Northern Territory Environment Protection Authority

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

Date and Time of Notification:	7 February 2020 16:30 Initial notification (phone) – 6 February 2020 11:00
Person / Company:	McArthur River Mining Pty Ltd
Incident:	Spillage of bulk zinc-lead concentrate dust from the rear trailer of a road train on the Carpentaria Highway.
(a) the incident causing or threatening to cause pollution	Approximately 20 kg of bulk zinc-lead concentrate from the rear trailer of a road train was released on the Carpentaria Highway over an area of 240 square metres (65 metres length by 3.7 metres width).
(b) the place where the incident occurred	The spill occurred at two locations on the Carpentaria Highway in close proximity, between the McArthur River Mine (the Mine) and the Bing Bong Loading Facility (Figure 1). These locations have been combined as one spill area of approximately 240 square metres for the purposes of the investigation and post-spill remediation (see Figure 2).  *Figure 1 – Approximate Spill Location*

	 *Figure 2 – Approximate Spill Extents* The Global Positioning System (GPS) points for the spill extents are listed below: MGA Zone 53 (GDA94) Spill start: Easting 631,542; Northing 8,218,585. Spill end: Easting 631,478; Northing 8,218,564.
(c) the date and time of the incident	5 February 2020 between 16:30 to 17:30.
(d) how the pollution has occurred, is occurring or may occur	The Environment Team carried out an inspection of the spill area during the initial clean-up response to determine the environmental risk and potential for pollution. During the inspection, light grey staining, indicative of concentrate, was observed on the road. No abnormal discolouration on the roadside or surrounding environment was observed (Figure 3). It was noted however that rainfall that occurred after the incident may have carried any residual concentrate still present after the initial clean-up into the runoff drain adjacent to the road. Approximately 22 millimetres of rainfall was recorded at the Borroloola Airport Bureau of Meteorology Station between 8.30 pm on 5 February and 1.30 am on 6 February 2020. At the time of the inspection, water was observed to be pooling in the runoff drain from recent rainfall. As such, the runoff drain on the roadside was noted as a potential receptor for the concentrate spill (Figure 4).

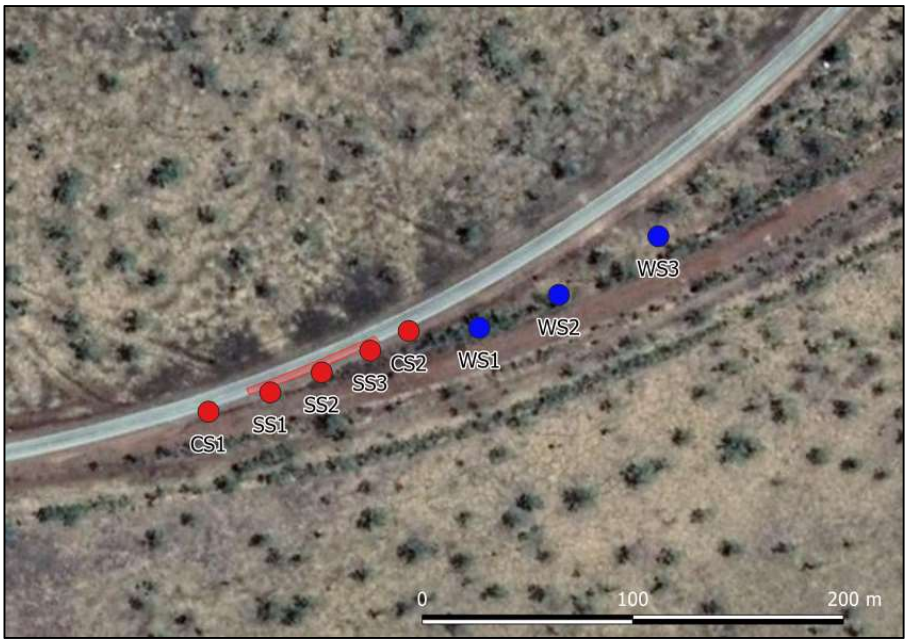
Figure 3 – Concentrate spill site during the clean-up.

Figure 4 – Roadside runoff drain.

The potential for environmental impact is considered to be low due to the small volume of zinc-lead concentrate released and the immediate remedial response, as outlined further below.

The road train trailers are designed to contain the concentrate during transport. An investigation to determine the direct cause of the concentrate escaping the trailer is still in progress.

(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	At 17:30 on 5 February 2020, McArthur River Mining (MRM) received communication from a local community member that a potential zinc-lead concentrate spill had occurred. Immediately after receiving the communication the length of the road was inspected by MRM staff to identify any signs of potential spillage.
	
	At 18:00, a road sweeper was deployed to clean-up the spill material from the road and roadside.
	
	At 20:30, rainfall was experienced in the region. At this time, the initial clean-up had been completed and majority of concentrate removed from the road.
	
	At 06:00 on 6 February 2020, inspection and clean-up works resumed. This included the use of the road sweeper to remove any residual material for transport back to the Mine. MRM Emergency Response Team provided traffic control for the duration of the clean-up works.
	
	MRM Environment staff re-inspected the length of the road to determine any sensitive receptors or surface water areas, collecting GPS locations and helping direct the clean-up activities as required.
	
	Validation Assessment
	
	MRM have undertaken validation sampling of the potentially impacted areas in accordance with Schedule B2 of the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM, 1999). Once received, the laboratory results will determine whether the post-spill remediation was successful and will include control and impact samples for soil on the roadside and surface water for the runoff drain adjacent to the road.
	
	The following samples are proposed to be collected and analysed (Figure 5):
	• Five soil samples comprised of the following:
	  ○ Three impact sites (SS1 to SS3);
	  ○ Two control sites (CS1 and CS2); and
	• Three surface water and soil samples (WS1 to WS3) within the roadside runoff drain to determine whether this area has been impacted by any runoff from the incident area.
	
	All samples will be analysed for relevant contaminants of potential concern (i.e. zinc and lead) and results will be compared against relevant NEPM (1999) guidelines to confirm whether remediation works have been successful and if further remediation is required. Impact site samples will also be compared with control samples to inform the effectiveness of clean-up.

	 *Figure 5 – Proposed sample locations.* MRM are in contact with members of the local community to determine if they witnessed the incident. Although no additional locations could be identified on the highway from multiple visual surveys, a conservative approach will be followed by MRM and any additional areas identified by community members will be added to the validation sampling program. Sampling for these additional areas will be carried out in accordance with Schedule B2 of NEPM (1999), and remediation will be completed if required. A formal report will be provided to the NT EPA within three to four weeks and will consist of the following: • Description of the incident, including potential causes; • Sample methodology, including a map and GPS coordinates of all samples collected; • Results of the sampling, including a comparison to relevant guideline values provided in Schedule B1 of NEPM (1999); • Discussion on the effectiveness of the remedial works.
(f) the identity of the person notifying the NT EPA	Adam Hatfield Manager – Health, Safety, Environment & Community