

Annex D7

Investigation Reports of
Environmental Quality
Limit Exceedance

Investigation Report of Environmental Quality Limit Exceedance

Project	South East New Territories (SENT) Landfill Extension
Date	7 January 2023
Time	8:00 (7 January 2023) – 8:00 (8 January 2023)
Monitoring Location	AM2
Parameter	24-hour Total Suspended Particulates (TSP)
Action / Limit Levels	Action level: >260 µg/ m ³ Limit level: >260 µg/ m ³
Measured Level	337 µg/ m ³
Possible reason	<p>From the meteorological data obtained from the SENTX on-site meteorological monitoring station, a predominantly east-southeasterly to easterly wind with highest wind speed 8.0 m/s was recorded on 7 and 8 January 2023 during the sampling event.</p> <p>On 6 and 9 January 2023 (monitoring event was conducted on Saturday and Sunday), the ET site representative observed construction works of Cell 4X and SENT Landfill tie-in area and unpaved areas in the vicinity dust monitoring station AM2. This could be the potential cause for the exceedance. Based on this observation, the TSP exceedance at AM2 was deemed to Project-related activities.</p> <p>In accordance with Table 3.8b of the updated EM&A Manual, repeat measurement was conducted at AM2 on 13 January 2023 to confirm findings. 24-hour TSP level of 47 µg/ m³ (below Action and Limit Levels) was measured during the sampling event, which demonstrate no consecutive dust impact at AM2.</p>
Action Taken / Action to be Taken	<p>In accordance with Table 3.8b of the updated EM&A Manual, the monitoring frequency at AM2 shall be increased to daily, until no exceedance of the Action/Limit Level. It should be noted that the turnaround time for the laboratory analysis of the dust filter paper is 5 working days and the preliminary results for the monitoring event conducted on 7 to 8 January 2023 were available on 16 January 2023. Repeat measurement was conducted on 13 January 2023 and the TSP monitoring result at AM2 is well below the Action/Limit Level. Hence, the daily TSP monitoring at AM2 shall not be triggered.</p> <p>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.</p>
Remarks	-

Prepared by: Abbey Lau
 Designation: Environmental Team
 Date: 20 February 2023

Investigation Report of Environmental Quality Limit Exceedance

Project	South East New Territories (SENT) Landfill Extension
Date	18 January 2023
Time	10:55 – 11:25
Monitoring Location	Thermal Oxidiser
Parameter	Sulphur Dioxide (SO ₂)
Trigger Levels	>0.07 g/s
Measured Level	0.21 g/s
Possible reason	<p>As confirmed by the Contractor, the thermal oxidiser was under normal operating conditions during the sampling event. The thermal oxidiser stack emission monitoring results (NO₂, CO, Benzene, Vinyl chloride, gas combustion temperature, exhaust temperature and exhaust gas velocity) on 18 January 2023 were well within the respective limit levels. It is possible that the slight exceedance of SO₂ limit level measured on 18 January 2023 could be due to some short-term system instability (e.g. insufficient air, short gas residence time or ineffective mixing of gas and air during the combustion) during the sampling event. Hence, the SO₂ exceedance at the thermal oxidiser on 18 January 2023 is considered to be Project related.</p> <p>In accordance with Table 3.8b of the updated EM&A Manual, repeat measurement was conducted on 21 February 2023 (it should be noted that the turnaround time of the laboratory analysis of the flue gas sample is 3 weeks and the results were available on 6 March 2023) to confirm findings. The SO₂ concentration (<0.01 g/s) measured on 21 February 2023 is well below Limit Level. There is no consecutive exceedance of SO₂ concentrations in the flue gas emission of thermal oxidiser.</p>
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 closely monitoring the operating conditions of the thermal oxidiser to avoid any exceedance of the Limit Levels.
Remarks	-

