

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

Date and Time of Notification:	Initial notification was provided by email on 16 August 2023.						
Person / Company:	McArthur River Mining Pty Ltd (MRM)						
Incident:	Spillage of bulk concentrate on the Carpentaria Highway. The concentrate 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 road train travelling from the Mine to the BBLF unknowingly spilled approximately 5 kilograms (kg) of bulk concentrate on the Carpentaria Highway.						
(b) the place where the incident occurred	<p>The incident occurred on the Carpentaria Highway, approximately 650 metres (m) southwest of the BBLF entrance. A reference map is provided in Attachment A.</p> <p>The Global Positioning System (GPS) points for the incident location are provided in Table 1 below.</p> <p><i>Table 1 – GPS co-ordinates of the incident location.</i></p> <table border="1" data-bbox="454 1283 1034 1391"> <thead> <tr> <th>Incident location</th> <th>Easting</th> <th>Northing</th> </tr> </thead> <tbody> <tr> <td>Carpentaria Highway</td> <td>647688</td> <td>8271313</td> </tr> </tbody> </table> <p>Coordinates were taken using the MGA Zone 53 (GDA94) coordinate reference system.</p>	Incident location	Easting	Northing	Carpentaria Highway	647688	8271313
Incident location	Easting	Northing					
Carpentaria Highway	647688	8271313					
(c) the date and time of the incident	The incident was reported to the MRM Environment team on 15 August 2023. Through the investigation process, MRM identified that the incident likely occurred on 9 August 2023.						

<p>(d) how the pollution has occurred, is occurring or may occur</p>	<p>As shown in the photographs provided, the volume of concentrate spilled was minor and was contained to the bitumen highway and immediate roadside (refer Image 1 and 2 in Attachment B). The area of impact is estimated to be 0.004 hectares (ha).</p> <p>The risk of environmental harm from this incident is considered low, because:</p> <ul style="list-style-type: none"> ▪ The extent of concentrate loss was limited to the bitumen road and immediate roadside. ▪ Remediation works were completed within 24 hours of the incident being reported to the MRM Environment Team, minimising the potential risk of migration beyond the incident location. ▪ The incident occurred during the dry season. As a result, no rainfall occurred in the period between the incident occurring and completion of clean-up works. This is confirmed by the Bureau of Meteorology weather observations provided in Attachment C. ▪ No sensitive receptors were impacted as a result of the incident or subsequent remediation works.
<p>(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</p>	<p>Remediation</p> <p>The incident was promptly inspected by BBLF personnel who assessed the incident location and ensured the concentrate was contained to the highway and roadside.</p> <p>Clean-up works were completed the following day on 16 August 2023. A high-pressure cleaner was used to remove residual concentrate from the bitumen. A bobcat was then used to remove potentially impacted surface material from the adjacent roadside (refer Image 4 in Attachment B).</p> <p>All remedial works were restricted to within the road reserve. Conditions at the incident location were dry and no rainfall occurred prior to remediation.</p> <p>All reclaimed concentrate was transported back to the BBLF for disposal. The incident location was inspected on 16 August 2023 following completion of remediation, and no visible signs concentrate were detected.</p> <p>Validation of Clean Up</p> <p>On 16 August 2023, five soil samples were collected from the incident location to verify remediation success. A further four control samples were collected from reference sites greater than 50 m from the incident location.</p> <p>These samples were analysed for zinc and lead and assessed against area-specific Ecological Investigation Levels (EILs). The results indicated elevated concentrations of both zinc and lead within the road reserve, notably within the controls samples taken beyond the area of impact.</p>

Control samples (CS1 to CS4) recorded elevated zinc and lead concentrations greater than those taken from the incident location. Of the four control samples collected, two exceeded the EIL for zinc, and also recorded elevated lead concentrations. These two samples were taken from the opposite side of the highway to that of the incident location (as demonstrated in **Attachment D**), and therefore cannot be attributed to the incident.

While one sample taken within the investigation area (HS4) exceeded the EIL for zinc, the concentration of 4,960 milligrams per kilogram (mg/kg) is less than that detected at control sites CS2 and CS4 which reported 5,790 and 6,980 mg/kg respectively.

However, for the avoidance of doubt, MRM conducted further remediation works at the incident location to reduce the metal concentrations at HS4 (refer Image 5 in **Attachment B**). Final sample results are provided in the table below.

