Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts)

Notifications of Environmental Quality Limits Exceedances Notification No.: 20180402SS

Date of Notification: 18 April 2018 Date of Investigation Report: 25 April 2018

Works Inspected: Data collected from water sampling works on 02 April 2018 and the results were issued on 18 April 2018

Monitoring Location: Water Quality Monitoring Station

Parameter: Dissolved Oxygen (DO)/ Suspended Solid (SS) /-Turbidity (TURB)

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID- EBB TIDE (mg/L)	MEASURED AT MID- FLOOD TIDE (mg/L)
SS	IS5	Depth Average	23.5 and 120% (i.e. 13.4 for midebb/13.3 for midflood) of upstream control station's SS at the same tide of the same day	34.4 and 130% (i.e. 14.5 for midebb/14.4 for midflood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes	24.7	13.1

Notes:

AL means Action Level.

LL means Limit Level.

Bold means AL exceedances.

Bold with underline means LL exceedances.

On 2 April 2018, one AL exceedance of SS at IS5 was recorded during mid-ebb tide.

Contract No.: HY/2013/01

As confirmed by the Contractor of Contract No.: HY/2013/01, there was no marine transportation and marine-based work on 2 April 2018. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Contract No.: HY/2013/02

As confirmed with RSS, it is concluded that the exceedances were not related to the Contract due to completion of marine works on 10 September 2017.

Contract No.: HY/2013/03

As confirmed with RSS of Contract No. HY/2013/03, there was no marine transportation on the date of exceedance. Regarding marine-based works in Box Culvert B, the work undertaken at the date of exceedance was preparation work of precast installation which had a cofferdam to separate seawater and works area. Silt curtain was also maintained to enclose the work area of the outlet of the box culvert fully. All sea water flows into the work area of box culvert B will be treated by desilting facilities before discharge in accordance with the discharge license approved by EPD for Contract No. HY/2013/03. For SS exceedance recorded at the WQM station IS5, the concerned WQM stations where the exceedances were recorded were not close to the marine works area of Contract No. HY/2013/03, while there was no notification of exceedance received at the WQM stations closer to the works areas, such as IS(Mf)11. It was unlikely that the works undertaken by Contract No. HY/2013/03 caused SS exceedance recorded at the concerned WQM station during mid-ebb tide on 2 April 2018.

Contract No.: HY/2013/04

According to the Contractor of HY/2013/04, all marine-based segment deliveries were completed in January 2018 and no marine-based works were conducted under the contract on 2 April 2018.

While SS exceedance was recorded at IS5, no exceedance was recorded at IS(Mf)9 which is the nearest monitoring location to HY/2013/04 loading and unloading point and HY/2013/04 shoreline interfacing with open waters. Also, no SS exceedance at IS5 was observed during monitoring at the next tide (i.e. mid-ebb tide on the same day).

During ET's (Contract No.: HY/2013/04) regular weekly site inspection on 28 March 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:00 and 15:10. There were no observations referring to water quality mitigation measures associated with that shoreline.

During ET's (Contract No.: HY/2013/04) subsequent regular weekly site inspection on 4 April 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between14:20 and 14:35. There were no observations referring to water quality mitigation measures associated

It was concluded that the exceedance was not due to HY/2013/04.

Contract No.: HY/2014/05

Contract No.: HY/2013/01

Actions were taken under action plan:

- 1. Not applicable as SS was not measured in situ;
- 2. After considering the above-mentioned investigation results, it appears that it was unlikely that the suspended solids exceedance was attributed to active construction activities of this Contract:
- 3. IEC, Contractor and ER were informed via email;
- 4. Monitoring data, all plant, equipment and Contractor's working methods were checked;
- 5. Since it is considered that the suspended solids exceedance is unlikely to be contract related, as such, Actions 5-7 under the EAP are not considered applicable.

However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

Contract No.: HY/2013/02

Although the exceedance was considered not due to HY/2013/02, the Contractor is reminded to implement all necessary water quality mitigation measures identified in the EM&A Manual.

