

Contract No. HY/2013/01 - Hong Kong- Zhuhai- Macao Bridge
Hong Kong Boundary Crossing Facilities – Passenger Clearance Building
Notifications of Environmental Quality Limits Exceedances Notification No.: 20171002DO_v1

Date of Notification: 10 October 2017 **Date of Investigation Report:** 20 October 2017

Works Inspected: Data collected from water sampling works on 2 October 2017 and the results were issued on 10 October 2017

Monitoring Location: Water Quality Monitoring Station

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

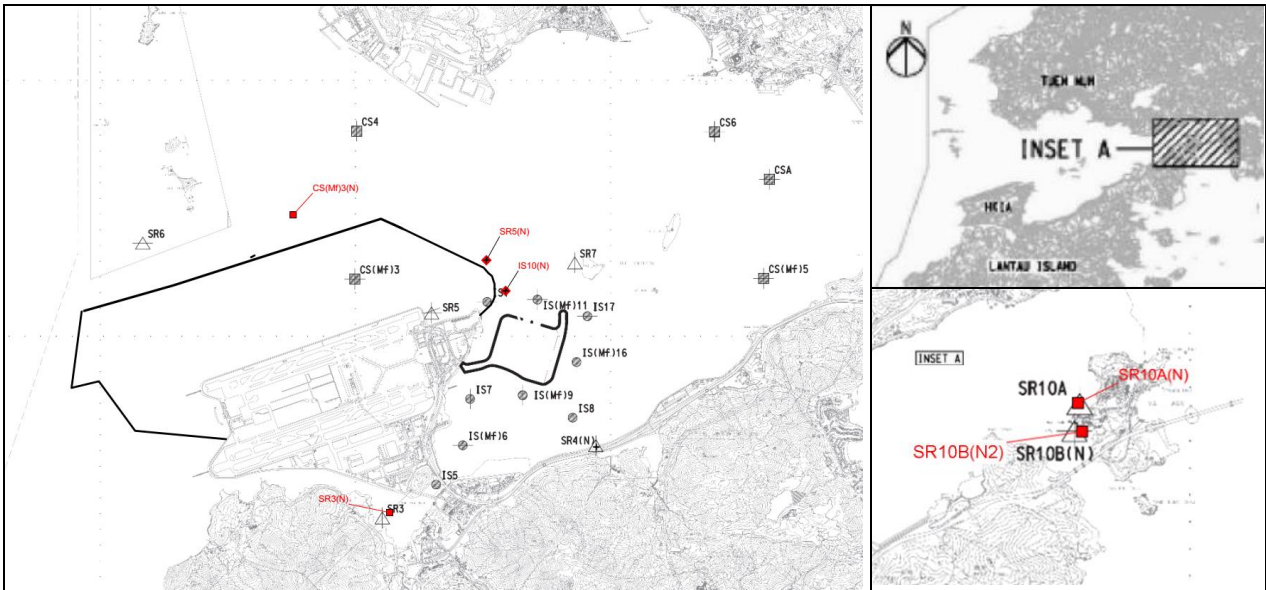
Action & Limit Level (AL & LL) / Measured Level:

| 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* | Bottom | Surface and Middle 5.0 Bottom 4.7 | Surface and Middle 4.2 (except 5 mg/L for FCZ) Bottom 3.6 | 4.6 | 4.5 |
| | SR10B(N)* | Surface and Middle | | | 5.4 | <u>4.7</u> |
| | SR10B(N)* | Bottom | | | 5.1 | 4.6 |

Notes:
AL means Action Level.
LL means Limit Level.
Bold means AL exceedances.
Bold with underline means LL exceedances.
* Monitoring stations SR3, SR10A and SR10B(N) were not available for water sampling due to safety reason, the monitoring stations were changed to tentative coordination.
(i.e. SR3(N): E810689 N816591, SR10A(N): E823644 N823484 and SR10B(N2): E823689 N823159)

Possible reason for Action and Limit Level Non-compliance:

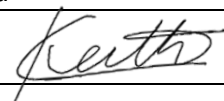
On 2 October 2017, one AL exceedance of DO at SR10A was recorded during mid-ebb tide, two AL exceedances of DO at SR10A and SR10B(N) were recorded during mid-flood tide and one LL exceedance of DO at SR10B(N) was recorded during mid-flood tide.



