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

The processed animal 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 processed animal waste 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 processed animal waste order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to processed animal waste that is, or is intended to be, applied to land as a soil amendment.
- 1.2. Processed animal waste means animal waste that has been processed into meal, fish emulsion or fish hydrolysate.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, processed animal waste 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.

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 processed animal waste is carried out.

5. Revocation

- 5.1. 'The processed animal waste exemption 2012' which commenced on 7 December 2012 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 processed animal waste 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 processed animal waste is 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:

- 7.1. The processed animal waste can only be applied to land as a soil amendment.
- 7.2. Application rates must be equal to or less than the agronomic rate for the most limiting factor.
- 7.3. The consumer must ensure that any application of processed animal waste to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means a person who applies, or intends to apply, processed animal waste to land.

fish emulsion means the liquid produced from the heat treatment of animal waste from fishery industries.

fish hydrolysate means the liquid produced from the hydrolysis and/or enzymatic breakdown of animal waste from fishery industries.

heat treatment means the process of heating the animal waste at temperatures and for times which, in combination, are sufficient to destroy pathogenic micro-organisms.

meal means defatted and dried solid product from rendering animal waste after milling, including but is not restricted to meat and bone meal, poultry meal, fish meal and blood meal.

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

rendering means the heat treatment of animal waste to remove moisture and/or liberate fat.

transaction means:

- in the case of a once-off supply, the supply of processed animal waste.
- where the supplier and recipient have an arrangement for more than one supply of processed animal waste, over a defined period (not exceeding two years), the first supply of processed animal waste 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 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 processed animal waste is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of processed animal waste 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 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.



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

The processed animal waste order 2014

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 processed animal waste to which 'the processed animal waste exemption 2014' applies. The requirements in this order apply in relation to the supply of processed animal waste for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to processed animal waste. In this order, processed animal waste means animal waste that has been processed into meal, fish emulsion or fish hydrolysate.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies processed animal waste that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of processed animal waste 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Definitions

In this order:

animal waste means dead animals or 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.

consumer means a person who applies, or intends to apply, processed animal waste to land .

fish emulsion means the liquid produced from the heat treatment of animal waste from fishery industries.

fish hydrolysate means the liquid produced from the hydrolysis and/or enzymatic breakdown of animal waste from fishery industries.

heat treatment means the process of heating the animal waste at temperatures and for times which, in combination, are sufficient to destroy pathogenic micro-organisms.

meal means defatted and dried solid product from rendering animal waste after milling, including but is not restricted to meat and bone meal, poultry meal, fish meal and blood meal.

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

rendering means the heat treatment of animal waste to remove moisture and/or liberate fat.

transaction means:

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

**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 of the generator and 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 processed animal waste 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 engineering 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 processed animal waste 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.

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



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

The ash from burning biomass 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 ash from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and 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 ash from burning biomass order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to ash that is, or is intended to be, applied to land as a soil amendment.
- 1.2. Ash means the waste generated by burning biomass from agriculture, forestry and sawmilling residues, uncontaminated wood waste and/or organic residues from virgin paper pulp activities.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, ash 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.

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 ash is carried out.

5. Revocation

- 5.1. *The ash from burning uncontaminated wood, timber, forestry residues or paper exemption 2006 and The ash from burning bagasse and cane trash exemption 2006* which commenced on 1 December 2006 are 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 ash 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, 110 and 114 of the Waste Regulation.
- 6.2. The exemption does not apply in circumstances where ash is 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:

- 7.1. At the time the ash is received at the premises, the material must meet all chemical and other material requirements for ash which are required on or before the supply of ash under 'the ash from burning biomass order 2014'.
- 7.2. The ash can only be applied to land as a soil amendment.
- 7.3. The application rate must be equal to or less than the agronomic rate for the most limiting factor.
- 7.4. The consumer must incorporate the ash into the topsoil.
- 7.5. The consumer must keep a written record of the following for a period of six years:
- the quantity of any ash received; and
 - the name and address of the supplier of the ash received.
- 7.6. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.7. The consumer must apply ash to land within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

application 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.

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

**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 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 ash is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of ash 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 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.



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

The ash from burning biomass order 2014

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 ash to which 'the ash from burning biomass exemption 2014' applies. The requirements in this order apply in relation to the supply of ash for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to ash. In this order, ash means the waste generated by burning biomass from agriculture, forestry and sawmilling residues, uncontaminated wood waste and/or organic residues from virgin paper pulp activities.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies ash that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of ash 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies ash.

Sampling requirements

- 4.1. On or before supplying ash, the generator must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the ash.
 - 4.1.2. Undertake sampling and testing of the ash as required under clauses 4.2 and 4.3 below.

- 4.2. Where the ash is generated as part of a continuous process, the generator must undertake the following sampling:
- 4.2.1. Characterisation of the ash by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for ash generated and processed during each 2-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the ash by collecting either 5 composite samples from every 1000 tonnes (or part thereof) processed or 5 composite samples every year (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the ash is not generated as part of a continuous process, the generator must undertake one-off sampling of a batch, truckload or stockpile of the ash, by collecting 10 composite samples from every 1000 tonnes (or part thereof) processed and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. The test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 1 and the absolute maximum concentration or other value listed in Column 4 of Table 1 prior to the supply of ash.

Chemical and other material requirements

- 4.4. The generator must not supply ash to any person if, in relation to any of the chemical and other attributes of the ash:
- 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine or one-off sampling of the ash exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or
 - 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the ash (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
 - 4.4.3. The average concentration or other value of that attribute from the routine sampling of the ash (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.
- 4.5. The absolute maximum concentration or other value of that attribute in any ash supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not required	1
2. Cadmium	0.5	0.5	1
3. Lead	50	Not required	100
4. Arsenic	10	10	20
5. Chromium (total)	50	50	100
6. Copper	50	20	100
7. Molybdenum	5	Not required	10
8. Nickel	30	30	60
9. Selenium	5	Not required	10
10. Zinc	100	100	200
11. Boron	Not required	Not required	60
12. Electrical Conductivity ¹	NA	NA	NA
13. pH ¹	NA	NA	NA

1. Note that while limits are not included for electrical conductivity and pH these must be tested in each sample and records kept of results.

Test methods

- 4.6. The generator 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.
- 4.7. The generator must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the ash it supplies 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.
- 4.7.1. Test method for measuring the mercury concentration:
- 4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated maximum average concentration in Table 1, Column 2 (i.e. < 0.1 mg/kg dry weight).
- 4.7.1.2. Report as mg/kg dry weight.
- 4.7.2. Test methods for measuring chemicals 2 - 10:
- 4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
- 4.7.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10%

- of stated maximum concentration in Table 1, Column 2 (i.e. 1 mg/kg dry weight for lead).
- 4.7.2.3. Report as mg/kg dry weight.
- 4.7.3. Test methods for measuring the boron concentration:
- 4.7.3.1. Water soluble boron using a calcium chloride extractable method. Rayment, G.E. and Higginson, F.R. 1992. Method 12C1 or 12C2. In Australian laboratory handbook of soil and water chemical methods, Inkata Press, Australia (or an equivalent analytical method with a detection limit for hot water soluble boron or calcium chloride extractable boron < 10% of stated total concentration).
- 4.7.3.2. Report as mg/kg dry weight.
- 4.7.4. Test methods for measuring the electrical conductivity and pH:
- 4.7.4.1. Sample preparation by mixing 1 part ash with 5 parts distilled water.
- 4.7.4.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
- 4.7.4.3. Report electrical conductivity in deciSiemens per metre (dS/m).

Notification

- 4.8. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the ash:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the ash from burning biomass exemption, or a link to the EPA website where the ash from burning biomass exemption can be found; and
 - a copy of the ash from burning biomass order, or a link to the EPA website where the ash from burning biomass order can be found.

Record keeping and reporting

- 4.9. The generator must keep a written record of the following for a period of six years:
- the sampling plan required to be prepared under clause 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the ash supplied;
 - the quantity of the ash supplied; and
 - the name and address of each person to whom the generator supplied the ash.
- 4.10. The generator must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for ash supplied to any consumer of the ash.
- 4.11. The generator must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Definitions

In this order:

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.

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, ash to land.

continuous process means a process that produces ash on an ongoing basis.

generator means a person who generates the ash.

transaction means:

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

**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 of the generator and 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 ash 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 engineering 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 ash 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The basalt fines 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 basalt fines from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and Waste Regulation in relation to the application of that waste to land for building or maintaining railway infrastructure, for road making activities, or as a soil amendment material, provided the consumer complies with the conditions of this exemption.

This exemption should be read in conjunction with 'the basalt fines order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to basalt fines that are, or are intended to be, used for application to land for building or maintaining railway infrastructure, for road making activities, or as a soil amendment.
- 1.2. Basalt fines is a material comprising of naturally excavated basalt with a maximum particle size of 9.5 mm, that is derived from the processing of basalt or the recycling of railway ballast.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, basalt fines 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.

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 basalt fines is carried out.

5. Revocation

- 5.1. 'The basalt fines exemption 2008' which commenced on 20 June 2008 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 basalt fines to land for building or maintaining railway infrastructure, for road making activities, or 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 basalt fines is 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:

- 7.1. At the time the basalt fines is received at the premises, the material must meet all chemical and other material requirements for basalt fines which are required on or before the supply of basalt fines under 'the basalt fines order 2014'.
- 7.2. The consumer can only apply basalt fines to land where it is used for building or maintaining railway infrastructure, for road making activities, or as a soil amendment.
- 7.3. The consumer must keep a written record of the following for a period of six years:
- the quantity of any basalt fines received; and
 - the name and address of the supplier of the basalt fines received.
- 7.4. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.5. The consumer must ensure that any application of basalt fines to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

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

**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 basalt fines are fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 basalt fines 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.



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

The basalt fines order 2014

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 basalt fines to which 'the basalt fines exemption 2014' applies. The requirements in this order apply in relation to the supply of basalt fines for application to land for building or maintaining railway infrastructure, for road making activities, or as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to basalt fines. In this order, basalt fines means a material comprising of naturally excavated basalt with a maximum particle size of 9.5 mm, that is derived from the processing of basalt or the recycling of railway ballast.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies basalt fines that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of basalt fines 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

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

Sampling requirements

- 4.1. On or before supplying basalt fines the processor must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the basalt fines.
 - 4.1.2 Undertake sampling and testing of the basalt fines as required under

clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).

- 4.2. Where the basalt fines are generated as part of a continuous process, the processor must undertake the following sampling:
 - 4.2.1. Characterisation of the basalt fines by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for basalt fines generated and processed during each 2-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of basalt fines by collecting either 5 composite samples from every 10,000 tonnes (or part thereof) processed or 5 composite samples every 3 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the basalt fines are not generated as part of a continuous process, the processor must undertake one-off sampling of a batch, truckload or stockpile of the basalt fines, by collecting 10 composite samples from every 4,000 tonnes (or part thereof) processed and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. The test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 1 and the absolute maximum concentration or other value listed in Column 4 of Table 1 prior to the supply of the basalt fines.

Chemical and other material requirements

- 4.4. The processor must not supply basalt fines to any person if, in relation to any of the chemical and other attributes of the basalt fines:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine or one-off sampling of the basalt fines exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or
 - 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the basalt fines (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
 - 4.4.3. The average concentration or other value of that attribute from the routine sampling of the basalt fines (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.

- 4.5. The absolute maximum concentration or other value of that attribute in any basalt fines supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not required	1
2. Cadmium	0.5	0.5	1
3. Lead	50	50	100
4. Arsenic	15	15	30
5. Chromium (total)	25	Not required	50
6. Copper	25	Not required	50
7. Nickel	25	Not required	50
8. Zinc	75	75	150
9. Electrical Conductivity	1 dS/m	1 dS/m	2 dS/m
10. Metal, glass, asphalt, ceramics and slag	2.5%	Not required	5%
11. Plaster, clay lumps and other friable materials	0.25%	Not required	0.5%
12. Rubber, plastic, bitumen, paper, cloth, paint, wood and other vegetable matter	0.05%	Not required	0.1%

Test methods

- 4.6. 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.
- 4.7. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the basalt fines it supplies 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.
- 4.6.1 Test methods for measuring the mercury concentration:
- 4.6.1.1 Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated absolute maximum average concentration in Table 1, Column 4 (i.e. <0.2mg/kg dry weight of mercury).
- 4.6.1.2 Report as mg/kg dry weight.

- 4.6.2 Test methods for measuring chemicals 2 - 8:
- 4.6.2.1 Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 4.6.2.2 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 stated absolute maximum concentration in Table 1, Column 4 (i.e. <10 mg/kg dry weight for lead).
 - 4.6.2.3 Report as mg/kg dry weight.
- 4.6.3 Test methods for measuring the electrical conductivity:
- 4.6.3.1 Sample preparation by mixing 1 part basalt fines with 5 parts distilled water.
 - 4.6.3.2 Analysis using Method 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.6.3.3 Report in deciSiemens per metre (dS/m).
- 4.6.4 Test method for measuring the attributes 10 - 12:
- 4.6.4.1 NSW Roads & Traffic Authority Test Method T276 Foreign Materials Content of Recycled Crushed Concrete (or an equivalent method) and modified to use a 2.36mm sieve.
 - 4.6.4.2 Report as %.

Notification

- 4.8. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the basalt fines:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the basalt fines exemption, or a link to the EPA website where the basalt fines exemption can be found; and
 - a copy of the basalt fines order, or a link to the EPA website where the basalt fines order can be found.

Record keeping and reporting

- 4.9. 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 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the basalt fines supplied;
 - the quantity of the basalt fines supplied; and
 - the name and address of each person to whom the processor supplied the basalt fines.
- 4.10. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for basalt fines supplied to any consumer of the basalt fines.
- 4.11. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Definitions

In this order:

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.

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, basalt fines to land.

continuous process means a process that produces basalt fines on an ongoing basis.

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

transaction means:

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

**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 of the generator and processor and 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 basalt fines 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 engineering 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 basalt fines 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The “batch process” recovered fines 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 “batch process” recovered fines 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 “batch process” recovered fines order 2014’.

1. Waste to which this exemption applies

- 1.1. This exemption applies to “batch process” recovered fines that are, or are intended to be, applied to land for the purposes of construction or landscaping.
- 1.2. “Batch process” recovered fines means a soil or sand substitute with a typical maximum particle size of 9.5 mm that is derived from the batch processing of mixed construction and demolition waste including residues from the processing of skip bin waste.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, “batch process” recovered fines 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.

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 "batch process" recovered fines is carried out.

5. Revocation

- 5.1. 'The "batch process" recovered fines exemption 2010' which commenced 13 September 2010 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 "batch process" recovered fines to land for the purpose of construction or landscaping 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 "batch process" recovered fines 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:

- 7.1. At the time the "batch process" recovered fines is received at the premises, the material must meet all chemical and other material requirements for "batch process" recovered fines which are required on or before the supply of "batch process" recovered fines under 'the "batch process" recovered fines order 2014'.
- 7.2. The "batch process" recovered fines can only be applied to land for the purposes of construction or landscaping. This exemption does not apply to any of the following applications:
- 7.2.1. Construction of dams or related water storage infrastructure,
 - 7.2.2. Mine site rehabilitation,
 - 7.2.3. Quarry rehabilitation,
 - 7.2.4. Sand dredge pond rehabilitation,
 - 7.2.5. Back-filling of quarry voids,
 - 7.2.6. Raising or reshaping of land used for agricultural purposes, and
 - 7.2.7. Construction of roads on private land unless:
 - (a) the "batch process" recovered fines is applied to land to the minimum extent necessary for the construction of a road, and

- (b) a development consent for the development has been granted under the relevant Environmental Planning Instrument (EPI), or
 - (c) it is to provide access (temporary or permanent) to a development approved by a Council, or
 - (d) the works undertaken are either exempt or complying development.
- 7.3. The consumer can only apply “batch process” recovered fines to land consistent with section 7.2 where it:
- 7.3.1. complies with a development consent; and
 - 7.3.2. is not applied in or beneath water, including groundwater.
- 7.4. The consumer must keep a written record of the following for a period of six years:
- the quantity of any “batch process” recovered fines received; and
 - the name and address of the supplier of the “batch process” recovered fines received.
- 7.5. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.6. The consumer must ensure that any application of “batch process” recovered fines to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means a person who applies, or intends to apply, “batch process” recovered fines to land.

**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 "batch process" recovered fines is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice. 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 "batch process" recovered fines 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.



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

The “batch process” recovered fines order 2014

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 “batch process” recovered fines to which ‘the “batch process” recovered fines exemption 2014’ applies. The requirements in this order apply in relation to the supply of “batch process” recovered fines for application to land for the purpose of construction or landscaping.

1. Waste to which this order applies

- 1.1. This order applies to “batch process” recovered fines. In this order, “batch process” recovered fines means a soil or sand substitute with a typical maximum particle size of 9.5 mm that is derived from the batch processing of mixed construction and demolition waste including residues from the processing of skip bin waste.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies “batch process” recovered fines that have been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of “batch process” recovered fines 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

The EPA imposes the following requirements on any processor who supplies “batch process” recovered fines.

Sampling requirements

- 4.1. On or before supplying “batch process” recovered fines, the processor must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the “batch process” recovered fines.
 - 4.1.2. Undertake sampling and testing of the “batch process” recovered fines as required under clause 4.2 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. The processor must undertake one-off sampling by collecting 10 composite samples from every 400 tonnes (or part thereof) of the waste processed and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1.
- 4.3. The processor must ensure that the test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 1 and the absolute maximum concentration or other value listed in Column 3 of Table 1 prior to the supply of the “batch process” recovered fines.

Chemical and other material requirements

- 4.4. The processor must not supply “batch process” recovered fines to any person if, in relation to any of the chemical and other attributes of the “batch process” recovered fines:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the one-off sampling of the “batch process” recovered fines exceeds the absolute maximum concentration or other value listed in Column 3 of Table 1, or
 - 4.4.2. The average concentration or other value of that attribute from the one-off sampling of the “batch process” recovered fines (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1.
- 4.5. The absolute maximum concentration or other value of that attribute in any “batch process” recovered fines supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 3 of Table 1.

Table 1

Column 1	Column 2	Column 3
Chemicals and other attributes	Maximum average concentration for one-off characterisation (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration for one-off characterisation (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	1.5
2. Cadmium	0.5	1.5
3. Lead	100	250
4. Arsenic	20	40
5. Chromium (total)	60	150
6. Copper	70	200
7. Nickel	40	80
8. Zinc	250	600
9. Total Organic Carbon	5%	10%
10. Electrical Conductivity	2.5 dS/m	3.5 dS/m
11. pH *	7.5 - 9	7.0 - 10
12. Total Polycyclic Aromatic Hydrocarbons (PAHs)	20	80
13. Benzo(a)pyrene	1	6
14. Total Petroleum Hydrocarbons (TPHs) C ₆ - C ₉	80	150
15. Total Petroleum Hydrocarbons (TPHs) C ₁₀ - C ₃₆	800	1600
16. Individual Chlorinated Hydrocarbons	Not applicable	1
17. Individual Organochlorine Pesticides	Not applicable	1
18. Individual Polychlorinated Biphenyls (PCBs)	Not applicable	1
19. Glass, metal and rigid plastics	0.1%	0.3%
20. Plastics - light flexible film	0.05%	0.1%
21. Proportion (by weight) retained on a 0.425 mm sieve	80%	90%
22. Proportion (by weight) retained on a 9.5 mm sieve	Not applicable	5%
23. Proportion (by weight) retained on a 26.5 mm sieve	Not applicable	0%

*Note: The ranges given for pH are for the minimum and maximum acceptable pH values in the "batch process" recovered fines.

Test methods

- 4.6. 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.
- 4.7. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the “batch process” recovered fines it supplies 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.
 - 4.7.1. Test methods for measuring the mercury concentration:
 - 4.7.1.1. USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated absolute maximum average concentration in Table 1, Column 3 (i.e. < 0.3 mg/kg dry weight).
 - 4.7.1.2. Report as mg/kg dry weight.
 - 4.7.2. Test methods for measuring chemicals 2 - 8:
 - 4.7.2.1. Sample preparation by digestion using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils (or an equivalent analytical method).
 - 4.7.2.2. 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 stated absolute maximum concentration in Table 1, Column 3 (i.e. 25 mg/kg dry weight for lead).
 - 4.7.2.3. Report as mg/kg dry weight.
 - 4.7.3. Test methods for measuring the total organic carbon:
 - 4.7.3.1. Method 105 (Organic Carbon) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.3.2. Reporting as % total organic carbon.
 - 4.7.4. Test methods for measuring the electrical conductivity and pH:
 - 4.7.4.1. Sample preparation by mixing 1 part recovered fines with 5 parts distilled water.
 - 4.7.4.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.4.3. Report electrical conductivity in deciSiemens per metre (dS/m).
 - 4.7.5. Test method for measuring PAHs and benzo(a)pyrene:
 - 4.7.5.1. Analysis using USEPA SW-846 Method 8100 Polynuclear aromatic hydrocarbons (or an equivalent analytical method).
 - 4.7.5.2. Calculate the sum of all 16 PAHs for total PAHs.

- 4.7.5.3. Report total PAHs as mg/kg dry weight.
- 4.7.5.4. Report benzo(a)pyrene as mg/kg.
- 4.7.6. Test method for measuring TPHs in "batch process" recovered fines:
 - 4.7.6.1. Method 506 (Petroleum Hydrocarbons) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.6.2. Report C6 – C9 as mg/kg.
 - 4.7.6.3. Report C10 – C 36 as mg/kg.
- 4.7.7. Test methods for measuring chlorinated hydrocarbons:
 - 4.7.7.1. Analysis using USEPA SW-846 Method 8021B Aromatic and halogenated volatiles by gas chromatography using photoionization and/or electrolytic conductivity detectors (or an equivalent analytical method).
 - 4.7.7.2. Measure the following chlorinated hydrocarbons: carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethene, dichloromethane (methylene chloride), 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride and hexachlorobutadiene concentrations.
 - 4.7.7.3. Report individual listed chlorinated hydrocarbons as mg/kg.
- 4.7.8. Test methods for measuring organochlorine pesticides:
 - 4.7.8.1. Analysis using USEPA SW-846 Method 8081B Organochlorine pesticides by gas chromatography (or an equivalent analytical method).
 - 4.7.8.2. Measure the following organochlorine pesticides: aldrin, alpha BHC, beta BHC, gamma BHC (lindane), delta BHC, chlordane, DDT, DDD, DDE, dieldrin, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexachlorobenzene, methoxychlor and endosulfan (includes endosulfan I, endosulfan II and endosulfan sulphate).
 - 4.7.8.3. Report individual listed organochlorine pesticides as mg/kg.
- 4.7.9. Test methods for measuring the PCBs:
 - 4.7.9.1. USEPA SW-846 Method 8082A Polychlorinated Biphenyls (PCBs) by gas chromatography (or an equivalent analytical method).
 - 4.7.9.2. Measure the following PCBs: Aroclor 1016 (CAS Registry No. 12674-11-2), Aroclor 1221 (CAS Registry No. 11104-28-2), Aroclor 1232 (CAS Registry No. 11141-16-5), Aroclor 1242 (CAS Registry No. 53469-21-9), Aroclor 1248 (CAS Registry No. 12672-29-6), Aroclor 1254 (CAS Registry No. 11097-69-1), Aroclor 1260 (CAS Registry No. 11096-82-5).
 - 4.7.9.3. Report individual listed PCBs as mg/kg.

- 4.7.10. Test method for measuring 19 - 20:
- 4.7.10.1. NSW Roads & Traffic Authority Test Method T276 Foreign Materials Content of Recycled Crushed Concrete (or an equivalent method), using a 2.36 mm sieve.
 - 4.7.10.2. Report as %.
- 4.7.11. Test method for measuring 21 -23:
- 4.7.11.1. NSW Roads & Traffic Authority Test Method T106 Coarse particle distribution in road construction materials (by dry sieving) and T107 Fine particle distribution in road construction materials (or an equivalent method).
 - 4.7.11.2. Report as %.

