Northern Territory Environment Protection Authority

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

Date and Time of Notification:	Initial notification (email) – 9 October 2021 11:34
Person / Company:	McArthur River Mining Pty Ltd (MRM)
Incident:	Spillage of bulk 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 100 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	The Global Positioning System (GPS) points for the spill start and end is provided in Table 1 below and shown in Figure 1.

Table 1 – GPS Coordinates of spill end and start.

Spill	Easting*	Northing*
End	644604	8262521
Start	644628	8262577

**All coordinates were taken using the MGA Zone 53 (GDA94) coordinate reference system.*

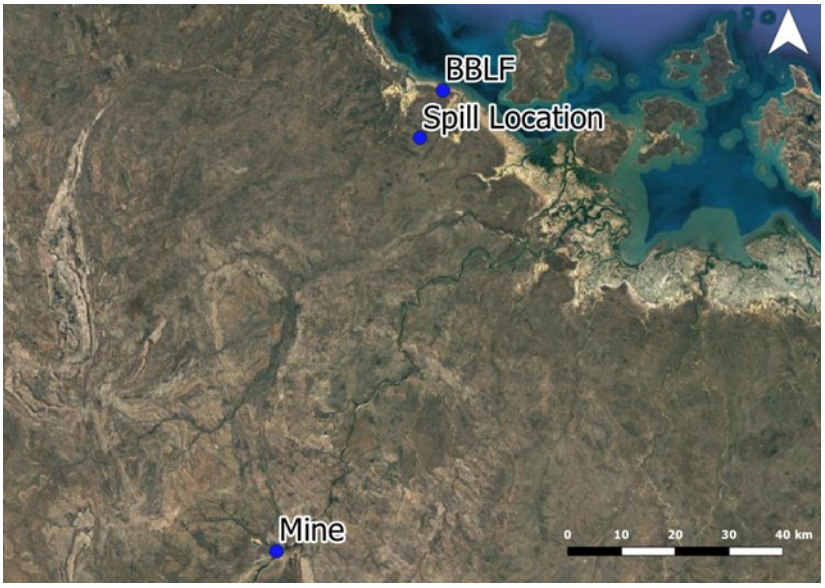
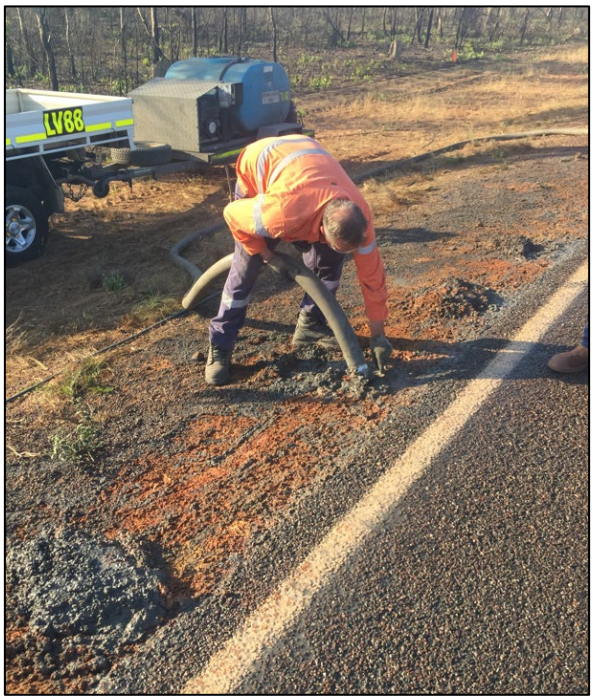


Figure 1: Approximate spill location in relation to the Mine and BBLF.

