



**M A E D A**

# Expansion of Shek Wu Hui Sewage Treatment Works

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Third Quarterly EM&A Report  
(Jun 06 – Aug 06)

September 2006

Report no: 01284R0252

**Hyder Consulting Ltd**

Incorporated in Hong Kong with limited liability—COI Number 126012  
47th Floor, Hopewell Centre, 183 Queens Road East, Wanchai, Hong Kong  
Tel: +852 2911 2233 Fax: +852 2805 5028  
[www.hyderconsulting.com](http://www.hyderconsulting.com)





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**Author:** Gigi Ho

**Checker:** Sharifah Or

**Approver:** Guiyi Li

**Report no:** EA01284R0252

**Date:** September 2006

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**Certified by Environmental Team Leader**  
Sharifah Or



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# 1 Executive Summary

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The expansion of Shek Wu Hui Sewage Treatment Works (SWHSTW) aims to increase the treatment capacity of the existing SWHSTW to cope with the increasing wastewater flows and loads as a result of the population growth in the catchment area of Fanling/Sheung Shui and the committed extension of sewerage system to unsewered areas. It is considered as a project constituting a material change to an exempted designated project under Schedule 2 of EIAO. Thus, the procedures under the EIAO have been followed and an Environmental Monitoring and Audit (EM&A) Programme has to be carried out. The present report documents the outcomes of the EM&A Works undertaken between June and August 2006.

## Breaches of Action and Limit Levels

### *Noise*

No non-compliance of action/limit level was recorded at all monitoring stations for noise during the reporting period.

### *1-hr TSP*

Two Limit Level exceedances were recorded at the monitoring station CAM1a on 18 July 2006. The Event and Action Plans were followed. The investigation found out that the exceedances were likely due to the concrete breaking activities for the pumping station where is about 3m from the monitoring location. The concrete breaking activity is a dust generating activity. With consideration the close proximity of the concrete breaking activities, it is normal to obtain a high level of TSP. However, as the concrete breaking activities were undertaken for the other project and no exceedance was recorded in the subsequent monitoring when no concrete breaking activity was being undertaken, these exceedances were considered invalid.

### *24-hr TSP*

One Limit Level exceedance was recorded at the monitoring station CAM1a on 6 July 2006. The Event and Action Plans were followed. The investigation found out that the exceedance was likely due to the concrete breaking activities for the pumping station where is about 3m from the monitoring location. The concrete breaking activity is a dust generating activity. With consideration the close proximity of the concrete breaking activities, it is normal to obtain a high level of TSP. However, as the concrete breaking activities were undertaken for the other project and no exceedance was recorded in the subsequent monitoring when no concrete breaking activity was being undertaken, this exceedance was considered invalid.

## Complaints Log

During this reporting period, no environmental complaint was received.

## Notifications of Any Summons and Successful Prosecutions

During the reporting period, no notification of summons or successful prosecution was recorded.

## Reporting Changes

There was no reporting change during the reporting period.

## Future Key Issues

The construction activities for the coming three months will include the construction of mini piles, cable/ utilities diversion, excavation, pile head / cap construction, sheet piling work, the installation of waling and struts, sub-structure and superstructure construction, pipe works and internal/ external finishing.

## 2 Introduction

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### 2.1 Basic Information

Shek Wu Hui Sewage Treatment Works (SWHSTW) provides treatment to the wastewater generated from Fanling/Sheung Shui areas before discharge it into Mai Po Inner Deep Bay Ramsar Site through River Indus and Shenzhen River, thus helps protecting the water quality of River Indus, Shenzhen River and Mai Po Inner Deep Bay Ramsar Site. The expansion of SWHSTW aims to expand the treatment capacity of the existing SWHSTW to cope with the increasing wastewater flows and loads as a result of the population growth in the catchment area of Fanling/Sheung Shui and the committed extension of sewerage system to unsewered areas.

In accordance with Section 9(2)(g) of the Environmental Impact Assessment Ordinance (EIAO), the SWHSTW is an exempted designated project as the existing SWHSTW has been in operation before the EIAO came into effect on 1 April 1998. However, since the proposed works involve physical expansion and alternation to the existing SWHSTW (hereafter called “the Project”) and may cause adverse environmental impacts if mitigation measures are not in place, it shall be considered as a project constituting a material change to an exempted designated project under Schedule 2 of EIAO. Hence the procedures under the EIAO have been followed. A Project Profile (PP) for direct application of the EP (Application No.DIR-121/2005) was approved by Environmental Protection Department (EPD) in May 2005 and an environmental permit (EP-218/2005) was obtained prior to the commencement of the expansion works.

