

**For information
On 28 October 1999**

Legislative Council Panel on Environmental Affairs

Information Paper on EPD's internal Y2K management and contingency planning for Waste Transfer and Disposal Facilities

Purposes

At the meeting of the Legislative Council Panel on Environmental Affairs held on 4 May 1999, Members asked for supplementary information on the progress of Y2K compliance work on critical waste management facilities which are operated by contractors. The requested information is set out in this paper.

Progress of Y2K Compliance on Waste Management Facilities

2. At an early stage we recognised the need to ensure that all our facilities would be Y2K compliant and this has already been achieved.

3. Our waste disposal system comprises three main elements; refuse transfer stations, landfills and the Chemical Waste Treatment Centre (CWTC). The transfer stations and landfills are designed to accept waste from public and private sources and to dispose of this waste as soon as possible in an environmentally acceptable manner. The systems used to achieve this objective are primarily electro-mechanical using either marine or land transport. Moreover, the facilities are fully manned during their hours of operation and if the systems should fail they can be operated on manual override and still provide satisfactory waste transfer and disposal arrangements.

4. For the operations at the CWTC, there is a computer system that handles waste reception, a computer system for laboratory information management and a control system that monitors and controls the treatment processes. All three systems are already Y2K compliant and embedded systems involved with plant operations have also been checked to be Y2K compliant. As a contingency measure CWTC has storage for over 7 days of normal waste deliveries. In the coming months we will arrange to process as much of the collected chemical waste as possible to increase its buffering capacity for coping with any surge of chemical waste arisings in early 2000. We will also shut down the CWTC incinerator during the millenium

rollover period as an added precaution. Collection of chemical waste will be carried out as usual and no waste producers will be affected.

5. EPD employ international contractors who have substantial experience in waste management and disposal operations to manage and operate the waste management facilities under design, build and operate contracts. The contractors have independently checked their systems for Y2K compliance including embedded systems. We are confident that their statements on Y2K compliance represent the true situation as far as they are reasonably able to ascertain since they have independently employed specialists in this area and have consulted with the manufacturers of the equipment they are using. However we do not rely entirely on the statements made and checking undertaken by our contractors. In conjunction with Works Bureau's independent consultant, we have arranged to carry out an external audit on the Y2K compliance programme of a selected sample of our waste management facilities to act as an additional checks and balances. The external audit exercise will be completed by mid-November 1999.

Contingency Arrangements

6. Most of the equipment used in the waste transfer and disposal system comprises mechanical plant that can either be operated on manual override or be substituted by other equipment in the event of failure due to Y2K. For example the moving floors at our waste transfer stations which move the deposited waste into the compactors could be immediately replaced by simple earth moving plant albeit with some loss in efficiency.

7. We must also be aware of the possibility of Y2K failure encountered by one or more of the utility companies such as electricity, water or telephones and of our fuel suppliers. Since we transport and dispose of waste every day of the year, we have already built into our facilities contingency measures for tackling external disruptions. We can for instance continue effective operation during typhoon conditions. Many of our installations are equipped with standby generators and a separate fuel supply so that limited operation can continue when the mains electricity fails. In addition the landfill gas from our three landfills is used to generate electricity to meet most of their on-site requirements.

8. However for the Y2K contingency planning we are considering individual and combined scenarios which may occur in addition to those we are already equipped to handle. We will concentrate on the transport & final disposal of the waste in developing our contingency plans.

9. To achieve this we have already established that our three strategic landfills can operate independently and should not be affected by Y2K provided they have sufficient fuel for their mechanical plant. In addition the waste collection authorities (USD & RSD) have confirmed that their collection systems are Y2K compliant.

10. We have discussed and agreed procedures with USD and RSD to ensure direct transfer to landfill of as much waste as possible should any of our transfer stations experience difficulties and we also have plans to link transfer stations together since many have compatible equipment. In this way we can achieve maximum flexibility and efficiency at minimum disruption and expenditure.

Business Contingency Plans

11. Based on the foregoing information we have formulated business contingency plans for refuse transfer stations, landfills and the chemical waste treatment facilities to ensure an acceptable system is in place should we encounter unforeseeable Y2K-induced failures. Recognising that we already have in place a flexible, robust and to a large extent independent system of transfer and disposal we do not anticipate major problems.

12. Our contingency plans have identified various emergency scenarios that may render one or more of our facilities inoperable. Action plans including contact list, revised operating modes and requirements for internal and external liaison have been prepared to handle the identified emergency scenarios. We plan to establish a command centre at our Divisional Headquarters which will use fixed and mobile telephones, faxes, mobile radios and if appropriate marine band radios to communicate with our waste facilities and business partners. Before critical dates are reached, we will ensure that our fuel supplies are topped up and that the contingency plans have been adequately reviewed and tested. In addition we expect to undertake sufficient physical testing of our equipment to ensure it can operate in manual override or be substituted by alternatives. In conjunction with our contractors and the waste collection authorities, we have finalised contingency arrangements and undertaken testing of key components to ensure that waste collection and disposal systems are able to continue to function satisfactorily during the rollover period.

Summary

13. To summarise the position of EPD's waste disposal facilities, it should be noted that

they have been checked for compliance by the operating contractors and are subject to tests, drills and audits by EPD and WB's independent consultant. If necessary, the facilities can be operated in manual mode without computer assistance and even without external power supplies. Should all this be insufficient, the option to divert part or all of the collected waste directly to landfill still remains. We are therefore confident in being able to provide an adequate waste disposal service during the Y2K critical dates.

Planning, Environment and Lands Bureau
October 1999