Notification

- 4.8. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the “batch process” recovered fines:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the “batch process” recovered fines exemption, or a link to the EPA website where the “batch process” recovered fines exemption can be found; and
 - a copy of the “batch process” recovered fines order, or a link to the EPA website where the “batch process” recovered fines order can be found.

Record keeping and reporting

- 4.9. 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 4.1.1;
 - all one-off test results in relation to the “batch process” recovered fines supplied;
 - the quantity of the “batch process” recovered fines supplied; and
 - either the name and address of each person to whom the processor supplied the “batch process” recovered fines or the registration details of the vehicle used to transport the “batch process” recovered fines.
- 4.10. The processor must provide, on request, the most recent one-off sampling results for “batch process” recovered fines supplied to any consumer of the “batch process” recovered fines.
- 4.11. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Definitions

In this order:

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.

composite sample means a sample that combines 5 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, “batch process” recovered fines to land.

processor means a person who processes, mixes, blends, or otherwise incorporates “batch process” recovered fines into a material in its final form for supply to a consumer.

transaction means:

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

**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 of the processor and 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 "batch process" recovered fines 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 engineering 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 "batch process" recovered fines 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.

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



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

The blast furnace slag 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 blast furnace slag or blended blast furnace slag from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and 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 blast furnace slag order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to blast furnace slag and blast furnace slag blended with other materials (blended blast furnace slag) that is, or is intended to be, applied to land as an engineering material.
- 1.2. Blast furnace slag means waste formed when iron ore, a mixture of oxides of iron, silica and alumina, a fuel consisting of coke, natural gas, oxygen and pulverised coal and limestone are fed into a blast furnace during the manufacture of iron for steel production.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies or intends to apply blast furnace slag or blended blast furnace slag 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.

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 blast furnace slag or blended blast furnace slag is carried out.

5. Revocation

- 5.1. *The blast furnace slag exemption 2013* which commenced on 1 July 2013 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 blast furnace slag and blended blast furnace slag to land as an engineering material 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 blast furnace slag or blended blast furnace slag is 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:

- 7.1. At the time the blast furnace slag or blended blast furnace slag is received at the premises, the material must meet all chemical and other material requirements for blast furnace slag or blended blast furnace slag which are required on or before the supply of blast furnace slag or blended blast furnace slag under 'the blast furnace slag order 2014'.
- 7.2. The blast furnace slag or blended blast furnace slag can only be applied to land:
- 7.2.1. in cementitious mixes such as concrete; and
 - 7.2.2. in a non-cementitious mix such as an engineered fill in earthworks or for roadmaking activities as follows:
 - (a) asphalt aggregate,
 - (b) engineered pavements (base and sub-base course),
 - (c) engineered fill,
 - (d) filter aggregate.

- 7.3. In cementitious mixes, the consumer can only apply blended blast furnace slag to land where it complies with a relevant specification or Australian Standard or supply agreement.
- 7.4. In non-cementitious mixes the consumer can only apply blast furnace slag or blended blast furnace slag to land where it:
- 7.4.1. complies with the relevant specification or Australian Standard or complies with supply agreement/s, or
 - 7.4.2. complies with a development consent that specifically considers the use of blast furnace slag, and
 - 7.4.3. is not applied in or beneath water, including groundwater.
- 7.5. The consumer must keep a written record of the following for a period of six years:
- the quantity of any blast furnace slag or blended blast furnace slag received; and
 - the name and address of the supplier of the blast furnace slag and blended blast furnace slag received.
- 7.6. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.7. The consumer must apply blast furnace slag or blended blast furnace slag to land within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

application 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.

cementitious mixes means either blast furnace slag or blended blast furnace slag which has been mixed with general purpose cement, lime and other activators for use in bound applications, where the materials must be chemically bound together.

consumer means a person who applies, or intends to apply, blast furnace slag or blended blast furnace slag to land.

non-cementitious mixes means either blast furnace slag or blended blast furnace slag that is not mixed with general purpose cement, lime and other activators or used in bound applications.

**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 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 blast furnace slag is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of blast furnace slag 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 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.



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

The blast furnace slag order 2014

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 blast furnace slag and blended blast furnace slag to which 'the blast furnace slag exemption 2014' applies. The requirements in this order apply in relation to the supply of blast furnace slag and blended blast furnace slag for application to land in line with the uses described in 'the blast furnace slag exemption 2014'.

1. Waste to which this order applies

- 1.1. This order applies to blast furnace slag and blast furnace slag blended with other materials (blended blast furnace slag). In this order, blast furnace slag means waste formed when iron ore, a mixture of oxides of iron, silica and alumina, a fuel consisting of coke, natural gas, oxygen and pulverised coal and limestone are fed into a blast furnace during the manufacture of iron for steel production.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies blast furnace slag or blended blast furnace slag that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of blast furnace slag or blended blast furnace slag 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies blast furnace slag.

Sampling requirements

- 4.1. On or before supplying blast furnace slag, the generator must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the blast furnace slag.
 - 4.1.2. Undertake sampling and testing of the blast furnace slag as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the blast furnace slag is generated as part of a continuous process, the generator must undertake the following sampling:
 - 4.2.1. Characterisation of the blast furnace slag by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for blast furnace slag generated and processed during each 2-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the blast furnace slag by collecting either 5 composite samples from every 10,000 tonnes (or part thereof) processed or 5 composite samples every 6 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the blast furnace slag is not generated as part of a continuous process, the generator must undertake one-off sampling of a batch, truckload or stockpile of the blast furnace slag, by collecting and testing 10 composite samples from every 4,000 tonnes (or part thereof) generated and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1.

Chemical and other material requirements

- 4.4. The generator must not supply blast furnace slag to any person if, in relation to any of the chemical and other attributes of the blast furnace slag:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine or one-off sampling of the blast furnace slag exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or
 - 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the blast furnace slag (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or

- 4.4.3. The average concentration or other value of that attribute from the routine sampling of the blast furnace slag (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.
- 4.5. The absolute maximum concentration or other value of that attribute in any blast furnace slag supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation testing (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not Required	1
2. Cadmium	0.5	0.5	1
3. Lead	10	10	20
4. Arsenic	5	Not Required	10
5. Beryllium	10	Not Required	20
6. Boron ¹	NA	NA	NA
7. Chromium (total)	50	Not Required	100
8. Copper	10	Not Required	20
9. Molybdenum	5	5	10
10. Nickel	10	Not Required	20
11. Selenium	2	Not Required	5
12. Zinc	25	25	50
13. Electrical Conductivity	NA	NA	NA
14. pH ²	7.5 to 12.5	Not Required	7 to 13

¹While limits are not included for boron and electrical conductivity these must be tested in each sample and a record kept of the results.

²The ranges given for pH are for the minimum and maximum acceptable pH values in the blast furnace slag.

Test methods

- 4.6. The generator 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.
- 4.7. The generator must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the blast furnace slag it supplies 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.

- 4.7.1. Test method for measuring the mercury concentration:
- 4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated maximum average concentration in Table 1, Column 2 (i.e. < 0.1 mg/kg dry weight).
 - 4.7.1.2. Report as mg/kg dry weight.
- 4.7.2. Test methods for measuring chemicals 2 - 12:
- 4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 4.7.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10% of stated maximum average concentration in Table 1, Column 2 (i.e. 1 mg/kg dry weight for lead).
 - 4.7.2.3. Report as mg/kg dry weight.
- 4.7.3. Test methods for measuring the electrical conductivity and pH:
- 4.7.3.1. Sample preparation by mixing 1 part blast furnace slag with 5 parts distilled water.
 - 4.7.3.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.3.3. Report electrical conductivity in deciSiemens per metre (dS/m).

Notification

- 4.8. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the blast furnace slag:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the blast furnace slag exemption, or a link to the EPA website where the blast furnace slag exemption can be found; and
 - a copy of the blast furnace slag order, or a link to the EPA website where the blast furnace slag order can be found.

Record keeping and reporting

- 4.9. The generator must keep a written record of the following for a period of six years:
- the sampling plan required to be prepared under clause 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the blast furnace slag supplied;
 - the quantity of any blast furnace slag supplied; and
 - the name and address of each person to whom the generator supplied blast furnace slag.

- 4.10. The generator must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for blast furnace slag supplied to any processor or consumer.
- 4.11. The generator must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clauses 4.1 to 4.7.

5. Processor requirements

The EPA imposes the following requirements on any processor who supplies blended blast furnace slag.

- 5.1. The processor may only blend blast furnace slag with materials that are the subject of a Resource Recovery Exemption and Resource Recovery Order if that material complies with all of the chemical and other material requirements under its Resource Recovery Order, and is able to be applied to land under its Resource Recovery Exemption for the same purpose(s) described in clause 5.1.1 and 5.1.2.
 - 5.1.1. in cementitious mixes such as concrete; and
 - 5.1.2. in non-cementitious mixes such as an engineered fill in earthworks or for roadmaking activities as follows:
 - 5.1.2.1. asphalt aggregate,
 - 5.1.2.2. engineered pavements (base and sub-base course),
 - 5.1.2.3. engineered fill,
 - 5.1.2.4. filter aggregate.

Notification

- 5.2. On or before each transaction, a processor must provide the following to each person to whom the processor supplies the blended blast furnace slag:
 - a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the blast furnace slag exemption, or a link to the EPA website where the blast furnace slag exemption can be found; and
 - a copy of the blast furnace slag order, or a link to the EPA website where the blast furnace slag order can be found.

Record keeping and reporting

- 5.3. The processor must keep a written record of the following for a period of six years:
 - the quantity of blast furnace slag received from the generator and the generators name and address. This does not have to be met by non-processing suppliers.
 - the quantity of the blended blast furnace slag supplied; and
 - the name and address of each person to whom the processor supplied the blended blast furnace slag.
- 5.4. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for blast furnace slag supplied to any consumer of the blast furnace slag.

6. Definitions

In this order:

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.

cementitious mixes means either blast furnace slag or blended blast furnace slag which has been mixed with general purpose cement, lime and other activators for use in bound applications, where the materials must be chemically bound together.

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 who intends to supply, blast furnace slag or blended blast furnace slag to land.

continuous process means a process that produces blast furnace slag on an ongoing basis.

generator means a person who generates blast furnace slag for supply to a processor or consumer.

non-cementitious mixes means either blast furnace slag or blended blast furnace slag that is not mixed with general purpose cement, lime and other activators or used in bound applications.

non-processing supplier means a person who supplies, causes, or permits the supply of cementitious mixes to a consumer and who does not undertake any processing of blast furnace slag.

processor means a person who processes, mixes, blends, or otherwise incorporates blast furnace slag into blended blast furnace slag for supply to a consumer.

transaction means:

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

**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 of the generator and processor and 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 blast furnace slag 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 engineering 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 blast furnace slag 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The biosolids 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 biosolids from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and 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 biosolids order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to biosolids that are, or are intended to be, applied to land as a soil amendment.
- 1.2. Biosolids means the organic product that results from sewage treatment processes (sometimes referred to as sewage sludge).

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, biosolids 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.

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 biosolids is carried out.

5. Revocation

- 5.1. 'The biosolids exemption 2008' which commenced on 20 June 2008, 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 biosolids 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 biosolids 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:

- 7.1. At the time the biosolids are received at the premises, the material must meet all chemical and other material requirements for biosolids which are required on or before the supply of biosolids under 'the biosolids order 2014'.
- 7.2. The biosolids can only be applied to land as a soil amendment in compliance with the Biosolids Guidelines.
- 7.3. The consumer must keep a written record of the following for a period of six years:
- the quantity of any biosolids received; and
 - the name and address of the supplier of the biosolids received.
- 7.4. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.

8. Definitions

In this exemption:

application 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.

Biosolids Guidelines means the document entitled *Environmental Guidelines: Use and Disposal of Biosolids Products*, published by the EPA and as in force from time to time.

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

**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 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 biosolids is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of biosolids 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 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.



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

The biosolids order 2014

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 biosolids to which the 'biosolids exemption 2014' applies. The requirements in this order apply in relation to the supply of biosolids for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to biosolids. In this order, biosolids means the organic product that results from sewage treatment processes (sometimes referred to as sewage sludge).

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies biosolids that have been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of biosolids 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies biosolids.

- 4.1. The generator must ensure that the biosolids meet the requirements of the Biosolids Guidelines.

Notification

- 4.2. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the biosolids:

- a written statement of compliance certifying that all the requirements set out in this order have been met;
- a copy of the biosolids exemption, or a link to the EPA website where the biosolids exemption can be found; and
- a copy of the biosolids order, or a link to the EPA website where the biosolids order can be found.

Record keeping and reporting

- 4.3. The generator must keep a written record of the following for a period of six years:
- all test results in relation to biosolids supplied;
 - the quantity of biosolids supplied; and
 - the name and address of each person to whom the generator supplied biosolids.
- 4.4. The generator must provide, on request, the most recent test results for biosolids supplied to any consumer of the biosolids.
- 4.5. The generator must notify the EPA within seven days of becoming aware that it has not complied with the requirement in clause 4.1.

5. Definitions

In this order:

application 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.

Biosolids Guidelines means the document entitled *Environmental Guidelines: Use and Disposal of Biosolids Products*, published by the EPA and as in force from time to time.

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

generator means a person who generates biosolids.

transaction means:

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

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 of the generator, processor and supplier to ensure they comply 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 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 biosolids 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 engineering 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 biosolids 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The bulk agricultural crop 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 bulk agricultural crop waste 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 bulk agricultural crop waste order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to bulk agricultural crop waste that is, or is intended to be, applied to land as a soil amendment.
- 1.2. Bulk agricultural crop waste means the non-putrescible organic residues left behind following crop harvest. These residues may include fibres, roots, stalks, stubble, leaves, and seed pods.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, bulk agricultural crop waste 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.

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 bulk agricultural crop waste is carried out.

5. Revocation

- 5.1. 'The bulk agricultural crop waste exemption 2014' which commenced on 8 August 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 bulk agricultural crop waste to land 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 bulk agricultural crop waste is 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:

- 7.1. The bulk agricultural crop waste can only be applied to land as a soil amendment.
- 7.2. The consumer must ensure that any application of bulk agricultural crop waste to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means a person who applies, or intends to apply, bulk agricultural crop waste to land.

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 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 bulk agricultural crop waste is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of bulk agricultural crop waste 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 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.



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

The bulk agricultural crop waste order 2014

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 bulk agricultural crop waste to which 'the bulk agricultural crop waste exemption 2014' applies. The requirements in this order apply in relation to the supply of bulk agricultural crop waste for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to bulk agricultural crop waste. In this order, bulk agricultural crop waste means the non-putrescible organic residues left behind following crop harvest. These residues may include fibres, roots, stalks, stubble, leaves, and seed pods.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies bulk agricultural crop waste that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of bulk agricultural crop waste 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Definitions

In this order:

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.

consumer means a person who applies, or intends to apply, bulk agricultural crop waste to land.

**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 of the generator and 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 bulk agricultural crop waste 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 engineering 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 bulk agricultural crop waste 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.

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



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

The cement fibre board 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 cement fibre board waste 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 cement fibre board waste order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to cement fibre board waste that is, or is intended to be, applied to land when incorporated within road making material or used as an alternative input into thermal processes for non-energy recovery purposes in the manufacture of building products.
- 1.2. Cement fibre board waste is a material comprising of sand, cement and cellulose that is derived from the manufacturing of cement fibre board.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to, any person who applies, or intends to apply, cement fibre board waste to land and, any person who uses, or intends to use, cement fibre board waste in connection with a process involving thermal treatment 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.

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 cement fibre board waste is carried out.

5. Revocation

- 5.1. 'The cement fibre board exemption 2008' which commenced on 20 June 2008 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 cement fibre board waste to land when incorporated within road making material, or used as an alternative input into thermal processes for non-energy recovery purposes in the manufacture of building products at the premises:

- section 48 of the POEO Act in respect of the scheduled activities described in clauses 39, 40 and 42 of Schedule 1 of the POEO Act;
- Part 4 of the Waste Regulation;
- section 88 of the POEO Act; and
- clause 109, 110 and 114 of the Waste Regulation.

- 6.2. The exemption does not apply in circumstances where cement fibre board waste is 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:

- 7.1. At the time the cement fibre board waste is received at the premises, the material must meet all chemical and other material requirements for cement fibre board waste which are required on or before the supply of cement fibre board waste under 'the cement fibre board waste order 2014'.
- 7.2. The cement fibre board waste can only be:
- 7.2.1. applied to land when incorporated within road making material; or
 - 7.2.2. used as an alternative input into thermal processes for non-energy recovery purposes in the manufacture of building products.
- 7.3. The consumer must keep a written record of the following for a period of six years:
- the quantity of any cement fibre board waste received; and
 - the name and address of the supplier of the cement fibre board waste received.
- 7.4. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.5. The consumer must ensure that any application of cement fibre board waste to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means:

- a person who applies, or intends to apply, cement fibre board waste to land; and
- a person who uses, or intends to use, cement fibre board waste in connection with a process involving thermal treatment.

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

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 cement fibre board waste is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 cement fibre board waste 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.



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

The cement fibre board waste order 2014

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 cement fibre board waste to which 'the cement fibre board waste exemption 2014' applies. The requirements in this order apply in relation to the supply of cement fibre board waste for application to land as a road making material, or for use in connection with a process of thermal treatment as an alternative input into the manufacture of building products.

1. Waste to which this order applies

- 1.1. This order applies to cement fibre board waste. In this order, cement fibre board waste means a material comprising of sand, cement and cellulose derived from the manufacture of cement fibre board.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies cement fibre board waste that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of cement fibre board waste to a consumer for land application purposes or for use in connection with a process of thermal treatment 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

The EPA imposes the following requirements on any processor who supplies cement fibre board waste.

Sampling requirements

- 4.1. On or before supplying cement fibre board waste, the processor must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the cement fibre board waste.
 - 4.1.2. Undertake sampling and testing of the cement fibre board waste as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the cement fibre board waste is generated as part of a continuous process, the processor must undertake the following sampling:
 - 4.2.1. Characterisation of the cement fibre board waste by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for cement fibre board waste generated and processed during each 2-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the cement fibre board waste by collecting either 5 composite samples from every 10,000 tonnes (or part thereof) processed or 5 composite samples every 3 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1, other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the cement fibre board waste is not generated as part of a continuous process, the processor must undertake one-off sampling of a batch, truckload or stockpile of the cement fibre board waste, by collecting 10 composite samples from every 4,000 tonnes (or part thereof) processed and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. The test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 1 and the absolute maximum concentration or other value listed in Column 4 of Table 1 prior to the supply of the cement fibre board waste.

Chemical and other material requirements

- 4.4. The processor must not supply cement fibre board waste to any person if, in relation to any of the chemical and other attributes of the cement fibre board waste:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine or one-off sampling of the cement fibre board waste exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or

- 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the cement fibre board waste (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
- 4.4.3. The average concentration or other value of that attribute from the routine sampling of the cement fibre board waste (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.
- 4.5. The absolute maximum concentration or other value of that attribute in any cement fibre board waste supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not required	1
2. Cadmium	0.5	0.5	1
3. Lead	10	Not required	20
4. Arsenic	10	10	20
5. Chromium (total)	50	50	100
6. Copper	20	20	40
7. Molybdenum	5	Not required	10
8. Nickel	30	30	60
9. Selenium	5	Not required	10
10. Zinc	100	100	200
11. Total Chlorine	0.05%	Not required	0.1%
12. Total Fluorine	200	Not required	400
13. Moisture content	10%	Not required	20%
14. Total Organic Carbon	5%	Not required	10%
15. Electrical Conductivity	1 dS/cm	1 dS/cm	2 dS/cm
16. pH *	8 to 11	Not required	7 to 12

*Note: The ranges given for pH are for the minimum and maximum acceptable pH values in the cement fibre board waste.

Test methods

- 4.6. 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.
- 4.7. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the cement fibre board waste it supplies 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.

- 4.7.1. Test method for measuring the mercury concentration:
 - 4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated maximum average concentration in Table 1, Column 2 (i.e. < 0.1 mg/kg dry weight).
 - 4.7.1.2. Report as mg/kg dry weight.
- 4.7.2. Test methods for measuring chemicals 2 - 10:
 - 4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 4.7.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10% of stated maximum concentration in Table 1, Column 2 (i.e. 1 mg/kg dry weight for lead).
 - 4.7.2.3. Report as mg/kg dry weight.
- 4.7.3. Test methods for measuring the attributes 11 - 13:
 - 4.7.3.1. Australian Standard 1038 Coal and coke (or an equivalent analytical method).
 - 4.7.3.2. Report total chlorine as %.
 - 4.7.3.3. Report total fluorine as mg/kg dry weight fluorine.
 - 4.7.3.4. Report moisture content as %.
- 4.7.4. Test methods for measuring the total organic carbon content:
 - 4.7.4.1. Method 105 (Organic Carbon) and using a 2g sample in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.4.2. Reporting as % total organic carbon.
- 4.7.5. Test methods for measuring the electrical conductivity and pH:
 - 4.7.5.1. Sample preparation by mixing 1 part cement fibre board waste with 5 parts distilled water.
 - 4.7.5.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.5.3. Report electrical conductivity in deciSiemens per metre (dS/m).

Notification

- 4.8. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the cement fibre board waste:
 - a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the cement fibre board waste exemption, or a link to the EPA

- website where the cement fibre board waste exemption can be found; and
- a copy of the cement fibre board waste order, or a link to the EPA website where the cement fibre board waste order can be found.

Record keeping and reporting

- 4.9. 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 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the cement fibre board waste supplied;
 - the quantity of the cement fibre board waste supplied; and
 - the name and address of each person to whom the processor supplied the cement fibre board waste.
- 4.10. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for cement fibre board waste supplied to any consumer of the cement fibre board waste.
- 4.11. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Definitions

In this order:

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.

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, cement fibre board waste to land; and
- a person who uses, or intends to use, cement fibre board waste in connection with a process involving thermal treatment.

continuous process means a process that produces cement fibre board waste on an ongoing basis.

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

transaction means:

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

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 of the generator and 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 cement fibre board waste 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 engineering 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 cement fibre board waste 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The coal ash 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 coal ash or blended coal ash from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and 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 coal ash order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to coal ash and coal ash blended with other materials (blended coal ash) that is, or is intended to be, applied to land as an engineering material.
- 1.2. Coal ash means coal combustion products (CCPs), fly ash or furnace bottom ash from burning Australian black coal. This does not include brine conditioned or treated ash.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, coal ash or blended coal ash 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.

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 coal ash or blended coal ash is carried out.

