GOVERNMENT OF KERALA

Abstract

ENVIRONMENT DEPARTMENT—ELECTRONIC WASTES—COLLECTION AND DISPOSAL—ORDERS ISSUED

ENVIRONMENT (B) DEPARTMENT

G. O. (Ms.) No. 01/2014/Envt. *Dated, Thiruvananthapuram, 1st January, 2014.*

Read:—1. D. O. letter No. 23-20/2007/HSMD dated 31-12-2008 from Sri R. H. Khwaja, Additional Secretary, MoEF, Government of India.

2. Letter No. EMC/EED/2009/0396 dated 21-2-2009 from the Director of Energy Management Centre, Kerala.

3. Letter No. CP/RES/GEN/2009-10/33 dated 14-5-2009 from Member (T&D), Kerala State Electricity Board.

4. Letter No. EMAC/T3/155/2010 dated 15-3-2010 from the Director, EMAC.

5. Letter No. PCB/TAC/E&F/218/06 dated 6-5-2011 from the Chairman, Kerala State Pollution Control Board.

6. Minutes of the meeting held on 17-11-2011 on setting up of e-wastes management facilities in Kerala.

7. Minutes of the discussion held on 17-2-2012 by Principal Secretary (Environment) regarding environmental activities to be overseen and regulated by LSGIs.

ORDER

The Ministry of Environment and Forests, Government of India has notified the e-wastes (Management and Handling) Rules, 2011, which came into effect from 1-5-2012. As per Section 3 thereof, the definition for 'Electrical and Electronic Equipment' is '*equipment which is dependent on electric currents or*

electro-magnetic fields to be fully functional' and the definition for 'e-waste' is *'waste electrical and electronic equipment, whole or in part or rejects from their manufacturing and repair process, which are intended to be discarded'.* Also in sub-rule (1) of rule 13 it is specified that "*Every producer of electrical and electronic equipment listed in schedule I shall ensure that, new electrical and electronic equipment does not contain Lead, Mercury, Cadmium, Hexavalent Chromium, polybrominated biphenyls or polybrominated diphenyl ethers:*

Provided that a maximum concentration value of 0.1 % by weight in homogenous materials for lead, mercury, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyls ethers and of 0.01 % by weight in homogenous materials for cadmium shall be permitted."

In sub-rule (3) of rule 13 it is specified that the sub-rule (1) of rule 13 shall not apply to components of electrical and electronic equipment manufactured or placed in the market six years before the date of commencement of these rules. These rules are applicable to the electrical and electronic equipment specified in schedule I. The applications listed in schedule II shall be exempted from provisions of sub-rule (1) of rule 13. This does not mean that schedule II is exempted from e-waste (Management and Handling) Rules, 2011. Putting the onus of re-cycling of electronics wastes (e-wastes) on the producers, the rules make the e-waste producers liable for recycling and reducing e-waste in the country. The rules cover discarded IT and telecoms equipment and consumer electrical goods and encompass the concept of Extended Producers' Responsibility or the 'Polluter Pays Principle' which as applicable in relation of e-wastes, makes the producers to take responsibility for the disposal of end-of-life products. Personal Computer manufacturers, mobile handset makers and the white goods makers will be required to come up with e-waste collection centers or introduce 'take back' systems. These rules will apply to every producer, and bulk consumer involved in manufacture, sales, purchase and processing of electronic equipment or components.

2. According to the 2011 Census around 32.6% of the households in Kerala have both land line and mobile phone connectivity, while the national average is only 11.7%. Kerala has 20.4% computer connectivity, as against national average of 18.7%. e-wastes are fast becoming a major solid waste stream in the State. Among them Compact Fluorescent Lamps (CFL) and Fluorescent Tube Lights (FTL) engage special attention and disposal tactics due to the mercury contained in them. The following types of wastes are generated from the fluorescent lamp sector:

(i) Glass Waste (with and without mercury)

(ii) Waste phosphor powder

(iii) Waste mercury (in liquid and vapour phase)

(iv) Waste electronic and plastic components.

