

Contract No. HY/2011/03 - Hong Kong- Zhuhai- Macao Bridge Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities Notifications of Environmental Quality Limits Exceedances Notification No.: 149						
Date of Notification: 19 September 2013						
Works Inspected: Data collected from water sampling works on 6 September 2013 and the test report was issued on 13 September 2013.						
Monitoring Location: Water Quality Monitoring Stations						
Parameter: Dissolved Oxygen (DO)/ Suspended Solids (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)9	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 3.35 x 120% = 4.0 mg/L for mid ebb) AND CS(Mf)5: 4.40 x 120% = 5.3 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 3.35 x 130% = 4.4 mg/L for mid ebb) AND CS(Mf)5: 4.40 x 130% = 5.7 mg/L for mid flood)	4.6	24.4

Notes:
 DA means depth average.
Bold Italic means AL exceedances.
Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 6 September 2013, an AL exceedance at station IS(Mf)9 was recorded during mid-flood tide.

The exceedance has been investigated and is considered unlikely to be related to contract works due to the following reasons:

- Geotextile laying activity at Zone 1 and filling activities at Zone 3A and Zone 2 were carried within silt curtain as recommended in the EIA Report.
- The ranges of suspended solid at station IS(Mf)9 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide
IS(Mf)9	5.5 to 20.1	7.3 to 26

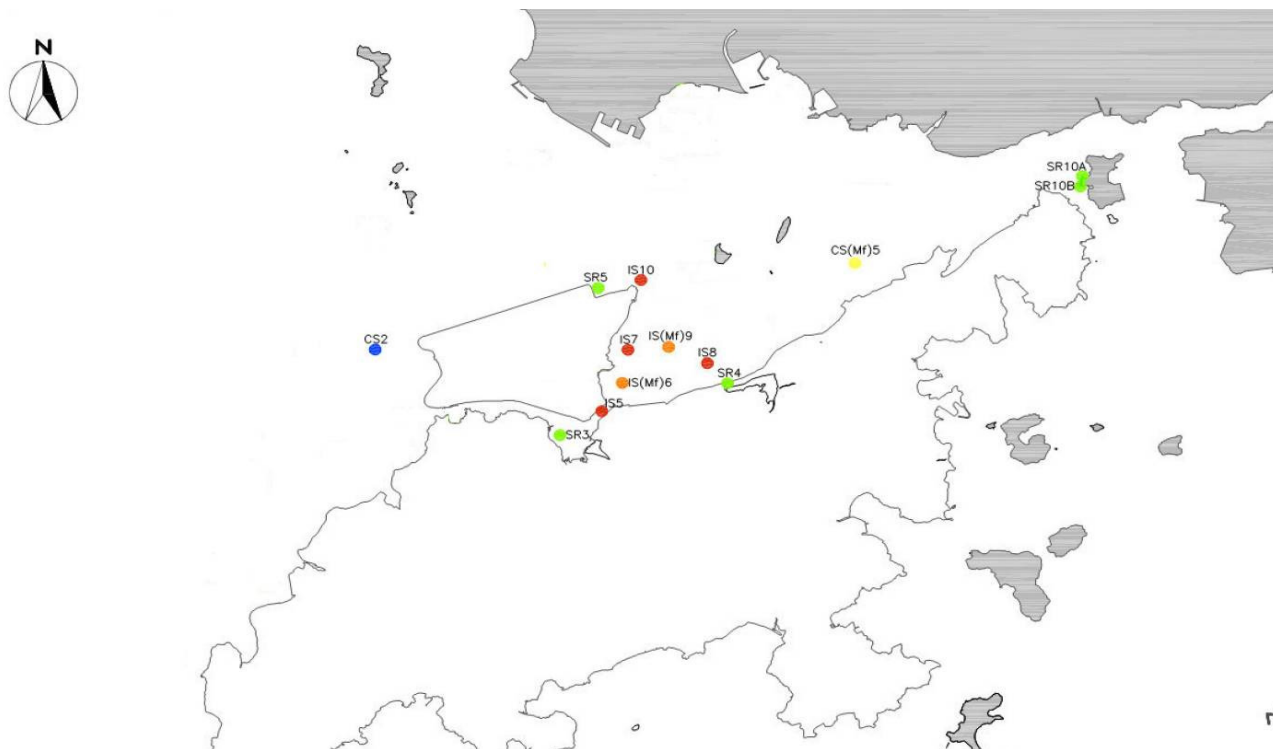
The measured value at station IS(Mf)9 was within the range of suspended solid during baseline monitoring for mid-flood tide.

