

**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.: 143

Date of Notification: 17 June 2013

Works Inspected: Data collected from water sampling works on 10 June 2013 and the test report was issued on 11 June 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)
DO	IS5	Bottom	5	4.2	5.2	<i>4.5</i>
DO	IS10	Bottom			<i>4.6</i>	<i>4.5</i>
DO	SR10B	Surface	5	5	7.2	<i><u>4.4</u></i>
DO	SR10B	Bottom			7.2	<i><u>4.4</u></i>

Notes:

Bold Italic means AL exceedances.

Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 10 June 2013, an AL exceedance at station IS10 was recorded at the bottom level during the mid-ebb tide. AL exceedances at stations IS5 and IS10 were recorded at the bottom level during the mid-flood tide. LL exceedances at station SR10B were recorded at the surface level and the bottom level during the mid-flood tide.

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

1. Installation of stone column which is a land-based construction activity was carried out at Zone 1 and Zone 3A on 10 June 2013. There were no marine construction activities on 10 June 2013.
2. The range of dissolved oxygen at stations IS5, IS10, SR10B during the baseline monitoring are shown as below:

Station	Depth	Range of Dissolved Oxygen (mg/L) Mid-Ebb Tide		Range of Dissolved Oxygen(mg/L) Mid-Flood Tide	
IS5	Bottom	3.3	to 8.6	2.9	to 9.4
IS10	Bottom	4.6	to 7.0	4.9	to 7.0
SR10B	Surface	5.2	to 9.0	5.0	to 8.4
SR10B	Bottom	5.6	to 9.3	4.9	to 7.6

The measured value at station IS5 and IS10 at the bottom level during mid flood tide and at station IS10 at the bottom level during mid-ebb tide were within the range of dissolved oxygen during the baseline monitoring. The measured value at stations SR10B at the surface level and bottom level during mid-flood tide were slightly below the range of dissolved oxygen.

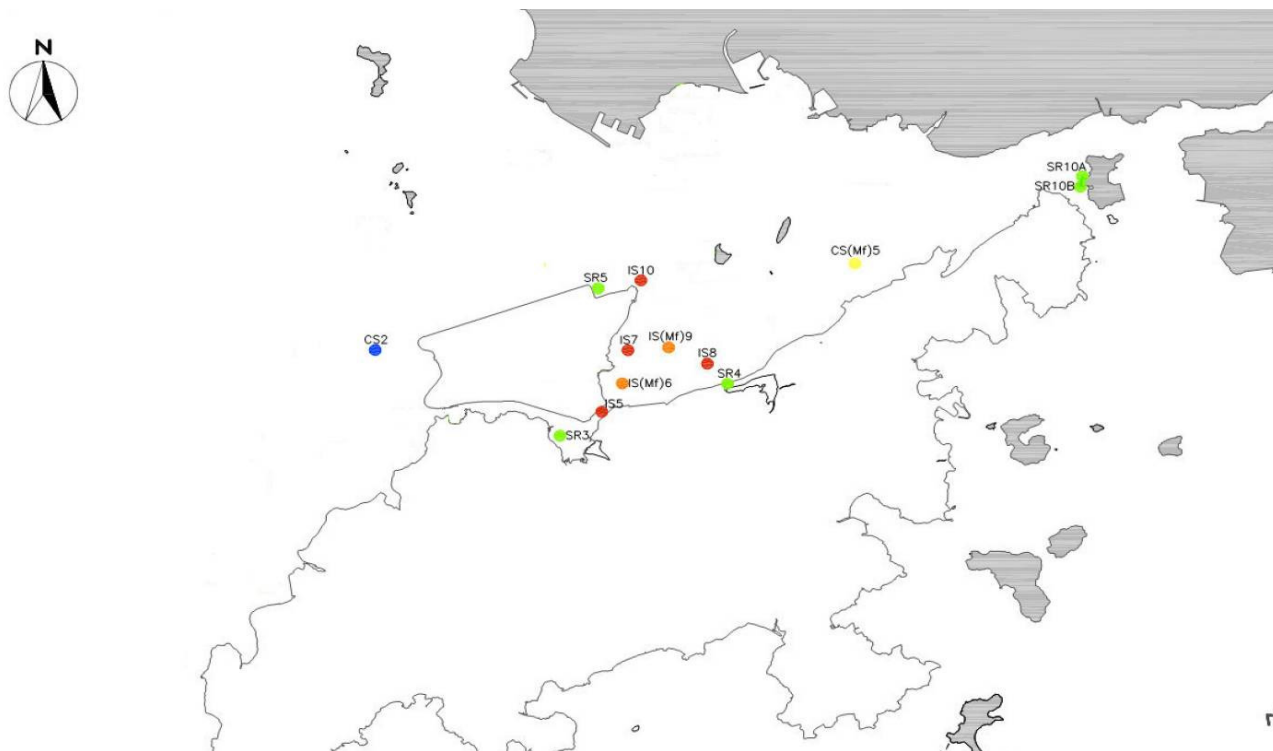
3. There were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.