(c) the date and time of the incident	7 October 2021 at approximately 15:45.
d) how the pollution has occurred, is occurring or may occur	On 7 October at approximately 15:45, a road train carrying bulk concentrate from the Mine to BBLF swerved to avoid cattle on the Carpentaria Highway. As a result of the swerving action, the rear road train trailer left the road causing the trailer lid to open and concentrate to escape from the trailer. On 7 October 2021 at approximately 17:00, the Transport Contractor Supervisor and MRM personnel completed an inspection of the spill location on the Carpentaria Highway to confirm the extent of the spill. During the inspection, grey material (indicative of bulk concentrate) was observed on both the road and roadside at the spill location (Figure 2). It was estimated that a total of 100 kg of bulk concentrate had been spilled from the road train across one location, totaling approximately 70 metres (m) in length (Figure 2). The majority of the spill was confined to the sealed bitumen. The incident investigation concluded that the contributing factors included the cattle on the road, in addition to the action of swerving to avoid the cattle.  *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 5:30 on 8 October 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 for disposal. 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 (TSF). At approximately 8:00 on 9 October 2021, following the completion of the works, MRM personnel inspected the road and did not identify any visible signs of bulk concentrate at the spill location (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

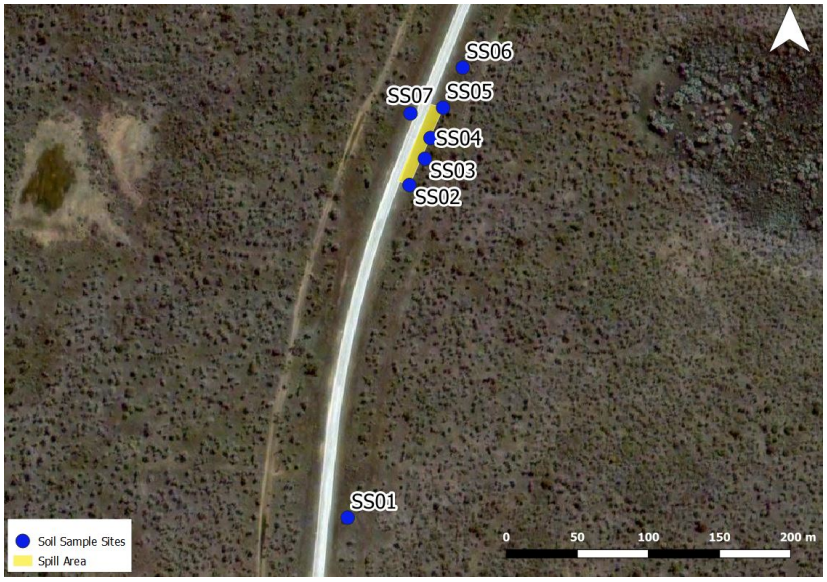
Approximately 100 kg of bulk concentrate was estimated to have been spilled from the road train across one location, totalling approximately 70 m in length. The majority of the spill was confined to the sealed bitumen area, with a portion of the material observed on the roadside. There were no potentially sensitive receptors, such as creeks, identified at the spill location.

No rainfall was recorded at the McArthur River Mine Bureau of Meteorology Station prior to the completion of the clean-up efforts.

MRM used a vacuum truck and pressure cleaner to remove the concentrate present on the sealed bitumen and an excavator to remove potentially impacted soil from the roadside that resulted from the spill and any residue resulting from the pressure cleaning works. The soil was disposed of in Cell 1 of the TSF and the vacuumed material was disposed of in the BBLF containment ponds. Further details of clean-up works are provided further below.

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 (Figure 5). Soil samples were collected at the spill location to determine whether the soil is suitable for the current land use. MRM is awaiting the soil sample results.

Figure 5: Incident location during clean-up.

	Validation of Clean-up On 9 October 2021, soil samples were collected at 7 locations 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 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 locations.*
	Prevention The incident investigation concluded that the contributing factors included the cattle on the road and failure to follow the transport of concentrate procedure. The work crew undertook training via a toolbox talk, reiterating the requirements of the *MRM Concentrate Transport Procedure*. As per the procedure, the operators must avoid swerving due to the potential risk that it poses to workers, community members and the environment (e.g. trailer roll-overs and/or concentrate spills). MRM is awaiting validation sampling results to determine whether the remediation was successful.
(f) the identity of the person notifying the NT EPA	Simon Longhurst Superintendent - Environment