

Hong Kong- Zhuhai- Macao Bridge Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts) Notifications of Environmental Quality Limits Exceedances Notification No.: 20180702DO_v1						
Date of Notification: 05 July 2018			Date of Investigation Report: 9 August 2018			
Works Inspected: Data collected from water sampling works on 02 July 2018 and the results were issued on 04 July 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)
DO	IS10(N)	Bottom	Surface and Middle 5.0 Bottom 4.7	Surface and Middle 4.2 (except 5 mg/L for FCZ) Bottom 3.6	3.6	3.7
DO	IS(Mf)11	Bottom			5.1	3.6
DO	SR5(N)	Bottom			4.0	4.5
DO	SR10A(N)	Bottom			6.0	3.7
Notes: AL means Action Level. LL means Limit Level. Bold means AL exceedances. Bold with underline means LL exceedances. Upstream control stations of mid-ebb tide: CS(Mf)3(N) and CS4 Upstream control stations of mid-flood tide: CS(Mf)5, CS6 and CSA						

Possible reason for Action / Limit Level Non-compliance:

On 2 July 2018, two AL exceedances of DO at IS10(N) and SR5(N) were recorded during mid-ebb tide, while four AL exceedances of DO at stations IS10(N), IS(Mf)11, SR5(N) and SR10A(N) 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 2 July 2018. No site runoff within the Contract site has been observed. All wastewater generated from construction site which potentially contain organic matter was collected by registered collector. No organic matter discharge/ accumulation at active works areas on 2 July 2018. 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. ET (Contract No. HY/2013/02) confirmed that no any organic matter discharge/accumulation at active works areas under Contract HY/2013/02 was observed on the date of exceedance with respect to the exceedance in DO.

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. As confirmed with Mr. Marko Chan, Environmental Officer, and operation team of Contract No. HY/2013/03, no organic matter discharge or accumulation at active works areas on 2 July 2018 under Contract No. HY/2013/03. The marine-based works in Box Culvert B had been completed. It was unlikely that the works undertaken by Contract No. HY/2013/03 caused DO exceedance recorded at the concerned WQM station on 2 July 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 July 2018. Furthermore, there was no visible observation of any discharge or accumulation of organic matter at the active works areas within HY/2013/04 site area on 2 July 2018. While the subject exceedances were recorded at IS10(N), IS(Mf)11, SR5(N), SR10A(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.

During ET's regular weekly site inspection on 27 June 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 08:30 and 09:00. There were no observations referring to water quality mitigation measures associated with that shoreline.

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

Contract No.: HY/2014/05

There was no marine transportation and marine-based work under this contract. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Actions taken/ to be taken:

Contract No.: HY/2013/01

Actions were taken under action plan:

1. in situ measurement was repeated to confirm findings;
2. After considering the above-mentioned investigation results, it appears that it was unlikely that the dissolved oxygen 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 dissolved oxygen 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 20, 28 June 2018 and 5 July 2018, ET (Contract No. HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures.

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:  Date: 9 August 2018

Copied to : EPD, Contractor, Engineer Representative and IEC/ENPO

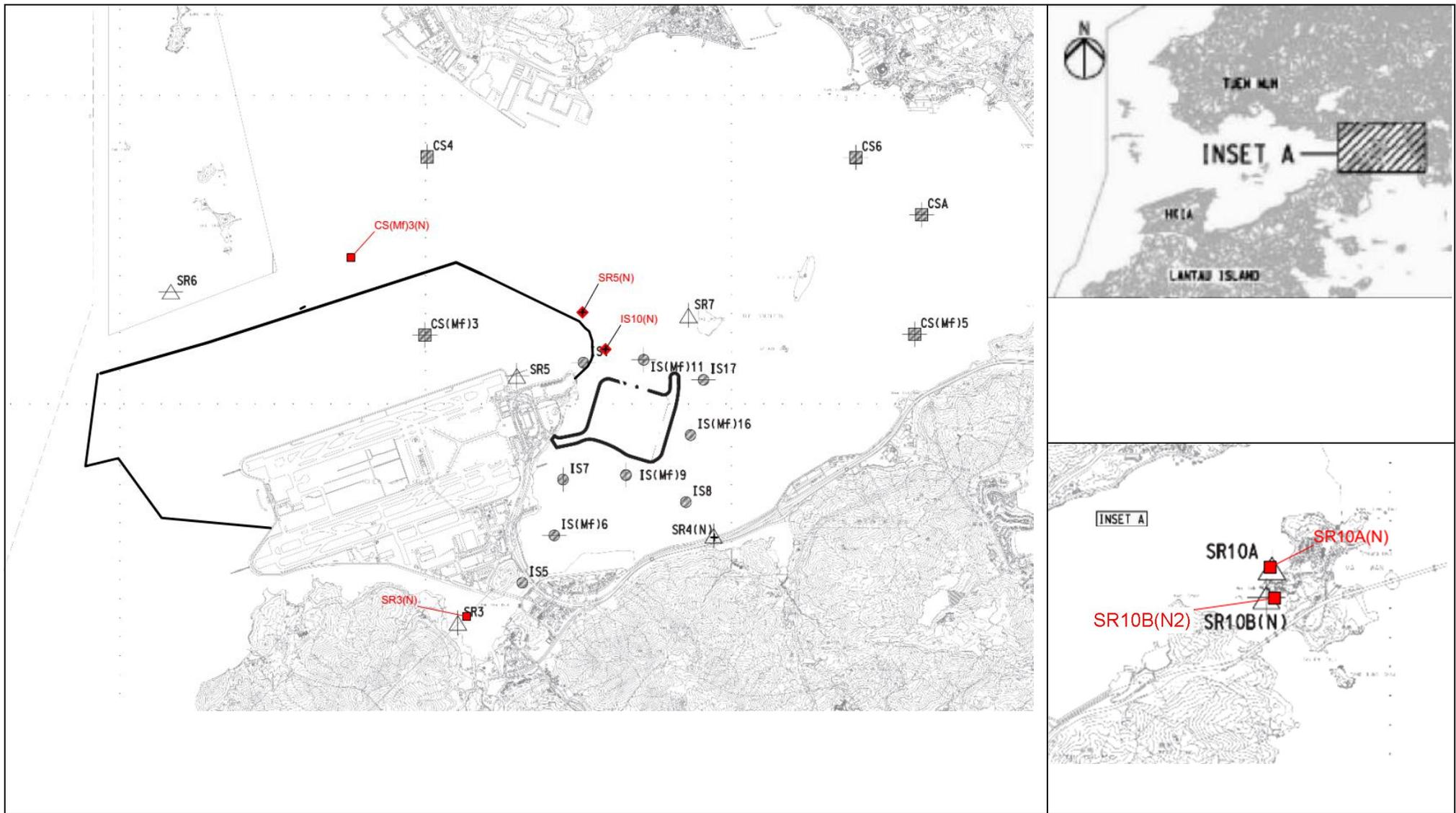


Figure 1: Location Plan

Hong Kong- Zhuhai- Macao Bridge
Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts)
Notifications of Environmental Quality Limits Exceedances Notification No.: 20180704DO_v2

Date of Notification: 09 July 2018 **Date of Investigation Report:** 13 August 2018

Works Inspected: Data collected from water sampling works on 4 July 2018 and the results were issued on 9 July 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)
DO	IS5	Bottom	Surface and Middle 5.0 Bottom 4.7	Surface and Middle 4.2 (except 5 mg/L for FCZ) Bottom 3.6	4.5	4.3
DO	IS10(N)	Bottom			4.6	4.9
DO	IS(Mf)11	Bottom			5.6	4.5
DO	SR10A(N)	Bottom			5.9	4.3

Notes:
AL means Action Level.
LL means Limit Level.
Bold means AL exceedances.
Bold with underline means LL exceedances.
Upstream control stations of mid-ebb tide: CS(Mf)3(N) and CS4
Upstream control stations of mid-flood tide: CS(Mf)5, CS6 and CSA

Possible reason for Action / Limit Level Non-compliance:

On 4 July 2018, two AL exceedances of DO at IS5 and IS10(N) were recorded during mid-ebb tide, while three AL exceedances of DO at stations IS5, IS(Mf)11 and SR10A(N) 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 4 July 2018. No site runoff within the Contract site has been observed. All wastewater generated from construction site which potentially contain organic matter was collected by registered collector. No organic matter discharge/ accumulation at active works areas on 4 July 2018. 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. ET (Contract No. HY/2013/02) confirmed that no any organic matter discharge/accumulation at active works areas under Contract HY/2013/02 was observed on the date of exceedance with respect to the exceedance in DO.

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. As confirmed with Mr. Marko Chan, Environmental Officer, and operation team of Contract No. HY/2013/03, no organic matter discharge or accumulation at active works areas on 4 July 2018 under Contract No. HY/2013/03. The marine-based works in Box Culvert B had been completed. It was unlikely that the works undertaken by Contract No. HY/2013/03 caused DO exceedance recorded at the concerned WQM station on 4 July 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 4 July 2018. Furthermore, there was no visible observation of any discharge or accumulation of organic matter at the active works areas within HY/2013/04 site area on 4 July 2018. While the subject exceedances were recorded at IS5, IS10(N), IS(Mf)11, SR10A(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.

