



Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014

The compost order 2016

Introduction

This order, issued by the Environment Protection Authority (EPA) under clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 (Waste Regulation), imposes the requirements that must be met by suppliers of compost to which 'the compost exemption 2016' applies. The requirements in this order apply in relation to the supply of compost for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to compost. In this order, **compost** means any combination of mulch, garden organics, food waste, manure and paunch that has undergone composting.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies compost that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of compost to a consumer for land application at a premises for which the consumer holds a licence under the POEO Act that authorises the carrying out of the scheduled activities on the premises under clause 39 'waste disposal (application to land)' or clause 40 'waste disposal (thermal treatment)' of Schedule 1 of the POEO Act.

3. Duration

- 3.1. This order commences on 25 April 2016 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Revocation

- 4.1. 'The compost order 2014' which commenced on 24 November 2014 is revoked from 25 April 2016.

5. Processor requirements

The EPA imposes the following requirements on any processor who supplies compost.

General conditions

- 5.1. The processor must undertake the process of composting, as a minimum, for compost supplied under this order.

- 5.2. On or before supplying compost, the processor must ensure that the compost:
 - 5.2.1. does not contain asbestos, engineered wood products and preservative treated or coated wood residues.
 - 5.2.2. is ready for land application.
- 5.3. The processor must not mechanically size-reduce the compost through methods such as hammer milling, crushing or grinding, as a way of managing the physical contaminant loading.

Sampling requirements

- 5.4. On or before supplying compost, the processor must:
 - 5.4.1. prepare a written sampling plan which includes a description of sample preparation and storage procedures for the compost.
 - 5.4.2. ensure that the absolute maximum or other value of that attribute in the compost does not exceed the absolute maximum listed in Column 2 of Table 1.

Table 1

Column 1	Column 2
Attributes	Absolute maximum (% 'dry weight' unless otherwise specified)
1. Glass, metal and rigid plastics > 2 mm	0.5
2. Plastics – light, flexible or film > 5 mm	0.05
3. Salmonella spp	absent in 25 g
4. Escherichia Coli (E. Coli)	<100 MPN/g*
5. Faecal coliforms	<1000 MPN/g*

*MPN = most probable number

Test methods

- 5.5. The processor must ensure that any testing of samples required by this order is undertaken by analytical laboratories accredited by the National Association of Testing Authorities (NATA), or equivalent.
- 5.6. The processor must ensure that the attributes listed in Column 1 of Table 1 in the compost supplied are tested in accordance with the test methods specified below or other equivalent analytical methods. Where an equivalent analytical method is used the detection limit must be equal to or less than that nominated for the given method below:
 - 5.6.1. Test method for measuring physical contaminants 1 and 2:
 - 5.6.1.1. Australian Standard AS4454-2012 Composts, soil conditioners and mulches, "Appendix I - Method For Determination Of Moisture Content And Level Of Visible Contamination". This test must be conducted under bright and direct light.
 - 5.6.1.2. Results must be reported as % contamination on a dry mass basis.
 - 5.6.2. Test method for the detection of Salmonella:
 - 5.6.2.1. Australian Standard AS5013.10-2009 Food microbiology - Microbiology of food and animal feeding stuffs - Horizontal

method for the detection of Salmonella spp., or an equivalent analytical method.

5.6.2.2. Report as absent or present.

5.6.3. Test method for the detection of E. Coli:

5.6.3.1. Australian Standard AS5013.15-2006 Food microbiology - Microbiology of food and animal feeding stuffs - Horizontal method for the detection and enumeration of presumptive Escherichia coli - Most probable number technique, or an equivalent analytical method.

5.6.3.2. Report as most probable number (MPN) /g.

5.6.4. Test method for the detection of Faecal Coliforms:

5.6.4.1. Australian Standard AS 5013.3-2009 Food microbiology - Microbiology of food and animal feeding stuffs - Horizontal method for the detection and enumeration of coliforms - Most probable number technique, or an equivalent analytical method.

5.6.4.2. Report as most probable number (MPN) /g.

Record keeping and reporting

5.7. The processor must keep a written record of the following for a period of six years:

- the sampling plan required to be prepared under clause 5.4.1;
- all test results in relation to any compost supplied;
- documentation of the composting process; and
- the quantity of any compost supplied.

5.8. The processor must provide, on request, the most recent test results for compost supplied to any consumer of the compost.

5.9. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 5.1 to 5.6.

6. Definitions

In this order:

animal waste means dead animals and animal parts and any mixture of dead animals and animal parts.

application or apply to land means applying to land by:

- spraying, spreading or depositing on the land;
- ploughing, injecting or mixing into the land; or
- filling, raising, reclaiming or contouring the land.

composting means a process of managed biological transformation:

(a) to achieve pasteurisation; and

(b) for a period of not less than a total of 6 weeks of composting and curing at an adequate moisture level (>40 % by weight), and/or until an equivalent level of biological stability can be demonstrated.

