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LegCo Panel on Environmental Affairs
LegCo Panel on Health Services

Minutes of the joint meeting
held on Tuesday, 14 December 1999, at 3:30 pm
in the Chamber of the Legislative Council Building

Members present : Members of the LegCo Panel on Environmental Affairs

Hon Christine LOH (Chairman)
Hon HUI Cheung-ching (Deputy Chairman)
Ir Dr Hon Raymond HO Chung-tai, JP
Hon Ronald ARCULLI, JP
*Dr Hon LEONG Che-hung, JP (Deputy Chairman of Health
Service Panel)
*Hon Mrs Sophie LEUNG LAU Yau-fun, JP
Hon WONG Yung-kan
Hon Emily LAU Wai-hing, JP
*Hon LAW Chi-kwong, JP

Members of the LegCo Panel on Health Services

Hon Michael HO Mun-ka (Chairman)
Hon Cyd HO Sau-lan
Hon CHAN Yuen-han
Dr Hon TANG Siu-tong, JP

Members attending : Hon LEE Cheuk-yan
Hon LEUNG Yiu-chung

Members absent : Members of the LegCo Panel on Environmental Affairs

Hon Martin LEE Chu-ming, SC, JP
Prof Hon NG Ching-fai
Hon Margaret NG
Hon CHEUNG Man-kwong
Hon CHAN Wing-chan
Hon LAU Kong-wah
Hon Mrs Miriam LAU Kin-ye, JP
Hon CHOY So-yuk
Hon Andrew CHENG Kar-foo

Members of the LegCo Panel on Health Services

Hon HO Sai-chu, SBS, JP
Hon Bernard CHAN
Dr Hon YEUNG Sum
Hon YEUNG Yiu-chung

Public officers attending : **Planning, Environment and Lands Bureau**

Mr Steve BARCLAY
Principal Assistant Secretary (Environment)

Environmental Protection Department

Mr John ROCKEY
Assistant Director (Waste Facilities)

Mr Conrad P K LAM
Principal Environmental Protection Officer (Special Waste)

Mr Patrick LEI
Principal Environmental Protection Officer
(Waste Policy & Services)

Attendance by invitation : **Hospital Authority**

Dr W M KO
Deputy Director (Operations)

Miss Regina LAW
Manager (Business Support Services)

Greenpeace China

Mr HO Wai-chi
Executive Director

Mr Clement LAM
Senior Campaigner

Kwai Tsing Provisional District Board

Hon SIN Chung-kai
Chairman

Mr CHIU Wah-shing
Chairman, Environment and Planning Committee

Mr LEUNG Chi-shing
Vice-chairman, Environment and Planning Committee

Mr AU Cheong-wa
Member

Miss CHEUK Choi-fung
Member

Ms TAM Wai-chun
Member

Clerk in attendance : Mrs Mary TANG
Chief Assistant Secretary (1)6

Staff in attendance : Ms Rosalind MA
Senior Assistant Secretary (1)9

I. Election of Chairman

Miss Christine LOH was elected chairman for the joint meeting.

II. Clinical Waste Control Scheme

(a) Meeting with Greenpeace

(LC Paper Nos. CB(2) 303/99-00, 381/99-00 and CB(1) 620/99-00(04)-(06))

2. Mr Clement LAM, Senior Campaigner of Greenpeace, raised objection to the incineration of clinical waste at the Tsing Yi Chemical Waste Treatment Centre (CWTC). He explained that the incineration of clinical waste would generate dioxin which was a highly toxic substance that could accumulate in the human body through intake of contaminated food. Due to its harmful nature, the United Nations Environmental Programme had included dioxin in the elimination list and had urged governments all over the world to develop action plans to reduce or eliminate the release of dioxin to the environment. He pointed out that the results of a study on dioxin emission in Belgium suggested that the standard measurement adopted by CWTC had under-estimated the average emission by a factor of 30 to 50. He made the following suggestions-

- (i) the funding request for the modification of CWTC for incineration of clinical waste should not be approved;
- (ii) the Hospital Authority (HA) and the Department of Health (DH) should step up measures for minimizing the amount of clinical waste;
- (iii) HA and DH should be encouraged to utilize existing non-incineration facilities for treatment of clinical waste on-site before disposal; and
- (iv) the Environmental Protection Department (EPD) should be requested to work out cheaper, safer and environmentally friendly alternatives such as autoclaving for treatment of clinical waste.

