

**立法會**  
**Legislative Council**

LC Paper No. CB(2)1234/99-00  
(These minutes have been seen  
by the Administration)

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**LegCo Panel on Environmental Affairs and  
LegCo Panel on Health Services**

**Minutes of Joint Meeting  
held on Friday, 7 January 2000 at 11:45 am  
in Conference Room A of the Legislative Council Building**

**Members Present** : Members of the Panel on Environmental Affairs

Hon Christine LOH (Chairman)

Hon HUI Cheung-ching (Deputy Chairman)

Ir Dr Hon Raymond HO Chung-tai, JP

Hon Martin LEE Chu-ming, SC, JP

Hon CHEUNG Man-kwong

Hon CHAN Wing-chan

\* Dr Hon LEONG Che-hung, JP

(Deputy Chairman of the Panel on Health Services)

Hon CHOY So-yuk

Members of the Panel on Health Services

Hon Michael HO Mun-ka (Chairman)

Hon HO Sai-chu, SBS, JP

Hon CHAN Yuen-han

Hon Bernard CHAN

(\* Also members of the Panel on Health Services)

**Members Absent** : Members of the Panel on Environmental Affairs

Prof Hon NG Ching-fai

Hon Margaret NG

Hon Ronald ARCULLI, JP

\* Hon Mrs Sophie LEUNG LAU Yau-fun, JP

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Hon WONG Yung-kan  
Hon LAU Kong-wah  
Hon Mrs Miriam LAU Kin-ye, JP  
Hon Emily LAU Wai-hing, JP  
Hon Andrew CHENG Kar-foo  
\* Hon LAW Chi-kwong, JP

Members of the Panel on Health Services

Hon Cyd HO Sau-lan  
Dr Hon YEUNG Sum  
Hon YEUNG Yiu-chung  
Dr Hon TANG Siu-tong, GBS, JP

(\* Also members of the Panel on Health Services)

**Members Attending** : Hon LEUNG Yiu-chung

**Public Officers Attending** : Mr Steve BARCLAY  
Principal Assistant Secretary for the Environment and Food (B)

Mr John ROCKEY  
Assistant Director (Waste Facilities),  
Environmental Protection Department

Mr Conrad LAM  
Principal Environmental Protection Officer (Special Waste),  
Environmental Protection Department

Dr W M KO  
Deputy Director (Operations), Hospital Authority

Miss Regina LAW  
Manager (Business Support Services), Hospital Authority

**Attendance by Invitation** : Greenpeace

Mr Clement LAM  
Senior Campaigner

Dr Paul CONNET

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**Clerk in Attendance** : Mrs Constance LI  
Chief Assistant Secretary (2) 2

**Staff in Attendance** : Ms Bernice WONG  
Assistant Legal Adviser 1

Miss Betty MA  
Senior Assistant Secretary (2) 1

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**I. Election of Chairman**

Miss Christine LOH was elected Chairman of the joint meeting.

**II. Clinical Waste Control Scheme**

[LC Paper Nos. CB(2)773/99-00(01) and CB(2)791/99-00(01)]

2. The Chairman informed members that the Administration had provided a response to the issues raised by members at the last joint meeting held on 14 December 1999 and that the Greenpeace had also made a further submission on the points raised.

Briefing by the Administration

3. At the Chairman's invitation, Principal Assistant Secretary for the Environment and Food (PAS(EF)) briefed members on the salient points of the Administration's response -

- (a) the Administration considered that it was premature to make a decision at the present stage as to whether a public enquiry would be held in relation to the dioxin issue as the consultancy study and review were underway. The Administration would consult the community and the relevant parties when the consultancy report was available;
- (b) according to the study conducted by the Hospital Authority (HA), the estimated quantity of PVC in clinical waste from public hospitals and institutions was very low, which was about 3% by weight of the total clinical waste;
- (c) the claims on the harmful effects of incineration put forward by the Greenpeace were based on misunderstanding of the current

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situation in Hong Kong. The amount of PVC contained in clinical waste was much lesser than that claimed by the Greenpeace, hence the risk of dioxin emissions from the Chemical Waste Treatment Centre (CWTC) was over-estimated; and

- (d) the Administration had met with representatives of the Greenpeace subsequent to the meeting on 14 December 1999 to discuss issues relating to clinical waste.

4. Referring to the Greenpeace's further submission [LC Paper No. CB(2)791/99-00(01)], PAS(EF) said that the alternatives proposed by the Greenpeace could not be used for all types of clinical waste. For example, disposing of human body parts at landfills together with other waste would probably be unacceptable to the community.

5. PAS(EF) stressed that the Administration was very concerned about the dioxin issue and the community's concern in this respect. The Administration would decide the way forward after public consultation on the dioxin study and review findings. The Administration would take a final decision based on the best available facts.