As such, the exceedances in DO levels are considered to be attributed to other external factors rather than the contract works.

Actions taken/ to be taken:

As the DO 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

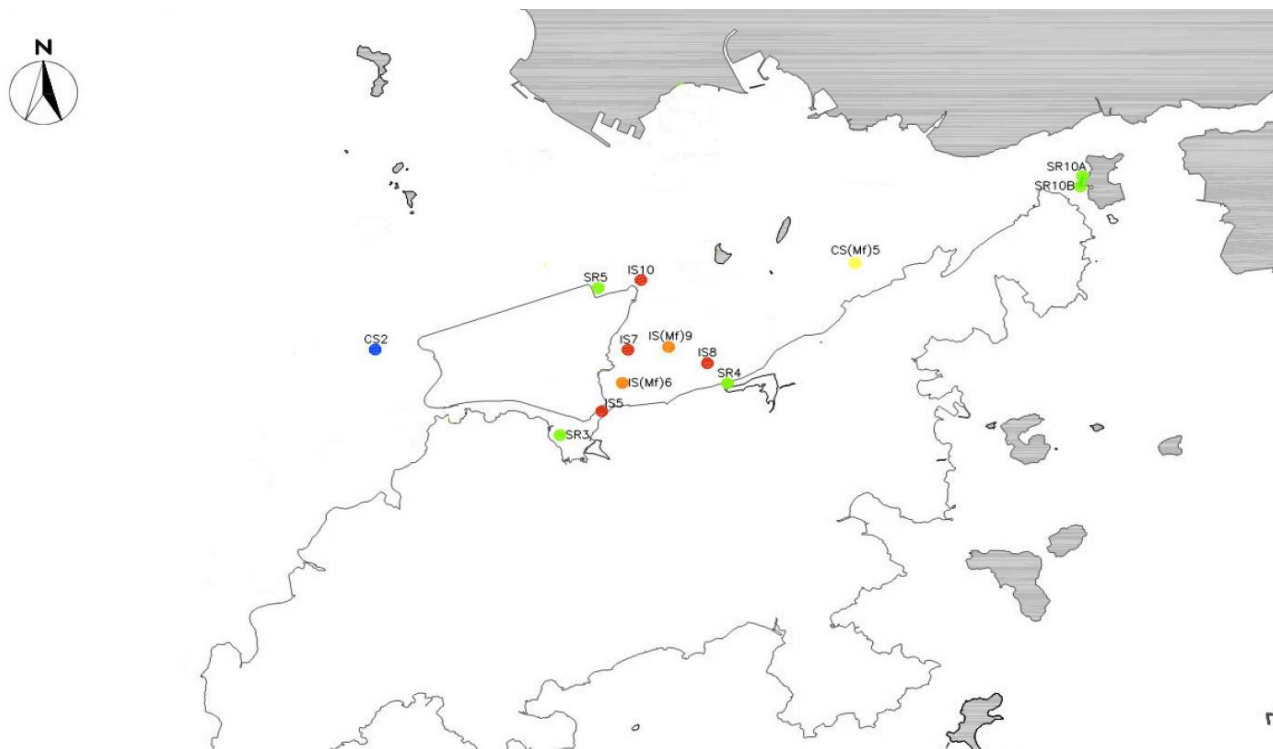


Date : 17 June 2013

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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.: 144						
Date of Notification: 5 July 2013						
Works Inspected: Data collected from water sampling works on 24 June 2013 and the test report was issued on 2 July 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: $3.12 \times 120\% = 3.7$ mg/L for mid ebb) AND CS(Mf)5: $4.02 \times 120\% = 4.8$ 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: $3.12 \times 130\% = 4.1$ mg/L for mid ebb) AND CS(Mf)5: $4.02 \times 130\% = 5.2$ mg/L for mid flood)	<u>47.3</u>	N.A.
<p>Notes: DA means depth average. <i>Bold Italic</i> means AL exceedances. <i>Bold Italic with underline</i> means LL exceedances. Due to adverse weather condition, the water quality monitoring was cancelled at SR4 during mid-flood tide.</p> <p>Possible reason for Action or Limit Level Non-compliance:</p> <p>On 24 June 2013, a LL exceedance at station SR4 was recorded during mid-ebb 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"> 1. There were no marine construction activities on 24 June 2013 at the station SR4. 2. 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. <p>As such, the suspended solid levels are considered to be attributed to other external factors, rather than the contract works.</p>						
<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 : 5 July 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.: 145