Contract No.: HY/2013/03

During weekly site audit on 22, 29 March, 6 and 12 April 2018, ET (Contract No.: HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures. ET (Contract No.: HY/2013/03) will take relevant photo records of the marine-based works for Contract No. HY/2013/03 via the on-going site inspections to support the necessary review of the effectiveness of site mitigation measures specific to the exceedance investigation.

Contract No.: HY/2013/04

Although the exceedance was considered not due to HY/2013/04, the Contractor is reminded to implement all necessary water quality mitigation measures identified in the EM&A Manual.

Contract No.: HY/2014/05

Although the exceedance was considered not due to HY/2014/05, the Contractor is reminded to implement all necessary water quality mitigation measures identified in the EM&A Manual.

Checked by:		Keith Chau	Title:	Environmental Team Leader (Contract No. HY/2013/01)
Signature:		Keith	Date:	25 April 2018
Copied to	:	Contractor, Engineer Representative	and IEC/ENPO	

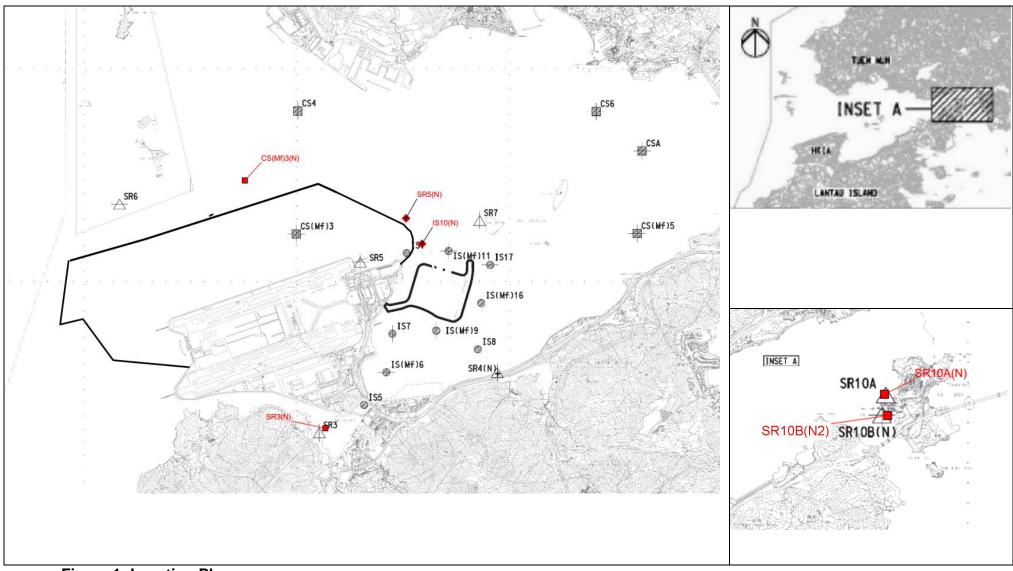


Figure 1: Location Plan

Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts)

Notifications of Environmental Quality Limits Exceedances Notification No.: 20180418SS_v1

Date of Notification: 25 April 2018

Date of Investigation Report: 2 May 2018

Works Inspected: Data collected from water sampling works on 18 April 2018 and the results were issued on 25 April 2018

Monitoring Location: Water Quality Monitoring Station

Parameter: Dissolved Oxygen (DO)/ Suspended Solid (SS) / Turbidity (TURB)

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID- EBB TIDE (mg/L)	MEASURED AT MID- FLOOD TIDE (mg/L)
SS	SR6	Depth Average	23.5 and 120% (i.e. 17.2 for mid- ebb/16.9 for mid- flood) of upstream control	19.7	31.1	
SS	SR7	Depth Average	upstream control station's SS at the same tide of the same day	station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes	9.8	23.9

Notes:

AL means Action Level.

LL means Limit Level.

Bold means AL exceedances.

Bold with underline means LL exceedances.

On 18 April 2018, two AL exceedances of SS at SR6 and SR7 were recorded during mid-flood tide.

