
Contract No. : DC/99/10

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

**Environmental Monitoring & Audit
Monthly Monitoring Report, No.18**

February 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 eighteenth 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 February 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 February 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. The Contractor reported that officers from the Environmental Protection Department visited the site on 18 February 2003. No adverse comment was made.

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. Apart from the dust problems, construction effluent may be another key issue in March 2003 since the wet season is approaching. The Contractor should continue water the haul roads and access roads more frequently on dry weather days. Open stockpiles of backfilling material should be compacted or covered with tarpaulin sheets to prevent dust emission and contamination of surface runoff. In addition, the Contractor should maintain road gullies, catchpits and U-channel in good condition to avoid flooding during rainstorm.

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:

- Stockpiles of rubbish were seen on 8 February 2003 on the site. The Contractor was advised to handle the rubbish properly and remove them from the site as soon as possible in the interest of hygiene.
- It was noted that wastewater pumped out from the odour control room was not properly treated and accumulated at the site. The Contractor should discharge the wastewater to nearby storm drain after proper treatment.
- It was observed that most stockpiles of backfilling sand were not covered by the tarpaulin sheets. In addition, the haul road and site area appeared dry since they were not received enough watering. The Contractor should compact and cover the stockpiles of sand with tarpaulin sheets and water the dusty area more frequently to prevent dust emission.

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 Hazarding 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 disposed of spent lube oil (~200L) at Dunwell Ind. (Hoilding) Ltd (Reception point) on 12 February 2003.
Avoidance/ Minimization of Waste <ul style="list-style-type: none"> - Reuse of Material - Recycle of Material - Disposal of General Refuse 	<ul style="list-style-type: none"> - 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 (3 pcs), Waste paper (3 kg) & Aluminum cans (10 pcs)) to the collector on 28 February 2003. - The refuse bins and refuse container were provided. - A total of 15 m³ of general refuse was collected by the Waylung Waste Services Ltd. in February 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

@ Water sample was collected bi-monthly for laboratory analysis in accordance with the license requirement.

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 stockpiled rubbish from the site.
- The Contractor has watered the main haul road and site area more frequently by water sprinkler system and water truck.
- The Contractor had removed the wastewater accumulated near the odour control room and stopped directly discharging the wastewater to the site.
- The Contractor had compacted the large-scale stockpiled sand and covered the small stockpiled sand with tarpaulin sheets.

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.

3 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. The potential environmental impact and the corresponding environmental mitigation measures are summarised in Table 3.1.

Summary of Complaints**Appendix A**

Environmental Parameters	Cumulative no. Brought forward	No. of complaint February 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">● Stockpiles of rubbish were seen on 8 February 2003 on the site. The Contractor was advised to handle the rubbish properly and remove them from the site as soon as possible in the interest of hygiene.● It was noted that muddy effluent pumped out from the odour control room was not properly treated and accumulated at the site. The Contractor should discharge the wastewater to nearby storm drain after proper treatment.● It was observed that most stockpiles of backfilling sand were not covered by the tarpaulin sheets. In addition, the haul road and site area appeared dry since they were not received enough watering. The Contractor should compact and cover the stockpiles of sand with tarpaulin sheets and water the dusty area more frequently to prevent dust emission.	<ul style="list-style-type: none">● The Contractor had removed the stockpiled rubbish from the site.● The Contractor had removed the wastewater accumulated near the odour control plant and stopped directly discharging the wastewater to the site.● The Contractor have compacted the large-scale stockpiled sand and covered the small stockpiled sand with tarpaulin sheets.● The Contractor has watered the main haul road and site area more frequently by water sprinkler system and water truck.

Site Audit Schedule for March 2003

Appendix C

7 Mar 2003	14 Mar 2003	21 Mar 2003	28 Mar 2003
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