

**立法會**  
**Legislative Council**

LC Paper No. CB(2)2769/11-12  
(These minutes have been seen  
by the Administration)

Ref : CB2/PL/SE

**Panel on Security**

**Minutes of meeting**  
**held on Tuesday, 3 April 2012, at 2:30 pm**  
**in Conference Room 2 of the Legislative Council Complex**

- Members present** : Hon James TO Kun-sun (Chairman)  
Hon LAU Kong-wah, JP (Deputy Chairman)  
Dr Hon Margaret NG  
Dr Hon Philip WONG Yu-hong, GBS  
Hon WONG Yung-kan, SBS, JP  
Hon Emily LAU Wai-hing, JP  
Hon Abraham SHEK Lai-him, SBS, JP  
Hon Audrey EU Yuet-mee, SC, JP  
Hon Andrew LEUNG Kwan-yuen, GBS, JP  
Hon CHIM Pui-chung  
Hon CHAN Hak-kan  
Hon WONG Kwok-kin, BBS  
Hon IP Kwok-him, GBS, JP  
Dr Hon PAN Pey-chyou  
Hon Paul TSE Wai-chun, JP  
Hon LEUNG Kwok-hung  
Hon WONG Yuk-man
- Member attending** : Ir Dr Hon Raymond HO Chung-tai, SBS, S.B.St.J., JP
- Members absent** : Hon Albert HO Chun-yan  
Hon CHEUNG Man-kwong  
Hon Timothy FOK Tsun-ting, GBS, JP  
Hon Cyd HO Sau-lan  
Dr Hon LAM Tai-fai, BBS, JP

**Public Officers : Item IV  
attending**

Mr LAI Tung-kwok, SBS, IDSM, JP  
Under Secretary for Security

Miss Shirley YUNG  
Deputy Secretary for Security (2)

Miss Bella MUI  
Principal Assistant Secretary for Security (B)

Mr WOO Ying-ming  
Assistant Commissioner (Human Resource)  
Correctional Services Department

Ms Priscilla TAM DAI Wai-ming  
Project Director (1), Project Management Branch  
Architectural Services Department

**Item V**

Mr LAI Tung-kwok, SBS, IDSM, JP  
Under Secretary for Security

Mr David WONG Fuk-loi  
Director (Contingency Plan)  
Security Bureau

Mr Kevin YEUNG Yun-hung  
Principal Assistant Secretary for Food and Health (Food) 1

Dr Kate CHAN Shuk-chi  
Senior Medical Officer (Emergency Response)  
Food and Environmental Hygiene Department

Dr Liza TO May-kei  
Principal Medical and Health Officer  
Department of Health

Mr CHENG Kit-man  
Senior Physicist In-charge  
Department of Health

Mr MA Wai-man  
Assistant Director (Radiation Monitoring and Assessment) (Acting)  
Hong Kong Observatory

Mr CHAN Ka-chung  
Senior Electrical and Mechanical Engineer/Nuclear and  
Utility Safety  
Electrical and Mechanical Services Department

Mr CHAN Kin-man  
Chief Chemist  
Water Supplies Department

Professor LEE Chack-fan  
Chair Professor of Geotechnical Engineering,  
The University of Hong Kong;  
Vice Chairman, Nuclear Safety Consultative  
Committee of the Guangdong Daya Bay  
Nuclear Power Station/Lingao Nuclear  
Power Station  
Member of Expert Advisory Panel

Professor Dora KWONG Lai-wan  
Clinical Professor/Head of Department,  
Department of Clinical Oncology, Li Ka  
Shing Faculty of Medicine, The University  
of Hong Kong; Council Member, Hong  
Kong College of Radiologists  
Member of Expert Advisory Panel

Professor Alexis LAU Kai-hon  
Director, Atmospheric Research Center,  
The Hong Kong University of Science and  
Technology Fok Ying Tung Graduate School;  
Scientific Advisor of the Hong Kong  
Observatory  
Member of Expert Advisory Panel

Ir Edmund LEUNG Kwong-ho  
Chairman, Energy Advisory Committee;  
Past President of the Hong Kong Institution  
of Engineers  
Member of Expert Advisory Panel

Dr WONG Ming-chung  
Former Assistant Director, Radiation  
Monitoring and Assessment Branch,  
Hong Kong Observatory  
Member of Expert Advisory Panel

