

Model Work Health and Safety Regulations for Mining - Public Comment Response Form
National Opal Miners Association (NSW, SA, QLD)

Importance of the Opal Industry

The Opal is an exceptionally rare commodity across the world, with only a few countries mining economic deposits. Australia is responsible for over 95% of all worldwide opal production, having been discovered in 1872 in Jundah, Qld. Opal is commercially mined in three states across Australia (NSW, SA and Qld). In 1993 the Opal was proclaimed as Australia's national gem, by the Governor-General, the Hon Bill Hayden AC and has weaved itself into the cultural fabric of all things Australian throughout the last century.

The overall economic value of the opal industry in Australia is challenging to statistically define, however with the available data, the industry is worth approximately \$370 to \$400 million to New South Wales, South Australia and Queensland's outback economy and should be considered a vital industry to Australia's general outback economy.

Economically speaking, the Opal industry has been valued up to \$85 million per annum to the Australian GDP in exports. These opal communities contribute much more to regional Australia and the psyche of the Australian spirit than can possibly be measured through economic data. In addition to this, any revenue from opal mining is more likely to be invested back into the local regional community, unlike larger mining industries, due to the smaller nature of the industry. This makes it valuable contributor to regional communities and economies.

The opal industry employs thousands of people from miners to retailers and is the focus of a strong tourism sector. Furthermore, it essentially sustains regional towns such as Coober Pedy, Andamooka, Mintabie, Lambina, Quilpie, Yowah, Winton, White Cliffs and Lightning Ridge. The opal industry supports an official population of approximately 7,427 across the three state's mining regions (ABS, Census Data, 2006), which in turn provides essential services to remote communities of Australia which may not receive any servicing without the addition of opal mining to their RDP. In addition the industry attracts a substantial itinerant population, that mines on a part time basis and are not included in census and economic figures. The ancillary value of the opal industry from both within and through export from Australia extends beyond just the total value of sales. The industry stimulates commercial activities such as jewellery design, setting and local sales, local trade, regional employment benefits, niche outback development and tourism trade to a greater extent than most outback niche industries.

In addition to essential community services being supplemented by the income of opal mining, the presence of the opal industry in these remote areas attracts a vast number of tourists to experience the world of opal mining. According to Tourism Research Australia, the Coober Pedy region attracts approximately 118,000 domestic and international visitors per annum. These visitors contribute approximately \$17million to the regional economy and stay on average 2.1 nights (a total of 246,000 nights). Opal mining, purchasing, fossicking (noodling) and tours are the main attraction of travellers to Coober Pedy (apart from travel through the region) and encourages people to stay longer than would be usual.

This multiplies out across the nation, with the main areas of opal mining in Australia attracting in excess of 231,000 visitors per annum, contributing approximately \$54 million to the regional economy and staying in excess of 656,000 nights within the main opal mining regions (Tourism Research Australia, 2007, Local Government Profiles, Coober Pedy, Winton, Walgett). It has been said that the tourist dollar multiplies out across a regional community approximately 6 times (the multiplier affect), this equates to over \$324 million in remote Australia, an area where the impact of this contribution is intensely felt.

Unlike other mining operations, opal mining remains a highly speculative industry after a century of opal mining in Australia. The genesis of opal has not been discovered and mining will continue to be a highly speculative business until this is understood. At present, there is no way an explorer, miners or geologists can assay the potential value of a mine. As a result, large companies will not invest in opal mining until the genesis of opal process is known. This process in itself makes opal mining and investment in the industry very different to larger scale mining operations which have access to geophysical information that can exactly define the size, location and purity of the ore body prior to commencement of mining. Opal mining therefore is the province of small mining operations generally of one and two man partnerships with no employees working on small short term titles.

General Comment

The language throughout the draft regulation includes in nearly each section “must”, for example the mine operator “must” establish and implement a WHS management system (S.9.2.5-9), “must prepare a principal mining hazard management plan”, “Must give the regulator work health and safety information outlined in schedule 9.1 on a quarterly basis” and so on throughout the draft. There are over 3,300 mineral claims around Lightning Ridge, NSW and this clause is obviously impractical. It is unclear how the term “must” applies in section 18 of the model work health and safety bill 23 June 2011 as to what is “reasonably practicable”. The full regulation is not available at present, however in the last draft section 10.3 “allow for the regulator to grant exemption for any regulations to an individual or group”. This is a vital regulation to enable the states the flexibility to exempt opal miners from sections that are not reasonably practicable.

