

---

---

**Contract No. : DC/99/10**

**Upgrading of Siu Ho Wan  
Sewage Treatment Plant - Civil Works**

**Environmental Monitoring & Audit  
Monthly Monitoring Report, No.27**

**November 2003**

THIS REPORT IS PREPARED BY : Envirotech Services Co.  
Shop 6, G/F, Casio Mansion,  
209 Shaukeiwan Road, Hong Kong.  
Tel : 2560 8450  
Fax : 2560 6553

---

---

## **EXECUTIVE SUMMARY**

This is the twenty-seven monthly EM&A Report for Contract No. DC/99/10- Upgrading of Siu Ho Wan Sewage Treatment Plant Civil Works, which records the results and findings of all EM&A work required in the EM&A Manual for the month of November 2003.

### **Environmental Monitoring and Inspection**

There was no routine environmental monitoring required during the construction period in accordance with the EM&A Manual. Joint site inspection was conducted regularly on weekly basis to ensure the environmental mitigation measures were performed timely and properly and the environmental requirement of the contract and environmental legislation in Hong Kong are complied. Ad hoc site inspections will be carried out if environmental problems are identified or upon receipt of complaints.

### **Status of Implementation of Mitigation Measures**

The works carried out in November were mainly backfilling work and erection of scaffold and cladding work at Admin Building and some drainage and road paving work. The corresponding mitigation measures were implemented such as a wheel washing bay was provided at the site exit; water hoses and water truck were provided for watering the dusty areas and perimeter channels were provided to intercept the surface runoff. The implementation status of the mitigation measures was overall satisfactory although minor deficiencies were observed. However, the deficiencies were not likely causing any immediate environmental problem and would be rectified by the Contractor in the short term.

### **Status of Licences and Permits**

Water discharge license, construction noise permit and registration of chemical waste producer were valid in the reporting period.

### **Environmental Complaints and Legislation**

No complaint was received during the reporting period and thus no action to be taken. There was also no notification of summonses and successful prosecutions.

### **Future Key Issues**

Since dry weather had approached, the Contractor was advised to increase the extent of watering on the haul roads and access roads to avoid dust emission while wind was blowing and vehicles were travelling there. Apart from that, the Contractor should continue the preventive measures for Dengger Fever such as removing stagnant water and applying larvicide if necessary. The Contractor should properly storage the waste and dispose of them more frequently to maintain the site tidiness. The Contractor should continue implement appropriate environmental mitigation in accordance with the contract requirement and the waste management plan.

## CONTENTS

	<b>Page</b>
1 ENVIRONMENTAL STATUS	1
1.1 Site Environmental Monitoring and Audit	1
1.2 Summary of Non-compliances	1
1.3 Summary of complaint	1
1.4 Breach of Environmental Regulation	1
1.5 Solid and Liquid Waste Management Status	1
1.6 Status of License and Permit	3
2 ENVIRONMENTAL ISSUES AND ACTIONS	4
2.1 Review of Follow-up Actions for Non-compliances	4
2.2 Status of Implementation of Mitigation Measures	4
3 FUTURE KEY ISSUES	4
4 CONCLUSIONS	5

### List of Tables

Table 1.1	Status of Management of Solid and Liquid Waste	2
Table 1.2	Environmental Licenses and Permits	3
Table 3.1	Construction Activities and Their Corresponding Environmental Mitigation Measures in the Coming Month	5

### Appendices

Appendix A	Summary of Complaints
Appendix B	Details of Outstanding Issues / Deficiencies
Appendix C	Site Audit Schedule for December 2003
Appendix D	Waste Disposal Record & Licenses Records

## **1 ENVIRONMENTAL STATUS**

### **1.1 Site Environmental Monitoring and Audit**

The EM&A Manual requires no routine environmental monitoring for air quality, noise level and water quality during construction phase.

The EM&A Manual stated that ET leader should carry out site audit at least once per week to ensure that all mitigation measures were implemented timely and properly, and the contract requirement and environmental laws are fully complied. Ad hoc site inspection will be carried out if any non-compliances are identified or upon receipt of an environmental complaint. Apart from the regular site audit, the ET Leader will review the progress of the works with respect to pollution control and anticipated environmental issues and check the status of solid and liquid waste management with reference to the waste management plan.

The ET Leader also reviews the proposals for mitigation measures and the relevant method statement submitted by the Contractor in respect of environmental protection.

