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Munster Works Approval W6817/2023/01

Time Limited Operations Report

Prepared by: Cockburn Cement Limited

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Contents

Introduction

This Time Limited Operations (TLO) Report has been completed as per section 8 & 9 of Works Approval W6817/2023/1 (works approval). The works approval was granted approving the installation and TLO of the Lime Kiln Dust (LKD) prilling infrastructure installed at Cockburn Cement, Lot 242 Russell Road East, Munster, WA, 6166. As per section 4 of the works approval, TLO commenced after submission of the Environmental Compliance Report in 20/12/2023 and the associated audit.

TLO phase was initiated in December 2023 and extended in two submissions to align with the works approval expiry date of the 6th November 2025. The extension was to enable more time for site production teams to complete TLO testing and reporting requirements.

Utilisation of the prilling equipment is intended to be in preference and addition to the current process of tankering and wet deposition of LKD at the disposal area at the discretion of the site operational leaders.

1 Summary of Time Limited Operations

Between December 2023 and April 2024, 9 trials were completed on the LKD prilling equipment, Table 1 below shows the time frame of these 9 trials. Each trial undertaken involved the operation of prilling equipment and loading of prilled product into a tipper truck to be disposed of within the prescribed LKD waste facility at Munster (Figure 1 below). Between June 2025 and September 2025, a further 9 trials were completed.

Table 1: Summary of TLO Timeframes from 2023-2024

Trial Run	Start Date/Time	Finish Date/Time
1	21/12/2023 8:35 AM	21/12/2023 10:44 AM
2	12/3/2024 9:52AM	12/3/2024 11:45 AM
3	3/5/2024 10:48 AM	3/5/2024 12:35 PM
4	9/5/2024 10:15 AM	9/5/2024 4:00 PM
5	3/12/2024 1:30 PM	3/12/2024 4:00 PM
6	4/12/2024 11:00 AM	4/12/2024 12:00 PM
7	27/3/2025 10:40 AM	27/3/2024 4:15 PM
8	2/4/2025 11:40 AM	2/4/2025 1:10 PM
9	10/4/2025 10:00 AM	10/4/2025 11:10 AM

Figure 1: LKD Disposal Area and Landfill

2 Summary of Environmental Performance of all infrastructure

Operational requirements of all site infrastructure and equipment during time limited operations is provided in table 2 below from section 6 of the works approval. Environmental performance against each of these operations requirements is addressed in the section under the table.

In summary, throughout the trials all operational and environmental performance requirements were met. Operators were continuously monitoring for adequate moisture content and no dust generation throughout each of the trials. The prilling trials were observed to be a success producing a “damp” material that could be loaded and stockpiled without dust generation. It is therefore expected that the LKD prilling equipment will continue to be operated.

Table 2: Operational requirements during time limited operations

	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	LKD prilling infrastructure	a) The moisture content of prilled LKD must be continuously monitored. b) The prilled LKD must meet a moisture content of 12% or higher or where the moisture content is less than 12%, the prilled LKD must be free of dust when exiting the LKD prilling machine.	LKD Prilling machine as shown in Figure 2 in Schedule 1
2.	Prilled LKD truck loading infrastructure	a) Loading of prilled LKD into tipper trucks must be undertaken via a telescopic loading sock which reaches into the truck. b) A street sweeper must be used as required to prevent dust accumulation within the loading area.	Prilled LKD loading sock as shown in Figure 2 in Schedule 1
3.	Dust extraction system and baghouse	a) Must be in operation whenever prilled LKD is being loaded via the loading chute/sock. b) Must discharge collected particulate matter back into the prilling feed via an enclosed chute or pipe. c) Broken or faulty baghouse filters must be maintained, repaired or replaced when detected.	New dust extraction baghouse as shown in Figure 2 in Schedule 1
4.	Tipper trucks	a) Prilled LKD must be transported via tipper trucks to the LKD disposal area for disposal. b) Prilled LKD must be in a damp state when being transported by tipper trucks. c) Trucks trailers must be covered when transporting prilled LKD.	NA
5.	Water cart	a) If there is any visible dust lift off during the deposition of prilled LKD a water cart must be operated to control dust lift off.	LKD disposal area as shown in Figure 1 in Schedule 1

LKD Prilling Infrastructure

LKD prilling infrastructure is fully enclosed and continues to operate as reported in the Environmental Compliance Report. Figure 2 shows

a. enclosed weigh screw,
b. enclosed prilling equipment,
c. moisture analyser,
d. dust collection.