Individual/Organisational name: National Opal Miners Association (NSW, QLD, SA)	
Regulations Chapter 9: Mines	
Part 9.1	
Regulation	Comment
Division 1 General control of risk	Hazard identification, risk assessment and control is the basis for managing all workplace health and safety and the opal miners undertake regular identification of hazards and assess the risks associated with their mining activities. In the case of documenting risk assessments, under the Westminster system in the UK since 1974; organisations with less than 5 employees have not had to document

	<p>risk assessments. It is proposed that this be enacted in the mining regulations here in Australia. Under the UK regulations “The Management of Health and Safety at Work Regulations 1999”, within Section 3.6 “Where the employer employs five or more employees, he shall record- a) the significant findings of the assessment; and b) any group of his employees identified by it as being especially at risk”. This system could be implemented across the opal mining areas, in conjunction with training systems in risk assessment. If applied this would include the need to document the following as an excessive liability to such small mining enterprises:</p> <p>Division 1, 9.2.5-9.2.9 Division 2, 9.2.10-12 Division 3, 9.2.13, 9.2.18</p> <p>The opal industry has an excellent safety record with no fatalities in NSW for over 12 years and no fatalities in SA in just 10 under years.</p>
Part 9.2	
Regulation	Comment
9.2.1	
9.2.9 WHS Management System	<p>The vast majority of mines are operated by partnerships and have no employees as such. It is not reasonably practicable for opal miners to abide by these sections. One example in particular is 9.29 (2) where by a mine operator must give the regulator quarterly information, there are currently over 3,300 mineral claims in the Lightning Ridge district alone, which makes this totally impractical particularly for the regulator. In South Australia there are in excess of 680 claims spread over 5430 square kilometres, with a new precious stones field coming online as we speak, the sheer size of these opal fields is going to make it impractical for the regulator.</p>
9.2.10 Duty to prepare a plan	<p>Opal mining currently is the realm of sole miners or small individual partnerships, the duty to formally document a Principal Mining Hazard Management Plan will be an excessive encumbrance on such small businesses, with few or no employees. As mentioned in Division One, in the case of the Westminster System in the UK, organisations with less than five employees do not have to document risk assessments, it is proposed that this be enacted here in Australia.</p> <p>Unlike large scale mining, where geophysical data can correctly identify ore bearing deposits to accurate depths and percentages, opal mining is purely speculative and requires a large amount of luck to find opal bearing deposits. The prospecting style of opal mining means that preparing a formal Principal Mining Hazard Management Plan for a mine that may only be working for a short period (ie 24 hours) would be an onerous task.</p> <p>Opal miners in New South Wales must attend safety workshops run by the government, prior to being able to hold a title and also must attend additional workshops prior to being nominated as the mine operator. We propose that this regime is extended across Australia for all opal miners in lieu of formally written Principal Mining Hazard Management Plans and Ventilation Plans.</p>
9.2.13- Specific control measures	<p>As mentioned opal mining is performed by sole trader and smaller partnerships and as such there are no official shifts, because there are no shift changes there is no requirement for a formally documented reporting system.</p>
9.2.15 Shafts and	<p>1 (a), (b), (c), (d) Not applicable, as it represents disproportionate cost for small mining operations, making it an onerous modification for</p>

winding	the average opal mine (approx. 40ft). (e) Opal mining winches are slow moving, non-free fall machines that already have braking systems within them and do not have the capacity to add additional limiting devices. These winches typically lift a maximum of the average miner (person) of up to 120kg. The 8mm cable that is currently utilised has the capacity to hold several tonnes. In New South Wales “man-riding-hoists” only are required to be registered and checked on a regular basis and this should be a national requirement.
9.2.18 Ventilation control plan for an underground mine	Due to the average size of an opal mining business, it would be an unwarranted impediment on sole traders or small partnerships to formally document a ventilation plan. Ventilation is currently well catered for as opal mines currently drill extra shafts for ventilation, and using blowers/fans to disperse gasses, dusts and or particles. Many opal miners have a mobile ventilation system/plan in place, which means that ventilation is created as part of every single mining operation.
9.2.23 Air safety – additional requirements relating to methane in underground mines	Opal mines should be exempted from this regulation as there is no methane present in opal bearing areas.
9.2.25 Signs	There should be no requirement for air monitoring devices and therefore no necessity for signage.
9.2.26 Air monitoring – All mines	Air monitoring should not be required as per the previous discussions and the risk assessments need not be recorded as per the submission relating to the UK requirements to document risk assessments.
9.2.28-29 Ventilation in underground mine and plans	It would be an unnecessary burden to require an opal miner to measure air current, keep a record of it and prepare a plan of the ventilation system, due to the size of mining operation (sole operator/small partnerships). The ventilation system usually consists of air holes and mobile ventilation machinery put in place by the miners themselves, which can be moved as required and they are constantly reviewing their ventilation needs as they progress the works. Generally speaking, opal mines have ventilation that would be in excess of any regulation for the size of their mine. As opal mining is speculative, some workings are of a temporary nature and therefore it would be a disproportionate burden to implement a ventilation plan for such short term underground activity.
9.2.31 Closure, suspension or abandonment of mine	The opal fields in Australia cover a vast area, many are within prescribed opal field areas. In South Australia there is now a 800mm high boundary fence with signage warning of the dangers of unauthorised entry. We believe that securing the area against entry is entirely justifiable and that safety is paramount; however we think that it is unreasonable and impracticable to have it secured against unauthorised access, given the vastness of the opal fields and the significant number of existing abandoned tenements throughout South Australia. Tourism companies must be required to train their personnel to ensure that tourists do not enter the restricted areas. Due to the changes in opal mining techniques; declines now have a perimeter of spoil to a minimum of 3 metres in height that clearly defines the entrance to the mine. All older drill holes and entrance holes are marked by spoil piles.
9.2.32-36 Emergency plan – duty to prepare and implement	It is an unreasonable obligation on an opal mining operator of such a small size; to prepare a documented emergency plan that is tested and reviewed. We believe it is unnecessary for the small sole trader and partnerships, especially in tenements that may be of a short duration (some tenements may only be worked for 24 hours, due to the highly speculative nature of opal mining).
9.2.37- Emergency exits	It would be financially unviable to require opal miner’s two means of exiting the mine, in addition to the hoisting shaft and any other normal exit; particularly when first setting up a mine and ascertaining whether it is worth continuing to work that mine. In New South Wales opal miners are only permitted four open shafts on a 50m by 50m mineral claim and if they require more, they are required to

