



Australian Government

RIIMCU408D Apply the spontaneous combustion management plan

Release: 3

RIIMCU408D Apply the spontaneous combustion management plan

Modification History

Release	Comment
1	This unit replaces RIIMCU408A Apply the spontaneous combustion management plan
2	Plan and Prepare element added to Performance Criteria; Inserted Modification History
3	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 apply the spontaneous combustion management plan in Coal mining (Underground).

This unit is appropriate for those working in supervisory or technical specialist 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 apply 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, clarify and communicate roles and responsibilities 1.3 Identify obtain and allocate resources required for the application of the spontaneous combustion plan 1.4 Identify individual training needs and prepare training plans
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2. Identify and explain the fundamentals of spontaneous combustion hazards and risks	2.1 Identify the fundamentals of spontaneous combustion 2.2 Identify and explain the effects of mine gases and barometric variations on the risks of spontaneous combustion 2.3 Identify and explain the hazards associated with goaf and waste working atmosphere 2.4 Identify the impact of ventilation and ventilation structures on the risks of spontaneous combustion 2.5 Identify spontaneous combustion risks associated with the coal stowage
3. Identify and explain the fundamentals of spontaneous combustion control systems and procedures	3.1 Identify the principles of ventilation design and related procedures and their impact on spontaneous combustion management 3.2 Identify the methods and purposes of natural and induced inertisation in the goaf and waste workings, in relation to spontaneous combustion 3.3 Identify the method, purpose, operation and procedures for installation of mine atmosphere monitoring systems, with regards to spontaneous combustion
4. Identify and apply resources to the spontaneous combustion management plan	4.1 Identify, access, interpret and apply relevant legislative requirements and site safety management systems including statutory inspection requirements related to spontaneous combustion 4.2 Identify, interpret and apply procedures and responsibilities in the spontaneous combustion management plan 4.3 Monitor the actions of the work group to ensure the application of required spontaneous combustion procedures are complied with 4.4 Identify and apply appropriate response procedures in situations where trigger levels are reached 4.5 Participate in the development, review and enhancement of spontaneous combustion procedures as per site requirements
5. Identify and respond to spontaneous combustion indicators	5.1 Identify, monitor, investigate, respond and report on spontaneous combustion indicators 5.2 Respond to indicators
6. Apply mine atmosphere monitoring systems and procedures	6.1 Conduct mine atmosphere monitoring, interpret the results and prepare and process reports 6.2 Identify and report defects to monitoring systems and, where appropriate, affect repairs
7. Apply control	7.1 Identify, investigate and report changes in ventilation which

measures	may affect spontaneous combustion 7.2 Report incidents of connection to other workings and take immediate action 7.3 Select, apply and report on the appropriate action to remedy impact of water accumulation on the ventilation system 7.4 Identify, rectify and report defects to ventilation structures and seals 7.5 Identify hazards associated with the coal accumulations and transport systems and apply action to minimise the spontaneous combustion risks
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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

RIIMCU408A Apply 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 RIIMCU408D Apply 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 evidence that the candidate:

- locates and applies relevant legislation, documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient completion of the application of the spontaneous combustion management plan including:
 - accessing, reading, interpreting, communicating and applying:
 - technical information
 - records and reports
 - briefing and handover details
 - planning and coordinating work
 - conducting mine atmosphere monitoring
 - conducting inspections related to spontaneous combustion
 - interpreting and recording data related to spontaneous combustion
 - interpreting and responding to spontaneous combustion indicators and ratios
 - identifying and investigating incidents and potential hazards associated with spontaneous combustion
 - identifying training needs, and preparing and implementing training plans
 - applying spontaneous combustion control procedures or methods

- works effectively with others to plan, prepare and conduct the application of the spontaneous combustion management plan that meets all of the required outcomes including:
 - organising work activities to meet all task requirements
 - communicating clearly and concisely with others to receive and clarify work instructions
 - complying with written and verbal reporting requirements and procedures
 - resolving coordination requirements throughout work activities
- demonstrates completion of applying the spontaneous combustion management plan that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - applying spontaneous combustion management plan procedures such as:
 - mine atmosphere monitoring
 - reporting requirements
 - auditing
 - ventilation systems and usage
 - inertisation techniques
 - mine plan
 - action plans
 - response plans
 - emergency procedures
 - individual group responsibilities
 - training and education procedures
- applying mine atmosphere monitoring such as:
 - continuous monitoring
 - portable (hand) monitoring
 - collection of bag samples
 - gas chromatography
 - ventilation measurements from all areas of the mine including sealed areas
 - waste workings monitoring
- identifying spontaneous combustion indicators such as:
 - smoke
 - haze
 - sweating
 - smell
 - heat
 - production of carbon monoxide
 - hydrogen
 - carbon dioxide
 - methane
 - higher hydrocarbons

- Or use of indicator ratios such as:
- CO make
- Graham's ratio
- other ratios included in the site safety management system

Knowledge Evidence

The candidate must demonstrate knowledge of applying the spontaneous combustion management plan through:

- accessing, interpreting and applying legislative, organization and site requirements and procedures for:
 - applying risk assessment and management processes
 - identifying and managing environmental issues, hazards and risks, and identifying environmental monitoring systems
 - identifying training systems
- identifying the impact of coal seam characteristics, depositional factors and geological conditions on spontaneous combustion
- identifying and applying the fundamentals of:
 - mine design and plan relating to spontaneous combustion
 - mine gases
 - mine and goaf ventilation systems
 - spontaneous combustion causes and hazards
 - methods of control of spontaneous combustion
 - spontaneous combustion indicators and trigger points
 - sealing procedures
 - identifying and applying emergency response and evacuation/disaster planning processes and techniques

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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