Date of Notification: 8 July 2013				
Works Inspected: Not Applicable				
Monitoring Location: Not Applicable				
Parameter: Noise				
Action & Limit Levels			Description	
Time Period	Action Level	Limit Level	One Action Level exceedance was recorded as there was a noise complaint received on 29 June 2013. The complaint was related to noise generated from the works area near the site office (WA6) around 10:00 hrs on 29 June 2013.	
07:00–19:00 hrs Normal weekday	1 complaint	75 dB(A)		
Possible reason for Action or Limit Level Non-compliance:				
According to the site diary provided by the Contractor, electric circular saw was used to cut plastic tubes for maintenance work at the works area near the site office (Work area WA6) from 09:45 to 10:15 hrs of 29 June 2013.				
A site inspection was undertaken on 2 July 2013, no construction works was undertaken at work area near the site office (Work area WA6). No significant noise was generated from the site.				
As the electric circular saw was used for maintenance work and there was no significant noise generated from the site, the complaint was considered invalid.				
The site diary for the complaint time period of 29 June 2013 and location plan of work area WA6 are attached for information.				
Actions taken/ to be taken:				
As the complaint is not due to the project works, no mitigation measure/actions are considered necessary.				
Recommendations/ mitigation measures/ actions if necessary:				
The Contractor was recommended to minimize the potential noise impacts generated from the construction sites as far as practicable in future.				

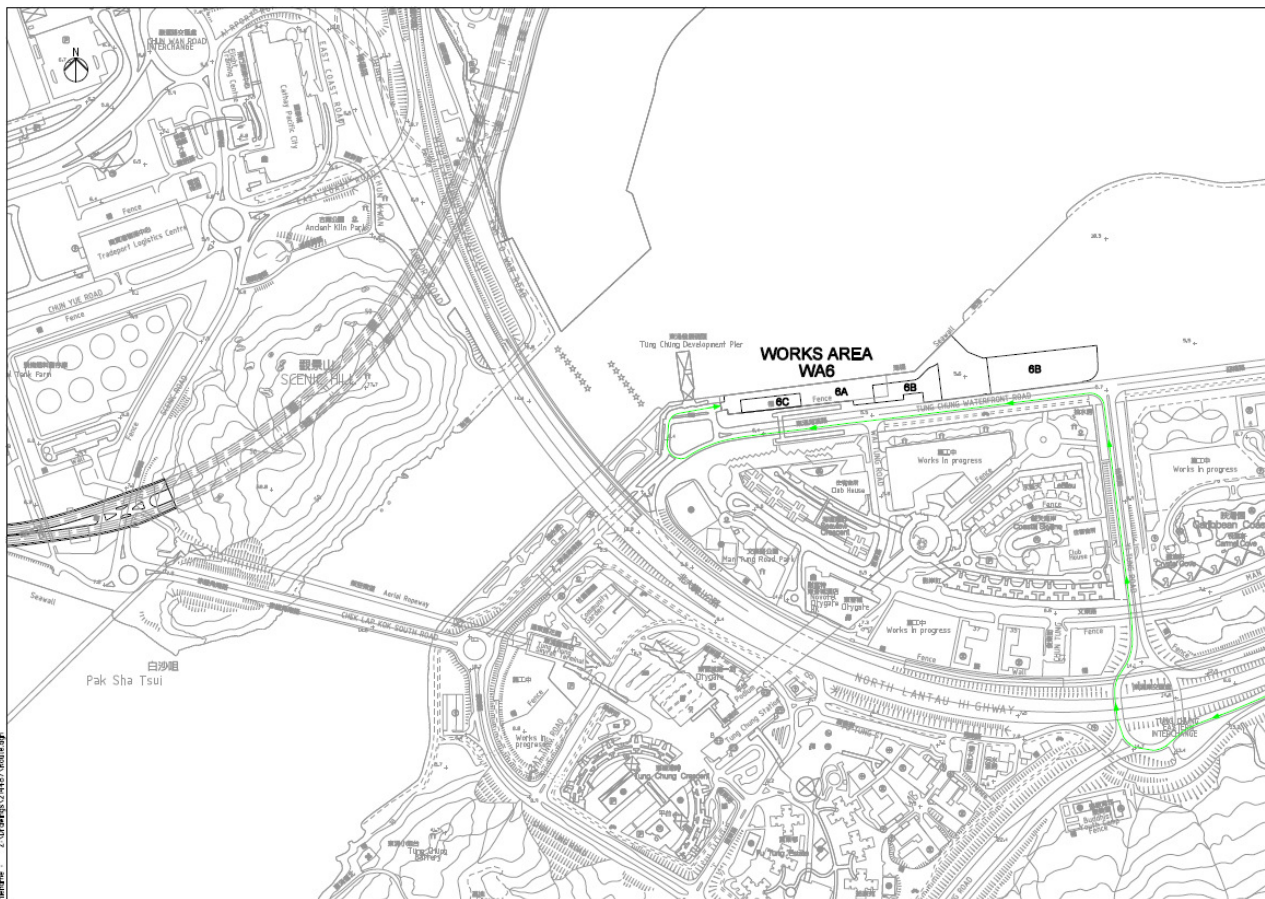
Reviewed by : Claudine Lee Title : ET Leader