During ET's regular weekly site inspection on 4 July 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:20 and 15:00. A water quality observation associated with that shoreline was recorded, in that gaps were observed at the silt curtain near Box Culvert C; the Contractor was reminded to fix and provide regular maintenance for the silt curtain. (Subsequently, the silt curtain near Box Culvert C was fixed and no gaps were observed at the silt curtain.) While this observation was made, it was noted that no muddy water immediately outside the silt curtain was observed. It was concluded that the exceedance was not due to HY/2013/04.

Contract No.: HY/2014/05

There was no marine transportation and marine-based work under this contract. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Actions taken/ to be taken:

Contract No.: HY/2013/01

Actions were taken under action plan:

1. in situ measurement was repeated to confirm findings;
2. After considering the above-mentioned investigation results, it appears that it was unlikely that the dissolved oxygen 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 dissolved oxygen 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 20, 28 June 2018 and 5 July 2018, ET (Contract No. HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures.

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:  Date: 13 August 2018

Copied to : EPD, Contractor, Engineer Representative and IEC/ENPO

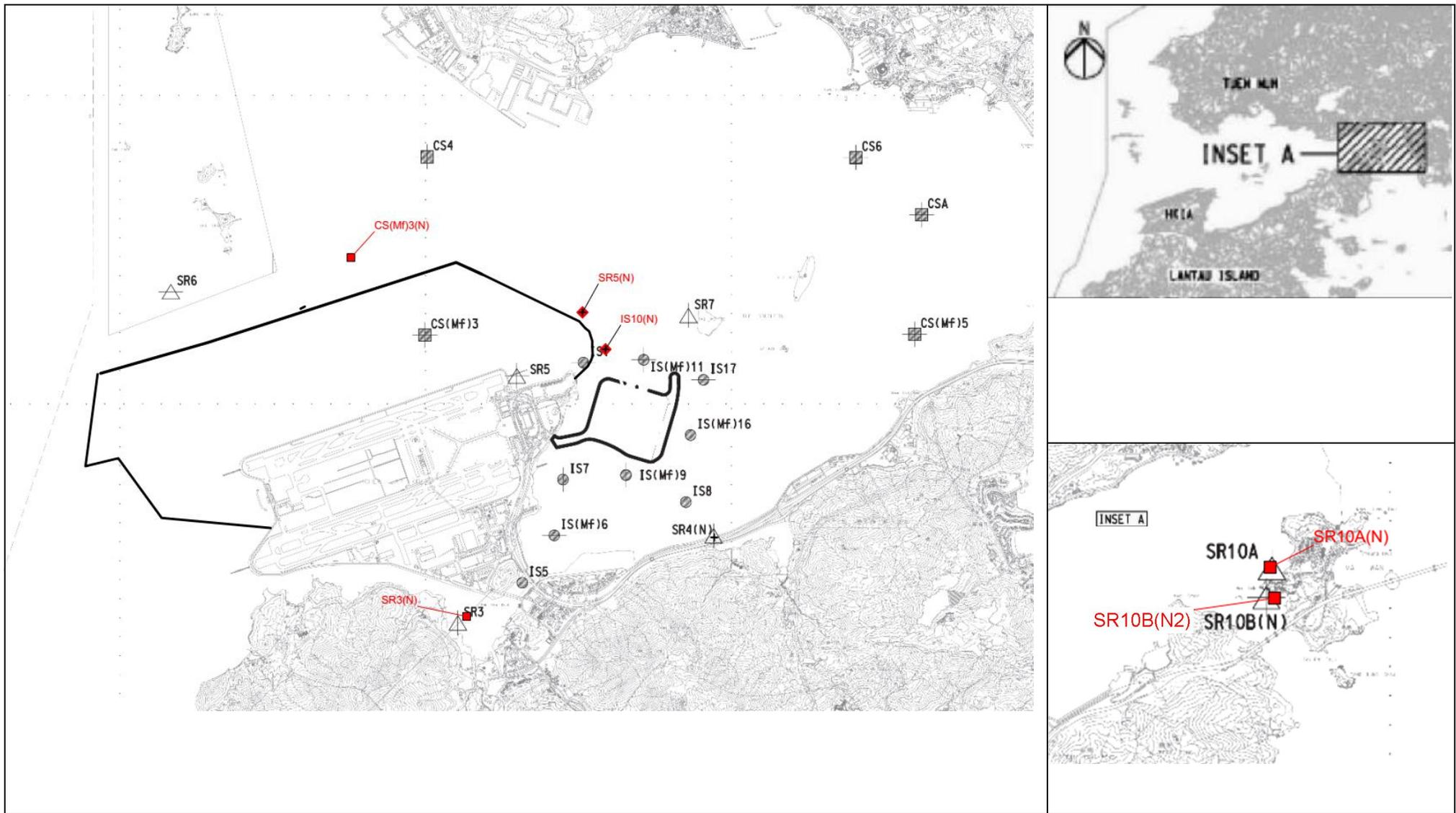


Figure 1: Location Plan

Hong Kong- Zhuhai- Macao Bridge Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts) Notifications of Environmental Quality Limits Exceedances						
					Notification No.: 20180706DO_v1	
Date of Notification: 09 July 2018			Date of Investigation Report: 10 August 2018			
Works Inspected: Data collected from water sampling works on 06 July 2018 and the results were issued on 09 July 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)
DO	IS5	Bottom	Surface and Middle 5.0 Bottom 4.7	Surface and Middle 4.2 (except 5 mg/L for FCZ) Bottom 3.6	4.0	4.6
DO	IS10(N)	Bottom			<u>3.2</u>	<u>3.2</u>
DO	IS(Mf)11	Bottom			3.6	<u>2.9</u>
DO	IS17	Bottom			<u>3.1</u>	4.7
DO	SR5(N)	Bottom			4.4	3.9
DO	SR10A(N)	Bottom			4.1	<u>3.3</u>
DO	SR10B(N2)	Bottom			4.6	4.5
Notes: AL means Action Level. LL means Limit Level. Bold means AL exceedances. Bold with underline means LL exceedances. Upstream control stations of mid-ebb tide: CS(Mf)3(N) and CS4 Upstream control stations of mid-flood tide: CS(Mf)5, CS6 and CSA						

Possible reason for Action / Limit Level Non-compliance:

On 6 July 2018, five AL exceedances of DO at stations IS5, IS(Mf)11, SR5(N), SR10A(N) and SR10B(N2) were recorded during mid-ebb tide, while three AL exceedances of DO at stations IS5, SR5(N) and SR10B(N2) were recorded during mid-flood tide. Moreover, two LL exceedances of DO at stations IS10(N) and IS17 were recorded during mid-ebb tide while three LL exceedances of DO at stations IS10(N), IS(Mf)11 and SR10A(N) 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 6 July 2018. No site runoff within the Contract site has been observed. All wastewater generated from construction site which potentially contain organic matter was collected by registered collector. No organic matter discharge/ accumulation at active works areas on 6 July 2018. 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. ET (Contract No. HY/2013/02) confirmed that no any organic matter discharge/accumulation at active works areas under Contract HY/2013/02 was observed on the date of exceedance with respect to the exceedance in DO.

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. As confirmed with Mr. Marko Chan, Environmental Officer, and operation team of Contract No. HY/2013/03, no organic matter discharge or accumulation at active works areas on 6 July 2018 under Contract No. HY/2013/03. The marine-based works in Box Culvert B had been completed. It was unlikely that the works undertaken by Contract No. HY/2013/03 caused DO exceedance recorded at the concerned WQM station on 6 July 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 6 July 2018. Furthermore, there was no visible observation of any discharge or accumulation of organic matter at the active works areas within HY/2013/04 site area on 6 July 2018. While the subject exceedances were recorded at IS5, IS10(N), IS(Mf)11, IS17, SR5(N), SR10A(N) and SR10B(N2), 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.

During ET's regular weekly site inspection on 4 July 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:20 and 15:00. A water quality observation associated with that shoreline was recorded, in that gaps were observed at the silt curtain near Box Culvert C; the Contractor was reminded to fix and provide regular maintenance for the silt curtain. (Subsequently, the silt curtain near Box Culvert C was fixed and no gaps were observed at the silt curtain.) While this observation was made, it was noted that no muddy water immediately outside the silt curtain was observed.

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

Contract No.: HY/2014/05

There was no marine transportation and marine-based work under this contract. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Actions taken/ to be taken:

Contract No.: HY/2013/01

Actions were taken under action plan:

1. in situ measurement was repeated to confirm findings;
2. After considering the above-mentioned investigation results, it appears that it was unlikely that the dissolved oxygen exceedance was attributed to active construction activities of this Contract;
3. EPD, 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 dissolved oxygen 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 20, 28 June 2018 and 5 July 2018, ET (Contract No. HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures.

