Hong Kong- Zhuhai- Macao Bridge
Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts)
Notifications of Environmental Quality Limits Exceedances Notification No.: 20180302SS

Date of Notification: 8 March 2018 **Date of Investigation Report:** 9 April 2018

Works Inspected: Data collected from water sampling works on 2 March 2018 and the results were issued on 7 March 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. 8.3 for mid-ebb/6.6 for mid-flood) of upstream control station's SS at the same tide of the same day	34.4 and 130% (i.e. 9.0 for mid-ebb/7.1 for mid-flood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes	10.4	**24.6**

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 March 2018, one AL exceedance of SS at SR6 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 2 March 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 cat ladder installation inside box culvert 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, 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 2 March 2018.

The location of the WQM station where exceedances were recorded and all relevant WQM stations are shown in **Figure 1** and the location of marine-based construction works are shown in **Figure 2**.

The RSS of Contract No. HY/2013/03 concluded that the captioned exceedance was not related to the construction site activities of the contract.

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 March 2018. Furthermore, no discharge originating from any HY/2013/04 site works on 2 March 2018 was identified.
While SS exceedance was recorded at SR6, no exceedance was recorded at IS(Mf)9 which is the nearest monitoring location to HY/2013/04 loading and unloading point and the shoreline interfacing with open waters. Also, no SS exceedance at SR6 was observed during monitoring at the next tide (i.e. mid-ebb tide on the same day).
During ET's regular weekly site inspection on 28 February 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:00 and 15:00. There were no observations referring to water quality mitigation measures associated with that shoreline. During ET's subsequent regular weekly site inspection on 7 March 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:00 and 15:00. A water quality observation regarding the wetsep near the wheel washing bay was made; the Contractor was reminded to operate the wetsep as soon as possible. However, there was no observation regarding any presence of silty water in the open waters 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. 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

The captioned exceedance was not related to the Contract and therefore, no additional follow-up action is needed. However, RSS proposed recommendations to Contractor in particular to the following aspects when there are marine construction activities.

Water Quality:

- Barges and hopper dredgers shall have tight fitting seals to their bottom openings to prevent leakage of material;
- Any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes;
- Loading of barges and hoppers shall be controlled to prevent splashing of dredged material to the surrounding water. Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation;
- Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved;
- Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action; and
- All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.
- wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters;
- 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;
- 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;
- rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;
- measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system;
- open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms;
- discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system;
- surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system

