

Annual Audit Compliance Report Form

Environmental Protection Act 1986, Part V Division 3

Once completed, please submit this form either via email to info@dwer.wa.gov.au, or to the below postal address:

Department of Water and Environmental Regulation
Locked Bag 10
Joondalup DC WA 6919

Section A – Licence details			
Licence number:	L6131/1990/13	Licence file number:	DER2013/001337-1
Licence holder name:	Pilbara Manganese Pty Ltd		
Trading as:	ConsMin		
ACN:	074 106 577		
Registered business address:	L2/24 Outram street, West Perth WA 6005		
Reporting period:	01/10/2020 to 30/09 /2021		

Section B – Statement of compliance with licence conditions
Did you comply with all of your licence conditions during the reporting period? (please tick the appropriate box)
<input type="checkbox"/> Yes – please complete: <ul style="list-style-type: none">• section C;• section D (if required); and• sign the declaration in Section F.
<input checked="" type="checkbox"/> No – please complete: <ul style="list-style-type: none">• section C;• section D (if required);• section E; and• sign the declaration in Section F.

Section C – Statement of actual production

Provide the actual production quantity for this reporting period. Supporting documentation is to be attached.

Prescribed premises category	Actual production quantity
5 - Processing or beneficiation of metallic or non-metallic ore	1,728,431 tonnes (t) (primary and secondary ore). Approved premise production or design capacity of 5,000,000 t per annum (tpa).
6 - Mine dewatering	9,483,501 t. Approved premise production or design capacity of 55,188,000 tpa.
54 - Sewage Facility	41,582 m ³ (average 113.92 m ³ per day). Approved premise production or design capacity of 150 m ³ per day.
73 - Bulk Storage of Chemicals	2,106.59 kilolitre (kL) capacity. Approved premise production or design capacity of 2,144 m ³ in aggregate.
89 - Putrescible landfill site	479.84 t. (based on assumed waste generation of 5 kg per person, per day). Approved premise production or design capacity of 1,950 tpa.

Section D – Statement of actual Part 2 waste discharge quantity

Provide the actual Part 2 waste discharge quantity for this reporting period. Supporting documentation is to be attached.

Prescribed premises category	Actual Part 2 waste discharge quantity
5 - Processing or beneficiation of metallic or non-metallic ore	641,992 dry tonnes (dT) of tailings discharged to Homestead in-pit TSF. Approved premise production or design capacity of 5,000,000 tpa.
6 – Mine Dewatering	6,676,504 kL of mine dewatering discharged to the environment. Approved premise production or design capacity of 55,188,000 tpa.

Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	1.3.1, 1.3.4	Date(s) of non-compliance:	22/05/2021
Details of non-compliance:			
<p>On 22 May at approximately 13:30, as part of routine inspections, a failure within a section of tailings discharge pipeline was identified. Tailings from this pipeline had pooled within the pipeline corridor, filling the adjacent tailings sump and eroding the windrow.</p> <p>As a result, tailings effluent has escaped the pipeline corridor into an area of 0.17 hectares (ha) of adjacent vegetation. The vegetation community impacted is described as <i>Open Low Woodland of Atalaya hemiglauca with Corymbia hamerleyana over Corchorus lasiocarpus subsp. lasiocarpus, *Aerva javanica, Eriachne mucronata and Triodia epactiaon minor watercourses.</i></p> <p>This event was reported to DWER on 24/05/2021 via Section 72 Waste Discharge Notification and recorded within ConsMin internal incident management system, InControl as INX 13434.</p>			
<p>What was the actual (or suspected) environmental impact of the non-compliance?</p> <p>NOTE – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.</p>			
<p>Environmental impact is considered to be negligible from this event. Given the method of malfunction, coarse grain sediment is primarily limited to the tailing’s corridor finer sediments and water flowing outside into the vegetated area. Tailing’s effluent has not sprayed or misted over adjacent vegetation. Manganese processing is chemically benign. Field samples taken of the tailings spill material immediately after the event did not show any evidence of any chemical contamination.</p>			

