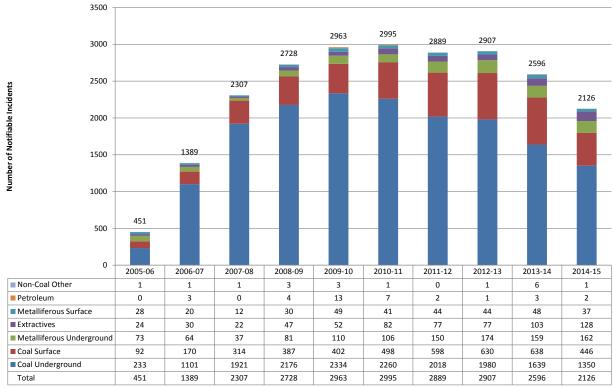


9. Notifiable incidents

This section reports on the breakdown of notifiable incidents reported to the NSW Department of Industry in the coal, metalliferous, extractives, non-coal other and petroleum (onshore) mining sectors.

9.1. All notifiable incidents

Figure 70 All notifiable incidents by sector 2005-06 to 2014-15



3500 2,995 2.963 2,889 2,907 3000 2,728 2,596 2500 2,307 Number of Notifiable Incidents 2.126 2000 1,389 1500 1000 451 500 2006-07 2007-08 2008-09 2009-10 2010-11 2011-12 2012-13 2013-14 2014-15 2005-06 ■ No Data 0 ■ Level 3 - Detailed investigation suitable for further action 4 7 6 9 3 3 2 4 5 2 ■ Level 2 - Official to attend mine. 190 412 349 410 484 466 384 284 201 260

Figure 71
All notifiable incidents by investigation level 2005-06 to 2014-15

Figure 72 All notifiable incidents by event subtype 2005-06 to 2014-15

216

451

970

1,389

1,952

2,307

2,308

2,728

2.476

2,963

Financial Year

2,526

2,995

2,503

2,889

2,619

2,907

2,389

2,596

1,852

2,126

■ Level 1 - No need to attend. Mine to investigate & report

Total

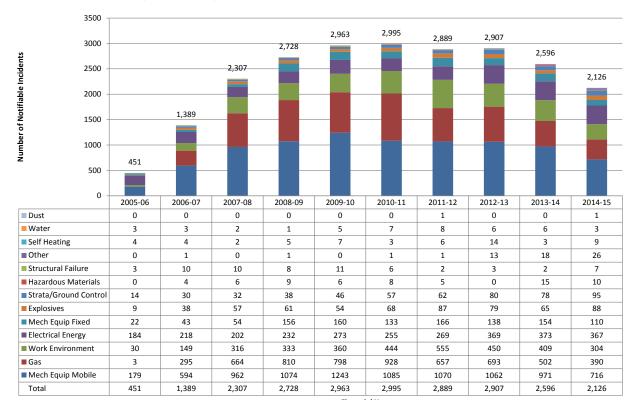
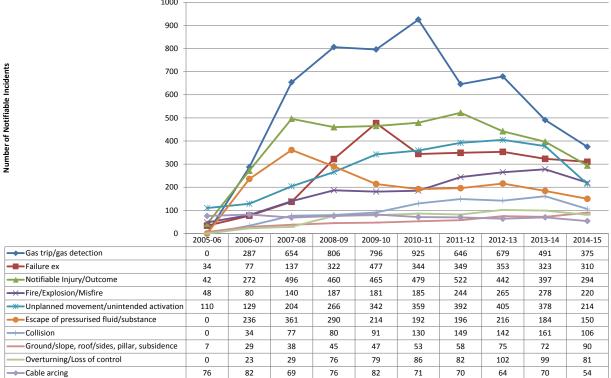


Figure 73 All notifiable incidents by 2014-15 top 10 categories 2005-06 to 2014-15 1000



Financial Year

9.2. Coal notifiable incidents

Figure 74
Coal notifiable incidents by operation type 2005-06 to 2014-15

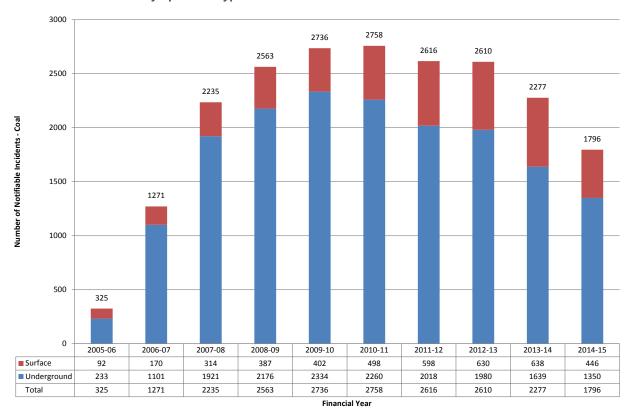


Figure 75
Coal notifiable incidents by investigation level 2005-06 to 2014-15

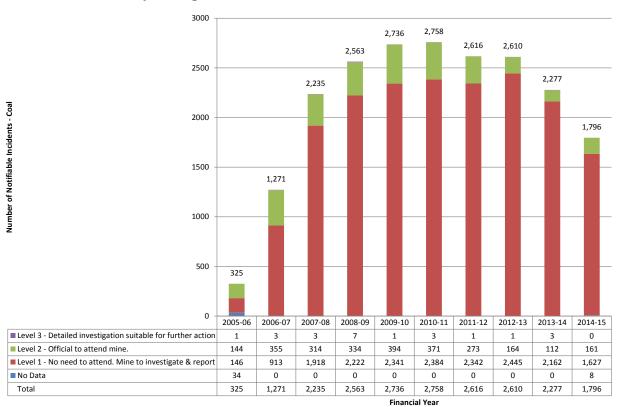


Figure 76
Coal notifiable incidents by event subtype 2005-06 to 2014-15

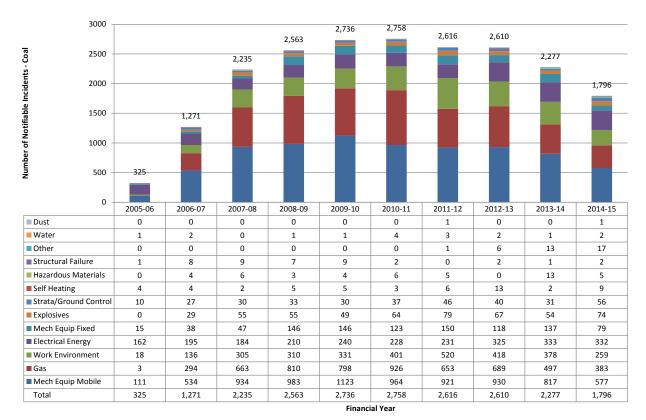
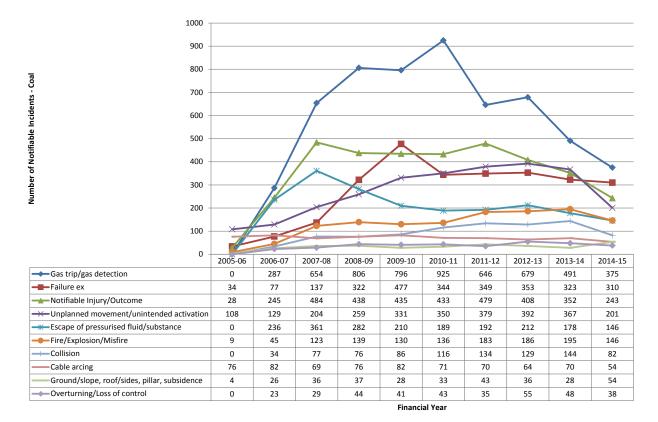