Meeting with the deputation

6. At the invitation of the Chairman, Dr Paul CONNETT representing the Greenpeace briefed members on the problems related to incineration of clinical waste. His views were summarized below -

- (a) using incineration to treat clinical waste was a mismatch between the problem and solution. Medical waste presented a biological problem and the disposal should aim at minimizing the risk of bugs (disease causing bacteria and viruses) moving from the hospitals into the community. However, high temperature incineration created many chemical problems, such as the production of acid gases, the liberation of highly toxic metals and the formation of toxic compounds, in particular dioxins and furans;
- (b) two very different approaches had been developed in recent years to solve the medical waste problem. The "back-end" approach sought to retrofit the existing medical waste incinerators with more advanced air pollution control technology, but the problem of producing acid gases and generating toxic materials could not be solved. Another approach involved the use of on-site technologies to destroy the bugs without the need to chemically destroy the waste, and this method could completely avoid the dioxin problem. Three technologies had been widely used in the

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hospitals in US and Europe for the latter approach, viz. autoclaving (steam sterilization), chemical disinfection and microwaving. These on-site technologies were advantageous over CWTC operation as they minimized the dangers posed by transportation and multiple handling of the dangerous materials;

- (c) the level of dioxin emissions from CWTC as projected by the Environmental Protection Department (EPD) was based on limited data collected under ideal conditions. EPD did not tackle the problems relating to exposure to dioxin via the food chain and the current dioxin level in the body of Hong Kong people;
- (d) the Administration only defended the option of incineration of clinical waste and had not fully studied other non-incineration alternatives;
- (e) the HA should take further steps to minimize the use of PVC, mercury, unnecessary disposables and packaging in hospitals, as further reduction in the amount of clinical waste would facilitate the adoption of on-site disposal technologies in hospitals;
- (f) body parts and materials contaminated with radioactive isotopes which could not be treated by on-site disposal technologies only accounted for less than 1% of the total amount of clinical waste. However, incineration was not the best method to dispose of materials contaminated with radioactive isotopes as such materials required careful storage. The Administration had over-simplified the problem by offering incineration as a complete solution to all problems related to clinical waste management; and
- (g) the Administration should allocate resources for gathering data in Hong Kong instead of from overseas. For example, there should be researches into the average level of dioxin in mothers' breast milk in Hong Kong for comparison with overseas samples so as to assess the impact of dioxin in Hong Kong.

Discussion

*Alternative technologies for clinical waste treatment*

7. Noting that certain clinical waste such as body parts would have to be disposed of at landfills if the alternative disposal methods put forward by the Greenpeace were adopted, Dr LEONG Che-hung sought additional information from the Greenpeace on the proposed solution to insufficient space for landfills. He also expressed concern about the occupational safety of the operators in hospitals if on-site disposal methods were to be adopted. Dr CONNETT

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responded that there was no question of the safety of the microwave system which would be used in an enclosed environment. The system could also be constructed on a mobile basis so that it could be shared among hospitals. As regards the land constraints, Dr CONNETT pointed out that the clinical waste generated each day in Hong Kong was about 7 tonnes while the domestic waste generated daily amounted to 8 000 tonnes. The amount of clinical waste requiring landfill disposal could be reduced greatly if segregated before treatment.

8. Dr LEONG Che-hung opined that the discussion should not be confined to the dioxin issue and that a wider perspective should be taken of clinical waste treatment. He hoped Government could be more open-minded in exploring alternatives for clinical waste management.

9. Mr LEUNG Yiu-chung also urged the Administration to take a prudent approach before adopting incineration to treat clinical waste since there were already two incidents in which the level of dioxin emissions at CWTC had exceeded the contract limit. He was concerned about the risk of dioxin emissions in the course of clinical waste incineration, and asked whether it was Government's established policy to reduce all waste by incineration.

10. In response, PAS(EF) said that the Administration had made clear its intention at the previous Panel meeting that CWTC would be the only licensed facility for the management of clinical waste provided by the Government to the community. However, the Administration did not rule out the possibility of having other options for clinical waste management and would consider licensing a disposal facility if it satisfied the conditions for operation. As regards the other disposal methods put forward by the Greenpeace, the Administration agreed that they were workable to a certain extent. However, the Greenpeace failed to pinpoint the shortcomings of the proposed technologies which were not suitable for all kinds of clinical waste and that they were not free from risk or toxic emission. The microwave system, for example, was not suitable for treating human tissues or certain chemicals which needed proper separation. PAS(EF) stressed that as a result of the careful segregation of hospital waste, incineration could provide solution to the disposal of clinical waste which would otherwise be disposed of at landfills. He said that the Administration aimed at finding a total solution to the whole package of clinical waste.

11. On the level of dioxin emissions from CWTC facility, Assistant Director of Environmental Protection (Waste Facilities) (AD(WF)) said that the Consultant would report his findings next month. International experts had supported the use of incineration for waste treatment that the limited amount of dioxin generated from an incinerator would not have adverse impact on public health. He assured members that the incinerator at CWTC was of the highest standard.