Contract No.: HY/2013/01

As confirmed by the Contractor of Contract No.: HY/2013/01, there was no marine transportation and marine-based work on 18 April 2018. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Contract No.: HY/2013/02

As confirmed with RSS, it is concluded that the exceedances were not related to the Contract due to completion of marine works on 10 September 2017.

Contract No.: HY/2013/03

As confirmed with RSS of Contract No. HY/2013/03, there was no marine transportation on the date of exceedance. Regarding marine-based works in Box Culvert B, the work undertaken at the date of exceedance was preparation work of precast installation which had a cofferdam to separate seawater and works area. Silt curtain was also maintained to enclose the work area of the outlet of the box culvert fully. All sea water flows into the work area of box culvert B will be treated by desilting facilities before discharge in accordance with the discharge license approved by EPD for Contract No. HY/2013/03. For SS exceedance recorded at the WQM station SR6 and SR7, the concerned WQM stations where the exceedances were recorded were not close to the marine works area of Contract No. HY/2013/03, while there was no notification of exceedance received at the WQM stations closer to the works areas, such as IS(Mf)11. It was unlikely that the works undertaken by Contract No. HY/2013/03 caused SS exceedance recorded at the concerned WQM station during mid-flood tide on 18 April 2018.

Contract No.: HY/2013/04

According to the Contractor of HY/2013/04, all marine-based segment deliveries were completed in January 2018 and no marine-based works were conducted under the contract on 18 April 2018.

While SS exceedance was recorded at SR6 and SR7, no exceedance was recorded at IS(Mf)9 which is the nearest monitoring location to HY/2013/04 loading and unloading point and HY/2013/04 shoreline interfacing with open waters. Also, no SS exceedance at SR6 and SR7 was observed during monitoring at the next tide (i.e. mid-ebb tide on the same day).

During ET's (Contract No.: HY/2013/04) regular weekly site inspection on 11 April 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:15 and 15:30. There were no observations referring to water quality mitigation measures associated with that shoreline.

During ET's (Contract No.: HY/2013/04) subsequent regular weekly site inspection on 18 April 2018, HY/2013/04 site shoreline interfacing with open waters was inspected at 15:10. There were no observations referring to water quality mitigation measures associated

It was concluded that the exceedance was not due to HY/2013/04.

Contract No.: HY/2014/05

Contract No.: HY/2013/01

Actions were taken under action plan:

- 1. Not applicable as SS was not measured in situ;
- 2. After considering the above-mentioned investigation results, it appears that it was unlikely that the suspended solids exceedance was attributed to active construction activities of this Contract:
- 3. IEC, Contractor and ER were informed via email;
- 4. Monitoring data, all plant, equipment and Contractor's working methods were checked;
- 5. Since it is considered that the suspended solids exceedance is unlikely to be contract related, as such, Actions 5-7 under the EAP are not considered applicable.

However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

Contract No.: HY/2013/02

Although the exceedance was considered not due to HY/2013/02, the Contractor is reminded to implement all necessary water quality mitigation measures identified in the EM&A Manual.

Contract No.: HY/2013/03

During weekly site audit on 6, 12, 20 and 26 April 2018, ET (Contract No.: HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures. ET (Contract No.: HY/2013/03) will take relevant photo records of the marine-based works for Contract No. HY/2013/03 via the on-going site inspections to support the necessary review of the effectiveness of site mitigation measures specific to the exceedance investigation.

Contract No.: HY/2013/04

Although the exceedance was considered not due to HY/2013/04, the Contractor is reminded to implement all necessary water quality mitigation measures identified in the EM&A Manual.

Contract No.: HY/2014/05

Although the exceedance was considered not due to HY/2014/05, the Contractor is reminded to implement all necessary water quality mitigation measures identified in the EM&A Manual.

