Confirmed Minutes of the 89th Meeting of the Environmental Impact Assessment Subcommittee of the Advisory Council on the Environment held on 18 October 2004 at 4:00pm

Present:

Mr. Otto POON, BBS (Chairman)
Prof. HO Kin-chung, BBS (Deputy Chairman)
Mr. Peter Y C LEE
Dr. NG Cho-nam, BBS
Prof. POON Chi-sun
Miss Petula POON (Secretary)

Absent with Apology:

Mrs. Mei NG, BBS
Prof. WONG Tze-wai

In Attendance:

Mr. Elvis AU	Assistant Director (Environmental Assessment & Noise), Environmental Protection Department (EPD)
Mr. C C LAY	Assistant Director (Conservation), Agriculture, Fisheries and Conservation Department (AFCD)
Mr. Eddie CHENG	Executive Officer (E), Environment, Transport and Works Bureau (ETWB)
Ms. Sarah NG	Executive Officer (E) (Designate), ETWB

In Attendance for Agenda Item 3:

Mr. CHAN Chi-yan	Chief Engineer/Fill Management, Civil Engineering and Development Department (CEDD)
Mr. DING Wing-wai	Senior Geotechnical Engineer/Marine, CEDD
Ms. Helen COCHRANE	Director, Meinhardt Mouchel Ltd.
Dr. Shaun NICHOLSON	Associate Director, Meinhardt Mouchel Ltd.

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Action

Agenda Item 1: Confirmation of Minutes of the 88th Meeting held on 20 September 2004

The draft minutes were confirmed without amendment.

Agenda Item 2: Matters Arising

Action

2. The Chairman reported that there was no matter arising from the minutes of the last meeting.

Agenda Item 3: Environmental Assessment Study on Backfilling of Marine Borrow Pits at North of the Brothers
(ACE-EIA Paper 9/2004)

Internal discussion

3. Upon the Chairman's enquiry, Mr. Elvis Au explained that the backfilling of marine borrow pits at North of the Brothers was authorized in 1990 before the enactment of the EIA Ordinance and was therefore exempted from the Ordinance. In reply to a Member's question, Mr. Au said that the previous EIA study focused on sand dredging while the current environmental assessment focused on backfilling.

Presentation

4. The Chairman welcomed the presentation team to the meeting. Mr. Chan Chi-yan introduced the project and Ms. Helen Cochrane presented the findings of the environmental assessment to Members.

Maximum concentration level vs average concentration level

5. Referring to the table in page 5 of the executive summary, the Chairman pointed out that some of the figures in the last column (i.e. figures on chromium and copper) exceeded the Water Quality Objectives in the same table. In response, Dr. Shaun Nicholson clarified that the data in the last column of the table was the maximum concentration ever recorded in the Contaminated Mud Pits II and III at East Sha Chau. The average data recorded there was actually lower than the Water Quality Objective. Ms. Helen Cochrane added that the data from East Sha Chau was included in the table for comparison purpose. The mud disposed of in East Sha Chau was much more contaminated but the Water Quality objectives could still be met. It showed that Category M material that passed biological tests which was less contaminated than that disposed of at East Sha Chau should have little environmental impacts. A Member asked whether the background concentration level of some contaminants were higher than the relevant Water Quality Objectives. In response, Dr. Nicholson said that the figures of background concentration referred to the average concentration levels which were much lower than the Water Quality Objectives. Another Member suggested that since water quality impacts were compared on an average basis, the average concentration level instead of the maximum concentration level recorded in East Sha Chau should be included in the table for better presentation. In response, Dr Nicholson stated that the

purpose of including the maximum level recorded was to demonstrate the worst-case situation.

Wet and dry season simulations

6. A Member said that the environmental assessment report showed a series of dry season and wet season simulation results but the figures were dated July and August of 1996. His concern was that if the dates were related to the data used in the simulation, then the result for the dry season would be incorrect. He also asked whether the worst-case scenario arising from natural conditions was also considered. In response, Ms. Helen Cochrane explained that the dates represented the time of the calibration of the model rather than the dates of the data used. The simulation was done with actual dry season and wet season data. Ms. Cochrane also confirmed that the worst-case scenario had been considered. What they had done was to simulate the situations of both wet and dry season with different tide amplitudes. The worst-case was included as one of the inputs and the model showed that the environmental impact was acceptable for all inputs.

