



Australian Government

RIICBS307D Conduct bitumen sprayer operations

Release: 3

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Modification History

Release	Comment
1	This unit replaces RIICBS307A Conduct bitumen sprayer operations
2	Corrected Performance Criteria numbering.
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 conduct bitumen sprayer operations in Civil Construction.

This unit is appropriate for those working in operational 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

Civil construction

Elements and Performance Criteria

1. Plan and prepare for bitumen sprayer operations	1.1 Access, interpret and apply bitumen sprayer operations documentation and ensure the work activity is compliant 1.2 Obtain, read, interpret, clarify and confirm work requirements 1.3 Identify and address potential risks, hazards and environmental issues, and implement control measures 1.4 Select and wear personal protective equipment appropriate for work activities 1.5 Confirm and apply environmental protection and safety requirements 1.6 Obtain, interpret and implement traffic management signage
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	requirements 1.7 Select and check for faults plant, tools and equipment to carry out tasks 1.8 Obtain and interpret emergency procedures, and be prepared for fire/accident/emergency
2. Set up sprayer	2.1 Ensure ancillary tanks are full and adequate materials are determined to perform spray operations 2.2 Check tank for prevention of contamination 2.3 Calculate spraying speed and pump rpm 2.4 Introduce correct amount of cutter 2.5 Fit appropriate number and size of jets to the spray bar
3. Load sprayer	3.1 Check previous load details for compatibility 3.2 Load tank with the prescribed type and quantity of material 3.3 Add additives and mix where required 3.4 Check, heat and maintain temperature of the material 3.5 Measure, calculate and record material quantities and additives
4. Operate bitumen sprayer	4.1 Carry out start-up, park, shutdown and secure equipment procedures 4.2 Select and modify bitumen spraying techniques to appropriately meet changing work conditions 4.3 Plan work to maximise machine coverage and minimise hand spraying 4.4 Set control valves correctly for the type of operation 4.5 Drive and operate equipment 4.6 Conduct, control and monitor spraying operations to ensure materials are sprayed to specification 4.7 Carry out operations adjacent to traffic 4.8 Complete spraying without damage to property or vehicles
5. Operate hand lance	5.1 Inspect hand lance to ensure correct operation 5.2 Select hand lancing techniques to match work conditions 5.3 Conduct, control and monitor hand spraying operations 5.4 Carry out hand spraying operations adjacent to traffic
6. Unload/empty	6.1 Unload or empty tank into storage or waste

sprayer	6.2	Clean tank interior and spray bar
7. Carry out operator maintenance	7.1	Prepare machine for maintenance
	7.2	Conduct inspection and fault finding
	7.3	Carry out scheduled maintenance tasks
	7.4	Process written maintenance records
8. Clean up	8.1	Clear work area and dispose of or recycle materials
	8.2	Clean, check, maintain and store plant, tools and equipment
	8.3	Carry out housekeeping requirements

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

RIICBS307A Conduct bitumen sprayer operations

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 RIICBS307D Conduct bitumen sprayer operations

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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 applicable documentation, policies and procedures
- implements the requirements, procedures and techniques for the safe, effective and efficient completion of bitumen sprayer operations including:
 - organising work activities
 - select and use relevant tools and equipment safely
 - identifying and reporting on hazards related to the worksite and work activity, including any environmental issues
- works effectively with others to undertake and complete bitumen sprayer operations 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
 - using a range of communication techniques and systems such as signage to advise others of work activity and exclusion zone
- demonstrates completion of conducting bitumen sprayer operations that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:

- a minimum of three (3) different materials to be loaded, mixed, heated and sprayed for two (2) sprayer loads each to be used for two (2) straight runs, two (2) tapers or turning slots and two (2) restricted areas to specified tolerances (spray runs to be a minimum total of 60% of the tank)
- a minimum of two (2) areas to be hand lanced, each with a different material and to the specified tolerance
- completion of all calculations and spray sheets for the activities

Knowledge Evidence

The candidate must demonstrate knowledge of the following when conducting bitumen sprayer operations:

- applying legislative, organisational and site requirements and procedures for:
 - site and equipment safety requirements
 - bitumen spraying
 - complying with the processes for heating bitumen
 - asphalt paving operations
 - asphalt strength and performance characteristics
 - edge and joint treatments
 - housekeeping
- communicating effectively to receive and clarify work instructions
- understanding bituminous materials and their characteristics
- understanding the different equipment types, characteristics, technical capabilities and limitations
- complying with the operational, maintenance and basic diagnostic procedures
- complying with site isolation and traffic control responsibilities and authorities
- understanding the processes for the calculation of material requirements, application rates and travel speed
- accessing, interpreting and applying safety data sheets
- using safe operating techniques in all terrain
- preparing and/or implementing with JSAs/JSEA/safe work method statements

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 using Resources and Infrastructure Industry sector specific policies, procedures, processes and operational manuals; 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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