

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

Individual/Organisational name: Sarah Lawley	
Regulations Chapter 9: Mines	
Part 9.1	
Regulation	Comment
Part 9.2	
Regulation	Comment
Part 9.3	
Regulation	Comment
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
Section 1.2	The definition of a principle mining hazard should be clarified or extended if it is intended to apply to NORM. Acute exposures to ionising radiation leading deterministically to fatalities (which are possible through exposure to some man-made radionuclides), are not possible through exposure to NORM. The concept of multiple fatalities in a single incident or through recurring incidents such as outlined in the definition of a principle mining hazard appears to be confusing the deterministic and stochastic effects of ionising radiation (which depend on

	the exposure scenario).
Section 1.2	It is not clear who would be responsible for assessing and approving Principle Mining Hazard Management Plans for NORM. If the intention is for Work Safe Australia to assess these plans (and/or existing Radiation Management Plans already approved by State or Territory governments), then this would require considerable resources and duplication, which may not have been taken into consideration in the development of this Code. Radiation Protection is a specialised field and as such it does need to be regulated by specialists, to ensure that assessment is thorough and complete and unnecessary requirements are not imposed. It is better that there is a minimum number of government departments assessing Radiation Management Plans or PMHMPs for NORM, but that the agencies which are responsible have appropriate experience in radiation protection and are well resourced.
Section 1.2	The statement “where no ionising radiation hazards are present whatsoever” is non-technical and this complicates the interpretation of when the requirement for a PMHMP applies. It may lead to over-regulation. Technically all operations mining and otherwise involve NORM, but this does not mean that all industries require Radiation Management Plans. The IAEA Safety Report Series No. 49 “Assessing the Need for Radiation Protection Measures in Work Involving Minerals and Raw Materials” (2006), discusses the idea of a graded approach to regulation. This document also refers to criteria below which it is unnecessary to regulate. For example, if the effective dose received by a worker does not exceed 1 – 2 mSv in a year, IAEA Safety Series No. 49 states that a decision not to impose regulatory requirements would generally be appropriate. This reasoning should be clear in the context that background radiation itself gives an average exposure of 2.4 mSv a year to all people and background varies considerably from place to place. Requiring all industries to prepare Radiation Management Plans or PMHMPs for NORM, regardless of the actual risk category, would not achieve any worthwhile improvement in protection. The requirement should either be removed, or defined using technical criteria which reduce the extent of unnecessary regulation.
Section 4.	This section is intended to be about exploration, so the terms “mining exploration operation” and “mining exploration site” are confusing. I think this should be “exploration project” and “exploration site.” Furthermore exploration does not involve tailings storage facilities and exhaust stacks, so these should not be used as examples and the exploration site should not be referred to as a “facility.” Indeed many exploration companies are not involved in project development or mining and most exploration projects do not result in mines. Radiation protection in exploration is generally treated separately to radiation protection in mining and minerals processing for obvious reasons and it is important not to confuse the two categories.
Section 4.	The list of recommendations given under the headings “core and sample storage” and “core and sample handling” etc are too prescriptive. This level of detail is currently determined when Radiation Management Plans are prepared and may vary from project to project. Appropriate practices depend on the ore type, ore grade, sample properties and quantities, storage location, etc.
General Comments on NORM Code	It appears that the proposed NORM Code duplicates the requirements of the State and Commonwealth systems which are already in place and functioning. Each state and territory already has Radiation Protection regulators with appropriate experience for this role. Radiation Management Plans are assessed and approved by those regulators. Further consultation with the State and Territory regulators may assist in assessing the regulatory impact of the proposed NORM Code and looking at a solution to reduce duplication etc.
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	
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