Figure 77
Coal notifiable incidents by 2014-15 top 10 categories 2005-06 to 2014-15



9.3. Metalliferous notifiable incidents

Figure 78 Metalliferous notifiable incidents by operation type 2005-06 to 2014-15

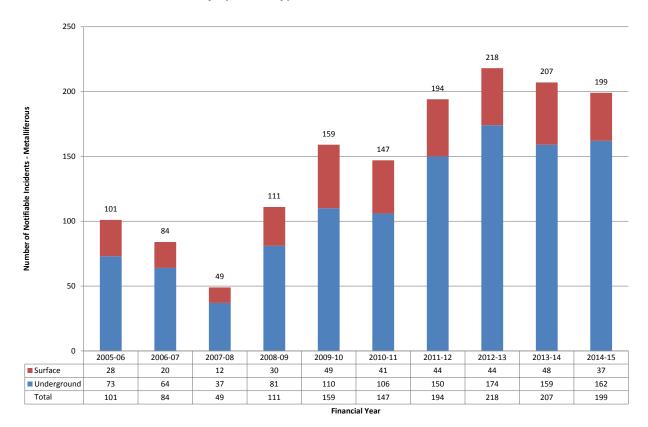
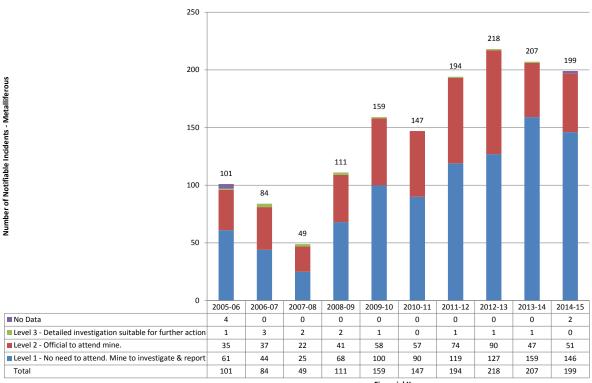


Figure 79
Metalliferous notifiable incidents by investigation level 2005-06 to 2014-15

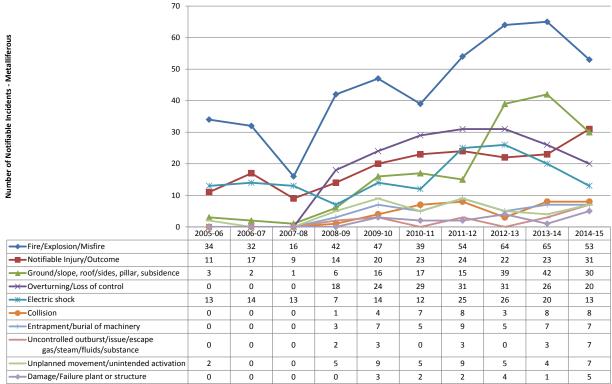


Number of Notifiable Incidents - Metalliferous 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11 2011-12 2012-13 2013-14 2014-15 ■ Self Heating ■ Hazardous Materials Other n ■ Water ■ Structural Failure

Figure 80
Metalliferous notifiable incidents by event subtype 2005-06 to 2014-15

Financial Year

Figure 81
Metalliferous notifiable incidents by 2014-15 top 10 categories 2005-06 to 2014-15



Financial Year

Gas

Explosives

Total

■ Mech Equip Fixed

■ Work Environment

■ Electrical Energy

■ Mech Equip Mobile

Strata/Ground Control

Extractives notifiable incidents 9.4.

Figure 82 Extractives notifiable incidents by investigation level 2005-06 to 2014-15

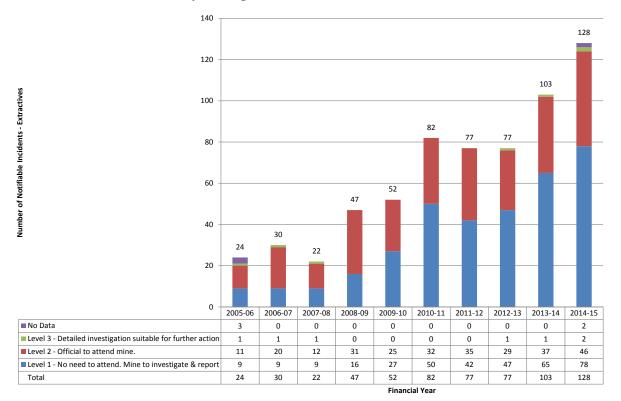


Figure 83 Extractives notifiable incidents by event subtype 2005-06 to 2014-15

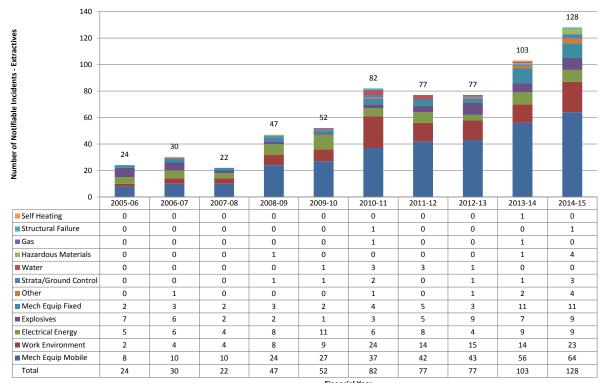
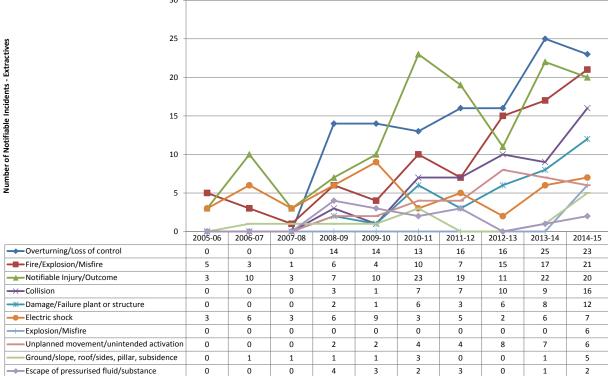


Figure 84 Extractives notifiable incidents by 2014-15 top 10 categories 2005-06 to 2014-15 30



Financial Year

9.5. Non-coal other notifiable incidents

Figure 85 Non-coal other notifiable incidents by investigation level 2005-06 to 2014-15