**Attendance  
by invitation** : Item V

The Professional Commons

Mr Albert LAI  
Convenor, Research Committee

Greenpeace

Mr Prentice KOO  
Senior Campaigner

Hong Kong Association of Risk Management and Safety

Dr Vincent HO  
Chairman

The Hong Kong Institution of Engineers - Nuclear Division

Ir Dr LUK Bing-lam  
Chairman

Hong Kong Nuclear Society

Ir Dr Herman TSUI Yik-wai  
Senior Vice Chairman

Daya Bay Monitoring Panel

Mr FUNG Chi-wood  
Spokesperson

IEEE Hong Kong Section Energy & Power Chapter

Mr Eric MA  
Chairman

**Clerk in  
attendance** : Mrs Sharon TONG  
Principal Council Secretary (2)

**Staff in  
attendance** : Ms Connie FUNG  
Senior Assistant Legal Adviser 1

Ms Rita LAI  
Senior Council Secretary (2) 1

Ms Camy YOONG  
Clerical Assistant (2) 7

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**I. Confirmation of minutes of previous meeting**  
(LC Paper No. CB(2)1535/11-12)

The minutes of the special meeting held on 25 November 2011 were confirmed.

**II. Information paper(s) issued since the last meeting**  
(LC Paper Nos. CB(2)1487/11-12(01) and CB(2)1502/11-12(01))

2. Members noted that the following papers had been issued since the last meeting -

- (a) Administration's paper on suspected cases of child abduction; and
- (b) Administration's paper on its proposed revision of fees and charges under the purview of the Hong Kong Police Force.

**III. Date of next meeting and items for discussion**  
(LC Paper Nos. CB(2)1534/11-12(01) and (02))

3. Members agreed to discuss the following items at the next meeting to be held on 8 May 2012 -

- (a) Replacement of Fireboat No. 7 and three turntable ladders of the Fire Services Department;
- (b) Initiatives on e-channel Service Enhancement; and
- (c) Police's handling of public meetings and public processions.

*(Post-meeting note: With the concurrence of the Panel Chairman, item (b) "Initiatives on e-Channel service enhancement" has subsequently been withdrawn from the agenda. The Administration has submitted information paper on the item which was circulated to members on 27 June 2012 vide LC Paper No. CB(2)2452/11-12(02).)*

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**IV. Redevelopment of disciplined services quarters in Fu Tei, Tuen Mun**

(LC Paper Nos. CB(2)1534/11-12(03) and (04))

4. Under Secretary for Security ("US for S") briefed members on the redevelopment of disciplined services quarters in Fu Tei, Tuen Mun, details of which were set out in the Administration's paper.

5. The Chairman sought information on the existing site of the redevelopment project, including the type of quarters that had been built previously, years of the building and the number of units.

6. US for S said that funding approval of the Finance Committee in 2004 enabled the Administration to buy some 4 300 surplus Home Ownership Scheme flats for reprovisioning old or substandard departmental quarters for the disciplined services, including the former departmental quarters at the concerned site. Subsequently, the Development Bureau allocated two pieces of land to the Security Bureau ("SB") in October 2007 for development of departmental quarters for the disciplined forces. The first piece of land at Wo Yi Hop Road, Kwai Chung had been given to the Immigration Department and funding approval had been obtained in 2009 for building two blocks of departmental quarters. A total of 144 units would be provided. The other piece of land was at Fu Tei, Tuen Mun. It was a vacant lot at the moment and at which the departmental quarters for the Fire Services Department ("FSD") were previously housed.

7. Ms Audrey EU held the view that it was important to build departmental quarters which would help boost the morale of the disciplined forces. Noting that the construction of the residential block was intended to provide departmental quarters for different disciplined forces, Ms EU enquired whether it was a new practice. To her knowledge, departmental quarters would be located in the vicinity of the workplace of the disciplined forces in the past. Given the remote location of the new departmental quarters in Tuen Mun, Ms EU was concerned whether it would be well received by disciplined forces.