5. Revocation

- 5.1. *The coal ash exemption 2013* which commenced on 18 April 2013 and the *fly ash and bottom ash from burning NSW or Queensland coal exemption 2006* which commenced on 1 December 2006 are 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 coal ash or blended coal ash to land as an engineering material 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, 110 and 114 of the Waste Regulation
- 6.2. The exemption does not apply in circumstances where coal ash or blended coal ash is 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:

- 7.1. At the time the coal ash or blended coal ash is received at the premises, the material must meet all chemical and other material requirements for coal ash or blended coal ash which are required on or before the supply of coal ash or blended coal ash under 'the coal ash order 2014'.
- 7.2. Coal ash and blended coal ash can only be applied to land:
- 7.2.1. as a soil amendment for the growing of vegetation,
 - 7.2.2. in cementitious mixes such as concrete, and
 - 7.2.3. in non-cementitious mixes such as an engineered fill, stabiliser, filter or drainage material or as a sand substitute as follows:
 - (a) pipe bedding material,
 - (b) selected backfill adjacent to structures,
 - (c) road pavement, base and sub-base structures,
 - (d) composite filler in asphalt pavements,
 - (e) rigid and composite pavement structures,
 - (f) select layers which act as working platforms at the top of earthworks,
 - (g) fill for reinforced soil structures (including geo-grid applications).
- 7.3. In cementitious mixes, the consumer can only apply coal ash or blended coal ash to land where it complies with a relevant specification or Australian Standard or supply agreement.
- 7.4. In non-cementitious mixes the consumer can only apply coal ash or blended coal ash to land where it:

- 7.4.1. complies with the relevant specification or Australian Standard or complies with supply agreement/s, or
 - 7.4.2. complies with a development consent that specifically considers the use of coal ash, and
 - 7.4.3. is not applied in or beneath water including groundwater.
- 7.5. The consumer must keep a written record of the following for a period of six years:
- the quantity of any coal ash and blended coal ash received; and
 - the name and address of the supplier of the coal ash and blended coal ash received.
- 7.6. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.7. The consumer must apply coal ash to land within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

application 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.

cementitious mixes means either coal ash or blended coal ash which has been mixed with general purpose cement, lime and other activators for use in bound applications, where the materials must be chemically bound together.

consumer means a person who applies, or intends to apply, coal ash or blended coal ash to land.

non-cementitious mixes means either blended coal ash or coal ash that is not blended with general purpose cement, lime and other activators or used in bound applications.

non-cementitious mixes means either coal ash or blended coal ash that is not mixed with general purpose cement, lime and other activators or used in bound applications.

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 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 coal ash is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of **coal ash** 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 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.



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

The coal ash order 2014

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 coal ash and blended coal ash to which 'the coal ash exemption 2014' applies. The requirements in this order apply in relation to the supply of coal ash and blended coal ash for application to land in line with the uses described in 'the coal ash exemption 2014'.

1. Waste to which this order applies

- 1.1. This order applies to coal ash and coal ash blended with other materials (blended coal ash). In this order, coal ash means coal combustion products (CCPs), fly ash or furnace bottom ash from burning Australian black coal. This does not include brine conditioned or treated ash.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies coal ash or blended coal ash that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of coal ash or blended coal ash 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies coal ash.

Sampling requirements

- 4.1. On or before supplying coal ash, the generator must:

- 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the coal ash.
 - 4.1.2. Undertake sampling and testing of the coal ash as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where coal ash is generated for land application as a soil amendment for the growing of vegetation the generator must undertake the following sampling and analysis:
 - 4.2.1. Where <1000 tonnes of coal ash is generated per year, the coal ash must be sampled by taking 3 composite samples per year. Each sample must be tested for analytes 5 and 12 in Table 1 according to test method 4.8.4 and 4.8.3.
 - 4.2.2. Where >1000 tonnes of coal ash is generated per year, the coal ash must be sampled by taking 3 composite samples per year and an additional 1 composite sample for every 1000 tonnes or part thereof generated. Each sample must be tested for analytes 5 and 12 in Table 1 according to test method 4.8.4 and 4.8.3.
- 4.3. Where the coal ash is generated for use as an engineering material and is generated as part of a continuous process, the generator must undertake the following sampling:
 - 4.3.1. Characterisation of the coal ash by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for coal ash generated and processed during each 2-year period following the commencement of the continuous process; and
 - 4.3.2. Routine sampling of the coal ash by collecting either 5 composite samples from every 10,000 tonnes (or part thereof) processed or 5 composite samples every 3 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.3.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.3.2.
- 4.4. Where the coal ash is generated for use as an engineering material and is not generated as part of a continuous process, the generator must undertake one-off sampling of a batch, truckload or stockpile of the coal ash, by collecting and testing 10 composite samples from every 4,000 tonnes (or part thereof) generated and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1.

Chemical and other material requirements

- 4.5. The generator must not supply coal ash to any person if, in relation to any of the chemical and other attributes of the coal ash:

- 4.5.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine or one-off sampling of the coal ash exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or
- 4.5.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the coal ash (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
- 4.5.3. The average concentration or other value of that attribute from the routine sampling of the coal ash (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.
- 4.6. The absolute maximum concentration or other value of that attribute in any coal ash supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not required	1
2. Cadmium	0.5	0.5	1
3. Lead	25	25	50
4. Arsenic	10	Not required	20
5. Boron	75	Not required	150 for engineering uses 60 for soil amendment
6. Chromium (total)	25	25	50
7. Copper	20	Not required	40
8. Molybdenum	10	Not required	20
9. Nickel	25	25	50
10. Selenium	10	10	20
11. Zinc	35	35	70
12. Electrical Conductivity ¹	NA	NA	NA for engineering uses 4dS/m for soil amendment
13. pH* in non-cementitious mixes ²	7 to 12.5	7 to 12.5	6 to 13
14. pH in cementitious mixes	NA	NA	NA

¹Note: while thresholds are not provided for electrical conductivity this must be tested and a record kept of the results.

²Note: The ranges given for pH are for the minimum and maximum acceptable pH values in the coal ash.

Test methods

- 4.7. The generator 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.
- 4.8. The generator must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the coal ash it supplies 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.
 - 4.8.1. Test method for measuring the mercury concentration:
 - 4.8.1.1 Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated maximum average concentration in Table 1, Column 2 (i.e. < 0.1 mg/kg dry weight).
 - 4.8.1.2 Report as mg/kg dry weight.
 - 4.8.2. Test methods for measuring chemicals 2 - 11:
 - 4.8.2.1 Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 4.8.2.2 Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10% of stated maximum average concentration in Table 1, Column 2 (i.e. 2.5 mg/kg dry weight for lead).
 - 4.8.2.3 Report as mg/kg dry weight.
 - 4.8.3. Test methods for measuring the electrical conductivity and pH:
 - 4.8.3.1 Sample preparation by mixing 1 part coal ash with 5 parts distilled water.
 - 4.8.3.2 Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.8.3.3 Report electrical conductivity in deciSiemens per metre (dS/m).
 - 4.8.4. Test method for measuring boron in coal ash for land application as a soil amendment:
 - 4.8.4.1 Water soluble boron using a calcium chloride extractable method 12C1 or 12C2 in Rayment, G.E. and Lyons D.J. 2011 Soil Chemical Methods - Australasia, CSIRO Publishing (or an equivalent analytical method with a detection limit for water soluble boron <10% of the stated absolute maximum).
 - 4.8.4.2 Report as mg/kg dry weight.

Notification

- 4.9. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the coal ash:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the coal ash exemption, or a link to the EPA website where the coal ash exemption can be found; and
 - a copy of the coal ash order, or a link to the EPA website where the coal ash order can be found.

Record keeping and reporting

- 4.10. The generator must keep a written record of the following for a period of six years:
- the sampling plan required to be prepared under clause 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the coal ash supplied;
 - the quantity of the coal ash supplied; and
 - the name and address of each person to whom the generator supplied coal ash.
- 4.11. The generator must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for coal ash supplied to any processor or consumer of the coal ash.
- 4.12. The generator must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.8.

5. Processor requirements

The EPA imposes the following requirements on any processor who supplies blended coal ash.

- 5.1. The processor may blend the coal ash with materials that are the subject of a Resource Recovery Exemption and Resource Recovery Order if that material complies with all of the chemical and other material requirements under its Resource Recovery Order, and is able to be applied to land under its Resource Recovery Exemption for the following purpose(s) described in clauses 5.2.1 to 5.2.3.
- 5.1.1. as a soil amendment for the growing of vegetation;
 - 5.1.2. in cementitious mixes such as concrete; and
 - 5.1.3. in non-cementitious mixes such as an engineered fill in earthworks or for roadmaking activities as follows:
 - (a) pipe bedding material,
 - (b) selected backfill adjacent to structures,
 - (c) road pavement, base and sub-base structures,
 - (d) composite filler in asphalt pavements,
 - (e) rigid and composite pavement structures,
 - (f) select layers which act as working platforms at the top of earthworks,
 - (g) fill for reinforced soil structures (including geo-grid applications).

- 5.2. Where the pH of the coal ash received is below 6 and it is intended to be supplied for use in non-cementitious mixes, the processor must undertake the following before supplying the coal ash to a consumer for use as in 5.1.3:
- 5.2.1. blend the coal ash at a rate of 20% or less with lime, natural quarried rock, coal washery rejects, recovered railway ballast, crushed concrete, blast furnace slag, steel furnace slag and/or electric arc furnace slag; and
- 5.2.2. sample the mix by taking the same number of samples as required to be taken under clause 4.3 or 4.4 and testing the pH of those samples. The test results for each composite sample must be validated as compliant with the requirements listed in row 13 of Table 1.

Notification

- 5.3. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the blended coal ash:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the coal ash exemption, or a link to the EPA website where the coal ash exemption can be found; and
 - a copy of the coal ash order, or a link to the EPA website where the coal ash order can be found.

Record keeping and reporting

- 5.4. The processor must keep a written record of the following for a period of six years:
- the quantity of any coal ash received from the generator and the generator's name and address;
 - the quantity of any blended coal ash supplied; and
 - the name and address of each person to whom the processor supplied the blended coal ash.
- 5.5. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for coal ash that it received from the generator.

6. Definitions

In this order:

brine conditioned ash means coal ash that has been conditioned or treated with brine concentrator waste from process water treatment.

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.

blast furnace slag means material that meets the chemical and other material requirements for blast furnace slag which are required on or before supply of blast furnace slag under 'The blast furnace slag order 2014'

cementitious mixes means either coal ash or blended coal ash which has been mixed with general purpose cement, lime and other activators for use in bound applications, where the materials must be chemically bound together.

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, coal ash or blended coal ash to land.

continuous process means a process that produces coal ash on an ongoing basis.

crushed concrete means waste concrete that has been processed into an engineered material, and meets the conditions of a resource recovery exemption.

electric arc furnace slag means material that meets the chemical and other material requirements for electric arc furnace slag which are required on or before supply of electric arc furnace slag under 'The electric arc furnace slag order 2014'

non-cementitious mixes means either coal ash or blended coal ash that is not mixed with general purpose cement, lime and other activators or used in bound applications.

non-processing supplier means a person who supplies, causes, or permits the supply of cementitious mixes to a consumer and who does not undertake any processing of coal ash.

processor means a person who processes, mixes, blends, or otherwise incorporates coal ash into blended coal ash for supply to a consumer.

steel furnace slag means material that meets the chemical and other material requirements for steel furnace slag which are required on or before supply of steel furnace slag under 'The steel furnace slag order 2014'

transaction means:

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

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 of the generator and processor and 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 coal ash 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 engineering 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 coal ash 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The coal washery rejects 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 coal washery rejects 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 coal washery rejects order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to coal washery rejects that are, or are intended to be, applied to land in earthworks for civil engineering applications.
- 1.2. Coal washery rejects is the waste resulting from washing coal (including substances such as coal fines, soil, sand and rock resulting from that process).

2. Persons to whom this exemption applies

- 2.1. This exemption applies to the any person who applies, or intends to apply, coal washery rejects 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.

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 coal washery rejects is carried out.

5. Revocation

- 5.1. 'The coal washery rejects general exemption 2009' which commenced on 1 November 2009, 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 coal washery rejects to land in earthworks for civil engineering applications 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 coal washery rejects 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:

- 7.1. At the time the coal washery rejects are received at the premises, the material must meet all chemical and other material requirements for coal washery rejects which are required on or before the supply of coal washery rejects under 'the coal washery rejects order 2014'.
- 7.2. The coal washery rejects can only be applied to land in earthworks for civil engineering applications. Approval does not apply to any of the following applications:
- 7.2.1. Construction of dams or related water storage infrastructure,
 - 7.2.2. Mine site rehabilitation,
 - 7.2.3. Quarry rehabilitation,
 - 7.2.4. Sand dredge pond rehabilitation,
 - 7.2.5. Back-filling of quarry voids,
 - 7.2.6. Raising or reshaping of land used for agricultural purposes, and
 - 7.2.7. Construction of roads on private land unless:
 - (a) the coal washery rejects are applied to land to the minimum extent necessary for the construction of a road, and
 - (b) a development consent for the development has been granted under the relevant Environmental Planning Instrument (EPI), or
 - (c) it is to provide access (temporary or permanent) to a development approved by a Council, or
 - (d) the works undertaken are either exempt or complying development.
- 7.3. The consumer can only apply coal washery rejects to land where it is not applied in or beneath water, including groundwater.

- 7.4. The consumer must keep a written record of the following for a period of six years:
- the quantity of any coal washery rejects received; and
 - the name and address of the supplier of the coal washery rejects received.
- 7.5. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.6. The consumer must ensure that any application of coal washery rejects to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means a person who applies, or intends to apply, coal washery rejects to land.

**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 coal washery rejects is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 coal washery rejects 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.



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

The coal washery rejects order 2014

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 coal washery rejects to which 'the coal washery rejects exemption 2014' applies. The requirements in this order apply in relation to the supply of coal washery rejects for application to land in earthworks for civil engineering applications.

1. Waste to which this order applies

- 1.1 This order applies to coal washery rejects. In this order, coal washery rejects means the waste resulting from washing coal (including substances such as coal fines, soil, sand and rock resulting from that process).

2. Persons to whom this order applies

- 2.1 The requirements in this order apply, as relevant, to any person who supplies coal washery rejects that have been generated, processed or recovered by the person.
- 2.2 This order does not apply to the supply of coal washery rejects to a consumer for land application purposes 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies coal washery rejects.

Sampling requirements

- 4.1 On or before supplying coal washery rejects, the generator must:
 - 4.1.1 Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the coal washery rejects.
 - 4.1.2 Undertake sampling and testing of the coal washery rejects as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2 Where the coal washery rejects are generated as part of a continuous process, the processor must undertake the following sampling:
 - 4.2.1. Characterisation of the coal washery rejects by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for coal washery rejects generated and processed during each 2-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the coal washery rejects by collecting either 5 composite samples from every 10,000 tonnes (or part thereof) processed or 5 composite samples every 6 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the coal washery rejects are not generated as part of a continuous process, the generator must undertake one-off sampling of discrete batches, truckloads or stockpiles, by collecting 10 composite samples from every 4,000 tonnes (or part thereof) generated and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. The test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 1 and the absolute maximum concentration or other value listed in Column 4 of Table 1 prior to the supply of the coal washery rejects.

Chemical and other material requirements

- 4.4. The processor must not supply coal washery rejects to any person if, in relation to any of the chemical and other attributes of the coal washery rejects:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine or one-off sampling of the coal washery rejects exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or

- 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of coal washery rejects (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
- 4.4.3. The average concentration or other value of that attribute from the routine sampling of coal washery rejects (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.
- 4.5. The absolute maximum concentration or other value of that attribute in any coal washery rejects supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not required	1
2. Cadmium	0.5	Not required	1
3. Lead	50	50	100
4. Arsenic	10	Not required	20
5. Chromium (total)	75	75	150
6. Copper	50	50	100
7. Nickel	40	40	80
8. Selenium	2	Not required	5
9. Zinc	100	100	200
10. Electrical Conductivity	1 dS/m	1dS/m	2 dS/m
11. pH*	8 to 11	Not required	7 to 12
12. Combustible content	30%	30%	40%
13. Sulphur %	0.5%	0.5%	1%

*Note: The ranges given for pH are for the minimum and maximum acceptable pH values in the coal washery rejects.

Test methods

- 4.6. The generator 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.
- 4.7. The generator must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the coal washery rejects it supplies 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.
- 4.7.1. Test method for measuring the mercury concentration:

- 4.7.1.1. 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 stated absolute maximum concentration in Table 1, Column 4 (i.e. < 0.2 mg/kg dry weight).
- 4.7.1.2. Report as mg/kg dry weight.
- 4.7.2. Test methods for measuring chemicals 2 - 9:
 - 4.7.2.1. Sample preparation by digestion using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 4.7.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with an appropriate detection limit.
 - 4.7.2.3. Report as mg/kg dry weight.
- 4.7.3. Test methods for measuring the electrical conductivity and pH:
 - 4.7.3.1. Sample preparation by mixing 1 part coal washery rejects with 5 parts distilled water.
 - 4.7.3.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.3.3. Report electrical conductivity in deciSiemens per metre (dS/m).
- 4.7.4. Test methods for measuring the combustible content and sulphur content:
 - 4.7.4.1. Australian Standard 1038 Coal and coke (or an equivalent analytical method).
 - 4.7.4.2. Report combustible content and sulphur content as %.

Notification

- 4.8. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the coal washery rejects:
 - a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the coal washery rejects exemption, or a link to the EPA website where the coal washery rejects exemption can be found; and
 - a copy of the coal washery rejects order, or a link to the EPA website where the coal washery rejects order can be found.

Record keeping and reporting

- 4.9. The generator must keep a written record of the following for a period of six years:
 - the sampling plan required to be prepared under clause 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the coal washery rejects supplied;
 - the quantity of the coal washery rejects supplied; and

- the name and address of each person to whom the generator supplied the coal washery rejects.
- 4.10. The generator must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for coal wash rejects supplied to any consumer of the coal washery rejects.
- 4.11. The generator must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Definitions

In this order:

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.

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, coal washery rejects to land.

continuous process means a process that produces coal washery rejects on an ongoing basis.

generator means a person who generates coal washery rejects.

transaction means:

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

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 of the generator and 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 coal washery rejects 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 engineering 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 coal washery rejects 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The compost 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 compost 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 compost order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to compost that is, or is intended to be, applied to land as a soil amendment.
- 1.2. Compost is any combination of raw mulch, garden organics, food waste and paunch that has undergone composting.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, compost 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.

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 compost is carried out.

5. Revocation

- 5.1. 'The compost 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 compost 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 compost is 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:

- 7.1. At the time the compost is received at the premises, the material must meet all chemical and other material requirements for compost which are required on or before the supply of compost under 'the compost order 2014'.
- 7.2. The compost can only be applied to land as a soil amendment.
- 7.3. The consumer must ensure that they do not cause or permit the migration of leachate from the land application site.
- 7.4. The consumer must ensure that any application of compost 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.

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, and

- (c) produce a product that passes the threshold level for 3 tests, including at least one from Group A and one from Group B specified in Australian Standard AS 4454 – 2012 Composts, soil conditioners and mulches, “Appendix N – Table N3.2 – Biological Stability and Plant Growth Tests Compost Maturity”.

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 raw mulch and/or other plant material including leaves, plant trimmings, grass, flowers, fruit and plant propagules.

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 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.

raw mulch means plant material that by virtue of the nature and source of the material poses minimal risk of the presence of plant propagules, pathogens and other contaminants. Such materials may be shredded and/or screened to a preferred particle size grading for particular applications. Raw mulch only includes:

- (a) horticultural barks, leaf mulch and wood chip mulch produced from forestry and sawmill residues, and urban wood residues; and
- (b) branches, tree stumps and bark that are absent of leaves, flowers, fruit and plant propagules.

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 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 compost is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 compost 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.



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

The compost order 2014

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 2014' 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 raw 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

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

General conditions

- 4.1. The processor must undertake the process of composting for compost supplied under this order.
- 4.2. The processor must ensure that the compost does not contain asbestos, engineered wood products and preservative treated or coated wood residues.
- 4.3. 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.
- 4.4. The processor must ensure that the compost is ready for land application prior to transport to a consumer.
 - 4.5. On or before supplying compost, the processor must:
 - 4.5.1. prepare a written sampling plan which includes a description of sample preparation and storage procedures for the compost.
 - 4.5.2. ensure that the absolute maximum or other value of that attribute in the compost must 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 50 g
4. Escherichia Coli (E. Coli)	<100 MPN/g*
5. Faecal coliforms	<1000 MPN/g*

*MPN = most probable number

Test methods

- 4.6. 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.
- 4.7. The processor must ensure that the attributes (listed in Column 1 of Table 1) in the compost it supplies 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:
 - 4.7.1. Test method for measuring physical contaminants 1 and 2:
 - 4.7.1.1. 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.
 - 4.7.1.2. Results must be reported as % contamination on a dry mass basis.
 - 4.7.2. Test method for the detection of Salmonella:
 - 4.7.2.1. For analysis - 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.
 - 4.7.2.2. Report as absent or present.
 - 4.7.3. Test method for the detection of E. Coli:
 - 4.7.3.1. 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.

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

4.7.4. Test method for the detection of Faecal Coliforms:

4.7.4.1. 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.

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

Record keeping and reporting

4.8. 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 4.5.1; and
- all test results in relation to the compost supplied.

4.9. The processor must make information available to the consumer of the compost, on request by that party, on the latest test results for compost.

4.10. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. 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; or
- 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, and;

(c) produce a product that passes the threshold level for 3 tests, including at least one from Group A and one from Group B specified in Australian Standard AS 4454 – 2012 Composts, soil conditioners and mulches, “Appendix N – Table N3.2 – Biological Stability and Plant Growth Tests Compost Maturity”.

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 raw mulch and/or other plant material including leaves, plant trimmings, grass, flowers, fruit and plant propagules.

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.

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 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.

raw mulch means plant material that by virtue of the nature and source of the material poses minimal risk of the presence of plant propagules, pathogens and

other contaminants. Such materials may be shredded and/or screened to a preferred particle size grading for particular applications. Raw mulch only includes:

- (a) horticultural barks, leaf mulch and wood chip mulch produced from forestry and sawmill residues, and urban wood residues; and
- (b) branches, tree stumps and bark that are absent of leaves, flowers, fruit and plant propagules.

transaction means:

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

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



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

The “continuous process” recovered fines 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 “continuous process” recovered fines 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 “continuous process” recovered fines order 2014’.

1. Waste to which this exemption applies

- 1.1. This exemption applies to “continuous process” recovered fines that are, or are intended to be, applied to land for the purposes of construction or landscaping.
- 1.2. “Continuous process” recovered fines means a soil or sand substitute with a typical particle size of less than 9.5 mm that is derived from the continuous processing of mixed construction and demolition waste including residues from the processing of skip bin waste.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, “continuous process” recovered fines 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.

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 "continuous process" recovered fines is carried out.

5. Revocation

- 5.1. 'The "continuous process" recovered fines exemption 2010' which commenced 13 September 2010 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 "continuous process" recovered fines to land for the purposes of construction or landscaping at the premises:

- section 48 of the POEO Act in respect of the scheduled activities described in clauses 39 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 "continuous process" recovered fines 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:

- 7.1. At the time the "continuous process" recovered fines are received at the premises, the material must meet all chemical and other material requirements for "continuous process" recovered fines which are required on or before the supply of "continuous process" recovered fines under 'the "continuous process" recovered fines order 2014'.
- 7.2. The "continuous process" recovered fines can only be applied to land for the purposes of construction or landscaping. This exemption does not apply to any of the following applications:
- 7.2.1. Construction of dams or related water storage infrastructure,
 - 7.2.2. Mine site rehabilitation,
 - 7.2.3. Quarry rehabilitation,
 - 7.2.4. Sand dredge pond rehabilitation,
 - 7.2.5. Back-filling of quarry voids,
 - 7.2.6. Raising or reshaping of land used for agricultural purposes, and
 - 7.2.7. Construction of roads on private land unless:
 - (a) the "continuous process" recovered fines are applied to land to the minimum extent necessary for the construction of a road, and

- (b) a development consent for the development has been granted under the relevant Environmental Planning Instrument (EPI), or
 - (c) it is to provide access (temporary or permanent) to a development approved by a Council, or
 - (d) the works undertaken are either exempt or complying development.
- 7.3. The consumer can only apply “continuous process” recovered fines to land consistent with section 7.2 where it:
- 7.3.1. complies with a development consent; and
 - 7.3.2. is not applied in or beneath water, including groundwater.
- 7.4. The consumer must keep a written record of the following for a period of six years:
- the quantity of any “continuous process” recovered fines received; and
 - the name and address of the supplier of the “continuous process” recovered fines received.
- 7.5. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.6. The consumer must ensure that any application of “continuous process” recovered fines to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means a person who applies, or intends to apply, “continuous process” recovered fines to land.

**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 “continuous process” recovered fines is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 “continuous process” recovered fines 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.