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 April 2018

Copied to : Contractor, Engineer Representative and IEC/ENPO

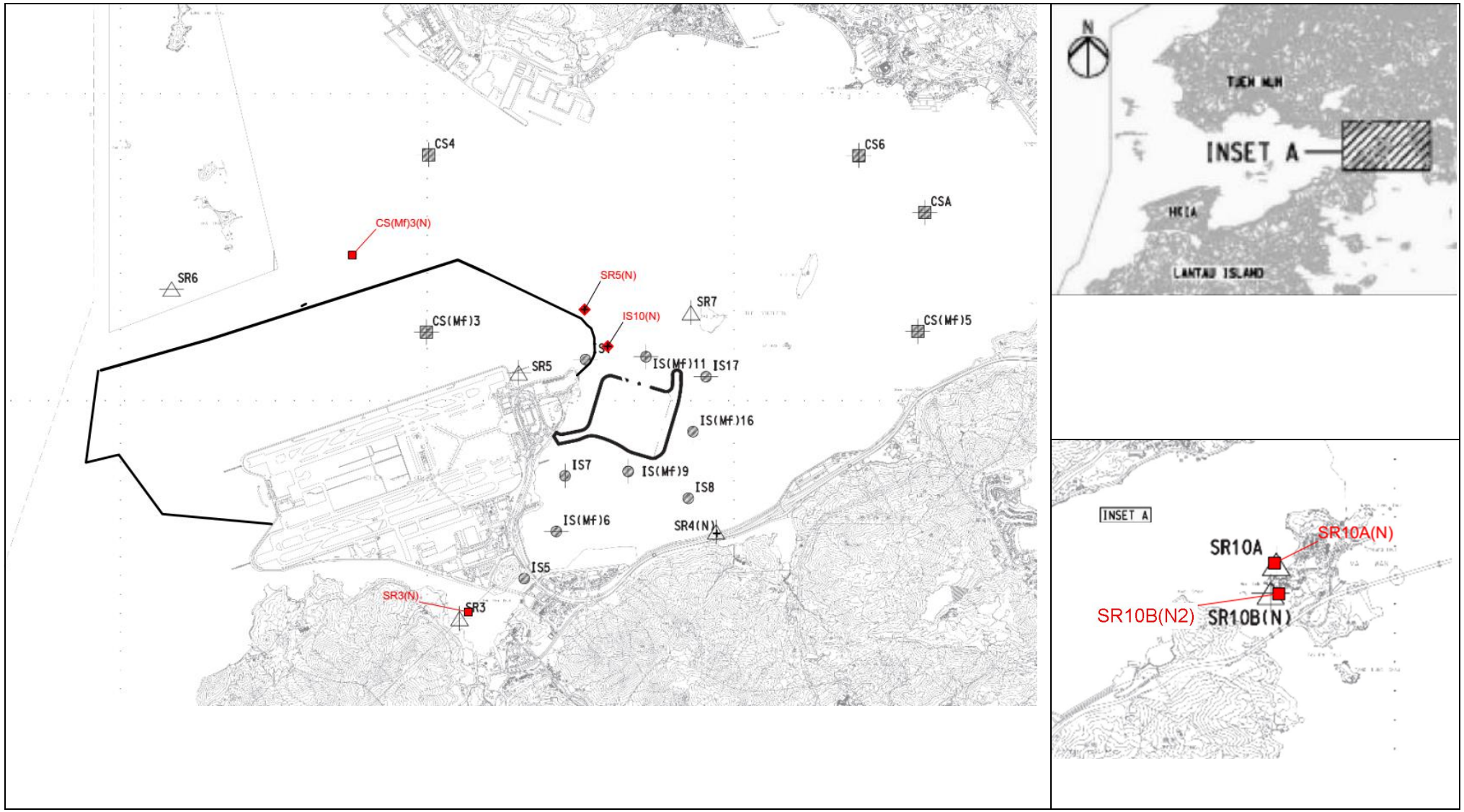
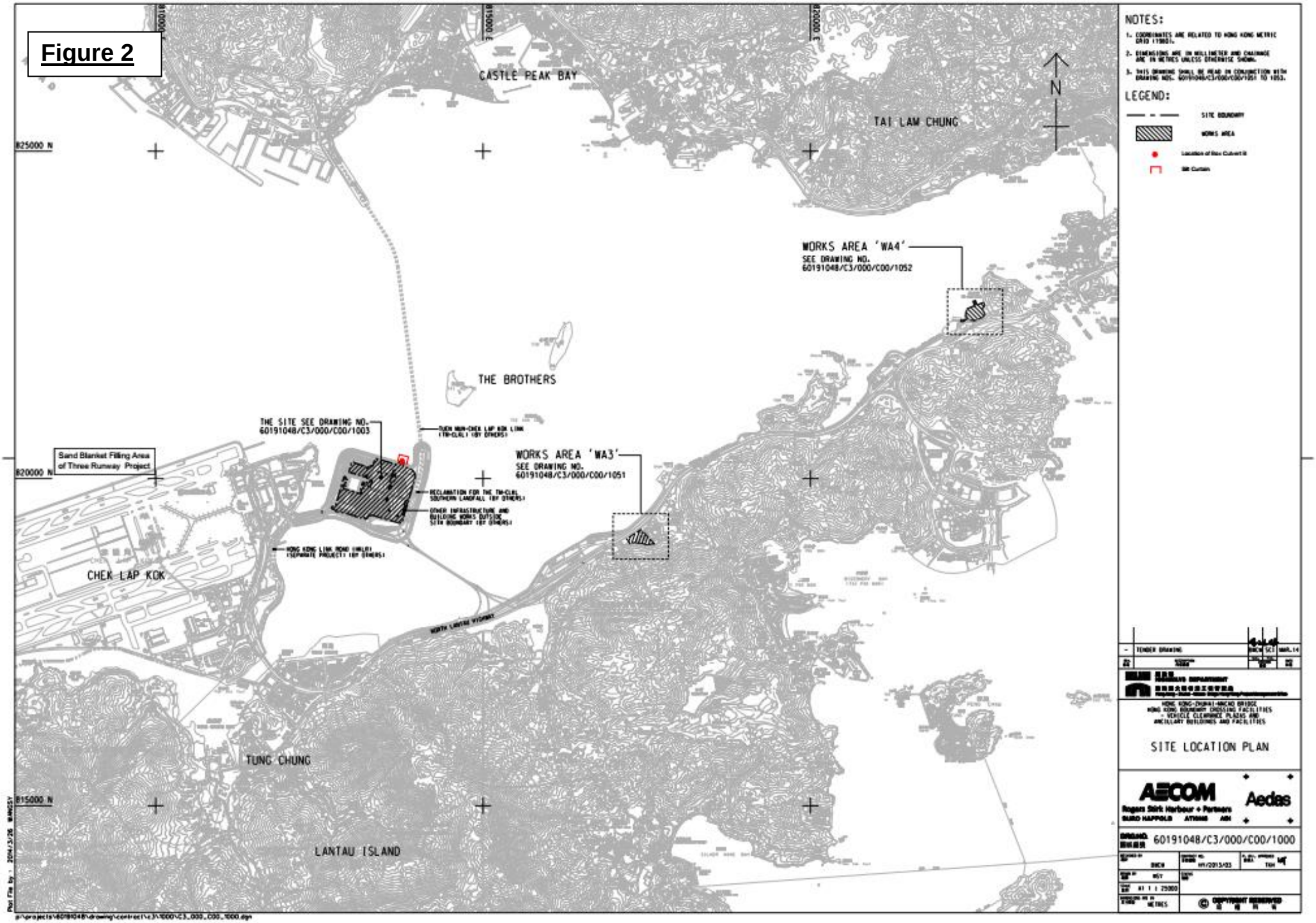