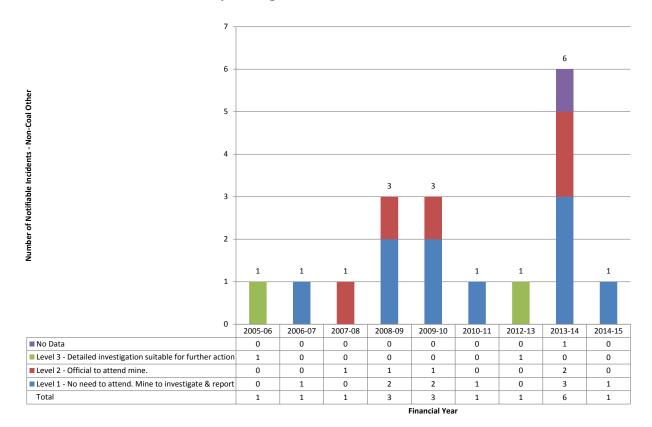
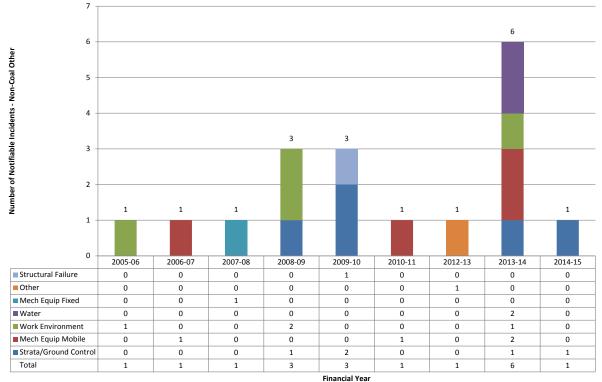


Figure 86 Non-coal other notifiable incidents by event subtype 2005-06 to 2014-15



Petroleum notifiable incidents 9.6.

Figure 87 Petroleum notifiable incidents by investigation level 2005-06 to 2014-15

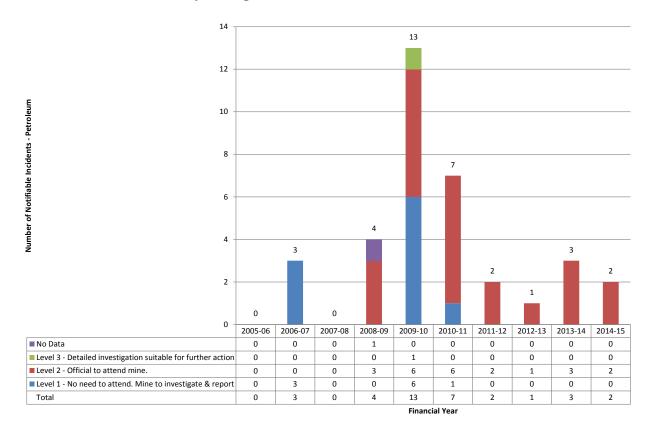
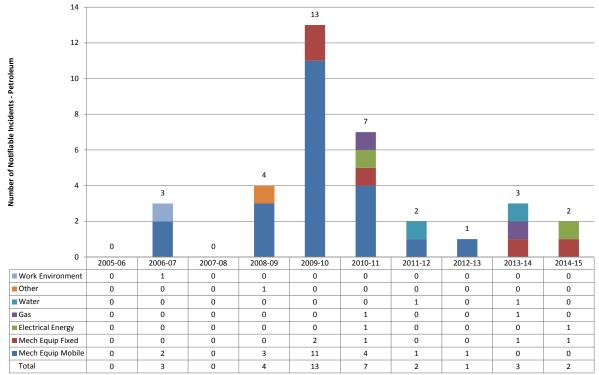


Figure 88 Petroleum incidents by event subtype 2005-06 to 2014-15



10. Non-notifiable incidents

This section provides a breakdown of near misses and other events which may have had the potential to cause damage or injury and were reported to the NSW Department of Industry, but where the relevant legislation did not require their notification.

Figure 89 Non-notifiable incidents by sector 2005-06 to 2014-15

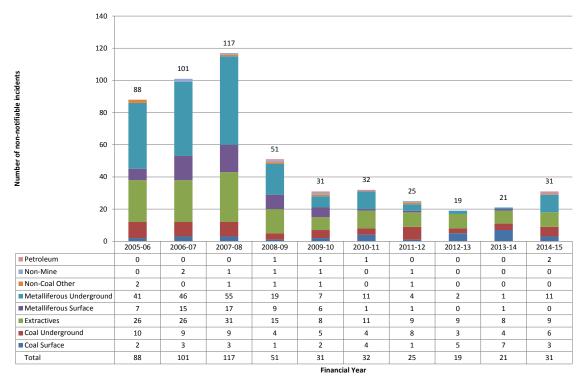


Figure 90 Non-Notifiable incidents by investigation level 2005-06 to 2014-15

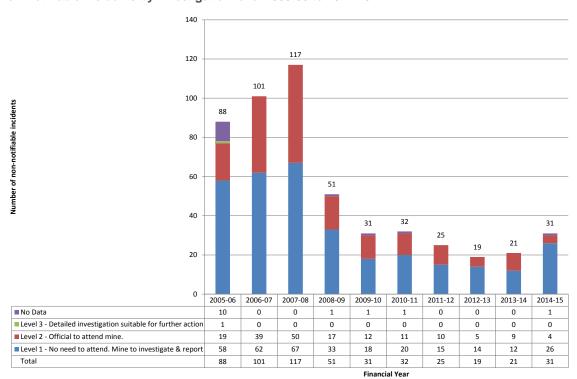
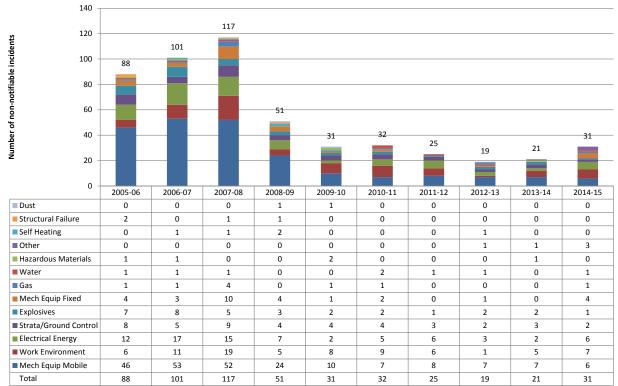


Figure 91 Non-notifiable incidents by event subtype 2005-06 to 2014-15



Financial Year

11. **Complaints**

This section reports on all mine work health and safety complaints received by the NSW Department of Industry from mine employees, members of the public, trade union representatives or anonymously.

