


	<b>Step by Step Guidance Document for Road Tanker to Bitumen Emulsion Sprayer Discharge Procedure</b>	Procedure	REA 002
		Issue Date	1/11/20
		Valid Until	1/05/24
		Revision	5

<b>Purpose</b>	To unload Emulsion products from Road Tanker to a Bitumen Emulsion Sprayer at the customer's site location using the Sprayer vehicle suction pump. <b>(Pressure discharge is not allowed)</b>
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<b>Specific Process Information</b>  	<p style="color: red; text-align: center;"><b>THE DELIVERY PROCESS MUST NOT START IF THE DRIVER AND/OR CUSTOMER HAVE ANY CONCERNS ABOUT THE EMULSION OFFLOAD.</b></p> <ul style="list-style-type: none"> <li>• Site specific safety rules and the Guidance to Transfer of Emulsion must be followed at all times.</li> <li>• Emulsion Road Tanker Drivers must have a site induction or carry out an Emulsion Delivery Point Assessment before delivery to any customer site.</li> <li>• Ensure that any minor spillages are cleaned up before leaving site by both parties. Should any major spillage occur during the above operations, action should be taken to contain and prevent product from entering drains or watercourses.</li> <li>• All spillages must be reported to the Supplier Traffic Office &amp; Customer immediately.</li> <li>• Unauthorised people are not permitted to enter the 3-meter exclusion zone.</li> <li>• Follow any site Traffic Management System. Ensure site speed limit is followed at all times.</li> </ul>
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<b>Personnel assigned to task</b> <ul style="list-style-type: none"> <li>• Bitumen Emulsion Sprayer Driver</li> <li>• Emulsion Road Tanker Driver</li> </ul>	<ul style="list-style-type: none"> <li>• Trained authorised customer plant (Sprayer) operators. Competency determined by customer.</li> <li>• Trained authorised Road Tanker drivers. Competency determined by Suppliers.</li> <li>• Driver Training Induction Record, with the subsequent issue of a driver competency card. (Passport)</li> </ul>
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<b>Criticality</b>	<ul style="list-style-type: none"> <li>• This procedure is <b>Safety Critical</b></li> </ul>
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<b>Hazards associated with procedure</b>	<ul style="list-style-type: none"> <li>• Hot Liquid</li> <li>• Manual Handling</li> <li>• Working at Height – <b>Bitumen Emulsion Sprayer Driver</b></li> <li>• Risk of contact with structures – tanks, lamp posts, gate posts etc</li> <li>• Contact with Overhead Cables / power lines – Potential arcing</li> <li>• Hot surfaces</li> <li>• Slips, trips &amp; falls</li> <li>• Local environmental conditions – Drains, rivers, streams, segregated areas, gully waste etc. <b>(Refer to REA Doc: 001 Rev2.)</b></li> </ul>
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<p><b>PPE requirements</b></p> <ul style="list-style-type: none"> <li>• Bitumen Emulsion Sprayer Driver</li> <li>• Emulsion Road Tanker Driver</li> </ul>		<ul style="list-style-type: none"> <li>• Safety Helmet</li> <li>• Full face visor &amp; Safety Glasses.</li> <li>• Ear Protection – (If required)</li> <li>• Neck apron</li> <li>• Safety footwear</li> <li>• Gauntlet gloves</li> <li>• High Visibility Tabard or long sleeves &amp; long-legged clothing, coveralls or boilersuits</li> </ul>
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Step	Responsible	Action
1	Emulsion Road Tanker Driver	<ul style="list-style-type: none"> <li>• Arrive at customer location as stated on delivery ticket.</li> <li>• Park the vehicle in a safe place.</li> <li>• Contact the Customer representative.</li> <li>• Wait for sprayer to arrive if not already available.</li> </ul>
2	Customer	Customer representative Informs Emulsion Road Tanker driver of the ETA of the sprayer.
3	Bitumen Emulsion Sprayer Driver	Arrives at the delivery location.
4	Emulsion Road Tanker Driver & Bitumen Emulsion Sprayer Driver 	<p>Verify the Emulsion Road Tanker Driver &amp; Bitumen Emulsion Sprayer Driver Delivery Passports are valid.</p> <p><b>STOP</b> Do not proceed with the delivery without verifying that both the emulsion road tanker driver &amp; bitumen emulsion sprayer driver passport is valid. If not valid contact your employer of Traffic Office. <b>(This issue should be raised as a Near Miss)</b></p>
5	Emulsion Road Tanker Driver & Bitumen Emulsion Sprayer Driver 	<p>Carry out a site specific Dynamic Risk Assessment for safe delivery.</p> <ul style="list-style-type: none"> <li>• Risk of contact with structures – tanks, lamp posts, gate posts etc.</li> <li>• Contact with Overhead Cables / power lines – Potential arcing.</li> <li>• Slips, trips &amp; falls.</li> <li>• Local environmental conditions – Drains, rivers, streams, segregated areas, gully waste etc.</li> </ul> <p><b>STOP</b> Do not proceed with the delivery without verifying any risk has been suitably controlled. <b>Contact your management</b></p>
6	Emulsion Road Tanker Driver	<p>Verifies the <b>delivery ticket</b> and confirms:</p> <ul style="list-style-type: none"> <li>• Correct Site.</li> <li>• Correct Gang.</li> <li>• Product Grade.</li> </ul>