8. Deputy Secretary for Security ("DS for S") said that depending on the availability of resources, it was the Government's policy to provide departmental quarters for the married rank and file staff of the different disciplined services. Departmental quarters might be built at locations in the vicinity of the workplace or at a site identified by the Planning Department. The project at Fu Tei was an example of the latter type. In general, there were two ways to identify a lot: a specific disciplined force identified a suitable lot and sought policy support from SB, or alternatively, the Planning Department would inform SB of the availability of a suitable lot and SB

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would liaise with the relevant disciplined forces, taking into consideration the percentage of shortfall in departmental quarters among the disciplined forces.

9. Ms Audrey EU referred to the reports of the Audit Commission on the waste of resources in the building of government staff quarters and the non-environmental design, in particular the installation of air-conditioners at places where noise was not a source of annoyance. Ms EU enquired about the environmental-friendly and energy-saving measures for the redevelopment project, in particular those measures which might reduce the charges for air-conditioning.

10. Project Director of the Project Management Branch of the Architectural Services Department ("Project Director") responded that the staircases, lifts and corridors were placed at the western part of the residential block facing Tuen Mun Road, whereas most of the quarters would face east and the noise nuisance would be reduced to minimal. Energy efficient features adopted for the redevelopment project would include the installation of T5 energy efficient fluorescent tubes with electronic ballast and lighting control by occupancy sensors in the common areas, light-emitting diode type exit signs and automatic lighting and ventilation control for lifts. For renewable energy technology, a small-scale photovoltaic system would be installed to provide electricity for the lighting in corridors. In response to Ms Audrey EU's further enquiry, Project Director confirmed that the windows could be opened.

11. Mr WONG Yung-kan said that Members belonging to the Democratic Alliance for the Betterment and Progress of Hong Kong supported the redevelopment project for the disciplined forces. Mr WONG noted with concern that there would be only 20 car-parking spaces for a total of 140 residential units. He enquired whether the number of car-parking spaces would be increased as necessary. As the residential block was to comprise 21 storeys, he held the view that more car-parking spaces should be reserved on the ground floor.

12. Project Director responded that there were two reference guidelines for determining the number of car-parking spaces. First, the Transport Department's assessment on the public transportation infrastructure provided for the area, including the light rail. Second, standard set by the Government Property Agency on the basis of the number of residential units and the number of vehicles required by the staff of the quarters. Assistant Commissioner (Human Resource) of Correctional Services ("AC(HR) of CS") added that any adjustment of the number of car-parking spaces should be based on these two reference guidelines.

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13. Mr WONG Yung-kan sought information on the allocation criteria for the car-parking spaces and asked whether priority would be given to staff members of higher ranks.

14. AC(HR) of CS responded that there would be a fair mechanism for allocation of the car-parking spaces, e.g. lot drawing. Measures would be taken to ensure that married rank and file staff allotted with quarters at the site could enjoy equal opportunity in respect of the allocation of car-parking spaces.

15. Noting that married rank and file staff of the Hong Kong Police Force ("the Police") was not included as target residents, Ms Emily LAU sought clarification on the rationale behind. DS for S said that in general, SB would take follow-up action according to the requests of individual disciplined forces for departmental quarters. During the liaison process, the four disciplined forces had shown interest in the redevelopment project whereas the Police had its own plan of departmental quarters for its staff and would make request for land acquisition as necessary.

16. Referring to the different sizes of the units, Ms Emily LAU asked whether the units would be allocated in accordance with the household size of the married rank and file staff. She further enquired about the rent of the departmental quarters and whether it would be based on a specific percentage of the staff salary.

17. AC(HR) of CS responded that all the disciplined services departments had their own policies governing the allocation of departmental quarters, which had been accepted by their respective staff. In general, a scoring system would be adopted in the allocation of staff quarters, which took into consideration a number of factors including staff salary, household size and years of service of staff, etc. Priority would be accorded to staff in accordance with the score. DS for S supplemented that staff with different pay points would be eligible to apply for corresponding grades of units. Regarding the rent of the departmental quarters, AC(HR) of CS said that it would be based on the rank of the staff and the size of the unit. In general, it would be in the range of 5% to 7.5% of the staff's monthly salary.

18. Ms Emily LAU asked whether housing allowance would be provided to those eligible rank and file staff while awaiting allocation of departmental quarters. DS for S replied that depending on the option of the housing benefits taken by disciplined service staff, they would either receive housing allowance (normally for ten years) for buying their own flats or be allocated departmental quarters. Disciplined service staff on the waiting list of departmental quarters would not be entitled to receive the housing allowance so as to avoid double benefits.