Date : 8 July 2013

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Site Diary for WA6 (Works Area of Site Office) on 29 June 2013

Location	Time	Plant Name	Plant Type	Working Status	CNP No.	Group
WA6	9:45 - 10:15	N/A	Electric circular saw	Electric circular saw was used to cut plastic tubes for maintenace work	N/A	N/A

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.: 146
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Date of Notification: 5 August 2013
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Works Inspected: Data collected from water sampling works on 29 July 2013 and the test report was issued on 30 July 2013.
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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)
DO	SR10B	Surface	5	5	6.1	<u>4.8</u>

Notes:
Bold Italic means AL exceedances.
Bold Italic with underline means LL exceedances.

Possible reason for Action or Limit Level Non-compliance:

On 29 July 2013, a LL exceedance at station SR10B was recorded at the surface level during the mid-flood tide.

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

- Marine cconstruction activities including rock filling and laying of geotextile at Zone 1, sand filling at Zone 3A were carried out within silt curtain as recommended in the EIA report on 29 July 2013.
- The range of dissolved oxygen at station SR10B during the baseline monitoring are shown as below:

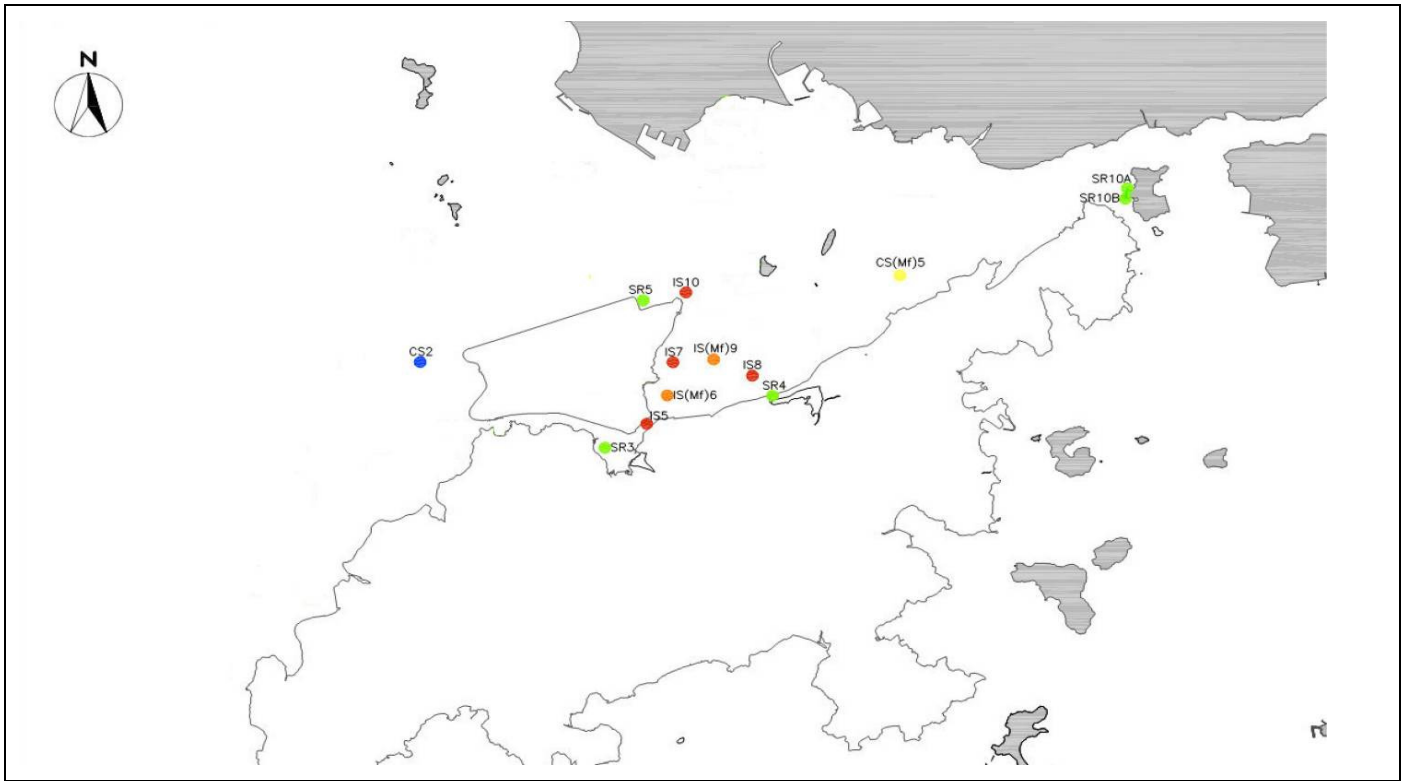
Station	Depth	Range of Dissolved Oxygen (mg/L) Mid-Ebb Tide	Range of Dissolved Oxygen(mg/L) Mid-Flood Tide
SR10B	Surface	5.2 to 9.0	5.0 to 8.4