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7	Bitumen Emulsion Sprayer Driver	Check the <b>delivery ticket</b> and confirm: <ul style="list-style-type: none"> <li>• Correct Site.</li> <li>• Correct Gang.</li> <li>• Product Grade.</li> <li>• Confirm the available quantity required and available ullage.</li> </ul>
8	Bitumen Emulsion Sprayer Driver & Emulsion Road Tanker Driver 	Verifies the available ullage and quantity required.  <b><u>STOP</u></b> The Sprayer gauge reading must demonstrate enough ullage for the confirmed quantity required. <b>Sprayer Gauge Requirement by April 2022.</b> <b>A Safe System of Work of checking Sprayer contents must be established to eliminate overflow or spillage to ground. Do not proceed with the delivery if there are any deviations as there may be an emulsion spill. Contact your management.</b>
9	Bitumen Emulsion Sprayer Driver	Signs the Emulsion road tanker driver's ullage note, to accept part or full delivery.
10	Emulsion Road Tanker Driver & Bitumen Emulsion Sprayer Driver	Put on the required specific delivery PPE.
11	Emulsion Road Tanker Driver 	The Emulsion road tanker driver must be able to visually see both connections and the Sprayer Driver at all times during the transfer when positioning the tanker. <ul style="list-style-type: none"> <li>• Aligns his tanker to sprayer vehicle and applies the park brake.</li> <li>• Remove delivery hose from tanker pipe rack.</li> </ul> <b>Use correct manual handling techniques at all times.</b>
12	Emulsion Road Tanker Driver 	Visually check condition of hose.  <b>If any defects are discovered, do not connect the hose and report the defect to the customer and to the Supplier Traffic Office.</b>
13	Emulsion Road Tanker Driver	<ul style="list-style-type: none"> <li>• Gets the drip bucket and tools out.</li> <li>• Confirm the Homir valve is closed.</li> <li>• Confirm the secondary valve is closed.</li> <li>• Confirm the splitter valve is closed.</li> <li>• Place the drip bucket under the connection valve.</li> <li>• Remove blanking cap from tanker connection.</li> <li>• Ensure that the threads are clean.</li> <li>• Remove the blanking cap form the tanker delivery hose.</li> <li>• Clean the threads and inspect the condition of the gasket seal.</li> <li>• Attach the delivery hose to the tanker. Making sure of a secure seal.</li> </ul>

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14	Bitumen Emulsion Sprayer driver	<ul style="list-style-type: none"> <li>• Make sure the Sprayer inlet valve is closed.</li> <li>• Place the bucket under the connection valve.</li> <li>• Remove the stop cap on the Sprayer connection.</li> <li>• Wipe and clean the threads.</li> </ul>
15	Emulsion Road Tanker Driver	<ul style="list-style-type: none"> <li>• Remove the blanking cap from the delivery hose.</li> <li>• Clean the threads and check the circular gasket.</li> <li>• Attach the hose to the Sprayer, making sure of a secure seal.</li> </ul>
16	Emulsion Road Tanker & Bitumen Emulsion Sprayer Driver  	<p>Double check that both connections are secure before commencing any transfer.</p> <p><b><u>STOP</u></b> <b>The delivery connection must be serviceable.</b> <b>If any defects are found, do not connect the hose and report the defect to the customer and to the Supplier Traffic Office.</b></p> <p><b>Take care not to over-tighten the collar connections.</b></p>
17	Emulsion Road Tanker Driver	<ul style="list-style-type: none"> <li>• Opens the Air Inlet and Air Outlet valves, to allow air to enter the road tanker (Refer to equipment manual).</li> <li>• Check the Emergency Secondary valve is open.</li> <li>• Driver stands at the tanker main Homir Valve.</li> </ul>
18	Bitumen Emulsion Sprayer Driver	<ul style="list-style-type: none"> <li>• Opens the Sprayer inlet tap (valve).</li> <li>• Starts the Sprayer suction pump – (refer to equipment manual).</li> <li>• Asks the Emulsion Tanker Driver to open the Homir main tanker valve slowly.</li> </ul>
19	Emulsion Road Tanker Driver 	<p>Slowly crack open Homir valve (maximum of 4 turns).</p> <p><b><u>STOP</u></b> <b>Do not fully open Homir valve quickly as there is a potential for an emulsion leak from the seals.</b></p>
20	Both Drivers	Visually check there are no leaks from the delivery connections and pipework.
21	Emulsion Road Tanker Driver 	<ul style="list-style-type: none"> <li>• If there are no leaks, fully open the Homir valve.</li> <li>• The Homir valve should be opened fully throughout the duration of the delivery.</li> <li>• Remain near to the Homir valve and monitor the delivery.</li> </ul> <p><b><u>STOP</u></b> <b>The road tanker driver should remain in attendance by the discharge valve for the duration of the delivery when the main Homir valve is open.</b></p>