- There were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.
- No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken: As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader

Date : 19 September 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Date of Notification: 4 October 2013

Works Inspected: Data collected from water sampling works on 16 September 2013 and the test report was issued on 23 September 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: ~~Dissolved Oxygen (DO)~~/ Suspended Solids (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)6	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 4.58 x 120% = 5.5 mg/L for mid ebb) AND CS(Mf)5: 6.70 x 120% = 8.0 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 4.58 x 130% = 6.0 mg/L for mid ebb) AND CS(Mf)5: 6.70 x 130% = 8.7 mg/L for mid flood)	24.9	12.5

Notes:
 DA means depth average.
Bold Italic means AL exceedances.
Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 16 September 2013, an AL exceedance at station IS(Mf)6 was recorded during mid-ebb tide.

The exceedance has been investigated and is considered unlikely to be related to contract works due to the following reasons:

- Geotextile laying activity and filling works at Zone 1, stone column installation and filling works at Zone 2 and stone column installation at Zone 3A were carried within silt curtain as recommended in the EIA Report.
- The ranges of suspended solid at station IS(Mf)6 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide		Range of Suspended Solid (mg/L) Mid- Flood Tide	
IS(Mf)6	7.1	to 19	8.5	to 35

The measured value at station IS(Mf)6 was above the range of suspended solid during baseline monitoring for mid-ebb tide. However, there were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.

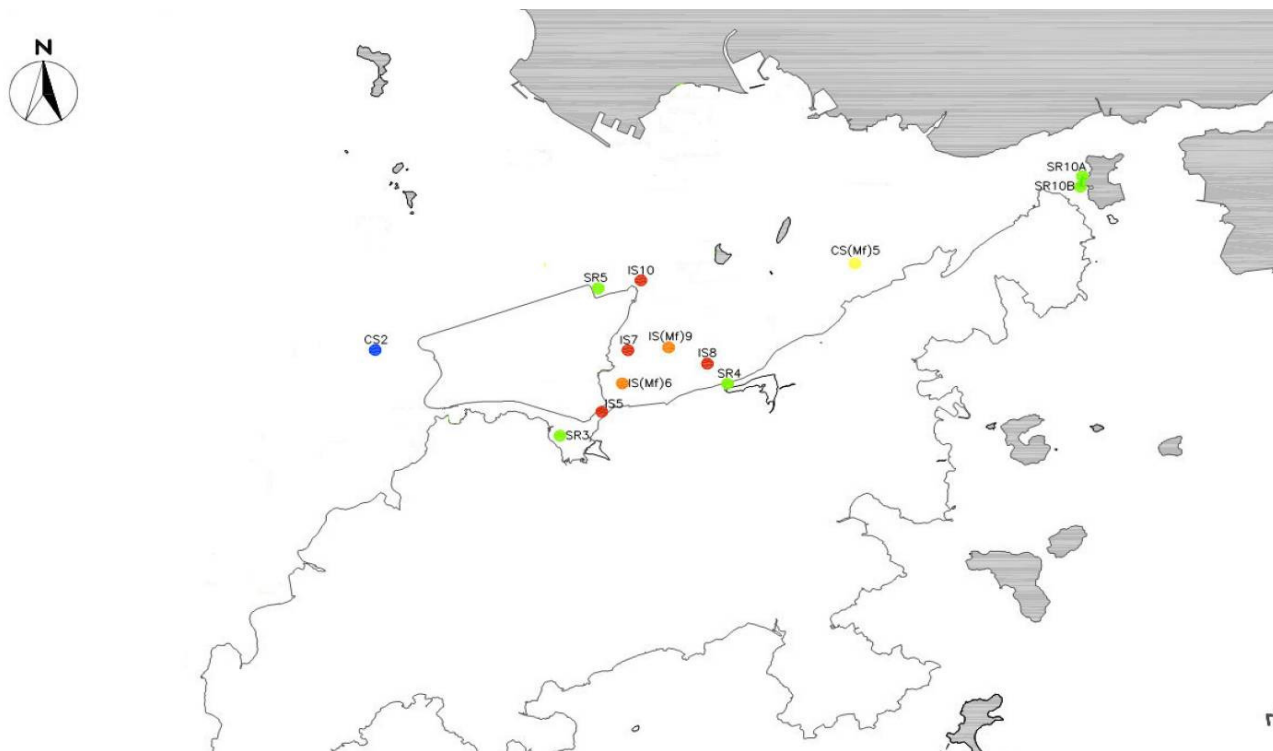
- No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