Prepared by: Abbey Lau
 Designation: Environmental Team
 Date: 7 March 2023

Investigation Report of Environmental Quality Limit Exceedance

Project	South East New Territories (SENT) Landfill Extension
Date	31 January 2023
Time	8:00 (31 January 2023) – 8:00 (1 February 2023)
Monitoring Location	AM1, AM2, AM3
Parameter	24-hour Total Suspended Particulates (TSP)
Action / Limit Levels	Action level: >260 µg/ m ³ Limit level: >260 µg/ m ³
Measured Level	AM1: 509 µg /m ³ AM2: 266 µg /m ³ AM3: 267 µg /m ³
Possible reason	<p>From the meteorological data obtained from the SENTX on-site meteorological monitoring station, a predominantly east-northeasterly to easterly wind with highest wind speed 3.6 m/s was recorded on 31 January and 1 February 2023 during the sampling event.</p> <p><u>AM1</u> On 31 January 2023, dust and traffic emission from the SENT landfill in vicinity and located at the east of dust monitoring location AM1 were observed. The sample taken at AM1 on the day might not represent the operation dust emission from SENTX.</p> <p>In addition, no SENTX works which may lead to potential dust emission was conducted in the vicinity of dust monitoring location AM1 on the sampling day based on on-site observations and construction and operation activities as described by the Contractor. Environmental deficiency was not observed during the weekly site inspection on 26 January 2023 and 2 February 2023 (before and after the sampling event). The Contractor has implemented the dust control and mitigation measures recommended in the updated EM&A Manual.</p> <p>In accordance with Table 3.8b of the updated EM&A Manual, repeat measurement was conducted on 6 February 2023 to confirm findings. 24-hour TSP level of 109 µg/ m³ (below Action and Limit Levels) was measured during the sampling event, which demonstrate no consecutive dust impact at AM1.</p> <p>Due to presence of the influencing factor from the SENT landfill and no potential source from the Project-related activities in the vicinity of AM1 which may lead to the high TSP level was identified, there is no adequate evidence showing that the TSP exceedance at AM1 was deemed to Project-related activities.</p>

	<p><u>AM2</u> On 31 January 2023, the ET site representative observed construction works of Cell 4X and SENT Landfill tie-in area and unpaved areas in the vicinity dust monitoring station AM2. This could be the potential cause for the exceedance. Based on this observation, the TSP exceedance at AM2 was deemed to Project-related activities.</p> <p>In accordance with Table 3.8b of the updated EM&A Manual, repeat measurement was conducted on 6 February 2023 to confirm findings. 24-hour TSP level of 61 µg/m³ (below Action and Limit Levels) was measured during the sampling event, which demonstrate no consecutive dust impact at AM2.</p> <p><u>AM3</u> On 31 January 2023, no works from SENTX which may generate dust emission were conducted in the vicinity of AM3 on the sampling day based on the ET site representative on-site observations and the Contractor’s record of the construction and operation activities carried out on that day. The dust and traffic emission from SENTX haul road at the east of dust monitoring location AM3 could be the potential dust source contributing to the exceedance. The TSP exceedance at AM3 was therefore deemed to Project-related activities. It should be noted that dust emitted from the public fill stockpiling areas and active earthworks from another project site in close vicinity of dust monitoring station AM3 could also contribute to the project.</p> <p>In accordance with Table 3.8b of the updated EM&A Manual, repeat measurement was conducted on 6 February 2023 to confirm findings. 24-hour TSP level of 115 µg/m³ (below Action and Limit Levels) was measured during the sampling event, which demonstrate no consecutive dust impact at AM3.</p>
Action Taken / Action to be Taken	<p>In accordance with Table 3.8b of the updated EM&A Manual, the monitoring frequency at AM1, AM2 and AM3 shall be increased to daily, until no exceedance of the Action/Limit Level. It should be noted that the turnaround time for the laboratory analysis of the dust filter paper is 5 working days and the preliminary results for the monitoring event conducted on 31 January to 1 February 2023 were available on 8 February 2023. Repeat measurement was conducted on 6 February 2023 and the TSP monitoring results at AM1, AM2 and AM3 are well below the Action/Limit Level. Hence, the daily TSP monitoring at AM1, AM2 and AM3 shall not be triggered.</p> <p>Examination of environmental performance of the Project will be continued during the weekly inspections. The Contractor is</p>

	<p>reminded to implement relevant and appropriate mitigation measures according to the updated EM&A Manual to avoid any exceedance of the Action/Limit Level.</p> <p>In addition, the Contractor was reminded to discuss the dust control measures with CEDD to minimize the dust impact from the other project site to proximity to the SENTX boundary.</p>
Remarks	-