Figure 1: Location Plan

Figure 2


NOTES:
1. COORDINATES ARE RELATED TO HONG KONG METRIC GRID (1980).
2. DIMENSIONS ARE IN MILLIMETER AND CHAINAGE ARE IN METRES UNLESS OTHERWISE SHOWN.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 60191048/C3/000/C00/1051 TO 1053.
LEGEND:
SITE BOUNDARY
WORKS AREA
Location of Box Culvert B
Silt Curtain
N
CASTLE PEAK BAY
TAI LAM CHUNG
825000 N
820000 N
815000 N
WORKS AREA 'WA4'
SEE DRAWING NO.
60191048/C3/000/C00/1052
THE BROTHERS
THE SITE SEE DRAWING NO.
60191048/C3/000/C00/1003
TUEN MUN-CHEK LAP KOK LINK (TM-CLKL) (BY OTHERS)
WORKS AREA 'WA3'
SEE DRAWING NO.
60191048/C3/000/C00/1051
Sand Blanket Filling Area of Three Runway Project
RECLAMATION FOR THE TM-CLKL SOUTHERN LANDFALL (BY OTHERS)
OTHER INFRASTRUCTURE AND BUILDING WORKS OUTSIDE SITE BOUNDARY (BY OTHERS)
HONG KONG LINK ROAD (HKLR) (SEPARATE PROJECT) (BY OTHERS)
CHEK LAP KOK
NORTH LANTAU HIGHWAY
TUNG CHUNG
LANTAU ISLAND
- TENDER Drawing
HIGHWAYS DEPARTMENT
HONG KONG-ZHUHAI-MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES
SITE LOCATION PLAN
AECOM
Aedas
Rogers Stirk Harbour + Partners
SHARD HAPPOLD ATKINS AGH
60191048/C3/000/C00/1000
BHCH
HY/2013/03
TSH
MSY
AS SHOWN
METRES
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Hong Kong- Zhuhai- Macao Bridge
Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts)
Notifications of Environmental Quality Limits Exceedances Notification No.: 20180316SS