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:  Date: 10 August 2018

Copied to : EPD, Contractor, Engineer Representative and IEC/ENPO

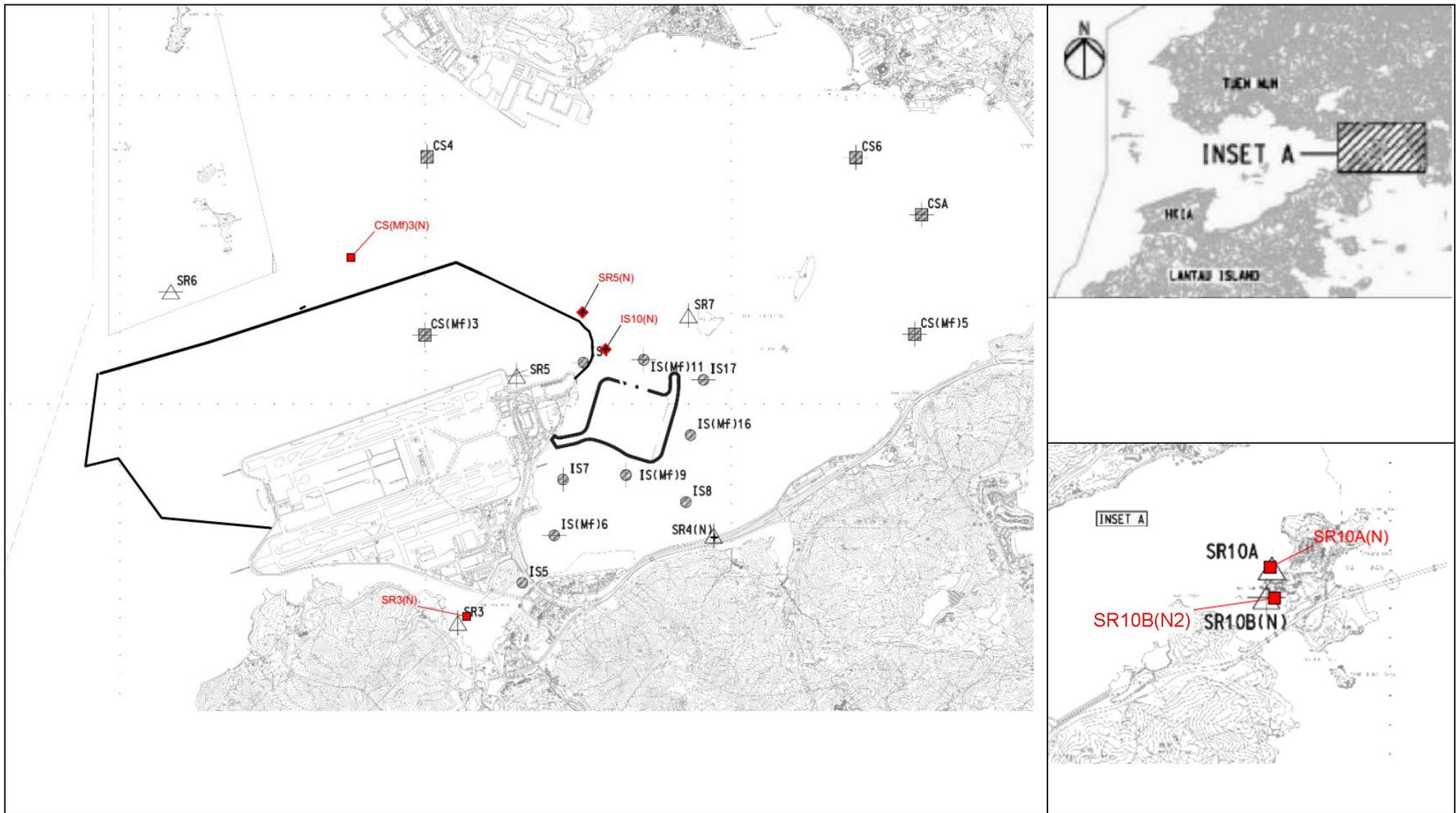


Figure 1: Location Plan

Hong Kong- Zhuhai- Macao Bridge Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts) Notifications of Environmental Quality Limits Exceedances						
				Notification No.: 20180709DO_v1		
Date of Notification: 10 July 2018			Date of Investigation Report: 13 August 2018			
Works Inspected: Data collected from water sampling works on 9 July 2018 and the results were issued on 10 July 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)
DO	IS5	Bottom	Surface and Middle 5.0 Bottom 4.7	Surface and Middle 4.2 (except 5 mg/L for FCZ) Bottom 3.6	<u>2.6</u>	3.8
DO	IS8	Bottom			4.0	6.4
DO	IS10(N)	Surface and Middle			4.5	4.5
DO	IS10(N)	Bottom			<u>2.6</u>	<u>2.8</u>
DO	IS(Mf)11	Surface and Middle			5.1	4.6
DO	IS(Mf)11	Bottom			<u>2.6</u>	3.7
DO	IS(Mf)16	Bottom			4.5	5.6
DO	IS17	Bottom			3.7	4.0
DO	SR3(N)	Bottom			3.7	6.5
DO	SR5(N)	Surface and Bottom			4.6	6.9
DO	SR5(N)	Bottom			<u>2.7</u>	<u>3.5</u>
DO	SR6	Bottom			<u>3.4</u>	5.0
DO	SR10A(N)	Bottom			5.7	<u>3.4</u>
DO	SR10B(N2)	Surface and Middle			<u>4.8</u>	5.8
DO	SR10B(N2)	Bottom			4.8	4.2

Notes:
AL means Action Level.
LL means Limit Level.
Bold means AL exceedances.
Bold with underline means LL exceedances.
Upstream control stations of mid-ebb tide: CS(Mf)3(N) and CS4
Upstream control stations of mid-flood tide: CS(Mf)5, CS6 and CSA

Possible reason for Action / Limit Level Non-compliance:

On 9 July 2018, six AL exceedances of DO at stations IS8, IS10(N), IS(Mf)16, IS17, SR3(N) and SR5(N) were recorded during mid-ebb tide, while six AL exceedances of DO at stations IS5, IS10(N), IS(Mf)11, IS17 and SR10B(N2) were recorded during mid-flood tide. Moreover, six LL exceedances of DO at stations IS5, IS10(N), IS(Mf)11, SR5(N), SR6 and SR10B(N2) were recorded during mid-ebb tide while three LL exceedances of DO at stations IS10(N), SR5(N) and SR10A(N) 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 9 July 2018. No site runoff within the Contract site has been observed. All wastewater generated from construction site which potentially contain organic matter was collected by registered collector. No organic matter discharge/ accumulation at active works areas on 9 July 2018. 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. ET (Contract No. HY/2013/02) confirmed that no any organic matter discharge/accumulation at active works areas under Contract HY/2013/02 was observed on the date of exceedance with respect to the exceedance in DO.

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. As confirmed with Mr. Marko Chan, Environmental Officer, and operation team of Contract No. HY/2013/03, no organic matter discharge or accumulation at active works areas on 9 July 2018 under Contract No. HY/2013/03. The marine-based works in Box Culvert B had been completed. It was unlikely that the works undertaken by Contract No. HY/2013/03 caused DO exceedance recorded at the concerned WQM station on 9 July 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 9 July 2018. Furthermore, there was no visible observation of any discharge or accumulation of organic matter at the active works areas within HY/2013/04 site area on 9 July 2018. While the subject exceedances were recorded at IS5, IS8, IS10(N), IS(Mf)11, IS(Mf)16, IS17, SR3(N), SR5(N), SR6, SR10A(N) and SR10B(N2), 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.

During ET's regular weekly site inspection on 4 July 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:20 and 15:00. A water quality observation associated with that shoreline was recorded, in that gaps were observed at the silt curtain near Box Culvert C; the Contractor was reminded to fix and provide regular maintenance for the silt curtain. (Subsequently, the silt curtain near Box Culvert C was fixed and no gaps were observed at the silt curtain during the subsequent the weekly site inspection on 11 July 2018.) No muddy water immediately outside the silt curtain was observed during both inspections.

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

Contract No.: HY/2014/05

There was no marine transportation and marine-based work under this contract. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Actions taken/ to be taken:

Contract No.: HY/2013/01

Actions were taken under action plan:

1. in situ measurement was repeated to confirm findings;
2. After considering the above-mentioned investigation results, it appears that it was unlikely that the dissolved oxygen exceedance was attributed to active construction activities of this Contract;
3. EPD, 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 dissolved oxygen 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 20, 28 June 2018 and 5 and 13 July 2018, ET (Contract No. HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures.