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19. The Chairman asked whether the plot ratio had been maximized in the redevelopment project and whether application had been made for changing the plot ratio. Project Director responded that the redevelopment project was submitted to the Town Planning Board for consideration in November 2011. When giving approval for the project, the Town Planning Board had stipulated that the resultant floor area of the new project should not be more than that of the demolished one for the quarters of FSD. Therefore, the plot ratio had already been maximized and the same floor area would be provided for the redevelopment project.

20. The Chairman concluded that members supported in principle the submission by the Administration of its proposal for the redevelopment project to the Public Works Subcommittee.

**V. Daya Bay Contingency Plan and exercise preparation**

(LC Paper Nos. CB(2)1291/11-12(01) and CB(2)1534/11-12(05))

Briefing by the Administration

21. US for S briefed members on the comprehensive review on the Daya Bay Contingency Plan ("DBCP") and exercise preparation, details of which were set out in the Administration's paper. He invited members to participate in the exercise in due course. Prof LEE Chack-fan, member of the Expert Advisory Panel, supplemented the different technical backgrounds and characteristics of the Daya Bay Nuclear Power Station ("DBNPS") and the Fukushima Daiichi Nuclear Power Station ("FDNPS") with the aid of powerpoint. He said that the major difference was that the containment structure of the French-designed pressurized water reactors ("PWRs") of DBNPS was able to filter the radioactive substances whereas the steam generated from the boiling water reactors of FDNPS was radioactive. As a result, the chance of "S1" type nuclear accident with the most serious release of radioactivity occurred at DBNPS was very slim. Also, given the filtering capacity of the containment structure of PWRs, the release of radioactive substances could be reduced from "S1" type to "S3" type in the event of a nuclear accident. This was the scientific basis for the simulation of the plume exposure pathway as adopted by the Hong Kong Observatory ("HKO").

22. Assistant Director (Radiation Monitoring and Assessment) (Acting) of HKO ("AD(RMA)(Ag)") presented the results of the possible radiological consequence of a "S3" source term release based on the simulation and assessment of the Accident Consequence Assessment System ("ACAS") with the aid of powerpoint.

*(Post-meeting note: The softcopy of the Powerpoint presentation*

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materials was issued to members vide LC Paper No. CB(2)1625/11-12(01) on 5 April 2012.)

23. In response to the Chairman's enquiry about whether a simulation had also been made on the basis of "S1" source term, AD(RMA)(Ag) replied in the negative. He explained that it was because the relevant authority in France had only given consideration to "S3" source term when working out the contingency plan and the Hong Kong Government had followed suit.

Presentation of views by deputations

24. The Chairman reminded the representatives of the deputations that when addressing the Panel, they did not have the protection and immunity provided under the Legislative Council (Powers and Privileges) Ordinance (Cap. 382).

*Greenpeace*

[LC Paper No. CB(2)1534/11-12(06)]

25. Mr Prentice KOO presented the views of Greenpeace as detailed in the submission.

*The Professional Commons*

26. Mr Albert LAI expressed the following views -

- (a) in view of the Fukushima Daiichi nuclear power plant accident ("the Fukushima incident") in March 2011, the setting up of the emergency planning zone 1 ("EPZ1") on the basis of a radius from the nuclear power plant was not realistic as the plume dispersion would change in accordance with the weather condition (including the rainfall) and the topographic features. An independent consultant should be engaged to assess the simulation results of ACAS and the adequacy of the contingency preparedness; and
- (b) having regard to the limited responsibility of the importer of nuclear energy to Hong Kong and the liability being capped at RMB1,100 million in a single nuclear accident as stated in Chapter 12 (Legal powers and compensation) of DBCP, the Government should liaise with the relevant authorities for the provision of various compensation packages.

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*Hong Kong Association of Risk Management and Safety*  
*[LC Paper No. CB(2)1625/11-12(02)]*

27. Dr Vincent HO presented the views of the Hong Kong Association of Risk Management and Safety as detailed in the submission.

