

## 5. CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

- 5.1 Environmental monitoring works were performed in this reporting month and all monitoring results were checked and reviewed.
- 5.2 A total of thirty-six events showing exceedances of Action/Limit Levels for suspended solids (SS) were recorded at the monitoring stations W1, W2 and W3 on 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup>, 17<sup>th</sup>, 23<sup>rd</sup>, 24<sup>th</sup>, 25<sup>th</sup>, 28<sup>th</sup> and 30<sup>th</sup> in the reporting month.
- 5.3 A total of four event showings exceedances of Action/Limit Levels for turbidity were recorded at the monitoring stations W1, W2 and W3 on 1<sup>st</sup>, 15<sup>th</sup>, 16<sup>th</sup> and 23<sup>rd</sup> in the reporting month.
- 5.4 A total of twenty-one events showing exceedances of Action/Limit Levels for dissolved oxygen (DO) at the monitoring stations W1, W2 and W3 were recorded on 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 17<sup>th</sup> and 28<sup>th</sup> in the reporting month.
- 5.5 For the continuous water quality monitoring at Station WS, events showing exceedances of Action/Limit Levels for turbidity levels were recorded on 1<sup>st</sup>, 4<sup>th</sup>, 8<sup>th</sup>, 16<sup>th</sup>, 17<sup>th</sup> and 25<sup>th</sup> in the reporting month while events showing exceedances of Action Level for DO were recorded on 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup>, 17<sup>th</sup> and 29<sup>th</sup> in the reporting month.
- 5.6 According to the ET's investigation, no direct evidence demonstrating that the exceedances of Action/Limit levels for SS and turbidity on 1<sup>st</sup>, 2<sup>nd</sup>, 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> were caused by the Project was identified. The cause of exceedances might be due to the high natural background outside Sum Wan since no marine construction activities were in place and a silt curtain was installed around the effluent discharge point.
- 5.7 Thunderstorms were recorded by Hong Kong Observatory on 15<sup>th</sup>, 16<sup>th</sup> and 17<sup>th</sup> in June so high surface runoff from the site was expected. However, the water quality control stations W2 and W3 revealed comparatively high SS and turbidity concentrations than those measured at W1, which was closer to the site. Moreover, a silt curtain was installed around the effluent discharge point. Therefore, the exceedances of Action/Limit levels of SS and turbidity were unlikely due to the Project.
- 5.8 Similarly, the exceedances of Action/Limit levels of SS and turbidity were due to the high natural background outside Sum Wan and not caused by the Project.
- 5.9 Besides, all the exceedances of Action/Limit levels for DO were unlikely due to the Project owing to the occasional high water temperature during the reporting month. It is understood that the concentration of DO will decrease with the increasing water temperature and there was no pollutant produced from the site affecting the DO.
- 5.10 According to the site photos taken on 4<sup>th</sup> June 2004, the temporary jetty was overtopped by the water wave during the flood tide. Debris and loose filling materials

on the temporary jetty were flushed into the sea and a yellow plume of sediment was observed. Therefore, the exceedances of Limit levels for SS and turbidity were valid.

- 5.11 It was reported that the construction works such as piling works for the permanent jetty was commenced in mid-June. With reference to the site photo taken on 29<sup>th</sup> June 2004 showing the muddy effluent arising from the jetty piling works running into the marine water and a yellow plume of sediment was observed around the jetty. The exceedances of Action/Limit levels for SS on 23<sup>rd</sup>, 25<sup>th</sup>, 28<sup>th</sup> and 30<sup>th</sup> were valid as the concentrations of SS at W1 were the highest among the three water quality monitoring station.
- 5.12 ET Leader informed all relevant parties and identified the cause of exceedances. The Contractor was urged to avoid the direct discharge of effluent into the sea during piling works. Proper mitigation measures were recommended to the Contractor to improve the situation:
- surrounding the works area with sufficient clean sand bags to avoid direct runoff into the sea;
  - collecting and diverting the effluent to the sedimentation tank prior to discharge;
  - regularly remove the accumulated mud and debris on the jetty to avoid them from flushing into the sea due to flooding during high tide; and
  - clear the unnecessary materials and equipment on the jetty to provide sufficient space for carrying out the piling works.
- 5.13 Monthly site audit was performed in the reporting month on 30<sup>th</sup> June 2004. No non-conformance was identified during the site audit.
- 5.14 No environmental complaint or prosecution was received during the reporting month.
- 5.15 According to the environmental audit performed in the reporting month, the following recommendations were made:

#### Dust Impact

- To prohibit open burning on site.
- To regularly maintain the machinery and vehicles on site
- To implement dust suppression measures on dust-generating activities (e.g. site clearance)

#### Water Impact

- To identify any wastewater discharge from site.
- To regularly maintain the sediment control measures.

#### Waste/Chemical Management

- To check for any accumulation of waste materials or rubbish on site.
- To avoid any discharge or accidental spillage of chemical waste or oil directly from the site.
- To avoid improper handling or storage of oil drum on site.