

Plan for the decontamination and/or disposal of inventoried equipment and the PCBs contained therein

and

Outlines for the collection and subsequent disposal of equipment which is not subject to inventory

in terms of Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT)

1.0 Background

1.1 This document provides Malta's plan for the decontamination and/or safe disposal of inventoried equipment containing PCB/PCT and the PCB/PCT contained therein. This document also provides for Malta's outlines for the collection and subsequent disposal of equipment which is not subject to inventory.

1.2 Limited quantities of polychlorinated biphenyls (PCB) and polychlorinated terphenyls (PCT) have been identified in the Maltese Islands.

1.3 The volumes and current storage locations of equipment containing more than 5 dm³ of PCB/PCT contaminated oil became known through an inventorization process conducted in 2001.

1.4 Old models of electrical appliances (washing machines, refrigerators, lighting equipment, etc) may have parts (capacitors, condensers, etc) with PCB volumes of less than 5 litres (5 dm³). This plan also provides for the way forward in respect of the management of this waste stream.

2.0 Legislation

2.1 Article 11 of Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT), requires that Member States draw up:

- plans for the decontamination and/or disposal of inventoried equipment and the PCBs contained therein; and
- outlines for the collection and subsequent disposal of equipment which is not subject to inventory.

2.2 Council Directive 96/59/EC was transposed by the Waste Management (Polychlorinated Biphenyls and Polychlorinated Terphenyls) Regulations, 2002, as published by Legal Notice 166 of 2002.

4.0 Quantities

4.1 In 2001, an exercise was carried out to compile an inventory of equipment containing more than 5 dm³ of oils containing PCB/PCT. The inventory, which is periodically updated, is currently held by the Malta Environment and Planning Authority.

4.2 Two (2) local organizations submitted a declaration indicating they have equipment containing PCB/PCT or oils contaminated with PCB/PCT in storage. Their details are reproduced in Table 1 hereunder.

Table 1

Organization	Description	Quantity
Organization A	Oils contaminated with PCB/PCT; no equipment contaminated with PCB/PCT	45,500 litres
Organization B	Capacitor containing oil contaminated with PCBs/PCT	6 litres

4.3 Organization A commissioned an analysis of a composite sample of the PCB/PCT contaminated oils currently in storage. This analysis revealed that the concentration of PCB/PCT in the oils is less than 0.005% by weight. Oils containing less than 0.005% by weight of PCB/PCT do not fall within the scope of Council Directive 96/59/EC on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT). Since the analysis was conducted on a composite sample of six out of forty-six (46) intermediate bulk containers (IBCs), a more detailed investigation of all 46 containers currently in storage is required. This may result in even smaller volumes of oils contaminated with PCBs requiring treatment.

5.0 Planning aspects

5.1 Decontamination and/or disposal of inventoried equipment and the PCBs contained therein

5.1.1 The current holders of PCB/PCT were requested by the Malta Environment and Planning Authority to provide a plan for the decontamination and disposal of equipment containing PCB/PCT, and for the monitoring and control of the storage of this equipment containing PCBs due to be decontaminated and disposed of not later than 2010. Both holders of PCB/PCT expressed their interest in a concerted decontamination and disposal procedure with the objective of rendering the operation more economically viable.

5.1.2 Potential sources of such equipment were further investigated through one of the activities of the Twinning Light Project MT2004/IB/EN/08-TL entitled “*Hazardous waste inventory and technical assistance in regulatory aspects of hazardous waste management*”, which was jointly implemented by the Malta Environment and Planning Authority and WasteServ Malta Ltd as Beneficiaries together with the Austrian Federal Environment Agency as Twinning Partner. The project was launched on 5 November 2006 and was completed on 4 July 2007. Indeed, two of the activities of the Twinning Light Project dealt with the management of PCB/PCT. These resulted in a comprehensive inventory of all PCB/PCT contaminated waste and a methodology or procedure for use at civic amenity sites to identify potential sources of equipment containing less than 5 dm³. It also identified further installations within the Community that may be used for the decontamination and disposal of this waste stream.

5.1.3 A detailed questionnaire for inventory of equipment potentially containing PCB/PCT was addressed to the Enemalta Corporation, Malta Shipyards Limited and the Ministry of Health, the Elderly and Community Care. The questionnaire was followed up by interviews and site visits to all three entities. As a result of these investigations, it can be concluded that it is unlikely that larger volume of PCB-containing equipment is still in operation in Malta, and that the only known larger amount of PCB/PCT inventoried for disposal is properly stored. The joint site visits of MEPA's inspectorate and foreign experts contributed to the training of MEPA technical staff regarding the identification approach for PCB-containing equipment.

5.1.4 There are no on island facilities for the treatment and/or disposal of PCB/PCT. As a consequence, treatment and/or disposal need to be conducted at a facility/ies overseas.