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

The “continuous process” recovered fines order 2014

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 “continuous process” recovered fines to which ‘the “continuous process” recovered fines exemption 2014’ applies. The requirements of this order apply in relation to the supply of “continuous process” recovered fines for application to land for the purposes of construction or landscaping.

1. Waste to which this order applies

- 1.1. This order applies to “continuous process” recovered fines. In this order, “continuous process” recovered fines means a soil or sand substitute with a typical maximum particle size of 9.5 mm that is derived from the continuous processing of mixed construction and demolition waste including residues from the processing of skip bin waste.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies “continuous process” recovered fines that have been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of “continuous process” recovered fines 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

The EPA imposes the following requirements on any processor who supplies “continuous process” recovered fines.

Sampling requirements

- 4.1. On or before supplying “continuous process” recovered fines, the processor must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the “continuous process” recovered fines.
 - 4.1.2. Undertake sampling and testing of the “continuous process” recovered fines as required under clause 4.2 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the “continuous process” recovered fines are generated as part of a continuous process, the processor must undertake the following sampling:
 - 4.2.1. Characterisation of the “continuous process” recovered fines by collecting 1 composite sample of the waste per fortnight, and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation, and
 - 4.2.2. Routine sampling of the “continuous process” recovered fines by collecting 1 composite sample each week and testing each sample for the chemicals and attributes listed in Column 1 of Table 1 other than those listed as ‘No testing required’ in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.

Chemical and other material requirements

- 4.3. The processor must not supply “continuous process” recovered fines to any person if, in relation to any of the chemical and other attributes of the “continuous process” recovered fines:
 - 4.3.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine sampling exceeds the maximum absolute concentration or other value listed in Column 4 of Table 1; or
 - 4.3.2. The average concentration or other value of that attribute from the characterisation of the “continuous process” recovered fines exceeds the maximum average concentration or other value (based on the arithmetic mean) listed in Column 2 of Table 1; or
 - 4.3.3. The average concentration or other value of that attribute from the routine sampling of the “continuous process” recovered fines exceeds the maximum average concentration or other value (based on the arithmetic mean) listed in Column 3 of Table 1. The results from 5 composite samples collected and tested in a 5 week period must be used to calculate the routine average.

- 4.4. The absolute maximum concentration or other value of that attribute in any “continuous process” recovered fines supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg ‘dry weight’ unless otherwise specified)	Maximum average concentration for routine testing (mg/kg ‘dry weight’ unless otherwise specified)	Absolute maximum concentration (mg/kg ‘dry weight’ unless otherwise specified)
1. Mercury	0.5	No testing required	1.5
2. Cadmium	0.5	No testing required	1.5
3. Lead	100	100	250
4. Arsenic	20	No testing required	40
5. Chromium (total)	60	60	150
6. Copper	70	70	200
7. Nickel	40	No testing required	80
8. Zinc	250	250	600
9. Total Organic Carbon	5%	No testing required	10%
10. Electrical Conductivity	2.5 dS/m	2.5 dS/m	3.5 dS/m
11. pH *	7.5 - 9	7.5 - 9	7.0 - 10
12. Total Polycyclic Aromatic Hydrocarbons (PAHs)	20	No testing required	80
13. Benzo(a)pyrene	1	No testing required	6
14. Total Petroleum Hydrocarbons (TPHs) C ₆ - C ₉	80	No testing required	150
15. Total Petroleum Hydrocarbons (TPHs) C ₁₀ - C ₃₆	800	No testing required	1600
16. Individual Chlorinated Hydrocarbons	Not applicable	No testing required	1
17. Individual Organochlorine Pesticides	Not applicable	No testing required	1
18. Individual Polychlorinated Biphenyls (PCBs)	Not applicable	No testing required	1
19. Glass, metal and rigid plastics	0.1%	0.1%	0.3%
20. Plastics - light flexible film	0.05%	0.05%	0.1%

21. Proportion (by weight) retained on a 0.425 mm sieve	80%	No testing required	90%
22. Proportion (by weight) retained on a 9.5 mm sieve	Not applicable	No testing required	5%
23. Proportion (by weight) retained on a 26.5 mm sieve	Not applicable	No testing required	0%

*Note: The ranges given for pH are for the minimum and maximum acceptable pH values in the “continuous process” recovered fines.

Test methods

- 4.5. 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.
- 4.6. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the “continuous process” recovered fines it supplies 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.
- 4.6.1. Test methods for measuring the mercury concentration:
- 4.6.1.1. USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated absolute maximum concentration in Table 1, Column 4 (i.e. <0.3 mg/kg dry weight).
- 4.6.1.2. Report as mg/kg dry weight.
- 4.6.2. Test methods for measuring chemicals 2 - 8:
- 4.6.2.1. Sample preparation by digestion using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils (or an equivalent analytical method).
- 4.6.2.2. 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 stated absolute maximum concentration in Table 1, Column 4 (i.e. 25 mg/kg dry weight for lead).
- 4.6.2.3. Report as mg/kg dry weight.
- 4.6.3. Test methods for measuring the total organic carbon content:
- 4.6.3.1. Method 105 (Organic Carbon) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
- 4.6.3.2. Reporting as % total organic carbon.
- 4.6.4. Test methods for measuring the electrical conductivity and pH:
- 4.6.4.1. Sample preparation by mixing 1 part recovered fines with 5 parts distilled water.

- 4.6.4.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity). In Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
- 4.6.4.3. Report electrical conductivity in deciSiemens per metre (dS/m).
- 4.6.5. Test method for measuring PAHs and benzo(a)pyrene:
 - 4.6.5.1. Analysis using USEPA SW-846 Method 8100 Polynuclear aromatic hydrocarbons (or an equivalent analytical method).
 - 4.6.5.2. Calculate the sum of all 16 PAHs for total PAHs.
 - 4.6.5.3. Report total PAHs as mg/kg dry weight.
 - 4.6.5.4. Report benzo(a)pyrene as mg/kg.
- 4.6.6. Test method for measuring TPHs:
 - 4.6.6.1. Method 506 (Petroleum Hydrocarbons) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.6.6.2. Report C6 – C9 as mg/kg.
 - 4.6.6.3. Report C10 – C 36 as mg/kg.
- 4.6.7. Test methods for measuring chlorinated hydrocarbons:
 - 4.6.7.1. Analysis using USEPA SW-846 Method 8021B Aromatic and halogenated volatiles by gas chromatography using photoionization and/or electrolytic conductivity detectors (or an equivalent analytical method).
 - 4.6.7.2. Measure the following chlorinated hydrocarbons: carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethene, dichloromethane (methylene chloride), 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride and hexachlorobutadiene concentrations.
 - 4.6.7.3. Report individual listed chlorinated hydrocarbons as mg/kg.
- 4.6.8. Test methods for measuring organochlorine pesticides:
 - 4.6.8.1. Analysis using USEPA SW-846 Method 8081B Organochlorine pesticides by gas chromatography (or an equivalent analytical method).
 - 4.6.8.2. Measure the following organochlorine pesticides: aldrin, alpha BHC, beta BHC, gamma BHC (lindane), delta BHC, chlordane, DDT, DDD, DDE, dieldrin, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexachlorobenzene, methoxychlor and endosulfan (includes endosulfan I, endosulfan II and endosulfan sulphate).
 - 4.6.8.3. Report individual listed organochlorine pesticides as mg/kg.
- 4.6.9. Test methods for measuring the PCBs:
 - 4.6.9.1. USEPA SW-846 Method 8082A Polychlorinated Biphenyls (PCBs) by gas chromatography (or an equivalent analytical method).

- 4.6.9.2. Measure the following PCBs: Aroclor 1016 (CAS Registry No. 12674-11-2), Aroclor 1221 (CAS Registry No. 11104-28-2), Aroclor 1232 (CAS Registry No. 11141-16-5), Aroclor 1242 (CAS Registry No. 53469-21-9), Aroclor 1248 (CAS Registry No. 12672-29-6), Aroclor 1254 (CAS Registry No. 11097-69-1), Aroclor 1260 (CAS Registry No. 11096-82-5).
- 4.6.9.3. Report individual listed PCBs as mg/kg.
- 4.6.10. Test method for measuring 19 - 20:
- 4.6.10.1. NSW Roads & Traffic Authority Test Method T276 Foreign Materials Content of Recycled Crushed Concrete (or an equivalent method), using a 2.36 mm sieve.
- 4.6.10.2. Report as %.
- 4.6.11. Test method for measuring 21 -23:
- 4.6.11.1. NSW Roads & Traffic Authority Test Method T106 Coarse particle distribution in road construction materials (by dry sieving) and T107 Fine particle distribution in road construction materials (or an equivalent method).
- 4.6.11.2. Report as %.

Notification

- 4.7. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the "continuous process" recovered fines:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the "continuous process" recovered fines exemption, or a link to the EPA website where the "continuous process" recovered fines exemption can be found; and
 - a copy of the "continuous process" recovered fines order, or a link to the EPA website where the "continuous process" recovered fines order can be found.

Record keeping and reporting

- 4.8. 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 4.1.1;
 - a record of weekly sampling times and other operational information;
 - all characterisation and routine sampling results in relation to the "continuous process" recovered fines supplied;
 - the quantity of the "continuous process" recovered fines supplied; and
 - either the name and address of each person to whom the processor supplied the "continuous process" recovered fines or the registration details of the vehicle used to transport the "continuous process" recovered fines.
- 4.9. The processor must provide, on request, the most recent characterisation and sampling (including routine) results for "continuous process" recovered fines supplied to any consumer of the "continuous process" recovered fines.
- 4.10. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.6.

5. Definitions

In this order:

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.

composite sample means a sample that combines 5 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, "continuous process" recovered fines to land.

continuous process means a process that produces "continuous process" recovered fines on an ongoing basis.

processor means a person who processes, mixes, blends, or otherwise incorporates "continuous process" recovered fines into a material in its final form for supply to a consumer.

transaction means:

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

**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 of the generator and 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 “continuous process” recovered fines 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 engineering 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 “continuous process” recovered fines 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.

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



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

The coal washery rejects (coal mine void) 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 coal washery rejects 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 coal washery rejects (coal mine void) order 2014'.

1. Waste to which this exemption applies

- 1.1 This exemption applies to coal washery rejects that are, or are intended to be, applied to land as fill for coal mine voids.
- 1.2 Coal washery rejects are the waste resulting from washing coal (including substances such as coal fines, soil, sand and rock resulting from that process).

2. Persons to whom this exemption applies

- 2.1 This exemption applies to any person who applies, or intends to apply, coal washery rejects 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.

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 coal washery rejects is carried out.

5. Revocation

- 5.1 'The coal washery rejects (coal mine void) exemption 2009' which commenced on 1 November 2009, 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 coal washery rejects to land as fill for coal mine voids 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 coal washery rejects is 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:

- 7.1 The coal washery rejects can only be applied to land to fill a coal mine void to the original ground level.
- 7.2 The consumer can only apply coal washery rejects to land where it complies with a rehabilitation plan for the site as approved by Industry and Investment NSW.
- 7.3 The consumer must ensure that any application of coal washery rejects to land as fill for coal mine voids must occur within six months of its receipt.

8. Definitions

In this exemption:

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.

coal mine void is an artificially created pit within a Mining Lease (as defined by the *Mining Act 1992*) from which coal is or has been extracted.

consumer means a person who applies, or intends to apply, coal washery rejects to land.

original ground level means the ground level prior to any mining activities, as indicated on a survey map described in Australian Height Datum or Relative Level.

**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 coal washery rejects is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 coal washery rejects 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.



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

The coal washery rejects (coal mine void) order 2014

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 coal washery rejects to which 'the coal washery rejects (coal mine void) exemption 2014' applies. The requirements in this order apply in relation to the supply of coal washery rejects for application to land as fill for coal mine voids.

1. Waste to which this order applies

- 1.1. This order applies to coal washery rejects. In this order, coal washery rejects means the waste resulting from washing coal (including substances such as coal fines, soil, sand and rock resulting from that process).

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies coal washery rejects that have been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of coal washery rejects 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies coal washery rejects.

Notification

- 4.1. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the coal washery rejects:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the coal washery rejects exemption, or a link to the EPA website where the coal washery rejects exemption can be found; and
 - a copy of the coal washery rejects order, or a link to the EPA website where the coal washery rejects order can be found.

5. Definitions

In this order:

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.

coal mine void is an artificially created pit within a Mining Lease (as defined by the *Mining Act 1992*) from which coal is or has been extracted.

consumer means a person who applies, or intends to apply, coal washery rejects to land.

generator means a person who generates coal washery rejects.

transaction means:

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

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 of the generator and 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 coal washery rejects 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 engineering 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 coal washery rejects 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The processed electric arc furnace ladle slag 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 processed electric arc furnace ladle slag from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and 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 processed electric arc furnace ladle slag order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to processed electric arc furnace ladle slag, which is electric arc furnace slag that has been blended with other materials, that is, or is intended to be, applied to land as an engineering material.
- 1.2. Electric arc furnace ladle slag means waste from the steelmaking process that is formed during ladle furnace and casting operations. Ladle slag is a mixture of molten oxides and silicates that provides an insulating layer on top of the liquid steel in the ladle. When casting has been completed the liquid slag is allowed to cool and solidify.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, processed electric arc furnace ladle slag 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.

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 processed electric arc furnace ladle slag is carried out.

5. Revocation

- 5.1. *The electric arc furnace ladle slag exemption 2011* which commenced on 14 June 2011 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 processed electric arc furnace ladle slag to land as an engineering material 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 processed electric arc furnace ladle slag is 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:

- 7.1. At the time the processed electric arc furnace ladle slag is received at the premises, the material must meet all chemical and other material requirements for processed electric arc furnace ladle slag which are required on or before the supply of processed electric arc furnace ladle slag under 'the processed electric arc furnace ladle slag order 2014'.
- 7.2. The processed electric arc furnace ladle slag can only be applied to land as an engineered fill in earthworks or for roadmaking activities as follows:
- (a) sealing aggregate,
 - (b) asphalt aggregate,
 - (c) engineered pavements (base and sub-base course),
 - (d) engineered fill,
 - (e) subsoil drains, and
 - (f) filter aggregate.
- 7.3. The consumer can only apply processed electric arc furnace ladle slag to land where it complies with:
- 7.3.1. a relevant specification or Australian Standard, or supply agreement, and
 - 7.3.2. development consent that specifically considers the use of processed electric arc furnace ladle slag.

- 7.4. The consumer must ensure that the processed electric arc furnace ladle slag is not applied in or beneath water, including groundwater.
- 7.5. The consumer must keep a written record of the following for a period of six years:
 - the quantity of any processed electric arc furnace ladle slag received; and
 - the name and address of the supplier of the processed electric arc furnace ladle slag received.
- 7.6. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.7. The consumer must apply processed electric arc furnace ladle slag to land within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

application 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.

consumer means a person who applies, or intends to apply, processed electric arc furnace ladle slag to land.

**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 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 electric arc furnace ladle slag is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of electric arc furnace ladle slag 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 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.



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

The processed electric arc furnace ladle slag order 2014

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 processed electric arc furnace ladle slag to which 'the processed electric arc furnace ladle slag exemption 2014' applies. The requirements in this order apply in relation to the supply of processed electric arc furnace ladle slag for application to land in line with the uses described in 'the processed electric arc furnace ladle slag exemption 2014'.

1. Waste to which this order applies

- 1.1. This order applies to processed electric arc furnace ladle slag blended with other materials. In this order, electric arc furnace ladle slag means waste from the steelmaking process that is formed during ladle furnace and casting operations. Ladle slag is a mixture of molten oxides and silicates that provides an insulating layer on top of the liquid steel in the ladle. When casting has been completed the liquid slag is allowed to cool and solidify

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies electric arc furnace ladle slag or processed electric arc furnace ladle slag that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of processed electric arc furnace ladle slag 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies electric arc furnace ladle slag to a processor.

Sampling requirements

- 4.1. On or before supplying electric arc furnace ladle slag, the generator must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the electric arc furnace ladle slag.
 - 4.1.2. Undertake sampling and testing of the electric arc furnace ladle slag as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the electric arc furnace ladle slag is generated as part of a continuous process, the generator must undertake the following sampling:
 - 4.2.1. Characterisation of the electric arc furnace ladle slag by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for electric arc furnace ladle slag generated and processed during each 1-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the electric arc furnace ladle slag by collecting either 5 composite samples from every 2,000 tonnes (or part thereof) processed or 5 composite samples every 3 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the electric arc furnace ladle slag is not generated as part of a continuous process, the generator must undertake one-off sampling of a batch, truckload or stockpile of the electric arc furnace ladle slag, by collecting and testing 10 composite samples from every 2,000 tonnes (or part thereof) generated and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1.

Chemical and other material requirements

- 4.4. The generator must not supply electric arc furnace ladle slag to any person if, in relation to any of the chemical and other attributes of the electric arc furnace ladle slag:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine or one-off sampling of the electric arc furnace ladle slag exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or
 - 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the electric arc furnace ladle slag (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
 - 4.4.3. The average concentration or other value of that attribute from the

routine sampling of the electric arc furnace ladle slag (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.

- 4.5. The absolute maximum concentration or other value of that attribute in any electric arc furnace ladle slag supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not Required	1
2. Cadmium	3	3	5
3. Lead	75	75	150
4. Arsenic	5	Not Required	10
5. Beryllium	5	Not Required	10
6. Boron ¹	NA	NA	NA
7. Chromium (total)	1%	Not Required	2%
8. Copper	150	150	300
9. Molybdenum	35	35	70
10. Nickel	50	50	100
11. Selenium	2	Not Required	5
12. Zinc	3500	3500	5000
13. Leachable concentration (TCLP) of Cadmium	0.025 mg/L	0.025 mg/L	0.05 mg/L
14. Leachable concentration (TCLP) of Chromium	1 mg/L	1 mg/L	2 mg/L
15. Leachable concentration (TCLP) of Copper	0.1 mg/L	0.1 mg/L	0.2 mg/L
16. Leachable concentration (TCLP) of Molybdenum	0.1 mg/L	0.1 mg/L	0.2 mg/L
17. Leachable concentration (TCLP) of Nickel	0.25mg/L	0.25mg/L	0.5mg/L
18. Leachable concentration (TCLP) of Zinc	2 mg/L	2 mg/L	4 mg/L
19. Electrical Conductivity ¹	NA	NA	NA
20. pH ²	9 to 12.5	Not Required	8 to 13

¹ While limits are not included for boron and electrical conductivity these must be

tested in each sample and a record kept of the results.

²The ranges given for pH are for the minimum and maximum acceptable pH values in the electric arc furnace ladle slag.

Test methods

- 4.6. The generator 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.
- 4.7. The generator must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the electric arc furnace ladle slag it supplies 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.
 - 4.7.1. Test method for measuring the mercury concentration:
 - 4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated maximum average concentration in Table 1, Column 2 (i.e. < 0.1 mg/kg dry weight).
 - 4.7.1.2. Report as mg/kg dry weight.
 - 4.7.2. Test methods for measuring chemicals 2 - 12:
 - 4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 4.7.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10% of stated maximum average concentration in Table 1, Column 2 (i.e. 7.5 mg/kg dry weight for lead).
 - 4.7.2.3. Report as mg/kg dry weight.
 - 4.7.3. Test method for measuring attributes 13 - 18:
 - 4.7.3.1. USEPA SW-846 Method 1311 Toxicity characteristic leaching procedure (or an equivalent analytical method).
 - 4.7.3.2. Report as mg/L.
 - 4.7.4. Test methods for measuring the electrical conductivity and pH:
 - 4.7.4.1. Sample preparation by mixing 1 part electric arc furnace ladle slag with 5 parts distilled water.
 - 4.7.4.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.4.3. Report electrical conductivity in deciSiemens per metre (dS/m).

Notification

- 4.8. On or before each transaction, the generator must provide the following to each processor to whom the generator supplies the electric arc furnace ladle

slag:

- a written statement of compliance certifying that all the generator requirements set out in this order have been met;
- a copy of the electric arc furnace ladle slag exemption, or a link to the EPA website where the electric arc furnace ladle slag exemption can be found; and
- a copy of the electric arc furnace ladle slag order, or a link to the EPA website where the electric arc furnace ladle slag order can be found.

Record keeping and reporting

- 4.9. The generator must keep a written record of the following for a period of six years:
- the sampling plan required to be prepared under clause 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the electric arc furnace ladle slag supplied;
 - the quantity of any electric arc furnace ladle slag supplied; and
 - the name and address of each person to whom the generator supplied the electric arc furnace ladle slag.
- 4.10. The generator must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for electric arc furnace ladle slag supplied to any processor or consumer of the electric arc furnace ladle slag.
- 4.11. The generator must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Processor requirements

The EPA imposes the following requirements on any processor who supplies processed electric arc furnace ladle slag.

- 5.1. The processor must only blend the electric arc furnace ladle slag received from the generator with materials that are the subject of a Resource Recovery Exemption and Resource Recovery Order if that material complies with all of the chemical and other material requirements under its Resource Recovery Order, and is able to be applied to land under its Resource Recovery Exemption for the same purpose(s) described in clause 5.1.1 to 5.1.6. The electric arc furnace ladle slag must not make up greater than 30% of the resultant blend of:
- 5.1.1. sealing aggregate,
 - 5.1.2. asphalt aggregate,
 - 5.1.3. engineered pavements (base and sub-base course),
 - 5.1.4. engineered fill,
 - 5.1.5. subsoil drains, and
 - 5.1.6. filter aggregate.

Notification

- 5.2. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the processed electric arc furnace ladle slag:
- a written statement of compliance certifying that all the requirements set out in this order have been met;

- a copy of the processed electric arc furnace ladle slag exemption, or a link to the EPA website where the processed electric arc furnace ladle slag exemption can be found; and
- a copy of the processed electric arc furnace ladle slag order, or a link to the EPA website where the processed electric arc furnace ladle slag order can be found.

Record keeping and reporting

- 5.3. The processor must keep a written record of the following for a period of six years:
- the quantity of any electric arc furnace ladle slag received from the generator and the generator's name and address;
 - the quantity of any processed electric arc furnace ladle slag supplied; and
 - the name and address of each person to whom the processor supplied the processed electric arc furnace ladle slag.
- 5.4. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for electric arc furnace ladle slag supplied to any consumer of the processed electric arc furnace ladle slag.

6. Definitions

In this order:

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.

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, processed electric arc furnace ladle slag to land.

continuous process means a process that produces electric arc furnace ladle slag on an ongoing basis.

generator means a person who generates electric arc furnace ladle slag for supply to a processor.

processor means a person who processes, mixes, blends, or otherwise incorporates electric arc furnace ladle slag and other materials to produce processed electric arc furnace ladle slag in its final form for supply to a consumer.

transaction means:

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

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 of the generator and processor and 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 electric arc furnace ladle slag 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 engineering 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 electric arc furnace ladle slag 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The electric arc furnace slag 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 electric arc furnace slag and blended electric arc furnace slag from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and 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 electric arc furnace slag order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to electric arc furnace slag and electric arc furnace slag blended with other materials (blended electric arc furnace slag) that is, or is intended to be, applied to land as an engineering material.
- 1.2. Electric arc furnace slag means waste sourced from electric arcs produced by the Electric Arc Furnace steelmaking process, and is formed after the molten solution of silicates and oxides cools and solidifies. Electric arc furnace slag does not include any bag house dust or air pollution control residues.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, electric arc furnace slag or blended electric arc furnace slag 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.

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 electric arc furnace slag and blended electric arc furnace slag is carried out.

