



Australian Government

RIIMCU601D Establish and maintain the spontaneous combustion management plan

Release: 2

RIIMCU601D Establish and maintain the spontaneous combustion management plan

Modification History

Release	Comment
1	This unit replaces RIIMCU601A Establish and maintain the spontaneous combustion management plan
2	Required frequency and volume of evidence amended in Performance evidence. Substantial amendments made in Assessment Conditions field, including: references to Industry Sectors, assessor and subject matter expert experience requirements, how assessment should be conducted and what it should confirm.

Application

This unit describes a participant's skills and knowledge required to establish and maintain the spontaneous combustion management plan in Coal mining.

This unit is appropriate for those working in management roles

Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and Industry sectors. Relevant information must be sourced prior to application of the unit.

Unit Sector

Coal mining (Underground)

Elements and Performance Criteria

1. Plan and prepare to establish and maintain the spontaneous combustion management plan	1.1 Access, interpret and apply spontaneous combustion management plan documentation, and ensure the work activity is compliant 1.2 Identify the causes and hazards of spontaneous combustion 1.3 Identify and clarify coal seam characteristics which affect likelihood of spontaneous combustion 1.4 Identify and clarify the effects of changes in the mine atmosphere on the risks of spontaneous combustion 1.5 Identify the impact of mine design and ventilation on the risks of spontaneous combustion
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	1.6 Identify and clarify the impact of water accumulation on the risks of spontaneous combustion 1.7 Identify spontaneous combustion risks associated with the planned and unplanned coal accumulation 1.8 Identify spontaneous combustion risks associated with transport of coal
2. Identify and clarify spontaneous combustion control systems and procedures	2.1 Identify and evaluate the method, purpose and procedures for installation and use of mine monitoring systems with regard to spontaneous combustion 2.2 Identify and evaluate the method, purpose and procedures for mine design and ventilation systems with regard to spontaneous combustion 2.3 Identify and evaluate the methods and purposes of natural and induced inertisation in the goaf and waste workings, in relation to spontaneous combustion 2.4 Identify and clarify the scope and impact of gas management on spontaneous combustion 2.5 Identify and clarify the scope, impact and uses of water management, including water infusion on spontaneous combustion 2.6 Identify and clarify seal design requirements in terms of geological structures, construction, location and use of correct materials for the spontaneous combustion risks
3. Design and develop the spontaneous combustion management plan	3.1 Access, interpret and apply spontaneous combustion management plan documentation 3.2 Identify, clarify and apply the principles of mine design with respect to spontaneous combustion 3.3 Review the effectiveness of mine design process in contributing to the minimisation of the risk of spontaneous combustion and amend the processes as required 3.4 Incorporate ventilation systems and controls to minimise the risk of spontaneous combustion into the development of the management system 3.5 Evaluate inertisation options that are applicable to the mine and incorporate into the development of the system 3.6 Incorporate mine monitoring systems into the management system to minimise the risk of spontaneous combustion 3.7 Develop and incorporate control methods into contingency plans to mitigate the effect of a spontaneous combustion occurrence
4. Establish the spontaneous	4.1 Establish spontaneous combustion management objectives,