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<b>Step</b>	<b>Responsible</b>	<b>Action</b>
<b>22</b>	Bitumen Emulsion Sprayer Driver	<ul style="list-style-type: none"> <li>Monitor the gauges throughout the delivery.</li> <li>Remain in constant contact with the emulsion driver during the loading process, informing the driver of the progress of the delivery ullage.</li> <li>Instructs the emulsion Road Tanker driver that the sprayer is at the desired level and to close the Road Tanker main Homir Valve.</li> </ul>
<b>23</b>	Emulsion Road Tanker Driver	<ul style="list-style-type: none"> <li>Closes the Homir valve securely.</li> <li>Slacken the collar on the delivery hose at the tanker to allow air into the pipe.</li> <li>Walk the delivery pipe twice towards the sprayer inlet to remove any residual product in the delivery hose, to the Sprayers running pump.</li> </ul>
<b>24</b>	Bitumen Emulsion Sprayer Driver	<ul style="list-style-type: none"> <li>Closes the inlet tap (valve).</li> <li>Turns off the Sprayer suction pump.</li> <li>Disconnects the tanker hose.</li> <li>Replaces the connection valve cap.</li> <li>Remove the drip bucket.</li> </ul>
<b>Split /Additional Loads</b>		
<b>25</b>	Emulsion Road Tanker Driver	<ul style="list-style-type: none"> <li>If the Sprayer must return for additional loads.</li> <li>Driver must replace hose cap and rest hose onto the tanker securely.</li> <li>Once Sprayer returns, driver must follow 14 to 24 for every transfer until the Emulsion delivery tanker is empty.</li> </ul>
<b>Empty Tanker indicated by the delivery hose shaking Repeat 23 &amp; 24</b>		
<b>26</b>	Emulsion Road Tanker Driver  	<p>Emulsion tanker is empty.</p> <ul style="list-style-type: none"> <li>Driver takes the hose from the Sprayer driver.</li> <li>Replaces the hose stop cap.</li> <li>Slackens the hose at the tanker connection and replaces the stop cap.</li> <li>Replaces the road tanker connection stop cap.</li> <li>Replace the hose back onto the tanker hose carrier.</li> </ul> <p><b>Use correct manual handling techniques at all times.</b></p>
<b>27</b>	Emulsion Road Tanker Driver	<ul style="list-style-type: none"> <li>Close the tanker air inlet and outlet valves.</li> <li>Confirm the secondary valve is closed.</li> <li>Replace tanker blanking stop cap.</li> <li>Remove drip bucket and tools.</li> </ul>
<b>28</b>	Bitumen Emulsion Sprayer Driver	<p>Sign ullage note to verify.</p> <ul style="list-style-type: none"> <li>Delivery complete.</li> <li>Hose disconnected.</li> </ul>

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29	Emulsion Road Tanker & Bitumen Emulsion Sprayer Drivers	Carry out full vehicle walk around. Leave the area with good housekeeping as you found it.

**During discharge transfer**

	<p>In the event of <b>any</b> of the following abnormal conditions:</p> <ul style="list-style-type: none"> <li>• Lack of communication with either driver.</li> <li>• Pedestrian interference.</li> <li>• Insufficient ullage.</li> <li>• Loss of containment from Tanker or Sprayer.</li> <li>• Leaking seals.</li> <li>• No flow.</li> </ul> <p><b><u>Stop</u></b> <b>The delivery immediately and instigate safe action to continue.</b></p>
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This is a Best Practice Guidance document only.

It remains the responsibility of the Employer and Employee to ensure all activities of work are undertaken in a safe manner in compliance with the Health and Safety at Work Act 1974.