Figure 92 Complaints by sector 2005-06 to 2014-15

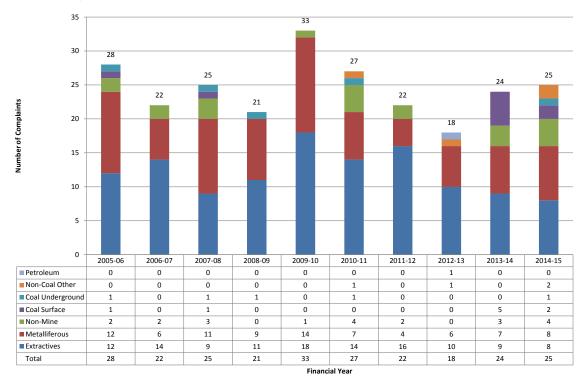


Figure 93 Complaints by investigation level 2005-06 to 2014-15

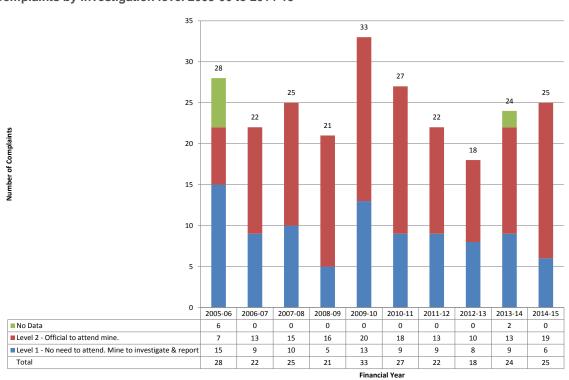
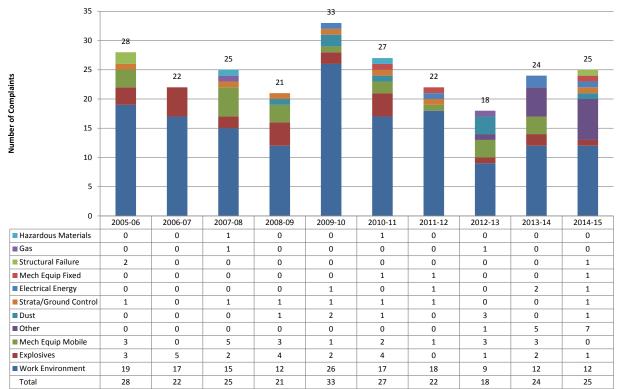


Figure 94 Complaints by event subtype 2005-06 to 2014-15



Financial Year

12. Assessments

This section reports on formal and informal mining, electrical and mechanical inspections, audits, assessments and reviews conducted by NSW Department of Industry inspectors and Mine Safety officers.

Refer to the definitions, COMET database terms and Appendix B for details of the classifications used.

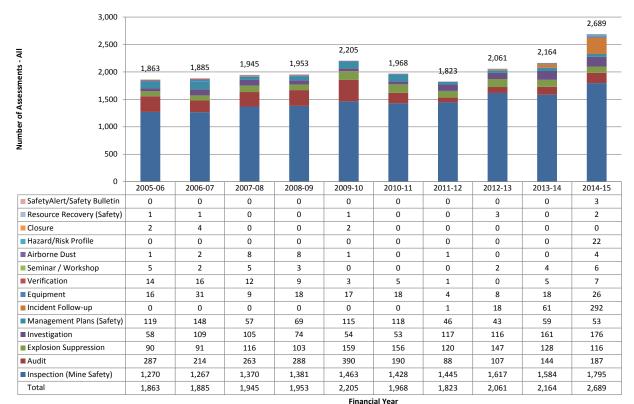
12.1. Assessments by sector

All assessments by sector 2005-06 to 2014-15

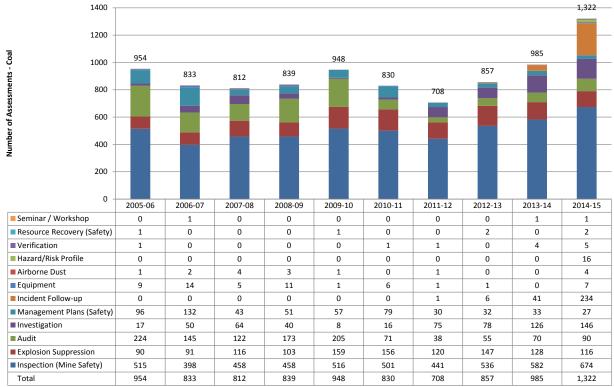


12.2. Assessments by event subtype

Figure 96 All assessments by event subtype 2005-06 to 2014-15



Coal assessments by event subtype 2005-06 to 2014-15



Number of Assessments - Metalliferous 2005-06 2006-07 2007-08 2008-09 2009-10 2010-11 2011-12 2012-13 2013-14 2014-15 ■ SafetyAlert/Safety Bulletin Resource Recovery (Safety) ■ Hazard/Risk Profile ■ Verification ■ Equipment ■ Incident Follow-up ■ Management Plans (Safety) ■ Audit ■ Investigation ■ Inspection (Mine Safety) Total

Figure 98 Metalliferous assessments by event subtype 2005-06 to 2014-15

Figure 99 Extractives assessments by event subtype 2005-06 to 2014-15

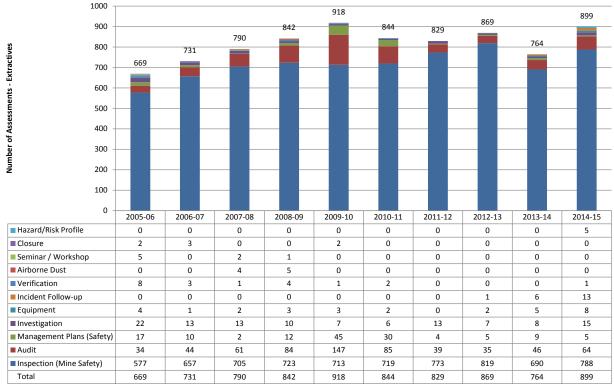


Figure 100 Non-coal other assessments by event subtype 2005-06 to 2014-15 60 50

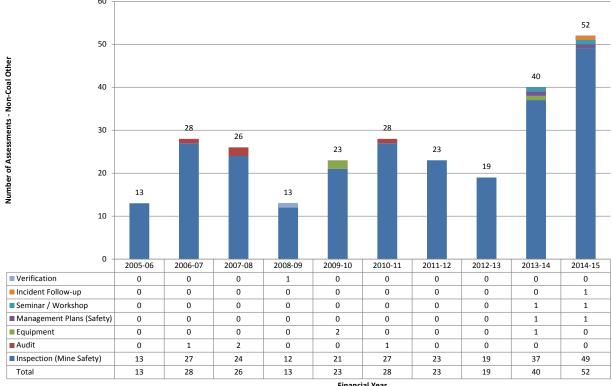


Figure 101 Non-mine assessments by event subtype 2005-06 to 2014-15

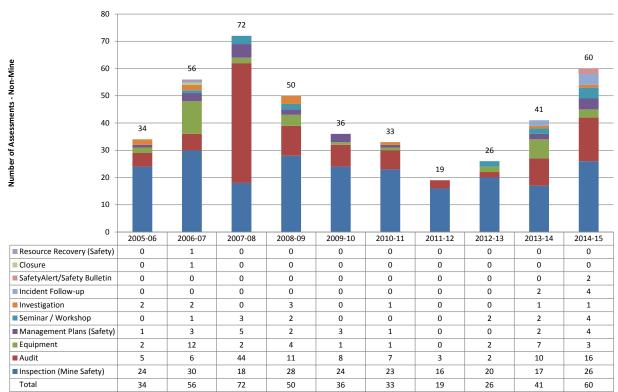
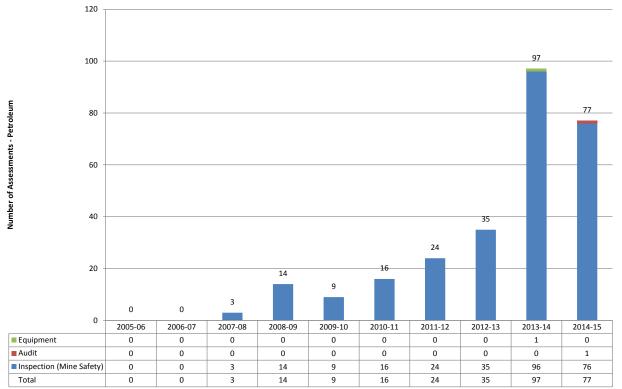