Compact Fluorescent Lamps (CFL) and Fluorescent Tube Lights (FTL) due to its mercury content pose health risk if handled carelessly, as mercury may enter living systems causing irreversible damages and may even prove to be fatal. The CPCB guidelines specify that the waste generated at the manufacturers end shall be stored and treated/recycled either in a recycling unit at the production site or any authorized Lamp Recycling Unit and all hazardous waste thereof shall be sent to Treatment, Storage and Disposal Facility (TSDF) set up as per the Hazardous Wastes (Management and Transboundary) Rules, 2008. Mercury emissions are strictly controlled during the manufacturing stage of CFL&FTL and stringent measures should be followed by units at the time of disposal of hazardous wastes containing mercury. At present fused CFLs /FTLs are posing a difficult situation to manage by local bodies since it is being dumped into municipal solid waste dumping sites very carelessly by the public and is endangering public health. This situation has warranted the Government to evolve a proper procedure to collect fused CFLs/FTLs and dispose them of scientifically and safely. The way forward for consumers would be turning in old mercury lamps of all types particularly conventional Fluorescent Tube Lights and CFLs to ensure proper transport and disposal availing the service of the Ministry of Environment authorized agencies for collection and storage of e-wastes, avoiding situations creating direct contact of broken CFLs and FTLs by users and others.

3. Since Kerala doesn't have an e-waste disposal plant, the waste goes into the unorganized market for crude dismantling, recovery and reuse. This create several occupational health hazards. As the State's consumption pattern increases, scientific management of e-waste becomes very critical. The problem of e-waste has been growing rapidly in the State and the end users especially offices and residents are facing practical difficulties in disposing of them in an environmentally sound manner.

4. In the matter of safe collection, storage, transportation and scientific disposal of the e-wastes generated in the State, Government issue the following orders for strict and urgent compliance by all concerned:

(i) Producers of e-wastes shall be responsible for collection, transportation and disposal in the prescribed manner, of all e-wastes generated by them or bought back by them from consumers under the 'Extended Producer Responsibility' either directly or through authorized agents. The e-wastes thus collected shall be delivered to authorized recyclers by the producers themselves, under appropriate arrangements.

(ii) Consumers of branded electrical and electronic equipments which have became 'e-wastes' may return it to the producer either through invoking 'EPR' or dispose it through local collection mechanisms if any arranged for by Local Self Government Institutions, in the manner ordered in para 4(v) below.

(iii) The State Pollution Control Board shall take steps to get the firms dismantling or recycling within the State to be registered and to have consents for operation and scientific disposal of the e-wastes collected.

(iv) The Board, Department of Environment and Climate Change and Kerala State Council for Science Technology and Environment shall include management and disposal as above of e-wastes, in the integrated environment awareness programmes being organized by them and in the environmental programmes being sponsored by them.

(v) There are several items which do not have EPR facility, for which special arrangements need to be made. Municipal Solid Waste (Management and Handling) Rules 2000 mandates municipal bodies to provide proper collection, treatment and disposal facilities for Municipal Waste Management (MSW) including segregation of toxic materials and substances. Often broken CFLs and FTLs are put up in the house hold solid wastes harming those who collect the same and those handling it at disposal facilities. As proper collection, storage and transportation of e-wastes is of direct consequence to the LSGIs they may provide the required basic facility for house hold level segregated collection and local storage of e-wastes to be taken to reprocessing units by registered agencies. Local Self Government Institutions may provide the minimum required storage facilities for the e-wastes to be collected from the ward level residential/commercial areas and those segregated from the MSW

and also facilities for centralized collection of e-wastes from the local collection centers. Kudumbasree units could be engaged for door-to-door collection of segregated e-wastes including electrical appliances, CFL and FTL. Forward linkages are now available for collection from central collection points in urban areas, to be taken to dismantling and disposal units.

(vi) Space may be arranged near local markets or landed properties owned by LSGIs, from where the wastes can be collected and stored at a central collection point for each LSGI, to be taken delivery of by the accredited state level agencies for collection and transportation and disposal or to collect and transport to centralized disposal facilities. The question of payment of some monetary incentives to those who collect income generating e-wastes from house holds, by the state level agencies to be engaged can also be considered, for which the LSGIs providing space for centralized storage may negotiate with such agencies.

