

---

---

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

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

**Environmental Monitoring & Audit  
Monthly Monitoring Report, No.33**

**May 2004**

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 thirty-three 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 May 2004.

### **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 May were mainly erection of scaffold and external finish work at the Admin Building and the Centrifuge Building; demolition of blockout wall in the Flow Separation Chamber and landscaping work; connection of the outlet channel of the Primary Tank to the existing discharge outlet and installation of hand railing. The corresponding mitigation measures were implemented such as water hose has been provided for washing wheels in lieu of wheel washing bay; 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 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**

Owing to wet season had approached, the Contractor was advised to clear drains and channels to prevent flooding and provide sandbags at the gullies to prevent sand from depositing into public drain. The Contractor was reminded to provide stand-by pumps to remove any ponding water after rainstorms because the perimeter channel near CSCEHKL's office was removed for the preparation of landscape work. Moreover, the Contractor should remove stagnant water to prevent breeding of mosquitoes. On the other hand, the Contractor should water the access roads to avoid dust emission on dry weather days. The Contractor should maintain good house keeping and remove the construction debris, waste timber and rubbish regularly. The Contractor must 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	2
1.6 Status of License and Permit	3
2 ENVIRONMENTAL ISSUES AND ACTIONS	3
2.1 Review of Follow-up Actions for Non-compliances	3
2.2 Status of Implementation of Mitigation Measures	3
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	4

### Appendices

Appendix A	Summary of Complaints
Appendix B	Details of Outstanding Issues / Deficiencies
Appendix C	Site Audit Schedule for June 2004
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 near CSCEHKL's office was removed since the area was reinstated for preparation of landscape work. The Contractor was reminded to provide stand-by pumps to remove any ponding water after rainstorms.
- The Contractor was reminded to remove stagnant water as practice as possible and apply mosquitoes oil to the stagnant water to prevent mosquitoes breeding.
- The Contractor was reminded to place sandbags around the gullies and cover the stockpile sand with tarpaulin sheets to prevent silt and sands from entering drainage systems.
- The drainage channel near the Underground Fire Services Pumping Station has been partially filled up by soil eroded from the slope. The covers of the channel were found not properly placed so the soil entered the channel readily during the recent environmental walks.

### **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 wheel washing will be silt filtered before discharging into nearby storm drains.</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>-The Contractor had appointed licensed waste collector to dispose of solid waste (2.05 tonne) at NLRTS Refuse Transfer Station on 9 June 2004.</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 dispose 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 (3 pcs), Waste paper (1kg) &amp; Aluminum cans (3 pcs) to the collector on 25 May 2004.</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
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 will provide water pumps to remove ponding water after rainstorms since the perimeter channel located at the back of the Contractor's office was removed.

### 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:

- The wheel washing bay at the site exit has been demolished. Water truck and water hoses were provided on site to clean the wheels of vehicles and water the access road to suppress the dust emission.
- Chemical waste containers and chemical waste drip tray were provided on site.
- 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 channel located at the back of the Contractor’s site office was removed due to preparation of landscape work.

### 3 FUTURE KEY ISSUES

Erection of bamboo scaffold and external finish work at the Centrifuge Building; landscaping works; demolition of blockout walls; footpath paving work and installation of handrailing 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
Erection of bamboo scaffold and external finish work at the Centrifuge Building; landscaping works; demolition of blockout walls; footpath paving work and installation of handrailing will proceed next month.	Dust Impact & Wastewater	Water the site areas more frequently especially on dry weather days.  Cover the exposed surfaces with tarpaulin sheets.  The wheel washing bay will not be re-constructed in short term. The Contractor provided water hose to clean the wheels of vehicles.  To treat the muddy water in de-silting facilities before discharging into nearby storm drains.  The Contractor was reminded to provide stand-by pumps to remove any ponding water since the perimeter channel near the Contractor’s office was removed for preparation of landscaping work.
General activities	Waste oil & Construction materials	Properly handle and treat the construction waste, municipal waste and chemical waste.  Dispose of municipal waste and waste engine oil by licensed collector

#### **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 stores the solid waste including the useless timber and dispose of them properly to maintain the site tidiness. Moreover, the Contractor should maintain the drains and channels in good condition to prevent accumulation of ponding water and flooding. Moreover, the Contractor was advised to apply mosquitoes oil into the stagnant water where accumulation of water was unavoidable.

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 May 2004</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>
● It was observed that the perimeter channel near CSCEHKL's office was removed since the area was reinstated for preparation of landscape work.	● The Contractor will provide water pumps to remove ponding water after rainstorms since the perimeter channel located at the back of the Contractor's office was removed.
● The Contractor was reminded to remove stagnant water as practice as possible and apply mosquitoes oil to the stagnant water to prevent mosquitoes breeding.	● The Contractor noted
● The Contractor was reminded to place sandbags around the gullies and cover the stockpile sand with tarpaulin sheets to prevent silt and sands from entering drainage systems.	● The Contractor noted
● The drainage channel near the Underground Fire Services Pumping Station has been partially filled up by soil eroded from the slope. The covers of the channel were found not properly placed so the soil entered the channel readily during the recent environmental walks.	● The Contractor noted

**Site Audit Schedule for June 2004**

**Appendix C**

4 June 2004	11 June 2004	18 June 2004	25 June 2004
-------------	--------------	--------------	--------------

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

To be submitted in final report.