*The Hong Kong Institution of Engineers - Nuclear Division*  
*[LC Paper No. CB(2)1625/11-12(03)]*

28. Ir Dr LUK Bing-lam presented the views of the Hong Kong Institution of Engineers - Nuclear Division as detailed in the submission.

*Hong Kong Nuclear Society*  
*[LC Paper No. CB(2)1625/11-12(04)]*

29. Ir Dr Herman TSUI presented the views of the Hong Kong Nuclear Society as detailed in the submission.

*Daya Bay Monitoring Panel*  
*[LC Paper No. CB(2)1625/11-12(05)]*

30. Mr FUNG Chi-wood presented the views of the Daya Bay Monitoring Panel as detailed in the submission.

*IEEE Hong Kong Section Energy & Power Chapter*  
*[LC Paper No. CB(2)1600/11-12(01)]*

31. Mr Eric MA presented the views of IEEE Hong Kong Section Energy & Power Chapter ("IEEE") as detailed in the submission.

Discussion

*Emergency Planning Zone 1*

32. Ms Audrey EU was of the view that the coverage of EPZ1 should be extended beyond 20 km to address the concerns of members of the public even though it might cause disturbance to the public in the event of evacuation.

33. In respect of plume countermeasures, Dr PAN Pey-chyou considered that the setting-up of EPZ1 up to 20 km for DBNPS was acceptable in view of the recommendation of the United Kingdom Atomic Energy Authority ("UKAEA") for a range of around 15 km from a nuclear power station as EPZ1.

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34. On the understanding that more nuclear power stations would be built in the vicinity of the Guangdong Province and therefore the potential risk would increase, Ms Audrey EU called for arrangement of more regular visits to these nuclear power stations for members and the enhancement of the general public education on nuclear safety protection so as to increase the transparency and emergency preparedness of the public and reduce the fear about nuclear accidents.

35. US for S agreed that the publicity work was important to educate members of the public, increase the transparency and reduce the phobia in this respect. He said that a pamphlet on nuclear safety protection issues would be published after the comprehensive exercise on the revised DBCP. Also, it was understood that an education centre on understanding nuclear issues would soon be operated by the China Light and Power Company Limited. He echoed the views of some of the deputations that in the event of a nuclear accident the best countermeasure would be sheltering as a substantial amount (ranging from 50% to 90%) of the direct radiation component of the dose which would have been received might be avoided. The amount of radiation would reduce once the plume passed. From the lesson of the Fukushima incident, it was noted that a number of deaths were caused by the aggravation of chronic disease in the process of evacuation. Regarding the DBCP exercise, one of the major objectives was to test the coordination of different departments within the Government so as to ensure the smooth operation in the event of a nuclear accident.

*Water supply to Hong Kong*

36. Referring to paragraphs 9.25 and 9.27 of DBCP, Ms Audrey EU sought clarification on the supply of water to Hong Kong and the possible contamination of water in the event of a nuclear accident at DBNPS.

37. Chief Chemist of the Water Supplies Department ("Chief Chemist") said that the source of water in Hong Kong mainly came from Dongjiang (ranging from 70% to 80%) and the rainwater collected from the catchments in Hong Kong (ranging from 20% to 30%). Given the different geographic locations of Dongjiang and the major reservoirs in Hong Kong, namely the High Island Reservoir and the Plover Cove Reservoir, and the specific requirements of the meteorological conditions, it would be impossible that these main sources of water would be contaminated at the same time. He further explained how the radiation level of Dongjiang water was closely monitored by the relevant Mainland authorities. According to the Consultancy Study Report of UKAEA, the effects on water supply to Hong Kong would be minimal even in the event of a serious nuclear accident at DBNPS, which might result in the wind carrying the plume over one or more reservoirs in Hong Kong and radioactive substances depositing in the

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reservoirs because of the rainfall. As the water treatment plants in Hong Kong had the capacity to reduce the radiation in the water, the contamination of water in the High Island Reservoir and the Plover Cove Reservoir would not exceed the radiation control standard. Water after treatment would be safe for consumption.

38. Referring to paragraph 9.25 of DBCP, the Chairman requested the Administration to provide information on the supply of water to Hong Kong and the possible contamination in the event of a nuclear accident at DBNPS.