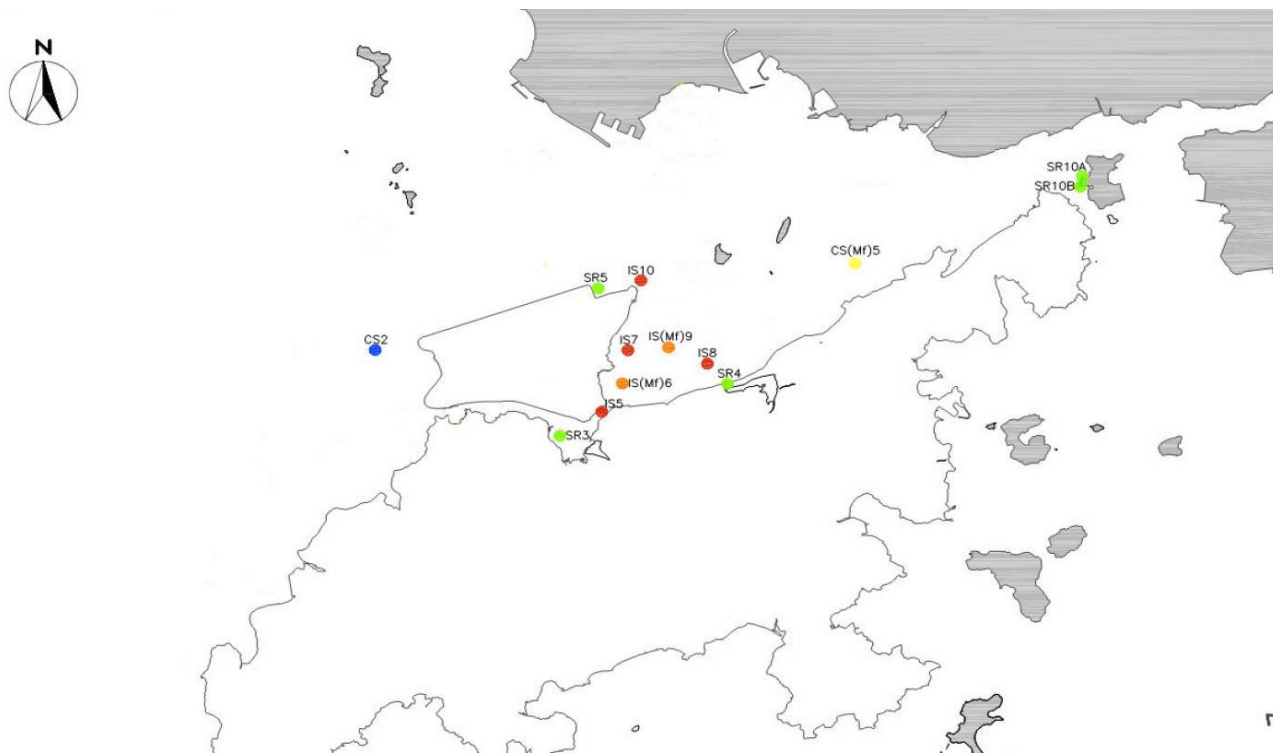
Title : ET Leader

Date : 4 October 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Contract No. HY/2011/03 - Hong Kong- Zhuhai- Macao Bridge Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities Notifications of Environmental Quality Limits Exceedances Notification No.: 151												
Date of Notification: 4 October 2013												
Works Inspected: Data collected from water sampling works on 18 September 2013 and the test report was issued on 26 September 2013.												
Monitoring Location: Water Quality Monitoring Stations												
Parameter: Dissolved Oxygen (DO) / Suspended Solids (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	SR4	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 6.08 x 120% = 7.3 mg/L for mid ebb) AND CS(Mf)5: 6.92 x 120% = 8.3 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 6.08 x 130% = 7.9 mg/L for mid ebb) AND CS(Mf)5: 6.92 x 130% = 9.0 mg/L for mid flood)	7.8	23.8						
<p>Notes: DA means depth average. <i>Bold Italic</i> means AL exceedances. <i><u>Bold Italic with underline</u></i> means LL exceedances.</p> <p>Possible reason for Action or Limit Level Non-compliance:</p> <p>On 18 September 2013, an AL exceedance at station SR4 was recorded during mid-flood tide.</p> <p>The exceedance has been investigated and is considered unlikely to be related to contract works due to the following reasons:</p> <ol style="list-style-type: none"> Stone column installation and filling works at Zone 2 and filling works at Zone 3B were carried within silt curtain as recommended in the EIA Report. The ranges of suspended solid at station SR4 during the baseline monitoring are shown as below: <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <tr> <th style="width: 10%;">Station</th> <th style="width: 40%;">Range of Suspended Solid (mg/L) Mid- Ebb Tide</th> <th style="width: 50%;">Range of Suspended Solid (mg/L) Mid- Flood Tide</th> </tr> <tr> <td>SR4</td> <td>5.3 to 20</td> <td>5.6 to 24.5</td> </tr> </table> <p>The measured value at station SR4 was within the range of suspended solid during baseline monitoring for mid-flood tide.</p> <ol style="list-style-type: none"> There were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results. No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise. <p>As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.</p>							Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide	SR4	5.3 to 20	5.6 to 24.5
Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide										
SR4	5.3 to 20	5.6 to 24.5										
<p>Actions taken/ to be taken:</p> <p>As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.</p>												