Date of Notification: 23 March 2018 **Date of Investigation Report:** 9 April 2018

Works Inspected: Data collected from water sampling works on 16 March 2018 and the results were issued on 22 March 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	SR5(N)	Depth Average	23.5 and 120% (i.e. 12.6 for mid-ebb/8.9 for mid-flood) of upstream control station's SS at the same tide of the same day	34.4 and 130% (i.e. 13.7 for mid-ebb/9.6 for mid-flood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes	11.0	**24.0**

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 16 March 2018, one AL exceedance of SS at SR5(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 16 March 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 SR5(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 16 March 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 16 March 2018.
While SS exceedance was recorded at SR5(N), no exceedance was recorded at IS(Mf)9 which is the nearest monitoring location to HY/2013/04 loading and unloading point and the shoreline interfacing with open waters. Also, no SS exceedance at SR5(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) regular weekly site inspection on 14 March 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:10 and 14:50. There were no observations referring to water quality mitigation measures associated with that shoreline. Furthermore, no discharge originating from any HY/2013/04 site works on 14 March 2018 was identified.
During ET's (Contract No.: HY/2013/04) subsequent regular weekly site inspection on 19 March 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:10 and 14:20. There were no observations referring to water quality mitigation measures associated with that shoreline. Furthermore, no discharge originating from any HY/2013/04 site works on 19 March 2018 was identified. 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 1, 8, 16 and 22 March 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:		Date:	9 April 2018

