

# Woodlawn Bioreactor Leachate and Water Management System Audit (LWMS) 2022 Recommendation Responses

**Table 1: Mandatory Recommendations**

Condition	Consent Condition	Observation	Action	Timeline
18R	PA 10_0012			
(b) i)	Assess actual performance against the assumptions and predictions made in the project water balance prepared by WSP dated September 2017. This must include: actual versus predicted inputs and outputs into and out of each dam.	Actual inputs into dams were substantially more than predicted in the 2017 water balance model due to excessive wet conditions during the audit period 16 March 2021 to 15 March 2022.	Veolia will seek to implement the leachate and water management strategy as required under the April 2022 Development Control Order to be completed in 2022 as a priority. This includes a revised water balance model, with a consent modification seeking to implement the required changes to the water management system, update of the reference water balance model for future compliance assessments, and revised and practical target date(s) for emptying of ED3N lagoons and ED1.	23/12/2022
(b) ii)	Assess actual performance against the assumptions and predictions made in the project water balance prepared by WSP dated September 2017. This must include: actual versus predicted mechanical evaporation from each dam.	Actual mechanical evaporation losses from each dam is substantially less than predicted in the 2017 water balance model due in part to overestimation of mechanical evaporation in combination with unfavorable climatic conditions during the audit period 16 March 2021 to 15 March 2022.	In the last 24 months Woodlawn has experienced twice the annual average rainfall. Recent climatic conditions have prevented Veolia from achieving the performance targets set out within the 2017 water balance. The abovementioned revised water balance will consider unfavorable climatic conditions with potential to impact on mechanical evaporation, based on recent weather events.	23/12/2022

(b) iii)	Assess actual performance against the assumptions and predictions made in the project water balance prepared by WSP dated September 2017. This must include: actual versus predicted rainfall and evaporation.	Actual rainfall was substantially higher and evaporation was substantially lower than the wettest year predictions in the 2017 water balance model, due to extreme climatic conditions during the audit period 16 March 2021 to 15 March 2022.	In the last 24 months Woodlawn has experienced twice the annual average rainfall. Recent climatic conditions have prevented Veolia from achieving the performance targets set out within the 2017 water balance. The abovementioned revised water balance will consider worst case scenarios rainfall and evaporatory conditions, based on recent weather events.	23/12/2022
(b) iv)	Assess actual performance against the assumptions and predictions made in the project water balance prepared by WSP dated September 2017. This must include: the actual versus predicted volume of water or treated leachate stored in each dam.	Actual inputs into the treated leachate dams has been substantially more than predicted in the 2017 water balance model due to excessive wet conditions during the audit period 16 March 2021 to 15 March 2022.	In the last 24 months Woodlawn has experienced twice the annual average rainfall. Recent climatic conditions have prevented Veolia from achieving the performance targets set out within the 2017 water balance. The abovementioned revised water balance will consider worst case scenarios rainfall and excessively wet conditions, based on recent weather events.	23/12/2022
(c) i)	Assess actual versus predicted performance of the LTP. This must include: actual versus target effluent quality	Effluent quality is considered to meet EPA license limits, however there was a single exceedance of ammonia and TSS during the audit period. As a result, the plant did not fully achieve effluent quality targets across the audit period.	Recent odour audits suggest that effluent quality is still within acceptable parameters, therefore Veolia is reviewing its current targets, to ensure control of odour potential, and maximise throughput. Veolia will continue to improve and optimise the LTP operation to minimise target exceedances.	31/08/2022
(c) ii)	Assess actual versus predicted performance of the LTP. This must include: actual versus target throughput.	The LTP achieved an average throughput of 3.4 L/sec during the audit period, less than the target of 4 L/sec.	A third Ultra Filtration (UF) train has been installed as planned in order to maintain design throughput. Once fully commissioned, this will enable additional processing capacity.	31/08/2022

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(d)	<p>Determine whether the leachate and water management system is achieving its intended objectives.</p> <p>1. Construction of a suitably sized and lined coffer dam (referred to as ED1 Cofferdam) to store and evaporate treated leachate from its leachate treatment plant from September 2018 for a 4-year period without filling.</p>	<p>The system is not achieving its objectives. The volume of water stored within the unlined ED3N dams have grown significantly instead of being drawn down. At the same time ED1 Cofferdam is also nearly full. This will substantially delay the installation of any new liners with ED3N dams. Dams are being operated above the 80% freeboard limit set.</p>	<p>Unprecedented storm events experienced over the last 2 years has had a detrimental impact on water storage capacity at the Premises. Veolia has commenced construction of an additional ED1 Cofferdam#2, capable of holding approximately 50ML of liquid.</p>	31/08/2022
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