The measured value at station SR10B at the surface level during mid-flood tide was slightly below the range of dissolved oxygen during the baseline monitoring.
- There were no specific activities recorded during the monitoring period that would cause any significant impacts on the monitoring results.

As such, the exceedance in DO levels is considered to be attributed to other external factors rather than the contract works.

Actions taken/ to be taken: As the DO level recorded beyond the water quality criteria was not related to contract works, no immediate actions are considered necessary.
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Location Plan:



Reviewed by : Claudine Lee


Title : ET Leader

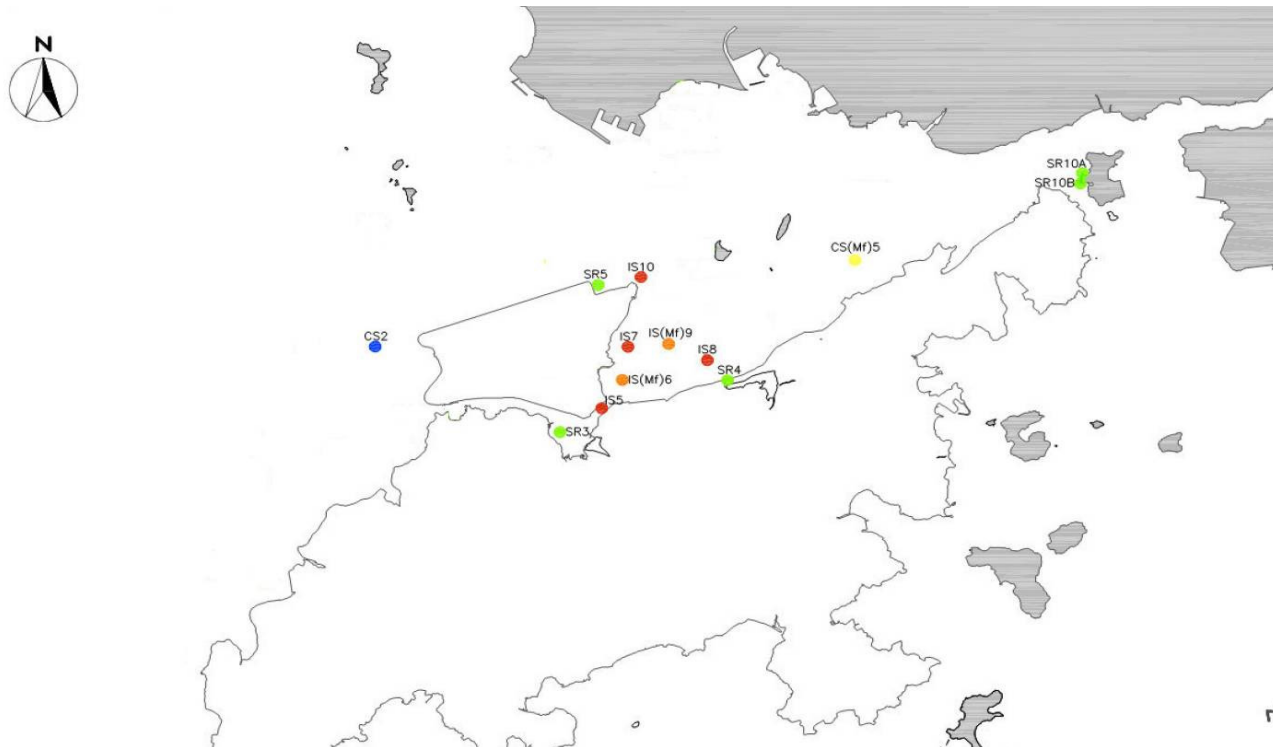
Date : 5 August 2013

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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.: 147																																				
Date of Notification: 30 August 2013																																									
Works Inspected: Data collected from water sampling works on 7 August 2013 and the test report was issued on 15 August 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: 6.72 x 120% = 8.1 mg/L for mid ebb) AND CS(Mf)5: 10.97 x 120% = 13.2 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: 6.72 x 130% = 8.7 mg/L for mid ebb) AND CS(Mf)5: 10.97 x 130% = 14.3 mg/L for mid flood)	25.5	11.7																																			
SS	IS(Mf)6	DA			24.3	17.6																																			
SS	IS7	DA			24.7	15.1																																			
SS	SR3	DA			26.4	10.7																																			
<p>Notes: DA means depth average. <i>Bold Italic</i> means AL exceedances. <i>Bold Italic with underline</i> means LL exceedances.</p> <p>Possible reason for Action or Limit Level Non-compliance:</p> <p>On 7 August 2013, AL exceedances at station IS5, IS(Mf)6, IS7 and SR3 were recorded during mid-ebb 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">Filling and geotextile laying activity were carried within silt curtain as recommended in the EIA Report.The ranges of suspended solid at station IS5, IS(Mf)6, IS7 and SR3 during the baseline monitoring are shown as below: <table><tr><td>Station</td><td colspan="3">Range of Suspended Solid (mg/L) Mid- Ebb Tide</td><td colspan="3">Range of Suspended Solid (mg/L) Mid- Flood