5. Revocation

- 5.1. *The electric arc furnace slag exemption 2013* which commenced on 1 July 2013 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 electric arc furnace slag and blended electric arc furnace slag to land as an engineering material 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 electric arc furnace slag or blended electric arc furnace slag is 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:

- 7.1. At the time the electric arc furnace slag or blended electric arc furnace slag is received at the premises, the material must meet all chemical and other material requirements for electric arc furnace slag or blended electric arc furnace slag which are required on or before the supply of electric arc furnace slag or blended electric arc furnace slag under 'the electric arc furnace slag order 2014'.
- 7.2. The electric arc furnace slag or blended electric arc furnace slag can only be applied to land:
- 7.2.1. in cementitious mixes such as concrete, and
 - 7.2.2. in non-cementitious mixes such as an engineered fill in earthworks or for roadmaking activities as follows:
 - (a) sealing aggregate,
 - (b) asphalt aggregate,
 - (c) engineered pavements (base and sub-base course),
 - (d) engineered fill,
 - (e) subsoil drains,
 - (f) filter aggregate.

- 7.3. In cementitious mixes, the consumer can only apply blended electric arc furnace slag to land where it complies with a relevant specification or Australian Standard, or supply agreement(s).
- 7.4. In non-cementitious mixes the consumer can only apply electric arc furnace slag or blended electric arc furnace slag to land where it:
- 7.4.1. complies with the relevant specification or Australian Standard, or complies with supply agreement/s, or
 - 7.4.2. complies with a development consent that specifically considers the use of electric arc furnace slag, and
 - 7.4.3. is not applied in or beneath water, including groundwater.
- 7.5. The consumer must keep a written record of the following for a period of six years:
- the quantity of any electric arc furnace slag or blended electric arc furnace slag received; and
 - the name and address of the supplier of electric arc furnace slag or blended electric arc furnace slag received.
- 7.6. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.7. The consumer must apply electric arc furnace slag to land within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

application 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.

cementitious mixes means either electric arc furnace slag or blended electric arc furnace slag which has been mixed with general purpose cement, lime and other activators for use in bound applications, where the materials must be chemically bound together.

consumer means a person who applies, or intends to apply, electric arc furnace slag or blended electric arc furnace slag to land.

non-processing supplier means a person who supplies, causes, or permits the supply of cementitious mixes to a consumer and who does not undertake any processing of electric arc furnace slag.

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 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 electric arc furnace slag is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of electric arc furnace slag 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 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.



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

The electric arc furnace slag order 2014

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 electric arc furnace slag and blended electric arc furnace slag to which 'the electric arc furnace slag exemption 2014' applies. The requirements in this order apply in relation to the supply of electric arc furnace slag and blended electric arc furnace slag for application to land in line with the uses described in 'the electric arc furnace slag exemption 2014'.

1. Waste to which this order applies

- 1.1. This order applies to electric arc furnace slag and electric arc furnace slag blended with other materials (blended electric arc furnace slag). In this order, electric arc furnace slag means waste sourced from steels produced by the Electric Arc Furnace steelmaking process and is formed after the molten solution of silicates and oxides cools and solidifies. Electric arc furnace slag does not include any bag house dust or air pollution control residues.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies electric arc furnace slag or blended electric arc furnace slag that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of electric arc furnace slag or blended electric arc furnace slag by any person 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies electric arc furnace slag.

Sampling requirements

- 4.1. On or before supplying electric arc furnace slag, the generator must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the electric arc furnace slag.
 - 4.1.2. Undertake sampling and testing of the electric arc furnace slag as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the electric arc furnace slag is generated as part of a continuous process, the generator must undertake the following sampling:
 - 4.2.1. Characterisation of the electric arc furnace slag by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for electric arc furnace slag generated and processed during each 1-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the electric arc furnace slag by collecting either 5 composite samples from every 2,000 tonnes (or part thereof) processed or 5 composite samples every 3 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the electric arc furnace slag is not generated as part of a continuous process, the generator must undertake one-off sampling of a batch, truckload or stockpile of the electric arc furnace slag, by collecting 10 composite samples from every 2,000 tonnes (or part thereof) generated and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1.

Chemical and other material requirements

- 4.4. The generator must not supply electric arc furnace slag to any person if, in relation to any of the chemical and other attributes of the electric arc furnace slag:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine or one-off sampling of the electric arc furnace slag exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or
 - 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the electric arc furnace slag (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or

- 4.4.3. The average concentration or other value of that attribute from the routine sampling of the electric arc furnace slag (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.
- 4.5. The absolute maximum concentration or other value of that attribute in any electric arc furnace slag supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not Required	1
2. Cadmium	0.5	0.5	1
3. Lead	25	25	50
4. Arsenic	5	Not Required	10
5. Beryllium	5	Not Required	10
6. Boron ¹	NA	NA	NA
7. Chromium (total)	1%	Not Required	2%
8. Copper	150	150	300
9. Molybdenum	35	35	70
10. Nickel	50	50	100
11. Selenium	2	Not Required	5
12. Zinc	400	400	700
13. Leachable concentration (TCLP) of Chromium	1 mg/L	1 mg/L	2 mg/L
14. Leachable concentration (TCLP) of Copper	0.1 mg/L	0.1 mg/L	0.2 mg/L
15. Leachable concentration (TCLP) of Molybdenum	0.1 mg/L	0.1 mg/L	0.2 mg/L
16. Leachable concentration (TCLP) of Nickel	0.25mg/L	0.25mg/L	0.5mg/L
17. Leachable concentration (TCLP) of Zinc	2 mg/L	2 mg/L	4 mg/L
18. Electrical Conductivity ¹	NA	NA	NA
19. pH ²	9 to 12.5	Not Required	8 to 13

¹While limits are not included for electrical conductivity and boron, these must be tested in each sample and records kept of results.

²The ranges given for pH are for the minimum and maximum acceptable pH values in the electric arc furnace slag.

Test methods

- 4.6. The generator 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.
- 4.7. The generator must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the electric arc furnace slag it supplies 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.
- 4.7.1. Test method for measuring the mercury concentration:
- 4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated maximum average concentration in Table 1, Column 3 (i.e. < 0.1 mg/kg dry weight).
- 4.7.1.2. Report as mg/kg dry weight.
- 4.7.2. Test methods for measuring chemicals 2 - 12:
- 4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
- 4.7.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10% of stated maximum average concentration in Table 1, Column 3 (i.e. 2.5 mg/kg dry weight for lead).
- 4.7.2.3. Report as mg/kg dry weight.
- 4.7.3. Test method for measuring attributes 13 - 17:
- 4.7.3.1. USEPA SW-846 Method 1311 Toxicity characteristic leaching procedure (or an equivalent analytical method).
- 4.7.3.2. Report as mg/L.
- 4.7.4. Test methods for measuring the electrical conductivity and pH:
- 4.7.4.1. Sample preparation by mixing 1 part electric arc furnace slag with 5 parts distilled water.
- 4.7.4.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
- 4.7.4.3. Report electrical conductivity in deciSiemens per metre (dS/m).

Notification

- 4.8. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the electric arc furnace slag:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the electric arc furnace slag exemption, or a link to the EPA website where the electric arc furnace slag exemption can be found; and

- a copy of the electric arc furnace slag order, or a link to the EPA website where the electric arc furnace slag order can be found.

Record keeping and reporting

- 4.9. The generator must keep a written record of the following for a period of six years:
- the sampling plan required to be prepared under clause 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the electric arc furnace slag supplied;
 - the quantity of any electric arc furnace slag supplied; and
 - the name and address of the person(s) or companies to whom they supply electric arc furnace slag.
- 4.10. The generator must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for electric arc furnace slag that it supplies to any processor or consumer of the electric arc furnace slag.
- 4.11. The generator must notify the EPA within seven days of becoming aware that it has not met any requirements in clauses 4.1 to 4.7.

5. Processor requirements

The EPA imposes the following requirements on any processor who supplies blended electric arc furnace slag.

- 5.1. The processor may only blend electric arc furnace slag with materials that are the subject of a Resource Recovery Exemption and Resource Recovery Order if that material complies with all of the chemical and other material requirements under its Resource Recovery Order, and is able to be applied to land under its Resource Recovery Exemption for the purpose(s) described in 5.1.1 and 5.1.2:
- 5.1.1. in cementitious mixes such as concrete, and
 - 5.1.2. in non-cementitious mixes such as an engineered fill in earthworks or for roadmaking activities as follows:
 - 5.1.2.1. sealing aggregate,
 - 5.1.2.2. asphalt aggregate,
 - 5.1.2.3. road pavement, base and sub-base structures,
 - 5.1.2.4. engineered fill,
 - 5.1.2.5. subsoil drains,
 - 5.1.2.6. filter aggregate.

Notification

- 5.2. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the blended electric arc furnace slag:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the electric arc furnace slag exemption, or a link to the EPA website where the electric arc furnace slag exemption can be found; and
 - a copy of the electric arc furnace slag order, or a link to the EPA website where the electric arc furnace slag order can be found.

Record keeping and reporting

- 5.3. The processor must keep a written record of the following for a period of six years:
- the quantity of electric arc furnace slag received from the generator and the generator's name and address.
 - the quantity of the blended electric arc furnace slag supplied; and
 - the name and address of each person to whom the processor supplied the blended electric arc furnace slag.
- 5.4. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for electric arc furnace slag supplied to any consumer of the electric arc furnace slag.

6. Definitions

In this order:

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.

cementitious mixes means either electric arc furnace slag or blended electric arc furnace slag which has been mixed with general purpose cement, lime and other activators for use in bound applications, where the materials must be chemically bound together.

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, electric arc furnace slag or blended electric arc furnace slag to land.

continuous process means a process that produces electric arc furnace slag on an ongoing basis.

generator means a person who generates electric arc furnace slag for supply to a processor or consumer.

non-cementitious mixes means either electric arc furnace slag or blended electric arc furnace slag that is not mixed with general purpose cement, lime and other activators or used in bound applications.

non-processing supplier means a person who supplies, causes, or permits the supply of cementitious mixes to a consumer and who does not undertake any processing of electric arc furnace slag.

processor means a person who processes, mixes, blends, or otherwise incorporates electric arc furnace slag into blended electric arc furnace slag for supply to a consumer.

transaction means:

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

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 of the generator and processor and 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 electric arc furnace slag 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 engineering 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 electric arc furnace slag 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The processed electric arc welding slag 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 processed electric arc welding slag from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and 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 processed electric arc welding slag order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to processed electric arc welding slag which is electric arc welding slag that has been blended with recovered aggregate that is, or is intended to be, applied to land as an engineering material.
- 1.2. Electric arc welding slag means waste recovered from the electric arc welding of iron and steel. Electric arc welding slag is generally glassy in nature but can include the unused material that was to be incorporated around the electrode during manufacture.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, processed electric arc welding slag 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.

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 processed electric arc welding slag is carried out.

5. Revocation

- 5.1. *The electric arc welding slag in recovered aggregate exemption 2009* which commenced on 21 December 2009 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 processed electric arc welding slag to land as an engineering material 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 processed electric arc welding slag is received 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.

7. Conditions of exemption

The exemption is subject to the following conditions:

- 7.1. At the time the processed electric arc welding slag is received at the premises, the material must meet all chemical and other material requirements for processed electric arc welding slag which are required on or before the supply of processed electric arc welding slag under 'the processed electric arc welding slag order 2014'.
- 7.2. The processed electric arc welding slag can only be applied to land for road making activities, building, landscaping and construction works. This approval does not apply to any of the following applications:
- 7.2.1. Construction of dams or related water storage infrastructure,
 - 7.2.2. Mine site rehabilitation,
 - 7.2.3. Quarry rehabilitation,
 - 7.2.4. Sand dredge pond rehabilitation,
 - 7.2.5. Back filling of quarry voids,
 - 7.2.6. Raising or reshaping of land used for agriculture, and
 - 7.2.7. Construction of roads on private land unless:
 - (a) it is applied only to the minimum extent necessary for the construction of the road,
 - (b) applicable development consent has been granted for the activity.

- (c) it is to provide access (temporary or permanent) to a development approved by a Council, or
 - (d) the works are either exempt or complying development.
- 7.3. The consumer must ensure that the processed electric arc welding slag is not applied in or beneath water, including groundwater.
- 7.4. The consumer must keep a written record of the following for a period of six years:
- the quantity of any processed electric arc welding slag received; and
 - the name and address of the supplier of processed electric arc welding slag received.
- 7.5. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.6. The consumer must apply processed electric arc welding slag to land within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

application 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.

consumer means a person who applies, or intends to apply, processed electric arc welding slag to land.

recovered aggregate means material that meets the conditions of 'The recovered aggregate order 2014'.

**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 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 electric arc welding slag is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of electric arc welding slag 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 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.



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

The processed electric arc welding slag order 2014

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 processed electric arc welding slag to which 'the processed electric arc welding slag exemption 2014' applies. The requirements in this order apply in relation to the supply of processed electric arc welding slag for application to land in line with the uses described in 'the processed electric arc welding slag exemption 2014'.

1. Waste to which this order applies

- 1.1. This order applies to processed electric arc welding slag which is electric arc welding slag that has been blended with recovered aggregate. In this order, electric arc welding slag means material recovered from the electric arc welding of iron and steel. Electric arc welding slag is generally glassy in nature but can include the unused material that was to be incorporated around the electrode during manufacture.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies electric arc welding slag and processed electric arc welding slag that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of processed electric arc welding slag 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies electric arc welding slag to a processor.

- 4.1. The generator must ensure that the electric arc welding slag complies with the following chemical and physical criteria:
 - 4.1.1. a pH range of 9 to 11,
 - 4.1.2. is insoluble (Electrical Conductivity of 1:5 solid:water mixture <2 dS/m),
 - 4.1.3. total Cadmium concentrations < 1 mg/Kg 'dry weight',
 - 4.1.4. total Mercury concentrations < 1 mg/Kg 'dry weight', and
 - 4.1.5. total Manganese concentrations < 10%.

Sampling requirements

- 4.2. On or before supplying electric arc welding slag to a processor, the generator must:
 - 4.2.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the electric arc welding slag.
 - 4.2.2. Undertake sampling and testing of the electric arc welding slag as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.3. Where the electric arc welding slag is generated as part of a continuous process, the generator must undertake routine sampling of the electric arc welding slag by collecting 5 composite samples from every 20 tonnes (or part thereof) processed; and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling.
- 4.4. Where the electric arc welding slag is not generated as part of a continuous process, the generator must undertake one-off sampling of a batch, truckload or stockpile of the electric arc welding slag, by collecting 10 composite samples from every batch generated and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1.

Chemical and other material requirements

- 4.5. The generator must not supply electric arc welding slag to a processor if, in relation to any of the chemical and other attributes of the electric arc welding slag:
 - 4.5.1. The concentration or other value of that attribute of any sample collected and tested as part of the routine or one-off sampling, of the electric arc welding slag exceeds the absolute maximum concentration or other value listed in Column 3 of Table 1, or
 - 4.5.2. The average concentration or other value of that attribute from the routine or one-off sampling of the electric arc welding slag (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1.
- 4.6. The absolute maximum concentration or other value of that attribute in any electric arc welding slag supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 3 of Table 1.

Table 1

Column 1	Column 2	Column 3
Chemicals and other attributes	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Lead	40	80
2. Barium	1500	3000
3. Chromium (total)	150	300
4. Cobalt	30	60
5. Copper	100	200
6. Nickel	200	400
7. Silver	100	200
8. Zinc	80	160
9. TCLP Manganese	300 mg/L	600 mg/L
10. TCLP Nickel	0.5 mg/L	1 mg/L

Test methods

- 4.7. The generator 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.
- 4.8. The generator must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the electric arc welding slag it supplies 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.
- 4.8.1. Test methods for measuring chemicals 1 - 8:
- 4.8.1.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
- 4.8.1.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10% of stated maximum average concentration in Table 1, Column 2 (i.e. 4 mg/kg dry weight for lead).
- 4.8.1.3. Report as mg/kg dry weight.
- 4.8.2. Test method for measuring attributes 9 and 10:
- 4.8.2.1. USEPA SW-846 Method 1311 Toxicity characteristic leaching procedure (or an equivalent analytical method).
- 4.8.2.2. Report as mg/L.

Notification

- 4.9. On or before each transaction, the generator must provide the following to each processor to whom the generator supplies the electric arc welding slag:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the processed electric arc welding slag exemption, or a link to

- the EPA website where the processed electric arc welding slag exemption can be found; and
- a copy of the processed electric arc welding slag order, or a link to the EPA website where the processed electric arc welding slag order can be found.

Record keeping and reporting

- 4.10. The generator must keep a written record of the following for a period of six years:
- the sampling plan required to be prepared under clause 4.1.1;
 - all routine and/or one-off sampling results in relation to the electric arc welding slag supplied;
 - the quantity of any electric arc welding slag supplied; and
 - the name and address of each person to whom the generator supplied the electric arc welding slag.
- 4.11. The generator must provide, on request, the most recent sampling (whether routine or one-off or both) results for the electric arc welding slag supplied to any processor of the electric arc welding slag.
- 4.12. The generator must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.8.

5. Processor requirements

The EPA imposes the following requirements on any processor who supplies processed electric arc welding slag.

- 5.1. The processor must mix, blend or otherwise incorporate the electric arc welding slag received from the generator at a rate less than 5% by weight with recovered aggregate.

Notification

- 5.2. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the processed electric arc welding slag:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the processed electric arc welding slag exemption, or a link to the EPA website where the processed electric arc welding slag exemption can be found; and
 - a copy of the processed electric arc welding slag order, or a link to the EPA website where the processed electric arc welding slag order can be found.

Record keeping and reporting

- 5.3. The processor must keep a written record of the following for a period of six years:
- the quantity of any electric arc welding slag received from the generator and the generator's name and address;
 - the quantity of any processed electric arc welding slag supplied; and
 - the name and address of each person to whom the processor supplied the processed electric arc welding slag.

- 5.4. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for electric arc welding slag supplied to any consumer of the electric arc welding slag.

6. Definitions

In this order:

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.

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, processed electric arc welding slag to land.

continuous process means a process that produces electric arc welding slag on an ongoing basis.

generator means a person who generates, supplies, causes, or permits the supply of electric arc welding slag to a processor.

processor means a person who processes, mixes, blends, or otherwise incorporates electric arc welding slag and recovered aggregate to produce processed electric arc welding slag for supply to a consumer.

recovered aggregate means material that meets the chemical and other material requirements for recovered aggregate which are required on or before supply of recovered aggregate under 'The recovered aggregate order 2014'

transaction means:

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

**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 of the generator and processor and 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 electric arc welding slag 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 engineering 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 electric arc welding slag 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The effluent 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 effluent 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 effluent order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to effluent that is, or is intended to be, applied to land as a soil amendment or for the purposes of irrigation.
- 1.2. Effluent means:
 - 1.2.1. waste water from sewage treatment systems (including the treatment works, pumping stations, sewage overflow structures and the reticulation system), or
 - 1.2.2. waste water from collection or treatment systems that are ancillary to processing industries involving livestock, agriculture, wood, paper or food, being waste water that is conveyed from the place of generation by means of a pipe, canal or conventional method used in irrigation (but not by means of a tanker or truck), or
 - 1.2.3. waste water from collection or treatment systems that are ancillary to intensive livestock, aquaculture or mariculture, being waste water that is released by means of a pipe, canal or other conventional method used in irrigation as part of day to day farming operations, in accordance with the Act.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, the effluent 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.

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 effluent is carried out.

5. Revocation

- 5.1. 'The effluent exemption 2008' which commenced on 20 June 2008 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 effluent to land as a soil amendment or for the purposes of irrigation 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 effluent is 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:

- 7.1. The effluent can only be applied to land as a soil amendment or for the purposes of irrigation.
- 7.2. The consumer must ensure that any application of effluent to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

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

**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 effluent is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 effluent 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.



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

The effluent order 2014

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 effluent to which 'the effluent exemption 2014' applies. The requirements in this order apply in relation to the supply of effluent for application to land as a soil amendment or for the purpose of irrigation.

1. Waste to which this order applies

- 1.1. This order applies to effluent. In this order, effluent means:
 - 1.1.1. waste water from sewage treatment systems (including the treatment works, pumping stations, sewage overflow structures and the reticulation system), or
 - 1.1.2. waste water from collection or treatment systems that are ancillary to processing industries involving livestock, agriculture, wood, paper or food, being waste water that is conveyed from the place of generation by means of a pipe, canal or conventional method used in irrigation (but not by means of a tanker or truck), or
 - 1.1.3. waste water from collection or treatment systems that are ancillary to intensive livestock, aquaculture or mariculture, being waste water that is released by means of a pipe, canal or other conventional method used in irrigation as part of day to day farming operations, in accordance with the Act.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies effluent that has been generated, processed or recovered by a person.
- 2.2. This order does not apply to the supply of effluent 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Definitions

In this order:

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.

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

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



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

The excavated natural material 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 excavated natural material 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 excavated natural material order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to excavated natural material that is, or is intended to be, applied to land as engineering fill or for use in earthworks.
- 1.2. Excavated natural material is naturally occurring rock and soil (including but not limited to materials such as sandstone, shale, clay and soil) that has:
 - a) been excavated from the ground, and
 - b) contains at least 98% (by weight) natural material, and
 - c) does not meet the definition of Virgin Excavated Natural Material in the Act.

Excavated natural material does not include material located in a hotspot; that has been processed; or that contains asbestos, Acid Sulfate Soils (ASS), Potential Acid Sulfate soils (PASS) or sulfidic ores.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies or intends to apply excavated natural material 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.

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 excavated natural material is carried out.

5. Revocation

- 5.1. 'The excavated natural material exemption 2012' which commenced 19 October 2012 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 excavated natural material to land as engineering fill or for use in earthworks at the premises:

- section 48 of the POEO Act in respect of the scheduled activities described in clauses 39 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 excavated natural material is 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:

- 7.1. At the time the excavated natural material is received at the premises, the material must meet all chemical and other material requirements for excavated natural material which are required on or before the supply of excavated natural material under 'the excavated natural material order 2014'.
- 7.2. The excavated natural material can only be applied to land as engineering fill or for use in earthworks.
- 7.3. The consumer must keep a written record of the following for a period of six years:
- the quantity of any excavated natural material received; and
 - the name and address of the supplier of the excavated natural material received.
- 7.4. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.5. The consumer must ensure that any application of excavated natural material to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means a person who applies, or intends to apply excavated natural material to land.

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 excavated natural material is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 excavated natural material 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.



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

The excavated natural material order 2014

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 excavated natural material to which 'the excavated natural material exemption 2014' applies. The requirements in this order apply in relation to the supply of excavated natural material for application to land as engineering fill or for use in earthworks.

1. Waste to which this order applies

- 1.1. This order applies to excavated natural material. In this order, excavated natural material means naturally occurring rock and soil (including but not limited to materials such as sandstone, shale, clay and soil) that has:
- a) been excavated from the ground, and
 - b) contains at least 98% (by weight) natural material, and
 - c) does not meet the definition of Virgin Excavated Natural Material in the Act.

Excavated natural material does not include material located in a hotspot; that has been processed; or that contains asbestos, Acid Sulfate Soils (ASS), Potential Acid Sulfate soils (PASS) or sulfidic ores.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies excavated natural material, that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of excavated natural material 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies excavated natural material.

Sampling requirements

- 4.1. On or before supplying excavated natural material, the generator must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the excavated natural material.
 - 4.1.2. Undertake sampling and testing of the excavated natural material as required under clauses 4.2, 4.3, and 4.4 below. The sampling must be carried out in accordance with the written sampling plan.
- 4.2. The generator must undertake sampling and analysis of the material for ASS and PASS, in accordance with the NSW Acid Sulfate Soil Manual, Acid Sulfate Soils Management Advisory Council, 1998 and the updated Laboratory Methods Guidelines version 2.1 – June 2004 where:
 - 4.2.1. the pH measured in the material is below 5, and/or
 - 4.2.2. the review of the applicable Acid Sulfate Soil Risk Maps (published by the former Department of Land and Water Conservation and available at <http://www.environment.nsw.gov.au/acidsulfatesoil/riskmaps.htm>) indicates the potential presence of ASS.
- 4.3. For stockpiled material, the generator must:
 - 4.3.1. undertake sampling in accordance with Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent);
 - 4.3.2. undertake characterisation sampling by collecting the number of samples listed in Column 2 of Table 1 with respect to the quantity of the waste listed in Column 1 of Table 1 and testing each sample for the chemicals and other attributes listed in Column 1 of Table 4. For the purposes of characterisation sampling the generator must collect:
 - 4.3.2.1. composite samples for attributes 1 to 10 and 18 in Column 1 of Table 4.
 - 4.3.2.2. discrete samples for attributes 11 to 17 in Column 1 of Table 4.
 - 4.3.2.3. The generator must carry out sampling in a way that ensures that the samples taken are representative of the material from the entire stockpile. All parts of the stockpile must be equally accessible for sampling.
 - 4.3.2.4. for stockpiles greater than 4,000 tonnes the number of samples described in Table 1 must be repeated.
 - 4.3.3. store the excavated natural material appropriately until the characterisation test results are validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 4 and the absolute maximum concentration or other value listed in Column 3 of Table 4.