As confirmed by the Contractor, there were no marine transportation and marine-based work on 2 October 2017. 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:

As the exceedances were not related to the Contract, no immediate actions are required. However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

Reviewed by : Keith Chau Title : ET Leader
 Date : 20 October 2017

Copied to : Contractor, Engineer Representative and IEC/ENPO

Contract No. HY/2013/01 - Hong Kong- Zhuhai- Macao Bridge
Hong Kong Boundary Crossing Facilities – Passenger Clearance Building
Notifications of Environmental Quality Limits Exceedances Notification No.: 20171004DO_v1

Date of Notification: 12 October 2017 **Date of Investigation Report:** 20 October 2017

Works Inspected: Data collected from water sampling works on 4 October 2017 and the results were issued on 9 October 2017

Monitoring Location: Water Quality Monitoring Station

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

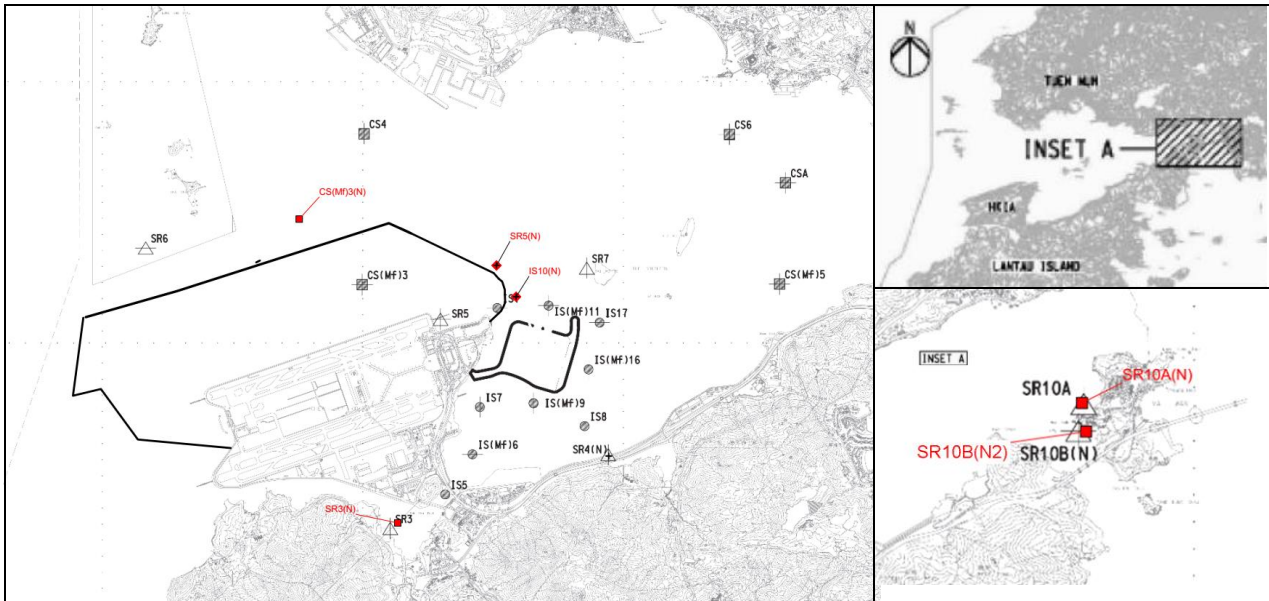
Action & Limit Level (AL & LL) / Measured Level:

| 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** | Surface and Middle | Surface and Middle 5.0 Bottom 4.7 | Surface and Middle 4.2 (except 5 mg/L for FCZ) Bottom 3.6 | <u>4.7</u> | <u>4.5</u> |
| | SR10A** | Bottom | | | 4.6 | 4.3 |
| | SR10B(N)* | Surface and Middle | | | <u>4.8</u> | <u>4.5</u> |
| | SR10B(N)* | Bottom | | | 4.9 | 4.5 |