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader

Date : 4 October 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Date of Notification: 28 October 2013

Works Inspected: Data collected from water sampling works on 16 October 2013 and the test report was issued on 23 October 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: Dissolved Oxygen (DO)/ Suspended Solids (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)9	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 5.07 x 120% = 6.1 mg/L for mid ebb) AND CS(Mf)5: 4.80 x 120% = 5.8 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 5.07 x 130% = 6.6 mg/L for mid ebb) AND CS(Mf)5: 4.80 x 130% = 6.2 mg/L for mid flood)	16.5	<u>34.8</u>

Notes:
 DA means depth average.
Bold Italic means AL exceedances.
Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 16 October 2013, a LL exceedance at station IS(Mf) 9 was recorded during mid-flood tide.

The exceedance has been investigated and is considered unlikely to be related to contract works due to the following reasons:

- Filling works at Zone 1, stone column installation at Zone 2 and unloading of fill materials on stone platform at Zone 3A were carried out within silt curtain as recommended in the EIA Report.
- The ranges of suspended solid at station IS(Mf) 9 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide
IS(Mf)9	5.5 to 20.1	7.3 to 26

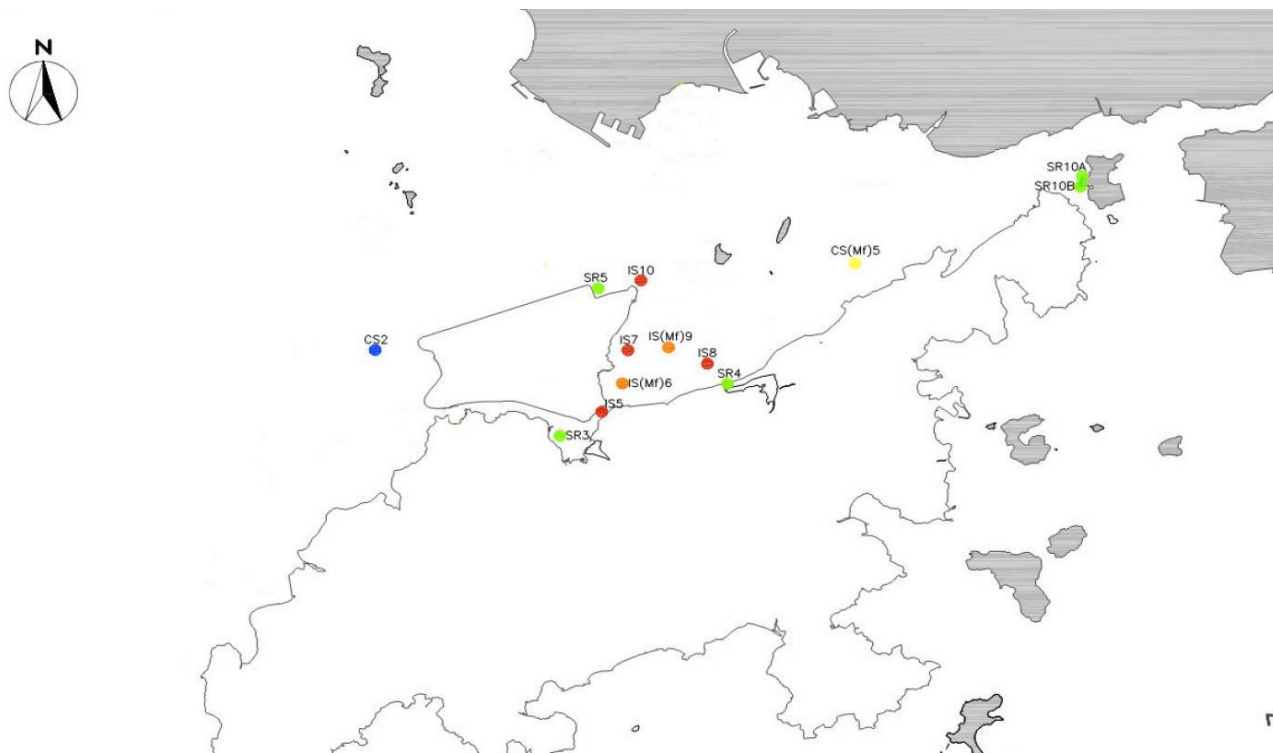
The measured value at station IS(Mf) 9 was above the range of suspended solid during baseline monitoring for mid-flood tide. However, there were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results as water quality mitigation measures were implemented as recommended in the EIA Report.