5.1.5 To this effect, WasteServ Malta Ltd. was requested to make the necessary arrangements for this operation to be conducted on behalf of the holders of this waste. WasteServ Malta Ltd. is a Government owned company responsible for organizing, managing and operating integrated systems for waste management including integrated systems for minimization, collection, transport, sorting, reuse, utilization, recycling, treatment and disposal of solid waste, including hazardous waste.

5.1.6 An agreement for the exportation of PCB/PCT to, treatment in a duly authorized waste treatment facility in France for decontamination and /or disposal in an environmentally sound manner was reached.

5.1.7 Until final disposal of the inventoried equipment and the PCB/PCT contained therein, the site managers and MEPA's inspectorate will ensure appropriate monitoring and control of the storage conditions of this equipment and waste containing PCB/PCT.

5.2 Collection and subsequent disposal of equipment which is not subject to inventory

5.2.1 Civic Amenity sites were established to control the disposal of bulky waste items, including household appliances. These items are collected separately through a collection system operated by all Local Councils. This waste stream is directed to newly established Civic Amenity sites for separation, treatment and/or disposal. Any parts containing PCB/PCT (including less than 5 dm³) will be removed, and stored in an appropriate manner for eventual exportation as per sections 5.2.2 below. In addition, the Malta Environment and Planning Authority is at the moment in the process of permitting WEEE dismantling and recovery facilities in line with the requirements of Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE) and Council Directive 75/442/EEC of 15 July 1975 on waste. The environmental permits of these facilities will impose conditions on the operators to segregate PCB/PCT contaminated parts and components of WEEE and manage them in line with provisions of this document.

5.2.2 It is planned to use the same agreement mentioned in section 5.1.6 for the disposal of all PCB-containing equipment already identified and still being identified in Malta. Both PCB-volumes over 5 dm³ and small capacitors can be included in this disposal scheme. The precondition for efficiently including small capacitors consists in an appropriate organization

and instructions for the collection scheme (information to potential generators and instructions to managers of collection points, dismantling and storage facilities).

5.2.3 The main sources of generation of small PCBs capacitors were identified to be as follows:

- WasteServ Malta Ltd. as Government owned company that is responsible for collection, transport, sorting, reuse, utilization, recycling, treatment and disposal of solid waste, including hazardous waste;
- Civic Amenity sites where WEEE are collected separately through a collection system operated by all Local Councils. On these sites, any parts containing PCB/PCT (including less than 5 dm³) are removed, and stored in an appropriate manner for eventual exportation;
- electrical equipment repair shops;
- households; and
- industrial site where old equipment is stored.

5.2.4 The following appliances possibly containing used PCBs capacitors and the following types of capacitors were identified:

- appliances manufactured between the 1950s and the mid-1980s including:
 - fluorescent strip lights for industrial and business premises;
 - domestic appliances such as washing machines, spin dryers, mangles, cooker hoods, microwave ovens, freezers and dishwashers;
 - audio/visual equipment;
 - street and gardening lights;
 - oil burners and warm air appliances; and
 - vehicle start motors.
- small PCBs capacitors including capacitors in fluorescent lighting. The major waste stream containing small PCB filled capacitors is old fluorescent strip and street lighting. PCBs containing capacitors within fluorescent light fittings are likely to have the following:
 - starting capacitors - identified by black plastic casing or outer shell;
 - dry capacitor - they do not contain PCB and will not need separate collection;
 - a resonant start;
 - a capacitor that is cylindrical or rectangular, encased in an aluminium container with a weld running all round the top edge with two terminals with quick connect tags; and
 - a capacitor encased in a rectangular metal container with soldered seams.

5.2.5 Producers of PCBs capacitors were identified. Many manufacturers included PCBs in all the capacitors they produced before 1986 and it would be prudent to assume that any equipment manufactured prior to this date has PCB-containing capacitors unless it is reasonable to assume the contrary.

5.2.6 A draft guideline for the collection, dismantling, storage and disposal of small PCBs capacitors was developed. The Waste Management (Electrical and Electronic Equipment) Regulations, 2007, as published as Legal Notice 63 of 2007 requires that all PCBs capacitors be inspected and dismantled before the waste is shredded, incinerated or landfilled. White

goods equipment should not be allowed to be crushed before being taken to a site for dismantling. Capacitors containing PCBs should be removed intact from the equipment and disposed as a whole – taking care not to release the PCB content. After removal, PCB containing capacitors should be placed in a clearly marked polythene bag with the details of their contents. These should then be placed in a sealable and leak proof metal container. If some of the materials are leaking, steps should be taken to ensure that the contents do not escape – for example the container could be partially filled with an absorbent material, such as a commercial absorbent, cat litter, or diatomaceous earth. It is advisable to store intact and leaking capacitors in separate sealed containers. Containers must then be maintained in good condition, with no visible signs of damage or corrosion.

6.3 Financing

6.3.1 The holders of PCB/PCT in storage will meet all costs involved in the exportation, treatment and/or disposal of the PCB/PCT.