Drainage Services Department (DSD) awarded the civil contract of the expansion of SWHSTW to Maeda Corporation (Maeda) in September 2005. Maeda appointed Hyder Consulting Limited (HCL) as the Contractor’s Environmental Team (ET) during the construction period. CH2M HILL Hong Kong Limited (formerly known as CH2M-IDC Hong Kong Limited) is the independent environmental checker (IEC). The construction contract commenced in September 2005 and the total construction period is approximately 36 months. The notified commencement date of work to the Director of EPD is 14 December 2005.

### 2.2 Management Structure and Project Organisation

The Engineer (DSD) is responsible for overseeing the construction works and ensuring that they are undertaken by the Contractor (Maeda) in accordance with the specification and contractual requirements. The Contractor shall report to the Engineer. The ET is employed by the Contractor and is responsible for conducting the EM&A programme. The IEC shall advise the Engineer on the environmental issues related to the Project.

The key personnel contact names and telephone number are summarised in Table 2-1. The project organisation is shown in Appendix 1.

Party	Position	Name	Telephone number
Project Proponent - DSD	Project Manager	Raymond Lee	2594 7457
	Engineer's Representative	Tim Tsoi	2594 7460
Contractor - Maeda	Site Agent	George Cheung	9268 1918
ET - Hyder	ET Leader	Sharifah Or	2911 2730
IEC – CH2M HILL	IEC	David Yeung	2872 2934

**Table 2-1 Key Personnel Contact Names and Telephone Number for the Project**

## 2.3 Construction Programme

Construction programme of the Project is attached in Appendix 2.

## 2.4 Works Undertaken during the Reporting Quarter

Works undertaken during the reporting period included:

- Excavation
- Cable / utilities diversion
- Sheet piling work
- Substructure construction
- Construction of pile head
- Remedial work for concrete structure
- Installation of waling and struts
- Relocation of FeCl<sub>3</sub> tank

## 2.5 Status of Environmental Permit/ Licence

The status of the Environmental Permit/Licence for the Project is shown below.

Permit/Licence	Application Date	Date of issue	Ref. No.	Valid Until
Environmental Permit	21 May 2005	16 June 2005	EP-218/2005	N/A
Notification was made to EPD pursuant to Section 3(1) of the Air Pollution Control (Construction Dust) Regulation (Form NA was submitted)	22 Sep 2005	N/A	N/A	N/A
Registration as a chemical waste producer	26 Sep 2005	4 Nov 2005	WPN: 5213-624-M2446-06	N/A



Permit/Licence	Application Date	Date of issue	Ref. No.	Valid Until
Effluent Discharge Licence	11 Nov 2005	20 Dec 2005	Licence No.: W5/11287/1	19 Dec 2010
Application for Exemption Account for Disposal of Construction Waste	12 Dec 2005	Approved by EPD on 31 Dec 2005	Application No.: RN/00134	25 Sep 2008
Construction Noise Permit	15 May 2006	26 May 2006	Permit No.: GW-RN0272-06	From 1 Jun 2006 to 30 Nov 2006

**Table 2-2 Status of Permit/Licence for the Project**

## 3 Environmental Status

### 3.1 Project and Work Area, Environmental Sensitive Receivers and Monitoring Locations

The site is located at the existing Shek Wu Hui Sewage Treatment Plant, next to Chuk Wan Street. It has been subdivided into different Works Areas/Portions as illustrated in Appendix 3. Project area, environmental sensitive receivers and monitoring locations are shown in Appendix 4.

## 4 Brief Summary of EM&A Requirements

### 4.1 Monitoring Parameters

#### 4.1.1 Air Quality

During the construction phase impact monitoring, 1-hour and 24-hour Total Suspended Particulates (TSP) levels should be measured at the selected air monitoring locations in accordance with the EM&A Manual. These two parameters are aimed to indicate the impacts of construction dust on air quality.

#### 4.1.2 Noise

The construction noise level should be measured in terms of the A-weighted equivalent continuous sound pressure level ( $L_{eq}$ ) for 30 minutes.  $L_{eq(30\text{ min})}$  is used as the monitoring parameter for the period between 0700 and 1900 hours on normal weekdays. For all other time periods, three consecutive  $L_{eq(5\text{ min})}$  are employed for comparison with the Noise Control Ordinance (NCO) criteria.

