

Resource Recovery Exemption under Part 9, Clauses 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014

The organic outputs¹ derived from mixed waste exemption 2014

Introduction

This exemption:

- is issued by the Environment Protection Authority (EPA) under clauses 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014 (Waste Regulation); and
- exempts a consumer of organic outputs derived from mixed waste (organic outputs) from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and the Waste Regulation in relation to the application of that waste to land, provided the consumer complies with the conditions of this exemption.

This exemption should be read in conjunction with 'the organic outputs derived from mixed waste order 2014'.

1. Waste to which this exemption applies

- 1.1 This exemption applies to organic outputs that are, or are intended to be, applied to land as a soil amendment.
- 1.2 Organic outputs are the pasteurised and biologically stabilised organic outputs produced from the mechanical biological treatment of mixed waste.

2. Persons to whom this exemption applies

- 2.1 This exemption applies to any person who applies, or intends to apply, the organic outputs to land as set out in 1.1.

3. Duration

- 3.1 This exemption commences on 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

¹These organic outputs are not the same as the source segregated outputs that are covered by the exemptions for compost, pasteurised garden organics, or raw mulch.

4. Premises to which this exemption applies

- 4.1 This exemption applies to the premises at which the consumer's actual or intended application of organic outputs is carried out.

5. Revocation

- 5.1 'The organic outputs derived from mixed waste exemption 2014' which commenced on 6 June 2014 is revoked from 24 November 2014.

6. Exemption

- 6.1 Subject to the conditions of this exemption, the EPA exempts each consumer from the following provisions of the POEO Act and the Waste Regulation in relation to the consumer's actual or intended application of organic outputs to land as a soil amendment at the premises:

- section 48 of the POEO Act in respect of the scheduled activities described in clauses 39 and 42 of Schedule 1 of the POEO Act;
- Part 4 of the Waste Regulation;
- section 88 of the POEO Act; and
- clause 109 and 110 of the Waste Regulation.

- 6.2 The exemption does not apply in circumstances where organic outputs are received at the 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.

7. Conditions of exemption

The exemption is subject to the following conditions:

General conditions

- 7.1 At the time the organic outputs are received at the premises, the material must meet all chemical and other material requirements for organic outputs which are required on or before the supply of organic outputs under 'the organic outputs order 2014'.
- 7.2 The organic outputs can only be applied to land as a soil amendment for:
- 7.2.1 soil improvement or site rehabilitation at mine sites, or
 - 7.2.2 plantation forestry use, or
 - 7.2.3 non-contact agricultural use, or
 - 7.2.4 broad acre agricultural use.
- 7.3 The organic outputs must not be used:
- 7.3.1 in urban landscaping,
 - 7.3.2 at public contact sites,
 - 7.3.3 on or in home lawns and gardens,
 - 7.3.4 in potting mix, or
 - 7.3.5 in turf production.

- 7.4 The consumer must ensure that no windblown litter leaves the premises as a result of the application to land of organic outputs.
- 7.5 All organic outputs applied to land must be evenly applied across the designated land application area at the application rate prescribed for that land use in clauses 7.6, 7.7 and 7.8.
- 7.6 For mine sites, no more than 140 tonnes/hectare (dry weight) of organic outputs may be applied in total to a given location.
- 7.7 For plantation forestry use and for non-contact agricultural use, no more than 50 tonnes/hectare (dry weight) of organic outputs may be applied in total to a given location.
- 7.8 For broad acre agricultural use, no more than 10 tonnes/hectare (dry weight) of organic outputs may be applied in total to a given location.
- 7.9 Organic outputs must not be applied to:
- 7.9.1 land with a slope in excess of 18% (10⁰), unless used for mine site rehabilitation where all practicable measures have been taken to control stability and prevent runoff, or
- 7.9.2 soil having a pH of less than 5.0* when measured in a 1:5 soil:water extract, or
- 7.9.3 land that is within the buffer zones for the protected areas specified in Table 1.
- 7.10 Animals must not be allowed to graze the land for 30 days after the application of organic outputs to land.
- 7.11. Lactating and new born animals must not be allowed to graze the land for 90 days after the application of organic outputs to land.
- 7.12. Crops must not be harvested for 30 days after the application of organic outputs to land.

Table 1 Buffer zones for protected areas

Column 1	Column 2	Column 3	Column 4
Protected Area	Minimum width of Buffer Zones (m)		
	Flat (< 3% or 2° slope)	Downslope (> 3% or 2° slope)	Upslope
Surface waters	50	100	5
Drinking water bores	250	250	250
Other bores	50	50	50

*Where organic outputs are proposed for land application on soils (such as mine sites) where the pH is less than 5.0, a specific exemption may be considered where low concentrations of metals can be achieved.