Notes:
AL means Action Level.
LL means Limit Level.
Bold means AL exceedances.
Bold with underline means LL exceedances.
* Monitoring stations SR3, SR10A and SR10B(N) were not available for water sampling due to safety reason, the monitoring stations were changed to tentative coordination.
(i.e. SR3(N): E810689 N816591, SR10A(N): E823644 N823484 and SR10B(N2): E823689 N823159)
Location was changed due to fishing net installed in the vicinity (22^o21.1165'N; 114^o03.1185'E)

Possible reason for Action and Limit Level Non-compliance:

On 4 October 2017, one AL exceedance of DO at SR10A was recorded during mid-ebb tide, two AL exceedances of DO at SR10A and SR10B(N) were recorded during mid-flood tide, two LL exceedances of DO at SR10A and SR10B(N) were recorded during mid-ebb tide and two LL exceedances of DO at SR10A and SR10B(N) were recorded during mid-flood tide.



As confirmed by the Contractor, there were no marine transportation and marine-based work on 4 October 2017. 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:

As the exceedances were not related to the Contract, no immediate actions are required. However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

Reviewed by : Keith Chau Title : ET Leader



Date : 20 October 2017

Copied to : Contractor, Engineer Representative and IEC/ENPO

Contract No. HY/2013/01 - Hong Kong- Zhuhai- Macao Bridge
Hong Kong Boundary Crossing Facilities – Passenger Clearance Building
Notifications of Environmental Quality Limits Exceedances Notification No.: 20171006DO_v2

Date of Notification: 11 October 2017 **Date of Investigation Report:** 26 October 2017

Works Inspected: Data collected from water sampling works on 6 October 2017 and the results were issued on 11 October 2017

Monitoring Location: Water Quality Monitoring Station

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

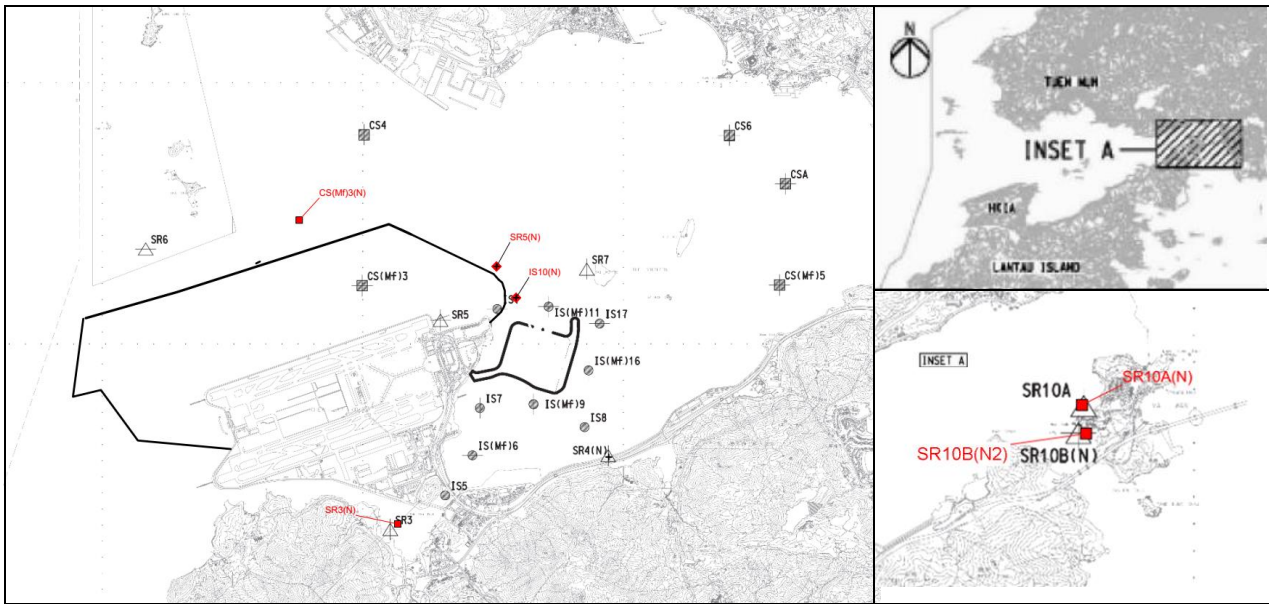
Action & Limit Level (AL & LL) / Measured Level:

| PARAM | STATION | DEPTH | AL (mg/L) | LL (mg/L) | MEASURED AT MID-EBB TIDE (mg/L) | MEASURED AT MID-FLOOD TIDE (mg/L) |
|-------|-----------|--------------------|---------------------------|---|---------------------------------|-----------------------------------|
| DO | SR10B(N)* | Surface and Middle | Surface and Middle 5.0 | Surface and Middle 4.2 (except 5 mg/L for FCZ) Bottom 3.6 | <u>4.9</u> | <u>4.5</u> |
| | SR10B(N)* | Bottom | Bottom 4.7 | | 5.0 | <u>4.6</u> |

Notes:
AL means Action Level.
LL means Limit Level.
Bold means AL exceedances.
Bold with underline means LL exceedances.
* Monitoring stations SR3, SR10A and SR10B(N) were not available for water sampling due to safety reason, the monitoring stations were changed to tentative coordination.
(i.e. SR3(N): E810689 N816591, SR10A(N): E823644 N823484 and SR10B(N2): E823689 N823159)

Possible reason for Action and Limit Level Non-compliance:

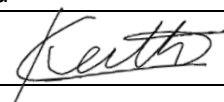
On 6 October 2017, one AL exceedance of DO at SR10B(N) was recorded during mid-flood tide, one LL exceedance of DO at SR10B(N) was recorded during mid-ebb tide and one LL exceedance of DO at SR10B(N) was recorded during mid-flood tide.



As confirmed by the Contractor, there were no marine transportation and marine-based work on 6 October 2017. 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:

As the exceedances were not related to the Contract, no immediate actions are required. However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

Reviewed by : Keith Chau Title : ET Leader
 Date : 26 October 2017

Copied to : Contractor, Engineer Representative and IEC/ENPO

Contract No. HY/2013/01 - Hong Kong- Zhuhai- Macao Bridge
Hong Kong Boundary Crossing Facilities – Passenger Clearance Building
Notifications of Environmental Quality Limits Exceedances Notification No.: 20171009DO_v1

Date of Notification: 12 October 2017 **Date of Investigation Report:** 26 October 2017

Works Inspected: Data collected from water sampling works on 9 October 2017 and the results were issued on 12 October 2017