Other noise parameters such as  $L_{10}$  and  $L_{90}$  should also be obtained for reference.

## 4.2 Action and Limit Levels

### 4.2.1 Air Quality

The baseline monitoring results documented in the Baseline Monitoring Report for the Project (our report ref.: EA01284R0012) form the basis for derivation of the Action and Limit Levels for air quality impact monitoring. Appendix 5 shows the derived Action and Limit Levels for the Project. If the air quality criteria are exceeded due to the Project, the Event/Action Plan summarised in Table 4-3 should be triggered immediately.

### 4.2.2 Noise

The Action and Limit Levels for construction noise are defined in Appendix 5. If valid non-compliance of the criteria occurs, actions in accordance with the Event and Action Plan in Table 4-4 should be implemented. If construction works are undertaken during the restricted hours, a construction noise permit under NCO shall be obtained by the Contractor.

## 4.3 Event and Action Plans

The Event and Action Plans for air quality and noise monitoring are shown in Tables 4-3 and 4-4, respectively.

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
<b>ACTION LEVEL</b>				
Exceedance for one sample	<ul style="list-style-type: none"> <li>Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>Inform IEC and ER;</li> <li>Repeat measurement to confirm finding.</li> </ul>	<ul style="list-style-type: none"> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method.</li> </ul>	<ul style="list-style-type: none"> <li>Notify Contractor.</li> </ul>	<ul style="list-style-type: none"> <li>Rectify any unacceptable practice;</li> <li>Amend working methods if appropriate.</li> </ul>
Exceedance for two or more consecutive samples	<ul style="list-style-type: none"> <li>Identify source, investigate the cause of exceedance and propose remedial measures;</li> <li>Inform IEC and ER;</li> <li>Advise ER on the effectiveness of the proposed remedial measures;</li> <li>Repeat measurements to confirm findings;</li> </ul>	<ul style="list-style-type: none"> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET and Contractor on possible remedial measures;</li> <li>Advise the ET on the effectiveness of the proposed remedial measures;</li> </ul>	<ul style="list-style-type: none"> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Notify Contractor;</li> <li>Ensure remedial measures properly implemented.</li> </ul>	<ul style="list-style-type: none"> <li>Submit proposals for remedial to ER within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ul>

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	<ul style="list-style-type: none"> <li>Increase monitoring frequency to daily;</li> <li>Discuss with IEC and Contractor on remedial actions required;</li> <li>If exceedance continues, arrange meeting with IEC and ER;</li> <li>If exceedance stops, cease additional monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>Supervise Implementation of remedial measures.</li> </ul>		
<b>LIMIT LEVEL</b>				
Exceedance for one sample	<ul style="list-style-type: none"> <li>Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>Inform IEC, ER, Contractor and EPD;</li> <li>Repeat measurement to confirm finding;</li> <li>Increase monitoring frequency to daily;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> <li>If exceedance stops, cease additional monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>Check monitoring data submitted by ET;</li> <li>Check Contractor's working method;</li> <li>Discuss with ET and Contractor on possible remedial measures;</li> <li>Advise ER on the effectiveness of the proposed remedial measures;</li> <li>Supervise implementation of remedial measures.</li> </ul>	<ul style="list-style-type: none"> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Notify Contractor;</li> <li>Ensure remedial measures properly implemented.</li> </ul>	<ul style="list-style-type: none"> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Amend proposal if appropriate.</li> </ul>
Exceedance for two or more consecutive samples	<ul style="list-style-type: none"> <li>Notify IEC, ER, Contractor and EPD;</li> <li>Identify source, investigate the cause of exceedance and propose remedial measures;</li> <li>Repeat measurement to confirm findings;</li> <li>Increase monitoring frequency to daily;</li> <li>Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>Arrange meeting with IEC and ER to</li> </ul>	<ul style="list-style-type: none"> <li>Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly;</li> <li>Supervise the implementation of remedial measures.</li> </ul>	<ul style="list-style-type: none"> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Notify Contractor;</li> <li>In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>Ensure remedial measures properly implemented;</li> <li>If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work</li> </ul>	<ul style="list-style-type: none"> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Resubmit proposals if problem still not under control;</li> <li>Stop the relevant portion of works as determined by ER until the exceedance is abated.</li> </ul>

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	discuss the remedial actions to be taken; <ul style="list-style-type: none"> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>If exceedance stops, cease additional monitoring.</li> </ul>		until the exceedance is abated.	

