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(ACE 37/94)
for information

Quarterly Report (January - March 1994) on Environmental Monitoring
Environmental Project Office (ENPO) - West Kowloon Project Area

A. Project Title: Environmental Project Office (ENPO) - West Kowloon Project Area

1. Project Data and Project Organisation:

The ENPO is a joint venture between the firms: Consultants in Environmental Sciences (Asia) Ltd (CES) and Binnie Consultants Ltd (BCL). The project office is managed by the Environmental Protection Department. ENPO conducts the environmental monitoring and audit of the projects under construction in the WKPA and reports on a monthly basis to a steering group formed by EPD, NAPCO, PM/KDevO, HyD and CED. Issues which cannot be resolved at this level will be referred to the Secretary for Works and the Secretary for Planning, Environment and Lands for resolution. The ENPO commenced on 27 August 1992 and the current consultancy will run initially for two years under the present arrangements. The ENPO will be needed throughout the period of major ACP construction work in the area.

2. Monitoring Requirement:

Air, noise and water quality are monitored together with related meteorological and tidal information. Ten permanent air monitoring stations are programmed to collect 24 hour dust samples. These are sampled on a weekly basis with ad hoc hourly sampling being implemented when it is necessary to focus on specific works operations. Two wind speed and direction monitoring stations have been commissioned to determine prevailing wind direction to determine the areas most likely to be impacted by fugitive dust from the site.

Seven noise monitoring stations provide three consecutive 5 minute readings on a weekly basis. Initially, baseline monitoring frequencies were higher in order to establish background conditions. Five permanent water stations and two control stations, to determine background water quality in the harbour, were initially established. Further supplementary stations have been added to provide data for specific operations so as to ensure that their consequences adequately dissipate within the confines of the site limits. Daily monitoring during the baseline has since reduced to 2 days per week and parameters include: dissolved oxygen (DO % and mg/l), suspended solids (SS), turbidity and temperature.

Flexible monitoring arrangements are built into the agreement to cope with unforeseen incidents. Additional stations can be added and frequency increased to closely monitor changing situations, such as sudden water quality deterioration.

3. Monitoring Results: Compliance with Action/Target levels

Monitoring results in the form of exceedances for the period January to March 1994 are included in Table A1.

Air: During the reporting period, 6 target level and 8 action level exceedances were recorded. As strong easterly winds were recorded during one of the monitoring periods even in locations where dust raising operations were taking place, it is considered that most of the exceedances were not construction related. Having said that, there are still insufficient dust suppression measures in place in areas where vehicular site traffic is regularly observed to raise significant dust plumes.

Noise: Night-time noise levels have exceeded the ANL on 15 occasions while the daytime target level was exceeded twice. These are mainly attributable to high background levels associated with traffic. Some marginal contravention of EPD construction permits have occurred at night but there has been no evidence of widespread violations in this quarter. Two daytime noise level exceedances were also recorded.

Water: Water quality seems to be improved in the last quarter. Only one target DO level exceedance has been recorded and suspended solid action and target level exceedances were reduced from seven in January and only one in February to none in March. The situation was probably a result of the temporary respite in sandfilling work at Yau Ma Tei typhoon shelter combined with the better seasonal water quality.

The sewage discharges onto the old Yau Ma Tei typhoon shelter has caused problems to the salt water intake at Ferry Point. Actions were on-going to have mitigation measures in place.

Table A1 - Exceedances of the ENPO Action and Target Levels

Environmental Parameters	January 94			February 94			March 94		
	Total*	A	T	Total*	A	T	Total*	A	T
Air	39	0	0	38	7	5	50	1	1
Noise	28	0	9	21	0	3	21	0	5
Water DO Surface	63	0	0	56	0	1	56	0	0
Water DO Bottom	63	0	0	56	0	0	56	0	0
Water SS	63	4	7	56	1	1	56	2	0
Water Turbidity	63	1	6	56	1	1	56	1	0

* Total no. of monitoring events undertaken.
A No. of monitoring events with results exceeding the Action Level only.
T No. of monitoring events with results exceeding the Target Level.

4. Audit Results: Implications of Non-compliance

Air: Most exceedances during this period were recorded in February. As strong easterly winds were recorded during one of the monitoring periods even in locations where dust generating operations were taking place, it was considered that most of the exceedances were not construction related. However ENPO considered that insufficient dust suppression measures have been implemented and has emphasized the need for sufficient dust mitigation measures to the Resident Site Staff. Continued vigilance by all concerned is required to minimise/avoid any potential dust problem, particularly as the nature of the works changes from reclamation to infrastructure development.

Noise: As in the previous quarter, most of the exceedances were not caused by site activities but by nighttime background noise associated with traffic. The RSS have

been asked to remind contractors that any continued non-compliance with permits will result in complaints and legal action against the contractors involved.

Water: Continued non-compliance due to factors such as expedient connection in the hinterland area and discharge of sewage to the works area may result in deteriorating water quality and the possibility of public health implications. Recommendations for temporary mitigation measures to protect the WSD Pumping Station before its relocation have been made. Civil Engineering Department has instructed its contractor to implement the measures.

ENPO has conducted an investigation into the water quality deterioration in Cheung Sha Wan Pumping Station and has recommended mitigation measures to the Resident Site Staff. Mitigation measures have been implemented and water quality has improved. ENPO will keep a close watch on the situation and will recommend further actions when necessary.

5. Proposals for Remedial Measures: Solutions to Problems

ENPO has made a number of proposals; these include:-

- ◆ dust suppression and good site housekeeping to minimize fugitive dust emissions. These include: reducing sand surcharge piles, demarcating and watering of site haul-roads and site area, provision of wheel washing facilities, creating of wind-rows on exposed areas of sand, and erection of barriers to prevent abuse of site access roads,
- ◆ an increase in the cleaning of the public access roads by USD
- ◆ supply of clean salt water from Government Dockyard to the WSD intake at Ferry Point
- ◆ increased overnight presence as works move towards foreshore

6. Follow-up Actions: By Contractors and Engineers etc

Some of the above suggested remedial or proactive solutions have been taken up by the Engineers and implemented by their contractors. ENPO has also advised all concerned groups on dust suppression measures as more vigilance is required by all with respect to effective dust suppression measures.

7. Complaints: From the Public

7 complaints (5 noise and 2 water) have been received during this period through the EPD Pollution Complaints Hotline and passed on to ENPO for investigation and these are as shown in Table 2.

The complaint received in January was concerned with the water quality problem in front of Nam Cheong Estate. Additional monitoring was conducted and there was no evidence of any odour problem. The ENPO requested the contractors to keep clear the stormwater drainage channel in front of the Estate in order to facilitate effective dispersion.

The second complaint received in March from WSD was concerned with the quality of salt water collected from the Cheung Sha Wan Pumping Station. The ENPO recommended that a

positive differential head be maintained at all times so that sewage-rich water cannot enter the pumping station. With the recommendation implemented, the flushing water quality has been improved.

Table A2: Monthly Distribution of Complaints Received

	January	February	March
Air	0	0	0
Noise	1	1	3
Water	1	0	1

8. Liaison: Meetings and Representations to the Public

ENPO has made presentations to the Yau Tsim District Board and Mongkok District Board during the reported period.

Environmental Protection Department
July 1994