Prepared by: Abbey Lau
 Designation: Environmental Team
 Date: 20 February 2023

Investigation Report of Environmental Quality Limit Exceedance

Project	South East New Territories (SENT) Landfill Extension
Date	2 March 2023
Time	8:00 (2 March 2023) – 8:00 (3 March 2023)
Monitoring Location	AM1
Parameter	24-hour Total Suspended Particulates (TSP)
Action / Limit Levels	Action level: >260 µg/ m ³ Limit level: >260 µg/ m ³
Measured Level	401 µg/ m ³
Possible reason	<p>From the meteorological data obtained from the SENTX on-site meteorological monitoring station, a predominantly east-southeasterly to easterly wind with highest wind speed 9.5 m/s was recorded on 2 and 3 March 2023 during the sampling event.</p> <p>On 2 March 2023, dust and traffic emission from the SENT landfill in vicinity and located at the east of dust monitoring location AM1 were observed. The sample taken at AM1 on the day might not represent the operation dust emission from SENTX.</p> <p>In addition, no SENTX works which may lead to potential dust emission was conducted in the vicinity of dust monitoring location AM1 on the sampling day based on on-site observations and construction and operation activities as described by the Contractor. Environmental deficiency was not observed during the weekly site inspection on 2 March 2023. The Contractor has implemented the dust control and mitigation measures recommended in the updated EM&A Manual.</p> <p>In accordance with Table 3.8b of the updated EM&A Manual, repeat measurement was conducted on 9 March 2023 to confirm findings. 24-hour TSP level of 165 µg/ m³ (below Action and Limit Levels) was measured during the sampling event, which demonstrate no consecutive dust impact at AM1.</p> <p>Due to presence of the influencing factor from the SENT landfill and no potential source from the Project-related activities in the vicinity of AM1 which may lead to the high TSP level was identified, there is no adequate evidence showing that the TSP exceedance at AM1 was deemed to Project-related activities.</p>
Action Taken / Action to be Taken	<p>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.</p> <p>In addition, the Contractor was reminded to implement additional</p>

	dust control measures to minimize the dust impact from SENT landfill to the SENTX boundary.
Remarks	-

Prepared by: Abbey Lau
Designation: Environmental Team
Date: 22 March 2023

Investigation Report of Environmental Quality Limit Exceedance

Project	South East New Territories (SENT) Landfill Extension
Date	8 March 2023
Time	8:00 (8 March 2023) – 8:00 (9 March 2023)
Monitoring Location	AM2
Parameter	24-hour Total Suspended Particulates (TSP)
Action / Limit Levels	Action level: >260 µg/ m ³ Limit level: >260 µg/ m ³
Measured Level	313 µg/ m ³
Possible reason	<p>From the meteorological data obtained from the SENTX on-site meteorological monitoring station, a predominantly southwesterly to south-southwesterly wind with highest wind speed 3.8 m/s was recorded on 8 and 9 March 2023 during the sampling event.</p> <p>On 8 and 9 March 2023 (during the sampling event), the ET site representative observed construction works at Cell 4X and SENT Landfill tie-in area and unpaved areas in the vicinity dust monitoring station AM2. This could be the potential cause for the exceedance. Based on this observation, the TSP exceedance at AM2 was deemed to Project-related activities.</p> <p>In accordance with Table 3.8b of the updated EM&A Manual, repeat measurement was conducted at AM2 on 14 March 2023 to confirm findings. Exceedance of 24-hour TSP Action/Limit Levels was recorded at AM2 (452 µg/ m³) during the sampling event, which showed consecutive dust impact at AM2.</p>
Action Taken / Action to be Taken	<p>In accordance with Table 3.8b of the updated EM&A Manual, the monitoring frequency at AM2 shall be increased to daily, until no exceedance of the Action/Limit Level. It should be noted that the turnaround time for the laboratory analysis of the dust filter paper is 5 working days and the preliminary results for the monitoring event conducted on 8 to 9 March 2023 were available on 17 March 2023. Repeat measurement and the regular TSP monitoring were conducted on 14 March and 20 March 2023, respectively. The TSP monitoring result at AM2 on 14 March 2023 exceeded the Action/Limit Level. However, 24-hour TSP level of 151 µg/ m³ (below Action/Limit Levels) was measured during the regular TSP monitoring event on 20 March 2023. Hence, the daily TSP monitoring at AM2 shall not be triggered.</p> <p>Examination of environmental performance of the Project will be continued during the weekly inspections. The Contractor is reminded to implement relevant and appropriate mitigation</p>