Table 1

Sampling of Stockpiled Material		
Column 1	Column 2	Column 3
Quantity (tonnes)	Number of samples	Validation
<500	3	Required
500 – 1,000	4	
1,000 – 2,000	5	
2,000 – 3,000	7	
3,000 – 4,000	10	

4.4. For in situ material, the generator must:

- 4.4.1. undertake sampling by collecting discrete samples. Compositing of samples is not permitted for in-situ materials.
- 4.4.2. undertake characterisation sampling for the range of chemicals and other attributes listed in Column 1 of Table 4 according to the requirements listed in Columns 1, 2 and 3 of Table 2. When the ground surface is not comprised of soil (e.g. concrete slab), samples must be taken at the depth at which the soil commences.
- 4.4.3. undertake sampling at depth according to Column 1 of Table 3.
- 4.4.4. collect additional soil samples (and analyse them for the range of chemicals and other attributes listed in Column 1 of Table 4), at any depth exhibiting discolouration, staining, odour or other indicators of contamination inconsistent with soil samples collected at the depth intervals indicated in Table 3.
- 4.4.5. segregate and exclude hotspots identified in accordance with Table 2, from material excavated for reuse.
- 4.4.6. subdivide sites larger than 50,000 m² into smaller areas and sample each area as per Table 2.
- 4.4.7. store the excavated natural material appropriately until the characterisation test results are validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 4 and the absolute maximum concentration or other value listed in Column 3 of Table 4.

Table 2

<i>In Situ</i> Sampling at surface				
Column 1	Column 2	Column 3	Column 4	Column 5
Size of <i>in situ</i> area (m ²)	Number of systematic sampling points recommended	Distance between two sampling points (m)	Diameter of the hot spot that can be detected with 95% confidence (m)	Validation
500	5	10.0	11.8	Required
1000	6	12.9	15.2	
2000	7	16.9	19.9	
3000	9	18.2	21.5	
4000	11	19.1	22.5	
5000	13	19.6	23.1	
6000	15	20.0	23.6	
7000	17	20.3	23.9	
8000	19	20.5	24.2	
9000	20	21.2	25.0	
10,000	21	21.8	25.7	
15,000	25	25.0	28.9	
20,000	30	25.8	30.5	
25,000	35	26.7	31.5	
30,000	40	27.5	32.4	
35,000	45	27.9	32.9	
40,000	50	28.3	33.4	
45,000	52	29.3	34.6	
50,000	55	30.2	35.6	

Table 2 has been taken from NSW EPA 1995, *Contaminated Sites Sampling Design Guidelines*, NSW Environment Protection Authority.

Table 3

<i>In Situ</i> Sampling at Depth	
Column 1	Column 2
Sampling Requirements *	Validation
<p>1 soil sample at 1.0 m bgl from each surface sampling point followed by 1 soil sample for every metre thereafter.</p> <p>From 1.0 m bgl, sample at the next metre interval until the proposed depth of excavation of the material is reached. If the proposed depth of excavation is between 0.5 to 0.9 m after the last metre interval, sample at the base of the proposed depth of excavation.</p>	<p>Required if the depth of excavation is equal to or greater than 1.0 m bgl</p>

* Refer to Notes for examples

Chemical and other material requirements

- 4.5. The generator must not supply excavated natural material waste to any person if, in relation to any of the chemical and other attributes of the excavated natural material:
- 4.5.1. The chemical concentration or other attribute of any sample collected and tested as part of the characterisation of the excavated natural material exceeds the absolute maximum concentration or other value listed in Column 3 of Table 4:
- 4.5.2. The average concentration or other value of that attribute from the characterisation of the excavated natural material (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 4.
- 4.6. The absolute maximum concentration or other value of that attribute in any excavated natural material supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 3 of Table 4.

Table 4

Column 1	Column 2	Column 3
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	1
2. Cadmium	0.5	1
3. Lead	50	100
4. Arsenic	20	40
5. Chromium (total)	75	150
6. Copper	100	200
7. Nickel	30	60
8. Zinc	150	300
9. Electrical Conductivity	1.5 dS/m	3 dS/m
10. pH *	5 to 9	4.5 to 10
11. Total Polycyclic Aromatic Hydrocarbons (PAHs)	20	40
12. Benzo(a)pyrene	0.5	1
13. Benzene	NA	0.5
14. Toluene	NA	65
15. Ethyl-benzene	NA	25
16. Xylene	NA	15
17. Total Petroleum Hydrocarbons C ₁₀ -C ₃₆	250	500
18. Rubber, plastic, bitumen, paper, cloth, paint and wood	0.05%	0.10%

* The ranges given for pH are for the minimum and maximum acceptable pH values in the excavated natural material.

Test methods

- 4.7. The generator 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.
- 4.8. The generator must ensure that the chemicals and other attributes (listed in Column 1 of Table 4) in the excavated natural material it supplies 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.
 - 4.8.1. Test methods for measuring the mercury concentration.
 - 4.8.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated absolute maximum concentration in Column 3 of Table 2 (i.e. < 0.20 mg/kg dry weight).
 - 4.8.1.2. Report as mg/kg dry weight.
 - 4.8.2. Test methods for measuring chemicals 2 to 8.
 - 4.8.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils (or an equivalent analytical method).
 - 4.8.2.2. 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 stated absolute maximum concentration in Column 3 of Table 2, (e.g. 10 mg/kg dry weight for lead).
 - 4.8.2.3. Report as mg/kg dry weight.
 - 4.8.3. Test methods for measuring electrical conductivity and pH.
 - 4.8.3.1. Sample preparation by mixing 1 part excavated natural material with 5 parts distilled water.
 - 4.8.3.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.8.3.3. Report electrical conductivity in deciSiemens per metre (dS/m).
 - 4.8.4. Test method for measuring Polynuclear Aromatic Hydrocarbons (PAHs) and benzo(a)pyrene.
 - 4.8.4.1. Analysis using USEPA SW-846 Method 8100 Polynuclear Aromatic Hydrocarbons (or an equivalent analytical method).
 - 4.8.4.2. Calculate the sum of all 16 PAHs for total PAHs.
 - 4.8.4.3. Report total PAHs as mg/kg dry weight.
 - 4.8.4.4. Report benzo(a)pyrene as mg/kg.

- 4.8.5. Test method for measuring benzene, toluene, ethylbenzene and xylenes (BTEX).
- 4.8.5.1. Method 501 (Volatile Alkanes and Monocyclic Aromatic Hydrocarbons) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
- 4.8.5.2. Report BTEX as mg/kg.
- 4.8.6. Test method for measuring Total Petroleum Hydrocarbons (TPH).
- 4.8.6.1. Method 506 (Petroleum Hydrocarbons) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
- 4.8.6.2. Report as mg/kg dry weight.
- 4.8.7. Test method for measuring rubber, plastic, bitumen, paper, cloth, paint and wood.
- 4.8.7.1. NSW Roads & Traffic Authority Test Method T276 Foreign Materials Content of Recycled Crushed Concrete (or an equivalent method).
- 4.8.7.2. Report as percent.

Notification

- 4.9. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the excavated natural material:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the excavated natural material exemption, or a link to the EPA website where the excavated natural material exemption can be found; and
 - a copy of the excavated natural material order, or a link to the EPA website where the excavated natural material order can be found.

Record keeping and reporting

- 4.10. The generator must keep a written record of the following for a period of six years:
- the sampling plan required to be prepared under clause 4.1.1;
 - all characterisation sampling results in relation to the excavated natural material supplied;
 - the volume of detected hotspot material and the location;
 - the quantity of the excavated natural material supplied; and
 - the name and address of each person to whom the generator supplied the excavated natural material.
- 4.11. The generator must provide, on request, the characterisation and sampling results for that excavated natural material supplied to the consumer of the excavated natural material.

5. Definitions

In this order:

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.

Bgl means below ground level, referring to soil at depth beneath the ground surface.

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 excavated natural material to land.

discrete sample means a sample collected and analysed individually that will not be composited.

generator means a person who generates excavated natural material for supply to a consumer.

hotspot means a cylindrical volume which extends through the soil profile from the ground surface to the proposed depth of excavation, where the level of any contaminant listed in Column 1 of Table 2 is greater than the absolute maximum concentration in Column 3 of Table 2.

in situ material means material that exists on or below the ground level. It does not include stockpiled material.

in situ sampling means sampling undertaken on *in situ* material.

N/A means not applicable.

stockpiled material means material that has been excavated from the ground and temporarily stored on the ground prior to use.

systematic sampling means sampling at points that are selected at even intervals and are statistically unbiased.

transaction means:

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

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 of the generator and 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 excavated natural material 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 engineering 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 excavated natural material 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.

Examples

In situ sampling at depth

Example 1.

If the proposed depth of ENM excavation is between 1 m bgl and 1.4 m bgl, then:

- 1 sample on surface (as per the requirements of Table 2).
- 1 sample at 1 m bgl.
- No further depth sampling after 1 m bgl, unless required under section 4.4.4.

Example 2.

If the proposed depth of ENM excavation is at 1.75 m bgl, then:

- 1 sample on surface (as per the requirements of Table 2).
- 1 sample at 1 m bgl.
- 1 sample at 1.75 m bgl.
- No further depth sampling after 1.75 m bgl, unless required under section 4.4.4.

Example 3.

If the proposed depth of ENM excavation is at 2.25 m bgl, then:

- 1 sample on surface (as per the requirements of Table 2).
- 1 sample at 1 m bgl.
- 1 sample at 2 m bgl.
- No further depth sampling after 2 m bgl, unless required under section 4.4.4.



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

The acetylene gas lime slurry 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 acetylene gas lime slurry from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and 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 acetylene gas lime slurry order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to acetylene gas lime slurry that is, or is intended to be, applied to land as a soil amendment.
- 1.2. Acetylene gas lime slurry means the calcium hydroxide residue waste formed from the reaction of calcium carbide and water during the manufacture of acetylene gas.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, acetylene gas lime slurry 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.

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 acetylene gas lime slurry is carried out.

5. Revocation

- 5.1. 'The acetylene gas lime slurry exemption 2008' which commenced on 20 June 2008, 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 acetylene gas lime slurry 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, 110 and 114 of the Waste Regulation.
- 6.2. The exemption does not apply in circumstances where acetylene gas lime slurry is 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:

- 7.1. At the time the acetylene gas lime slurry is received at the premises, the material must meet all chemical and other material requirements for acetylene gas lime slurry which are required on or before the supply of acetylene gas lime slurry under 'the acetylene gas lime slurry order 2014'.
- 7.2. The acetylene gas lime slurry can only be applied to land as a soil amendment.
- 7.3. The acetylene gas lime slurry must be incorporated into the topsoil.
- 7.4. The consumer must calculate application rates prior to the acetylene gas lime slurry being land applied. The application rates must be equal to or less than the agronomic rate for the most limiting factor.
- 7.5. The consumer must keep a written record of the following for a period of six years:
- the quantity of any acetylene gas lime slurry received; and
 - the name and address of the supplier of the acetylene gas lime slurry received.
- 7.6. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.7. The consumer must ensure that any application of acetylene gas lime slurry to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means a person who applies, or intends to apply, acetylene gas lime slurry to land.

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 acetylene gas lime slurry is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 acetylene gas lime slurry 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.



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

The acetylene gas lime slurry order 2014

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 acetylene gas lime slurry to which 'the acetylene gas lime slurry exemption 2014' applies. The requirements in this order apply in relation to the supply of acetylene gas lime slurry for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to acetylene gas lime slurry. In this order, acetylene gas lime slurry means the calcium hydroxide residue waste formed from the reaction of calcium carbide and water during the manufacture of acetylene gas.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies acetylene gas lime slurry that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of acetylene gas lime slurry 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies acetylene gas lime slurry.

Sampling requirements

- 4.1. On or before supplying acetylene gas lime slurry, the generator must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the acetylene gas lime slurry.
 - 4.1.2. Undertake sampling and testing of the acetylene gas lime slurry as required under clauses 4.2 below.
- 4.2. The generator must undertake the following sampling:
 - 4.2.1. Characterisation of the acetylene gas lime slurry by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for acetylene gas lime slurry generated and processed during each 2-year period following the commencement of the process; and
 - 4.2.2. Routine sampling of the acetylene gas lime slurry by collecting 5 composite samples every 6 months; and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. The generator must ensure that the acetylene gas lime slurry is not a Dangerous Goods Division 4.3 under the *Transport of Dangerous Goods Code*.

Chemical and other material requirements

- 4.4. The generator must not supply acetylene gas lime slurry to any person if, in relation to any of the chemical and other attributes of the acetylene gas lime slurry:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine sampling of the acetylene gas lime slurry exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or
 - 4.4.2. The average concentration or other value of that attribute from the characterisation sampling of the acetylene gas lime slurry (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
 - 4.4.3. The average concentration or other value of that attribute from the routine sampling of the acetylene gas lime slurry (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.

- 4.5. The absolute maximum concentration or other value of that attribute in any acetylene gas lime slurry supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.1	Not required	0.2
2. Cadmium	0.5	0.5	1
3. Lead	20	20	40
4. Arsenic	10	Not required	20
5. Chromium (total)	50	50	100
6. Copper	25	25	50
7. Nickel	30	30	60
8. Selenium	2.5	Not required	5
9. Zinc	30	Not required	60

Test methods

- 4.6. The generator 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.
- 4.7. The generator must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the acetylene gas lime slurry it supplies 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.
- 4.7.1. Test methods for measuring the mercury concentration:
- 4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated maximum average concentration in Table 1, Column 2 (i.e. < 0.02 mg/kg dry weight).
- 4.7.1.2. Report as mg/kg dry weight.
- 4.7.2. Test methods for measuring chemicals 2 - 9:
- 4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.

- 4.7.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10% of stated absolute maximum average concentration in Table 1, Column 2 (i.e. < 4 mg/kg dry weight for lead).

Notification

- 4.8. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the acetylene gas lime slurry:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the acetylene gas lime slurry exemption, or a link to the EPA website where the acetylene gas lime slurry exemption can be found; and
 - a copy of the acetylene gas lime slurry order, or a link to the EPA website where the acetylene gas lime slurry order can be found.

Record keeping and reporting

- 4.9. The generator must keep a written record of the following for a period of six years:
- the sampling plan required to be prepared under clause 4.1.1;
 - all characterisation and routine sampling results in relation to the acetylene gas lime slurry supplied;
 - the quantity of the acetylene gas lime slurry supplied; and
 - the name and address of each person to whom the generator supplied the acetylene gas lime slurry.
- 4.10. The generator must provide, on request, the most recent characterisation and routine sampling results for acetylene gas lime slurry supplied to any consumer of the acetylene gas lime slurry.
- 4.11. The generator must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Processor requirements

The EPA imposes the following requirements on any processor who supplies acetylene gas lime slurry.

- 5.1. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the acetylene gas lime slurry:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the acetylene gas lime slurry exemption, or a link to the EPA website where the acetylene gas lime slurry exemption can be found; and
 - a copy of the acetylene gas lime slurry order, or a link to the EPA website where the acetylene gas lime slurry order can be found.
- 5.2. The processor must keep a written record, for a period of six years, of the quantity of acetylene gas lime slurry:
- received from the generator, and the generator's name and address; and
 - supplied to the consumer and the consumer's name and address.

6. Definitions

In this order:

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.

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, acetylene gas lime slurry to land.

generator means a person who generates acetylene gas lime slurry.

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

transaction means:

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

Transport of Dangerous Goods Code means the *Australian Code for the Transport of Dangerous Goods by Road and Rail* (7th edition) approved by the Ministerial Council for Road Transport and published by the Commonwealth Government from time to time.

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 of the generator and 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 acetylene gas lime slurry 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 engineering 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 acetylene gas lime slurry 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The liquid food 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 liquid food waste 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 liquid food waste order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to liquid food waste that is, or is intended to be, applied to land as a soil amendment.
- 1.2. Liquid food waste means liquid food waste from the manufacture, preparation, sale or consumption of food.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, the liquid food waste 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.

4. Premises to which this exemption applies

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

5. Revocation

- 5.1. 'The liquid food 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 liquid food waste 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 liquid food waste is 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:

- 7.1. At the time the liquid food waste is received at the premises, the material must meet all material requirements for liquid food waste which are required on or before the supply of liquid food waste under 'the liquid food waste order 2014'.
- 7.2. The liquid food waste can only be applied to land as a soil amendment.
- 7.3. The consumer must ensure that the liquid food waste is appropriately contained on receipt at the land application site, such that leaching or runoff of waste is prevented prior to land application. The containment must also ensure minimal risk of exposure to and transfer of pathogenic materials from the site by vectors (animals, birds and insects).
- 7.4. The consumer must calculate application rates prior to the liquid food waste being land applied. The application rates must be equal to or less than the agronomic rate for the most limiting factor.
- 7.5. The liquid food waste can only be injected into land between 10 cm and 30 cm below the soil surface. The consumer must ensure that furrows are covered shortly after injection.
- 7.6. The liquid food waste must not flow off-site either by means of surface or lateral sub-surface flow.
- 7.7. The liquid food waste must not be applied to land where the site characteristics specified in Column 1 of Table 1 do not meet the requirements in Column 2 of Table 1.
- 7.8. The liquid food waste must not be applied to land that is within the buffer zones for the protected areas specified in Table 2.
- 7.9. The consumer must ensure that they do not cause or permit the migration of leachate from the premises from liquid food waste following receipt at the land application site, but prior to land application, and when applying liquid food waste to land.
- 7.10. Where the liquid food waste is land applied within 4 weeks of any other exempted waste, an investigation to determine the suitability of the proposed application must be undertaken prior to the waste being received at the

application site. A report must be prepared including, but not necessarily limited to, information detailing how the receiving site will benefit from multiple wastes being applied, how the matrices and constituents of the different wastes will interact, and what application rates will be appropriate to minimise the potential for environmental harm. The investigation should determine whether the land application will deliver a net benefit. Where a net benefit is not demonstrated the land application of liquid food waste must not proceed. A written record of the report must be kept for a minimum period of three years.

Table 1 Landform requirements for the application site

Column 1	Column 2
Site Characteristic	Requirement
Slope	Less than 10%
Drainage	No application of wastes permitted in: - Waterlogged soil; and/or - Slowly or highly permeable soil
Depth to bedrock	Greater than 60 cm
Surface rock outcrop	Less than 10%

Table 2 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
Farm dams ¹	20	30	5
Drinking water bores	250	250	250
Other bores	50	50	50
Farm driveways and fence lines	5	5	5
Native forests and other significant vegetation types	10	10	5
Animal enclosures	25	50	25
Occupied dwelling	50	100	50
Residential zone	250	500	250

¹ Buffer zones to other drainage features in the landscape, including drainage depressions, may be required to minimise run-off contaminating protected areas both on and off site.

- 7.11. The consumer must keep a written record of the following for a period of six years:
- the quantity of any liquid food waste received; and
 - the name and address of the supplier of the liquid food waste received.
- 7.12. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.13. The consumer must ensure that any application of liquid food waste 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.

consumer means a person who applies, or intends to apply, liquid food waste 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.

liquid waste means any waste (other than special waste) that exhibits any of the following:

- (a) has an angle of repose of less than 5 degrees above horizontal, or
- (b) becomes free-flowing at or below 60°C or when it is transported, or
- (c) is generally not capable of being picked up by a spade or shovel.

As defined in the POEO Act.

**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 liquid food waste is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 liquid food waste 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.



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

The liquid food waste order 2014

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 liquid food waste to which the 'liquid food waste exemption 2014' applies. The requirements in this order apply in relation to the supply of liquid food waste for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to liquid food waste. In this order, liquid food waste means liquid food waste from the manufacture, preparation, sale or consumption of food.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies liquid food waste that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of liquid food waste 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies liquid food waste.

General conditions

- 4.1. On or before supplying liquid food waste, the generator must ensure that the liquid food waste:
 - 4.1.1. does not include post-consumer food waste, grease trap waste or animal waste.

- 4.1.2. is not corrosive, and does not contain any physical contaminants, including but not limited to glass, metal, rigid plastics, flexible plastics, or polystyrene.
- 4.1.3. is in a form and condition that is suitable for land application.

Notification

- 4.2. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the liquid food waste:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the liquid food waste exemption, or a link to the EPA website where the liquid food waste exemption can be found; and
 - a copy of the liquid food waste order, or a link to the EPA website where the liquid food waste order can be found.

Record keeping and reporting

- 4.3. The generator must keep a written record of the following for a period of six years:
- the quantity of any liquid food waste supplied; and
 - the name and address of each person to whom the generator supplied the liquid food waste.
- 4.4. The generator must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1.

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

consumer means a person who applies, or intends to apply, liquid food waste 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.

generator means a person who generates liquid food waste.

liquid waste means any waste (other than special waste) that exhibits any of the following:

- (a) has an angle of repose of less than 5 degrees above horizontal, or
- (b) becomes free-flowing at or below 60°C or when it is transported, or
- (c) is generally not capable of being picked up by a spade or shovel.

As defined in the POEO Act.

post-consumer food waste means food waste generated by the end consumer of

food and collected from kerbside collections either as a single stream or co-collected with garden waste.

transaction means:

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

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 of the generator and 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 liquid food waste 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 engineering 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 liquid food waste 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.

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



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

The manure 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 manure 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 manure order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to manure that is, or is intended to be, applied to land as a soil amendment.
- 1.2. 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.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, manure 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.

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 manure is carried out.

5. Revocation

- 5.1. 'The manure exemption 2014' which commenced on 8 August 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 manure to land 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 manure is 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:

- 7.1. The manure can only be applied to land as a soil amendment.
- 7.2. The consumer must ensure that any application of manure to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

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

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 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 manure is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of manure 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 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.



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

The manure order 2014

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 manure to which 'the manure exemption 2014' applies. The requirements in this order apply in relation to the supply of manure for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to manure. In this order, 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.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies manure that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of manure 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Definitions

In this order:

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.

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

**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 of the generator and 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 manure 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 engineering 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 manure 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.

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



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).



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

The organic outputs derived from mixed waste order 2014

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 organic outputs derived from mixed waste (organic outputs) to which the 'organic outputs derived from mixed waste exemption 2014' applies. The requirements in this order apply in relation to the supply of organic outputs for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to organic outputs. In this order, organic outputs means the pasteurised and biologically stabilised organic outputs produced from the mechanical biological treatment of mixed waste.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies organic outputs, that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of organic outputs 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

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

General conditions

- 4.1. On or before supplying organic outputs, the processor must:

- 4.1.1. ensure that the organic outputs do not contain contaminants that will degrade land or present a risk of harm to human health or to the environment.
- 4.1.2. ensure that the organic outputs do not contain sharp pieces of glass, metal or plastic of a size, shape (e.g. glass shards), or type that might cause damage or injury to humans, animals, plants or soil.
- 4.1.3. ensure that the organic outputs do not contain any asbestos.
- 4.1.4. ensure that it provides effective pre-sorting mechanisms to remove lead-acid batteries and other sortable lead containing wastes.
- 4.1.5. ensure that all practicable measures have been taken to remove (i) glass, metal and rigid plastics, and (ii) light, flexible or film plastics, so that they are not present at unacceptable levels (including in particle sizes less than 2 mm and 5 mm respectively) in the organic outputs.