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:	<u>Keith Chau</u>	Title:	<u>Environmental Team Leader (Contract No. HY/2013/01)</u>
Signature:	<u></u>	Date:	<u>13 August 2018</u>
Copied to	: EPD, Contractor, Engineer Representative and IEC/ENPO		

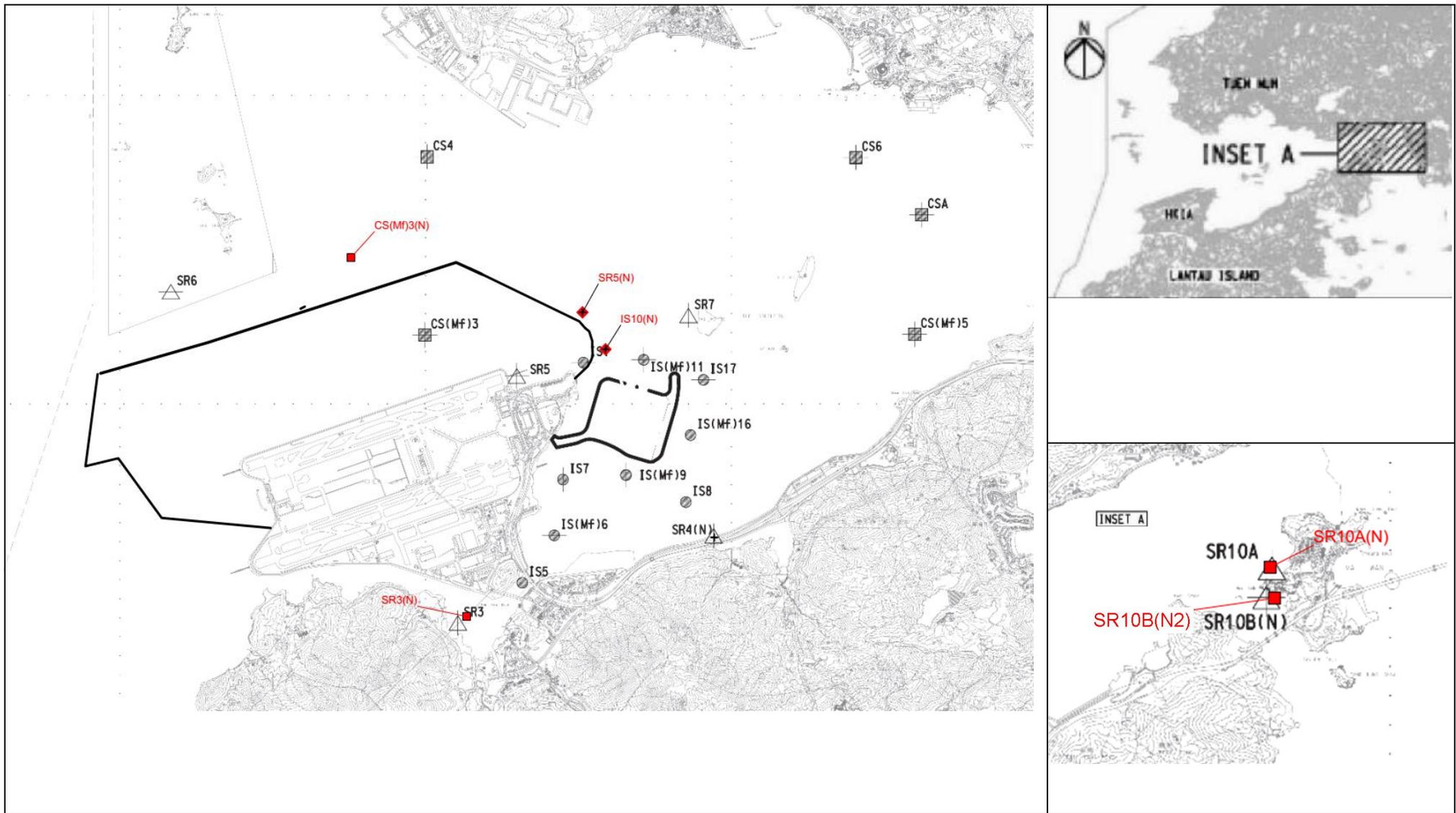


Figure 1: Location Plan

Hong Kong- Zhuhai- Macao Bridge Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts) Notifications of Environmental Quality Limits Exceedances						
				Notification No.: 20180711DO_TURB_v1		
Date of Notification: 13 July 2018			Date of Investigation Report: 15 August 2018			
Works Inspected: Data collected from water sampling works on 11 July 2018 and the results were issued on 13 July 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	LL	MEASURED AT MID-EBB TIDE	MEASURED AT MID-FLOOD TIDE
DO	IS5	Bottom	Surface and Middle 5.0 mg/L Bottom 4.7 mg/L	Surface and Middle 4.2 mg/L	4.6 mg/L	8.4 mg/L
DO	SR10B(N2)	Bottom		(except 5 mg/L for FCZ) Bottom 3.6 mg/L		7 mg/L
TURB	IS10(N)	Depth Average	27.5 NTU and 120% (i.e. 15.2 NTU for mid-ebb/11.4 NTU for mid-flood) of upstream control station's turbidity at the same tide of the same day	47.0 NTU and 130% (i.e. 16.4 NTU for mid-ebb/12.4 NTU for mid-flood) of upstream control station's turbidity at the same tide of the same day	13.1 NTU	28.0 NTU
Notes: AL means Action Level. LL means Limit Level. Bold means AL exceedances. <u>Bold with underline</u> means LL exceedances. Upstream control stations of mid-ebb tide: CS(Mf)3(N) and CS4 Upstream control stations of mid-flood tide: CS(Mf)5, CS6 and CSA						

Possible reason for Action / Limit Level Non-compliance:

On 11 July 2018, one AL exceedance of DO at station IS5 was recorded during mid-ebb tide, while one AL exceedance of DO at station SR10B(N2) was recorded during mid-flood tide. Moreover, one AL exceedance of TURB at station 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 11 July 2018. No exposed earth is presented along the shoreline area within the site area of Contract No.: HY/2013/01. No site runoff within the Contract site has been observed. All wastewater generated from construction site which potentially contain organic matter was collected by registered collector. No organic matter discharge/ accumulation at active works areas on 11 July 2018. 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. ET (Contract No. HY/2013/02) confirmed that no any organic matter discharge/accumulation at active works areas under Contract HY/2013/02 was observed on the date of exceedance with respect to the exceedance in DO.

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. As confirmed with Mr. Marko Chan, Environmental Officer, and operation team of Contract No. HY/2013/03, no organic matter discharge or accumulation at active works areas on 11 July 2018 under Contract No. HY/2013/03. The marine-based works in Box Culvert B had been completed. It was unlikely that the works undertaken by Contract No. HY/2013/03 caused DO exceedance recorded at the concerned WQM station on 11 July 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 11 July 2018. Furthermore, there was no visible observation of any discharge or accumulation of organic matter at the active works areas within HY/2013/04 site area on 11 July 2018. While the subject exceedances were recorded at IS5, SR10B(N2) and 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. During ET's regular weekly site inspection on 11 July 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:30 and 14:35. There were no observations referring to water quality mitigation measures associated with that shoreline.

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

Contract No.: HY/2014/05

There was no marine transportation and marine-based work under this contract. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Actions taken/ to be taken:

Contract No.: HY/2013/01

Actions were taken under action plan:

1. in situ measurement was repeated to confirm findings;
 2. After considering the above-mentioned investigation results, it appears that it was unlikely that the dissolved oxygen and turbidity 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 dissolved oxygen and turbidity 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 20, 28 June 2018 and 5 and 13 July 2018, ET (Contract No. HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures.

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:	<u>Keith Chau</u>	Title:	<u>Environmental Team Leader (Contract No. HY/2013/01)</u>
Signature:	<u></u>	Date:	<u>15 August 2018</u>
Copied to	: EPD, Contractor, Engineer Representative and IEC/ENPO		

