

Annex F

Investigation Report

Investigation Report of CEMS Exceedances

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| Date | 1 - 30 June 2023 |
| Time | Continuous monitoring throughout June 2023 |
| Monitoring Location | Continuous Environmental Monitoring System (CEMS) |
| Parameter | Various emission parameters of the Cogeneration Units (CHPs) and 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 and SO₂ from the CHP1; • NO_x and SO₂ from the CHP2; • NO_x and SO₂ from the CHP3; and • NO_x, SO₂ and NH₃ from ASP. <p>2. The Contractor has investigated the cause of the exceedances and identified that:</p> <ul style="list-style-type: none"> • The exceedances of NO_x and SO₂ from CHPs, and the exceedances of NO_x, SO₂ and NH₃ from ASP occurred due to system instability. |
| Action Taken / Action to be Taken | The Contractor investigated the reason for the exceedances and arranged Remedial Works and Follow-up Actions (see below). |
| Remedial Works and Follow-up Actions | The Contractor has arranged the CHP supplier to inspect, analyse and improve CHP performance in July 2023. Improvement recommendation will be provided once the report is completed. The Contractor has also arranged cleaning and repairing of the ASP in July 2023 to restore the treatment efficiency of the ASP. |

Prepared by: Alex Khawaja Waheed, MT Representative

Date: 28 November 2023

Investigation Report of Discharged Sample Exceedances

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| Date | 9 June 2023 |
| Monitoring Location | Outlet Chamber of the Effluent Storage Tank |
| Parameter | Total Nitrogen, Total Phosphorus |
| Exceedance Description | <ol style="list-style-type: none"> 1. According to EM&A Manual, the monitoring of the effluent discharge from the outlet chamber of the Effluent Storage Tank and Petrol Interceptors shall be carried out monthly and bi-monthly, respectively, under Section 21 of the Water Pollution Control Ordinance (WPCO) license. Exceedance is considered if the concentration of discharged effluent sample from the Effluent Storage Tank and Interceptors is higher than the discharge limits stated in Part B2 of the WPCO. Exceedances of discharge parameter was recorded during the monitoring of effluent discharge from the outlet chamber of the Effluent Storage Tank. 2. The Contractor has investigated the cause of the exceedances and found that the exceedance of Total Nitrogen and Total Phosphorus from the effluent discharge from the outlet chamber of Effluent Storage Tank was potentially caused by SBR condition had not stabilized after previous cleaning event. |
| Action Taken / Action to be Taken | The Contractor investigated the reason for the exceedance. New effluent sample has been taken on 11 July 2023. |
| Remedial Works and Follow-up Actions | The Contractors has arranged action to increase bacteria activities. Increasing activated sludge volume and extended continuous aeration is ongoing to assess the effectiveness. |

Prepared by: Benny Lam, MT Representative

Date 13 July 2023