Checked by:	Keith Chau	Title:	Environmental Team Leader (Contract No. HY/2013/01)	
Signature:	Keith	Date:	2 May 2018	
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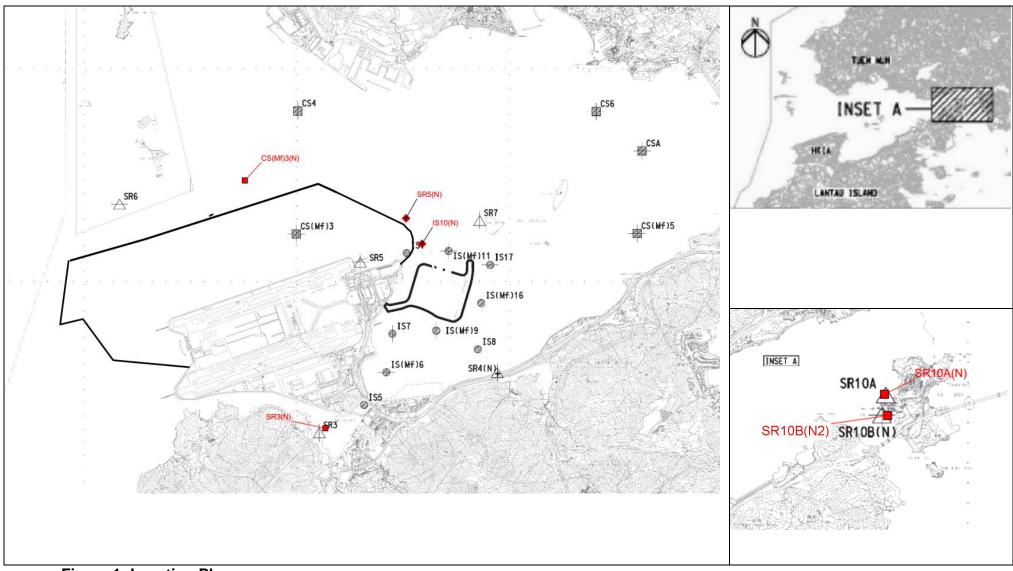


Figure 1: Location Plan

Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts)

Notifications of Environmental Quality Limits Exceedances Notification No.: 20180420SS

Date of Notification: 27 April 2018

Date of Investigation Report: 3 May 2018

Works Inspected: Data collected from water sampling works on 20 April 2018 and the results were issued on 27 April 2018

Monitoring Location: Water Quality Monitoring Station

Parameter: Dissolved Oxygen (DO)/ Suspended Solid (SS) / Turbidity (TURB)

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID- EBB TIDE (mg/L)	MEASURED AT MID- FLOOD TIDE (mg/L)
SS	IS10(N)	Depth Average	23.5 and 120% (i.e. 18.3 for midebb/14.1 for midflood) of upstream control station's SS at the same tide of the same day	34.4 and 130% (i.e. 19.8 for midebb/15.3 for midflood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes	21.0	25.5

Notes:

AL means Action Level.

LL means Limit Level.

Bold means AL exceedances.

Bold with underline means LL exceedances.

On 20 April 2018, one AL exceedance of SS at IS10(N) was recorded during mid-flood tide.

Contract No.: HY/2013/01

As confirmed by the Contractor of Contract No.: HY/2013/01, there was no marine transportation and marine-based work on 20 April 2018. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Contract No.: HY/2013/02

As confirmed with RSS, it is concluded that the exceedances were not related to the Contract due to completion of marine works on 10 September 2017.

Contract No.: HY/2013/03

As confirmed with RSS of Contract No. HY/2013/03, there was no marine transportation on the date of exceedance. Regarding marine-based works in Box Culvert B, the work undertaken at the date of exceedance was preparation work of precast installation which had a cofferdam to separate seawater and works area. Silt curtain was also maintained to enclose the work area of the outlet of the box culvert fully. All sea water flows into the work area of box culvert B will be treated by desilting facilities before discharge in accordance with the discharge license approved by EPD for Contract No. HY/2013/03. For SS exceedance recorded at the WQM station IS10(N), the concerned WQM stations where the exceedances were recorded were not close to the marine works area of Contract No. HY/2013/03, while there was no notification of exceedance received at the WQM stations closer to the works areas, such as IS(Mf)11. It was unlikely that the works undertaken by Contract No. HY/2013/03 caused SS exceedance recorded at the concerned WQM station during mid-flood tide on 20 April 2018.