Table 2 – Soil sample test results for INC-0171431

Sample Date	Sample Type	Sample ID	Lead	Zinc
			mg/kg	mg/kg
Ecological Investigation Level (EIL) ¹			1,784	4,239
17/08/2023	Soil	CS1 (control)	274	1,190
17/08/2023	Soil	CS2 (control)	1,360	5,790
17/08/2023	Soil	CS3 (control)	401	1,960
17/08/2023	Soil	CS4 (control)	1,540	6,980
17/08/2023	Soil	HS1	520	2,640
17/08/2023	Soil	HS2	656	3,120
17/08/2023	Soil	HS3	460	2,440
17/08/2023	Soil	HS4	909	4,960
17/08/2023	Soil	HS5	604	3,400
11/10/2023	Soil	HS4	297	1,730

¹ National Environment Protection (Assessment of Site Contamination) Measure 1999 Schedule 5Bc (NEPC, 2013) area-specific Ecological Investigation Levels (EILs) for industrial/commercial areas for soil samples.

Note: All samples were collected in accordance with Australian Standard 4482.1-2005: *Guide to the investigation and sampling of sites with potentially contaminated soil*.

As final remediation has been completed and no environmental harm has occurred, no further actions have been identified and the incident is now considered closed.

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

Simon Longhurst, Superintendent - Environment

Attachment A – Incident Location

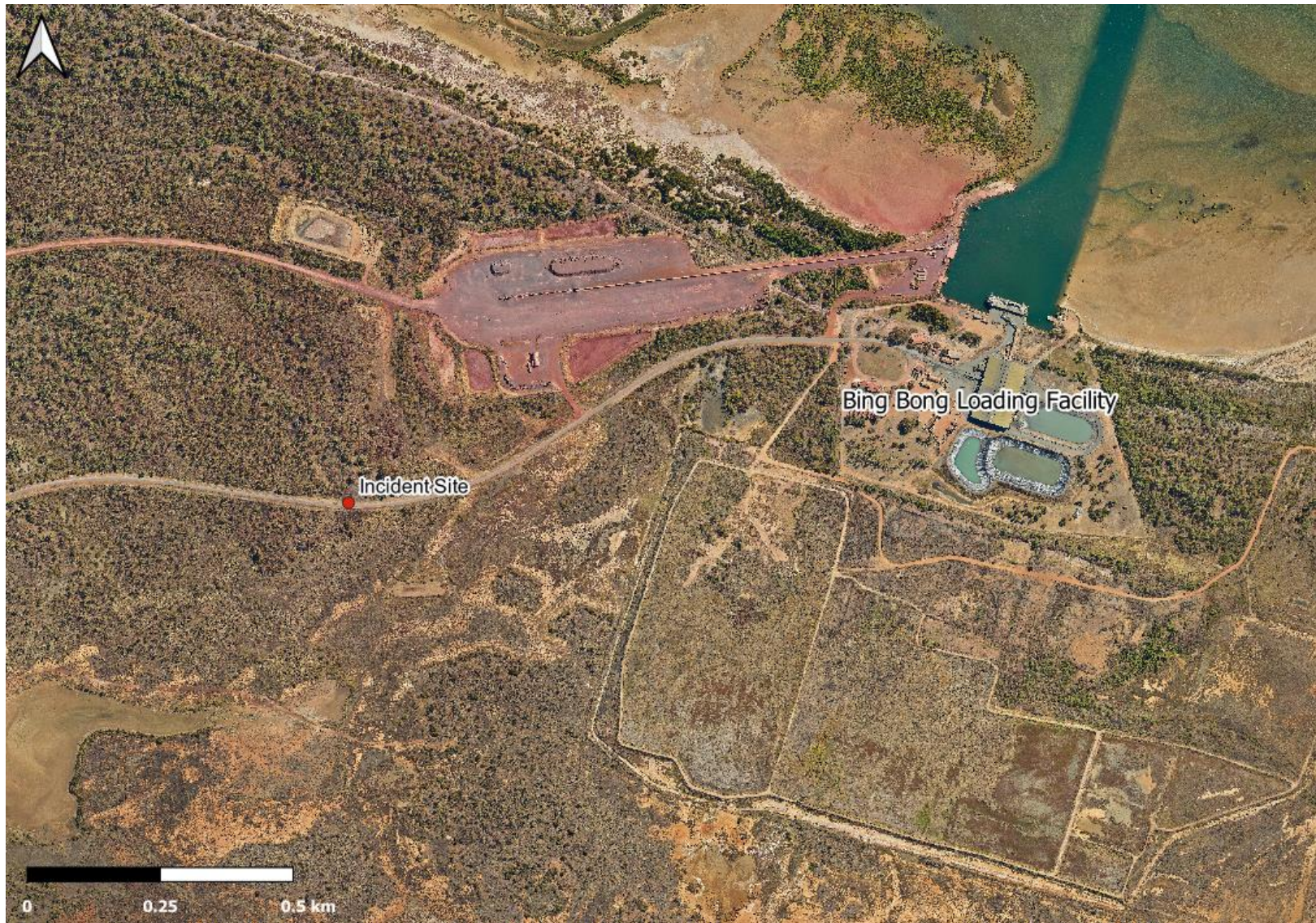


Figure 1: Incident location in relation to the Bing Bong Loading Facility (BBLF)

Attachment B – Reference Photographs



Image 1: Bulk concentrate observed on the Carpentaria Highway.



Image 2: Extent of bulk concentrate loss along the Carpentaria Highway.



Image 3: During clean-up activities, a high-pressure hose was used to remove residual concentrate from the highway.

Attachment B – Reference Photographs continued



Image 4: During remediation, a bobcat was used to remove all potentially contaminated surface material from the roadside adjoining the incident location.

Attachment B – Reference Photographs continued



Image 5: Additional remediation works 10 October 2023; a bobcat was again used to remove potentially impacted surface material from the roadside adjoining the incident location.

