

Woodlawn Bioreactor & Crisps Creek IMF Independent Environmental Audit (IEA) 2021 Recommendation Responses

Table 1: Mandatory Recommendations

Condition	Observation	Recommendation	Action	Timeline
	PA 10_0012			
3.5	Based on data reported in the AEMRs, Veolia accepted more than 90,000 tpa regional waste by road in 2019 and 2020 prior to determining that the climbing lane was not required to the satisfaction of GMC.	Investigate the causes for limit exceedances and undertake appropriate corrective actions to prevent a recurrence. Also confirm that GMC accept ARRB's advice that the climbing lane is not considered necessary and close out the traffic impact assessment to the satisfaction of the GMC.	Regional waste volumes are predominantly received via the southern access route and Veolia has contributed close to \$2mil of funding to QPRC for road maintenance that Veolia understands should have begun in February however is yet to begin on the southern access road. All funding will be completed by Early 2022. Veolia will seek acceptance from GMC for ARRB's Traffic Impact Assessment that indicates that a climbing lane is not necessary.	June 2022
4.18D	Veolia transferred 50 ML stormwater from ED3S to ED2 during the Audit Period. There is no evidence available to the Auditors that the seepage or leakage points identified in ED2 have been repaired to the satisfaction of the Planning Secretary and EPA.	Establish that the leakage points in ED2 have been identified and repaired to the satisfaction of the Planning Secretary and EPA prior to transferring any more stormwater from ED3S to ED2.	Stormwater was transferred to ED2 as a result of a 1-in-100 year rainfall event in 2020 where the Woodlawn recorded total rainfall of 704mm, which is well above the annual average from 2010-2020 of 458.5mm. Having assumed responsibility, Heron Resources Ltd have HDPE lined ED2 and have been dewatering in accordance with their EPL. Veolia will obtain verification of repairs undertaken and submit to the Department & NSW EPA for approval.	December 2021

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4.18M	There is no evidence that quarterly updates have been submitted to Water NSW or the Department in accordance with this Condition.	Provide quarterly reports to the EPA, Water NSW and the Department of the leachate volume in the ED1 Coffey Dam and the remaining leachate storage volume.	Veolia will ensure relevant stakeholders are included in monthly report distribution. Quarterly updates as per 70A will be reinstated.	June 2021
6.4	The Transport Code of Conduct was last issued in 2011 and was not updated in consultation with RMS, Goulburn Mulwaree Council, Palerang Council and the Community Liaison Committee to the satisfaction of the Department prior to the receipt of more than 50,000 tpa of regional waste.	Update Veolia's Transport Code of Conduct in consultation with RMS, Goulburn Mulwaree Council, Palerang Council and the Community Liaison Committee, and to the satisfaction of the Department.	The Woodlawn Transport Code of Conduct (TCC) was reviewed in 2019 however not circulated. A revised TCC will be submitted to all relevant stakeholders for consultation.	June 2021
7.8	Waste volume limits were exceeded during the Audit Period, which represent an 'incident', as defined in PA 10_0012, Schedule 2, Definitions. The waste volume limit exceedances were not notified and reported to the Department within the required timeframes.	Conduct an investigation as to why the Department was not notified of waste volume exceedances and based on the investigation findings carry out appropriate corrective action(s) to prevent a recurrence.	Regional waste limits were exceeded by 12,753t in 2020 and reported to the Department in the AEMR. Veolia also received 64,455t of bushfire impacted waste material from regional areas of NSW during the reporting period. Veolia will develop a process to identify exceedances using cumulative data and prompt timely notification to the Department as required.	July 2021
7.9	The SWMP was not reviewed and updated following the LWMS Audit and revision of the water balance in 2020, and changes to the stormwater system.	Review and revise the LEMP and its sub-plans, particularly the SWMP as appropriate. Also consider the EPA's previous comments in relation to the SWMP and LMP (16/08/2018).	A review of the Woodlawn LEMP and sub-plans is already underway and will be submitted to the Department by the end of 2021.	December 2021
DC 31-02-99				
18	A Compliance Report has not been issued for more than two years.	Seek advice on whether the effort to prepare a Compliance Report at this time is required given that this IEA will be issued almost in parallel. Also seek advice on whether this Condition can be modified.	Veolia will seek advice in conjunction with the NSW Compliance Department and the Department.	December 2021