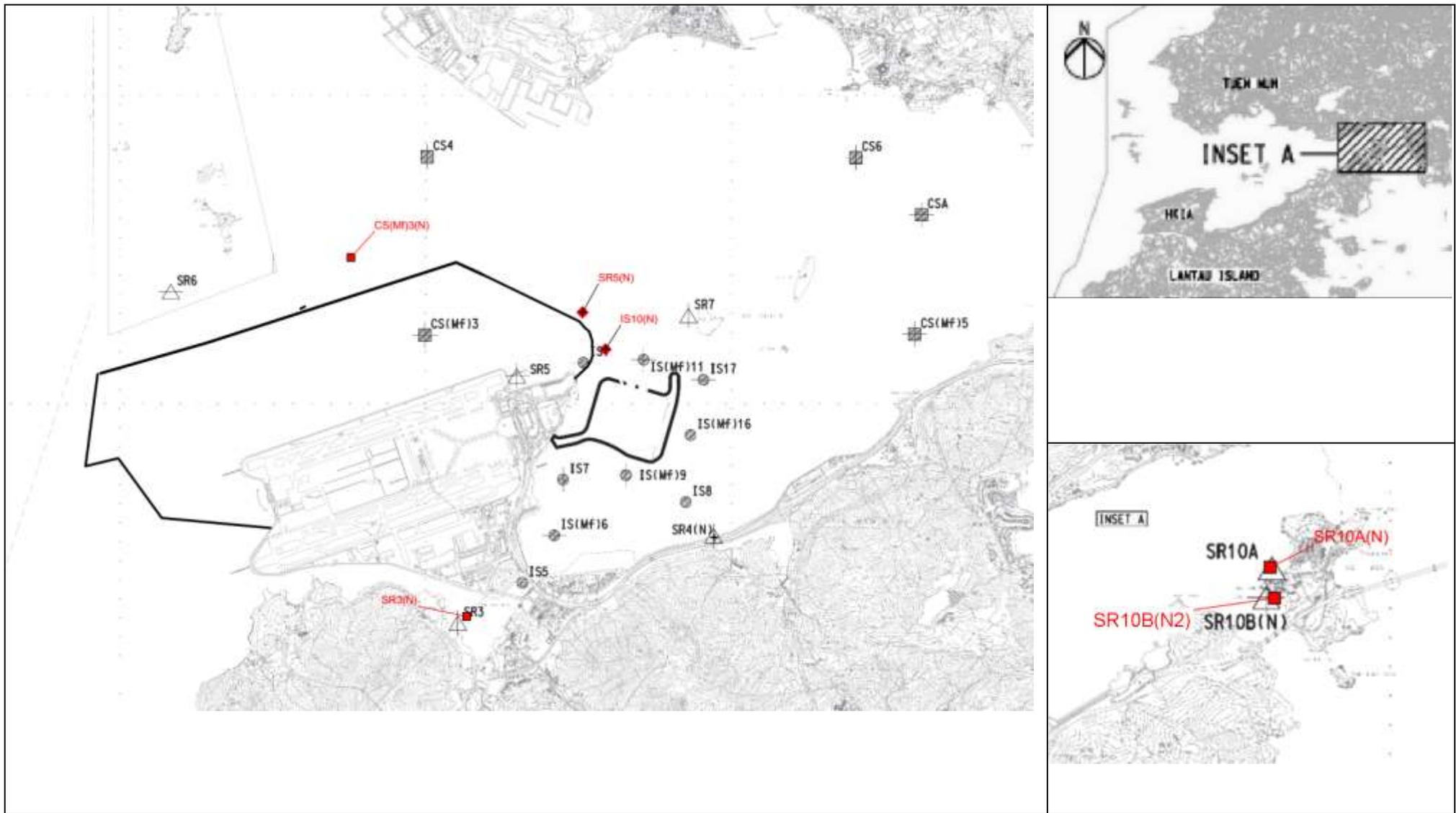


Figure 1: Location Plan

Hong Kong- Zhuhai- Macao Bridge Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts) Notifications of Environmental Quality Limits Exceedances Notification No.: 20180713DO_SS_v1						
Date of Notification: 24 July 2018			Date of Investigation Report: 10 August 2018			
Works Inspected: Data collected from water sampling works on 13 July 2018. Results for in-situ were issued on 17 July 2018 and the results for SS were issued on 23 July 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	LL	MEASURED AT MID-EBB TIDE	MEASURED AT MID-FLOOD TIDE
DO	SR6	Surface and Middle	Surface and Middle 5.0 mg/L Bottom 4.7 mg/L	Surface and Middle 4.2 mg/L (except 5 mg/L for FCZ) Bottom 3.6 mg/L	4.8	4.7
DO	SR6	Bottom			4.6	4.7
DO	SR10A(N)	Surface and Middle			5.4	<u>4.6</u>
DO	SR10A(N)	Bottom			5.1	4.4
DO	SR10B(N2)	Surface and Middle			5.8	<u>4.4</u>
SS	IS(Mf)11	Depth Average	23.5 and 120% (i.e. 10.4 for mid-ebb/12.3 for mid-flood) of upstream control station's SS at the same tide of the same day	34.4 and 130% (i.e. 11.3 for mid-ebb/13.3 for mid-flood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes	12.9	24.1
SS	SR6	Depth Average			11.2	27.0
SS	SR10B(N2)	Depth Average			10.7	26.7
Notes: AL means Action Level. LL means Limit Level. Bold means AL exceedances. Bold with underline means LL exceedances. Upstream control stations of mid-ebb tide: CS(Mf)3(N) and CS4 Upstream control stations of mid-flood tide: CS(Mf)5, CS6 and CSA						

Possible reason for Action / Limit Level Non-compliance:

On 13 July 2018, Two AL exceedances of DO at station SR6 were recorded during mid-ebb tide. Two AL exceedances of DO at stations SR6 and SR10A(N) were recorded during mid-flood tide while two LL exceedances of DO at stations SR10A(N) and SR10B(N2) were record during mid-flood tide.

For SS results, three AL exceedances of SS at stations IS(Mf)11, SR6 and SR10B(N2) 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 13 July 2018. No site runoff within the Contract site has been observed. All wastewater generated from construction site which potentially contain organic matter was collected by registered collector. No organic matter discharge/ accumulation at active works areas on 13 July 2018. 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. ET (Contract No. HY/2013/02) confirmed that no any organic matter discharge/accumulation at active works areas under Contract HY/2013/02 was observed on the date of exceedance with respect to the exceedance in DO.

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. As confirmed with Mr. Marko Chan, Environmental Officer, and operation team of Contract No. HY/2013/03, no organic matter discharge or accumulation at active works areas on 13 July 2018 under Contract No. HY/2013/03. The marine-based works in Box Culvert B had been completed. For the SS exceedance, all surplus filling materials transported from Contract No. HY/2013/03 to other projects by marine vessels have been completed with the last batch delivered on 24 March 2018. It was unlikely that the works undertaken by Contract No. HY/2013/03 caused DO exceedance recorded at the concerned WQM station on 13 July 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 13 July 2018. Furthermore, there was no visible observation of any discharge or accumulation of organic matter at the active works areas within HY/2013/04 site area on 13 July 2018. While the subject exceedances were recorded at SR6, SR10A(N), SR10B(N2)and IS(Mf)11, no exceedance was recorded at IS(Mf)9 which is the nearest monitoring location to HY/2013/04 loading and unloading point and HY/2013/04shoreline interfacing with open waters.

During ET's regular weekly site inspection on 11 July 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:30 and 14:35. There were no observations referring to water quality mitigation measures associated with that shoreline. It was concluded that the exceedance was not due to HY/2013/04.

Contract No.: HY/2014/05

There was no marine transportation and marine-based work under this contract. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Actions taken/ to be taken:

Contract No.: HY/2013/01

Actions were taken under action plan:

1. in situ measurement was repeated to confirm findings;
 2. After considering the above-mentioned investigation results, it appears that it was unlikely that the Suspended Solids and dissolved oxygen exceedance was attributed to active construction activities of this Contract;
 3. EPD, 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 and dissolved oxygen exceedances are 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 20, 28 June 2018 and 5 and 13 July 2018, ET (Contract No. HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures.

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:	<u>Keith Chau</u>	Title:	<u>Environmental Team Leader (Contract No. HY/2013/01)</u>
Signature:	<u></u>	Date:	<u>10 August 2018</u>
Copied to	: EPD, Contractor, Engineer Representative and IEC/ENPO		

