

Annex F

Investigation Report

Investigation Report of CEMS Exceedances

Date	1 – 28 February 2022
Time	Continuous monitoring throughout February 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"> • SO₂ in CHP 3 • Dust, 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 SO₂ from CHP 3 occurred due to malfunctioning of the control instrument. • The exceedances from ASP occurred due to system instability caused by the blockage of the stripping column and unstable column and thermal oxidizer temperature of the ASP.
Action Taken / Action to be Taken	<p>The Contractor arranged immediate maintenance work after the malfunctioning of the control instrument of the de-sulphurisation system was found and the issue was fixed on the same day.</p> <p>The Contractor arranged cleaning of the column packaging of the ASP during mid-February and further upgrading work in the next reporting month.</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: 14 March 2022