- No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.
- As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader

Date : 28 October 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Date of Notification: 13 November 2013

Works Inspected: Data collected from water sampling works on 18 October 2013 and the test report was issued on 25 October 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: ~~Dissolved Oxygen (DO)~~/ Suspended Solids (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	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 4.28 x 120% = 5.1 mg/L for mid ebb) AND CS(Mf)5: 3.13 x 120% = 3.8 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 4.28 x 130% = 5.6 mg/L for mid ebb) AND CS(Mf)5: 3.13 x 130% = 4.1 mg/L for mid flood)	7.5	24.1

Notes:

DA means depth average.

Bold Italic means AL exceedances.

Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 18 October 2013, an AL exceedance at station IS7 was recorded during mid-flood tide.

The exceedance has been investigated and is considered unlikely to be related to contract works due to the following reasons:

1. Stone column works/installation, filling and leveling of stone platform at Zone 2, stone column installation, sand filling, transfer of fill material, filling and leveling of stone platform at Zone 3A, and fill material transfer between barges at Zone 3C. Silt curtains are installed enclosing the filling activities and silt curtains are fully maintained throughout the works as recommended in the EIA Report. In addition, cover was placed between barges during transfer of fill material at Zone 3C.
2. The ranges of suspended solid at station IS7 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide		Range of Suspended Solid (mg/L) Mid- Flood Tide	
IS7	6.1	to 21	7.8	to 34

The measured value at station IS7 was within the range of suspended solid during baseline monitoring for mid-flood tide.

3. There were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.
4. No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader

Date : 13 November 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Contract No. HY/2011/03 - Hong Kong- Zhuhai- Macao Bridge Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities Notifications of Environmental Quality Limits Exceedances					Notification No.: 154 (ver2)	
Date of Notification: 13 November 2013						
Works Inspected: Data collected from water sampling works on 25 October 2013 and the test report was issued on 1 November 2013.						
Monitoring Location: Water Quality Monitoring Stations						
Parameter: Dissolved Oxygen (DO)/ Suspended Solids (SS)/ Turbidity (TURB)						
Action & Limit Level (AL & LL) / Measured Level:						
PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)
SS	IS10	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 14.20 x 120% = 17.0 mg/L for mid ebb) AND CS(Mf)5: 7.42 x 120% = 8.9 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 14.20 x 130% = 18.5 mg/L for mid ebb) AND CS(Mf)5: 7.42 x 130% = 9.6 mg/L for mid flood)	17.5	57.8
SS	SR5	DA			18.4	56.9
Notes: DA means depth average. Bold Italic means AL exceedances. Bold Italic with underline means LL exceedances.						
Possible reason for Action or Limit Level Non-compliance:						
On 25 October 2013, LL exceedances at stations IS10 and SR5 were recorded during mid-flood tide.						
The exceedances have been investigated and are considered unlikely to be related to contract works due to the following reasons:						
1. Filling and leveling of stone platform between Zone 1 and 2, stone column works and sand filling at Zone 2, stone column installation, fill material transfer and unloading of fill materials on stone platform at Zone 3A were carried within silt curtain as recommended in the EIA Report.						
2. The ranges of suspended solid at station IS10 and SR5 during the baseline monitoring are shown as below:						
Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide			Range of Suspended Solid (mg/L) Mid- Flood Tide		
IS10	6.1	to	20.2	7.2	to	16
SR5	6.7	to	16.5	6.5	to	31.2
The measured value at stations IS10 and SR5 were above the range of suspended solid during baseline monitoring for mid-flood tide. However, there were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.						
3. No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.						
As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.						
Actions taken/ to be taken:						
As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.						

