
Contract No. : DC/99/10

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

**Environmental Monitoring & Audit
Monthly Monitoring Report, No.34**

June 2004

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EXECUTIVE SUMMARY

This is the thirty-four 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 June 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 June were mainly erection of bamboo scaffold and working platform for GRP tank covers and external finish at Sludge Buffer Tanks, laying surface channels and paving blocks, landscaping work and internal finish. 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, construction noise permit 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

Since the wet season was expected to continue, 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.

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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 observed that stagnant water pools were found in the catchpit near the General Good Store, the outlet in the Sludge Buffer Tanks and in the u-channel with blockage channel. The Contractor was advised to apply mosquito larvicides to the stagnant water pools and pump dry them as soon as possible.
- It was noted that rubbish were scattered in the site area and a lot of waste timber board were stockpiled near the rubbish container. The Contractor was reminded to dispose of them properly.
- The Contractor was reminded to implement anti-mosquito measures properly and provide implemented checklist and weekly records on site for ET, IEC and Engineer inspection.

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	<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>
Disposal of Construction & Demolition Material - Public Fill - Construction & Demolition (C&D) Waste	<p>- No public fill material was disposed.</p> <p>-The Contractor had appointed licensed waste collector to dispose of solid waste (2.05 tonne) at NLRTS Refuse Transfer Station on 9 June 2004.</p>
Disposal of Hazardous Waste - Chemical Waste	<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 dispose of spent lube oil (~200L) at Dunwell Ind. (Holding) Ltd (Reception point).</p>
Avoidance/ Minimization of Waste - Reuse of Material - Recycle of Material - Disposal of General Refuse	<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 (3 pcs), Waste paper (1kg) & Aluminum cans (3 pcs) to the collector on 25 June 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-UW0189-04	3/5/04	30/10/04	Concrete lorry mixer(3), Dump truck(2), Excavator, tracked(2), poker (3), Generator, Saw(3), Crane, Concrete pump(2) Compactor vibratory, Power rammer, Lorry with crane, power rammer, roller vibratory, concrete dump, saw, circular, wood(3)	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 was reminded to remove stagnant water as practice as possible and apply anti-mosquitoes oil to the stagnant water to prevent mosquitoes breeding.
- The Contractor have removed the deposited sand from the u-channel .The Contractor was also 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 had provided stand-by pumps to remove any ponding water after rainstorms.
- The Contractor will prepare the weekly checklist of implementation of anti-mosquito measures as soon as possible.

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 steel staircase and GRP tank cover and support beams at Sludge Buffer Tanks, internal finishes and installation of stainless steel cover and 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; landscaping works; demolition of blockout walls; footpath paving work and installation of steel staircase and GRP tank cover and support beams at Sludge Buffer Tanks, internal finishes and installation of stainless steel cover and handrailing will proceed next month.</p>	<p>Dust Impact & Wastewater</p>	<p>Water the site areas more frequently on dry weather days.</p> <p>Cover the exposed surfaces with tarpaulin sheets.</p> <p>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>The Contractor had provided stand-by pumps to remove any ponding water after rainstorms.</p>
<p>General activities</p>	<p>Waste oil & Construction materials</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 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 anti-mosquito 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**

Environmental Parameters	Cumulative no. Brought forward	No. of complaint June 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 stagnant water pools were found in the catchpit near the General Good Store, the outlet in the Sludge Buffer Tanks and in the u-channel with blockage channel. The Contractor was advised to apply mosquito larvicides to the stagnant water pools and pump dry them as soon as possible. ● It was noted that rubbish were scattered in the site area and a lot of waste timber board were stockpiled near the rubbish container. The Contractor was reminded to dispose of them properly. ● The Contractor was reminded to implement anti-mosquito measures properly and provide implemented checklist and weekly records on site for ET, IEC and Engineer inspection.	<ul style="list-style-type: none">● The Contractor was reminded to remove stagnant water as practice as possible and apply anti-mosquitoes oil to the stagnant water to prevent mosquitoes breeding. ● The Contractor had provided stand-by pumps to remove any ponding water after rainstorms. ● The Contractor have removed the deposited sand from the u-channels .The Contractor was also 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 had told his staff to dispose the rubbish properly and maintain the site in good housekeeping condition. ● The Contractor will prepare the weekly checklist of implementation of anti-mosquito measures as soon as possible.

Site Audit Schedule for July 2004

Appendix C

2 July 2004	9 July 2004	16 July 2004	23 July 2004	30 July 2004
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Appendix D
Waste Disposal Record &
Licenses Records

To be submitted in final report.