Sampling requirements

- 7.13. Prior to receiving and land applying any organic outputs, where the application will result in greater than 10 tonnes/hectare (dry weight) total organic outputs in or on the land, the consumer must sample the soil to which the organic outputs are to be applied by taking the following samples at a depth of 0 to 15 centimetres:

- 7.13.1. For plantation forestry use and non-contact agricultural use:
- (i) For land equal to, or less than 10 hectares - 2 composite samples, and
 - (ii) For land greater than 10 hectares - 1 composite sample per 10 ha.
- 7.13.2. For mine site rehabilitation:
- (i) For land equal to, or less than, 20 hectares - 2 composite samples, and
 - (ii) For land greater than 20 hectares - 1 composite sample per 20 ha.

7.14. The soil where the organic outputs have been applied to land must be re-sampled and re-tested as set out in clause 7.13 prior to receiving or applying any additional organic outputs to the land.

Chemical and other material requirements

7.15. Prior to receiving and land applying the organic outputs, where the application will result in greater than 10 tonnes/hectare (dry weight) total organic outputs, the consumer must ensure that:

7.15.1. each of the composite samples referred to in section 7.13 are tested for the contaminants listed in Column 1 of Table 2.

7.15.2. the contaminant concentrations in the soil prior to application of organic outputs to the land do not exceed the maximum levels specified for those contaminants for the relevant land use in either Column 2 or Column 3 of Table 2.

Table 2 Maximum allowable soil contaminant concentrations¹ prior to organic outputs application to land

Column 1	Column 2	Column 3
Contaminant	Mine sites Maximum allowable soil contaminant concentration (dry weight of soil in mg/kg, unless otherwise specified)	Plantation forestry use, non-contact agricultural use and broad acre agricultural use land Maximum allowable soil contaminant concentration (dry weight of soil in mg/kg, unless otherwise specified)
1. Mercury	4	1
2. Arsenic	20	20
3. Cadmium	5	1
4. Chromium (total)	250	100
5. Copper	375	100
6. Lead	150	150
7. Nickel	125	60
8. Selenium	8	5
9. Zinc	700	200

10. DDT/DDD/DDE	0.5	0.5
11. Aldrin	0.2	0.02
12. Dieldrin	0.2	0.02
13. Chlordane	0.2	0.02
14. Heptachlor	0.2	0.02
15. Hexachlorobenzene (HCB)	0.2	0.02
16. Lindane	0.2	0.02
17. Benzene hexachloride (BHC)	0.2	0.02
18. Polychlorinated Biphenyls (PCBs)	0.3	ND ²

Notes and Definitions for the purposes of Table 2:

1. Maximum allowable soil contaminant concentrations are mean concentration values based on the sampling requirements set out in Section 7.13.
2. No detected PCBs at a limit of detection of 0.1 mg PCB/kg soil. Organic outputs must not be applied to land where any individual PCB Aroclor has been detected at a limit of detection of 0.1 mg PCB/kg.

Test methods

7.16. The consumer must ensure that any testing of samples required by this exemption is undertaken by analytical laboratories accredited by the National Association of Testing Authorities (NATA), or equivalent.

7.17. The consumer must ensure that the contaminants (listed in Column 1 of Table 2) in the soil 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.

7.17.1. Test method for measuring the mercury concentration:

7.17.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold-vapor technique), or an equivalent analytical method with a detection limit < 20% of the applicable stated maximum allowable concentration in Table 2, Columns 2 and 3.

7.17.1.2. Results must be reported as mg/kg dry weight.

7.17.2. Test methods for measuring metals 2 – 9:

7.17.2.1. For sample preparation by digestion - USEPA SW-846 Method 3050B acid digestion of sediments, sludges, soils, and oils, or using an equivalent digestion method.

7.17.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10% of the applicable stated maximum allowable concentration in Table 2, Columns 2 and 3.

7.17.2.3. Results must be reported as mg/kg dry weight.

7.17.3. Test method for measuring 10 – 18 in Table 2:

7.17.3.1. Analysis using USEPA SW-846 Method 8270D Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), or equivalent.

7.17.3.2. Results must be reported as mg/kg dry weight.

Notification

7.18. On or before each transaction, the consumer must provide a written statement of compliance to each generator or supplier that the consumer has engaged to supply the organic outputs, certifying that:

- all the sampling and testing requirements set out in clause 7.13 to 7.17 of this exemption have been met; and
- none of those test results show that existing contaminant concentrations in the soil exceed any of the maximum allowable soil contaminant concentrations in Table 2.

Record keeping and reporting

7.19 The consumer must keep a written record of the following for a period of six years for each delivery of organic outputs received:

- the quantity of the organic outputs received;
- the name and address of the supplier of organic outputs received;
- the location(s) where the organic outputs are applied including the address and paddock or plot identification;
- the rate(s) at which the organic outputs are applied to the land at each location as defined above;
- the date(s) upon which the organic outputs are applied to the land at each location as defined above; and
- for land application sites, other than mine sites, where the consumer is not the owner of the land on which the organic outputs are applied, the consumer must obtain a statement of consent from the owner of the land that the owner has received a copy of the exemption and accepts the application on the land.

7.20 The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.

7.21 The consumer must ensure that any application of organic outputs to land must occur within a reasonable period of time after its receipt.