Monitoring Location: Water Quality Monitoring Station

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

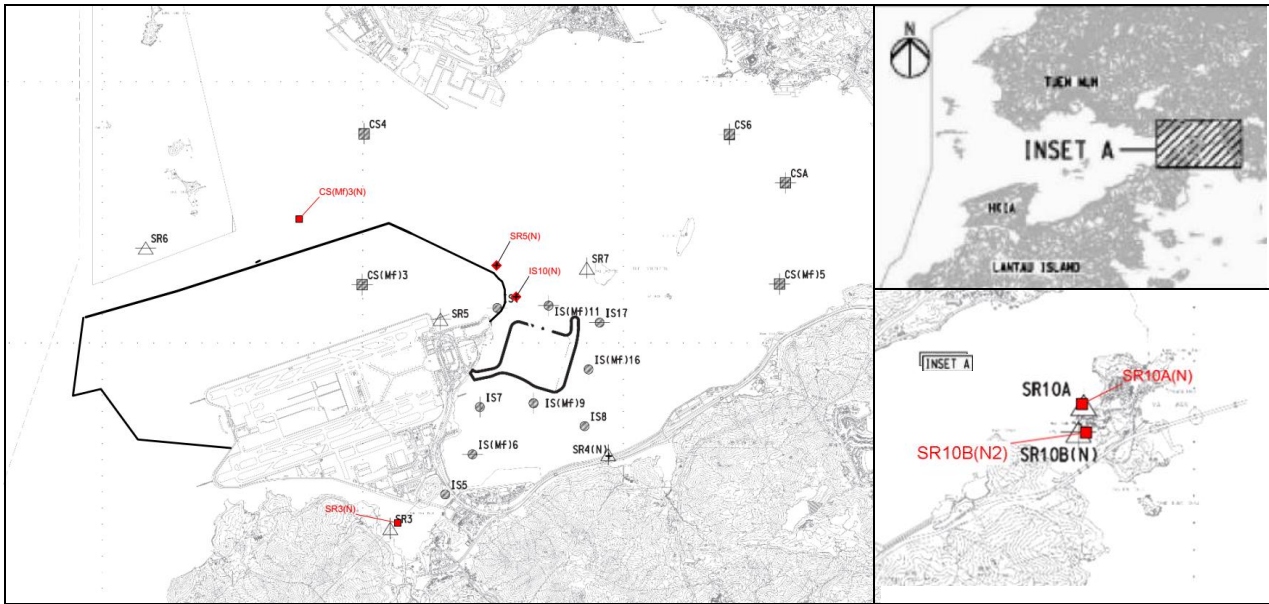
Action & Limit Level (AL & LL) / Measured Level:

| PARAM | STATION | DEPTH | AL (mg/L) | LL (mg/L) | MEASURED AT MID-EBB TIDE (mg/L) | MEASURED AT MID-FLOOD TIDE (mg/L) |
|-------|-----------|--------------------|--|---|---------------------------------|-----------------------------------|
| DO | SR10B(N)* | Surface and Middle | Surface and Middle 5.0 Bottom 4.7 | Surface and Middle 4.2 (except 5 mg/L for FCZ) Bottom 3.6 | 5.2 | <u>4.8</u> |

Notes:
 AL means Action Level.
 LL means Limit Level.
Bold means AL exceedances.
Bold with underline means LL exceedances.
 * Monitoring stations SR3, SR10A and SR10B(N) were not available for water sampling due to safety reason, the monitoring stations were changed to tentative coordination.
 (i.e. SR3(N): E810689 N816591, SR10A(N): E823644 N823484 and SR10B(N2): E823689 N823159)

Possible reason for Action and Limit Level Non-compliance:

On 9 October 2017, one LL exceedance of DO at SR10B(N) was recorded during mid-flood tide.



As confirmed by the Contractor, there were no marine transportation and marine-based work on 9 October 2017. No site runoff within the Contract site has been observed. Therefore, it is concluded that the exceedance was not related to the Contract.

Actions taken/ to be taken:

As the exceedance was not related to the Contract, no immediate actions are required. However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

Prepared by: Evan Wong

Title: Environmental Team Representative

Signature: 

