

	Unit ID: 814
Domain	ROAD CONSTRUCTION AND MAINTENANCE – BITUMEN ROAD MAINTENANCE
Title:	Carry out road construction and maintenance activities using bitumen spray and roller equipment
Level: 2	Credits: 8

Purpose

This unit standard is intended for those who work in road construction and maintenance operations. People holding credit for this unit standard are able to demonstrate knowledge of the functions of bitumen spray equipment; plan for work activities and prepare work area; start and shut down bitumen spray equipment; operate bitumen spray equipment; prepare bitumen spray equipment for transport to and from site; complete work related documents; and clean up work area.

Special Notes

1. Entry information:

Prerequisite

- Unit ID 712 - *Comply with health, safety and environmental rules and regulations in road construction and maintenance work operations.*

2. Quality in this unit standard means adherence to contract requirements and workplace instructions.
3. Expected worksite production target are to be met.
4. Assessment evidence may be collected from a real workplace, a simulated workplace or an appropriately simulated environment in which road construction and maintenance operations are carried out.
5. Equipment, tools, attachments, fuel and lubricants include but are not limited to the bitumen spray equipment, machine attachments, accessory tools and bitumen.
6. Maintenance includes but is not limited to cleaning, authorised servicing, monitoring, recording and reporting of faults. It may also include the conduct of authorised minor replacements and the provision of assistance to maintenance and repair activities.
7. Safe working practices include but are not limited to day-to-day observation of safety policies and procedures and compliance with workplace procedures.
8. Performance of all elements in this unit standard must comply with all relevant legal and workplace requirements, contractual agreement and/or manufacturers' specifications.
9. Regulations and legislation relevant to this unit standard include but are not limited to the following:
 - Labour Act, No. 11 of 2007 as amended

- Occupational Health and Safety Regulations No. 18, 1997
- Road Traffic and Transport Regulations No. 52, 1999 and Government Notice No 53 Road Traffic and Transport Regulations
- Road Ordinance 1972 and other relevant legislations and all subsequent amendments.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority. All approved unit standards, qualifications and national assessment arrangements are available on the Namibia Training Authority website www.nta.com.na.

Elements and Performance Criteria

Element 1: Demonstrate knowledge of the functions of bitumen spray and roller equipment

Performance Criteria

- 1.1 The main functions of the bitumen spray and roller equipment are explained in terms of manufacturers' specifications.
- 1.2 The operation of all major components is explained in terms of their functions.
- 1.3 The applications of the bitumen spray and roller equipment are described in terms of road surfacing activities.
- 1.4 All safety features and warning devices on the bitumen spray equipment are identified, and their purposes explained in accordance with manufacturers' specifications.
- 1.5 The maximum operating capacities are explained in terms of the designed bitumen spray equipment capabilities.
- 1.6 Warnings from bitumen spray equipment indicators and gauges are explained according to manufacturers' specifications.
- 1.7 Corrective actions are described or demonstrated in terms of neutralising warnings received.

Element 2: Plan for work activities and prepare work area

Performance Criteria

- 2.1 Sequence of operations is determined according to site operational requirements.
- 2.2 Required equipment to perform the work activity is selected according to site operational requirements.

- 2.3 Traffic control requirements are obtained and implemented according to workplace requirements.
- 2.4 Work area is inspected and prepared according to site operational requirements.

Element 3: Start and shut down bitumen spray equipment

Performance Criteria

- 3.1 Pre-operational checks are carried out according to appropriate checklist.
- 3.2 Start-up and shutdown procedures are followed according to manufacturers' specifications.
- 3.3 Bitumen spray equipment is parked according to manufacturers' and worksite requirements.
- 3.4 Bitumen spray equipment maintenance and faults are reported in accordance with company requirements.

Element 4: Operate bitumen spray and roller equipment

Performance Criteria

- 4.1 The purpose of the various controls is explained in accordance with their designed use.
- 4.2 Functions of the various controls are demonstrated in accordance with the manufacturers' specifications.
- 4.3 Temporary safety signs are explained in relation to their use and placement.
- 4.4 Bitumen spray equipment performance is monitored and corrective action is taken when necessary to maintain specified application rates, in accordance with manufacturers' specifications.
- 4.5 Bitumen spray and roller equipment is operated according to safe working procedures, manufacturers' specifications and road surface activity.
- 4.6 Bitumen spray equipment hours and bitumen usage are recorded in accordance with company requirements.

Element 5: Prepare bitumen spray equipment for transport to and from site

Performance Criteria

- 5.1 Methods of loading bitumen spray equipment for transport are explained and demonstrated according to safety requirements, manufacturers' instructions and transport configuration.
- 5.2 Methods of securing bitumen spray equipment for transport are explained and demonstrated in relation to lashing points and safety requirements.

Element 6: Complete work related documents

Performance Criteria

- 6.1 Work related documents are completed in accordance with contract and workplace requirements.
- 6.2 Maintenance and service related documents are completed in accordance with manufacturer and workplace requirements.
- 6.3 Documents related to accidents or other incidents are completed in accordance with workplace requirements.

Element 7: Clean up work area

Performance Criteria

- 7.1 Work area is cleared and materials disposed of or recycled in accordance with project environment management plan.
- 7.2 Tools and equipments are cleaned, checked, maintained, serviced and stored in accordance with manufacturers' recommendations and standard work practices.
- 7.3 Unused materials are safely stored and stacked for future use.

Registration Data

Subfield:	Road Construction and Maintenance
Date first registered:	
Date this version registered:	
Anticipated review:	
Body responsible for review:	Namibia Training Authority