
Contract No. : DC/99/10

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

**Environmental Monitoring & Audit
Monthly Monitoring Report, No.31**

March 2004

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EXECUTIVE SUMMARY

This is the thirty-one 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 March 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 March were mainly erection of scaffold and external finish work at the Admin Building and the Centrifuge Building; 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 surround the gullies by sandbags to prevent sand from depositing into public drain. Moreover, the Contractor should remove any ponding water to prevent breeding of mosquitoes. On the other hand, the Contractor should water the access roads to avoid dust emission while wind was blowing and vehicles were travelling there during dry weather days. 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.

CONTENTS

	Page
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	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 April 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 filled with weeds and the sand. The Contractor should clear the channel to prevent flooding during wet season.

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

Management of Solid and Liquid Waste	Status
<p>Disposal of Liquid Waste</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 wheel washing will be silt filtered before discharging into nearby storm drains.</p>
<p>Disposal of Construction & Demolition Material</p> <ul style="list-style-type: none"> - Public Fill - Construction & Demolition (C&D) Waste 	<ul style="list-style-type: none"> - No public fill material was disposed. -The Contractor had appointed licensed waste collector to dispose of solid waste (1.61 tonne) at NLRTS Refuse Transfer Station on 23 March 2004.
<p>Disposal of Hazarding Waste</p> <ul style="list-style-type: none"> - Chemical Waste 	<ul style="list-style-type: none"> -Chemical waste was being stored in the chemical containers and housed in a proper place. -The Contractor had appointed Wing Tat Transportation Company (waste collector) to dispose of spent lube oil (~200L) at Dunwell Ind. (Holding) Ltd (Reception point).
<p>Avoidance/ Minimization of Waste</p> <ul style="list-style-type: none"> - Reuse of Material - Recycle of Material - Disposal of General Refuse 	<ul style="list-style-type: none"> -Excavated material had been used for backfilling. -Waste material was segregated into different categories. -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 (2kg) & Aluminum cans (3 pcs) to the collector on 27 March 2004. -The refuse bins and garbage container was provided.

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 clear the channel before coming of wet season.

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.
- 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 & Wastewater</p> <p>Waste oil & 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

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 storage 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 channel in good condition to prevent accumulation of ponding water and flooding.

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

Summary of Complaints**Appendix A**

Environmental Parameters	Cumulative no. Brought forward	No. of complaint March 2004	Overall total
Noise	0	0	0
Air	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	0

Details of Complaints

Date	Complainant	Detail	Action taken
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Details of Outstanding Issues / Deficiencies**Appendix B**

Outstanding Issues / Deficiencies	Action taken
<ul style="list-style-type: none">• It was observed that the perimeter channel near CSCEHKL's office was filled the weeds and the sand. The Contractor should clear the channel to prevent flooding during wet season.	<ul style="list-style-type: none">• The Contractor will clear the channel before coming of wet season.

Site Audit Schedule for April 2004

Appendix C

2 April 2004	8 April 2004	16 April 2004	23 April 2004	30 April 2004
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Appendix D
Waste Disposal Record &
Licenses Records

To be submitted in final report.