

**Contract No. HK 12/02**  
**Central Reclamation Phase III – Engineering Works**  
**Environmental Permit No.: FEP- 01/122/2003**

**Certification and Verification**  
**Modification to Environmental Monitoring & Audit (Marine Water Quality)**

**ET Leader Certification**

The major reclamation works of CR3III Project have now been substantially completed. The majority of works are now land-based, and the minimal remaining marine works will largely be undertaken behind seawalls. As such, the following changes to the marine water quality programme shall take effect from August 2009 as shown below.

<b>Current Programme (Total 14 Stations)</b>	<b>Modified Programme (Total 8 Stations)</b>
<b>Intake Impact Stations</b>	
<ul style="list-style-type: none"> <li>• M1A</li> <li>• M2A</li> <li>• M3_M5A</li> <li>• M4B</li> <li>• M5B</li> <li>• M6</li> <li>• M11</li> <li>• M12</li> </ul>	<ul style="list-style-type: none"> <li>• M1A</li> <li>• M4B</li> <li>• M5B</li> <li>• M6</li> </ul>
<b>Marine-Based Stations</b>	
<u>Impact</u> <ul style="list-style-type: none"> <li>• M8</li> <li>• M10</li> </ul> <u>Indicating</u> <ul style="list-style-type: none"> <li>• M7</li> <li>• M9</li> </ul>	<u>Impact</u> <ul style="list-style-type: none"> <li>• M7</li> <li>• M9</li> </ul>
<b>Control Stations</b>	
<ul style="list-style-type: none"> <li>• C1</li> <li>• C2</li> </ul>	<ul style="list-style-type: none"> <li>• M8</li> <li>• M10</li> </ul>
<b>Monitoring Frequency</b>	
<ul style="list-style-type: none"> <li>• 3 times per week</li> </ul>	<ul style="list-style-type: none"> <li>• 3 times per week</li> </ul>

Condition 4.1 of the project Environmental Permit (EP-01/122/2003C) states:

“The EM&A programme shall be implemented in accordance with the procedures and requirements in the EM&A Manual. Any changes to the programme shall be justified by the IEC as conforming to the requirements set out in the EM&A Manual and shall be approved by the Director”.

The original monitoring programme was designed to ensure that impacts would be detected during the extensive marine works associated with the project and to ensure that the cooling water intakes were tracked individually as they were to be relocated during the construction. As these cooling water intakes are now in permanent position outside the reclamation seawalls, modifications to the monitoring for marine water quality monitoring shall be carried out, as set out in the Project EM&A Manual.

All dredging activities have been completed and over 90% of the filling works has now been completed for the reclamation works and the remaining works will be carried out within FRAE and FRAW behind the existing seawalls. There are now only two small channel openings within the seawall. We are presently monitoring several water quality stations within the same area. These monitoring stations were relocated during the construction works due to the relocation of the cooling water intakes on a like for like basis. As the marine works have been substantially completed and the cooling water intakes are within the same area the marine water quality monitoring programme shall be modified as shown in the above table.

### Reduction in Number of Monitoring Stations

As shown above, the following shall be carried out:

- Discontinue sampling at M11 and continue monitoring the station M1A, which is 95m closer to the channel entrance through the seawall;
- Discontinue sampling at M2A and instead use the current monitoring station M4B which is located 45m closer to the seawall opening in FRAW; and
- Discontinue sampling at M3\_M5A and use the current M5B location which is 72m closer to the opening of the seawall in FRAE.

In addition, M12 shall be removed as it is no longer within the area of influence of works, with the current M6 station to be retained.

For the above, similar monitoring results have been recorded at these stations over the past 6 months. Statistical analysis conducted on suspended solids data from this time period for each proposed combination, show that there is no significant difference between stations. The proposed changes will not compromise the monitoring programme or reduce the ability to detect exceedances at the sensitive receivers.

For marine-based stations, it is considered that M7 and M9 are better served as impact stations with M8 and M10 to replace control stations C1 and C2 as these are considered too far outside the area of influence of work.

Justification to this programme has been provided by the IEC to EPD with approval from the Director (EPD) granted on 15 July 2009.

Susana Bezy  
Environmental Team Leader




Date: 30<sup>th</sup> July 2009

### **IC(E) Verification**

I hereby verify the above.

Bill Douglas, Independent Checker (Environment)



Date: 30<sup>th</sup> July 2009