Tide</td></tr><tr><td>IS5</td><td>8.1</td><td>to</td><td>25.7</td><td>7</td><td>to</td><td>23.7</td></tr><tr><td>IS(Mf)6</td><td>7.1</td><td>to</td><td>19</td><td>8.5</td><td>to</td><td>35</td></tr><tr><td>IS7</td><td>6.1</td><td>to</td><td>21</td><td>7.8</td><td>to</td><td>34</td></tr><tr><td>SR3</td><td>6.7</td><td>to</td><td>31</td><td>7.6</td><td>to</td><td>28</td></tr></table> <p>The measured value at stations IS5 and SR3 were within the range of suspended solid during baseline monitoring for mid-ebb 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			IS5	8.1	to	25.7	7	to	23.7	IS(Mf)6	7.1	to	19	8.5	to	35	IS7	6.1	to	21	7.8	to	34	SR3	6.7	to	31	7.6	to	28
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																																			
IS(Mf)6	7.1	to	19	8.5	to	35																																			
IS7	6.1	to	21	7.8	to	34																																			
SR3	6.7	to	31	7.6	to	28																																			

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 : 30 August 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.: 148
Date of Notification: 23 September 2013			
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 June 2013-August 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)	STG = 0.88; ANI = 3.91
Northwest Lantau (NWL)	STG < 6.9 & ANI < 31.3		STG = 6.56; ANI = 27.00
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 (March to May 2013 and June to August 2013) included stone platform construction, reclamation, stone column installation, band drain installation and excavation of stone platform. During the quarterly period of June to August 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 11 September 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 (third quarter of the impact phase), the p-value for the differences in average dolphin encounter rates of STG and ANI were 0.0611 and 0.1508 respectively. If the alpha value is set at 0.1 (due to the small sample size with lower statistical power in the analysis), significant difference was detected between the baseline and present quarters in the average dolphin encounter rate of STG, but not in the average dolphin encounter rate of 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 0.0559 and 0.0244 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 June-August 2013 has been reviewed by the dolphin specialist, and only one group of six dolphins were sighted from 126.03 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



Date : 23 September 2013

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

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