Sampling requirements

- 4.2. On or before supplying organic outputs, the processor must:
 - 4.2.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the organic outputs.
 - 4.2.2. Undertake sampling and testing of the organic outputs as required under clause 4.2.3. The sampling must be carried out in accordance with the written sampling plan. Testing must occur within 25 working days from the date of sampling.
 - 4.2.3. Undertake characterisation sampling of the organic outputs by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. A maximum of 2 composite samples may be collected per month. Characterisation must be conducted for the organic outputs generated and processed during the 1-year period following the commencement of the process. Note: Routine sampling requirements will be determined on review of the results of characterisation testing.

Chemical and other material requirements

- 4.3. The absolute maximum concentration or other value of that attribute in any organic outputs supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 2 of Table 1. Note that while limits are not included for attributes 16 – 20 in Table 1, these must be tested in each sample and records kept of results.
- 4.4. The processor must not supply organic outputs to any person if, in relation to any of the chemical and other attributes of the organic outputs, the concentration or other value of that attribute of any sample collected and tested as part of the characterisation of the organic outputs exceeds the absolute maximum concentration or other value listed in Column 2 of Table 1.

Table 1

Column 1	Column 2
Chemicals and other attributes	Absolute maximum concentration (dry weight in mg/kg unless otherwise specified)
1. Mercury	4
2. Cadmium	3
3. Lead	420 for mine sites 250 for plantation forestry use, non-contact agricultural use and broad acre agricultural use ^{1,2}
4. Arsenic	20
5. Chromium (total)	100
6. Copper	375
7. Nickel	60
8. Selenium	5
9. Zinc	700
10. DDT/DDD/DDE	0.5
11. Other pesticides ³	0.2
12. Polychlorinated Biphenyls (PCBs)	ND ⁴
13. Glass, metal and rigid plastics > 2 mm	2.5% for mine sites (as % dry matter on weight/weight basis) ¹
	1.5% for plantation forestry use, non-contact agricultural use and broad acre agricultural use (as % dry matter on weight/weight basis) ¹
14. Plastics – light, flexible or film > 5 mm	0.25% for mine sites (as % dry matter on weight/weight basis) ¹
	0.2% for plantation forestry use, non-contact agricultural use and broad acre agricultural use (as % dry matter on weight/weight basis) ¹
15. Maximum particle size	16 mm (particle size)
16. Other metals ⁵	N/A
17. Total Polycyclic Aromatic Hydrocarbons (PAHs) ⁶	N/A
18. Phthalates ⁷	N/A
19. Pesticides (non-scheduled) ⁸	N/A
20. Monobutyltin	N/A

Notes and Definitions for Table 1

1. Future contaminant levels will be set after considering the outcomes of research and trials that are to be conducted as well as the other considerations outlined in the notes to this Order.

2. The effectiveness of mechanisms implemented by each facility in clause 4.1.4 in reducing the levels of lead present in the organic outputs will be evaluated. The maximum lead concentration may be amended following this review.
3. **Other pesticides** mean Aldrin, Dieldrin, Chlordane, Heptachlor, Hexachlorobenzene (HCB), Lindane and Benzene Hexachloride (BHC).
4. No detected individual PCB Aroclor at a limit of detection of 0.2 mg PCB Aroclor/kg.
5. **Other metals** mean antimony, beryllium, boron, cobalt, manganese, molybdenum, tin, and vanadium.
6. **PAHs** means the following 16 USEPA priority pollutant polycyclic aromatic hydrocarbons (with CAS registry numbers): Acenaphthene (83-32-9), Chrysene (218-01-9), Acenaphthylene (208-96-8), Dibenzo(a,h)anthracene (53-70-3), Anthracene (120-12-7), Fluoranthene (206-44-0), Benzo(a)anthracene (56-55-3), Fluorene (86-73-7), Benzo(a)pyrene (50-32-8), Indeno(1,2,3-cd)pyrene (193-39-5), Benzo(b)fluoranthene (205-99-2), Naphthalene (91-20-3), Benzo(ghi)perylene (191-24-2), Phenanthrene (85-01-8), Benzo(k)fluoranthene (207-08-9), and Pyrene (129-00-0).
7. **Phthalates** means (with CAS registry numbers): Di-2-ethylhexylphthalate (DEHP) (117-81-7) and Dibutylphthalate (DBP) (84-74-2).
8. **Pesticides (non-scheduled)** means the following pesticides, herbicides, fungicides and insecticides (with CAS registry numbers): Brodifacoum (56073-10-0), Chlorpyrifos (2921-88-2), Cypermethrin (52315-07-8), Dichlofluanid (1085-98-9), Emamectin benzoate (137515-75-4 & 155569-91-8), Permethrin (52645-53-1), Profenofos (41198-08-7), Simazine (122-34-9), and Tebuconazole (107534-96-3).

Test methods

- 4.5. 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.
- 4.6. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the organic outputs 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.
 - 4.6.1. Test method for measuring the mercury concentration:
 - 4.6.1.1. 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 stated absolute maximum concentration in Table 1, Column 2.
 - 4.6.1.2. Results must be reported as mg/kg dry weight.
 - 4.6.2. Test methods for measuring metals 2 – 9 and 16:
 - 4.6.2.1. Sample preparation by digestion - USEPA SW-846 Method 3050B acid digestion of sediments, sludges, soils, and oils, or using an equivalent digestion method.
 - 4.6.2.2. 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 stated absolute maximum concentration in Table 1, Column 2.
 - 4.6.2.3. Results must be reported as mg/kg dry weight.
 - 4.6.3. Test method for measuring 10, 11, 17 and 18:

- 4.6.3.1. Analysis using USEPA SW-846 Method 8270D Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), or equivalent.
- 4.6.3.2. Results must be reported as mg/kg dry weight.
- 4.6.4. Test method for measuring PCBs:
 - 4.6.4.1. Analysis using USEPA SW-846 Method 8082A Polychlorinated Biphenyls (PCBs) By Gas Chromatography (GC), or equivalent.
 - 4.6.4.2. Measure the following PCBs: Aroclor 1016 (CAS Registry No. 12674-11-2), Aroclor 1221 (CAS Registry No. 11104-28-2), Aroclor 1232 (CAS Registry No. 11141-16-5), Aroclor 1242 (CAS Registry No. 53469-21-9), Aroclor 1248 (CAS Registry No. 12672-29-6), Aroclor 1254 (CAS Registry No. 11097-69-1), Aroclor 1260 (CAS Registry No. 11096-82-5).
 - 4.6.4.3. Results must be reported as mg/kg dry weight.
- 4.6.5. Test method for measuring physical contaminants (13 and 14):
 - 4.6.5.1. Analysis using Australian Standard AS4454-2003 Composts, soil conditioners and mulches, "Appendix H - Method For Determination Of Moisture Content And Level Of Visible Contamination".
 - 4.6.5.2. Results must be reported as % contamination on a dry mass basis.
- 4.6.6. Test method for measuring maximum particle size:
 - 4.6.6.1. Analysis using Australian Standard AS4454-2003 Composts, soil conditioners and mulches, "Appendix F – Method for Determination of Particle Size Grading".
 - 4.6.6.2. Results must be reported as % by mass retained on a sieve with 16 mm apertures.
 - 4.6.6.3. The entire sample must pass through the sieve.
- 4.6.7. Test method for measuring pesticides (non-scheduled):
 - 4.6.7.1. Analysis using USEPA SW-846 Method 8270D Semivolatile Organic Compounds By Gas Chromatography/Mass Spectrometry (GC/MS) for all pesticides (non-scheduled) or equivalent, except for the following:
 - (a) Analysis of Dichlofluanid – AOAC method 2007.01 Pesticide Residues in Foods by GC/MS.
 - (b) Emamectin benzoate – acceptable analytical methods for the determination of emamectin benzoate include high-performance liquid chromatography (HPLC) with fluorescence detection.
 - (c) Brodifacoum – acceptable analytical methods for the determination of brodifacoum include high-performance liquid chromatography (HPLC) with fluorescence detection such as AOAC International 18th Edition, Method 983.11 and *Journal of Chromatography A*, 1985, Volume 321, Pages 255-272.
 - 4.6.7.2. Results must be reported as mg/kg dry weight.
- 4.6.8. Test method for measuring monobutyltin:

4.6.8.1. Analysis using International Organization for Standardization ISO/DIS 23161.2:2007 Selected organotin compounds – Soil quality by Gas-chromatographic method (GC), or equivalent.

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

Notification

- 4.7. On or before each transaction, the processor must obtain a written statement of compliance in accordance with clauses 7.18 of 'the organic outputs derived from mixed waste exemption 2014'.
- 4.8. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the organic outputs:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the organic outputs exemption, or a link to the EPA website where the organic outputs exemption can be found; and
 - a copy of the organic outputs order, or a link to the EPA website where the organic outputs order can be found.

Record keeping and reporting

- 4.9. 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 4.2.1;
 - all characterisation sampling results in relation to organic outputs supplied;
 - the quantity of any organic outputs supplied;
 - the name and address of each person to whom the processor supplied the organic outputs;
 - 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; and
 - the date(s) upon which the organic outputs are applied to the land at each location as defined above.
- 4.10. The processor must provide, on request, the most recent characterisation results for organic outputs that are supplied to any consumer of the organic outputs.
- 4.11. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.6.

5. Definitions

In this order:

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

AOAC International 18th Edition means Dr. William Horwitz and Dr. George Latimer, Jr. Editors. "Official Methods of Analysis of AOAC International", 18th Edition Revision 2 (2007), AOAC INTERNATIONAL, Gaithersburg, MD, USA.

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,
- (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.

N/A means not applicable.

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.

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 order at any time. It is the responsibility of each of the generator and 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 organic outputs 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 engineering 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 organic outputs 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.

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

Research program

The goal of the Resource Recovery Order and Resource Recovery Exemption for organic outputs is to facilitate the resource recovery of fit for purpose organic outputs by minimising the amount of physical and chemical contaminants.

Trials and research will be conducted to examine the environmental and human health impacts of contaminants in the organic outputs.

The EPA intends to extend the RRE for agricultural uses following a review of the results of the research and trials. The nature of the extended RRE for broad acre agricultural use, non-contact agricultural use and plantation forestry use will be determined taking into account:

- trials that are to be conducted in collaboration with the processors of mixed waste,
- the goal of the exemption,
- the environmental, agricultural and human health impacts of the use of organic outputs,
- the technological capabilities of AWT facilities including the adequacy of pre-sorting processes, and
- community acceptance of the use of organic outputs.



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

The pasteurised garden organics 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 pasteurised garden organics 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 pasteurised garden organics order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to pasteurised garden organics that are, or are intended to be, applied to land as a soil amendment.
- 1.2. Pasteurised garden organics means raw mulch and/or garden organics that have undergone the process of pasteurisation as a minimum.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, pasteurised garden organics 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.

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 pasteurised garden organics is carried out.

5. Revocation

- 5.1. 'The pasteurised garden organics 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 pasteurised garden organics 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 pasteurised garden organics 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:

- 7.1. At the time the pasteurised garden organics are received at the premises, the material must meet all chemical and other material requirements for pasteurised garden organics which are required on or before the supply of pasteurised garden organics under 'the pasteurised garden organics order 2014'.
- 7.2. The pasteurised garden organics can only be applied to land as a soil amendment.
- 7.3. The consumer must ensure that they do not cause or permit the migration of leachate from the land application site.
- 7.4. The consumer must ensure that any application of pasteurised garden organics to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means a person who applies, or intends to apply, pasteurised garden organics to land.

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.

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 raw mulch and/or other plant material including leaves, plant trimmings, grass, flowers, fruit and plant propagules.

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, 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 order. A written record of the validation report must be kept for a minimum period of three years.

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.

raw mulch means plant material that by virtue of the nature and source of the material poses minimal risk of the presence of plant propagules, pathogens and other contaminants. Such materials may be shredded and/or screened to a preferred particle size grading for particular applications. Raw mulch only includes:

- (a) horticultural barks, leaf mulch and wood chip mulch produced from forestry and sawmill residues, and urban wood residues; and
- (b) branches, tree stumps and bark that are absent of leaves, flowers, fruit and plant propagules.

Raw 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.

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 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 pasteurised garden organics is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 pasteurised garden organics 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.

The pasteurised garden organics that meets the conditions of this exemption should be applied to land by the consumer within 2 weeks of being received. Where there are extenuating circumstances the pasteurised garden organics should be land applied within 4 weeks. The EPA considers that 6 weeks would be the absolute limit in all circumstances.



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

The pasteurised garden organics order 2014

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 pasteurised garden organics to which 'the pasteurised garden organics exemption 2014' applies. The requirements in this order apply in relation to the supply of pasteurised garden organics for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to pasteurised garden organics. In this order, pasteurised garden organics means raw mulch and/or garden organics that have undergone the process of pasteurisation as a minimum.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies pasteurised garden organics that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of pasteurised garden organics 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

The EPA imposes the following requirements on any processor who supplies pasteurised garden organics.

General conditions

- 4.1. The processor must undertake the process of pasteurisation, as a minimum, on the garden organics supplied under this order.

- 4.2. The processor must ensure that the pasteurised garden organics do not contain asbestos, engineered wood products and preservative treated or coated wood residues.
- 4.3. The processor must not mechanically size-reduce the pasteurised garden organics through methods such as hammer milling, crushing or grinding, as a way of managing the physical contaminant loading.
- 4.4. The processor must ensure that the pasteurised garden organics are ready for land application prior to transport to a consumer.
- 4.5. On or before supplying pasteurised garden organics, the processor must:
 - 4.5.1. prepare a written sampling plan which includes a description of sample preparation and storage procedures for the pasteurised garden organics.
 - 4.5.2. ensure that the absolute maximum or other value of that attribute in the pasteurised garden organics does not exceed the absolute maximum listed in Column 2 of Table 1.

Table 1

Column 1	Column 2
Attributes	Absolute maximum (% 'dry weight')
1. Glass, metal and rigid plastics > 2 mm	0.5
2. Plastics – light, flexible or film > 5 mm	0.05

Test methods

- 4.6. 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.
- 4.7. The processor must ensure that the attributes (listed in Column 1 of Table 1) in the pasteurised garden organics it supplies 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.
 - 4.7.1. Test method for measuring physical contaminants 1 and 2:
 - 4.7.1.1. 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.
 - 4.7.1.2. Results must be reported as % contamination on a dry mass basis.

Record keeping and reporting

- 4.8. 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 4.5.1;
 - all test results in relation to any pasteurised garden organics supplied; and
 - the quantity of any pasteurised garden organics supplied.

- 4.9. The processor must make information available to the consumer of the pasteurised garden organics, on request by that party, on the latest test results for pasteurised garden organics.
- 4.10. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7

5. Definitions

In this order:

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.

consumer means a person who applies, or intends to apply, pasteurised garden organics to land.

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.

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 raw mulch and/or other plant material including leaves, plant trimmings, grass, flowers, fruit and plant propagules. Garden organics must not include material containing asbestos, engineered wood products and preservative treated or coated wood residues.

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, 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 order. A written record of the validation report must be kept for a minimum period of three years.

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 pasteurised garden organics into a material in its final form for supply to a consumer.

raw mulch means plant material that by virtue of the nature and source of the material poses minimal risk of the presence of plant propagules, pathogens and other contaminants. Such materials may be shredded and/or screened to a preferred particle size grading for particular applications. Raw mulch only includes:

- (a) horticultural barks, leaf mulch and wood chip mulch produced from forestry and sawmill residues, and urban wood residues; and
- (b) branches, tree stumps and bark that are absent of leaves, flowers, fruit and plant propagules.

Raw 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.

transaction means:

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

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 of the generator and 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 pasteurised garden organics 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 engineering 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 pasteurised garden organics 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.

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

The EPA considers pasteurisation the minimum treatment to significantly reduce the numbers of plant and animal pathogens and plant propagules. However the EPA recommends full composting of garden organics to achieve maximum biological transformation.

Whilst this order requires that the pasteurised garden organics must not contain engineered wood products, the EPA recognises that the pasteurised garden organics 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 pasteurised garden organics. These procedures must be formally documented. However, as noted in this order, the pasteurised garden organics must not contain any asbestos, or preservative treated or coated wood residues.

The pasteurised garden organics that meet the conditions of this order should be applied to land by the consumer within 2 weeks of being received. Where there are extenuating circumstances the pasteurised garden organics should be land applied within 4 weeks. The EPA considers that 6 weeks would be the absolute limit in all circumstances.



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

The processed foundry sand 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 processed foundry sand 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 processed foundry sand order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to processed foundry sand which is foundry sand that has been blended with either recovered aggregate or compost.
- 1.2. Foundry sand means material recovered from the moulds used in the hot casting of iron, steel and aluminium metals, comprised predominantly of sand and fine sand rejects from sand recovery systems. Processed foundry sand does not include other materials from foundries such as bag dusts, dross and slags, or processed foundry sand from the casting of other materials, including brass, bronze, stainless steel or any other metal alloys, combination of alloys or hot dipping or surface treating.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, processed foundry sand 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.

4. Premises to which this exemption applies

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

5. Revocation

- 5.1. 'The foundry sand in recovered aggregate exemption 2008' which commenced on 17 November 2008 is revoked from 24 November 2014.
- 5.2. 'The foundry sand exemption December 2006' which commenced on 1 December 2006 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 processed foundry sand in recovered aggregate or in compost to land 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, 110 and 114 of the Waste Regulation.
- 6.2. The exemption does not apply in circumstances where processed foundry sand is received 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.

7. Conditions of exemption

The exemption is subject to the following conditions:

- 7.1. At the time the processed foundry sand is received at the premises, the material must meet all chemical and other material requirements for processed foundry sand which are required on or before the supply of processed foundry sand under 'the processed foundry sand order 2014'.
- 7.2. Where the processed foundry sand is a blend of foundry sand and recovered aggregate, it can only be applied to land for road making activities, building, landscaping and construction works. This approval does not apply to any of the following applications:
- 7.2.1. Construction of dams or related water storage infrastructure
 - 7.2.2. Mine site rehabilitation
 - 7.2.3. Quarry rehabilitation
 - 7.2.4. Sand dredge pond rehabilitation
 - 7.2.5. Back filling of quarry voids
 - 7.2.6. Raising or reshaping of land used for agriculture, and
 - 7.2.7. Construction of roads on private land unless:
 - 7.2.7.1. It is applied only to the minimum extent necessary for the construction of the road,

- 7.2.7.2. An applicable development consent has been granted for the activity,
 - 7.2.7.3. It is to provide access (temporary or permanent) to a development approved by a Council, or
 - 7.2.7.4. The works are either exempt or complying development.
- 7.3. Where the processed foundry sand is a blend of foundry sand and compost it can only be applied to land as a soil amendment.
- 7.4. The consumer must keep a written record of the following for a period of six years:
- the quantity and material blend (compost or recovered aggregate) of any processed foundry sand received; and
 - the name and address of the supplier of the processed foundry sand received.
- 7.5. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.6. The consumer must ensure that any application of processed foundry sand occurs within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

compost means material that meets the conditions of 'The compost order 2014'.

consumer means a person who applies, or intends to apply, processed foundry sand to land.

recovered aggregate means material that meets the conditions of 'The recovered aggregate order 2014'.

**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 processed foundry sand in recovered aggregate, or in compost or artificial soil, is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 processed foundry sand in recovered aggregate, or in compost or artificial soil, 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.



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

The processed foundry sand order 2014

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 foundry sand to which 'the foundry sand exemption 2014' applies. The requirements in this order apply in relation to the supply of foundry sand for application to land in a blend with either (i) recovered aggregate or (ii) compost.

1. Waste to which this order applies

- 1.1. This order applies to processed foundry sand which is foundry sand that has been blended with either recovered aggregate or compost.
- 1.2. In this order, foundry sand means material recovered from the moulds used in the hot casting of iron, steel and aluminium metals, comprised predominantly of sand and fine sand rejects from sand recovery systems. Foundry sand does not include other materials from foundries such as bag dusts, dross and slags, or foundry sand from the casting of other materials, including brass, bronze, stainless steel or any other metal alloys, combination of alloys or hot dipping or surface treating.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies foundry sand that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of processed foundry sand 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies foundry sand to a processor.

Sampling requirements

- 4.1. On or before supplying foundry sand to a processor, the generator must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the foundry sand.
 - 4.1.2. Undertake sampling and testing of the foundry sand as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the foundry sand is generated as part of a continuous process, the generator must undertake the following sampling:
 - 4.2.1. Characterisation of the foundry sand by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for foundry sand generated and processed during each 1-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the foundry sand by collecting either 5 composite samples from every 1,000 tonnes (or part thereof) processed or 5 composite samples every 1 month (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the foundry sand is not generated as part of a continuous process, the generator must undertake one-off sampling of a batch, truckload or stockpile of the foundry sand, by collecting 10 composite samples from every 1,000 tonnes (or part thereof) processed and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. The test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 1 and the absolute maximum concentration or other value listed in Column 4 of Table 1 prior to the supply of the foundry sand.

Chemical and other material requirements

- 4.4. The generator must not supply foundry sand to any person if, in relation to any of the chemical and other attributes of the foundry sand:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation, or the routine or one-off sampling, of the foundry sand exceeds the absolute maximum

- concentration or other value listed in Column 4 of Table 1, or
- 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the foundry sand (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
- 4.4.3. The average concentration or other value of that attribute from the routine sampling of the foundry sand (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.
- 4.5. The absolute maximum concentration or other value of that attribute in foundry sand supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.15	Not required	0.3
2. Cadmium	0.5	0.5	1
3. Lead	15	15	30
4. Arsenic	5	Not required	10
5. Beryllium	1.5	Not required	3
6. Chromium (total)	40	40	80
7. Copper	40	40	80
8. Molybdenum	10	Not required	20
9. Nickel	20	20	40
10. Selenium	3	Not required	5
11. Silver	5	Not required	10
12. Zinc	50	50	100
13. Fluoride	100	Not required	200
14. Electrical Conductivity	1 dS/m	1 dS/m	2 dS/m
15. pH*	7 to 8	Not required	6 to 9

*Note: The ranges given for pH are for the minimum and maximum acceptable pH values in the foundry sand.

Test methods

- 4.6. The generator must ensure that any testing of samples required by this order is undertaken by analytical laboratories accredited by the National Association of Testing Authorities, or equivalent.
- 4.7. The generator must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the foundry sand it supplies 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.

4.7.1. Test methods for measuring the mercury concentration:

4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated absolute maximum average concentration in Table 1, Column 2 (i.e. < 0.03 mg/kg dry weight).

4.7.1.2. Report as mg/kg dry weight.

4.7.2. Test methods for measuring chemicals 2 - 12:

4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils (or equivalent).

4.7.2.2. 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 stated maximum average concentration in Table 1, Column 3 (i.e. 1.5 mg/kg dry weight for lead).

4.7.2.3. Report as mg/kg dry weight.

4.7.3. Test methods for measuring the fluoride concentration:

4.7.3.1. Particle size reduction & sample splitting may be required.

4.7.3.2. Analysis using Method 404 (Fluoride) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method with a detection limit < 10% of the stated maximum average concentration in Table 1, Column 3 i.e. 10 mg/kg dry weight).

4.7.3.3. Report as mg/kg dry weight.

4.7.4. Test methods for measuring the electrical conductivity and pH:

4.7.4.1. Sample preparation by mixing 1 part foundry sand with 5 parts distilled water.

4.7.4.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).

4.7.4.3. Report electrical conductivity in deciSiemens per metre (dS/m), and pH as pH.

Notification

4.8. On or before each transaction, the generator must provide the following to each processor to whom the generator supplies the foundry sand:

- a written statement of compliance certifying that all the requirements set out in this order have been met;
- a copy of the processed foundry sand exemption, or a link to the EPA website where the processed foundry sand exemption can be found; and
- a copy of the processed foundry sand order, or a link to the EPA website where the processed foundry sand order can be found.