**Table 4-3 Event/ Action Plan for Air Quality Monitoring**

EVENT	Action			
	ET	IEC	ER	CONTRACTOR
Action Level	<ul style="list-style-type: none"> <li>Notify IEC and ER;</li> <li>Carry out investigation;</li> <li>Report the results of investigation to the IEC, ER and Contractors;</li> <li>Discuss with the Contractor and formulate remedial measures;</li> <li>Increase monitoring frequency to check mitigation effectiveness.</li> </ul>	<ul style="list-style-type: none"> <li>Review the analysed results submitted by the ET;</li> <li>Review the proposed remedial measures by the Contractor and advise the ER accordingly;</li> <li>Supervise the implementation of remedial measure.</li> </ul>	<ul style="list-style-type: none"> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>Ensure remedial measures are properly implemented.</li> </ul>	<ul style="list-style-type: none"> <li>Submit noise mitigation proposal to IEC;</li> <li>Implement noise mitigation proposals.</li> </ul>
Limit Level	<ul style="list-style-type: none"> <li>Identify source;</li> <li>Inform IEC, ER, EPD and Contractor;</li> <li>Repeat measurements to confirm findings;</li> <li>Increase monitoring frequency to check mitigation effectiveness;</li> <li>Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>Inform IEC, ER and EPD the causes and actions taken for the exceedances;</li> <li>Assess effectiveness of Contractor's remedial actions and</li> </ul>	<ul style="list-style-type: none"> <li>Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> <li>Supervise the implementation of remedial measures.</li> </ul>	<ul style="list-style-type: none"> <li>Confirm receipt of notification of failure in writing;</li> <li>Notify Contractor;</li> <li>Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>Ensure remedial measures properly implemented;</li> <li>If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ul>	<ul style="list-style-type: none"> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Resubmit proposals if problem still not under control;</li> <li>Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ul>

EVENT	Action			
	ET	IEC	ER	CONTRACTOR
	keep IEC, EPD and ER informed of the results; <ul style="list-style-type: none"> <li>If exceedance stops, cease additional monitoring.</li> </ul>			

**Table 4-4 Event/ Action Plan for Noise Monitoring**

## 4.4 Environmental Mitigation Measures and Requirements

The recommended measures for mitigating air quality, water quality, noise, waste and all other possible environmental impacts due to the construction works have been stated clearly in the EM&A Manual. The details of the measures implemented by the Contractor are shown in Appendix 6.

## 5 Implementation Status of Environmental Protection and Pollution Control/ Mitigation Measures

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The status of the mitigation measures implemented by the Contractor is listed in Appendix 6.

## 6 Monitoring Results

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### 6.1 Graphical Plots of Monitoring Parameters

Graphical plots of the monitoring results are summarized in Appendix 7.

### 6.2 Factors Which Might Affect the Monitoring Results

Dust from other sources such as roads with the movement of heavy vehicles in the vicinity of the monitoring stations would affect the air quality monitoring results.

## 7 Non-compliance, Complaints, Notifications of Summons and Successful Prosecutions

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### 7.1 Non-compliance of Action and Limit Levels

### *1-hr TSP*

Two Limit Level exceedances were recorded at the monitoring station CAM1a on 18 July 2006. The Event and Action Plans were followed. The investigation found out that the exceedances were likely due to the concrete breaking activities for the pumping station where is about 3m from the monitoring location. The concrete breaking activity is a dust generating activity. With consideration the close proximity of the concrete breaking activities, it is normal to obtain a high level of TSP. However, as the concrete breaking activities were undertaken for the other project and no exceedance was recorded in the subsequent monitoring when no concrete breaking activity was being undertaken, these exceedances were considered invalid.

### *24-hr TSP*

One Limit Level exceedance was recorded at the monitoring station CAM1a on 6 July 2006. The Event and Action Plans were followed. The investigation found out that the exceedance was likely due to the concrete breaking activities for the pumping station where is about 3m from the monitoring location. The concrete breaking activity is a dust generating activity. With consideration the close proximity of the concrete breaking activities, it is normal to obtain a high level of TSP. However, as the concrete breaking activities were undertaken for the other project and no exceedance was recorded in the subsequent monitoring when no concrete breaking activity was being undertaken, this exceedance was considered invalid.