Section E – Details of non-compliance with licence condition

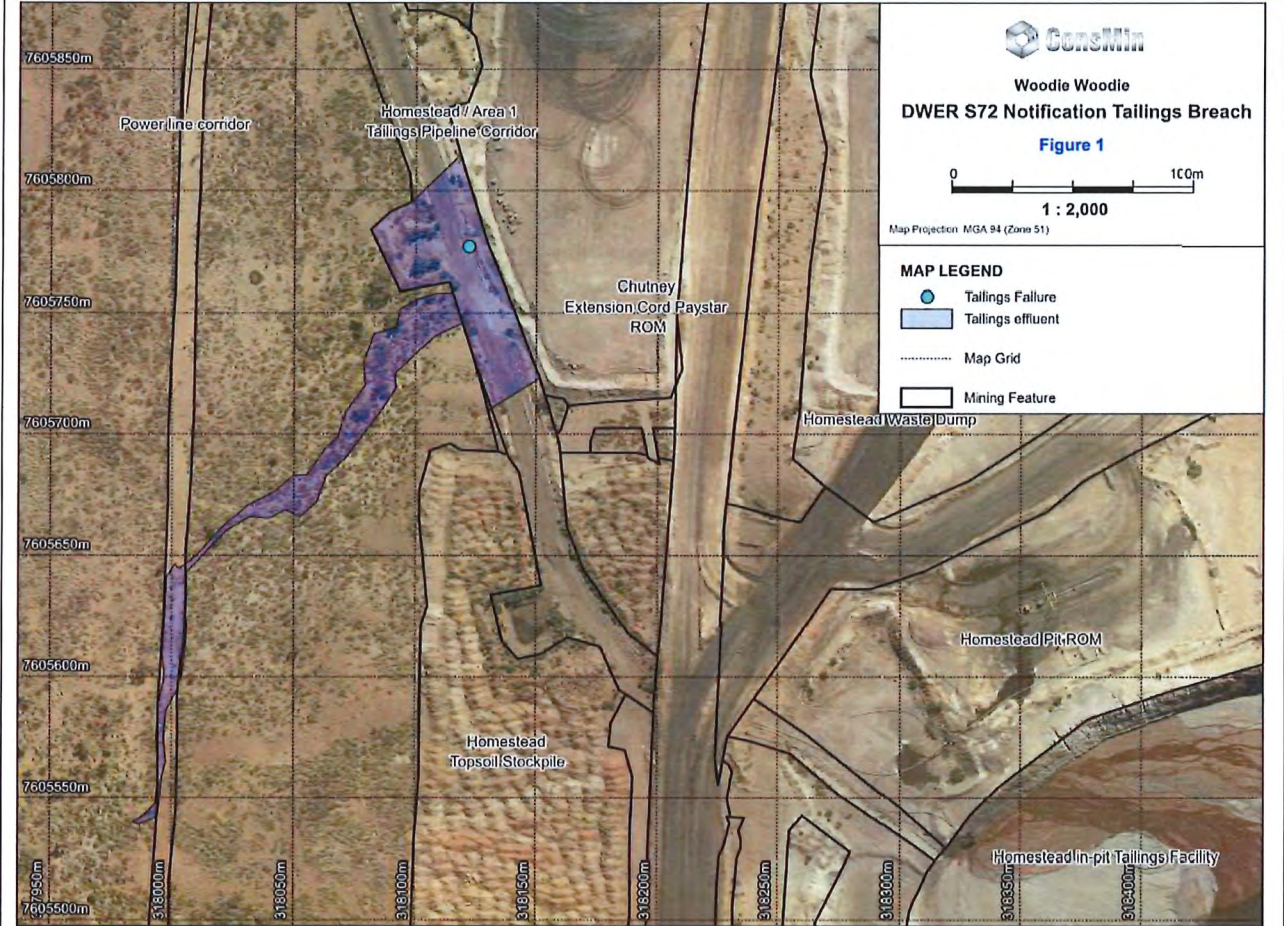


Figure 1: Location of tailings spill and the impacted area.