Date: 26 October 2017

Checked by: Keith Chau

Title: Environmental Team Leader

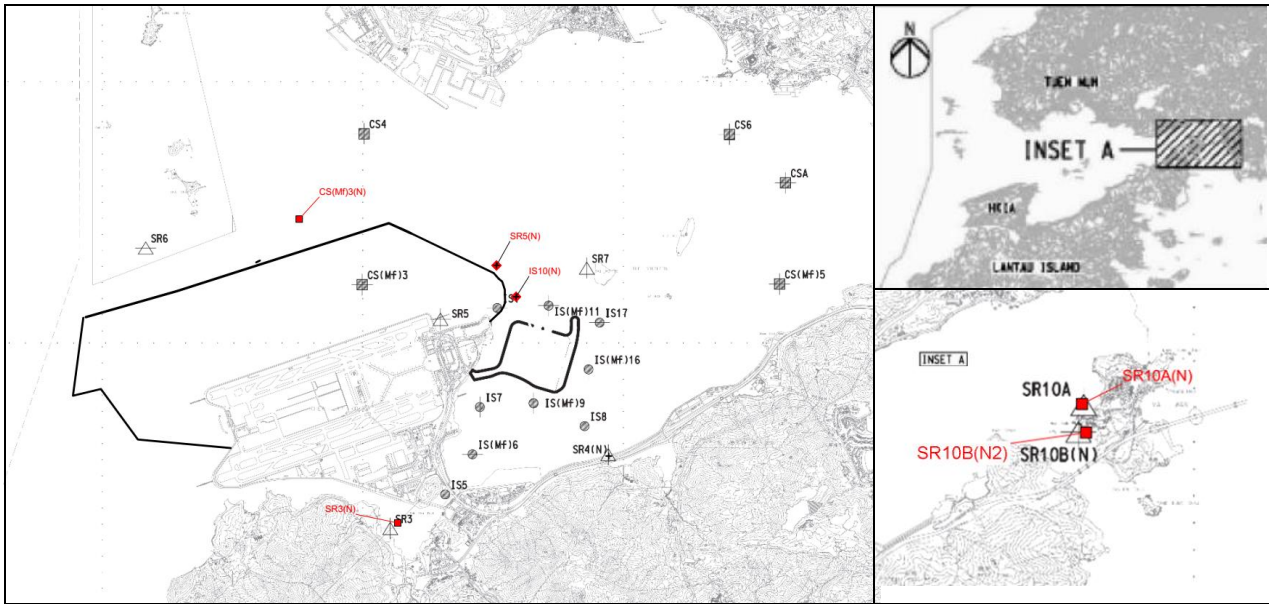
Signature: 

Date: 26 October 2017

| Contract No. HY/2013/01 - Hong Kong- Zhuhai- Macao Bridge Hong Kong Boundary Crossing Facilities – Passenger Clearance Building Notifications of Environmental Quality Limits Exceedances | | | | | | | Notification No.: 20171018SS |
|---|---------|---------------|--|--|---------------------------------|-----------------------------------|------------------------------|
| Date of Notification: 27 October 2017 | | | | Date of Investigation Report: 30 October 2017 | | | |
| Works Inspected: Data collected from water sampling works on 18 October 2017 and the results were issued on 26 October 2017 | | | | | | | |
| 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. 10.6 for mid-ebb/23.9 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/25.9 for mid-flood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes | 9.5 | 30.1 | |
| 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 and Limit Level Non-compliance:

On 18 October 2017, one AL exceedance of SS at SR5(N) was recorded during mid-flood tide.



As confirmed by the Contractor, there was no marine transportation and marine-based work on 18 October 2017. 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:

As the exceedance was not related to the Contract, no immediate actions are required. However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