*(Post-meeting note: The Administration's response was circulated to members vide LC Paper No. CB(2)2607/11-12 on 17 July 2012.)*

39. Referring to the comparison of the intervention level for water between Hong Kong and Japan in the Fukushima incident as made by Greenpeace, Ms Emily LAU queried about the low standard adopted by the Government.

40. Chief Chemist responded that the radiation control standard for the water in Hong Kong was set in accordance with the recommendation of the International Atomic Energy Agency ("IAEA") and was confirmed by the Radiological Protection Advisory Group of the Department of Health. It was suitable for consumption by people of all ages in Hong Kong, including babies and infants. Even though there was difference in the regulation values for radioactive substances in water adopted in Hong Kong and that of the provisional regulation values adopted by Japan in the Fukushima incident, it did not mean that the radiation control standard in Hong Kong was lower than that of Japan. The respective radiation control standards in Hong Kong and Japan could ensure safety of water consumption in the event of a nuclear accident. Both standards had limits for radionuclide safety in the event of a nuclear accident, including Iodine-131, Caesium-134 and Caesium-137. In addition, there was limit for Strontium-90 in Hong Kong. More importantly, there were additional safety standards of the activity concentration of these radionuclides and their derived intervention levels in Hong Kong.

41. The Chairman requested the Administration to provide detailed information on the respective regulation levels of radioactive substances in water in Hong Kong with reference to the international standards and comparison with those in Japan.

*(Post-meeting note: The Administration's response was circulated to members vide LC Paper No. CB(2)2607/11-12 on 17 July 2012.)*

42. Referring to the report of IEEE, Dr PAN Pey-chyou expressed concern about the safety of water in Hong Kong in the event of a nuclear accident. It was noted that the radiation level of the area covering the Plover Cove

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Reservoir and the High Island Reservoir in the simulation would reach 83 Millisievert ("mSv") per year in the event of a nuclear accident. Dr PAN enquired whether the equivalent dose per hour would be equal to Level 1 of the International Nuclear Event Scale.

43. AD(RMA)(Ag) said that there was an overestimation of the dose to be received per year, which was based on the release of radioactive substance per hour. While there would be a high dose of release of radioactive substances at the initial stage, it would reduce over a period of time. He further pointed out the inaccurate estimation of the radiation level in the area of 20km from Fukushima. He considered that the application of Fukushima incident to Hong Kong by means of computing calculation was not scientific as the data in the region of Hong Kong had not been used.

44. Mr Eric MA of IEEE responded as follows -

- (a) the study was not an estimation, calculation or a computer simulation. It was the actual measurement and readings of the contamination taken at Fukushima on 12 August 2011 by the Ministry of Education, Culture, Sports, Science, and Technology of the Japanese government and such actual consequences were transposed to Hong Kong by making use of the mapping skill. There was such a possibility if the wind direction and the amount of the release of the radioactive substances from DBNPS were equivalent;
- (b) regarding 83 mSv, it was not an accumulative dose per year but a dose rate which meant the degree of the radiation level at that time. Indirectly, it indicated the amount of radioactive substances precipitated in the environment, including water and soil. There was a possibility that the water had been contaminated to a certain extent; and
- (c) in the event of a nuclear incident and in case of raining, there was a possibility of deposit of plume in the Shenzhen Reservoir (through which water from Dongjiang would be delivered to Hong Kong) and it was possible that all sources of water supply to Hong Kong would be contaminated.

Mr MA reiterated that the contingency measure should be able to address the consequence of a nuclear incident but not the probability.

45. Regarding the concern about contamination of water in the High Island Reservoir, Chief Chemist referred to the analysis provided in the Consultancy Report of the UKEAE and explained that it would be very unlikely that water

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in the High Island Reservoir would be contaminated.

46. Referring to the submission of IEEE, Dr WONG Ming-chung of the Expert Advisory Panel pointed out the following -

- (a) regarding the individual dose limit under emergency exposure circumstances, the International Commission on Radiological Protection had advised that there was no such concept. The value of 20mSv to 100 mSv did not represent a safe dose limit for individuals per year. It referred to the situation that countermeasures should be introduced if the dosage exceeded such limit; and
- (b) the relationship between the dose rate of radiation and contamination of water would depend on the volume of the water and the content of the radioactive substances.