combustion management plan	processes, descriptions, responsibilities and review procedures 4.2 Identify, develop and establish hazard control procedures 4.3 Develop and establish spontaneous combustion management monitoring system installation, operation and maintenance procedures 4.4 Develop and establish ventilation control device installation, operation and maintenance procedures 4.5 Develop and establish inertisation procedures 4.6 Develop and establish spontaneous combustion system information recording and reporting procedures 4.7 Establish and review trigger levels and responses to minimise the hazards of spontaneous combustion 4.8 Establish a program including systems and procedures, to satisfy identified spontaneous combustion management training requirements 4.9 Develop and establish audit, review and updating procedures into the spontaneous combustion management plan
5. Plan and prepare for the implementation of the spontaneous combustion management plan	5.1 Identify, interpret and confirm the legislative and site requirements 5.2 Access, interpret and clarify the spontaneous combustion management plan 5.3 Identify, clarify and communicate to all personnel roles and responsibilities 5.4 Identify, forecast, obtain and allocate/schedule resources 5.5 Implement the spontaneous combustion training program 5.6 Review the spontaneous combustion management implementation procedures, and implement required changes
6. Audit and review the spontaneous combustion management plan	6.1 Audit the operation of spontaneous combustion monitoring systems for compliance with legislative and gas management plan standards 6.2 Audit mine ventilation control devices for compliance 6.3 Audit recording and reporting systems for compliance 6.4 Audit the maintenance program and procedures for compliance 6.5 Audit spontaneous combustion training program for currency, relevance and compliance 6.6 Identify and respond promptly to instances of non-compliance or other discrepancies/deficiencies revealed by audit 6.7 Maintain written records, reports and policy documentation

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

RIIMCU601A Establish and maintain the spontaneous combustion management plan

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIMCU601D Establish and maintain the spontaneous combustion management plan

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Performance Evidence

Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include that the candidate:

- locates and applies relevant legislation, documentation, policies and procedures
- implements the procedures and techniques for the safe, effective and efficient establishment and maintenance of the spontaneous combustion management plan including:
 - accessing, interpreting and applying:
 - technical information
 - site/legislative requirements
 - records and reports
 - briefings and handover details
 - applying the principles of mine design
 - assessing the risks and consequences of spontaneous combustion
- works effectively with others to undertake and complete the establishment and maintenance of the spontaneous combustion management plan including:
 - communicating clearly and concisely with others to plan and coordinate work, receive and clarify work instructions, and convey work progress.
 - identifying the relevant information and scope of the work necessary to meet the required outcomes
 - developing procedures appropriate to mine operations for management of spontaneous combustion

- demonstrates completion of establishing and maintaining the spontaneous combustion management plan that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - establishing and incorporating spontaneous combustion management objectives, processes, descriptions, responsibilities and review procedures
 - identifying viable options and selecting spontaneous combustion management techniques that best meet the required outcomes
 - identifying training needs related to spontaneous combustion

Knowledge Evidence

The candidate must demonstrate knowledge in establishing and maintaining the spontaneous combustion management plan through:

- mine design relating to spontaneous combustion including:
 - identifying the effects of coal seam characteristics on spontaneous combustion
 - identifying and reviewing inertisation principles and techniques
 - evaluating geological data
 - evaluating strata control
 - evaluating underground water management
 - evaluating seal design and sealing procedures
- spontaneous combustion management requirements including:
 - identifying and managing causes and effects of spontaneous combustion
 - identifying and monitoring spontaneous combustion indicators and ratios
 - implementing methods of control of spontaneous combustion
- the principles of ventilation management including:
 - mine gases and gas management
 - mine ventilation systems

Assessment Conditions

- An assessor of this unit must satisfy the requirements of the NVR/AQTF or their successors; and Industry regulations for certification and licensing; and,
- this unit must be assessed in the context of this sector's work environment; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other Units of Competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and through the minimum years of current* work experience specified below in an Industry sector relevant to the outcomes of the unit; or,

- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an Industry subject matter expert. The Industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An Industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the Industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or Industry Sector as follows:

Industry sector	AQF** Level	Required assessor or Industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 Years
Other sectors	Where this Unit is being assessed outside of the Resources and Infrastructure Sectors assessor and/or Industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no Industry standard is specified should comply with any relevant regulation.	

*Assessors can demonstrate current work experience through employment within Industry in a role relevant to the outcomes of the Unit; or, for external assessors this can be demonstrated through exposure to Industry by conducting frequent site assessments across various locations.

**Where a unit is being delivered outside of a Qualification the first numeric character in the Unit code should be considered to indicate the AQF level

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