### **1.2 Summary of Non-compliances**

Four regular site audits were conducted in the reporting month. It was observed that some mitigation measures had not been fully implemented or the extent was insufficient. They included:

- It was observed that the perimeter channel located at the back of the contractor's office was filled with sand, weed and rubbish. The Contractor was reminded to remove them to prevent attraction of mosquitoes and pest and blockage of the water flow.
- It was noted that the site area was slightly dusty since the weather was dry and backfilling work was being carried out. The Contractor was advised to increase the extent of watering on the access roads and haul roads and cover the stockpiled sand when it was not in use.
- Stockpiles of filling materials near Chemical Building have been uncovered for long time

### **1.3 Summary of complaint**

No complaint was received during the monitoring period and thus no action to be taken. A detailed summary of complaint was shown in Appendix A.

### **1.4 Breach of Environmental Regulation**

In this reporting period, there was no conviction for breach of environmental legislation and regulations and thus no action was taken.

### **1.5 Solid and Liquid Waste Management Status**

The status of management of solid and liquid waste in accordance with the waste management plan is presented in Table 1.1 below:

**Table 1.1 Status of Management of Solid and Liquid Waste**

<b>Management of Solid and Liquid Waste</b>	<b>Status</b>
<b>Disposal of Liquid Waste</b>	<ul style="list-style-type: none"> <li>-Sewage generated by the site office was discharged into adjacent Siu Ho Wan Sewage Treatment Plant.</li> <li>-Surface runoff and groundwater were treated by sand bags or de-silting tank before discharging into nearby storm drains, if any. Some surface runoff infiltrated through the sediment.</li> <li>-Muddy effluent generated from a wheel washing bay via a silt trap before discharging into nearby storm drains.</li> <li>-Portable toilet was provided on site.</li> </ul>
<b>Disposal of Construction &amp; Demolition Material</b> <ul style="list-style-type: none"> <li>- Public Fill</li> <li>- Construction &amp; Demolition (C&amp;D) Waste</li> </ul>	<ul style="list-style-type: none"> <li>- No public fill material was disposed.</li> <li>- No C&amp;D waste was disposed.</li> </ul>
<b>Disposal of Hazarding Waste</b> <ul style="list-style-type: none"> <li>- Chemical Waste</li> </ul>	<ul style="list-style-type: none"> <li>-Chemical waste was being stored in the chemical containers and housed in a proper place.</li> <li>-The Contractor had appointed Wing Tat Transportation Company (waste collector) to disposed of spent lube oil (~200L) at Dunwell Ind. (Holding) Ltd (Reception point).</li> </ul>
<b>Avoidance/ Minimization of Waste</b> <ul style="list-style-type: none"> <li>- Reuse of Material</li> <li>- Recycle of Material</li> <li>- Disposal of General Refuse</li> </ul>	<ul style="list-style-type: none"> <li>-Excavated material had been used for backfilling.</li> <li>-Waste material was segregated into different categories.</li> <li>-Separated recycling bins were provided for collection of aluminum cans, plastic bottles and waste paper. The Contractor has delivered recycled materials (Plastic bottles (12 pcs), Waste paper (4 kg) &amp; Aluminum cans (11 pcs) to the collector on 28 November 2003.</li> <li>-The refuse bins and garbage container was provided.</li> </ul>

## 1.6 Status of License and Permit

All permits / licenses / notification validated in the monitoring period are summarised in Table 1.2.

**Table 1.2 Environmental Licenses and Permits**

Description	Permit/ Reference No.	From	To	Section/PME	Status
Application for chemical waste producer registration	TS20011042-001	Whole period		Construction Site	Valid
Notification of const. Work under APCO (CONST DUST)	TS20010805-001	Whole period		Construction Site	Valid
Construction Noise Permit	GW-UW0212-03	25/7/03	05/1/04	Concrete lorry mixer(4), Dump truck(2), Excavator, tracked(2), poker (4), Generator, Saw(4), Crane, Concrete pump(2) Compactor vibratory, Power rammer, Lorry with crane crane, power rammer, roller vibratory, concrete dump (2), saw, circular, wood(4)	Valid
Water Discharge License@	EP742/972/0031261	19/6/02	30/6/07	Discharge point	Valid

@ No water was sampled for analysis since the Contractor had stopped discharging construction effluent at the discharge point.

## **2 ENVIRONMENTAL ISSUES AND ACTIONS**

### **2.1 Review of Follow-up Actions for Non-compliances**

The following actions have been taken in response to the deficiencies:

- The Contractor had cleared the rubbish from the perimeter channel.
- The Contractor had increased the frequency of watering on the haul roads and covered part of the stockpiled sand with tarpaulin sheets when it was not in use to prevent dust emission.
- The Contractor was advised to cover the filling materials with tarpaulin sheets without further delay to prevent dust emission.