### *Noise*

No non-compliance of Action or Limit Level was recorded for noise monitoring.

## 7.2 Complaints Received

In case of an environmental complaint received, all related parties should follow the complaints response procedures specified in the EM&A Manual.

During this reporting quarter, no environmental complaint was received. Cumulative number of environmental complaint is shown in Appendix 8.

## 7.3 Notifications of Summons and Successful Prosecutions

No notification of summons or successful prosecution was recorded during the reporting period. The cumulative number of notifications of summons and successful prosecutions are shown in Appendix 8.

## 7.4 Review of the Reasons and Implications of Non-compliance, Complaints, Summons and Prosecutions

### 7.4.1 Non-compliance of Action/Limit Level

No valid exceedance of Action/Limit Level was recorded during the reporting period.

### 7.4.2 Complaints, Summons and Prosecutions

No complaints, summons and prosecutions were recorded during the reporting period.

## 7.5 Site Inspections

Weekly site inspections have been carried out during the reporting period. The findings of the site inspections and appropriate mitigation measures were recorded in the site inspection checklists. The observations raised during the site inspections, corresponding recommendations and rectification status are summarised in Table 7-5.

Inspection Date	Deficiencies	Recommendation	Status	Note / Reminder
1 June 06	1. No environmental deficiency was observed.	N.A.	N.A.	1. Stagnant and silty water was observed at various locations. The Contractor was reminded to inspect and maintain both mosquito and sediment control after rainstorm.
8 June 06	1. A generator operating with doors opened was observed at Portion 2.	1. The Contractor was reminded that all plants should be operated with doors closed to minimize noise nuisance.	1. The Contractor has rectified the situation by closing the doors immediately.	N.A.
14 June 06	1. No environmental deficiency was observed.	N.A.	N.A.	N.A.
21 June 06	1. Stagnant water was observed at the sub-contractor storage area.	1. The Contractor was reminded to remove the stagnant water and fill in the pit to prevent mosquito breeding.	1. Stagnant water at the sub-contractor storage area was removed and the ponding areas were filled as observed on 27 June 2006.	1. The Contractor was reminded to maintain mosquito preventive measures after rainstorm.

Inspection Date	Deficiencies	Recommendation	Status	Note / Reminder
27 June 06	1. The sludge outlet pipe of the WetSep at Portion 2 was directed to the gully nearby.	1. The Contractor was reminded that the sludge from WetSep should be collected at sump pit or settling tank. No direct discharge to gully should be allowed.	1. The sludge outlet was diverted to the sump pit properly as observed on 5 July 2006.	1. Larvicide was applied at the ponding areas. Site inspection after rainfall is required. Stagnant water should be drained and larvicide should be re-applied after rainfall, where necessary.
5 July 2006	1. Dry open stockpile was observed at Portion 3. 2. Broken sandbags were observed at SCT.	1. The Contractor was reminded to keep the open stockpile moist or cover it with impervious sheeting. 2. The Contractor was reminded to repair sandbags or remove un-used ones regularly.	1. Open stockpile at Portion 3 was removed as observed on 12 July 2006. 2. Broken sandbags at SCT were removed as observed on 12 July 2006.	N.A.
12 July 2006	1. An oil bucket without drip tray was observed at Portion 3.	1. The Contractor was reminded to provide drip tray for oil drums to prevent soil and water contamination from oil leakage.	1. The oil bucket at Portion 3 was removed as observed on 19 July 2006.	N.A.
19 July 2006	1. Stagnant water in drip trap was observed at Portion 2. 2. Small gravels were found in a gully at Portion 3 and the Contractor indicated that they would be removed as soon as possible.	1. The Contractor was reminded to remove stagnant water in drip trap regularly. 2. The Contractor was reminded to remove them properly.	1. The stagnant water in drip tray at Portion 2 was removed as observed on 26 July 2006. 2. The gravels in the gully at Portion 3 were removed as observed on 26 July 2006.	1. The Contractor was reminded to remove stagnant water on site after rainstorm.
26 July 2006	1. Leaked oil and water were observed at drip tray on site.	1. The Contractor was recommended clear the leaked oil and water properly.	1. The leaked oil and water were cleared as observed on 2 August 2006.	1. The Contractor was reminded to remove the water ponding after rainfall. 2. The Contractor was reminded to provide well maintenance and regular inspection for any silt removal facilities on site during and after rainfall.



