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

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

**Environmental Monitoring & Audit  
Monthly Monitoring Report, No.29**

**January 2004**

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## **EXECUTIVE SUMMARY**

This is the twenty-ninth 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 January 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 January were mainly erection of scaffold and external finish work at the Admin Building. The corresponding mitigation measures were implemented such as water hoses and water truck were provided for watering the dusty areas and perimeter channels were provided to intercept the surface runoff. The wheel washing bay at the site exit has been demolished. 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. Construction noise permit expired on 4 January 2004.

### **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 current dry weather, the Contractor was advised to increase the extent of watering on the access roads to avoid dust emission while wind was blowing and vehicles were travelling there. Moreover, the Contractor should cover the stockpiled sand with tarpaulin sheet when it not in use. The Contractor should implement the preventive measures for Dengger Fever such as removing stagnant water and applying larvicide if necessary. The Contractor should provide proper storage for the construction debris and waste timber and arrange prompt disposal of them to maintain the site in a tidy manner. The Contractor must continue implement appropriate environmental mitigation in accordance with the contract requirement and the waste management plan.

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## **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**

Five 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 noted that the wheel washing bay was removed due to construction work was carried out there. The Contractor was reminded to provide water hose to clean the dirty vehicles when they exit the site to the public road. The washed water should be discharged to the stormwater drains with mud/sand filtered. Moreover, an instruction sign reminding the exit vehicle drivers to use the hose should be erected.
- It was observed that the perimeter channel near CSCEHKL's office was filled the weeds and the sand. The Contractor should remove them to prevent blockage of the channel.
- It was spotted that waste timbers or some solid waste were not properly disposed off. The Contractor should dispose them in the garbage tank instead of the nearby open space.

### **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>
<p><b>Disposal of Liquid Waste</b></p>	<p>-Sewage generated by the site office was discharged into adjacent Siu Ho Wan Sewage Treatment Plant.</p> <p>-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.</p> <p>Muddy effluent generated from a wheel washing will be silt filtered before discharging into nearby storm drains.</p>
<p><b>Disposal of Construction &amp; Demolition Material</b></p> <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>
<p><b>Disposal of Hazarding Waste</b></p> <ul style="list-style-type: none"> <li>- Chemical Waste</li> </ul>	<p>-Chemical waste was being stored in the chemical containers and housed in a proper place.</p> <p>-The Contractor had appointed Wing Tat Transportation Company (waste collector) to disposed of spent lube oil (~200L) at Dunwell Ind. (Holding) Ltd (Reception point).</p>
<p><b>Avoidance/ Minimization of Waste</b></p> <ul style="list-style-type: none"> <li>- Reuse of Material</li> <li>- Recycle of Material</li> <li>- Disposal of General Refuse</li> </ul>	<p>-Excavated material had been used for backfilling.</p> <p>-Waste material was segregated into different categories.</p> <p>-Separated recycling bins were provided for collection of aluminum cans, plastic bottles and waste paper. The Contractor has delivered recycled materials (Plastic bottles (4 pcs), Waste paper (2kg) &amp; Aluminum cans (3 pcs) to the collector on 29 January 2004.</p> <p>-The refuse bins and garbage container was provided.</p>

## 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)	Expired
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 provided water hose at the site exit for cleaning the vehicles.

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

Five 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.
- 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**

Erection of bamboo scaffold and external finish work at the Centrifuge Building 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
<p>Erection of bamboo scaffold and external finish work at the Centrifuge Building and installation of handrailing 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>The wheel washing bay will not be re-constructed in short term. The Contractor provided water hose to clean the wheels of vehicles.</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

Five 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 storage the solid waste and dispose of them properly to maintain the site tidiness and prevent attraction of pest and mosquitoes. The Contractor should also water the site areas and cover the dusty materials to prevent dust emission in dry weather. Moreover, the Contractor was reminded to renew the construction noise permit as soon as possible if they need to carry construction work in the restricted hours.

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 January 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>
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**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 noted that the wheel washing bay was removed due to construction work was carried out there. The Contractor was reminded to provide water hose to clean the dirty vehicle when they exit the site to the public road.</li><li>• It was observed that the perimeter channel near CSCEHKL's office was filled the vegetation and the sand. The Contractor should remove them to prevent blockage of the channel.</li><li>• It was spotted that waste timbers or some solid waste were not properly disposed off. The Contractor should dispose them in the garbage tank instead of the nearby open space.</li></ul>	<ul style="list-style-type: none"><li>• The Contractor had provided water hose at the site exit for cleaning the vehicles.</li><li>• The Contractor noted.</li><li>• The Contractor noted.</li></ul>

**Site Audit Schedule for February 2004**

**Appendix C**

6 February 2004	13 February 2004	20 February 2004	27 February 2004
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**Appendix D**  
**Waste Disposal Record &**  
**Licenses Records**

To be submitted in final report.