3. Mr LAM said that instead of taking remedial measures to reduce the harmful effects of polluting substances generated in the treatment process, the Administration should adopt more environmentally friendly alternatives other than incineration of clinical waste. He requested the Administration to conduct detailed analysis on the advantages and disadvantages of other alternative treatment technologies in comparison with incineration so as to make a fair decision on the best technology to be adopted. Other than the percentage of mercury released from the incineration of clinical waste, the Greenpeace was also concerned about the release of other harmful substances. The presence of Polyvinylchloride (PVC) in clinical wastes was also of much concern as its incineration would lead to the release of dioxin.

- (b) Meeting with the Kwai Tsing Provisional District Board (KTPDB)
(LC Paper Nos. CB(1) 569/99-00(01) and 620/99-00(07))

4. Mr SIN Chung-kai, in his capacity as the Chairman of KTPDB, raised objection to the Administration's proposal of treating clinical waste in CWTC at Tsing Yi. At the meetings of KTPDB held on 13 May and 22 July 1999, KTPDB members expressed concern over the emission of dioxin and other harmful substances in the incineration process and the threats to the health of residents in Tsing Yi. In view of the existing concentration of high risk facilities in Tsing Yi such as the Container Terminal 9, it would be unfair for the residents to further tolerate the centralized treatment of clinical waste in CWTC at Tsing Yi. He urged the Administration to seek long term solution to the treatment of clinical waste instead of investing considerable amount of money in modifying CWTC for short term purpose. KTPDB members had made the following requests-

- (i) the Administration should identify an alternative site for the relocation of CWTC; and
- (ii) for the health and safety of Tsing Yi residents, CWTC should stop operation until an effective and comprehensive emission monitoring mechanism was established.

5. Mr AU Cheong-wa said that from what he observed during his visits to CWTC, the facilities appeared worn out and there was limited space for introducing additional facilities for the treatment of clinical waste. He was particularly concerned about the two incidents in November 1998 and February 1999 when excessive dioxin emissions from CWTC were detected. The management of CWTC had not made known these incidents to the public. He doubted very much the effectiveness of the monitoring mechanism of CWTC. He shared the concerns of Greenpeace on the undesirable impacts of incineration. Mr CHIU Wah-shing also supported the views and alternatives suggested by Greenpeace. For the improvement of the environment and the protection of health of Tsing Yi residents, he urged members not to approve the funding request for the modification of CWTC. He also suggested members to pay a visit to CWTC before consideration of the funding request.

- (c) Meeting with the Administration
(LC Paper Nos. CB(1) 569/99-00(02), 620/99-00(01) and (02))

6. The Principal Assistant Secretary for Planning, Environment and Lands (Environment) (PAS/PEL) briefly introduced the information paper entitled "Management, Regulation and Disposal of Clinical Waste". He assured members that the package of proposals contained therein was the most environmentally friendly, timely and cost-effective means to deal with all types of clinical waste. The

Administration intended to introduce in early 2000 a Bill and a Regulation on the control of clinical waste. Funding would be sought from Public Works Subcommittee.

7. Referring to the submission by Greenpeace, PAS/PEL said that the materials and arguments put forward did not reflect the situation in Hong Kong and were US-biased. Many references were drawn from the World Bank's study which were only applicable to Third World countries. Many of the claims on harmful effects of incineration put forward by Greenpeace were a result of misunderstanding of the current situation in Hong Kong. Nevertheless, the Administration agreed with Greenpeace on the importance of waste reduction and segregation of clinical waste from municipal waste so as to minimize the amount of wastes that required special disposal treatment. He advised that HA had implemented waste segregation measures which resulted in significant reduction in the amount of clinical waste. At present, an average of 0.13 kg of clinical waste was produced per bed per day. The present waste production rate was very low compared with other developed countries. As for the alternative technologies proposed, PAS/PEL said that although these were useful complementary processes, they could not provide a complete solution to the treatment of all kinds of clinical waste. The cost for employing these alternative technologies were similar to that of incineration, taking account of all necessary equipment such as storage and emission control facilities. Members noted that the risk of dioxin emission by CWTC was 0.000057 per million per year, which was much lower than the risk of being hit by lightning.