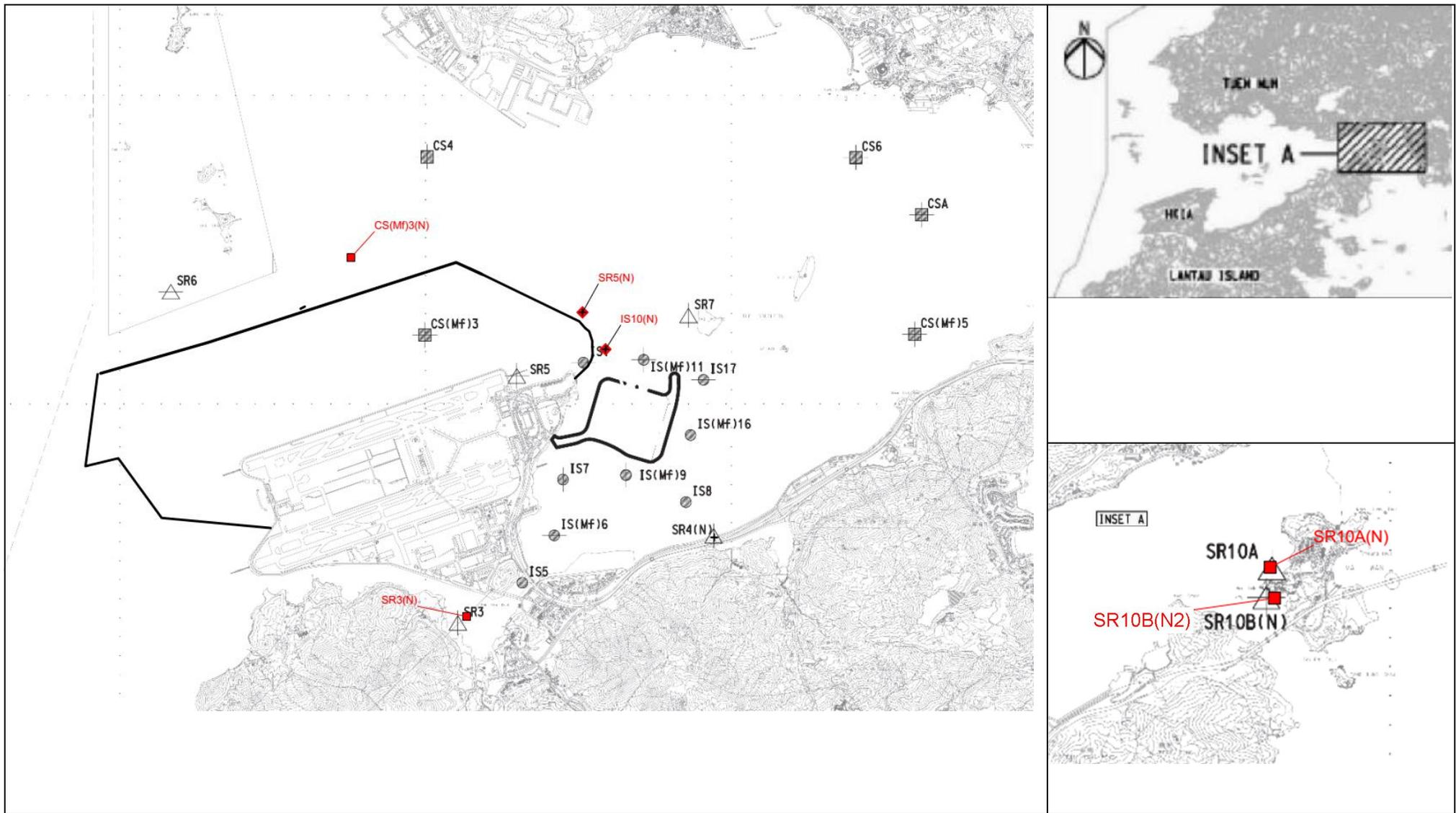


Figure 1: Location Plan

Hong Kong- Zhuhai- Macao Bridge Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts) Notifications of Environmental Quality Limits Exceedances Notification No.: 20180716DO_SS_v1						
Date of Notification: 18 July 2018				Date of Investigation Report: 13 August 2018		
Works Inspected: Data collected from water sampling works on 16 July 2018. Results for in-situ were issued on 18 July 2018 and the results for SS were issued on 24 July 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)
DO	SR10A(N)	Surface and Middle	Surface and Middle 5.0 mg/L Bottom 4.7 mg/L	Surface and Middle 4.2 mg/L (except 5 mg/L for FCZ) Bottom 3.6 mg/L	5.5	<u>4.9</u>
DO	SR10A(N)	Bottom			5.5	4.5
DO	SR10B(N2)	Surface and Middle			5.5	<u>4.4</u>
DO	SR10B(N2)	Bottom			5.8	4.6
SS	SR6	Depth Average	23.5 and 120% (i.e. 10.6 for mid-ebb/16.0 for mid-flood) of upstream control station's SS at the same tide of the same day	34.4 and 130% (i.e. 11.5 for mid-ebb/17.4 for mid-flood) of upstream control station's SS at the same tide of the same day and 10 mg/L for WSD Seawater intakes	9.9	24.3
SS	SR7	Depth Average			22.7	28.9
Notes: AL means Action Level. LL means Limit Level. Bold means AL exceedances. Bold with underline means LL exceedances. Upstream control stations of mid-ebb tide: CS(Mf)3(N) and CS4 Upstream control stations of mid-flood tide: CS(Mf)5, CS6 and CSA						

Possible reason for Action / Limit Level Non-compliance:

On 16 July 2018, Two AL exceedances of DO at station SR10A(N) and SR10B(N2) were recorded during mid-flood tide. Two LL exceedances of DO at stations SR10A(N) and SR10B(N2) were recorded during mid-flood tide. For SS results, two AL exceedances of SS at stations 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 16 July 2018. No site runoff within the Contract site has been observed. All wastewater generated from construction site which potentially contain organic matter was collected by registered collector. No organic matter discharge/ accumulation at active works areas on 16 July 2018. 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. ET (Contract No. HY/2013/02) confirmed that no any organic matter discharge/accumulation at active works areas under Contract HY/2013/02 was observed on the date of exceedance with respect to the exceedance in DO.

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. As confirmed with Mr. Marko Chan, Environmental Officer, and operation team of Contract No. HY/2013/03, no organic matter discharge or accumulation at active works areas on 16 July 2018 under Contract No. HY/2013/03. The marine-based works in Box Culvert B had been completed. It was unlikely that the works undertaken by Contract No. HY/2013/03 caused exceedance recorded at the concerned WQM station on 16 July 2018.

During weekly site audit on 20, 28 June 2018, 5 and 13 July 2018, ET confirmed the Contractor had provided workable and effective water quality mitigation measures. The ET of Contract No. HY/2013/03 concluded that the captioned exceedance was not related to the construction site activities of the contract. Nevertheless, the Contractor had been reminded to comply with the requirements stipulated in the Environmental Mitigation Implementation Schedule (EMIS) of the EM&A Manual, in particular:

- Water Quality:

- W2-
1. wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters;
 2. storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks;
 3. silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly, including specifically at the onset of and after each rainstorm;
 4. rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;
 5. measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system;
 6. open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms;
 7. discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system;
 8. surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.

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 16 July 2018. Furthermore, there was no visible observation of any discharge or accumulation of organic matter at the active works areas within HY/2013/04 site area on 16 July 2018.

While the subject exceedances were recorded at SR10A(N) and SR10B(N2), 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.

HY/2013/04 site shoreline interfacing with open waters was inspected during ET's regular weekly site inspections on 11 July 2018 (between 14:30 and 14:35) and 18 July 2018 (between 14:25 and 14:30). There were no observations referring to water quality mitigation measures associated with that shoreline. It was concluded that the exceedance was not due to HY/2013/04.

Contract No.: HY/2014/05

There was no marine transportation and marine-based work under this contract. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Actions taken/ to be taken:

Contract No.: HY/2013/01

Actions were taken under action plan:

1. in situ measurement was repeated to confirm findings;
 2. After considering the above-mentioned investigation results, it appears that it was unlikely that the suspended solids and dissolved oxygen exceedance was attributed to active construction activities of this Contract;
 3. EPD, 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 and dissolved oxygen exceedances are 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 20, 28 June 2018 and 5 and 13 July 2018, ET (Contract No. HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures.

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:	<u>Keith Chau</u>	Title:	<u>Environmental Team Leader (Contract No. HY/2013/01)</u>
Signature:	<u></u>	Date:	<u>13 August 2018</u>
Copied to	: EPD, Contractor, Engineer Representative and IEC/ENPO		