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader

Date : 27 November 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Contract No. HY/2011/03 - Hong Kong- Zhuhai- Macao Bridge Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities Notifications of Environmental Quality Limits Exceedances Notification No.: 155 (ver1)															
Date of Notification: 19 November 2013															
Works Inspected: Data collected from water sampling works on 6 November 2013 and the test report was issued on 13 November 2013.															
Monitoring Location: Water Quality Monitoring Stations															
Parameter: Dissolved Oxygen (DO)/ Suspended Solids (SS)/ Turbidity (TURB)															
Action & Limit Level (AL & LL) / Measured Level:															
PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)									
SS	IS10	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 9.67 x 120% = 11.6 mg/L for mid ebb) AND CS(Mf)5: 9.60 x 120% = 11.5 mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 9.67 x 130% = 12.6 mg/L for mid ebb) AND CS(Mf)5: 9.60 x 130% = 12.5 mg/L for mid flood)	7.1	28.3									
SS	SR5	DA			10.3	29.3									
<p>Notes: DA means depth average. <i>Bold Italic</i> means AL exceedances. <i><u>Bold Italic with underline</u></i> means LL exceedances.</p> <p>Possible reason for Action or Limit Level Non-compliance:</p> <p>On 6 November 2013, AL exceedances at stations IS10 and SR5 were recorded during mid-flood tide.</p> <p>The exceedances have been investigated and are considered unlikely to be related to contract works due to the following reasons:</p> <ol style="list-style-type: none"> Sand filling at Zone 1, stone column work at Zone 2, sand filling, public fill filling, transfer of public fill material and sand and stone column work at zone 3A were carried within silt curtain as recommended in the EIA Report. The ranges of suspended solid at stations IS10 and SR5 during the baseline monitoring are shown as below: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>Station</th> <th>Range of Suspended Solid (mg/L) Mid- Ebb Tide</th> <th>Range of Suspended Solid (mg/L) Mid- Flood Tide</th> </tr> </thead> <tbody> <tr> <td>IS10</td> <td>6.1 to 20.2</td> <td>7.2 to 16</td> </tr> <tr> <td>SR5</td> <td>6.7 to 16.5</td> <td>6.5 to 31.2</td> </tr> </tbody> </table> <p>The measured value at station SR5 was within the range of suspended solid during baseline monitoring for mid-flood tide while the measured value at station IS10 was above the range of suspended solid during baseline monitoring for mid-flood tide. However, there were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.</p> No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise. <p>As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.</p>							Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide	IS10	6.1 to 20.2	7.2 to 16	SR5	6.7 to 16.5	6.5 to 31.2
Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide	Range of Suspended Solid (mg/L) Mid- Flood Tide													
IS10	6.1 to 20.2	7.2 to 16													
SR5	6.7 to 16.5	6.5 to 31.2													
<p>Actions taken/ to be taken:</p> <p>As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.</p>															

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader

Date : 27 November 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Contract No. HY/2011/03 -

Hong Kong- Zhuhai- Macao Bridge

Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities

Notifications of Environmental Quality Limits Exceedances

Notification No.: 156

Date of Notification: 25 November 2013

Works Inspected: Data collected from water sampling works on 11 November 2013 and the test report was issued on 18 November 2013.

Monitoring Location: Water Quality Monitoring Stations

Parameter: Dissolved Oxygen (DO)/ Suspended Solids (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)6	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: $6.67 \times 120\% = 8.0$ mg/L for mid ebb) AND CS(Mf)5: $5.07 \times 120\% = 6.1$ mg/L for mid flood)	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: $6.67 \times 130\% = 8.7$ mg/L for mid ebb) AND CS(Mf)5: $5.07 \times 130\% = 6.6$ mg/L for mid flood)	27.7	31.5

Notes:

DA means depth average.

Bold Italic means AL exceedances.

Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 11 November 2013, AL exceedances at station IS(Mf)6 were recorded during mid-ebb tide and mid-flood tide.

The exceedances have been investigated and are considered unlikely to be related to contract works due to the following reasons:

- Sand filling at Zones 2 and 3A, filling public fill at Zone 3A, transferring fill material at Zone 3A, transferring sand at Zone 3A and installation of stone column at Zone 2 were carried within silt curtain as recommended in the EIA Report.
- The ranges of suspended solid at stations IS(Mf)6 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide		Range of Suspended Solid (mg/L) Mid- Flood Tide	
IS(Mf)6	7.1	to 19	8.5	to 35

The measured value at station IS(Mf)6 was within the range of suspended solid during baseline monitoring for mid-flood tide while the measured value at station IS(Mf)6 was above the range of suspended solid during baseline monitoring for mid-ebb tide. However, there were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.