Figure 102 Petroleum assessments by event subtype 2005-06 to 2014-15

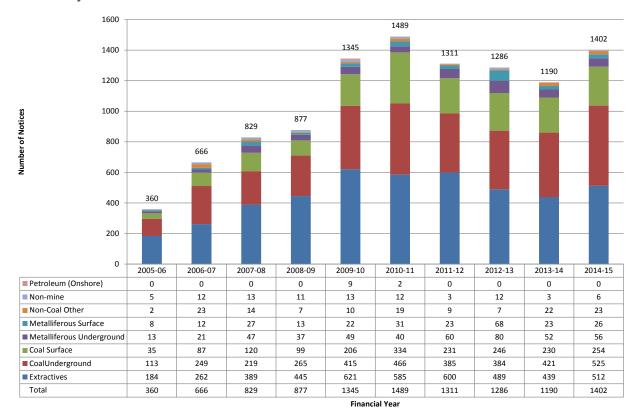


13. **Notices**

This section reports on advice/improvement, prohibition, investigation and explosives enforcement and advice/improvement notices issued by NSW Department of Industry inspectors and Mine Safety officers.

13.1. Notices by sector

Figure 103 All notices by sector 2005-06 to 2014-15



13.3. Notices by notice category

Figure 104 All notices by notice category 2005-06 to 2014-15

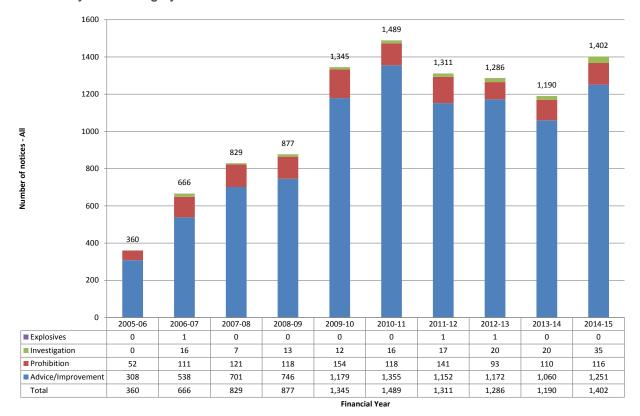


Figure 105 Coal notices by notice category 2005-06 to 2014-15

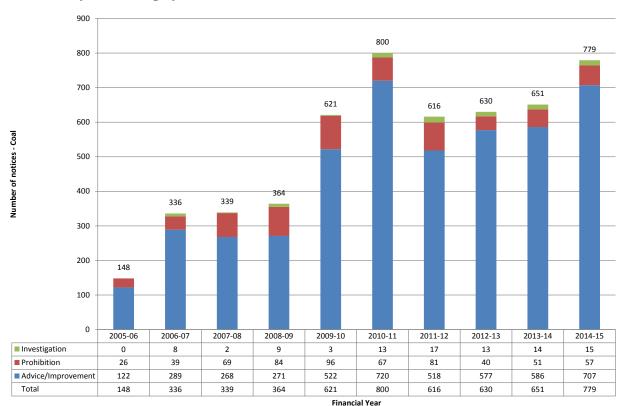


Figure 106 Metalliferous notices by notice category 2005-06 to 2014-15

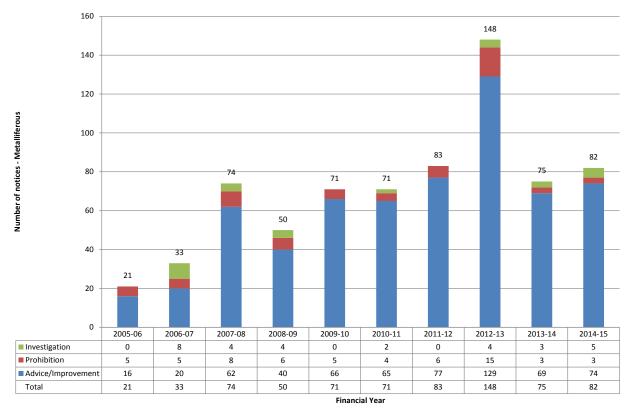


Figure 107 Extractives notices by category 2005-06 to 2014-15

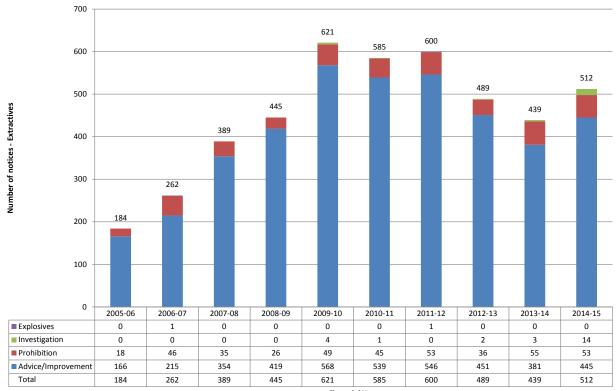


Figure 108 Non-coal other notices by category 2005-06 to 2014-15

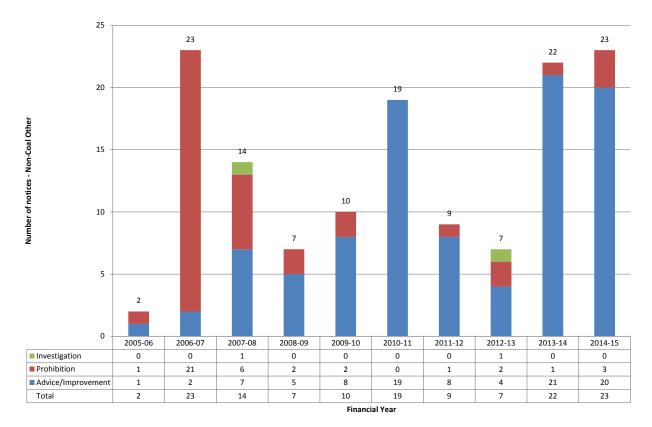


Figure 109 Non-mine notices by category 2005-06 to 2014-15

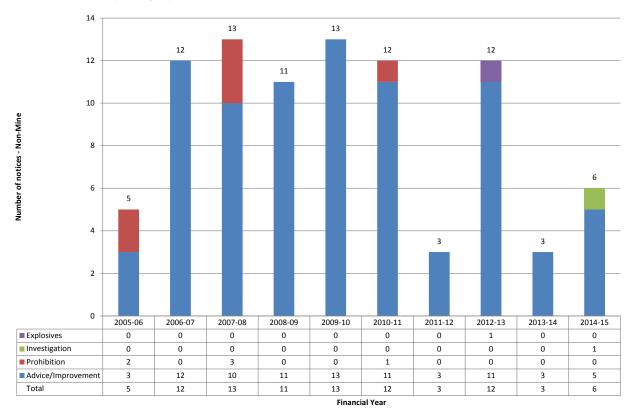
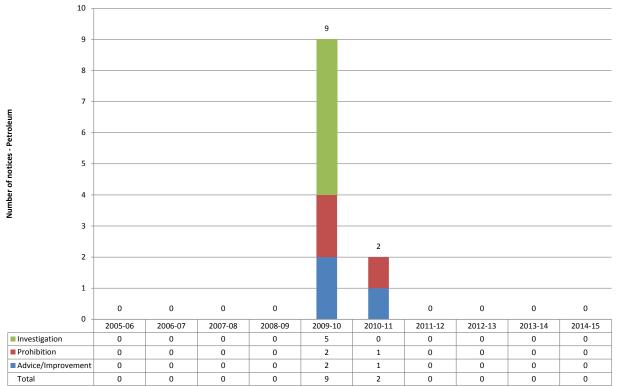


Figure 110 Petroleum notices by category 2005-06 to 2014-15



Appendices – Additional information

Appendix 1 Mine types and mine operation types

Figure 111 Mine types

Mining sector		Mine type	
Coal		Coal Declared Plant – CPP	
Metalliferous	Metals Mineral Sands		
	Extractives	Construction Materials Industrial Minerals	
Non Coal	Other	Gemstones or Precious Stones Opal Claim Readymix/Bitumen Ancillary to Mining Waste Mining Treatment Plant To Be Determined	
Petroleum (Onshore)		Petroleum	

Figure 112 Mine operation types

Operation	Operation Type
Underground	Underground
Surface	Open Cut Processing Borrow Pit Dredging Drilling Exploration Exploration Wells Opal Mining (All Types) Production Wells To Be Determined

Note that in this report, both surface and underground activity occurring at an underground operation, is considered as underground activity

Appendix 2 Incident event subtypes

Figure 113 incident event subtypes

Incident event subtype	Description	
Dust	dust ignition; sulphide dust explosion; silica exposure	
Electrical energy	electrical energy (electric shock); burns caused by electrical heat; outbreak of fire due to electricity; unplanned movement due to electricity	
Explosives	explosives general (ejection of flyrock); fault with an explosive; misfire - significant	
Gas	gas ignition; asphyxiate gases such as CO2; poisonous gases such as H2S or CO; explosive gases such as H; flammable gases.	
Hazardous materials	scolding, injection of hydraulic fluid, flammable / explosive liquids, liquid chemicals, etc	
Mechanical equipment fixed	winding systems, crushers, screens, conveyors, guarding, etc.	
Mechanical equipment mobile	mobile plant	