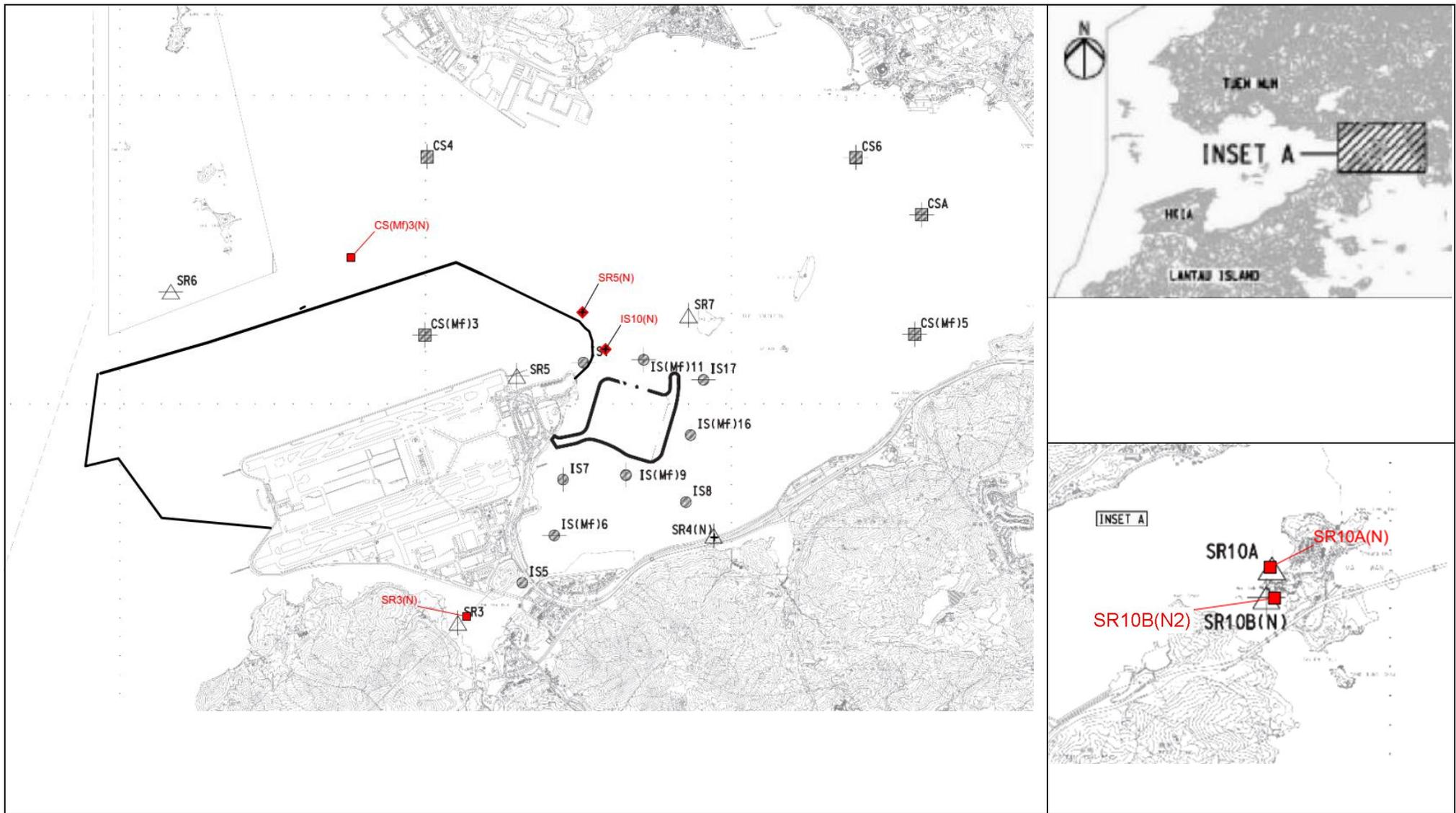


Figure 1: Location Plan

Hong Kong- Zhuhai- Macao Bridge Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts) Notifications of Environmental Quality Limits Exceedances							Notification No.: 20180727SS
Date of Notification: 6 August 2018				Date of Investigation Report: 7 August 2018			
Works Inspected: Data collected from water sampling works on 27 July 2018 and the results were issued on 4 August 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	SR10B(N2)	Depth Average	23.5 and 120% (i.e. 9.3 for mid-ebb/10.7 for mid-flood) of upstream control station's SS at the same tide of the same day	34.4 and 130% (i.e. 10.1 for mid-ebb/11.6 for mid-flood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes	7.2	25.0	
Notes: AL means Action Level. LL means Limit Level. Bold means AL exceedances. Bold with underline means LL exceedances. Upstream control stations of mid-ebb tide: CS(Mf)3(N) and CS4 Upstream control stations of mid-flood tide: CS(Mf)5, CS6 and CSA							

Possible reason for Action / Limit Level Non-compliance:

On 27 July 2018, one AL exceedance of SS at SR10B(N2) 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 27 July 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. As confirmed with Mr. Marko Chan, Environmental Officer, and operation team of Contract No. HY/2013/03, all surplus filling materials transported from Contract No. HY/2013/03 to other projects by marine vessels have been completed with the last batch delivered on 24 March 2018. It was unlikely that the works undertaken by Contract No. HY/2013/03 caused SS exceedance recorded at the concerned WQM station on 27 July 2018.

During weekly site audit on 20, 27 July and 2, 6 August 2018, ET (Contract No.: HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures.

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 27 July 2018. Furthermore, there was no visible observation of any discharge or accumulation of organic matter at the active works areas within HY/2013/04 site area on 27 July 2018. While the subject exceedance on 27 July 2018 was recorded at SR10B(N2), 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.

During ET's (Contract No.: HY/2013/04) regular weekly site inspection on 23 July 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:25 and 14:30. A water quality observation associated with that shoreline was recorded, in that leakage of site runoff was observed immediately outside the silt curtain at Box Culvert C; the Contractor was reminded to improve the deployment of silt curtain to prevent leakage of silty runoff. (Subsequently, the silt curtain near Box Culvert C was extended in length and no leakage of site runoff was observed at the subsequent weekly site inspection on 30 July 2018.)

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

Contract No.: HY/2014/05

There was no marine transportation and marine-based work under this contract. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedances were not related to the Contract.

Actions taken/ to be taken:

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 20, 27 July and 2, 6 August 2018, ET (Contract No.: HY/2013/03) confirmed the Contractor had provided workable and effective water quality mitigation measures.

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:	<u>Keith Chau</u>	Title:	<u>Environmental Team Leader (Contract No. HY/2013/01)</u>
Signature:	<u></u>	Date:	<u>7 August 2018</u>
Copied to	: Contractor, Engineer Representative and IEC/ENPO		

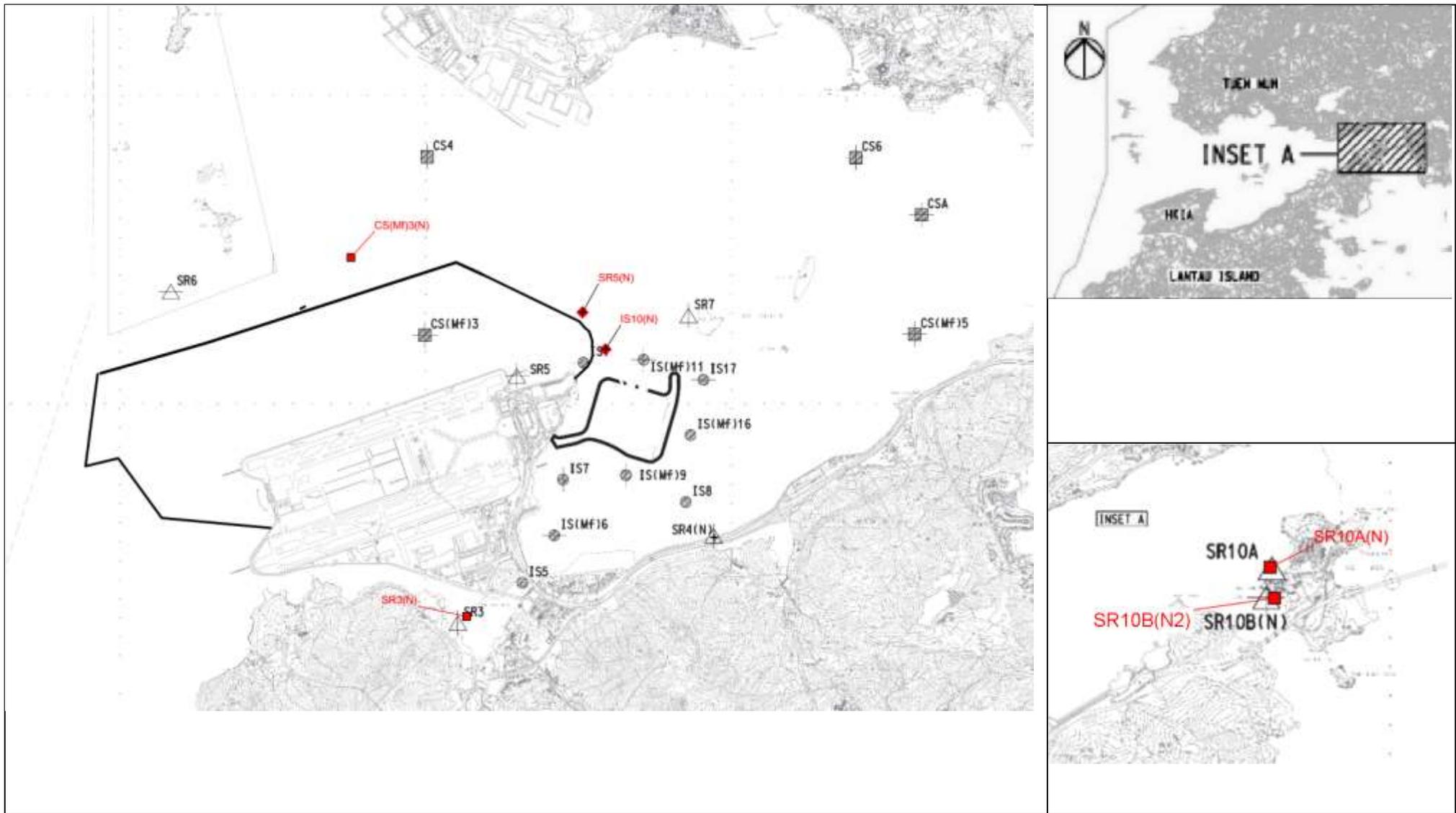


Figure 1: Location Plan

Environmental Complaint/ Enquiry Form

Investigation No: 011_ver4

Complaint/ Enquiry Received*

Date: 25 June 2018
Time: 10:42
From: ENPO (HyD referred the email from Complainant to ENPO)
Via: Email

Complainant/ Enquirer*:

Name: Undisclosed
Tel: Undisclosed
Address: Undisclosed
E-mail: Undisclosed

Complaint/Enquiry*:

Date of complaint/ enquiry: 13 June 2018
Time of complaint/ enquiry: Undisclosed
Media: Dust Noise Water Quality Other:
Description: According to ENPO's email to ET, Engineer's Representative and Contractor on 25 June 2018, it was noted that HyD had received a complaint regarding discharge of muddy water from HKBCF on 13 June 2018.