Cause (or suspected cause) of non-compliance:
<p>The event was caused by internal erosion of the pipeline by the sediment, causing the pipe to fail. The weakening in this pipeline had not been identified prior to the event.</p> <p>In addition, the spill was not contained within the windrowed pipeline corridor and caused emission to the environment as the barrier has weakened over time and failed under pressure. It is estimated that the spill lasted 1 hour prior to identification.</p>
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:
<p>ConsMin investigated the incident and took several actions. The windrow barrier on the tailings corridor which failed was reinstalled to a higher level with more competent material.</p> <p>To improve leak detection a pressure gauge was installed on the tailings pipeline linked to an alarm system activating when pipeline pressure changes. Equipment to scan and assess pipeline thickness has been trialed and visual inspections of the pipeline were increased. Inspection of the line were originally scheduled at 4 times per 24 hour period, were doubled to 8 to increase the early identification of issues.</p> <p>The composition of the discharge was assessed by samples taken from the spill material. On the 26/05/2021 in reply to the Section 72 notification, DWER Pollution Response requested a 3</p>

Section E – Details of non-compliance with licence condition	
<p>month period of photo monitoring of both impacted vegetation and nearby vegetation. This was completed between May 2021 and September 2021, with the photos and health assessment determining the impacted vegetation showed no signs of stress, degradation, or death. As requested by DWER details of the assessment including process, photographs and assessment records have been downloaded and stored pending request for these.</p>	
<p>Was this non-compliance previously reported to DWER?</p>	
<p><input checked="" type="checkbox"/> Yes, and</p>	
<p><input type="checkbox"/> Reported to DWER verbally</p>	<p>Date: / /</p>
<p><input checked="" type="checkbox"/> Reported to DWER in writing</p>	<p>Date: 24/05/2021</p>

Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	2.3.1	Date(s) of non-compliance:	13 October 2021
Details of non-compliance:			
<p>During an internal audit of the workshop and washpad facilities it was identified that the workshop drain bypasses the washpad Oily Water Separator. Treated effluent from the Oily Water Separator is monitored at licenced sample point L1. The license incorrectly states that emission point L1 is “treated wastewater from oil water separator originating from Greensnake Workshop and wash down area.”</p> <p>The workshop drain is located at the foot of the workshop concrete floor. This drain collects stormwater from the workshop roof and is used to capture water utilised during routine cleaning of the workshop concrete floor. This water may be contaminated with hydrocarbon material.</p> <p>The workshop drain is directed into a Downstream Defender stormwater treatment system located at the end of the workshop. The Downstream Defender system utilises a vortex separator to separate sediment, oil and grease into a catchment trap. The catchment trap is emptied periodically by Veolia waste services and disposed in Port Hedland at a licenced facility.</p> <p>Water treated by the Oily water Separator at license sample point L1 is sampled. The treated water from the workshop drain is disposed via a dedicated outlet pipe infrequently and is sampled on an ad-hoc basis. Sampling occurred most months, except for October, February and August. Results were below the 15 mg/l DWER limit of total recordable hydrocarbon, except for exceedances in January (80.6 mg/l), March (47 mg/l) and May (86 mg/l).</p>			
<p>What was the actual (or suspected) environmental impact of the non-compliance?</p> <p>NOTE – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.</p>			
<p>No exceedances to evaporation basin TRH concentrations were detected.</p> <p>The evaporation basin, into which the treated water with from the Workshop drain and Oily Water Separator is released has been constructed from natural clay material. Clay at Woodie has been tested and found to be extremely non permeable (1.0×10^{-9} – 6.1×10^{-11} m/s). As the hydrocarbon contaminated water is localised to the evaporation basin, and groundwater level sits 80 m below the pond, Pilbara Manganese Pty Ltd does not consider this non-compliance to have resulted in environmental impact.</p> <p>In addition, the evaporation basin and greater workshop areas, have been identified as requiring sampling and investigation at Mine Closure, to determine any potential locations which may require management under the <i>Contaminated Sites Act 2003</i>.</p>			