Self-heating	spontaneous combustion involving increase in temperature of coal or other combustible material from the oxidation process	
Strata control	fall of roof or sides, slope stability – High wall, Windblast	
Structural failure	Infrastructure failure – bins, buildings, etc	
Water	inrush of water	
Work environment	slips, trips and falls; falling or flying objects; fall from a height; ventilation; lightning strike; noise; radiation	

Appendix 3 Incident types and relevant legislation

Figure 114 Incident types under former and current legislation

Mine Category	Legislation		Commenced	Status	Legislation Category	COMET Incident Type
	Coal Mines Regulation Act 1982	CMRA 1982	26/03/1984	Repealed	*CMRA	*1984 Dangerous Occurrence O/C *1984 Dangerous Occurrence U/G *Serious Bodily Injury CMRA *Fatality
	Coal Mines (General) Regulation 1999	CMGNR1999	1/09/1999	Repealed	*CMGNR	*Notifiable Incidents DCCP CMGNR 1999, Cl 83 *Non Spec Acc Ending in Fat/Injury
Coal	Coal Mines (Open Cut) Regulation 1999	CMOCR 1999	1/09/1999	Repealed	*CMOCR	*Notifiable Incidents CMOCR 1999, Cl 16
	Coal Mines (Underground) Regulation 1999	CMUGR 1999	1/09/1999	Repealed	*CMUGR	*Dangerous Occurrences CMUGR 1999, Cl 34(1) *Notifiable Incidents CMUGR 1999 Cl 34A *Other Notifiable Incidents CMUGR 1999 Cl 34B *Incidents CMUGR 1999, Cl 34(2) Repealed 4/7/2003
	Coal Mine Health and Safety Act 2002 Coal Mine Health and Safety Regulation 2006	CMHSA 2002 CMHSR 2006	23/12/2006	Repealed	*CMHS	*CMHSR 2006 Cl 55 *CMHSR 2006 Cl 56(1) *Non Spec Acc Ending in Fat/Injury
Non-Coal	Mines Inspection Act 1901 Mines Inspection Regulation 1999 Mines Inspection General Rule 2000	MIA 1901 MIR 1999 MIGR 2000	1/02/1902 30/07/1999 01/09/2000	Repealed	*MIA	*1994 Emergency MIA *Minor Accident MIA *Pre Sept 2000 Dangerous Incident MIA *Serious Injury MIA *Dangerous Incident *Non Spec Acc Ending in Fat/Injury
	Mine Health and Safety Act 2004 Mine Health and Safety Regulation 2007	MHSA 2004 MHSR 2007	1/09/2008	Repealed	*MHS	*MHSR 2007 Cl 145 *MHSR 2007 Cl 146(1) *Non Spec Acc Ending in Fat/Injury
Petroleum	Petroleum (Onshore) Schedule 1992	POSch 1992	08/1992	Current	POSch	POSch 1992
All excl Petroleum	Work Health and Safety (Mines) Act Work Health and Safety (Mines) Regulation	WHSMA 2013 WHSMR 2014	1/02/2015	Current	WHSMA WHSMR	WHSMR 2014 Cl 128(5)(a) High Potential Incident WHSMR 2014 Cl 128(5)(b)-(m) High Potential Incident WHSMR 2014 Cl 179(a) Dangerous Incident WHSMR 2015 Cl 179 (a)-(f) Dangerous Incident Non Spec Acc Ending in Fat/Injury
	Explosives Regulation 2005	EXPLR 2005	1/09/2005	Current	Explosives	Explosives Regulation 2005
AII	Not Applicable				N/A	Complaint
						NEC (not elsew here classified)

^{*} indicates repealed legislation

Appendix 4 Serious bodily injury types and relevant legislation

Figure 115 Coal and non-coal serious bodily injury (SBI)/serious injury (SI) clauses under former and current legislation