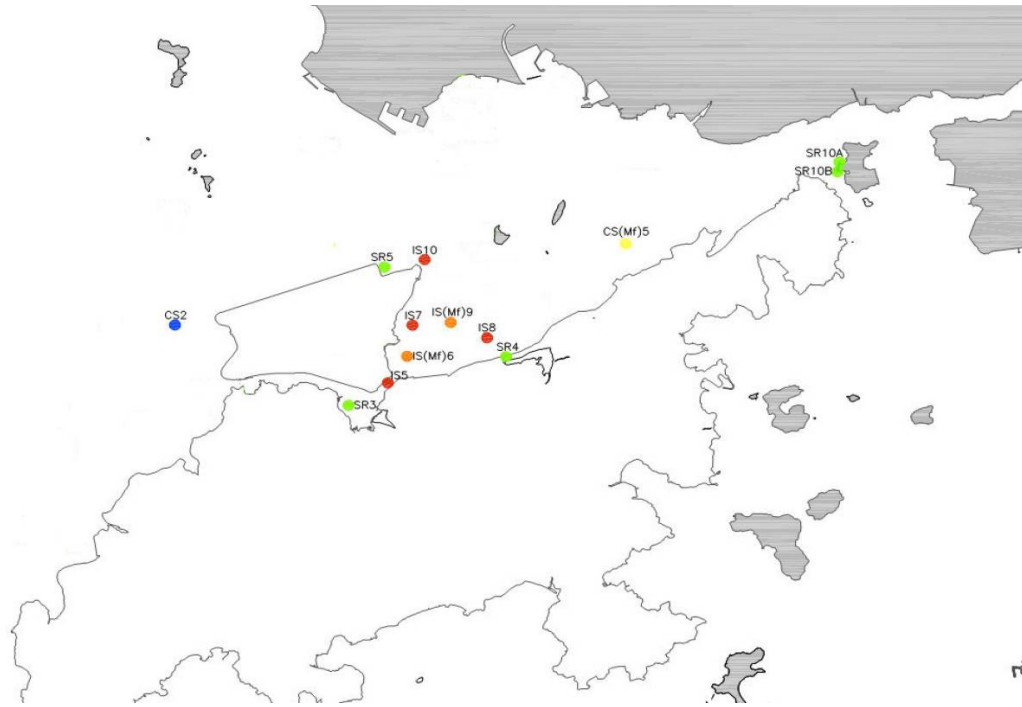
- No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader

Date : 25 November 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Date of Notification: 5 December 2013

Works Inspected: Data collected from water sampling works on 22 November 2013 and the test report was issued on 29 November 2013.

Monitoring Location: Water Quality Monitoring Stations

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

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

PARAM	STATION	DEPTH	AL (mg/L)	LL (mg/L)	MEASURED AT MID-EBB TIDE (mg/L)	MEASURED AT MID-FLOOD TIDE (mg/L)
SS	IS5	DA	23.5 and 120% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 5.12 x 120% = 6.1 mg/L for mid ebb) AND	34.4 and 130% of upstream control station's suspended solid at the same tide of the same day (i.e. CS2: 5.12 x 130% = 6.7 mg/L for mid ebb) AND	15.1	25.4
SS	SR3	DA	CS(Mf)5: 8.12 x 120% = 9.7 mg/L for mid flood)	CS(Mf)5: 8.12 x 130% = 10.6 mg/L for mid flood)	14.2	24.2

Notes:
 DA means depth average.
Bold Italic means AL exceedances.
Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 22 November 2013, AL exceedances at stations IS5 and SR3 were recorded during mid-flood tide.

The exceedances have been investigated and are considered unlikely to be related to contract works due to the following reasons:

- Sand filling and installation of stone column at Zone 1, installation of stone column at Zone 2, and transferring of fill material and sand, filling of public fill and rock and installation of stone column at Zone 3A were carried within silt curtain as recommended in the EIA Report.
- The ranges of suspended solid at stations IS5 and SR3 during the baseline monitoring are shown as below:

Station	Range of Suspended Solid (mg/L) Mid- Ebb Tide		Range of Suspended Solid (mg/L) Mid- Flood Tide	
IS5	8.1	to 25.7	7	to 23.7
SR3	6.7	to 31	7.6	to 28

The measured value at station SR3 was within the range of suspended solid during baseline monitoring for mid-flood tide while the measured value at station IS5 was above the range of suspended solid during baseline monitoring for mid-flood tide. However, there were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.

- No leakage of turbid water or any abnormality or malpractice was observed during the sampling exercise.

As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.

Actions taken/ to be taken:

As the suspended solid levels recorded beyond the water quality criteria were not related to contract works, no immediate actions are considered necessary.