47. The Chairman requested the Administration to provide the following -

- (a) detailed information on the emergency measures to be taken in the event of contamination of all the three sources of water supply to Hong Kong, including the sustainability and the levels involved; and
- (b) a response to the points made in the submission of IEEE.

*(Post-meeting note: The Administration's response was circulated to members vide LC Paper No. CB(2)2607/11-12 on 17 July 2012.)*

48. Dr PAN Pey-chyou sought information on the technology for reducing the radiation level in the water. Chief Chemist explained that the water treatment process would undergo several procedures, including mixing for coagulation and flocculation, settlement of impurities in water and the filtering procedures. All these procedures would be able to reduce the radioactive substances in the water effectively. When water from Dongjiang and the reservoirs entering into the water treatment plants, Water Supplies Department would adjust the water treatment process to reduce the radiation level in the water to the lowest so as to ensure the compliance with the international safety standard for consumption.

49. The Chairman requested the Administration to provide information on the following -

- (a) how the adjustment of treatment processes could reduce radioactivity in treated water; and

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- (b) a detailed analysis on how the radiation level of water in Hong Kong would not exceed the international safety standard in the event of a major release of radioactivity from DBNPS which might result in the wind carrying the plume over one or more reservoirs and radioactive materials depositing in the reservoirs and its associated catchments and therefore causing contamination of water supply.

*(Post-meeting note: The Administration's response was circulated to members vide LC Paper No. CB(2)2607/11-12 on 17 July 2012.)*

*Assessment of accident consequence*

50. Dr Philip WONG noted with concern that DBCP was based on the "S3" type nuclear accident with the least amount of release of radioactive materials whereas the contingency plans of some other countries were based on the most serious "S1" type. He sought information on the considerations given to using "S3" type as the basis for DBCP and queried why "S1" type had not been adopted.

51. US for S responded that DBNPS were French-designed nuclear power stations and France was the country in which there was the greatest use of PWRs. The local monitoring agencies in France had studied the different scenarios of "S1" to "S3" and had given considerations to the type of reactors and the countermeasures required before working out the contingency plan on the basis of "S3" source term. Accordingly, DBCP was also based on "S3" source term. As the reactors of FDNPS and the containment structure were of different design, the protection was also different.

52. Prof LEE Chack-fan explained that the containment structure of the French-designed PWRs was very strong and the chance of "S1" type accident was therefore very slim. Also, the filter of PWRs was able to reduce the "S1" type accident to "S3" type and therefore the study analysis was based on "S3" type.

53. In response to the Chairman's enquiry about the adoption of "S3" source term as the basis for DBCP, which was similar to that of France, US for S confirmed that it was the decision of the Government.

54. Dr Philip WONG held the view that the basis of DBCP should be changed from "S3" source term to "S1" source term so as to address the concerns of members of the public. Ms Emily LAU shared a similar view. US for S responded that experts from France had paid a visit to DBNPS and they were of the view that the countermeasures based on "S3" scenario were practicable.

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55. The Chairman requested the Administration to provide information on an analysis of the resources implications for the contingency plan on the basis of "S1" type accident, including the manpower and financial requirements.

*(Post-meeting note: The Administration's response was circulated to members vide LC Paper No. CB(2)2607/11-12 on 17 July 2012.)*

56. Senior Physicist In-charge of the Department of Health supplemented the technical background for "S1" to "S3" scenarios and the specific concepts behind the three source terms. For "S1" scenario (the value of the source term similar to those at Chernobyl incident), there was no strong containment structure. In the event of a nuclear incident, the reactor core would melt down and a large amount of radioactive substances would be released. For "S2" scenario (the value of the source term similar to those of the Fukushima incident), the containment structure was damaged and when the reactor core melted down, the radioactive substances were released to the atmosphere without being filtered. These two scenarios would not be applicable to DBNPS as there were strong containment structure, PWRs and a filtering system. Given the different designs of the nuclear power plants at Chernobyl, Fukushima and Daya Bay, consideration should be given to the scientific justifications rather than the financial implications in adopting "S1" source term as the basis for the assessment of the accident consequence.

57. Mr LEUNG Kwok-hung and the Chairman held the view that it was necessary to address the concerns of members of the public regardless of the scientific analysis.