S	Serious Bodily Injury/Serious Injury (SE	31)
Coal Mines (General) Regulation 1999 Clause 85 Mines Inspection Act 1901 Section 47	Coal Mine Health & Safety Regulation 2006 Clauses 55 and 57 Mine Health & Safety Regulation 2007 Clause 145	Work Health & Safety (Mines) 2014 Clause 178
		WHSMR CI 178(a) an injury or illness requiring the person to have immediate treatment as an in-patient in a hospital Note: applicable to sub-clauses under WHSMR CI 178(b) An injury or illness requiring the person to have immediate treatment for:
*CMGR CI 85(a) *MIA S 47(a) a fracture of the skull, jaw, spine, pelvis, arm, shoulder- blade, collar-bone, forearm, thigh, leg, knee cap, ankle or ribs	*CMHSR CI 55, 57(a)(ii) *MHSR CI 145 any fracture other than a fracture of a finger, toe, hand or foot	WHSMR CI 178(d) a fracture to a person's bone other than a bone in the person's hand (including a finger) or foot (including a toe)
*CMGR CI 85(b) *MIA S 47(b) a dislocation of the shoulder, elbow, hip, knee or spine	-	May be covered by other clauses eg WHSMR Cl 178(a)
*CMGR CI 85(c) *MIA S 47(c) an amputation of the hand or foot or a substantial part of the hand or foot	*CMHSR CI 55, 57(a)(i) *MHSR CI 145(a)(i) the amputation of one or more fingers or toes or any other part of a hand or foot	WHSMR CI 178(b)(i) the amputation of any part of his or her body
*CMGR CI 85(d) the serious impairment or loss of sight of an eye MIA S 47(d) the loss of sight of an eye	*CMHSR CI 55, 57(a)(iii) *MHSR CI 145(a)(iii) loss of sight of an eye,	WHSMR CI 178(b)(iii) a serious eye injury
*CMGR CI 85(e) an internal haemorrhage receiving hospital treatment *MIA S 47(e) an internal haemorrhage requiring hospital treatment	*CMHSR CI 55, 57(a)(iv) *MHSR CI 145(a)(iv) an internal haemorrhage receiving hospital treatment	Covered by other clauses eg WHSMR Cl 178(a)
*CMGR CI 85(f) burns receiving treatment from a registered medical practitioner *MIA S 47(f) burns requiring hospital treatment	*CMHSR CI 55(c)(v) *MHSR CI 145(c)(iv) serious burns to a person	WHSMR CI 178(b)(iv) a serious burn
*CMGR CI 85(g) an injury involving injection of hydraulic fluid	*CMHSR CI 55, 57(a)(v) the injection of fluid (including hydraulic fluid, oil, air or water) under pressure *MHSR CI 145(a)(v) the injection of fluid	Covered by other clauses eg WHSMR Cl 178(a)
*CMGR 85(h) *MIA S 47(g) asphyxia	*CMHSR CI 55, 57(a)(vi) *MHSR CI 145(a)(vi) asphyxia	Covered by other clauses eg WHSMR Cl 178(a)
*MIA S 47(h) any other kind of injury prescribed by the general rules	-	-
		WHSMR CI 178(b)(ii) a serious head injury
		WHSMR CI 178(b)(v) the separation of his or her skin from an underlying tissue (such as degloving or scalping) WHSMR CI 178(b)(vi)
		a spinal injury WHSMR CI 178(b)(vii) the loss of a bodily function
		WHSMR CI 178(b)(viii) serious lacerations
		WHSMR CI 178(c) an injury or illness requiring the person to have medical treatment within 48 hours of exposure to a substance WHSMR CI 178(e)
	*indicates repealed legislation	A condition prescribed as a serious illness for the purposes of section 36 of the WHS Act Note: see clause 699 of the WHS Regulation

*indicates repealed legislation

Figure 116 Petroleum (Onshore) serious injury (SI) clauses under current legislation

Serio	Serious Injury (SI) – Petroleum (Onshore)		
Petrole	Petroleum (Onshore) Schedule 1992		
301(1)	an injury which requires immediate attention by a medical practitioner		

Appendix 5 Notifiable injury outcomes and relevant legislation

Figure 117 Notifiable injury outcomes under former and current legislation

Notifiable outcome	Legislation		
Fatality	*CMHSA 2002	S 110(1)(a)	any incident at the coal operation site that has resulted in a person being killed
	CIVINSA 2002	S 110 (2)(a)	any incident at the exploration site that has resulted in a person being killed
	*MHSA 2004	S 88(1)(a)	any incident at the mine that has resulted in a person being killed
	WHSMA 2013	S14(a)	The death of a person
Permanent incapacity	WHSMR 2014	Cl 178(b)(vii)	The loss of a bodily function
Lost consciousness	CMHSD 2006	Cl 55(a)	an injury to a person that results (at any time after the injury) in any of the following: (vii) the loss of consciousness of the person caused by impact of physical force, exposure to hazardous substances, electric shock or lack of oxygen
	*CMHSR 2006	Cl 57(a)	an injury to a person that results (at any time after the injury) in any of the following: (vii) the loss of consciousness of the person caused by impact of physical force, exposure to hazardous substances, electric shock or lack of oxygen
	[*] MHSR 2007	CI 145(a)	an injury to a person that results (at any time after the injury) in any of the following: (vii) the loss of consciousness of the person caused by impact of physical force, exposure to hazardous substances, electric shock or lack of oxygen
	WHSMR 2014	Cl 178(b)(vii)	The loss of a bodily function
	*CMHSR 2006	Cl 55(b)	an event that results (at any time after the event) in the admission of a person to hospital as an in-patient
Hospital inpatient admission		Cl 57(b)	an event that results (at any time after the event) in the admission of a person to hospital as an in-patient
nospital impatient aumission	*MHSR 2007	CI 145(b)	an event that results (at any time after the injury) in the admission of a person to hospital as an in-patient
	WHSMR 2014	CI 178(a)	An injury or illness requiring the person to have immediate treatment as an in-patient in a hospital
Entrapment	CMHSR 2006	CI 55(c)	any of the following events or circumstances that present an immediate threat to life or of permanent incapacitating injury: (iii) entrapment of a person
	MHSR 2007	CI 145(c)	any of the following events or circumstances that present an immediate threat to life or of permanent incapacitating injury: (iii) entrapment of a person