(vii) Some recyclers extend the facility of entering into agreement with corporate and .Government organizations to collect, transport and dispose of e-wastes. They may also give incentive for the types of e-wastes which will provide them income on reprocessing. Each category may have different rate depending on its recyclable value. Usually the following e-wastes are eligible for payment by registered recyclers/authorized collection agents.

Waste Electronic/Electrical Material	Disposal Procedure
CPUs, Laptops, Servers, Telecom networking switching Stations, Printed Circut Boards etc.	Dismantling, Segregation after Destruction/Recycling
Monitors, Scanners, Fax, CRTs, Photocopy, Telephones, Washhing Machines, Vaccum Cleaners, Card Readers, Swipe machine, Fans, AC etc.	
Plastic Waste, Printers, CD Drivers, Storage devices, Thump drivers, Power control units, 10 device, Key Boards, Mouse, Plastics Parts, Hand sets, Chargers, Calculators etc.	
Metal Waste, Speakers, Multimedia, Electrical Items (Regulators, Meters, Switches, Starters, Chokes, Wires, and Cables, etc.), CPU cabinets, other electrical parts	

(viii) In respect of other such as floppies, LCDs, Toner Cartridges, Transformers, Condensers containing cooling oils, FTLs, CFLs, bulbs, batteries (other than Lead Acid Batteries) which do not generate income on disposal, those contracting collection and removal may have to give service charges, as the registered recyclers have to pay charges to the Hazardous Wastes Disposal Facilities for final disposal of these wastes. The formalities may be negotiated with contracting agencies.

5. LSGIs and Pollution Control Board shall ensure that the e-wastes are not incinerated or carelessly dumped in public places, and are not disposed of by any person/firm in any manner not approved as per the e-wastes (Management and Handling) Rules 2011, and not mixed with Municipal Solid Wastes to be processed in SWM plants.

6. LSGIs shall strive to set up models for door to door collection, local and centralized storage facilities and arrangements with registered recyclers or their duly authorized agents for transportation and disposal of e-wastes in their jurisdiction.

7. Arrangements for management and disposal of e-wastes shall be a mandatory stipulation in all sanctions, licenses, permits and consents for producers, distributors, bulk consumers of e-wastes such as IT firms, hospitals and EPR mandates shall be strictly enforced wherever applicable.

8. The buy back/take back system of electronic goods like Compact Fluorescent Lamps (CFL) and Fluorescent Tube Lights (FTL), Computer systems etc; by the producer shall be a mandatory condition in all the tenders being floated by Government Departments, Public sector undertakings, Boards and Corporations.

9. The State Pollution Control Board may institute, a State level pollution Control Award to the Local Self Government Institutions (3 tier) doing commendable e-waste collection and dispatch service.

10. Pollution Control Board, Biodiversity Board and the Directorate of Environment and Climate Change may include environmental issues and hazards due to non-scientific disposal of e-wastes in their awareness programmes for students and general public.

11. Collection centres of e-wastes at all levels shall be covered, and secured from rain water, to avoid contamination, before being transported to the dismantling and disposal units elsewhere.

By order of the Governor,

P. K. MOHANTY,
Additional Chief Secretary.

ANNEXURE

I. List of Authorized Recyclers.

II. List of duly appointed agents for collection.

To

The Chairman, Kerala State Pollution Control Board.

The Director, Environment and Climate Change.

All Heads of Departments.

Secretaries of all District Panchayats.

All Corporations, Municipalities (through Director of Urban Development).

All Grama Panchayats (through Director of Panchayats).

The Director, Energy Management Centre, Sreekaryam-695 017.

The Member (T&D), Kerala State Electricity Board, Pattom, Thiruvananthapuram-4.

The Managing Director, Kerala State Industrial Development Corporation, Vellayambalam, Thiruvananthapuram-3.

The Registrar, University of Kerala

The Registrar, Cochin University of Science and Technology, University of Calicut-673 635.

The Registrar, Mahatma Gandhi University, Kottayam-686 560.

The Registrar, Sree Sankaracharya University of Sanskrit, Kalady-680 574.

The Registrar, Kerala Agricultural University, Vellanikara, Thrissur-680 656.