

Annex F

Investigation Report

Investigation Report of CEMS Exceedances

Date	1 – 31 January 2022
Time	Continuous monitoring throughout January 2022
Monitoring Location	Continuous Environmental Monitoring System (CEMS)
Parameter	Various emission parameters of the Cogeneration Units (CHP) and the Ammonia Stripping Plant (ASP)
Exceedance Description	<p>1. Continuous monitoring was carried out at the CAPCS, CHP and ASP throughout the reporting period using the CEMS. According to the EM&A Manual, exceedance is considered if the emission concentration of the concerned pollutants is higher than the emission limits stated in Tables 2.2, 2.3 and 2.5 of the EM&A Manual (Version F) for CAPCS, CHP and ASP respectively. The concentration of the concerned air pollutants were monitored on-line by the CEMS. Exceedances of various emission parameters were recorded on the CEMS including:</p> <ul style="list-style-type: none"> • NO_x in CHP 3 • CO, NO_x, VOCs and NH₃ in the ASP <p>2. The Contractor has investigated the cause of the exceedance and identified that</p> <ul style="list-style-type: none"> • The exceedances of NO_x from CHP 3 occurred due to insufficient feedstock. Two CHPs were under operation and CHP 3 received a low loading to consume biogas in the reporting period. • The exceedance of CO, NO_x, VOCs and NH₃ from ASP occurred due to system instability caused by the malfunctioning of the steam generator of ASP.
Action Taken / Action to be Taken	<p>Malfunctioning of the steam generator of ASP was found in early January 2022. An urgent maintenance was carried out and the ASP was shut down for about 16 days. Off-site discharge of wastewater to DSD was required in the reporting month.</p> <p>After resuming operation in late January 2022, the steam generator and remained unstable and further fine-tuning was carried out throughout the rest of the reporting period.</p>
Remedial Works and Follow-up Actions	<p>The Contractor is recommended to closely monitor the processes, including the modification works and follow-up emission monitoring of the ASP to avoid exceedance.</p> <p>The Contractor should review the routine inspection and maintenance schedule of the ASP and conduct preventative maintenance to avoid similar re-occurrence of the equipment failure.</p>

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 Date: 18 February 2022