Contract No.: HY/2013/04

According to the Contractor of HY/2013/04, all marine-based segment deliveries were completed in January 2018 and no marine-based works were conducted under the contract on 20 April 2018.

While SS exceedance was recorded at IS10(N), no exceedance was recorded at IS(Mf)9 which is the nearest monitoring location to HY/2013/04 loading and unloading point and HY/2013/04 shoreline interfacing with open waters. Also, no SS exceedance at IS10(N) was observed during monitoring at the next tide (i.e. mid-ebb tide on the same day).

During ET's (Contract No.: HY/2013/04) subsequent regular weekly site inspection on 18 April 2018, HY/2013/04 site shoreline interfacing with open waters was inspected at 15:10. There were no observations referring to water quality mitigation measures associated with that shoreline.

During ET's subsequent regular weekly site inspection on 23 April 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:15 and 14:50 Regarding water quality mitigation measures associated with that shoreline, it was observed that the silt curtain at Box Culvert C was not securely positioned at one end. The Contractor was reminded to secure the silt curtain to prevent contained site runoff entering the open waters. However, given the large distance between HY/2013/04 site shoreline and IS10(N), it is unlikely that this observation could be related to the subject exceedance. It was concluded that the exceedance was not due to HY/2013/04.

Contract No.: HY/2014/05

Contract No.: HY/2013/01

Actions were taken under action plan:

- 1. Not applicable as SS was not measured in situ;
- 2. After considering the above-mentioned investigation results, it appears that it was unlikely that the suspended solids exceedance was attributed to active construction activities of this Contract:
- 3. IEC, Contractor and ER were informed via email;
- 4. Monitoring data, all plant, equipment and Contractor's working methods were checked;
- 5. Since it is considered that the suspended solids exceedance is unlikely to be contract related, as such, Actions 5-7 under the EAP are not considered applicable.

However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

Contract No.: HY/2013/02

Although the exceedance was considered not due to HY/2013/02, the Contractor is reminded to implement all necessary water quality mitigation measures identified in the EM&A Manual.

Contract No.: HY/2013/03

During weekly site audit on 6, 12, 20 and 26 April 2018, ET (Contract No.: HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures. ET (Contract No.: HY/2013/03) will take relevant photo records of the marine-based works for Contract No. HY/2013/03 via the on-going site inspections to support the necessary review of the effectiveness of site mitigation measures specific to the exceedance investigation.

Contract No.: HY/2013/04

Although the exceedance was considered not due to HY/2013/04, the Contractor is reminded to implement all necessary water quality mitigation measures identified in the EM&A Manual.

Contract No.: HY/2014/05

Although the exceedance was considered not due to HY/2014/05, the Contractor is reminded to implement all necessary water quality mitigation measures identified in the EM&A Manual.

Checked by:	Keith Chau	Title:	Environmental Team Leader (Contract No. HY/2013/01)
Signature:	Keith	Date:	30 April 2018