Prepared by: Evan Wong Title: Environmental Team Representative

Signature:  Date: 30 October 2017

Checked by: Keith Chau Title: Environmental Team Leader

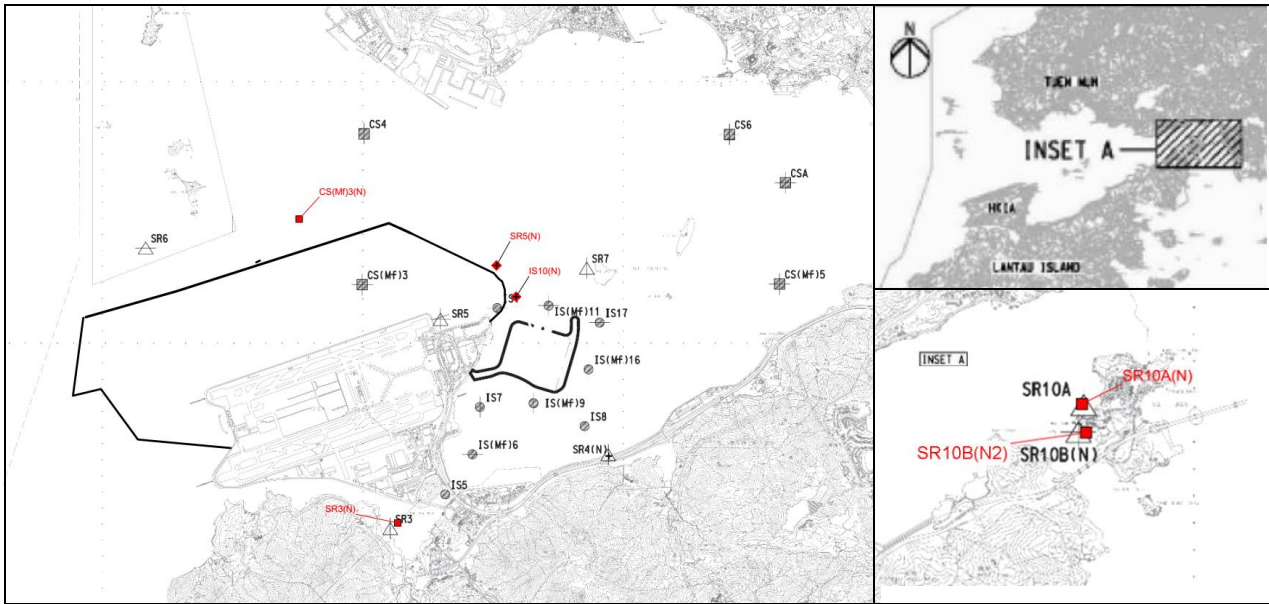
Signature:  Date: 30 October 2017

Copied to : Contractor, Engineer Representative and IEC/ENPO

| Contract No. HY/2013/01 - Hong Kong- Zhuhai- Macao Bridge Hong Kong Boundary Crossing Facilities – Passenger Clearance Building Notifications of Environmental Quality Limits Exceedances | | | | | | | Notification No.: 20171020SS |
|---|----------|---------------|--|--|---------------------------------|-----------------------------------|------------------------------|
| Date of Notification: 31 October 2017 | | | | Date of Investigation Report: 3 November 2017 | | | |
| Works Inspected: Data collected from water sampling works on 20 October 2017 and the results were issued on 30 October 2017 | | | | | | | |
| 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 | IS(Mf)11 | Depth Average | 23.5 and 120% (i.e. 20.8 for mid-ebb/20.1 for mid-flood) of upstream control station's SS at the same tide of the same day | 34.4 and 130% (i.e. 22.6 for mid-ebb/21.8 for mid-flood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes | 11.9 | 26.1 | |
| | SR5(N) | | | | 8.0 | 24.4 | |
| | SR7 | | | | 14.9 | 28.3 | |
| 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 20 October 2017, three AL exceedances of SS at IS(Mf)11, SR5(N) and SR7 were recorded during mid-flood tide.



As confirmed by the Contractor, there was no marine transportation and marine-based work on 20 October 2017. 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:

