
Contract No. : DC/99/10

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

**Environmental Monitoring & Audit
Monthly Monitoring Report, No.19**

March 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 nineteenth 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 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

Cladding works of buildings, internal blockworks and finishes, watertightness tests of structures, laying of drain pipes and construction of manholes, laying cable trenches were carried out in March 2003. The corresponding mitigation measures were implemented such as a wheel washing bay was provided at the site exit; water hoses, water truck and water sprinklers were provided for watering the dusty areas; a de-silting tank was provided to treat the muddy effluent before discharging; stockpiled materials were covered with tarpaulin sheets to prevent fugitive dust emission 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

Construction noise 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

Cladding works of buildings, internal blockworks and finishes, watertightness tests of structures, laying of drain pipes and construction of manholes, laying cable trenches will proceed next month. In view of the forthcoming wet season, site drainage shall be one of the key issues. The site drainage related problems may include muddy water flowing to nearby stormwater drain and mosquito breeding on stagnant water. The Contractor should maintain road gullies, catchpits and U-channel in good condition to avoid flooding during rainstorm. Apart from that, the Contractor should continue to water the haul roads and access roads more frequently on dry weather days.

The Contractor should 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

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 noted that there was a lot of standing water accumulated in the site area after recent raining. The Contractor was advised to remove the stagnant water as soon as possible to prevent breeding of mosquito. In addition, the Contractor should adopt a proper site management to prevent accumulation of rainwater.
- It was noted that the site areas appeared dry and dusty. The Contractor was advised to water the site areas more often to prevent dust emission on dry weather days.
- It was noted that a lot of sand was deposited on the access roads of an existing treatment plant. The Contractor was advised to remove the deposited sand as soon as possible.
- Some sandbags used as a trap to prevent muddy surface runoff flowing directly to the gullies had been damaged. The Contractor is reminded to replace the damaged sandbags regularly with intact ones.
- It was observed that some garbage were disposed at the perimeter channel near the Contractor's office. The Contractor should clear the channels from time to time to prevent flooding.

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
Disposal of Liquid Waste	<ul style="list-style-type: none">- Sewage generated by the site office was discharged into adjacent Siu Ho Wan Sewage Treatment Plant.- Surface runoff and groundwater were treated by sand bags or de-silting tank before discharging into nearby storm drains. Some surface runoff was infiltrated through the sediment.- Wastewater generated from a wheel washing bay via a silt trap before discharging into nearby storm drains.- Portable toilet was provided on site.
Disposal of Construction & Demolition Material <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.- No C&D waste was disposed.
Disposal of Hazardous Waste <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) on 12 March 2003.

Management of Solid and Liquid Waste	Status
Avoidance/ Minimization of Waste - Reuse of Material - Recycle of Material - Disposal of General Refuse	-Excavated material has been properly stockpiled and awaiting 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 (2 pcs), Waste paper (5 kg) & Aluminum cans (12 pcs)) to the collector on 28 March 2003. -The refuse bins and refuse container were provided. -A total of 15 m ³ of general refuse was collected by the Waylung Waste Services Ltd. in March 2003.

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-UW0408-02	06/1/03	05/7/03	Concrete lorry mixer(4), Dump truck(2), Excavator, tracked(2),poker (4), Generator, compactor vibratory, lorry with crane, crane, power rammer, roller vibratory, concrete dump (2), saw, circular, wood(4)	Valid
Water Discharge License@	EP742/972/00 31261	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 removed the stagnant water, which accumulated at the site after rainy days.
- The Contractor has watered the main haul road and site areas more frequently by water sprinkler system and water truck.
- The Contractor removes the deposited sand from the access roads of the existing treatment plant every days.

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 sprinklers, water truck and water hoses were provided on site to suppress the dust emission. The Contractor had provided more water sprinklers at the dusty areas.
- Chemical waste containers and chemical waste storage place were provided.
- Stockpiled materials were properly compacted and covered with the tarpaulin sheets to prevent fugitive dust emission and contamination of surface runoff.
- 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.
- Excavated materials were properly stockpiled for future use.
- De-silting tanks were provided on site to treat the muddy construction effluent before discharging into nearby storm drain.
- Perimeter channels were provided at the site boundary to intercept the surface runoff.

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 was reminded to adopt a proper site management to prevent accumulation of rainwater and remove any stagnant water as soon as possible to prevent breeding of mosquito. Moreover, the recycled quantities as indicated Table 1.1 seems to be low. The Contractor should encourage their site staff to recycle material on the site.

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 2003	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 noted that there was a lot of standing water accumulated in the site areas after recent raining. The Contractor was advised to remove the stagnant water as soon as possible to prevent breeding of mosquito. In addition, the Contractor should adopt a proper site management to prevent accumulation of rainwater.● It was noted that the site areas appeared dry and dusty. The Contractor was advised to water the site areas more often to prevent dust emission on dry weather days.● It was noted that a lot of sand was deposited on the access roads of the existing treatment plant. The Contractor was advised to remove the deposited sand as soon as possible.● Some sandbags used as a trap to prevent muddy surface runoff flowing directly to the gullies had been damaged. The Contractor is reminded to replace the damaged sandbags regularly with intact ones.● It was observed that some garbage were disposed at the perimeter channel near the Contractor's office. The Contractor should clear the channels from time to time to prevent flooding.	<ul style="list-style-type: none">● The Contractor had removed the stagnant water, which accumulated at the site after rainy days.● The Contractor has watered the main haul road and site area more frequently by water sprinkler system and water truck.● The Contractor removes the deposited sand from the access road of the existing treatment plant every days.

Site Audit Schedule for April 2003

Appendix C

4 Apr 2003	11 Apr 2003	17 Apr 2003	25 Apr 2003
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