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	3. SAFE OPERATING PROCEDURES & METHOD STATEMENTS	Rev date:	15/09/2019
		File name:	999 - MS-008-Bitumen Handling

Contract no: C1049.03

Contract name: UPGRADING OF DIVISIONAL ROAD 1098 (KM5, 47 TO KM8, 79 AND REHABILITATION OF DIVISIONAL ROAD 1098 (KM8, 79 TO KM14, 24)

METHOD STATEMENT 008 – HANDLING OF COLD AND HOT BITUMINOUS PRODUCTS AND MATERIALS

BASELINE CIVIL CONTRACTORS (PTY) LTD SUBMISSION FOR ACCEPTANCE				
	Name	Designation	Date	Signature
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Submitted				

ENGINEERS APPROVAL				
	Name	Designation	Date	Signature
Engineers Acceptance				
Health and Safety Acceptance				
Environmental Acceptance				

WHAT work is to be undertaken?

Handling of cold and hot bituminous products and materials on site

WHERE are the works to be undertaken?

JOOSTENBERGVLAKE, Waarburgh Road

WHEN are the works to start, what is the anticipated finish date?

Start: November 2023, End: June 2025

HOW are the works to be undertaken?**Resources**Labour

- Bitumen Truck Driver
- Trained General Workers
- Site Supervisor

Plant and equipment

- Distributor
- Asphalt paver
- Asphalt tipper trucks
- Hand push prime cars
- Static bulk storage tanks
- LPG burners
- Gas cylinders

Material

- Bituminous products
- Bitumen paper

PPE

- Visor
- One piece coverall
- Heat resistant gloves
- Foot protection

Method description**1. The works****1.1. Work with bitumen refers to road construction and maintenance work involving:**

- 1.1.1. All aspects of 'cold' bitumen work such as crack sealing, jointing and road maintenance using cold mix with emulsions applied at ambient temperature.
- 1.1.2. 'Hot' bitumen products, which are those applied above ambient temperature. These include blended or heated bitumen binders, asphalt batch plant product, laying asphalt, stabilisation of granular materials with hot foamed bitumen, sprayed sealing with hot cutback or polymer modified bitumen or crack sealing with hot sealants.
- 1.1.3. Bitumen binders include cutback bitumen (with added solvents), bitumen emulsion (with chemically treated water), modified binders (including suitable storage with correct product signs and classification under dangerous goods) and oxidised bitumen.

1.2. The following controls will be implemented when working with bitumen:

- 1.2.1. Transport and store of bitumen will only happen in properly prepared plant and equipment.
- 1.2.2. Using reliable high quality hose fittings or valve clamps with all bitumen plant.
- 1.2.3. Enabling supplies of materials / solvents in a ready-cut and sized form rather than carrying / cutting processes onsite.
- 1.2.4. Prohibiting the heating of bitumen on days declared as fire restricted.
- 1.2.5. Using approved non-sparking tools.
- 1.2.6. Safe fit out of plant, particularly at entry and exits.
- 1.2.7. Remote operation of a process to avoid fumes.
- 1.2.8. Distancing bituminous product from people, so that direct contact is avoided.
- 1.2.9. Exclusion of water from bitumen at elevated temperature.
- 1.2.10. Limit workers and operating plant in close proximity.
- 1.2.11. Safely venting vapours from bitumen whilst heating.
- 1.2.12. Testing bitumen transfer hoses regularly.
- 1.2.13. Controlling OVER spray to prevent unintended application of product.
- 1.2.14. Containment systems to avoid escape of hot bitumen.
- 1.2.15. Closed tanks and vessels, so water and other emulsions do not enter.
- 1.2.16. Daily plant inspection reports.
- 1.2.17. Safety barriers at storage locations.
- 1.2.18. Following correct procedures for ignition of LPG burners.
- 1.2.19. Reducing the period of exposure in hot bitumen work.
- 1.2.20. Regular cleaning of contaminated areas and spillages.
- 1.2.21. Providing correct labelling, safe storage and disposal of chemicals.
- 1.2.22. Prohibiting eating, drinking and smoking in work area.
- 1.2.23. Keeping lids on containers when not in use.
- 1.2.24. Providing and using facilities for effective decontamination.

2. Health and safety

- 2.1. All employees will be inducted prior to site access.
- 2.2. PPE will be provided to ensure that harmful contact with any bituminous products and materials does not occur.
- 2.3. Provision of adequate fire-fighting equipment and training.
- 2.4. Provision of adequate medical aid boxes to treat bitumen burns.
- 2.5. Burns caused by hot bitumen require special medical treatment and consultation with burns specialist experienced in bitumen burns.
- 2.6. Risk assessments will be used to train site personnel on all the risks within this working environment.
- 2.7. Machine operators will be medically tested and deemed fit.
- 2.8. Employees will attend annual medical evaluation by an occupational health practitioner to evaluate their health.
- 2.9. All machine operators will be licensed and competent.
- 2.10. Daily, weekly and monthly monitoring, reviewing and reporting will be done on site.
- 2.11. Emergency control numbers and procedures will be readily available on site at all times.
- 2.12. All the required warning and safety signage will be in place.
- 2.13. All incidents and accidents will be reported immediately to the H&S Officer.

3. Environmental

- 3.1. All employees will be inducted prior to site access.
- 3.2. All areas used for storing of bituminous products and materials will be pre-approved by the appointed ECO, GNEC and RE.
- 3.3. All areas will be demarcated and where this hazardous material is present there will be a bund area constructed and ground coverage will be placed to reduce the risk of natural ground

exposure.

- 3.4. Storage facilities will be within a safe distance from water sources and plantation.
- 3.5. Signage will be placed at “NO-GO” areas.
- 3.6. All works will be monitored and minimum environmental disturbance will be enforced.
- 3.7. All incidents and accidents will be reported immediately to the ECO.