Inspection Date	Deficiencies	Recommendation	Status	Note / Reminder
2 August 2006	1. Cement sealing for the manhole beside the wheel washing facilities was observed broken.	1. The Contractor was reminded to seal the manhole properly.	1. The manhole was properly sealed as observed on 9 August 2006.	N.A.
9 August 2006	1. No deficiency was observed.	N.A.	N.A.	N.A.
16 August 2006	1. No deficiency was observed.	N.A.	N.A.	<ol style="list-style-type: none"> <li>1. The Contractor was reminded to provide water spraying for haul road more frequently.</li> <li>2. The Contractor was reminded to clean up sediment accumulated in the wheel washing bay regularly.</li> <li>3. The Contractor was reminded to operate plants with closed doors to minimize noise impact to NSRs.</li> </ol>
22 August 2006	1. Ponding of water was observed near the Contractor's site office which possibly come from the hand washing facility nearby.	1. The Contractor was reminded to prevent ponding of water which may cause mosquito breeding.	1. Ponding water was removed as observed on 29 August 2006.	1. The Contractor was reminded to remove ponding water regularly.
29 August 2006	<ol style="list-style-type: none"> <li>1. Oily water accumulated in the drip tray at the sub-contractor storage area was observed.</li> <li>2. Oil container without drip tray at the sub-contractor storage area was observed.</li> </ol>	<ol style="list-style-type: none"> <li>1. The Contractor was reminded to dispose of the oily water as chemical waste properly.</li> <li>2. The Contractor was reminded to provide drip tray for oil container.</li> </ol>	<ol style="list-style-type: none"> <li>1. Drip tray at the sub-contractor storage area was clear as observed on 6 September 2006.</li> <li>2. Drip tray was provided for oil container at the sub-contractor storage area as observed on 6 September 2006.</li> </ol>	1. The Contractor was reminded to protect the gully with sandbags to prevent any substandard quality of water from discharging into it.

**Table 7-5 Summaries of Site Inspections and Recommendations**

EPD conducted site visit on 26 July 2006. They checked whether the cover of dump trucks were closed before leaving the site and inspected the effluent discharge at

Portions 2 and 3 and the chemical waste storage area. No adverse comment was given.

## 8 Waste Management Status

According to the information provided by the Contractor, Table 8-5 shows waste materials were generated during the reporting period.

Type of Waste	Jun 06	Jul 06	Aug 06
Inert C&D material (m <sup>3</sup> )	3060	5257	5594
General Refuse (m <sup>3</sup> )	26	110.5	91
Chemical waste (L)	0	0	0

**Table 8-6 The Quantity of Waste Generation**

Inert C&D materials were disposed of at Tuen Mun Area 38 Public Fill. General refuse was collected and disposed of at NENT Landfill. No chemical waste was produced during the reporting period. Trip ticket system was implemented and disposal records were in order on site. The Waste Management Plan was followed.

## 9 Comments, Recommendations and Conclusions

EM&A works have been undertaken between June 2006 and August 2006 for the Project based on the requirements set in the EM&A Manual.

All monitoring equipments have been calibrated and all monitoring protocols have been carried out properly according to the EM&A Manual.

There were two Limit Level exceedances on 1-hr TSP at the monitoring station CAM1a on 18 July 2006 and one Limit Level exceedance on 24-hr TSP at the monitoring station CAM1a on 6 July 2006. The Event and Action Plans were followed. However, according to the investigation, the exceedance was likely due to the concrete breaking activities for the other project. Therefore, these exceedances were considered invalid.

No valid exceedance of Action/Limit Level on noise was recorded during the reporting period.

No compliant, notification of summons or successful prosecution was recorded during the reporting period.

The overall EM&A programme is considered efficient during the reporting period and no material and technical changes are considered necessary.

# Appendix 1

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## Project Organization

# Appendix 2

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## Construction Programme

# Appendix 3

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## Works Area

# Appendix 4

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## Project Area, Environmental Sensitive Receiver and Monitoring Location

# Appendix 5

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## Action and Limit Levels

# Appendix 6

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## Environmental Requirements and Implementation Status



# Appendix 7

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## Monitoring Results and Graphical Plots

# Appendix 8

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## Cumulative Statistics of Complaint, Notification of Summons and Successful Prosecution