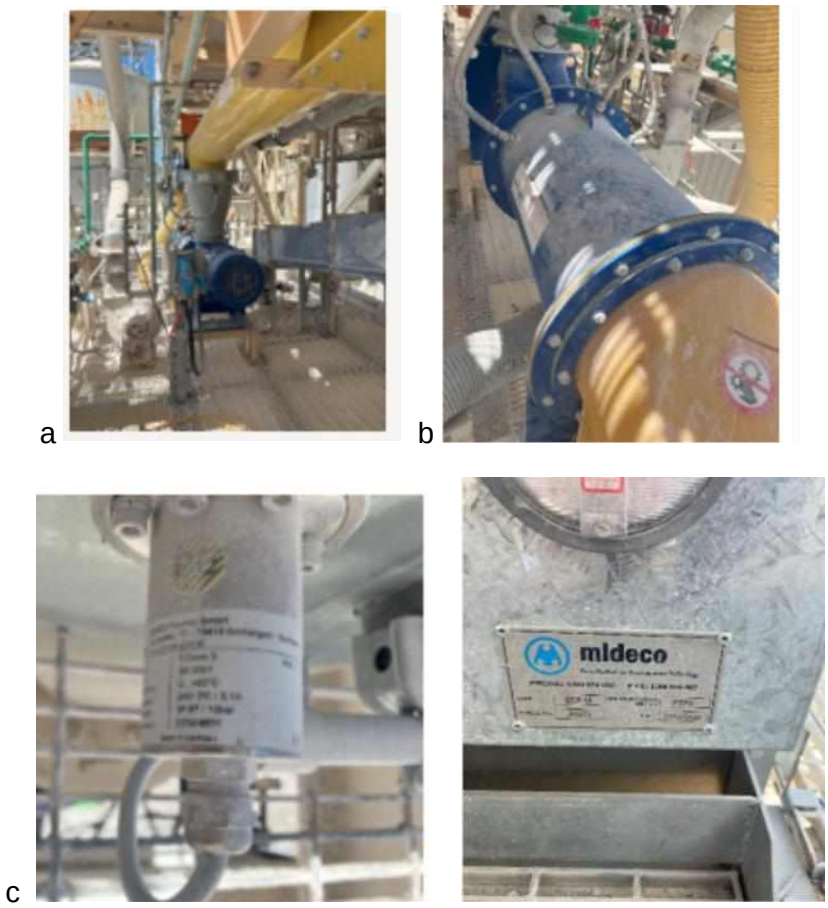

Figure 2: Prilling Infrastructure

All LKD prilling infrastructure equipment demonstrates functional performance.

The LKD online moisture analyser takes continuous moisture readings of prilled LKD which is recorded through the Citect system and monitored by personnel in the control room. In addition to continuous monitoring of moisture via the moisture analyser, grab samples were also taken during trials and tested onsite to validate the results. The grab sample moisture results range from 12% to 17.1% and snapshot of Citect moisture results for one trial show a range of 18%-23%.

Prilled LKD truck loading infrastructure

The LKD prilling equipment was successful in achieving the deposition of material through a telescopic loading sock into the tipper truck without dust generation. Figure 3 & 4 shows

a) the LKD prilled product dropping into the tipper truck and

b) the automatic roller door on the northern side of the loading enclosure.

A visual check is completed during loading to ensure the prilled LKD is damp and no dust is generated during loading. The dust collector was observed to be functioning correctly with no evidence of dust generation from the clean air outlet.

A street/road sweeper is onsite Monday to Friday and is used during prilling operations when required to ensure that dust does not accumulate in the loading area.

a

*Figure **3**: LKD being prilled into a tipper truck*

b

Figure 4: Automatic roller door

Transport of prilled LKD

Following completion of loading damp prilled LKD the tipper truck cover is sealed over, using the inbuilt canopy and the prilled LKD product was transported to the LKD Disposal Area (Figure 5) for unloading. The truck driver remains with the truck throughout loading and provides additional visual check of successful prilling.

A water cart is onsite during prilling operations and used when required for any visible dust lifting off during deposition of prilled LKD.

*Figure **5**: LKD prilled product being sealed in tipper truck for transport*

Deposition of prilled LKD

The LKD was then tipped into a pile (Figure 6a) at the licenced waste dam facility. Samples taken to confirm adequate moisture content was achieved which registered above 12%. No dust was observed on tipping the LKD material. Figure 6b shows a close-up of the damp prilled nodules after tipping at the licenced waste dam facility.

Figure 6a & b: LKD tipped pile at LDK disposal area

3 Manufacturer design specs and conditions

All manufacturer design specs and conditions of work approval have been met. The LKD Prilling equipment has been observed through trials to operate in accordance with the manufacturers design specification and environmental performance requirements of works approval. All conditions of the works approval have been met and there are no actions noted for implementing corrective measures.

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