Composting does not include drying or dehydration processes.

consumer means a person who applies, or intends to apply, compost to land.

corrosive means a substance having properties that may damage or destroy living organisms and components of the soil, including soil organic matter. Commonly this includes strong acids and strong bases, or weak acids and weak bases occurring in concentrated form.

drying or dehydration processes are those that use externally supplied energy to heat and ventilate food wastes (or any other compostable waste) in order to rapidly dry the waste material over a short time period (typically 24 to 48 hours), either with or without the addition of an inoculum. This is distinct from those processes of managed biological transformation that use heat generated by the aerobic microorganisms that are responsible for decomposition under moist conditions during pasteurisation and composting, and traditional forced aeration composting methods such as aerated static pile composting.

engineered wood products means engineered, painted, treated or composite wood products such as particleboard, oriented strand board, plywood, laminated veneer lumber, glulam or fibreboard that are manufactured with glues, resins, water repellents, fire retardants, fungal inhibitors and/or other chemicals.

food waste means waste from the manufacture, preparation, sale or consumption of food but does not include grease trap waste or animal waste, and must not be corrosive.

forestry and sawmill residues are untreated and uncontaminated plant materials from forestry operations such as logging, silviculture and sawmilling. Forestry and sawmill residues include materials such as bark, woodchip, sawdust and wood fibre that are collected as a source separated material stream for processing.

garden organics means plant material that by virtue of the nature and source of the material poses a risk of the presence of physical and chemical contaminants. Garden organics includes material from kerbside waste collections. Garden organics must not contain asbestos, engineered wood products, or preservative treated or coated wood residues.

manure means faecal matter generated by any animal other than humans and includes any mixture of animal faecal matter and biodegradable animal bedding such as straw or sawdust.

mulch means plant material shredded and/or screened to a preferred particle size grading for particular applications. Mulch, by virtue of the nature and source of the plant material, must pose minimal risk of the presence of physical and chemical contaminants. Mulch may include urban wood residues and forestry and sawmill residues. Mulch does not include plant material from kerbside waste collections. Mulch must not contain asbestos, engineered wood products, preservative treated or coated wood residues, or physical contaminants, including but not limited to glass, metal, rigid plastics, flexible plastics, or polystyrene.

pasteurisation means a process to significantly reduce the numbers of plant and animal pathogens and plant propagules. Pasteurisation requires that the entire mass of organic material be subjected to either of the following:

- (a) Appropriate turning of outer material to the inside of the windrow so that the whole mass is subjected to a minimum of 3 turns with the internal temperature reaching a minimum of 55°C for 3 consecutive days before each turn. Where materials with a higher risk of containing pathogens are present, including but not limited to manure and food waste, the core temperature of the material mass should be maintained at 55°C or higher for 15 days or longer, and during this period the windrow should be turned a minimum of 5 times.
- (b) An alternative process of pasteurisation that guarantees the same level of

pathogen reduction, and the reduction of plant propagules as in (a). Any such alternative process must be clearly defined in writing and validated by a suitably qualified person before claiming compliance with this order. A written record of the validation report must be kept for a minimum period of six years.

paunch means the undigested food contained in the stomach of ruminant animals. This is generally considered to include partially digested grass, hay and other feed products such as grain.

preservative treated or coated wood residues means wood residues that are preservative treated with chemicals such as copper chrome arsenate (CCA), high temperature creosote (HTC), pigmented emulsified creosote (PEC) and light organic solvent preservative (LOSP) and/or coated with substances such as varnish or paint.

processor means a person who processes, mixes, blends, or otherwise incorporates compost into a material in its final form for supply to a consumer.

urban wood residues means untreated, unpainted, and uncontaminated urban derived timber and wood material that is collected as a separate material stream for processing. Urban wood residues include materials such as off-cuts, saw dust, wood shavings, packaging crates and pallets.

Manager Waste Strategy and Innovation

Environment Protection Authority

(by delegation)

Notes

The EPA may amend or revoke this order at any time. It is the responsibility of each processor to ensure it complies with all relevant requirements of the most current order. The current version of this order will be available on www.epa.nsw.gov.au

In gazetting or otherwise issuing this order, the EPA is not in any way endorsing the supply or use of this substance or guaranteeing that the substance will confer benefit.

The conditions set out in this order are designed to minimise the risk of potential harm to the environment, human health or agriculture, although neither this order nor the accompanying exemption guarantee that the environment, human health or agriculture will not be harmed.

Any person or entity which supplies compost should assess whether the material is fit for the purpose the material is proposed to be used for, and whether this use may cause harm. The supplier may need to seek expert scientific or technical advice.

Regardless of any exemption or order provided by the EPA, the person who causes or permits the application of the substance to land must ensure that the action is lawful and consistent with any other legislative requirements including, if applicable, any development consent(s) for managing operations on the site(s).

The supply of compost remains subject to other relevant environmental regulations in the POEO Act and Waste Regulation. For example, a person who pollutes land (s. 142A) or water (s. 120), or causes air pollution through the emission of odours (s. 126), or does not meet the special requirements for asbestos waste (Part 7 of the Waste Regulation), regardless of this order, is guilty of an offence and subject to prosecution.

This order does not alter the requirements of any other relevant legislation that must be met in supplying this material, including for example, the need to prepare a Safety Data Sheet (SDS).

Whilst this order requires that compost must not contain engineered wood products, the EPA recognises that the compost may contain extremely low and incidental amounts of engineered wood products. The processor must implement procedures to prevent the presence of engineered wood products in the compost. These procedures must be formally documented and their implementation demonstrated. However, as noted in this order, compost must not contain any asbestos, or preservative treated or coated wood residues.

This order does not require sampling and testing of compost for biological stability and maturity. However the EPA strongly encourages the supply of compost that contains stable organic matter content, and an absence of phytotoxic compounds and pathogens. Immature and poorly stabilised compost can potentially generate offensive odours, contain viable plant propagules and cause initial adverse impacts on plant growth following land application.

Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.