Appendix D. Monitoring Results
Air Quality Monitoring Results
1. The key activities of the Project during monitoring included reclamation works and land-side works. Reclamation works included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation. Land-side works involved mainly foundation and substructure works for Terminal 2 expansion, modification and tunnel work for APM and BHS, and preparation works for utilities.

2. General weather condition during monitoring ranged from sunny to rainy. Detailed meteorological conditions should be referred to Table 2.3 of this Report and corresponding Monthly EM&A Reports.

3. QA/QC requirements as stipulated in the EM&A Manual was carried out during measurement.
Noise Monitoring Results
QA/QC requirements as stipulated in the EM&A Manual was carried out during measurement.

The Limit Level is reduced to 70 dB(A) for school and 65 dB(A) during school examination period at NM4. School examination periods in the reporting period were 15/3 to 21/3, 4/6 to 8/6, and 9/11 to 15/11. Monitoring at NM4 on 6 Jun 2018 was conducted after the end of school examination that day. The Limit Level adopted for the monitoring session was 70 dB(A).

Noise monitoring at NM3A was temporarily suspended starting from 1 Sep 2018 and would be resumed with the completion of the Tung Chung East Development.

The key activities of the Project during monitoring included reclamation works and land-side works. Reclamation works included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation. Land-side works involved mainly foundation and substructure works for Terminal 2 expansion, modification and tunnel work for APM and BHS, and preparation works for utilities.

General weather condition during monitoring ranged from sunny to cloudy. Detailed meteorological conditions should be referred to Table 2.6 of this Report and corresponding Monthly EM&A Reports.

5. QA/QC requirements as stipulated in the EM&A Manual was carried out during measurement.

Notes
1. The Limit Level is reduced to 70 dB(A) for school and 65 dB(A) during school examination period at NM4. School examination periods in the reporting period were 15/3 to 21/3, 4/6 to 8/6, and 9/11 to 15/11. Monitoring at NM4 on 6 Jun 2018 was conducted after the end of school examination that day. The Limit Level adopted for the monitoring session was 70 dB(A).
2. Noise monitoring at NM3A was temporarily suspended starting from 1 Sep 2018 and would be resumed with the completion of the Tung Chung East Development.
3. The key activities of the Project during monitoring included reclamation works and land-side works. Reclamation works included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation. Land-side works involved mainly foundation and substructure works for Terminal 2 expansion, modification and tunnel work for APM and BHS, and preparation works for utilities.
4. General weather condition during monitoring ranged from sunny to cloudy. Detailed meteorological conditions should be referred to Table 2.6 of this Report and corresponding Monthly EM&A Reports.
5. QA/QC requirements as stipulated in the EM&A Manual was carried out during measurement.
Water Quality Monitoring Results
The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.

General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.

Notes:
1. The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.
2. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.
3. QA/ QC requirements as stipulated in the EM&A Manual was carried out during measurement.
Dissolved Oxygen (Bottom) during Mid-Ebb

Notes:
1. The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.
2. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.
3. QA/QC requirements as stipulated in the EM&A Manual was carried out during measurement.
Notes:
1. The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.
2. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.
3. QA/ QC requirements as stipulated in the EM&A Manual was carried out during measurement.
The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and precast vertical drain (PVD) installation.

General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.