Section E – Details of non-compliance with licence condition

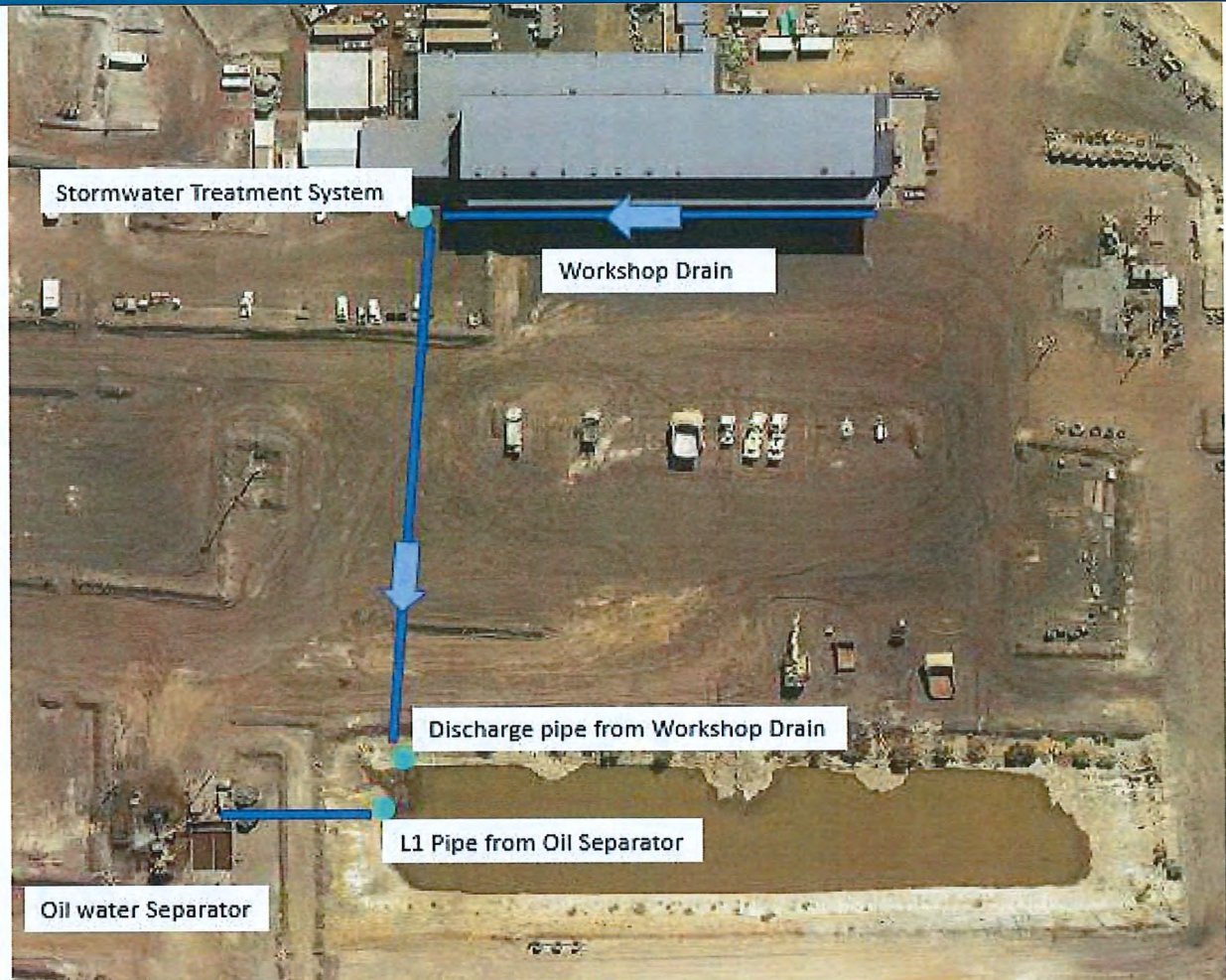


Figure 2: Location of pipe discharging from the workshop drain into the lined evaporation pond.

Cause (or suspected cause) of non-compliance:

Detailed schematics are not available for the workshop, which was constructed in 2008. Information available incorrectly indicates that the Workshop collection drain enters the Oily Water Separator, before discharging into the evaporation pond.

Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:

The discharge pipe from the workshop drain will be sampled on an ad-hoc basis when stormwater flows are able to be captured. In addition, quarterly samples will be taken from the evaporation pond to monitor TRH levels.