Background level for suspended solid

7. Noting that that the Water Quality Objectives for suspended solids was 30% of the background concentration, a Member asked about the range of the background suspended solids concentrations and whether the predicted level would easily exceed the lower range of the figures. In response, Ms. Helen Cochrane explained that the range of background suspended solids concentrations varied greatly. For example, according to the East Sha Chau Contamination Mud Pits monitoring data (to 2002), the suspended solids concentrations varied from 10mg/L up to over 80mg/L, and in the baseline monitoring on Strategic Sewage Disposal Scheme Stage I outfall, suspended solids level as high as 161mg/L had been recorded. However, for environmental assessment purpose, the average level instead of the minimum level would be used. In the present study, 30mg/L which was rather conservative was adopted as the standard. The Member said that the impact with respect to suspended solids could be significant if the background level of suspended solids was low. He asked whether the disposal operation would cease temporarily if such scenario arose. In response, Ms. Cochrane said that as stated in the Environmental Monitoring and Audit (EM&A) Manual, regular monitoring would be conducted. The Action/Event Plan in the Monitoring and Audit programme would be followed if an exceedance of the Water Quality Objectives was detected. The actions included verification of the monitoring data, further investigation, and possibly temporary cessation of disposal operations if appropriate. In response to the Member's question, Mr. Elvis Au said that

though the proposed project was exempted from the EIA Ordinance, the Civil Engineering and Development Department, being a responsible government department, would follow the EM&A Manual. In addition, there was an administrative circular on EIA requiring all government departments to abide to EM&A Manuals.

The appropriateness of disposing Category M material passing biological testing into type 1 sites

8. A Member expressed concern about the appropriateness of disposing Category M material which passed biological tests in Type 1 (dedicated) open sea disposal sites if such material was disposed of at East Sha Chau Contamination Mud Pits in the past, and whether there were scientific studies to support the case. In response Dr. Shaun Nicholson said that Category M material that had passed biological tests was not particularly toxic, and it would be a waste of space to dispose such material in Contaminated Mud Pits at East Sha Chau. Ms. Helen Cochrane indicated that disposal activities at the Contamination Mud Pits at East Sha Chau had been monitored for more than ten years and no significant impact on the environment had been found. They had also used the worst-case scenario to predict the impact of the proposed operation and even based on those conditions, no significant impact on the environment was predicted. Mr. Ding Wing-wai explained that the present New Sediment Classification Framework was presented to the Council in 1997 and was promulgated in 2000. In the Framework, the Lower Chemical Exceedance Levels and Upper Chemical Exceedance Levels were specified for a larger number of potential contaminants than before and biological testing was introduced. Category M material that passed biological tests would not be toxic and the chance of any bioaccumulation would be small. It was therefore considered that the material was suitable for disposal at Type 1 (dedicated) open sea disposal sites.

Duration of the operation

9. In response to a Member's enquiry, Mr. Ding Wing-wai said that the proposed project could last for 20 years because the demand for the facility was low. According to experience, most dredging sites contained both Category M and Category H material. Those materials were often interbedded and it would be very difficult to separate them. As a result, those materials had to be disposed of at confined sites at East Sha Chau. At present, there was only one planned project that would produce Category M material that passed biological test in sufficient quantity and in isolated manner.

10. A Member asked whether mud disposal mainly arose from

dredging procedures before reclamation, and whether the reduction in reclamation projects in recent years had lowered the demand for the facility. In response, Mr. Ding Wing-wai said that recently the majority of dredged material came from maintenance dredging instead of reclamation dredging.