Notes:
1. The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.
2. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.
3. QA/QC requirements as stipulated in the EM&A Manual was carried out during measurement.
During the reporting period, 0.3% of the DO monitoring results at surface and middle water level and 0.1% of the DO monitoring results at bottom water level triggered the corresponding Action or Limit Level, where both percentages were lower than that recorded in the previous reporting period. All results triggering the corresponding Action or Limit level were collected during the wet season (April to October), particularly in July to September, which suggest the observation of seasonal effect on the DO monitoring results. Based on above observations, as well as the relevant investigation findings presented in the Construction Phase Monthly EM&A Reports, it is considered that the Project did not cause adverse impact on DO level at all water quality sensitive receivers.
Notes:
1. The Action and Limit Levels can be referred to Table 2.8 of the Annual EM&A Report.
2. The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.
3. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.
4. QA/ QC requirements as stipulated in the EM&A Manual was carried out during measurement.
1. The Action and Limit Levels can be referred to Table 2.8 of the Annual EM&A Report.
2. The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.
3. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.
4. QA/QC requirements as stipulated in the EM&A Manual was carried out during measurement.
During the reporting period, 0.1% of the turbidity monitoring results triggered the corresponding Action Level, which was lower than that recorded in the previous reporting period. Due to the small number of results triggering the Action Level, and the relevant investigation findings presented in the Construction Phase Monthly EM&A Reports, it is considered that the Project did not cause adverse impact on turbidity level at all water quality sensitive receivers.
Notes:
1. The Action and Limit Levels can be referred to Table 2.8 of the Annual EM&A Report.
2. The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.
3. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.
4. QA/QC requirements as stipulated in the EM&A Manual was carried out during measurement.
Notes:
1. The Action and Limit Levels can be referred to Table 2.8 of the Annual EM&A Report.
2. The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.
3. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.
4. QA/QC requirements as stipulated in the EM&A Manual was carried out during measurement.
During the reporting period, 1.0% of the SS monitoring results triggered the corresponding Action Level, which was lower than that recorded in the previous reporting period. Due to the small number of results triggering the Action Level, and the relevant investigation findings presented in the Construction Phase Monthly EM&A Reports, it is considered that the Project did not cause adverse impact on SS level at all water quality sensitive receivers.
1. QA/QC requirements as stipulated in the EM&A Manual was carried out during measurement. The Action and Limit Levels can be referred to Table 2.8 of the Annual EM&A Report.

2. The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.

3. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.

4. GA/QC requirements as stipulated in the EM&A Manual was carried out during measurement.
Notes:

1. The Action and Limit Levels can be referred to Table 2.8 of the Annual EMA Report.
2. Key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.
3. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EMA Reports.
4. QA/ QC requirements as stipulated in the EMA Manual was carried out during measurement.
All alkalinity monitoring results in the reporting period were within the corresponding Action and Limit Levels.
QA/QC requirements as stipulated in the EM&A Manual was carried out during measurement.

The Action and Limit Levels can be referred to Table 2.8 of the Annual EM&A Report.

The monitoring results of chromium at all other monitoring stations were below the reporting limit of 0.2 µg/L.

The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.

General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.

Notes:
1. The Action and Limit Levels can be referred to Table 2.8 of the Annual EM&A Report.
2. The monitoring results of chromium at all other monitoring stations were below the reporting limit of 0.2 µg/L.
3. The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.
4. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.
5. QA/QC requirements as stipulated in the EM&A Manual was carried out during measurement.
During the reporting period, 0.2% of the chromium monitoring results triggered the corresponding Action or Limit Level, which was higher than that recorded in the previous reporting period. However, it appeared that all cases were isolated with no observable temporal and spatial trend that might be related to Project activities.
The Action and Limit Levels can be referred to Table 2.8 of the Annual EM&A Report.

The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.

General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.

Notes:
1. The Action and Limit Levels can be referred to Table 2.8 of the Annual EM&A Report.
2. The key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.
3. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.
4. QA/OC requirements as stipulated in the EM&A Manual was carried out during measurement.
1. The Action and Limit Levels can be referred to Table 2.8 of the Annual EM&A Report.
2. Key marine works activities of the Project during monitoring included deep cement mixing (DCM) works, marine filling, seawall construction, laying of sand blanket, and prefabricated vertical drain (PVD) installation.
3. General weather condition during monitoring ranged from sunny to rainy, with sea condition ranged from calm to rough. Detailed meteorological conditions should be referred to Table 2.10 of this Report and corresponding Monthly EM&A Reports.
4. QA/ QC requirements as stipulated in the EM&A Manual was carried out during measurement.
During the reporting period, 1.9% of the nickel monitoring results triggered the corresponding Action or Limit Level, which was higher than that recorded in the previous reporting period. From the graph, it is noted that the majority of cases were recorded in the wet season during mid-flood tide, which might suggest the existence of a seasonal, tide-specific effect that could have led to episodes of relatively high nickel concentrations. This observation also concurred with that made in the previous reporting period, and therefore was considered not related to the Project activities.

Combining the observations from the monitoring results of the two representative heavy metals for DCM works (chromium and nickel), the low percentage of results triggering corresponding Action or Limit Level, as well as the investigation findings which concluded that these cases were not related to the Project, this indicates that DCM activities during the reporting period did not cause adverse water quality impact.