

SECTION 14 INCIDENT REPORT (*Waste Management and Pollution Control Act*)

Date and Time of Notification:	Initial notification (email) – 24 March 17:49									
Person / Company:	McArthur River Mining Pty Ltd (MRM)									
Incident:	Spillage of zinc concentrate on the Carpentaria Highway. The source of the spill originated from a road train travelling from McArthur River Mine (the Mine) to the Bing Bong Loading Facility (BBLF).									
(a) the incident causing or threatening to cause pollution	A total of approximately 200 kilograms (kg) of bulk concentrate was released at one location on the Carpentaria Highway, between the Mine and the BBLF. All concentrate was confined to the road and roadside.									
(b) the place where the incident occurred	<p>The Global Positioning System (GPS) points for the length of the spill is provided in Table 1 below and shown in Figure 1.</p> <p style="text-align: center;"><i>Table 1 – GPS Coordinates of spill end and start.</i></p> <table border="1"> <thead> <tr> <th>Spill</th> <th>Easting*</th> <th>Northing*</th> </tr> </thead> <tbody> <tr> <td>End</td> <td>615 157</td> <td>8 199 510</td> </tr> <tr> <td>Start</td> <td>615 148</td> <td>8 199 590</td> </tr> </tbody> </table> <p>*All coordinates were taken using the MGA Zone 53 (GDA94) coordinate reference system.</p>	Spill	Easting*	Northing*	End	615 157	8 199 510	Start	615 148	8 199 590
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End	615 157	8 199 510								
Start	615 148	8 199 590								



Figure 1: Approximate spill locations in relation to the Mine and BBLF.

(c) the date and time of the incident

23 March 2021 at approximately 19:00.

d) how the pollution has occurred, is occurring or may occur

On 23 March 2021 at approximately 19:00, a road train operator carrying bulk concentrate was travelling from the Mine to the BBLF, when the road train deviated slightly into the roadside. As the operator corrected the steering, the rear trailers swung causing the lids to open and concentrate to escape the trailers (Figure 2 and 3). The operator immediately notified the Transport Contractor Supervisor of the incident.

On 24 March 2021 at approximately 9:00, the Transport Contractor Supervisor and MRM personnel completed an inspection of the Carpentaria Highway at the spill location to confirm the extent of spillage and assess the environmental risk.

During the inspection, grey material, indicative of concentrate, was observed at the spill location on the Carpentaria Highway. It was estimated that a total of 200 kg of bulk concentrate had been spilled from the road train across one location, on the road and roadside, over an area of approximately 0.2 hectares (ha).

The incident investigation concluded that the contributing factors included the uneven road surface and human error.



Figure 2: Concentrate observed on road prior to clean-up efforts.

(e) the attempts made to prevent, reduce, control, rectify or clean up the pollution or resultant environmental harm caused or threatening to be caused by the incident

Clean-up Works

At approximately 12:30 on 24 March 2021, a vacuum truck was deployed to clean-up all of the material on the sealed bitumen (Figure 3). This involved pressure washing the concentrate and simultaneously using a vacuum truck to collect the residue, which was transported back to the BBLF containment ponds.

On the same day, an excavator was used to remove the potentially impacted soil on the roadside that resulted from the incident. All potentially impacted soil was removed and disposed of in Cell 1 of the Tailings Storage Facility.

On 27 March 2021, following the completion of the works, MRM personnel inspected the road and could not identify any visible signs of concentrate along the transport route (Figure 4).



Figure 3: Spill clean-up efforts via pressure cleaner and vacuum truck.



Figure 4: Spill location after the completion of clean-up works.

Potential for Environmental Harm

Approximately 200 kg of bulk concentrate was estimated to have been spilt at one location. The majority of the spill was confined to the sealed bitumen area. No potentially sensitive receptors were identified at the spill location (Figure 5).

No rainfall was recorded at the McArthur River Mine Bureau of Meteorology Station prior to the clean-up efforts. However, there was minor rainfall of 6.4 millimetres (mm) recorded between 25 March and 27 March during the clean-up works. There was no evidence that light rainfall caused any bulk concentrate run off.

The potential for material environmental harm is considered to be low due to the majority of the spill being confined to one location, and the timely remedial response. Soil samples were collected at the spill location to determine whether the soil is suitable for the current land-use.



Figure 5: No sensitive receptors identified at the spill location whilst remediation undertaken.

Validation of Clean-up

On 29 March 2021, 14 soil samples were collected in total at the spill location (Figure 6) in accordance with *Australian Standard 4482.1-2005: Guide to the investigation and sampling of sites with potentially contaminated soil*.

All soil samples are being analysed for relevant contaminants of concern (i.e. zinc and lead) and results will be compared against the relevant National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM, 1999) Guidelines to determine whether the soil is suitable for the current land-use.



Figure 6: Sampling locations at the spill sites between the Mine and BBLF.

	<p>Prevention</p> <p>The incident investigation concluded that the contributing factors included the uneven road surface and human error. It is a critical requirement for road train operators to follow the loading procedure to prevent similar spills from occurring. The work crew undertook training via a toolbox talk, reiterating the requirement to check load levels prior to departing the Mine.</p> <p>In addition, MRM have recently implemented set trailer load fill limits to the top ridge of the trailers, approximately 200 mm below the lid of the trailers.</p> <p>Further, MRM will now conduct visual trailer inspections at the Mine Security Gatehouse prior to exiting the Mine. The inspections are conducted to confirm the trailer lids are in working order, and there is no concentrate sitting on the external body of the trailers. If the truck fails the inspection, arrangements are to be made to ensure the trailer is rectified to a suitable condition before approval to leave site is given.</p> <p>MRM is awaiting validation sampling results to determine whether the remediation was successful. The findings of the soil results will be provided to the Department in due course.</p>
(f) the identity of the person notifying the NT EPA	Simon Longhurst Acting Superintendent - Environment