

Model Work Health and Safety Regulations for Mining - Public Comment Response Form

Individual/Organisational name: Dr Ches Mason, Radiation Safety Specialist	
Regulations Chapter 9: Mines	
Part 9.1	
Regulation	Comment
9.1.4	Paragraph (1) (a) (viii) – ionising radiation – does not belong in the list of principal mining hazards as they are defined in 9.1.4. It is not feasible for ionising radiation from naturally occurring radioactive materials to ‘create a risk of multiple fatalities in a single incident or fatalities in a series of recurring incidents’. The draft definition of a principal mining hazard relates to ‘incidents’ – that is, to acute events – whereas any risk from ionising radiation from radioactive ores arises from cumulative exposure over a period and reflects a possibility of future harm, long after the exposure occurs. If ionising radiation is to be included under these regulations, the definition of a principal mining hazard must be amended to cover ionising radiation correctly. For example, the definition could be modified along the following lines: ‘...a principal mining hazard is (...anything...) that creates a risk of multiple fatalities in a single incident or fatalities in a series of recurring incidents, or a statistical risk of fatality from chronic exposure to an agent that may be detrimental to health’. This change would also benefit paragraphs (1) (a) (v) and 9.2.21 which relate to airborne contaminants.
Part 9.2	
Regulation	Comment
Part 9.3	
Regulation	Comment
Other Comments	
Schedule 9.2, paragraph 8. <p>This paragraph is not adequate for dealing with ionising radiation. It could be replaced with the following: “In assessing the impact on the safety of workers and others in current and proposed mining operations and in developing the control measures to manage the risks from ionising radiation, the following Code of Practice must be considered: <i>Code of Practice and Safety Guide on Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing</i>, Radiation Protection Series No.9, Australian Radiation Protection and Nuclear Safety Agency, 2005, as amended from time to time. In particular, consideration must be given to Paragraph 2.3.2 of the above Code dealing with the applicability of the provisions of the Code to occupational exposure to radiation”.</p>	

General	The objective of a unified and coherent system of workplace health and safety standards across all Australian jurisdictions is of course a good one and strongly supported. However, the Safe Work Australia process needs to recognize existing standards and practices. In particular, a process already exists for national uniformity of regulation of exposure to ionising radiation. The process is managed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) in consultation with the States and Territories. Rather than developing additional, competing and possibly conflicting standards, the existing safety standards could be incorporated by reference.
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Codes of Practice	
Roads and Other Vehicle Operating Areas	
Section/page number	Comment
Managing Naturally Occurring Radioactive Materials in Mining	
Section/page number	Comment
All	<p>The first and overriding comment is that the proposed Code of Practice is not needed and, furthermore, is likely to lead to inconsistencies and jurisdictional problems. There is already a well-established code of practice dealing with protection from ionising radiation in mining that is consistent with a long-standing national standard for limiting occupational exposure to ionising radiation. The code (ARPANSA, RPS9) and the national standard (ARPANSA, RPS1) are both referenced in the National Directory for Radiation Protection (ARPANSA, RPS6, July 2011), which provides the mechanism for uniform adoption of radiation protection standards across Australian jurisdictions.</p> <p>As agreed by the relevant Commonwealth, State and Territory ministers, the National Directory states (Paragraph 5.1): “Codes and Standards referenced in this Directory must be adopted by Authorities within their regulatory frameworks. This should be done preferably by direct reference to a Code or Standard in the regulations of an Authority, but may be achieved by using a Code or Standard as conditions of licence and/or registration issued by an Authority. The referenced Codes and Standards are listed in Schedule 11.”</p> <p>The National Directory, the National Standard and the Code (RPS9) were all developed through a process of extensive consultation and public comment. There is no merit in developing a competing Code of Practice, as proposed. Paradoxically, the draft Code of Practice states in its Scope section: “In the event of any conflict between this Code and that of the ARPANSA legislation, the latter will take precedence”! Why then, was work begun to duplicate existing standards?</p>

	<p>The simplest and most effective way to deal with this unfortunate situation is to discontinue the proposed Code of Practice and instead to refer to the existing ARPANSA code. If there are concerns about the scope or content of the ARPANSA code, these could be readily addressed through the review and revision process managed by ARPANSA.</p>
All	<p>There are many errors in this draft document. Several public commentaries already submitted draw attention to them, and these comments are not repeated here. The draft is not written consistently in the style of a code of practice – that is, using prescriptive language ('must' and 'should'). A code of practice is not a tutorial document. The draft also contains some very poor writing. To illustrate, consider the second paragraph under Scope and Application:</p> <p>“This Code has been developed to assist the person conducting a business or undertaking to ensure that workplaces where naturally occurring radioactive materials (NORMs) associated with mining occur (whether in situ or when persons are exploring for minerals that contain NORMs, or handling, processing, storing or transporting minerals that contain NORMs) are without risks to health and safety and that facilities provided for the welfare of workers and health surveillance are adequate.”</p> <p>This 72-word sentence is almost unintelligible. There are 33 words between the noun 'workplaces' and the verb 'are' that applies to it. As Mark Twain observed of German sentence structure, the verb can sometimes be away over on the next page, but not here surely!</p>
Section 4.2 (Scope issues)	<p>In this section, dealing with the contents of the principal mining hazard management plan, the concept of the critical group of members of the public is introduced. Not only that, but: “In some cases, identification of the critical group may not be possible due to the distance from the proposed site being too far for a group to receive any measurable radiation dose. However, even in such situations, there still exists a need for the operator to demonstrate that the impact of the operation on the local environment is minimal or negligible; and, in these cases a reference plant/animal may be selected for the study after the consultation with an appropriate authority. The flora / fauna selected should, in these cases, [be] described in the principal mining hazard management plan for exploration”.</p> <p>Protection of members of the public, and protection of flora and fauna and the environment are beyond the jurisdictional scope of occupational health and safety. This sub-section has no place in a code of this kind (see under Division 2, Object, of the model Act: “The main object of this Act is to provide for a balanced and nationally consistent framework to secure the health and safety of workers and workplaces...”).</p> <p>Incidentally, the 'critical group' concept has now been replaced by a protection approach based on the 'representative person' – see ICRP Publication 101.</p>
All	<p>Taking into account the conflict with existing standards, the many errors of substance and the poor drafting, there is an overwhelming case to not proceed with this draft Code of Practice. Instead, consultations should take place with ARPANSA and with the State and Territory regulatory bodies currently implementing radiation protection standards on the best way to reference existing standards and codes that deal with occupational radiation protection in mining.</p>

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
Section 2.2	The sub-section on radon at the end of Section 2.2 is totally inadequate for dealing with radon and radon decay products. If radon is to be included here, it should be dealt with by referencing the ARPANSA Code of Practice (RPS9) and related safety guides.
Survey and Drafting Directions for Mine Surveyors	
Section/page number	Comment
Health Monitoring	
Section/page number	Comment

Mine Closure	
Section/page number	Comment
Ground Control in Open Pit Mines	
Section/page number	Comment
Ground Control for Underground Mines	
Section/page number	Comment
Underground Winding Systems	
Section/page number	Comment