Loss rate of the discharged volume

11. In reply to a Member's question on the loss rate of the discharged volume, Mr. Ding Wing-wai said that the figures were derived from actual measurements done in East Tung Lung Chau in 1997. The range of the loss rate was from 1.1% to 6.7%, and the conservative average figure of 5% for trailer disposal was adopted for the proposed project.

Monitoring during disposal operations

12. Noting that the most critical environmental impacts would arise during mud disposal operations, a Member asked whether any modeling had been conducted and whether monitoring would be conducted during disposal operations. In response, Ms. Helen Cochrane confirmed that they had conducted modeling and the result was satisfactory. As regards monitoring during disposal operations, since the number of barges using the facility would be small, it would be very difficult to co-ordinate the monitoring with the disposal operations. They had been able to monitor such operations at East Sha Chau because the operations were much more frequent. The current monitoring arrangements could be reviewed if the need arose.

13. A Member said that monitoring the water quality during dumping operations would ensure that any adverse impacts due to the operation could be dealt with promptly. He suggested that during disposal operations, small boats should be employed to monitor changes in the water quality at the upstream and downstream of the dumping area. Operations should cease if the Water Quality Objectives were exceeded. In response, Dr. Shaun Nicholson pointed out that they had been monitoring the water quality in East Sha Chau during disposal operations for ten years in the manner suggested, and had never recorded any significant impact during the operations. The Member agreed that it would be very difficult to carry out ambient environmental monitoring and it would be more practical to monitor the content of the material before disposal. Ms. Helen Cochrane assured Members that all material had to undergo testing to determine its category before disposal. The objective of monitoring work was to ensure that the operation would not cause any significant impact.

14. In response to a Member's question, Ms. Helen Cochrane clarified that in addition to EPD's monthly monitoring data, they had also

made use of a large set of water quality data from various studies in the area. The Member noted that a series of emergency procedures were suggested but since monitoring would be conducted monthly, emergency actions might not be taken in time. The Chairman hoped that the project proponent would consider Members' suggestion of conducting monitoring during disposal operations. Having regard to Members' concern on the issue, Mr. Chan Chi-yan agreed to consider their suggestions and try to include terms and specifications in the works contracts if possible.

Red tides

15. A Member said that according to his studies, more and more different algae species that caused red tides were identified in Hong Kong in recent years. He and his colleagues suspected that some of the species might come from dredged material because algae could form cysts on the seabed and dumping of dredged mud might transport the cysts to other areas. He suggested that phytoplankton monitoring and biodiversity monitoring would be beneficial for the project

Impact on sea fish

16. A Member expressed concern that the proposed project site was near a narrow channel. If dumping carried on in a prolonged period, the loss of suspended solids would seriously affect fish resources in the area, particularly during breeding seasons. Mr. Chan Chi-yan noted his concerns.

Conclusion

17. The Chairman thanked the presentation team and concluded that the Subcommittee had no objection to the environmental assessment report and would recommend it to the Council for endorsement. Although the proposed project was exempted from the EIA Ordinance, the Chairman requested the project proponent to consider Members' suggestions when implementing the project.

Agenda Item 4: Monthly Updates of Applications under Environmental Impact Assessment Ordinance

18. Members noted the updates.

Agenda Item 5: Any Other Business

Tentative items for discussion at the 90th meeting

19. The Chairman informed Members that according to the

tentative schedule provided by EPD, there was no EIA report scheduled for the next meeting to be held on 15 November 2004. The Secretariat would liaise with EPD nearer the time and notify Members in due course.

Reply slip on EIA reports

20. The Secretary reminded Members to make use of the reply slip that was attached to the notice of meeting to ask questions on the EIA report under consideration. The project proponent would be invited to provide written response to Members' questions before the meeting as far as possible. Where appropriate, Members could also make use of the reply slip to endorse the EIA report.

Agenda Item 6: Date of Next Meeting

21. As some Members might not be able to attend the meeting scheduled for 15 November 2004, the Secretariat would liaise with Members to fix a suitable date.

(Post-meeting note : the next meeting would be held on 22 November 2004.)

EIA Subcommittee Secretariat
October 2004