Notifiable injury outcomes under current legislation continued

Notifiable outcome	Legislation		
	*CMHSR 2006	CI 56(1)(a)	an injury to a person that results in the person being unfit, for a continuous period of at least 7 days, to attend the person's usual place of work, to perform his or her usual duties at his or her place of work or, in the case of a non-employee, to carry out his or her usual work activities (where that unfitness is supported by a medical certificate)
		CI 56(1)(b)	an illness of a person that is related to work processes and results in the person being unfit, for a continuous period of at least 7 days, to attend the person's usual place of work or to perform his or her usual duties at that place of work (where that unfitness is supported by a medical certificate)
>=7 days lost time and/or alternative duties		CI 56(1)(c)	any incidence of violence at a place of work that results in an employee being unfit, for a continuous period of at least 7 days, to attend the employee's usual place of work or to perform his or her usual duties at that place of work (where that unfitness is supported by a medical certificate)
	*MHSR 2007	CI 146(1)(a)	an injury to a person that results in the person being unfit, for a continuous period of at least 7 days, to attend the person's usual place of work, to perform his or her usual duties at his or her place of work or, in the case of a non-employee, to carry out his or her usual work activities (where that unfitness is supported by a medical certificate)
		CI 146(1)(b)	an illness of a person that is related to work processes and results in the person being unfit, for a continuous period of at least 7 days, to attend the person's usual place of work or to perform his or her usual duties at that place of work (where that unfitness is supported by a medical certificate)
		CI 146(1)(c)	any incidence of violence at a place of work that results in an employee being unfit, for a continuous period of at least 7 days, to attend the employee's usual place of work or to perform his or her usual duties at that place of work (where that unfitness is supported by a medical certificate)
	WHSMR 2014	CI 128(5)(n)	an injury to a person (supported by a medical certificate) that results in or is likely to result in the person being unfit, for a continuous period of at least 7 days, to perform person's usual activities at the person's place of work
		Cl 125(5)(o)	an illness of a person (supported by a medical certificate) that is related to a work process and that results in the person being unfit, for a continuous period of at least 7 days, to perform person's usual activities at the person's place of work

Notifiable outcome		Legisla	ation
Medical treatment	WHSMR 2014	Cl 128(1)(a)	Results in illness or injury that requires medical treatment by a doctor, being the management or care of a patient including: (a) the suturing of a wound, (b) the treatment of fractures (c) the treatment of bruises by drainage of blood, (d) the treatment of second and third degree burns, but not including diagnostic procedures.

*indicates repealed legislation

Appendix 6 Assessment event subtypes

Figure 118 Assessment event subtypes

Assessment event subtype	Description
Airborne dust	Evaluation of the implementation of an operation's safety systems and procedures relevant to the control and analysis of airborne dust at the mine.
Audit	Formal evaluation of site activities, plant and equipment and management systems in relation to compliance with legislation, standards and guidelines.
Closure	Evaluation of the implementation of an operation's safety systems and procedures relevant to the closure or abandonment of a mine or part of a mine.
Equipment	Formal or informal inspection of equipment or plant in relation to compliance with legislation, standards and guidelines.
Explosion suppression	Sampling inspections, analysis and reports of roadway dust conditions.
Inspection (Mine Safety)	Formal or informal inspection of site activities, plant and equipment and management systems relevant to the continued safe operation of a mine or health, safety and welfare of persons who work at the mine.
Investigation	Investigation of a mine incident requiring the collection and analysis of information obtained from premises off-site or not at the mine.
Management plans (Safety)	Desk top review of Mine Safety Management Plans in relation to compliance with legislation, standards and guidelines.
Resource recovery (Safety)	Evaluation of information on planning, operation and geology in relation to the safe operation of a mine or health, safety and welfare of persons who work at the mine.
Seminar/workshop	Review of information presented on safety matters relating to the mining industry.
Verification	Verification of the implementation of an operation's Mine Safety Management Plan safety systems and procedures

NB Use of Assessment Event Subtypes may change over time due to changes in recording approach.

Appendix 7 Enforcement and advice/improvement notice categories and relevant legislation

Figure 119 Enforcement and advice/improvement notice categories and types under former and current legislation

Enforcement and Advice Notice Category	Legislation and Enforcement and Advice Notice Type			
	*CMRA 1982	S 61	Inspector or mine safety officer to inform mine management of exercise of certain powers	
	*CMHSA 2002	S 150	Bringing of concerns regarding health, safety or welfare to the attention of operators	
Advice	*MIA	S 36B	Inspector or mine safety officer to inform mine management of certain matters	
	*MHSA 2004	S 131	Bringing of concerns regarding health, safety or welfare to the attention of operators	
	WHSMA 2013	S 23	Notice of concern	
Improvement	*OHSA 2000	S 91	Issue of improvement notices	
Improvement	WHSA 2011	S 191	Issue of improvement notices	
	*CMRA 1982	S 63	Inspector may impose prohibitions or restrictions or direct evacuation or closure of mine	
	*CMHSR 2006	CI 51	Chief Inspector may impose prohibitions or restrictions or direct evacuation or closure of coal operation	
Prohibition	*MIA	S 37	Notice to be given of cause of danger	
		S 37A	Order to withdraw persons from mine	
	*MHSR 2007	CI 158	Chief Inspector may impose prohibitions or restrictions or direct evacuation or closure of mine	
	*OHSA 2000	S 93	Issue of prohibition notices	
	WHSA 2011	S 195	Power to issue prohibition notices	
		S 62	Power of Inspectors to obtain information, documents and evidence	
		S 70	Notice of taking or dismantling plant, substances or other things	
	*OHSA 2000	S 72	Receipt for things taken	
		S 89	Investigation notice to stop plant or prevent disturbance of premises to allow investigation	
Investigation		S 155	Powers of regulator to obtain information	
		S 171	Power to require production of documents and answers to questions	
	WHSA 2011	S 177	Powers supporting seizure	
	WHSA 2011	S 178	Receipt for seized things	
		S 179	Forfeiture of seized things	
		S 183	Inspector to give notice of damage	
		S 198	Issue of a non-disturbance notice	
Explosives	EXPLR 2005	CI 99	Certain powers of inspectors and police officers	

*indicates repealed legislation

Appendix 8 Sources of data

Figure 120 Sources of data

Data	Mining Sector	Source
Employees hours worked	Coal	 Coal Services Pty Ltd to 2006-07 NSW Coal Industry Profiles to 2006-07 NSW Department of Industry Quarterly Workplace Injury Reports from 2007-08 onwards
	Metalliferous extractives	Minerals Council of Australia Safety Performance Reports to 2004-05 NSW Department of Industry Mineral Royalty Returns to 2006-07 NSW Department of Industry Quarterly Workplace Injury Reports from second quarter 2008-09 onwards
LTIs	Coal	Coal Services Pty Ltd to 2006-07 NSW Department of Industry Quarterly Workplace Injury Reports from 2007-08 onwards
	Metalliferous extractives	Minerals Council of Australia Safety Performance Reports to 2004-05 NSW Department of Industry Injury (Non Serious) Forms - Mines Inspection General Rule 2000 CI 26 NSW Department of Industry Incident and Injury Notifications to first quarter 2008-09 NSW Department of Industry Quarterly Workplace Injury Reports from second quarter 2008-09 onwards
MTIs	Coal	NSW Department of Industry Quarterly Workplace Injury Reports from 2007-08 onwards
RDIs	Metalliferous extractives	NSW Department of Industry Quarterly Workplace Injury Reports from second quarter 2008-09 onwards
Incidents Fatalities Serious bodily injuries Notifiable injury outcomes	All	NSW Department of Industry Incident and Injury Notifications
Assessments enforcement and advice notices	AII	NSW Department of Industry COMET Mine Safety database