8. The Assistant Director (Waste Facilities)/Environmental Protection Department (AD/EPD) supplemented that EPD intended to appoint an international consultant to conduct a study on the evaluation of risk of using CWTC as a combined centre for treatment of both chemical and clinical wastes. The study would also cover the wider implications of incineration in Hong Kong. The result of the study would be available early next year and the consultant would be invited to Hong Kong to present his findings and recommendations to members of the Legislative Council.

9. The Deputy Director (Operations)/Hospital Authority (DD/HA) said that HA had implemented a waste segregation programme through the issue of a code of practice to all staff for the appropriate ways of disposing different types of waste generated from the operation of hospitals. This had successfully reduced the amount of clinical waste to a great extent. Clinical waste which was not suitable for disposal in landfills would be incinerated. He assured members that HA would be willing to employ safe and environmentally friendly technologies for treatment of clinical waste. Study on these alternatives had been undertaken by consultants of HA and some of the technologies were found to be useful in treating certain types of waste. Unfortunately, the alternative technologies available could not be used for treatment of all types of clinical wastes. Certain types of waste, for example, parts of the human body, had to

be incinerated.

Dioxin emissions at CWTC

10. Mr LEE Cheuk-yan expressed concern over the level of dioxin emissions at CWTC. He sought further information from the Greenpeace and the Administration on the effectiveness of the facilities at CWTC in destroying all dioxin if the rotary kiln and the combustion chamber were heated up to 1,200 degrees Celsius. Mr Clement LAM responded that theoretically, dioxin could be destroyed under a high temperature of 1,200 degrees Celsius. However, in actual operation, the temperature in different parts of the machine could be different and when the machine was turned off, dioxin could reform and could be released into the atmosphere when the machine was restarted. AD/EPD clarified that CWTC was in operation 24 hours a day and would only be shut down for maintenance once a year. The design of the incinerator had also catered for the prevention of dioxin formation. The air scrubbing system would eliminate virtually all acidic gases and ensure that the level of dioxin emissions would be kept well below internationally acceptable standards. The existing standard maintained by CWTC was very high and was comparable to that of Germany. To facilitate future discussions, the Chairman urged the Administration to maintain information exchange with the Greenpeace on the subject of clinical waste control.

Admin 11. In response to Mr LEUNG Yiu-chung's suggestion of incinerating only those clinical wastes which would not release dioxin, PAS/PEL said that this had been the existing practice under the waste segregation programme. Sharing similar concern, Mr Michael HO sought information on the amount of items among the clinical waste which contained PVC. He suggested that HA should avoid purchasing those medical items with PVC content in order to eliminate the dioxin emissions during waste incineration. DD/HA advised that not all plastic medical items were made of PVC and that most of the plastic items would not be incinerated. DD/HA responded that he did not have the statistics on the use of plastic items with PVC content in hand and undertook to provide the information after the meeting. With the implementation of the waste segregation programme, the majority of items with PVC content were not classified as clinical waste and would not be incinerated. As for the suggestion of avoiding the purchase of items which contained PVC, he explained that the decision was not a simple one. The use of a different kind of medical item would involve changes in the assembly of equipment that were used together. Moreover, there might not be complete assurance on the safety of other non-PVC materials used in the medical items.

12. As regard members' concern over the two incidents of dioxin emissions which exceeded the acceptable standard, AD/EPD explained that the dioxin emissions only exceeded the licensed discharge limits, but not any safety standards in the two incidents. Upon the Chairman's request, he undertook to provide an information

Admin paper on the investigation of the two incidents for members' reference.

Proposed usage of CWTC for treatment of clinical waste

13. Dr LEONG Che-hung expressed concern over the proposal of using CWTC for treatment of clinical waste and sought information on the operation of CWTC. Mr LEE Cheuk-yan shared his concern and requested the Administration to clarify whether it would move forward with its proposal despite strong opposition from KTPDB. AD/EPD said that CWTC started operation in 1993 and was considered a world-class waste treatment centre. Its facilities were all maintained at a high standard. It would be more preferable in terms of cost-effectiveness and safety to utilize the spare capacity of CWTC to treat clinical waste than to identify a new site for construction of a new treatment centre for the treatment of a few tons of clinical waste per day. As regards the objection of KTPDB, PAS/PEL said that the Administration would continue its discussion with KTPDB and would inform them of the progress of the proposal.

