

**For discussion
on 27 April 2004**

LegCo Panel on Food Safety and Environmental Hygiene

Control of Live Fish Wholesalers and Fish Tank Water Quality

PURPOSE

This paper briefs Members on the progress made on the regulatory control of the quality of fish tank water and of live fish wholesalers. It also sets out the longer term measures, including consideration of legislation to prohibit abstraction of seawater from areas adjacent to the coast.

EXISTING AND RECENTLY ENHANCED MEASURES

Inspection Regime

2. Previously, the Food and Environmental Hygiene Department's (FEHD's) control of the quality of fish tank water was basically at the retail level. Since December 2003, FEHD has progressively put live fish wholesalers also under its regulatory control (see paragraphs 10 to 13). At the retail level, the licensing requirements and conditions and market tenancy conditions of FEHD specify the hygiene conditions of the licensed food premises and market stalls which are required to install and maintain proper filtration and disinfection facilities to filter and disinfect water used for keeping live marine fish or shell fish intended for human consumption. Licensees and stallholders are also prohibited from using flushing water for such purpose.

3. FEHD staff inspect market fish stalls once every eight weeks to ensure that their operations are in compliance with the licensing requirements and conditions. Based on the risk-based inspection system introduced in February 2003, the inspection frequency for supermarkets, fresh provision shops and restaurants would depend on the risk

classification of the premises concerned, ranging from once every four weeks to once every 12 weeks.

4. From January 2003 to March 2004, FEHD issued 178 verbal warnings and one written warning for breach of licensing requirements/conditions and tenancy conditions in relation to the quality of fish tank water. Irregularities were all rectified subsequently.

Water Sampling and Surveillance Programme

5. In addition to routine inspections, FEHD adopts a two-pronged approach in the monitoring of fish tank water. Water samples are collected from all licensed food premises, including supermarkets and seafood stalls for both *E. coli* and *Vibrio cholerae* testing at regular intervals. Under section 10A of the Food Business Regulation (Cap 132. sub. leg. X), no person shall in the course of any food business keep any live fish or shell fish intended for human consumption in water of a quality below the standard specified by the Director of Food and Environmental Hygiene (DFEH) by notice published in the Gazette. The specified standard is “*E. coli* less than 610 per 100ml and absence of pathogenic organisms”. Anyone in breach of the provision is liable to a maximum fine of \$10,000 and imprisonment for three months upon conviction. To safeguard public health, once the presence of highly infectious cholera bacteria is detected, FEHD will close the premises concerned on health hazard grounds under the authority conferred by section 128C of the Public Health and Municipal Services Ordinance (Cap. 132).

6. Before 2004, FEHD collected water samples for *E. coli* testing once every eight weeks. To strengthen the control of the quality of fish tank water, we have since January 2004 implemented a new risk-based surveillance programme aiming to be educational and preventive. While the normal frequency of testing for *E. coli* for each premises remains at once every eight weeks, the action level is set at 180 per 100ml. This provides an early alert signal to those premises with deteriorating quality of fish tank water or failing disinfection system so that remedial measures could be carried out in a timely manner. Upon receipt of any report exceeding this action level, FEHD staff would inspect the premises

concerned within three working days to give advice to the operators to carry out proper maintenance work. Thereafter, follow-up samples would be taken within one week for both *E. coli* and *Vibrio cholerae* testing. If the test results of the follow-up samples remain unsatisfactory, FEHD staff would continue to conduct site inspections and take water samples until the irregularities are rectified.

7. In the past, two samples for *Vibrio cholerae* testing were collected from each premises every year with one being taken between June and August. Since the introduction of the new surveillance programme in January 2004 with a lower trigger point for testing of both *E. coli* and *Vibrio cholerae*, at least one separate sample will be taken from each premises for *Vibrio cholerae* testing between May and September.

8. The sampling frequency is subject to regular review and is flexibly adjusted as circumstances require. Since the implementation of the new surveillance programme, a total of 2 024 samples were taken by the end of March. 99 samples were found to contain *E. coli* exceeding the action level of 180 per 100 ml and follow-up samples were taken. None of the follow-up samples were found to contain pathogenic *Vibrio cholerae*. However, two were found to have contained *E. coli* of more than 610 per 100ml and prosecutions have been instituted against the operators concerned.

Guidelines on Filtration and Disinfection Facilities for Fish Tank Water

9. FEHD has recently updated the detailed guidelines to seafood operators to elaborate on use of synthetic seawater and UV radiation disinfection system. These guidelines set out the common disinfection methods and management practices that should be observed for better quality control of fish tank water. FEHD will issue the updated version shortly.

Control of Live Fish Wholesalers

10. At the meeting held on 12 November 2003, Members were

briefed on our plan to introduce a licensing scheme to cover live fish wholesalers through the issue of permits under the Food Business Regulation (Cap. 132 sub. leg. X).