Copied to : Contractor, Engineer Representative and IEC/ENPO

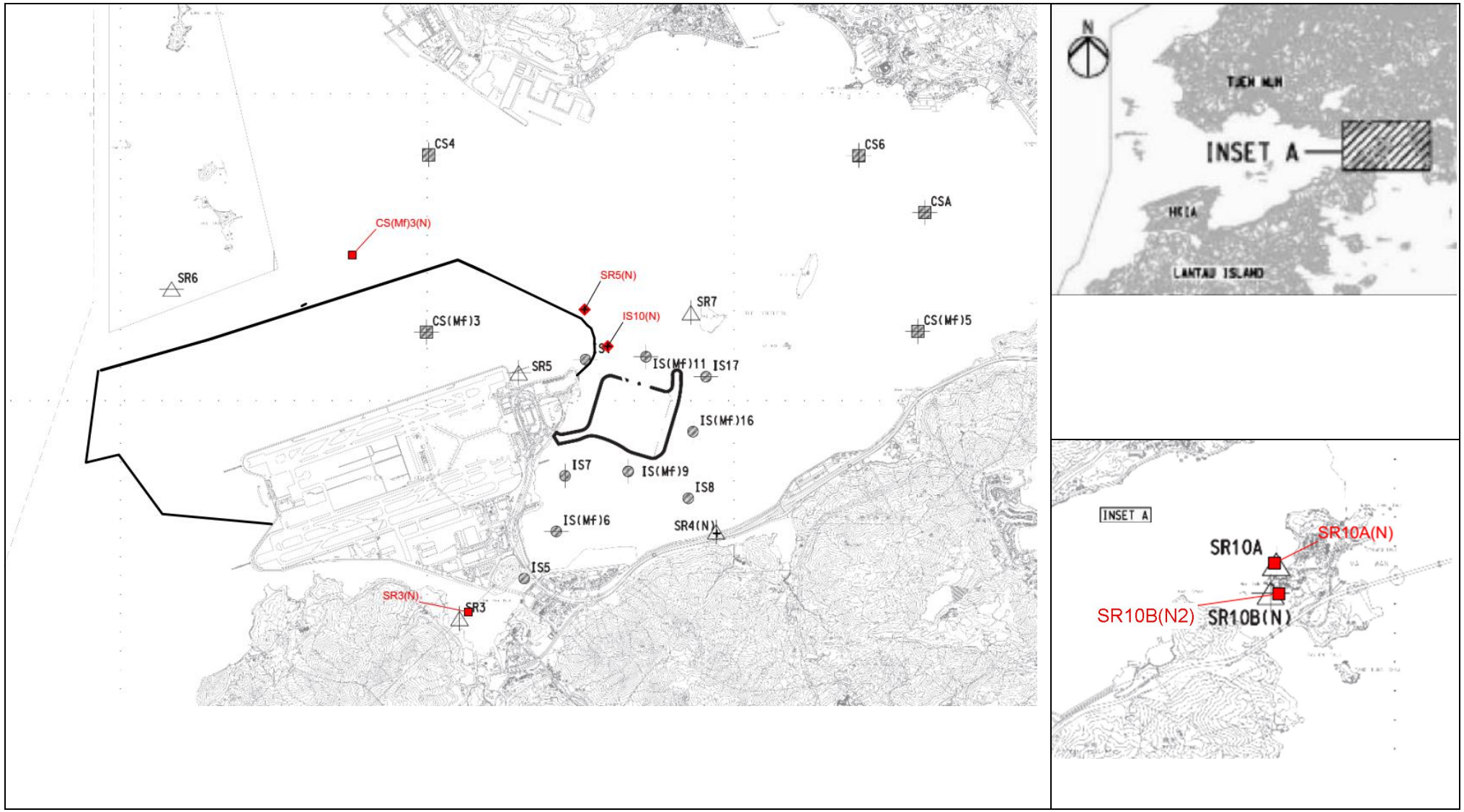


Figure 1: Location Plan

Hong Kong- Zhuhai- Macao Bridge
Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts)
Notifications of Environmental Quality Limits Exceedances Notification No.: 20180321SS

Date of Notification: 4 April 2018 **Date of Investigation Report:** 10 April 2018

Works Inspected: Data collected from water sampling works on 21 March 2018 and the results were issued on 29 March 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	IS7	Depth Average	23.5 and 120% (i.e. 16.5 for mid-ebb/11.6 for mid-flood) of upstream control station's SS at the same tide of the same day	34.4 and 130% (i.e. 17.9 for mid-ebb/12.6 for mid-flood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes	13.1	**25.8**

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 21 March 2018, one AL exceedance of SS at IS7 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 21 March 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 IS7, 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 21 March 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 21 March 2018.
While SS exceedance was recorded at IS7, 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 IS7 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 19 March 2018, HY/2013/04 site shoreline interfacing with open waters was inspected between 14:10 and 14:20. 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 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.
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.

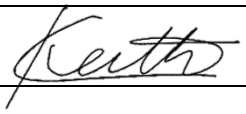
However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

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 1, 8, 16 and 22 March 2018, ET confirmed the Contractor had provided workable and effective water quality mitigation measures. ET 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:		Date:	10 April 2018