Copied to : Contractor, Engineer Representative and IEC/ENPO

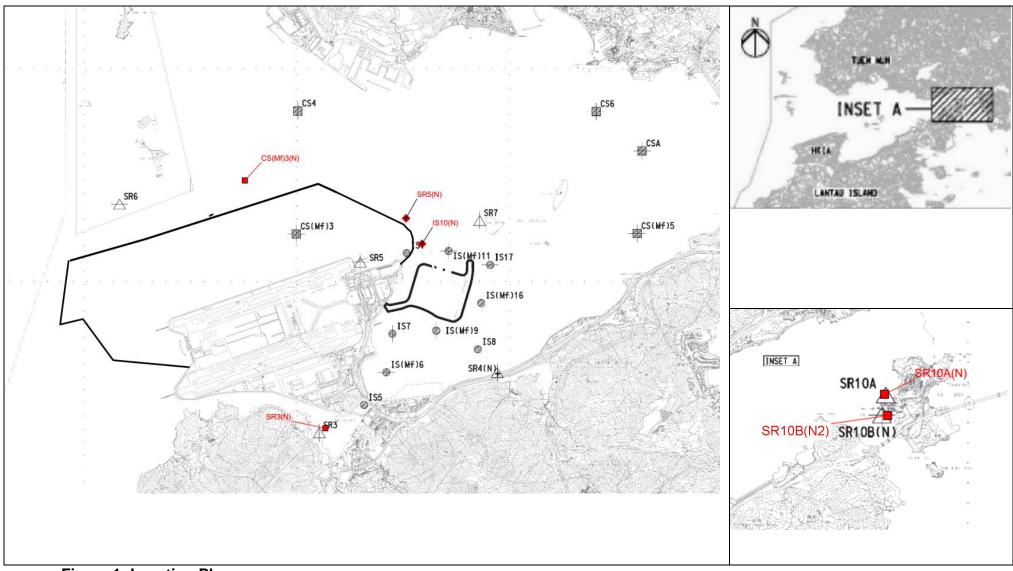


Figure 1: Location Plan

Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts)

Notifications of Environmental Quality Limits Exceedances Notification No.: 20180423SS_v2

Date of Notification: 3 May 2018

Date of Investigation Report: 11 May 2018

Works Inspected: Data collected from water sampling works on 23 April 2018 and the results were issued on 3 May 2018

Monitoring Location: Water Quality Monitoring Station

Parameter: Dissolved Oxygen (DO)/ Suspended Solid (SS) / Turbidity (TURB)

Action & Limit Level (AL & LL) / Measured Level:

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID- EBB TIDE (mg/L)	MEASURED AT MID- FLOOD TIDE (mg/L)
SS	SR7	Depth Average	23.5 and 120% (i.e. 12.1 for midebb/10.6 for midflood) of upstream control station's SS at the same tide of the same day	34.4 and 130% (i.e. 13.1 for mid- ebb/11.5 for mid- flood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes	9.3	33.6

Notes:

AL means Action Level.

LL means Limit Level.

Bold means AL exceedances.

Bold with underline means LL exceedances.

On 23 April 2018, one AL exceedance of SS at SR7 was recorded during mid-flood tide.

Contract No.: HY/2013/01

As confirmed by the Contractor of Contract No.: HY/2013/01, there was no marine transportation and marine-based work on 23 April 2018. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Contract No.: HY/2013/02

As confirmed with RSS, it is concluded that the exceedances were not related to the Contract due to completion of marine works on 10 September 2017.

Contract No.: HY/2013/03

As confirmed with RSS of Contract No. HY/2013/03, there was no marine transportation on the date of exceedance. Regarding marine-based works in Box Culvert B, the work undertaken at the date of exceedance was preparation work of precast installation which had a cofferdam to separate seawater and works area. Silt curtain was also maintained to enclose the work area of the outlet of the box culvert fully. All sea water flows into the work area of box culvert B will be treated by desilting facilities before discharge in accordance with the discharge license approved by EPD for Contract No. HY/2013/03. For SS exceedance recorded at the WQM station SR7, the concerned WQM stations where the exceedances were recorded were not close to the marine works area of Contract No. HY/2013/03, while there was no notification of exceedance received at the WQM stations closer to the works areas, such as IS(Mf)11. It was unlikely that the works undertaken by Contract No. HY/2013/03 caused SS exceedance recorded at the concerned WQM station during mid-flood tide on 23 April 2018.

Contract No.: HY/2013/04

According to the Contractor of HY/2013/04, all marine-based segment deliveries were completed in January 2018 and no marine-based works were conducted under the contract on 23 April 2018.

While SS exceedance was recorded at SR7, no exceedance was recorded at IS(Mf)9 which is the nearest monitoring location to HY/2013/04 loading and unloading point and HY/2013/04 shoreline interfacing with open waters. Also, no SS exceedance at SR7, was observed during monitoring at the next tide (i.e. mid-ebb tide on the same day).