Attachment C – BoM Weather Observations for McArthur River Mine (Station ID 014704)

McArthur River Mine, Northern Territory August 2023 Daily Weather Observations



Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain mm	Evap mm	Sun hours	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C					km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Tu	12.6	33.5	0			SE	33	10:12	24.6	35		SSE	19	1019.0	32.8	24		E	9	1014.8
2	We	16.9	33.6	0			NE	35	16:49	25.2	34		SSE	17	1018.8	32.4	21	4	NE	17	1015.9
3	Th	16.4	32.5	0			NE	35	11:27	25.3	54	1	E	20	1021.0	29.8	45	8	NE	15	1017.7
4	Fr	19.6	32.6	0.2			NE	37	12:14	25.6	36	8	ESE	7	1022.1	29.9	43	7	NNE	17	1018.9
5	Sa	14.7	33.5	0			E	39	10:23	24.7	48		SE	7	1022.0	30.9	29	8	E	13	1017.8
6	Su	14.8	32.2	0			ENE	37	10:56	25.4	28		ESE	20	1020.7	31.8	22		E	15	1016.3
7	Mo	11.7	32.6	0			SE	46	08:55	25.3	28		ESE	28	1020.2	32.1	20		NE	15	1015.9
8	Tu	11.2	32.9	0			E	41	10:06	25.4	29		E	11	1020.5	31.9	23		ESE	13	1016.8
9	We	12.6	32.9	0			ENE	37	09:48	23.3	43		ESE	7	1021.5	32.2	24		E	9	1017.4
10	Th	13.4	32.6	0						25.3	38		SSE	11	1020.9	32.4	19		ENE	19	1016.8
11	Fr	13.9	33.1				NNE	35	18:42	25.9	42		SE	7	1019.9	32.5	22		E	11	1015.5
12	Sa	16.3	33.0	0			NNE	33	19:05	22.5	75		SSW	11	1019.0	32.7	25	4	NNE	13	1014.5
13	Su	15.2	33.6	0			ENE	35	10:59	22.3	74	2	S	7	1018.8	30.8	29	2	N	13	1013.9
14	Mo	18.7	33.5	0			ENE	33	12:11	22.1	86	2	SW	6	1018.6	32.8	25	1	ENE	11	1013.7
15	Tu	16.0	33.6	0			NNE	35	13:18	20.4	93	8	SSW	6	1018.9	32.8	24		NNE	13	1013.7
16	We	14.2	34.6	0			E	35	12:39	23.0	64		SSE	6	1017.9	34.2	24		N	15	1012.7
17	Th	15.0	34.4	0			NNE	28	18:41	23.3	75		ESE	6	1016.2	34.3	21		NE	13	1011.6

Source: Bureau of Meteorology (BoM) website, [McArthur River Mine, NT - August 2023 - Daily Weather Observations \(bom.gov.au\)](https://www.bom.gov.au/mc/mc-arthur-river-mine-nt-august-2023-daily-weather-observations)

Attachment D – Soil Sampling Reference Map



Figure 2: Locations of soil sampling undertaken at the Incident location to verify successful remediation.