8 Definitions

In this exemption:

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; or
- ploughing, injecting or mixing into the land; or
- filling, raising, reclaiming or contouring the land.

biological stabilisation means a process whereby mixed waste undergoes a process of managed biological transformation for a period of not less than a total of 6 weeks of composting and curing, or until an equivalent level of biological stability can be demonstrated. Any such alternative process must be clearly defined in writing and validated by a suitably qualified person prior to claiming compliance with this exemption. A written record of the validation report must be kept for a minimum period of three years.

biologically stabilised means the mixed waste that has undergone biological stabilisation.

broad acre agricultural use means application to land where the land is used for agriculture. This does not include the keeping and breeding of poultry or pigs, food root crops, vegetables or crops where the harvested parts touch or are below the surface of the land.

composite sample means a sample that combines five discrete sub-samples of equal size into a single sample for the purpose of analysis.

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

food waste means waste from the manufacture, preparation, sale or consumption of food but does not include grease trap waste.

garden waste means waste that consists of branches, grass, leaves, plants, loppings, tree trunks, tree stumps and similar materials, and includes any mixture of those materials.

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.

mine site means land disturbed by mining on which rehabilitation is being carried out by or on behalf of:

- (a) the holder of an authority under the *Mining Act 1992* pursuant to an approved rehabilitation plan, or
- (b) the State of NSW.

mixed waste means:

- (a) residual household waste that contains putrescible organics and/or
- (b) waste from litter bins that are collected by or on behalf of local councils.

It may only be mixed with any one or more of the following:

- (i) waste collected from commercial premises by or on behalf of councils as part of its kerbside household waste collection service,
- (ii) commercial waste sourced from restaurants, clubs, pubs, hotels, motels, resorts, offices, schools and shopping centres that is similar in composition to household waste (but may include a higher proportion of food waste),
- (iii) manure,
- (iv) food waste,
- (v) animal waste,
- (vi) grit or screenings from sewage treatment systems that have been dewatered so that the grit or screenings do not contain free liquids, or
- (vii) up to 20% source separated household garden and food waste.

It must not contain any other waste. For example, it must not contain:

- (a) any special waste, hazardous waste, restricted solid waste or liquid waste as defined in clause 49 of Schedule 1 to the Act; or
- (b) any source separated recyclable household waste other than those set out in (vii) above.

non-contact agricultural use means application to land where the land is used for the growing of fruit or nut trees or vines but not where fallen produce is or may be collected off the ground. It does not include application to land where the land is used for grazing or for any other cropping purpose.

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 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 prior to claiming compliance with this exemption. A written record of the validation report must be kept for a minimum period of three years.

pasteurised means that the mixed waste that has been subject to a process of pasteurisation.

pathogen means a living organism that could be harmful to humans, animals, plants or other living organisms.

plantation forestry use means application to an area of land on which the predominant number of trees or shrubs forming, or expected to form, the canopy are trees or shrubs that have been planted (whether by sowing seed or otherwise) for the purpose of timber production.

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

public contact sites means land with a high potential for contact by the public, including public parks, fields, cemeteries, plant nurseries and golf courses.

source separated recyclable household waste means household waste from kerbside waste collection services that has been separated for the purpose of recycling.

transaction means:

- in the case of a one-off supply, the supply of a batch, truckload or stockpile of organic outputs that is not repeated,
- in the case where the supplier has an arrangement with the recipient for more than one supply of organic outputs the first supply of organic outputs as required under the arrangement.

Manager Waste Strategy and Innovation

Environment Protection Authority

(by delegation)

Notes

The EPA may amend or revoke this exemption at any time. It is the responsibility of the consumer to ensure they comply with all relevant requirements of the most current exemption. The current version of this exemption will be available on www.epa.nsw.gov.au.

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

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

The consumer should assess whether or not the organic outputs is fit for the purpose the material is proposed to be used for, and whether this use may cause harm. The consumer may need to seek expert advice from a certified professional soil scientist (<http://www.cpss.com.au/index.php/locate-a-cpss/cpss-register>).

Regardless of any exemption 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 receipt of organic outputs remains subject to other relevant environmental regulations in the POEO Act and the 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 having an exemption, is guilty of an offence and subject to prosecution.

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

Failure to comply with the conditions of this exemption constitutes an offence under clause 91 of the Waste Regulation.

Additional information

Application at the maximum rates allowed in this exemption can add physical contaminants to land as follows:

Glass, metal and rigid plastics > 2 mm	3.5 tonnes per hectare for mine sites
	0.75 tonnes per hectare for plantation forestry use and non-contact agricultural use
	0.15 tonnes per hectare for broad acre agricultural use
Plastics – light, flexible or film > 5 mm	0.35 tonnes per hectare for mine sites
	0.1 tonnes per hectare for plantation forestry use and non-contact agricultural use
	0.02 tonnes per hectare for broad acre agricultural use

Physical contaminants may also be present in substantial quantities below 2 mm (for glass, metal and rigid plastics) and 5 mm (for Plastics – light, flexible or film).