11. The wholesalers at the Aberdeen promenade were asked to submit permit applications to FEHD in November 2003. The Fish Marketing Organization (FMO) then took over the management of live fish wholesale activities at the Aberdeen promenade in December 2003. By the end of 2003, all the 18 operators at the promenade were issued with fish permits and shell fish permits. Live fish operators at other Wholesale Fish Markets (WFMs) managed by FMO, namely those in Aberdeen, Kwun Tong and Cheung Sha Wan, were also invited to apply for permits from FEHD in November 2003. As at end March 2004, FEHD issued a total of 34 live fish permits and 33 shell fish permits to the existing 34 stalls at WFMs including those at the Aberdeen promenade.

12. In addition to the WFMs managed by FMO, there are two other wholesale and loading/unloading venues located in Lau Fau Shan and Lei Yue Mun. In Lau Fau Shan, there are 37 live fish operators. As at end March 2004, FEHD has issued four fish permits and six shell fish permits to the stalls and is processing 20 and 24 applications for fish permit and shell fish permit respectively. Letters of requirements have been issued to stall operators pending their compliance. In Lei Yue Mun, there are a few operators engaging in live fish wholesale and loading/unloading activities. Discussion is ongoing with the District Management Committee of the Kwun Tong District Office with a view to regularizing those activities.

13. The permit system has put the live fish wholesalers under the regulatory control of FEHD and the Agriculture, Fisheries and Conservation Department in the case of WFMs managed by FMO. Permit holders are required to comply with the same requirements and conditions as those for retail outlets selling live fish, including the installation and maintenance of filtration and disinfection facilities. FEHD staff conduct inspections to these premises once every eight weeks. In addition, water samples are collected for *E. coli* and *Vibrio cholerae* testing once every eight weeks and once every year respectively, as in the case of retail outlets selling live fish. We will allow another couple of

months for the operators in Lau Fau Shan and Lei Yue Mun to complete their applications for permits. Thereafter, we will start to take strict enforcement action against those operators engaging in wholesale activities without permits.

LONGER TERM MEASURES

Use of Synthetic Seawater

14. There is no plan at this stage to make the use of synthetic seawater mandatory for several reasons. Firstly, the use of synthetic seawater will impose a higher cost on the trade. Secondly, to ensure the use of synthetic seawater is effective, operators have to equip themselves with the knowledge and know-how to control water salinity properly. Thirdly, live fish and shell fish may carry bacteria. The use of synthetic seawater alone cannot dispense operators with the need to install proper disinfection and filtration facilities. However, from the perspective of microbiological safety, synthetic seawater has an advantage over natural seawater. We will continue to promote its use among the trade.

Licensing of Vehicles for Transportation of Seawater

15. As contamination of live seafood may occur at different stages from abstraction of seawater, transportation, to storage, we have to carefully consider at which of these stages would control be most effective and represent the optimal use of resources for enhancing the current monitoring efforts.

16. It has been suggested that FEHD may license vehicles used for transportation of seawater, and that FEHD may impose requirements on the source from which the vehicles may draw seawater as well as the installation of suitable filtration and disinfection systems in these vehicles.

17. We consider that the licensing of vehicles used for transportation of seawater will pose several problems. It will represent an increase of cost to the trade which will likely be transferred to

consumers. Moreover, the short duration of the delivery process will not allow sufficient time for the filtration and disinfection systems installed in the vehicles to work effectively on the seawater being transported. In any case, the filtration and disinfection process will need to take place again at the wholesale and retail levels as the live fish and shell fish may carry bacteria.

Prohibition of Abstraction of Seawater from Areas Adjacent to the Coast

18. Taking into account resource, enforcement and other practical considerations, we have considered other measures to enhance the control of the quality of fish tank water including the banning of the use of seawater abstracted from areas adjacent to the coast for keeping live seafood. Section 10A of the Food Business Regulation provides that the quality of water used for keeping live fish or shell fish intended for human consumption in the course of any food business must comply with the standard set by DFEH. As the provision only makes reference to water quality and not the source of the water, an operator would be considered to have breached this provision only if the test result of the water sample taken from the fish tank is found to be over the prescribed standard. We are now considering adding a provision under this section to prohibit abstraction of seawater from areas adjacent to the coast as specified in the schedule. This would be a more pragmatic approach than specifying suitable locations for abstraction of seawater in terms of enforceability.

Task Force on Study of *Vibrio cholerae*

19. The inter-departmental task force formed to examine the occurrence and distribution of *Vibrio cholerae* in local waters and its association with environmental factors is making good progress. The task force expects to complete its field work by the end of this year. The study findings will be useful reference for us in enhancing measures to control the quality of fish tank water.

WAY FORWARD

20. FEHD will continue with its existing and enhanced efforts as described in paragraphs 2 to 13 to ensure the quality of fish tank water. We also undertake to consider introducing legislation in the 2004-05 legislative year to prohibit the abstraction of seawater from areas adjacent to the coast for keeping live seafood for human consumption. In parallel, FEHD will continue to enhance public awareness of the importance of good personal hygiene and to remind food handlers and consumers of the risks which can be eliminated by proper and thorough cooking.

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