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70A	Quarterly updates to the EPA and DPIE of the leachate volume in ED3SS and remaining volume were not available.	Confirm in writing to the EPA and DPIE that the ED3SS lining is in place and that quarterly updates are provided to the EPA and DPIE.	Due to the commissioning of the LTP, reliance on ED3SS for storage requirements has significantly reduced. A lagoon in ED3N has also been emptied and will be lined to enable an additional 25 ML evaporation capacity. Veolia will locate and retain the evidence of lining previously submitted to EPA and DPIE and resume quarterly updates as per 4.18M however will be proposing that this condition be removed as the use of ED3SS was no longer required, and storage volume and capacity is reported every year in the AEMR.	June 2021
EPL 11436				
O6.17	The Total VOCs measured at the LFG Inlet (Point 5) and the Engine 1 Exhaust Stack (EPA Point 8) were 56 g/min and 1.8 g/min, respectively, resulting in a calculated destruction efficiency of 96.8% for Engine 1, which is less than the required minimum destruction efficiency of 98%.	Ensure that future gas engine emission test reports, report the calculated destruction efficiency correctly and that Veolia reports potential non-compliances as required under the EPL.	An experimental error margin of 19% was associated with the test method used and reflected in the calculation of destruction efficiency reported in 2019. Veolia and the third party consultant is now using a secondary approved test method that has eliminated the margin of error, and provides a more accurate and reliable destruction efficiency calculation, confirming that the required minimum destruction efficiency of 98% is being achieved.	June 2021
R4.2	Three odour complaint reports were not provided to the EPA within the required 24-hour timeframe.	Undertake a review of the complaints response process and consider appropriate corrective actions to ensure that the 24-hour report requirement is met on an ongoing basis.	Veolia will implement processes and endeavour to avoid delays in odour complaint investigations in future. Veolia will seek to vary its licence to extend reporting requirements with the NSW EPA.	June 2021
U1.2	Whilst the LTP has been designed to continuously treat at least 4 L/s of leachate and therefore, should be	Continue to optimise the LTP performance to achieve the required minimum 4 L/s leachate treatment rate.	The LTP is currently treating an average of 3.88L/s and achieving a maximum of 4.22L/s. Operations are now looking to stabilise the plant at this treatment rate	July 2022

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	capable of doing so, the LTP has yet to achieve the minimum rate.		as the process is pushed to 4 L/s. Veolia is also installing an additional UF Train with a target for completion in July 2022.	
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Table 2: Improvement Opportunities

Condition	Observation	Recommendation	Action	Timeline
	PA 10_0012			
3.5	There is an inconsistency to references to regional waste and putrescible regional waste in PA 10-0012 which requires clarification as this impacts on assessment of compliance with limits.	Seek to clarify with the Department and EPA the various waste volume limits in the approvals to ensure that they are clearly defined in relation to the type of waste and the limits are consistent between conditions and approvals.	Veolia will clarify various waste volume allowance limits with the Department and EPA.	December 2021
4.2	A VENM certificate from Denrith Pty Ltd did not provide the address of the source site, Reynolds Pit, and the certificate does not provide photographs or other evidence demonstrating that the material is in fact VENM.	Obtain further evidence to support claims that material imported to site as waste cover material is VENM.	Veolia has obtained and will retain a more comprehensive VENM certificate from Denrith Pty Ltd.	Completed
4.7	The IOA did not include a detailed odour complaint analysis as recommended in the previous IEA and in accordance with the Department's consultation requirement. This is a repeat finding.	Conduct a detailed odour complaint analysis for the next IOA that includes an assessment of environmental parameters, LTP operational conditions and consideration of the complainants, as per the Department's consultation requirement. The Auditors also suggest that the Independent Odour Auditor avoid making generic recommendations.	Veolia will be added to the scope of the next IOA.	March 2022
4.9	Records showing the submission of the 2019 IOA and Veolia's response were not available.	Confirm that the 2019 IOA and response were submitted to both the Department and the EPA.	Submission of 2019 IOA correspondence was provided to the Auditors during the audit period. This appears to have been overlooked.	Completed