	<p>measures according to the updated EM&A Manual to avoid any exceedance of the Action/Limit Levels.</p> <p>ET will continue to closely monitor the dust monitoring results and collect additional data for investigation and further review, if necessary.</p>
Remarks	-

Prepared by: Abbey Lau
 Designation: Environmental Team
 Date: 23 March 2023

Investigation Report of Environmental Quality Limit Exceedance

Project	South East New Territories (SENT) Landfill Extension
Date	14 March 2023
Time	8:00 (14 March 2023) – 8:00 (15 March 2023)
Monitoring Location	AM1 and AM2
Parameter	24-hour Total Suspended Particulates (TSP)
Action / Limit Levels	Action level: >260 µg/ m ³ Limit level: >260 µg/ m ³
Measured Level	AM1: 306 µg /m ³ AM2: 452 µg /m ³
Possible reason	<p>From the meteorological data obtained from the SENTX on-site meteorological monitoring station, a predominantly east-northeasterly to south-easterly wind with highest wind speed 2.0 m/s was recorded on 14 and 15 March 2023 during the sampling event.</p> <p><u>AM1</u> On 14 March 2023, dust and traffic emission from the SENT landfill in vicinity and located at the east of dust monitoring location AM1 were observed. The sample taken at AM1 on the day might not represent the operation dust emission from SENTX.</p> <p>In addition, no SENTX works which may lead to potential dust emission was conducted in the vicinity of dust monitoring location AM1 on the sampling day based on on-site observations and construction and operation activities as described by the Contractor. Environmental deficiency was not observed during the weekly site inspection on 9 and 16 March 2023. The Contractor has implemented the dust control and mitigation measures recommended in the updated EM&A Manual.</p> <p>In accordance with Table 3.8b of the updated EM&A Manual, repeat measurement was conducted on 20 March 2023 to confirm findings. 24-hour TSP level of 171 µg/m³ (below Action and Limit Levels) was measured during the sampling event, which demonstrate no consecutive dust impact at AM1.</p> <p>Due to presence of the influencing factor from the SENT landfill and no potential source from the Project-related activities in the vicinity of AM1 which may lead to the high TSP level was identified, there is no adequate evidence showing that the TSP exceedance at AM1 was deemed to Project-related activities.</p> <p><u>AM2</u> On 14 March 2023, the ET site representative observed construction works at Cell 4X and SENT Landfill tie-in area and unpaved areas</p>

	<p>in the vicinity dust monitoring station AM2. This could be the potential cause for the exceedance. Based on this observation, the TSP exceedance at AM2 was deemed to Project-related activities.</p> <p>In accordance with Table 3.8b of the updated EM&A Manual, repeat measurement was conducted on 20 March 2023 to confirm findings. 24-hour TSP level of 151 µg/m³ (below Action and Limit Levels) was measured during the sampling event, which demonstrate no consecutive dust impact at AM2.</p>
Action Taken / Action to be Taken	<p>In accordance with Table 3.8b of the updated EM&A Manual, the monitoring frequency at AM2 shall be increased to daily, until no exceedance of the Action/Limit Level. It should be noted that the turnaround time for the laboratory analysis of the dust filter paper is 5 working days and the preliminary results for the monitoring event conducted on 14 to 15 March 2023 were available on 22 March 2023. Repeat measurement was conducted on 20 March 2023 and the TSP monitoring results at AM2 is well below the Action/Limit Level. Hence, the daily TSP monitoring at AM2 shall not be triggered.</p> <p>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/Limit Level. The Contractor is also reminded to implement additional dust control measures to minimize the dust impact from SENT Landfill to the SENTX boundary.</p> <p>ET will continue to closely monitor the dust monitoring results and collect additional data for investigation and further review, if necessary.</p>
Remarks	-

Prepared by: Abbey Lau
Designation: Environmental Team
Date: 31 March 2023