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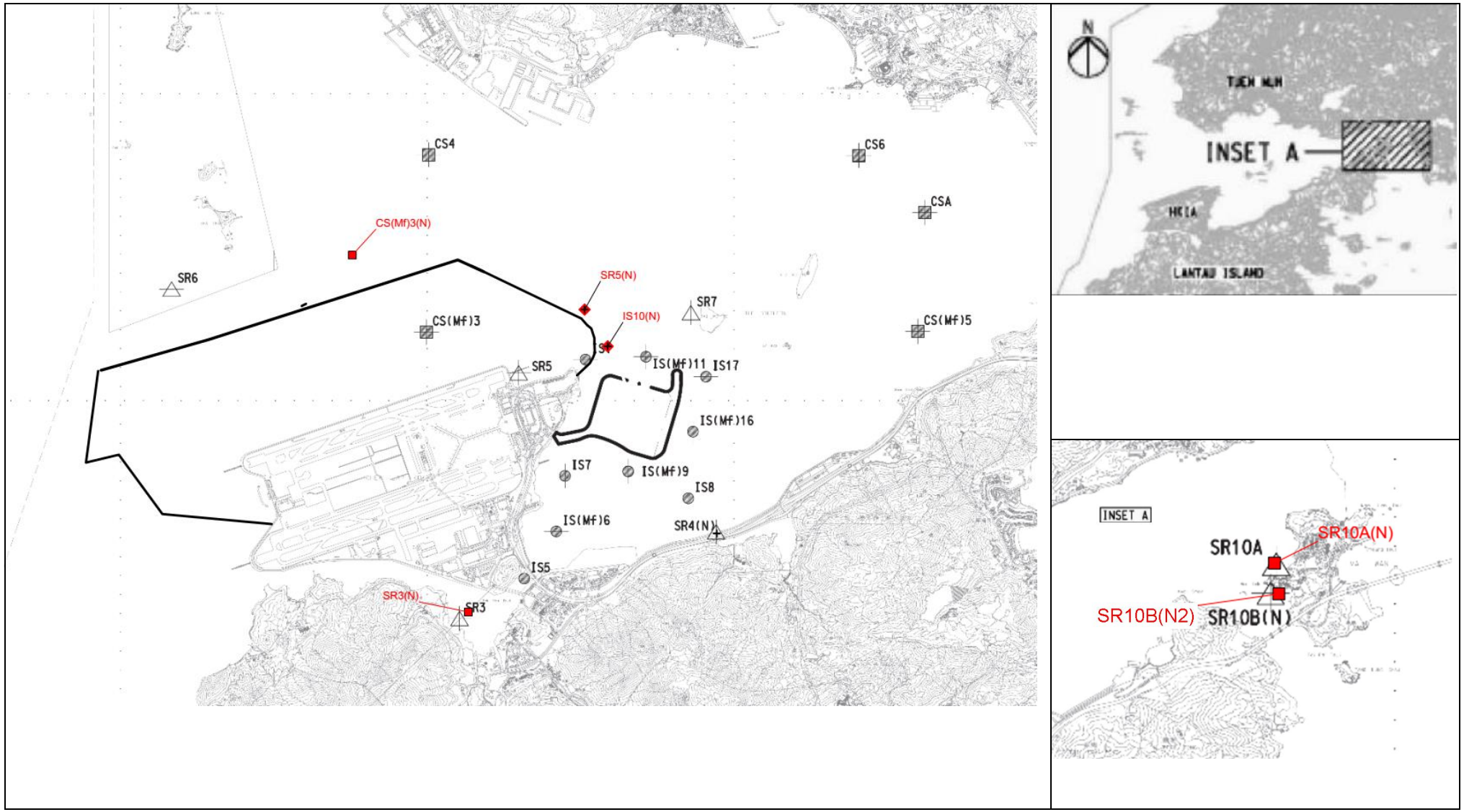

Figure 1: Location Plan

Hong Kong- Zhuhai- Macao Bridge
Hong Kong Boundary Crossing Facilities (Superstructure and Infrastructure Contracts)
Notifications of Environmental Quality Limits Exceedances Notification No.: 20180330SS

Date of Notification: 12 April 2018 **Date of Investigation Report:** 13 April 2018

Works Inspected: Data collected from water sampling works on 30 March 2018 and the results were issued on 12 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	SR5(N)	Depth Average	23.5 and 120% (i.e. 15.8 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. 17.1 for mid-ebb/13.4 for mid-flood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes	12.2	**28.2**

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 30 March 2018, one AL exceedance of SS at SR5(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 30 March 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 SR5(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 30 March 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 30 March 2018.
While SS exceedance was recorded at SR5(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 SR5(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) 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 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
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 16, 22 29 March and 6 April 2018, ET confirmed the Contractor had provided workable and effective water quality mitigation measures. ET 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:		Date:	13 April 2018