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4.11	The available tabulated data for dust monitoring do not record "extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed to by the [Department] in consultation with [EPA]" for the purpose of excluding elevated data linked to extraordinary events.	Record observations of extraordinary events in sampling field records and in the data spreadsheet with appropriate evidence so that results impacted by such events may be excluded (evidence based) from the average calculation.	Such field observations will be recorded in field sheets and master data records.	June 2021
4.18R	It is considered that the water balance model in its current form is not sufficient to assess the overall performance of the LWMS.	In consultation with the EPA, consider whether a different, more complete water balance model could be used to determine whether the LWMS is achieving its intended objectives or consider modifying this Condition(s) in order to provide clarity on more realistic and achievable assessment goals.	Veolia in collaboration with Heron Resources Ltd, will consult with the EPA on LWMS Audit prior to the next Audit.	March 2022
4.25B	Two to three Intermediate Bulk Containers (IBCs) that from a distance appeared empty and labelled as corrosives were stored at Crisp Creek IMF outside a bunded area.	Investigate the status of 2-3 IBCs that were observed at the Crisps Creek IMF in relation to their contents, labelling and storage location.	The IBC's, previously used for pumping out storm water/drain sediment, were empty and have been removed.	Complete
5.14	Whilst there was evidence of slope stability erosion controls used in a swale drain at the IMF, the sides of the drain had eroded in some places and required maintenance.	Inspect and repair the eroded sides on the swale drain at the Crisps Creek IMF.	Veolia has arranged repairs to eroded sides of the swale drain.	August 2021
7.5	Whilst non-compliances are discussed in the AEMRs (e.g. waste volume limit exceedances), they are not always clearly identified as a "non-compliance".	A separate section should be included in the AEMR that provides a summary of identified EPL related non-compliances.	Veolia will add a separate section on EPL related non-compliances in the AEMR/AEPR's moving forward.	September 2021
7.8	Veolia's ERP / PIRMP does not refer to the requirement to notify the Department in accordance with this Condition.	Revise the ERP / PIRMP to include the requirement to notify the Department if the incident presents a risk of material harm.	Notification of the Department will be added to the ERP/PIRMP.	September 2021
7.10	The majority of the required documents are provided on the Veolia's Woodlawn Bioreactor, NSW webpage, with the	Upload responses to any Independent Environmental or Odour Audit to the webpage along with the audit report. It is	Veolia will continue to comply with the existing consent requirements for public availability of information.	Completed

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	exception of Veolia's responses to the IOAs.	recommended that responses are provided as a separate document to the audit reports.		
	DC 31-02-99			
19	Correspondence could not be provided showing that the 2018 IEA report was submitted to DPIE, EPA, DoI L&W, Council and the Community Liaison Committee. However, the Auditors recall that Veolia advised the report had been submitted to DPIE.	Seek advice from DPIE as to which stakeholders the IEA reports are required to be submitted to.	Veolia to confirm stakeholder distribution requirements in the consent.	Completed
32 & 151	The ERP does not provide a response procedure for a truck rollover and spill of waste on a public road that may be within an agricultural area (Condition 151).	Include an Emergency Response Procedure for a truck rollover and spill of waste on a public road in the site ERP.	An emergency response procedure for truck rollover whilst carrying waste will be added to the Woodlawn ERP.	December 2021
65	Changes to the stormwater collection and transfer system in the void have occurred during the Audit Period, including the transfer and EPL monitoring point, which are not reflected in the 2018 SWMP and potentially the EPL 11436. The monitoring location is also unclear to the EPA.	Review and revise the SWMP to reflect current void stormwater management practices and EPL 11436 requirements.	Veolia is currently in consultation with the EPA in relation to stormwater management system improvements and increased efficiency during significant storm events. The SWMP will be updated to reflect these improvements.	December 2021
70	The LEMP, SWMP and LMP address management of ED3. It is considered that the management plans for ED3 dams do not adequately address: leak detection monitoring of all pipelines used to transfer leachate and treated leachate; leachate quality targets; and performance indicators, which are not clearly stated.	Review and revise the management plans and particularly, the LMP, to address all of the requirements of Condition 70 in relation to the management of ED3 adequately.	Veolia is currently undertaking a review of LEMP and this information will be incorporated accordingly.	December 2021
125 & 127	Dust is not identified as a potential environmental impact in the IMF EMP and therefore, dust control measures are not included.	Revise the IMF EMP to include wind-blown dust emissions as a hazard (particularly given EPL 11455, Condition O3.1) and document the management	Wind-blown dust and preventative controls will be incorporated into the IMF EMP.	December 2021