Investigation Result & Response:

IEC and ER notified on: 25 June 2018

Result of investigation:

The complaint is focusing on the discharge of muddy water from HKBCF via as constructed box culvert/outfall structures at various parts of seawall on 13 June 2018. The site location plan is provided in Figure 1.

Based on the information from the Contractor, the Box Culvert A was constructed by C1's contractor and it was completed in April 2018. The Contractor confirmed that the Box Culvert A is currently under the management of Contract C1, however, only unpolluted surface runoff from the site area was being discharged into the Box Culvert A.

The construction works on 13 June 2018 are summarised as below:

- Remaining painting works;
- E&M installation; and
- Domestic Cleaning for building floor and furniture

According to the observation of weekly site inspections (6, 13 and 20 June 2018) and confirmed by the Contractor, no exposed stockpiles of excavated soils or construction materials were found within C1 site area. All C1 site area have been paved expect planting area which are being hydroseeded. No muddy wastewater was observed during the site inspection (Photo 1 and Photo 2). The WQM data at stations, IS10(N) and IS(Mf)11 which near Culvert A on 13 June 2018 have been reviewed. No exceedance was found.

The site investigation was conducted on 26 and 27 June 2018. No muddy water was found near Box Culvert A (Photo 3 to Photo 7). Domestic sewage arising from domestic cleaning was being discharged to domestic sewer which connect to government sewer. The locations where the photos taken are shown in Figure 1.

Photo 1 (Photo taken on 13 June 2018)



Photo 2 (Photo taken on 13 June 2018)



Photo 3 (Photo taken on 26 June 2018)



Photo 4 (Photo taken on 27 June 2018)



Photo 5 (Photo taken on 27 June 2018)



Photo 6 (Photo taken on 27 June 2018)



Photo 7 (Photo taken on 27 June 2018)



Based on the investigation results, it is found that the complaint is not related to Contract No. HY/2013/01. No follow up action is required.

Recommendations/ mitigation measures/ actions if necessary:

No immediate mitigation measures are required as the complaint is not related to Contact No. HY/2013/01. However, The Contractor was also reminded to implement all necessary mitigation as specified in Environmental Mitigation Implementation Schedule of EIA, EM&A Manual, EMP, Method Statements, General and Particular Specifications of this Project to minimize environmental pollution.

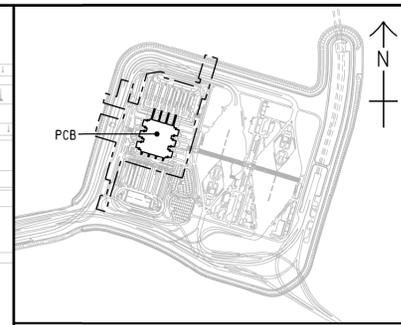
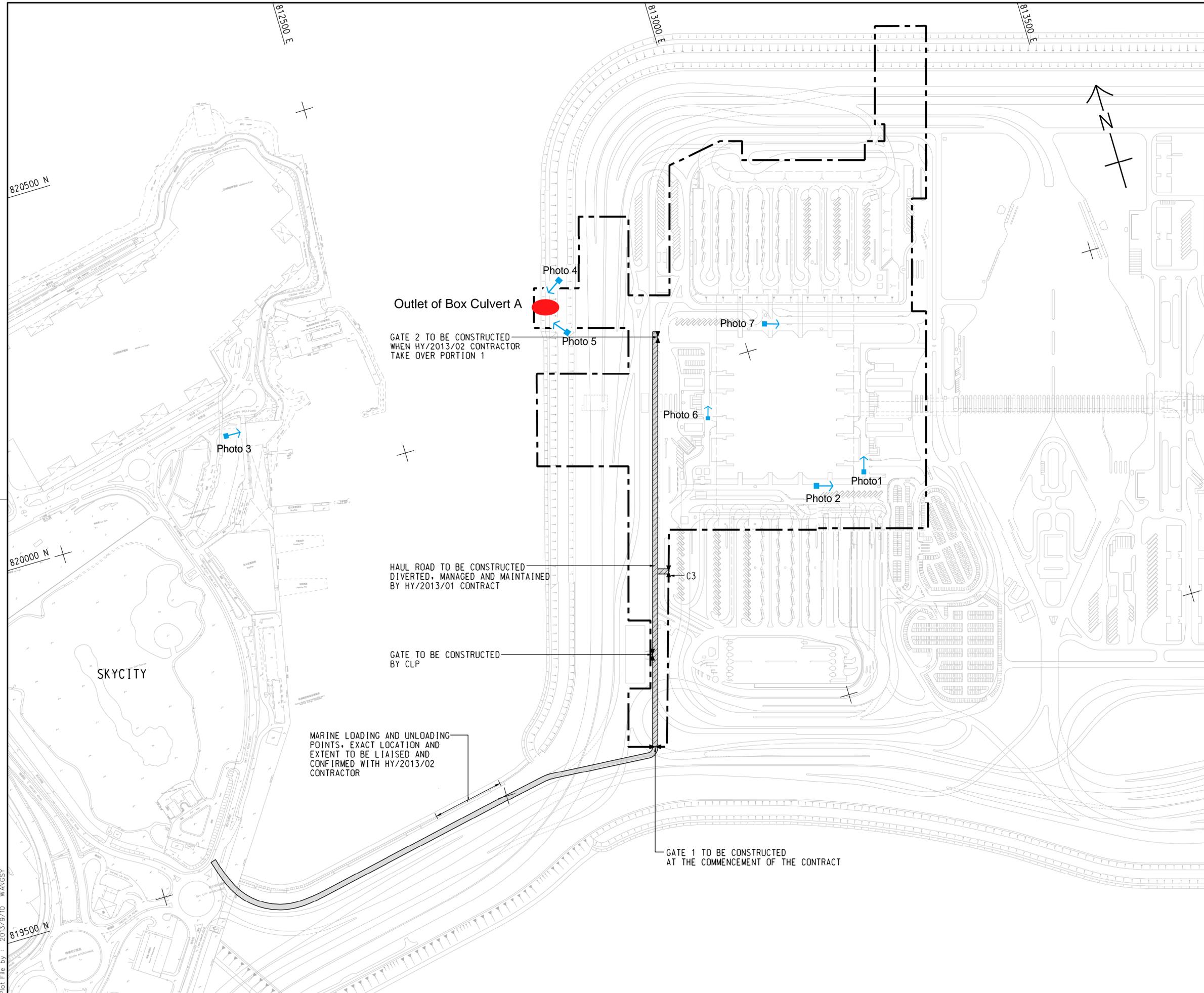
Prepared by: Keith Chau

Title : ET Leader



Date : 17 July 2018

Copied to: Engineer's Representative, ENPO/IEC, Contractor



- NOTES:**
- COORDINATES ARE BASED ON HONG KONG METRIC GRID (1980) UNLESS OTHERWISE NOTED.
 - LEVELS ARE IN METRES RELATIVE TO HONG KONG PRINCIPAL DATUM (mPD) UNLESS OTHERWISE NOTED.
 - DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
 - SETTING OUT, DIMENSIONS, LEVELS, COORDINATES ARE TO BE CALCULATED BY THE CONTRACTOR. NO INFORMATION SHOULD BE SCALED PHYSICALLY OR ELECTRONICALLY FROM THE DRAWINGS OR FILES.
 - SITE ACCESS SHALL BE HARD PAVED WITH PROPER DRAINAGE PROVIDED. IT SHALL BE KEPT UNOBSTRUCTED AND UNDISRUPTED AT ALL TIMES.

- LEGEND:**
- SITE BOUNDARY
 - 7.3m CLEAR WIDTH CONSTRUCTION HAUL ROAD
 - INDICATIVE 20m WIDE VEHICULAR ACCESS BY RECLAMATION CONTRACT HY/2010/02

- TENDER DRAWING		BWCW SCI	SEP.13
REV. 修改	DESCRIPTION 工程圖號	CHECKED 審核	DATE 日期

路政署 HIGHWAYS DEPARTMENT
 港珠澳大橋香港工程管理局
 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

HONG KONG-ZHUHAI-MACAO BRIDGE
 HONG KONG BOUNDARY CROSSING FACILITIES
 - PASSENGER CLEARANCE BUILDING

Figure 1

AECOM +
 Rogers Stirk Harbour + Partners
 BURO HAPPOLD ATKINS ADI +
Aedas

DRG.NO. 60191048/C1/000/C00/1044
 圖紙編號

DESIGNED BY BWCW CONTRACT NO. HY/2013/01 P. Dir. APPROVED EMSC
 設計 合約編號 批准人

DRAWN BY WSY STATUS
 繪圖 審核

SCALE A1 1 : 2500
 比例 圖紙單位 公尺
 DIMENSIONS ARE IN METRES
 尺寸單位 公尺

© COPYRIGHT RESERVED
 版權所有

Plot File by : 2013/9/10 WANGSY