Location Plan:



Reviewed by : Claudine Lee

Title : ET Leader



Date : 5 December 2013

Copied to : Supervising Officer, IEC, EPD, Contractor, ENPO

Contract No. HY/2011/03 - Hong Kong- Zhuhai- Macao Bridge Hong Kong Link Road Section between Scenic Hill and Hong Kong Boundary Crossing Facilities Notifications of Environmental Quality Limits Exceedances			Notification No.: 158
Date of Notification: 6 January 2014			
Works Inspected: Not Applicable			
Monitoring Location: NEL & NWL			
Parameter: Ecology (Chinese White Dolphin Monitoring)			
Action & Limit Levels		Monitoring Results	
	North Lantau Social Cluster		The quarter of September 2013-November 2013
	Action Level (AL)	Limit Level (LL)	
Northeast Lantau (NEL)	STG < 4.2 & ANI < 15.4	NEL: (STG < 2.4 & ANI < 8.9) and NWL: (STG < 3.9 & ANI < 17.9)	<i>STG = 1.01; ANI = 3.77</i>
Northwest Lantau (NWL)	STG < 6.9 & ANI < 31.3		STG = 8.04; ANI = 32.48
Notes: 1. STG means quarterly encounter rate of number of dolphin sightings. 2. ANI means quarterly encounter rate of total number of dolphins. 3. For North Lantau Social Cluster, AL will be triggered if either NEL or NWL falls below the criteria; LL will be triggered if both NEL and NWL fall below the criteria. 4. <i>Bold Italic</i> means AL exceedances. 5. <i><u>Bold Italic with underline</u></i> means LL exceedances			
Possible reason for Action Level Non-compliance: According to the contractor's information, the marine activities undertaken for HKLR03 during the two quarterly periods (June to August 2013 and September to November 2013) included stone platform construction, reclamation, stone column installation, band drain installation and excavation of stone platform. During the quarterly period of September to November 2013, geotextile laying activities were also carried out. There is no evidence showing the current AL non-compliance directly related to the construction works of HKLR03. It should also be noted that reclamation work under HKLR03 (adjoining the Airport Island) situates in waters which has rarely been used by dolphins in the past, and the working vessels under HKLR03 have been travelling from source to destination in accordance with the Marine Travel Route to minimize impacts on Chinese White Dolphin. In addition, the contractor will implement proactive mitigation measures such as avoiding anchoring at Marine Department's designated anchorage site – Sham Shui Kok Anchorage (near Brothers Island) as far as practicable.			
Actions taken/ to be taken: <u>Inform the IEC, ER/SOR and Contractor</u> The ETL informed IEC, ENPO SOR and Contractor via email on 10 December 2013. <u>Repeat statistical data analysis to confirm findings and check monitoring data:</u> A two-way ANOVA with repeated measures and unequal sample size was conducted to examine whether there were any significant differences in the average encounter rates between the baseline and impact monitoring periods. The two variables that were examined included the two periods (baseline and impact phases) and two locations (NEL and NWL). For the comparison between the baseline period and the present quarter (fourth quarter of the impact phase), the p-value for the differences in average dolphin encounter rates of STG and ANI were 0.1424 and 0.2339 respectively. If the alpha value is set at 0.1, no significant difference was detected between the baseline and present quarters in the average dolphin encounter rates of STG and ANI. For the comparison between the baseline period and the cumulative quarters in impact phase (i.e. first four quarters of the impact phase), the p-value for the differences in average dolphin encounter rates of STG and ANI were 0.0366 and 0.0179 respectively. If the alpha value is set at 0.1, significant difference was detected in both the average dolphin encounter rates of STG and ANI (i.e. between the two periods and the locations). <u>Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences:</u> The AFCD monitoring data during September-November 2013 has been reviewed by the dolphin specialist, and only two groups of three dolphins were sighted from 77.81 km of survey effort on primary lines in NEL during the same quarter. This review has confirmed that the very low occurrence of dolphins reported by the HKLR03 monitoring survey in summer 2013 in NEL is accurate. <u>Identify source(s) of impact:</u> There is no evidence showing that the sources of impact directly related to the construction works of HKLR03 that may have affected the dolphin usage in the NEL region.			

Recommendations/ mitigation measures/ actions if necessary:

Review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary:

All dolphin protective measures are fully and properly implemented in accordance with the EM&A Manual. In order to minimise disturbance to the Brother's Island, the Contractor provide training to skippers to ensure that their working vessels travel from source to destination to minimize impacts on Chinese White Dolphin and avoid anchoring at Marine Department's designated anchorage site - Sham Shui Kok Anchorage (near Brothers Island) as far as practicable.

Reviewed by : Claudine Lee Title : ET Leader



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Summary of Notifications of Summons and Prosecutions

Total No. of Notifications of Summons / Prosecutions Received	No. of Notifications of Summons / Prosecutions Received during Reporting Period	Status of Notifications of Summons / Prosecutions
0	0	N/A