On completion of the current assessment under Part 4 of the *Environmental Protection Act 1986*, ConsMin will submit a licence amendment application to correctly reflect the discharge pipe and evaporation basin and point of emission of treated wastewater from the oily water separator.

Was this non-compliance previously reported to DWER?

Yes, and

Reported to DWER verbally

Date:

Reported to DWER in writing

Date: 30 /11 / 2020

Section E – Details of non-compliance with licence condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	2.3.2	Date(s) of non-compliance:	3/06/2021
Details of non-compliance:			
<p>As part of quarterly sampling, L1 (Greensnake wash down evaporation basin) was sampled on 26th May 2021. This subsequently resulted in the detection of summed TRH concentration of 86 milligrams per litre (mg/l), this result is above the licenced target limit of 15 mg/l.</p> <p>This event was reported to DWER on 4/06/2021 via Form N1 notification letter and recorded within ConsMin internal incident management system, InControl as INX 13532.</p>			
<p>What was the actual (or suspected) environmental impact of the non-compliance?</p> <p>NOTE – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.</p>			
<p>Light Vehicles and Heavy Equipment are washed at the wash down bay. All water and sediment are directed into the adjacent sump which then passes through the oily water separator. Hydrocarbon contaminated material is discharged into a 1,000 L Intermediate Bulk Container (IBC) and treated water is discharged into the adjacent evaporation basin.</p> <p>At the time of sampling, the evaporation basin was also sampled, returning a TRH of 2.9 mg/l. The discharge of TRH concentrations above the Licence Limit may have been diluted within the larger evaporation basin. The evaporation basin, into which the water with elevated TRH was released has been constructed from natural clay material. Clay at Woodie has been tested and found to be extremely non permeable (1.0×10^{-9} – 6.1×10^{-11} m/s). As the hydrocarbon contaminated water is localised to the evaporation basin, and groundwater level sits 80m below the pond PMPL do not consider this exceedance to have resulted in environmental impact.</p> <p>In addition, the evaporation basin and greater workshop areas, have been identified as requiring sampling and investigation at Mine Closure, to determine any potential locations which may require management under the <i>Contaminated Sites Act 2003</i>.</p>			

Section E – Details of non-compliance with licence condition



Figure 3: Location of L1 discharge point for treated water from the Oil Water Separator.

Cause (or suspected cause) of non-compliance:

Initial review of maintenance records has identified that the scheduled three-monthly maintenance works (removal and washing of baffles plus additional cleaning and inspections) was not completed. Further inspection found a blocked overflow pipe outlet within the system which is likely to have contributed to the elevated levels of TRH.

Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:

Maintenance work commenced on the 4/6/21 and included:

- The removal, inspection, and cleaning of Oily Water Separator baffles.
- Inspection of float valves.
- Removal, inspection, and cleaning, of skimmers, pumps, hoses, and oil filters.
- Removal of waste sediment from catchment bund.

Maintenance staff were reminded that preventative maintenance on the Oily Water Separator is essential, and if unable to be completed, needs to be escalated to management immediately.

The discharge pipe was improved by replacing the lay flat hose with a polypipe on a camlock system for easy cleaning, and a 6-month preventative maintenance check scheduled to ensure this part of the system is free of blockages.

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Subsequent samples taken from emission point L1 on 9 th of June 2021, returned results of 2.5 mg/l TRH, in line with licence limits.	
Was this non-compliance previously reported to DWER?	
<input checked="" type="checkbox"/> Yes, and	
<input type="checkbox"/> Reported to DWER verbally	Date: / /
<input checked="" type="checkbox"/> Reported to DWER in writing	Date: 04 / 06 / 2020

Section F – Declaration	
I / We declare that the information in this Annual Audit Compliance Report is true and correct and is not false or misleading in a material particular ¹ .	
I / We consent to the Annual Audit Compliance Report being published on the Department of Water and Environmental Regulation's (DWER) website.	
Signature ² :	Signature:
Name: (printed)	Name: (printed)
Position:	Position:
Date:	Date:
Seal (if signing under seal):	

¹ It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular.

² AACRs can only be signed by the licence holder or an authorised person with the legal authority to sign on behalf of the licence holder.