

Annex F9

# Investigation Reports of Environmental Quality Limit Exceedance

## Investigation Report of Environmental Quality Limit Exceedance

Project	South East New Territories (SENT) Landfill Extension
Date	8 December 2021
Time	10:15
Monitoring Location	MWX-6
Parameter	Chemical Oxygen Demand (COD)
Action / Limit Levels	>46 mg /L
Measured Level	56 mg /L
Possible reason	<p>Groundwater contaminated with leachate is commonly characterized by high COD and ammoniacal-nitrogen levels as a result of degradation of organic matters in the waste. The groundwater quality (ammoniacal-nitrogen) monitoring results at MWX-6 (3.52mg/L) and groundwater quality (COD) monitoring results of the groundwater monitoring wells adjacent to MWX-6 (MWX-5: 28 mg/L and MWX-7: 23 mg/L) are well within the respective limit levels. In addition, no exceedance of COD Limit Levels for groundwater monitoring at other monitoring wells was recorded in the sampling event. Hence, there is a low possibility of the slight elevation of COD level at MWX-6 is due to leachate contamination from SENTX operation or at least it is not conclusive to base on this result to demonstrate exceedance is due to leachate contamination.</p> <p>In accordance with Table 4.5b of the updated EM&amp;A Manual, repeat measurement was conducted on 4 January 2022 to confirm findings. COD concentration of 44 mg/L (below Limit Level) was measured during the sampling event, which demonstrates no consecutive groundwater quality impact at MWX-6.</p> <p>In addition, in accordance with the findings of the desktop review commissioned by GVL and EPD (the Employer) in May 2021 to investigate the potential sources of the elevated methane levels at the perimeter landfill gas monitoring wells at SENTX, pockets of organic matters are identified in the fill materials of the SENTX site upon review of the historical site investigation borehole logs at the Project Site area. It is possible that the elevated COD concentration measured at MWX-6 (in close proximity to LFG13, which shows elevated methane levels continuous) on 8 December 2021 could be due to localised organic matters within or around the monitoring well.</p> <p>Due to the presence of influencing factor from non-project source; the COD levels at all other groundwater monitoring wells are within the respective limit level, and the subsequent month monitoring results at MWX-6 did not show exceedance, there is no adequate evidence showing that the COD level exceedance measured at MWX-6 on 8 December 2021 was deemed to Project-</p>

	related activities.
Action Taken / Action to be Taken	Examination of environmental performance of the Project will be continued during the weekly inspections. The Contractor is reminded to implement relevant and appropriate mitigation measures according to the updated EM&A Manual to avoid any exceedance of the Action and Limit Levels.
Remarks	-

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Designation: Environmental Team

Date: 26 January 2022