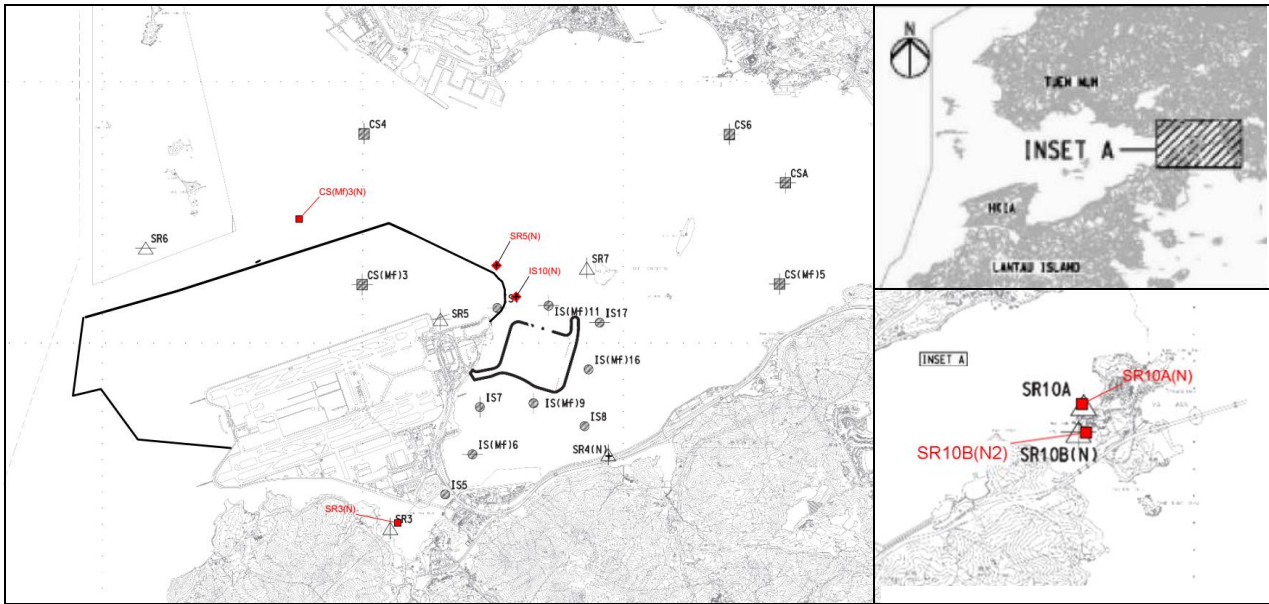
As the exceedance was not related to the Contract, no immediate actions are required. However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

| | | | |
|--------------|--|--------|--|
| Prepared by: | <u>Evan Wong</u> | Title: | <u>Environmental Team Representative</u> |
| Signature: | <u></u> | Date: | <u>3 November 2017</u> |
| Checked by: | <u>Keith Chau</u> | Title: | <u>Environmental Team Leader</u> |
| Signature: | <u></u> | Date: | <u>3 November 2017</u> |
| Copied to | : Contractor, Engineer Representative and IEC/ENPO | | |

| Contract No. HY/2013/01 - Hong Kong- Zhuhai- Macao Bridge Hong Kong Boundary Crossing Facilities – Passenger Clearance Building Notifications of Environmental Quality Limits Exceedances | | | | | | | Notification No.: 20171023SS |
|---|---------|---------------|--|--|---------------------------------|-----------------------------------|------------------------------|
| Date of Notification: 1 November 2017 | | | | Date of Investigation Report: 6 November 2017 | | | |
| Works Inspected: Data collected from water sampling works on 23 October 2017 and the results were issued on 1 November 2017 | | | | | | | |
| 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. 14.8 for mid-ebb/16.9 for mid-flood) of upstream control station's SS at the same tide of the same day | 34.4 and 130% (i.e. 16.0 for mid-ebb/18.3 for mid-flood) of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes | 10.4 | 26.3 | |
| 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 23 October 2017, one AL exceedance of SS at SR5(N) was recorded during mid-flood tide.



As confirmed by the Contractor, there was no marine transportation and marine-based work on 23 October 2017. 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:

As the exceedance was not related to the Contract, no immediate actions are required. However, the Contractor was also reminded to implement environmental mitigation measures in accordance with Environmental Mitigation Implementation Schedule.

Prepared by: Evan Wong Title: Environmental Team Representative

Signature:  Date: 6 November 2017

Checked by: Keith Chau Title: Environmental Team Leader

Signature:  Date: 6 November 2017

Copied to : Contractor, Engineer Representative and IEC/ENPO