Copied to : Contractor, Engineer Representative and IEC/ENPO

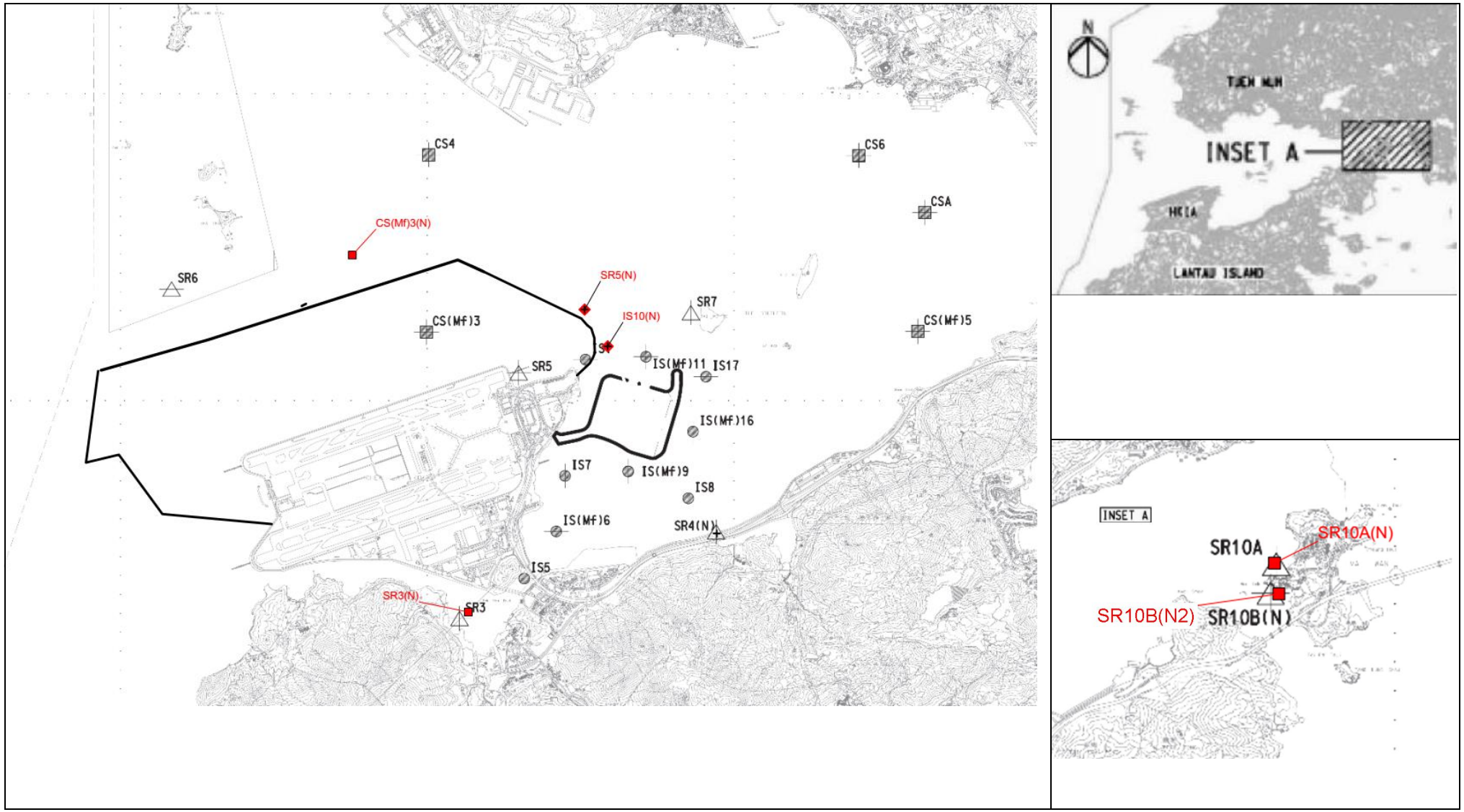

Figure 1: Location Plan