### **2.2 Status of Implementation of Mitigation Measures**

Four regular site audits were conducted in the reporting month to check the implementation status of the mitigation measures recommended in the Environmental Permit, the EIA Report, the EM&A Manual and the contract document. The implementation status of the mitigation measures was detailed in the site inspection records, which were kept by the Contractor on site and available for inspection. The implementation status of the mitigation measures was overall satisfactory. Particular implemented mitigation measures are described as follows:

- A wheel washing bay was provided at the site exit. Water truck and water hoses were provided on site to suppress the dust emission.
- Chemical waste containers and chemical waste drip tray were provided on site.
- A portable toilet, refuse bins and refuse container were provided on site.
- Construction waste was segregated. Aluminum cans, plastic bottles and waste paper were separately collected and delivered to the collector for recycling.
- Perimeter channels were provided at the site boundary to intercept the surface runoff.

## **3 FUTURE KEY ISSUES**

Road works, construction of manhole covers, backfilling works and scaffolding for external cladding at Admin Carpark will proceed next month. The potential environmental impact and the corresponding environmental mitigation measures are summarised in Table 3.1.

**Table 3.1 Construction Activities and Their Corresponding Environmental Mitigation Measures in the Coming Month**

Construction Activities	Environmental Impact	Environmental Mitigation Measures
<p>Road works, construction of manhole covers, backfilling works and scaffolding for external cladding at Admin Carpark will proceed next month.</p> <p>General activities</p>	<p>Dust Impact &amp; Wastewater</p> <p>Waste oil &amp; Construction materials</p>	<p>Water the site areas more frequently especially on dry weather days.</p> <p>Cover the exposed surfaces with tarpaulin sheets.</p> <p>Operate wheel washing bay and clear the wheel washing bay regularly.</p> <p>To treat the muddy water in de-silting facilities before discharging into nearby storm drains.</p> <p>Properly handle and treat the construction waste, municipal waste and chemical waste.</p> <p>Dispose of municipal waste and waste engine oil by licensed collector</p>

#### 4 CONCLUSIONS

Four regular site audits were conducted in the reporting month to check the implementation status of the mitigation measures and any non-compliance with the environmental requirements.

The implementation status of the mitigation measures was overall satisfactory although minor deficiencies were observed. The deficiencies were not likely causing any immediate environmental problem. Overall, the environmental condition of the site was satisfactory.

The Contractor should properly storage the solid waste and dispose of them more frequently to maintain the site tidiness and prevent attraction of pest and mosquitoes. The Contractor should also water the access roads and haul roads to prevent dust emission in dry weather.

No complaint was received during the reporting period. There was also no notification of summonses and successful prosecutions.



**Summary of Complaints****Appendix A**

<b>Environmental Parameters</b>	<b>Cumulative no. Brought forward</b>	<b>No. of complaint November 2003</b>	<b>Overall total</b>
Noise	0	0	0
Air	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	0

**Details of Complaints**

<b>Date</b>	<b>Complainant</b>	<b>Detail</b>	<b>Action taken</b>
----	----	----	----

**Details of Outstanding Issues / Deficiencies****Appendix B**

<b>Outstanding Issues / Deficiencies</b>	<b>Action taken</b>
<ul style="list-style-type: none"><li>● It was observed that the perimeter channel located at the back of the contractor's office was filled with sand, weed and rubbish. The Contractor was reminded to remove them to prevent attraction of mosquitoes and pest and blockage of the water flow.</li><li>● It was noted that the site area was slightly dusty since the weather was dry and backfilling work was being carried out. The Contractor was advised to increase the extent of watering on the access roads and haul roads and cover the stockpiled sand when it was not in use.</li><li>● Stockpiles of filling materials near Chemical Building have been uncovered for long time.</li></ul>	<ul style="list-style-type: none"><li>● The Contractor had removed the rubbish from the perimeter channel.</li><li>● The Contractor had increased the frequency of watering on the access roads and covered part of the stockpiled sand with tarpaulin sheets when it was not uses to prevent dust emission.</li><li>● The Contractor was advised to cover the filling materials with tarpaulin sheets without further delay to prevent dust emission.</li></ul>

**Site Audit Schedule for December 2003**

**Appendix C**

5 December 2003	12 December 2003	19 December 2003	24 December 2003
-----------------	------------------	------------------	------------------

**Appendix D**  
**Waste Disposal Record &**  
**Licenses Records**