58. Dr Raymond HO declared that he was the Chairman of the Guangdong Daya Bay Nuclear Plant and Lingao Nuclear Plant Safety Consultative Committee. He said that the containment structure for the reactors of DBNPS was close to one metre thick and was made of reinforced concrete. There was a steel plate of six millimetre in-between whereas there was no containment structure for the reactors of FDNPS which were built 40 years ago. A containment structure was only added ten years ago and was smaller than those of DBNPS.

*(Members agreed to extend the meeting to 5:15 pm.)*

59. The Chairman asked whether or not it would be possible that the weapons of some overseas countries would cause damage to the containment structure of the reactors of DBNPS in the event of an intentional attack, which would give rise to "S1" type release of radioactive materials.

60. US for S shared with members a news report of the Mainland on the setting-up of the naval and vessel protection zones for DBNPS and the

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implementation of very stringent security measures inside.

61. Dr Vincent HO of the Hong Kong Association of Risk Management and Safety was of the view that there was such a possibility. Yet, the possibility was very low based on risk assessment. He stressed the importance of risk assessment and was concerned that the "S1" scenario simulation would arouse unnecessary panic of members of the public.

*(Post-meeting note: Two documents from the Hong Kong Association of Risk Management and Safety (The tolerability of risk from nuclear power stations and Criteria for preparation and evaluation of radiological emergency response plans and preparedness in support of nuclear power plants) were issued to members vide LC Paper Nos. CB(2)1635/11-12(01) and (02)) on 10 April 2012.)*

62. Dr LUK Bing-lam of The Hong Kong Institution of Engineers - Nuclear Division was of the view that the "S1" scenario simulation would be unrealistic in view of the difference between the designs of the reactors of DBNPS and those of other reactors.

63. Given the five cases of reactor core meltdown in the past 50 years, Mr Prentice KOO of Greenpeace queried the accuracy of risk assessment of the nuclear accidents.

*Lesson of the Fukushima Incident*

64. Ms Emily LAU enquired whether lesson had been learnt from the Fukushima incident. Director (Contingency Plan) responded that at the invitation of the Japanese Government, officers of SB had visited the relevant municipal authorities of the Fukushima Prefecture to understand the aftermath of the Fukushima incident and attended the IAEA Ministerial Conference on Nuclear Safety held in Vienna in June 2011. At the conference, the Japanese representatives had given an account of the situation in Fukushima after the nuclear incident to the Member States. Director (Contingency Plan) said that as revealed in the Fukushima incident, in the event of a nuclear accident, the coordination among various departments of different functions within the Government and their communication were very important. Therefore, DBCP was to test the preparedness and response capability of various departments, including the activation of the notification system to various departments and the different stages of DBCP.

65. Given the expertise required for the study of the nuclear issue, Mr LEUNG Kwok-hung held the view that a mechanism should be put in place to enable non-government organizations with input of resources from the Government to monitor the use of nuclear energy in Hong Kong.

Action

66. US for S agreed that the monitoring role of non-government organizations was important and the views of the professionals on the nuclear issue could serve as reference for the Government. He said that there was no nuclear power stations in the territory and the closest nuclear power stations were at Daya Bay. While there was a plan to establish more nuclear power stations in the Mainland, a comprehensive review had been conducted following the Fukushima incident and the report had yet to be released. It was understood that the Mainland authorities would be cautious about building more nuclear power stations.

67. In anticipation of a number of nuclear power plants to be built in the vicinity of the Guangdong Province, Mr LEUNG Kwok-hung enquired whether the Government had drawn reference from other countries, including Japan and Germany, in respect of the careful application of the policy of using nuclear energy. US for S said that the view would be conveyed to the relevant policy bureau for consideration.

DBCP Exercise 2012

68. Ms Emily LAU expressed interest in participating in the DBCP Exercise 2012. She held the view that the exercise should be made public. US for S explained that the specific details of the exercise needed to be kept confidential so as to test the preparedness and response capability of various departments.

69. In response to the Chairman's enquiry about the timeline for the exercise, US for S said that it would be conducted before 1 July 2012. The Chairman said that a review needed to be conducted after the exercise and be discussed at a Panel meeting.

*(Post-meeting note: The DBCP Exercise 2012 was subsequently conducted on 26 and 27 April 2012.)*

70. There being no other business, the meeting ended at 5:15 pm.