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12. Responding to AD(WF), Dr CONNETT said that the Administration should not pre-empt the consultancy findings which were yet to be published. He said that the consultant should study the current level of dioxin in the body of Hong Kong people and in the food chain. He considered that the Government had the responsibility to present the pros and cons of each alternative disposal method for the consideration of the community. Referring to his research findings conducted in the US, Dr CONNETT said that it was universally well established that incineration was the most significant source of dioxin emissions. He commented that the Administration appeared to lack a real understanding of the relationship between food contamination and dioxin emissions from incineration and had overlooked the problem.

13. Responding to Mr Martin LEE, Dr CONNETT said that incineration of clinical waste and body parts was acceptable provided that no PVC and plastic were included so that no dioxin or toxic materials would be produced. If the clinical waste were segregated carefully, the total amount of clinical waste requiring incineration could be minimized, thus substantially reducing the risk of dioxin emissions from CWTC.

14. Mr Martin LEE noted that Dr CONNETT was not against incineration but that incineration should only be used for a small amount of waste. He supported Dr CONNETT's stance that the Administration should reconsider the feasibility of other alternative disposal methods before concluding that incineration was the most suitable way to deal with clinical waste.

15. Mr Michael HO also asked whether the Administration had studied the feasibility of further segregating the clinical waste so as to facilitate the use of other alternative disposal technologies, e.g. steam sterilization.

16. Deputy Director (Operations) of the Hospital Authority responded that it was the established policy of the HA to segregate clinical waste. At present, hospital waste was broadly segregated into medical, chemical and radioactive waste and the latter would require special treatment. HA would endeavour to improve its waste segregation measures with regard to resources and the cost-effectiveness of improvement measures.

17. Dr LEONG Che-hung said that a combination of disposal methods could be used even under a total approach for clinical waste treatment. In this connection, he asked whether the Administration had explored ways to further reduce the amount of clinical waste and that only those materials that could not be treated by other methods would be incinerated. PAS(EF) responded that since certain types of waste must be incinerated, it was not cost-effective to adopt a multiple system to treat clinical waste, as this would involve selection and follow-up procedures. He said that other disposal methods could only complement, but could not replace the incineration method.

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*Funding proposal for the modification of CWTC facility*

18. The Chairman sought clarification as to whether additional provision would be required for the proposed expansion of the existing CWTC facility for the incineration of clinical waste. AD(WF) clarified that the current proposal was not to expand the capacity of the existing incineration facilities already in CWTC but to modify CWTC such that its spare incineration capacity could be utilized for the treatment of clinical waste. The Administration would revert to the Panel on its concrete plan around March 2000 when the reports on the dioxin study and its reviews were available. Subject to members' views, the Administration intended to submit the proposal to the Public Works Subcommittee (PWSC) before the end of this session.

19. Dr LEONG Che-hung considered that the Administration should not rush into a decision to seek PWSC approval on the project since the two Panels did not agree entirely on the proposed incineration of clinical waste. He opined that the Administration should first deal with the objection of the residents in the vicinity of CWTC over the modification of CWTC. Mr LEUNG Yiu-chung added that residents of the Tsing Yi district had expressed serious concern about the risk of dioxin emissions from CWTC.

20. Dr CONNETT remarked that it would be more worthwhile to invest in other disposal methods instead of the incineration proposal.

*Engagement of consultants to study the dioxin issues*

21. Dr CONNETT pointed out that one of the consultants engaged by the Administration to study the level of dioxin emissions from CWTC facility had worked for the incineration industry and had spent a considerable time to defend incineration proposals. He considered it more appropriate to engage an independent consultant distant from the incineration industry to avoid any possible conflict of interest.

22. Mr Martin LEE and Mr LEUNG Yiu-chung expressed concern that the consultants were engaged to justify the Administration's position on the incineration proposals.

23. PAS(EF) responded that there was only a limited number of dioxin experts available and that the two consultants engaged by the Administration were renowned international experts. There was high transparency in the dioxin study and the full curriculum vitae of the two consultants had been made known to the public. To ensure the impartiality of the dioxin study, the report would be reviewed by an independent consultant. The Chairman requested the Administration to note members' concern about any possible conflict of interests of the consultants.



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24. In concluding the discussion, the Chairman said that the Panels did not object to the use of incineration for clinical waste treatment but that members were concerned about the extent of expansion of the existing CWTC facility, and whether the proposed additional investment was cost-effective when compared with other on-site disposal methods. Members also considered that a further reduction in the amount of medical waste from hospitals could alleviate the dioxin problem to some extent.

25. PAS(EF) stressed that the situation in Hong Kong was different from that in the US which incinerated all medical waste generated from hospitals while the clinical waste in Hong Kong were properly segregated before incineration.

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26. The Chairman suggested and the Administration agreed to revert to the Panel on the clinical waste control scheme when the results of the dioxin study were available.

**III. Any other business**

27. There being no other business, the meeting ended at 12:55 pm.

Legislative Council Secretariat  
14 February 2000