	lodge additional security- a disincentive designed for environmental purposes. Sign posts are unnecessary as the mine owner/operator has constructed the exits themselves.
9.2.39 Emergency signage	Due to the size and nature of opal mining, this would pose an unwarranted burden on the opal miners, as the shafts are on average about 15m in depth and tunnels are on average 20m length before there is another shaft drilled for ventilation and safety, which also provides an alternative for a refuge chamber, which is more safe and practical for the existing mining practices. The mine owner/operator does not need signage as they know where the exits are, as they designed and constructed them.
9.2.40 Self-rescuers	Typically opal mines are found within siltstone and/or sandstone; these types of sedimentary rocks are not associated with the accumulation of noxious gasses. A self-rescuer will hinder the escape of an opal miner, as when correctly fitted, they increase the physical size of the opal miner which will hinder escape through smaller diameter mine shafts, thus increasing the risk to the individual. It also has the ability to decrease essential vision, required for climbing physically up the shaft, which in emergency situations would be up a ladder or to get onto mining equipment. The average size of an opal mine means that the time required to correctly fit a self-rescuer would be longer than the average emergency exit time out of an opal mine, which is between 1-3 minutes, as the typical depth of an opal mine is no deeper than about 30 metres.
9.2.41 Personal protective equipment in emergencies	The opal fields have a mine rescue response team of trained volunteers supplied with the necessary plant and equipment to undertake retrieval of injured persons. This negates the need for each individual mine to provide equipment for this and as previously discussed there is no need for respiratory devices as there are no subterranean gases.
9.2.42-46 Information training and instruction	A more practical requirement for opal mine owners/operators is to give workers and visitors verbal inductions prior to commencing mining or visiting a mine and giving verbal training and instruction on machinery they require workers to use. In New South Wales, an opal miner's safety course is being developed by the Department of Mineral Resources and all title holders must attend this course and the vast majority of workers are title holders. As discussed earlier we believe that opal miners should attend safety workshops run by the government, prior to being able to hold a title and also to attend additional workshops prior to being nominated as the mine operator as they do in NSW. We proposed that this regime is extended across Australia for all opal miners.
9.3.1-9.3.6 Fitness for work and health	This section is irrelevant to opal miners who work together in partnerships. It's a disproportionate burden on small partnerships and sole operators to implement a regime of fitness for work monitoring as they would not be able to finance such undertakings and it would not be viable for one to test oneself.
9.4 Consultation and Workers' Safety Role	This section is irrelevant for opal miner operators/owners who are sole traders or work in partnerships and therefore consultation will occur only in the partnership role and all mine operators would be consulted as a matter of course. It is hitherto unknown in opal mining for the mine operator to require external employees outside of any partnership.
Part 9.5	
Regulation	Comment
9.5.1 Survey plan of mine must be prepared	Is not used by the current South Australian regulator (PIRSA), because of the inaccurate nature of GPS technology and the small size of opal tenements. It would be a disproportionate burden to expect mine owner/operators to undertake a survey plan of such a small mine, when the regulator is unable to utilise the GPS technology due to the nature of small tenements. It is an unnecessary financial burden to

	require a registered mine surveyor – there are none in the opal mining areas of NSW. In addition there is a serious issue with ratters on the opal fields whereby people steal ore from another’s mine and a plan of the underground workings would give them carte blanche. The miners themselves have dug the claim themselves so they do not need a plan.
Other Comments	

Codes of Practice	
Roads and Other Vehicle Operating Areas	
Section/page number	Comment
Managing Naturally Occurring Radioactive Materials in Mining	
Section/page number	Comment
The Mine Records	
Section/page number	Comment
WHS Management Systems in Mining	
Section/page number	Comment
Inundation and Inrush Hazard Management	
Section/page number	Comment
Emergency Response in Australian Mines	
Section/page number	Comment

Strata Control in Underground Coal Mines	
Section/page number	Comment
Ventilation of Underground Mines	
Section/page number	Comment
Survey and Drafting Directions for Mine Surveyors	
Section/page number	Comment
Health Monitoring	
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Mine Closure	
Section/page number	Comment
Ground Control in Open Pit Mines	
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Ground Control for Underground Mines	
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Underground Winding Systems	
Section/page number	Comment