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		control measures (maintaining paving, hardstand and vegetation cover).		
131	The SWMP does not detail how the groundwater height should be reported against water table contours around the site and should be monitored and reported to assess any variation over time, and importantly, ensure that the groundwater continues to flow towards the void.	Review and revise the SWMP to include monitoring and reporting the groundwater contours and flow direction, as well as the height of the saturation level in the Bioreactor void to verify that groundwater continues to flow towards the void.	Veolia is currently in the process of reviewing the LEMP and all supplementary plans. This information will be incorporated. Clarification of this recommendation is required.	December 2021
132	The SWMP does not address all of the requirements of this Condition, particularly, monitoring of volumes that are transferred from one location to another (e.g. void to ED3, ED3 to void, ED3S to ED2).	Review and revise the SWMP to include all of the monitoring requirements from Condition 132, including those that have yet to be triggered.	Veolia manages dam volumes and quantities of water transferred by the continuous monitoring of freeboard. Veolia is currently in the process of reviewing the LEMP and all supplementary plans. This information will be incorporated.	December 2021
134	The requirement to notify the EPA as soon as practicable after becoming aware that the height of the saturation level in the waste is above the height of the groundwater table that surrounds the mine void is not addressed within the LEMP, the LMP or the SWMP.	Document conditions R3.5 and R3.6 of EPLs in the LEMP, SWMP and LMP because it is dependent on aspects of groundwater and leachate monitoring, and a key performance indicator for the Bioreactor.	Veolia is currently in the process of reviewing the LEMP and all supplementary plans. This information will be incorporated.	December 2021
153	The Landscaping and Vegetation Management Plan (LVMP) does not refer to Buttercup Doubletail.	Consider adding a section to the LVMP that provides information on the Buttercup Doubletail and any other threatened or vulnerable species known to be in the region. Consider including a picture and means of raising awareness with site personnel that this species may be present and if it is sighted to report it so that it may be conserved in accordance with this Condition.	Veolia will collaborate with Heron Resources Ltd during the review of the LVMP as it encompasses an area of operation, and will be proposing the removal of this reference to the Buttercup Doubletail as it has not listed as a species that was identified in the field surveys undertaken for Veolia's or Heron Resources Ltd's EA.	December 2021

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160	The LEMP and IMF EMP do not refer to a complaint verification procedure that aims to correlate potential sources of odours with an operation or activity by assessing relevant meteorological data.	Review and revise the LEMP, IMF EMP and the Odour Complaint Response procedure to more clearly state that a complaint verification procedure using meteorological data is required and implemented.	Veolia is currently in the process of reviewing the LEMP and all supplementary plans. This information will be incorporated.	December 2021
EPL 11436				
O6.11	The LEMP and SWMP do not mention the requirement to apply an additional 15cm of cover material (i.e. 30 cm depth) over surfaces of the landfilled waste which have had 15 centimetres of cover material for more than 90 days.	Address the requirement to apply an additional 15cm of cover material (i.e. 30 cm depth) over surfaces of the landfilled waste which have had 15 centimetres of cover material for more than 90 days in the LEMP.	Veolia is currently in the process of reviewing the LEMP and all supplementary plans. This information will be incorporated in accordance with existing EPL requirements.	December 2021
O6.16	Both residence time and temperature are reported as static and not as minimum, maximum and average values in the Annual Returns.	Consider modifying future Annual Returns and AEPRs / AEMRs to show minimum, maximum and average values.	Veolia is compliant with the EPL and does not see any value in including this data in annual reporting.	Completed
P1.1	The drawing showing the EPL monitoring locations (Drawing No. 16735-16) still shows DG18 as being at the western end of the site and not near the site office as observed during the site visit, although the drawing does not indicate where the entrance and site office are located.	Review the EPL monitoring location plan in consultation with the EPA to ensure that the dust gauge samples are being collected in the approved location.	Veolia will obtain the correct location (gps) of DG18 and update the map accordingly.	December 2021
General				
N/A	Investigate whether the objectives of the water balance model are aligned with the expectations of the EPA and Water NSW.	Consult with the EPA, Water NSW and the Department to ascertain their expectations in relation to the water balance model and whether the model and associate Condition(s), should be modified to better meet their expectations.	Veolia will consult with the EPA, Water NSW and the Department as per this recommendation prior to next water balance. Now included in assessment of water balance has been added to EPL.	March 2022
N/A	The objectives that the LWMS audit assessed mainly relate to the dams and separation of stormwater from leachate to minimize leachate production and do not consider other aspects such as waste	Consult with the EPA, Water NSW and the Department to understand and better define the objectives for the LWMS Audit and consider whether the scope of the audit should be broadened or more	Veolia will add assessment of groundwater monitoring data to the scope of the next LWMS Audit.	March 2022

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	inputs to the Bioreactor and the interaction between leachate and groundwater. The LWMS audit report does not refer to a review of groundwater monitoring data, to assess the status of the Bioreactor void.	targeted to address the desired objectives.		
N/A	The project approvals contain over 500 conditions, of which a number of them are superseded and/or duplicated by the later approval PA 10_0012. Hence, the size and complexity of the project approvals increases the difficulty to fully understand and monitor the various conditions and their requirements.	In consultation with the Department seek to consolidate the PA's to remove duplication due to supersedences, reduce the complexity of the project consents and simplify the understanding of conditions.	Veolia is currently in consultation with the Department in regards to consolidating the development consent and project approval conditions prior to the September 2024 deadline.	September 2024

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