

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

Date and Time of Notification:	Initial notification (phone) – 30 December 17:00																					
Person / Company:	McArthur River Mining Pty Ltd (MRM)																					
Incident:	Spillage of bulk zinc-lead concentrate on the Carpentaria Highway. The source of the spill is likely to have been 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 30 kilograms (kg) of bulk zinc-lead concentrate was released at six main locations across 28 kilometres (km) of the Carpentaria Highway, between the Mine and the BBLF. All concentrate was confined to the sealed bitumen.																					
(b) the place where the incident occurred	The Global Positioning System (GPS) points for the six spill locations are listed in Table 1 below and shown in Figure 1. <i>Table 1 – GPS Coordinates of all spill locations.</i> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Spill location</th><th>Easting*</th><th>Northing*</th></tr> </thead> <tbody> <tr> <td>1</td><td>641,002</td><td>8,247,337</td></tr> <tr> <td>2</td><td>641,768</td><td>8,251,517</td></tr> <tr> <td>3</td><td>643,334</td><td>8,255,772</td></tr> <tr> <td>4</td><td>643,358</td><td>8,255,824</td></tr> <tr> <td>5</td><td>646,195</td><td>8,270,629</td></tr> <tr> <td>6</td><td>646,231</td><td>8,270,693</td></tr> </tbody> </table> <i>*All coordinates were taken using the MGA Zone 53 (GDA94) coordinate reference system.</i>	Spill location	Easting*	Northing*	1	641,002	8,247,337	2	641,768	8,251,517	3	643,334	8,255,772	4	643,358	8,255,824	5	646,195	8,270,629	6	646,231	8,270,693
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Figure 1: Approximate spill locations in relation to MRM and BBLF.

(c) the date and time of the incident

The spillage was sighted and reported by an MRM employee on 30 December 2020 at 08:26. The exact time the incident occurred is unknown.

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

Based on the immediate inspection by MRM staff to confirm the extent of spillage and assess the environmental risk, grey material (indicative of zinc-lead concentrate) was observed at six main locations across a 28 km stretch of the Carpentaria Highway.

The concentrate was confined to the sealed bitumen for the length of the spill (Figure 2). Based on the inspections, approximately 30 kg of concentrate is estimated to have been spilt in total.

The source of the spill is likely to have been from a road train travelling from the Mine to the BBLF. The road train trailers are designed to contain the concentrate during transport. A detailed internal investigation is in progress to determine the direct cause and any contributing factors..



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 09:00 on 30 December 2020, a vacuum truck was deployed to clean-up the majority of material on the road. This involved pressure washing the concentrate and using a vacuum truck to collect the residue, which was transported back to the BBLF containment ponds. Dried residue remaining in the vacuum truck was sent back to the Mine for permanent disposal.

On 2 January 2021, an industrial road sweeper and pressure cleaner was deployed for approximately 10 hours to complete continuous circuits over the 28km length to ensure any undetectable residual concentrate at or between the six spill locations was completely removed (Figure 3). A small amount of residue recovered from this process was transported back to the Mine for permanent disposal.

On 6 January 2021, following the completion of the works, MRM Environment staff inspected the road and could not identify any visible signs of lead-zinc concentrate along the transport route.



Figure 3: Spill clean-up efforts via pressure cleaner and industrial road sweeper at one of the spill locations.

Potential for Environmental Harm

Approximately 37 mm of rainfall was recorded at the Borroloola Bureau of Meteorology Station between 30 December 2020 and 2 January 2021. As described further below, the rainfall occurred after the initial clean-up works were completed. The final clean-up works were completed on 2 January 2021.

There was no visible evidence of runoff of zinc-lead concentrate at these locations.

Soil samples were collected at all six locations to determine whether the concentrate had spread from the spill site as a result of any rainfall. Additionally, water samples were collected at potentially sensitive receptors identified at Site 1 (i.e. minor creek culvert) (Figure 4), and Site 5 and Site 6 (i.e. floodplain with pooled water) (Figure 5). Details of the samples are provided below.

The potential for material environmental harm is considered to be low due to the small volume of concentrate across all locations and the immediate remedial response.



Figure 4: Site 1 – minor creek culvert observed next to spill location.



Figure 5: Site 5 – floodplain observed next to spill location.

Validation Assessment

On 6 January 2021, 20 soil samples were collected in total at the six spill locations (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 concentrate had spread to the roadside as a result of any rainfall.

On 7 January 2021, 16 water samples were collected at Site 1, Site 5 and Site 6 (Figure 6) in accordance with *Australian Standard 5667.1-1998: Water quality - Sampling Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples*.

The water samples were analysed for filtered and total lead and zinc concentration for comparison with the Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ, 2000) for recreational purposes. This guideline was also applied to ensure a conservative approach despite very low potential for people to come into primary contact with the minor creek and floodplain.

Follow-up correspondence confirming the final soil and water results will be provided to the Department within three weeks.



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

(f) the identity of the person notifying the NT EPA

Cassie Bell
Superintendent - Environment