14. Mr LEUNG Yiu-chung said that with the recent decline in industrial development in Hong Kong, there might be a significant reduction in the amount of chemical waste to be treated at CWTC to the extent that affected the financial viability of its operation. He doubted whether the proposal of using CWTC for treatment of clinical waste was made mainly for the purpose of supporting the continued operation of CWTC. PAS/PEL said that despite the relocation of large number of factories to the Mainland, there was still a substantial amount of chemical waste being treated at CWTC. AD/EPD added that the amount of clinical waste which required treatment at CWTC was minimal compared with the large capacity of the centre. As a result, the treatment of clinical waste could not help to sustain the profitability of CWTC. The proposal was made in an attempt to provide a safe and cost-effective way of disposing clinical waste.

15. In response to the Chairman's question on the choice of alternative sites for the relocation of CWTC, PAS/PEL explained that the contract of CWTC would expire in 2008 and the premature termination of contract would involve a considerable amount of compensation to be paid to the operator. Moreover, a high capital cost would be incurred for the construction of a new treatment centre. Given the international obligation to treat MARPOL waste, the location chosen had to be close and convenient to the shipping terminals as well.

Alternative technologies for treatment of clinical waste

16. Dr LEONG Che-hung requested the Administration to provide information on the analysis of different treatment technologies available and the justifications for the selection of incineration as the best method. PAS/PEL said that a study tour had been

made by officers of EPD and HA in early 1999 to observe the operations of alternative technologies for treatment of clinical waste in the United States. In the light of information on the operations of these technologies, the Administration was of the view that incineration was the best available method for Hong Kong. Notwithstanding, the Administration would not come to a final decision until the results of the study by the international expert was ready and presented to the Legislative Council. He agreed that alternative technologies should be considered but given the problem of clinical waste disposal which required an immediate solution, it would not be possible to carry out in-depth studies into every new technology before arriving at a solution.

17. DD/HA stressed that the existing practice of disposing majority of the clinical waste at landfills and burning only the parts of human body in sub-standard hospital incinerators was an undesirable arrangement. The proposed clinical waste control scheme would provide an acceptable solution to clinical waste control. Although new technologies were emerging, it would take time for them to be developed and put to use. The technology of incineration was well-developed and could provide solution to the disposal of clinical waste which would otherwise be disposed at landfills.

18. Mr HUI Cheung-ching sought information from Greenpeace on the setting up of 1,500 non-incineration facilities in the United States, the number of these facilities required if non-incineration method was adopted in Hong Kong, and the type of alternative technology suitable for Hong Kong. Mr Clement LAM said that large numbers of non-incineration facilities had to be set up in the United States to meet the dioxin emission requirement and to address the strong objections from local residents. He could not decide on the suitable alternative for Hong Kong at this moment as this would depend on the actual practice of waste segregation in the hospitals and the volume and type of waste to be treated. He said that instead of providing facilities for the treatment of harmful emissions, Greenpeace would much prefer the avoidance of harmful emission through the implementation of non-incineration technology.

19. In response to Mr Michael HO's question on whether the volume of waste could be further reduced thus enabling the use of other alternative treatment methods, DD/HA said that HA would try to reduce the volume of waste further. However, there would still be a small amount of waste generated. He reiterated that alternative technologies could be employed as complementary processes but incineration was at present considered the most suitable way to deal with clinical waste.

Study by the international expert

20. Noting that EPD intended to appoint an international expert to conduct a study on the incineration policy, Miss Emily LAU opined that the result of the study should be made public. The meetings held between the expert and the green groups, the

Legislative Councillors and other interested groups in the community should be open. She sought further information from the Administration regarding the way the meetings would be conducted, the schedule of these meetings, the expert's background, the terms of reference and scope of his study, and the cost implications of the study.

21. In reply to Mr Michael HO's enquiry on whether the expert would look into the safety aspect of incineration, AD/EPD said that the expert would be invited to review the effectiveness of CWTC's operations and the effects of incineration on the community. PAS/PEL added that a copy of the brief to the expert would be included in the information paper to be provided to the Panel.

22. The Chairman suggested and members agreed to further discuss the subject at a joint meeting of the Environmental Affairs and the Health Services Panels to be held on Friday, 7 January 2000 at 11:45 am.

III. Any other business

23. There being no other business, the meeting was adjourned at 5:10 pm.

Legislative Council Secretariat
1 February 2000