During ET's (Contract No.: HY/2013/04) regular weekly site inspection on 23 April 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:15 and 14:50. Regarding water quality mitigation measures associated with that shoreline, it was observed that the silt curtain at Box Culvert C was not securely positioned at one end. The Contractor was reminded to secure the silt curtain to prevent contained site runoff entering the open waters. However, given the large distance between HY/2013/04 site shoreline and SR7, plus taking into account the subject exceedance being only observed at SR7, it is unlikely that this observation could be related to the subject exceedance. It is also noted that no exceedance was recorded at the monitoring locations closest to the silt curtain at Box Culvert C, namely IS7 and IS(Mf)9, on 23 April 2018. It was concluded that the exceedance was not due to HY/2013/04.

Contract No.: HY/2014/05

Contract No.: HY/2013/01

Actions were taken under action plan:

- 1. Not applicable as SS was not measured in situ;
- 2. After considering the above-mentioned investigation results, it appears that it was unlikely that the suspended solids exceedance was attributed to active construction activities of this Contract:
- 3. IEC, Contractor and ER were informed via email;
- 4. Monitoring data, all plant, equipment and Contractor's working methods were checked;
- 5. Since it is considered that the suspended solids exceedance is unlikely to be contract related, as such, Actions 5-7 under the EAP are not considered applicable.

However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

Contract No.: HY/2013/02

Although the exceedance was considered not due to HY/2013/02, the Contractor is reminded to implement all necessary water quality mitigation measures identified in the EM&A Manual.

Contract No.: HY/2013/03

During weekly site audit on 12, 20, 26 April and 3 May 2018, ET (Contract No.: HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures. ET (Contract No.: HY/2013/03) will take relevant photo records of the marine-based works for Contract No. HY/2013/03 via the on-going site inspections to support the necessary review of the effectiveness of site mitigation measures specific to the exceedance investigation.

Contract No.: HY/2013/04

Although the exceedance was considered not due to HY/2013/04, the Contractor is reminded to implement all necessary water quality mitigation measures identified in the EM&A Manual.

Contract No.: HY/2014/05

Although the exceedance was considered not due to HY/2014/05, the Contractor is reminded to implement all necessary water quality mitigation measures identified in the EM&A Manual.

Checked by:	Keith Chau	Title:	Environmental Team Leader (Contract No. HY/2013/01)
Signature:	Keith	Date:	11 May 2018
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Copied to : Contractor, Engineer Representative and IEC/ENPO

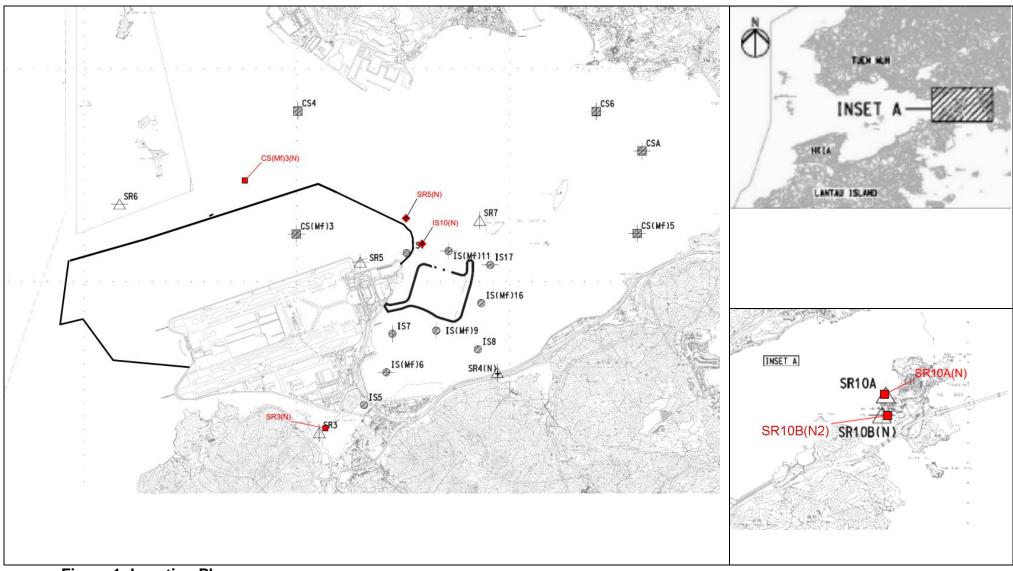


Figure 1: Location Plan