Record keeping and reporting

- 4.9. The generator must keep a written record of the following for a period of six years:
- the sampling plan required to be prepared under clause 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the foundry sand supplied;
 - the quantity of any foundry sand supplied; and
 - the name and address of each processor to whom the generator supplied the foundry sand.
- 4.10. The generator must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for foundry sand supplied to any processor of the foundry sand.
- 4.11. The generator must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Processor requirements

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

- 5.1. The foundry sand must be mixed or blended with, or otherwise incorporated into:
- 5.1.1. Recovered aggregate where the foundry sand is added at a rate <20% by weight; or
- 5.1.2. Compost where the foundry sand is added at a rate <10% by weight.
- 5.2. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the processed foundry sand:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the processed foundry sand exemption, or a link to the EPA website where the processed foundry sand exemption can be found; and
 - a copy of the processed foundry sand order, or a link to the EPA website where the processed foundry sand order can be found.
- 5.3. The processor must keep a written record, for a period of six years, of the quantity of:
- any foundry sand received from the generator, and the generator's name and address; and
 - any processed foundry sand supplied to the consumer and the consumer's name and address.

6. Definitions

In this order:

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.

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

compost means material that meets all chemical and other material requirements,

for compost which are required on or before the supply of compost under 'the compost order 2014'.

continuous process means a process that produces foundry sand on an ongoing basis.

generator means a person who generates foundry sand for supply to a processor.

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

recovered aggregate means material that meets the chemical and other material requirements for recovered aggregate which are required on or before supply of recovered aggregate under 'The recovered aggregate order 2014'.

transaction means:

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

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 of the generator and 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 foundry sand 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 engineering 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 foundry sand 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.

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



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

The recovered railway ballast 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 recovered railway ballast 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 recovered railway ballast order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to recovered railway ballast that is, or is intended to be, applied to land for building or maintaining railway infrastructure or for road making activities.
- 1.2. Recovered railway ballast means free draining coarse natural aggregate of high strength and a minimum particle size of 9.5 mm.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, the recovered railway ballast 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.

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 recovered railway ballast is carried out.

5. Revocation

- 5.1. 'The recovered railway ballast exemption 2008' which commenced on 20 June 2008 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 recovered railway ballast to land for building or maintaining railway infrastructure or for road making activities 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 recovered railway ballast is 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:

- 7.1. At the time the recovered railway ballast is received at the premises, the material must meet all chemical and other material requirements for recovered railway ballast which are required on or before the supply of recovered railway ballast under 'the recovered railway ballast order 2014'.
- 7.2. The recovered railway ballast can only be applied to land for building or maintaining railway infrastructure or for road making activities.
- 7.3. The consumer must keep a written record of the following for a period of six years:
- the quantity of any recovered railway ballast received; and
 - the name and address of the supplier of the recovered railway ballast received.
- 7.4. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.5. The consumer must ensure that any application of recovered railway ballast to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means a person who applies, or intends to apply, recovered railway ballast to land.

**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 recovered railway ballast is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 recovered railway ballast 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.



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

The recovered railway ballast order 2014

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 recovered railway ballast to which 'the recovered railway ballast exemption 2014' applies. The requirements in this order apply in relation to the supply of recovered railway ballast for application to land for building or maintaining railway infrastructure or for road making activities.

1. Waste to which this order applies

- 1.1. This order applies to recovered railway ballast. In this order, recovered railway ballast means free draining coarse natural aggregate of high strength and a minimum particle size of 9.5 mm.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies recovered railway ballast that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of recovered railway ballast to a consumer for land application 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.

3. Duration

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

4. Processor requirements

The EPA imposes the following requirements on any processor who supplies recovered railway ballast.

Sampling requirements

- 4.1. On or before supplying recovered railway ballast, the processor must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the railway ballast.
 - 4.1.2. Undertake sampling and testing of the recovered railway ballast as required under 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the recovered railway ballast is generated as part of a continuous process, the processor must undertake the following sampling:
 - 4.2.1. Characterisation of the recovered railway ballast by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purpose of characterisation. Characterisation must be conducted for recovered railway ballast generated and processed during each 2-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the recovered railway ballast by collecting either 5 composite samples from every 4,000 tonnes (or part thereof) processed or 5 composite samples every 3 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the recovered railway ballast is not generated as part of a continuous process, the processor must undertake one-off sampling of a batch, truckload or stockpile of the recovered railway ballast, by collecting 10 composite samples from every 4,000 tonnes (or part thereof) processed and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. The test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 1 and the absolute maximum concentration or other value listed in Column 4 of Table 1 prior to the supply of the recovered railway ballast.

Chemical and other material requirements

- 4.4. The processor must not supply recovered railway ballast to any person if, in relation to any of the chemical and other attributes of the recovered railway ballast:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine or one-off sampling of the recovered railway ballast exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or

- 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the recovered railway ballast (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
- 4.4.3. The average concentration or other value of that attribute from the routine sampling of the recovered railway ballast (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.
- 4.5. The absolute maximum concentration or other value of that attribute in any recovered railway ballast supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not required	1
2. Cadmium	0.5	0.5	1
3. Lead	50	50	100
4. Arsenic	15	15	30
5. Chromium (total)	25	Not required	50
6. Copper	25	Not required	50
7. Nickel	25	Not required	50
8. Zinc	75	75	150
9. Electrical Conductivity	1 dS/m	1 dS/m	2 dS/m
10. Metal, glass, asphalt, ceramics and slag	2.5%	Not required	5%
11. Plaster, clay lumps and other friable materials	0.25%	Not required	0.5%
12. Rubber, plastic, bitumen, paper, cloth, paint, wood and other vegetable matter	0.05%	Not required	0.1%

Test methods

- 4.6. 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.
- 4.7. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the recovered railway ballast it supplies 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.

- 4.7.1. Test methods for measuring the mercury concentration:
- 4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated absolute maximum concentration in Table 1, Column 4 (i.e. < 0.2 mg/kg dry weight).
 - 4.7.1.2. Report as mg/kg dry weight.
- 4.7.2. Test methods for measuring chemicals 2 - 8:
- 4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 4.7.2.2. 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 stated absolute maximum concentration in Table 1, Column 4, (i.e. < 0.15 mg/kg dry weight for cadmium).
 - 4.7.2.3. Report as mg/kg dry weight.
- 4.7.3. Test methods for measuring the electrical conductivity:
- 4.7.3.1. Sample preparation by mixing 1 part recovered railway ballast 'as received' with 5 parts distilled water.
 - 4.7.3.2. Analysis using Method 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.3.3. Report in deciSiemens per metre (dS/m).
- 4.7.4. Test method for measuring the attributes 10 - 12:
- 4.7.4.1. NSW Roads & Traffic Authority Test Method T276 Foreign Materials Content of Recycled Crushed Aggregate (or an equivalent method), for the materials listed in 10 - 12 of Column 1, Table 1.
 - 4.7.4.2. Report as %.

Notification

- 4.8. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the recovered railway ballast:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the recovered railway ballast exemption, or a link to the EPA website where the recovered railway ballast exemption can be found; and
 - a copy of the recovered railway ballast order, or a link to the EPA website where the recovered railway ballast order can be found.

Record keeping and reporting

- 4.9. 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 4.1.1;
 - all characterisation, routine and/or one-off test sampling results in relation to the recovered railway ballast supplied;
 - the quantity of the recovered railway ballast supplied; and

- the name and address of each person to whom the processor supplied the recovered railway ballast.
- 4.10. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for recovered railway ballast supplied to any consumer of the recovered railway ballast.
- 4.11. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Definitions

In this order:

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.

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, recovered railway ballast to land.

continuous process means a process that produces recovered railway ballast on an ongoing basis.

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

transaction means:

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

**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 of the generator and 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 recovered railway ballast 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 engineering 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 recovered railway ballast 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.

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



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

The raw mulch 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 raw mulch 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 raw mulch order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to raw mulch that is, or is intended to be, applied to land as a soil amendment.
- 1.2. Raw mulch means plant material that by virtue of the nature and source of the material poses minimal risk of the presence of plant propagules, pathogens and other contaminants. Such materials may be shredded and/or screened to a preferred particle size grading for particular applications. Raw mulch only includes:
 - (a) horticultural barks, leaf mulch and wood chip mulch produced from forestry and sawmill residues, and urban wood residues; and
 - (b) branches, tree stumps and bark that are absent of leaves, flowers, fruit and plant propagules.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, the raw mulch 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.

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 raw mulch is carried out.

5. Revocation

- 5.1. 'The raw mulch 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 raw mulch 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 raw mulch is 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:

- 7.1. At the time the raw mulch is received at the premises, the material must meet all material requirements for raw mulch which are required on or before the supply of raw mulch under 'the raw mulch order 2014'.
- 7.2. The raw mulch can only be applied to land as a soil amendment.
- 7.3. The consumer must ensure that they do not cause or permit the migration of leachate from the land application site.
- 7.4. The consumer must not undertake further processing of the raw mulch at the land application site.
- 7.5. The consumer must ensure that any application of raw mulch to land occurs within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

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

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.

forestry and sawmill residues means 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.

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 raw mulch 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 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 raw mulch is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 raw mulch 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.

Whilst this exemption requires that the raw mulch must not contain engineered wood products and/or physical contaminants, the EPA recognises that the raw mulch may contain extremely low and incidental amounts of engineered wood products and/or physical contaminants of glass, metal, rigid plastics, flexible plastics, or polystyrene. The processor must implement procedures to prevent the presence of engineered wood products and/or physical contaminants in the raw mulch. These procedures must be formally documented. However, as noted in this exemption, the raw mulch must not contain any asbestos, or preservative treated or coated wood residues.

The raw mulch that meets the conditions of this exemption should be applied to land by the consumer within 2 weeks of being received. Where there are extenuating circumstances the raw mulch should be land applied within 4 weeks to ensure that composting of the raw mulch does not occur. The EPA considers that 6 weeks would be the absolute limit in all circumstances.



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

The raw mulch order 2014

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 raw mulch to which 'the raw mulch exemption 2014' applies. The requirements in this order apply in relation to the supply of raw mulch for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to raw mulch. In this order, raw mulch means plant material that by virtue of the nature and source of the material poses minimal risk of the presence of plant propagules, pathogens and other contaminants¹. Such materials may be shredded and/or screened to a preferred particle size grading for particular applications. Raw mulch only includes:
 - (a) horticultural barks, leaf mulch and wood chip mulch produced from forestry and sawmill residues, and urban wood residues; and
 - (b) branches, tree stumps and bark that are absent of leaves, flowers, fruit and plant propagules.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies raw mulch that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of raw mulch 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

¹ Where there is a significant risk of the presence of plant propagules, pathogens and other contaminants, the raw mulch must be assessed against and comply with the conditions of *the pasteurised garden organics order 2014*.

4. Processor requirements

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

- 4.1. On or before supplying raw mulch, the processor must ensure that:
 - 4.1.1. the raw mulch does 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.
 - 4.1.2. the raw mulch is ready for land application prior to transport to a consumer.

5. Definitions

In this order:

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.

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

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.

forestry and sawmill residues means 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.

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 raw mulch 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 of the generator and 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 raw mulch 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 engineering 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 raw mulch 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The reclaimed asphalt pavement 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 reclaimed asphalt pavement 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 or in connection with a process of thermal treatment, provided the consumer complies with the conditions of this exemption.

This exemption should be read in conjunction with 'the reclaimed asphalt pavement order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to reclaimed asphalt pavement that is, or is intended to be:
 - 1.1.1. applied to land for road related activities including road construction or road maintenance activities being:
 - (a) use as a road base and sub base,
 - (b) applied as a surface layer on road shoulders and unsealed roads, and
 - (c) use as an engineering fill material.
 - 1.1.2. used as an alternative input into thermal processes for non-energy recovery purposes in the manufacture of asphalt.
- 1.2. Reclaimed asphalt pavement means an asphalt matrix which was previously used as an engineering material and which must not contain a detectable quantity of coal tar or asbestos.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, reclaimed asphalt pavement to land and any person who uses, or intends to

use, reclaimed asphalt pavement in connection with a process of thermal treatment 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.

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 reclaimed asphalt pavement is carried out.

5. Revocation

- 5.1. 'The reclaimed asphalt pavement exemption 2012' which commenced on 16 January 2012 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 reclaimed asphalt pavement to land or use in connection with a process of thermal treatment at the premises:

- section 48 of the POEO Act in respect of the scheduled activities described in clauses 39, 40 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 reclaimed asphalt pavement is 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:

- 7.1. The reclaimed asphalt pavement can only be:
- 7.1.1. applied to land for road related activities including road construction or road maintenance activities being:
- (a) use as a road base and sub base,
 - (b) applied as a surface layer on road shoulders and unsealed roads, and
 - (c) use as an engineering fill material
- 7.1.2. used as an alternative input into thermal processes for non-energy recovery purposes in the manufacture of asphalt.

- 7.2. The consumer must ensure that any application of reclaimed asphalt pavement to land or any use of reclaimed asphalt pavement in connection with a process of thermal treatment must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

asphalt matrix means the solid material typically comprising of sand, aggregates and similar materials bound together with bituminous and/or other similar binders.

coal tar means the by-product of the thermal processing of coal and means material that has or reasonably is suspected to have present volatile organic contaminants, such as phenols, as well as other toxic materials such as polycyclic aromatic hydrocarbons (PAHs).

consumer means:

- a person who applies, or intends to apply, reclaimed asphalt pavement to land; and
- a person who uses, or intends to use, reclaimed asphalt pavement in connection with a process involving thermal treatment.

detectable quantity of coal tar means the coal tar deemed to be present in an asphalt matrix when it gives a positive red colour result when tested using RTA Test Method T542.

**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 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 reclaimed asphalt pavement is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of reclaimed asphalt pavement 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 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.



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

The reclaimed asphalt pavement order 2014

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 reclaimed asphalt pavement to which 'the reclaimed asphalt pavement exemption 2014' applies. The requirements in this order apply in relation to the supply of reclaimed asphalt pavement for application to land for road maintenance activities, being use as a road base and sub base, applied as a surface layer on road shoulders and unsealed roads, and use as an engineering fill. The requirements in this order also apply to the supply of reclaimed asphalt pavement for use as an alternative raw material in the manufacture of asphalt.

1. Waste to which this order applies

- 1.1. This order applies to reclaimed asphalt pavement. In this order, reclaimed asphalt pavement means an asphalt matrix which was previously used as an engineering material and which must not contain a detectable quantity of coal tar or asbestos.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies reclaimed asphalt pavement that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of reclaimed asphalt pavement to a consumer for land application or in connection with a process involving thermal treatment 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

The EPA imposes the following requirements on any processor who supplies reclaimed asphalt pavement.

General requirements

- 4.1. The processor must implement procedures to minimise the potential to receive or process reclaimed asphalt pavement containing asbestos. These procedures must be formally documented and the records of compliance must be kept for a period of six years.
- 4.2. The processor must implement procedures to minimise the potential to receive or process reclaimed asphalt pavement in which the asphalt matrix contains detectable quantities of coal tar. These procedures must be formally documented and the records of compliance must be kept for a period of six years.

Notification

- 4.3. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the reclaimed asphalt pavement:
 - a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the reclaimed asphalt pavement exemption, or a link to the EPA website where the reclaimed asphalt pavement exemption can be found; and
 - a copy of the reclaimed asphalt pavement order, or a link to the EPA website where the reclaimed asphalt pavement order can be found.

Record keeping and reporting

- 4.4. The processor must keep a written record of the following for a period of six years:
 - the quantity of any reclaimed asphalt pavement supplied; and
 - the name and address of each person to whom the processor supplied the reclaimed asphalt pavement, or the registration details of the vehicle used to transport the reclaimed asphalt pavement.

5. Definitions

In this order:

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.

asphalt matrix means the solid material typically comprising of sand, aggregates and similar materials bound together with bituminous and/or other similar binders.

coal tar means the by-product of the thermal processing of coal and means material that has or reasonably is suspected to have present volatile organic contaminants, such as phenols, as well as other toxic materials such as polycyclic aromatic hydrocarbons (PAHs).

consumer means:

- a person who applies, or intends to apply, reclaimed asphalt pavement to land; and
- a person who uses, or intends to use, reclaimed asphalt pavement in connection with a process involving thermal treatment.

detectable quantity of coal tar means the coal tar deemed to be present in an asphalt matrix when it gives a positive red colour result when tested using RTA Test Method T542.

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

transaction means:

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

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 of the generator and 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 reclaimed asphalt pavement 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 engineering 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 reclaimed asphalt pavement 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.

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



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

The recovered aggregate 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 recovered aggregate 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 recovered aggregate order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to recovered aggregate that is, or is intended to be, applied to land for road making activities, building, landscaping and construction works.
- 1.2. Recovered aggregate is a material comprising of concrete, brick, ceramics, natural rock and asphalt processed into an engineered material. This does not include refractory bricks or associated refractory materials, or asphalt that contains coal tar.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, recovered aggregate 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.

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 recovered aggregate is carried out.

5. Revocation

- 5.1. 'The recovered aggregate exemption 2010' which commenced on 13 September 2010 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 recovered aggregate to land when used for road making activities, building, landscaping and construction works 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 recovered aggregate is 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:

- 7.1. At the time the recovered aggregate is received at the premises, the material must meet all chemical and other material requirements for recovered aggregate which are required on or before the supply of recovered aggregate under 'the recovered aggregate order 2014'.
- 7.2. The recovered aggregate can only be applied to land in road making activities, building, landscaping and construction works. This approval does not apply to any of the following applications:
- 7.2.1. Construction of dams or related water storage infrastructure,
 - 7.2.2. Mine site rehabilitation,
 - 7.2.3. Quarry rehabilitation,
 - 7.2.4. Sand dredge pond rehabilitation,
 - 7.2.5. Back filling of quarry voids,
 - 7.2.6. Raising or reshaping of land used for agriculture, and
 - 7.2.7. Construction of roads on private land unless:
 - (a) the recovered aggregate is applied only to the minimum extent necessary for the construction of the road, and
 - (b) a development consent has been granted under the relevant Environmental Planning Instrument (EPI), or

- (c) it is to provide access (temporary or permanent) to a development approved by a Council, or
 - (d) the works are either exempt or complying development.
- 7.3. The consumer must keep a written record of the following for a period of six years:
- the quantity of any recovered aggregate received; and
 - the name and address of the supplier of the recovered aggregate received.
- 7.4. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.5. The consumer must ensure that any application of recovered aggregate to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

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

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

**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 recovered aggregate is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 recovered aggregate 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.



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

The recovered aggregate order 2014

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 recovered aggregate to which 'the recovered aggregate exemption 2014' applies. The requirements in this order apply in relation to the supply of recovered aggregate for application to land as a road making material, or in building, landscaping or construction works.

1. Waste to which this order applies

- 1.1. This order applies to recovered aggregate. In this order, recovered aggregate means material comprising of concrete, brick, ceramics, natural rock and asphalt processed into an engineered material. This does not include refractory bricks or associated refractory materials, or asphalt that contains coal tar.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies recovered aggregate that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of recovered aggregate 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

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

Sampling requirements

- 4.1. On or before supplying recovered aggregate, the processor must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample

- preparation and storage procedures for the recovered aggregate.
- 4.1.2. Undertake sampling and testing of the recovered aggregate as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the recovered aggregate is generated as part of a continuous process, the processor must undertake the following sampling:
 - 4.2.1. Characterisation of the recovered aggregate by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for recovered aggregate generated and processed every year following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the recovered aggregate by collecting either 5 composite samples from every 4,000 tonnes (or part thereof) processed or 5 composite samples every 3 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
 - 4.3. Where the recovered aggregate is not generated as part of a continuous process, the processor must undertake one-off sampling of a batch, truckload or stockpile of the recovered aggregate, by collecting 10 composite samples from every 4,000 tonnes (or part thereof) processed and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. The test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 1 and the absolute maximum concentration or other value listed in Column 4 of Table 1 prior to the supply of the recovered aggregate.

Chemical and other material requirements

- 4.4. The processor must not supply recovered aggregate to any person if, in relation to any of the chemical and other attributes of the recovered aggregate:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation, or the routine or one-off sampling, of the recovered aggregate exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or
 - 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the recovered aggregate (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
 - 4.4.3. The average concentration or other value of that attribute from the routine sampling of the recovered aggregate (based on the arithmetic mean) exceeds the maximum average concentration or other value

listed in Column 3 of Table 1.

- 4.5. The absolute maximum concentration or other value of that attribute in any recovered aggregate supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not required	1
2. Cadmium	0.5	0.5	1.5
3. Lead	75	75	150
4. Arsenic	20	Not required	40
5. Chromium (total)	60	60	120
6. Copper	60	60	150
7. Nickel	40	Not required	80
8. Zinc	200	200	350
9. Electrical Conductivity	1.5 dS/m	1.5dS/m	3 dS/m
10. Metal	1%	1%	2%
11. Plaster	0.25%	0.25%	0.5%
12. Rubber, plastic, paper, cloth, paint, wood and other vegetable matter	0.2%	0.2%	0.3%

Test methods

- 4.6. 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.
- 4.7. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the recovered aggregate it supplies 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.
- 4.7.1. Test method for measuring the mercury concentration:
- 4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated maximum average concentration in Table 1, Column 2 (i.e. < 0.1 mg/kg dry weight).
- 4.7.1.2. Report as mg/kg dry weight.
- 4.7.2. Test methods for measuring chemicals 2 - 8:

- 4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 4.7.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10% of stated maximum concentration in Table 1, Column 2 (i.e. 1 mg/kg dry weight for lead).
 - 4.7.2.3. Report as mg/kg dry weight.
- 4.7.3. Test methods for measuring the electrical conductivity:
- 4.7.3.1. Sample preparation by mixing 1 part recovered aggregate with 5 parts distilled water.
 - 4.7.3.2. Analysis using Method 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.3.3. Report deciSiemens per metre (dS/m).
- 4.7.4. Test method for measuring the attributes 10 - 12:
- 4.7.4.1. NSW Roads & Traffic Authority Test Method T276 Foreign Materials Content of Recycled Crushed Aggregate (or an equivalent method), for the materials listed in 10 - 12 of Column 1, Table 1.
 - 4.7.4.2. Report as %

Notification

- 4.8. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the recovered aggregate:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the recovered aggregate exemption, or a link to the EPA website where the recovered aggregate exemption can be found; and
 - a copy of the recovered aggregate order, or a link to the EPA website where the recovered aggregate order can be found.

Record keeping and reporting

- 4.9. 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 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the recovered aggregate supplied;
 - the quantity of the recovered aggregate supplied; and
 - the name and address of each person to whom the processor supplied the recovered aggregate.
- 4.10. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for recovered aggregate supplied to any consumer of the recovered aggregate.
- 4.11. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Definitions

In this order:

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.

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, recovered aggregate to land.

continuous process means a process that produces recovered aggregate on an ongoing basis.

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

transaction means:

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

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 of the generator and 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 recovered aggregate 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 engineering 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 recovered aggregate 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The recovered glass sand 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 recovered glass sand 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 recovered glass sand order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to recovered glass sand that is, or is intended to be, applied to land for the purpose of pipe bedding, drainage or for road making activities.
- 1.2. Recovered glass sand means recovered glass that has been processed to produce a 'sand-like' glass material with a particle size diameter generally less than 5 mm, and that contains at least 98% recovered glass.

2. Persons to whom this exemption applies

- 2.1. This exemption applies any person who applies, or intends to apply, the recovered glass sand 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.

4. Premises to which this exemption applies

- 4.1. This exemption only applies to the premises at which the consumer's actual or intended application of recovered glass sand is carried out.

5. Revocation

- 5.1. 'The recovered glass sand exemption 2010' which commenced on 14 June 2010 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 recovered glass sand to land as pipe bedding, drainage or for road making activities 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 recovered glass sand is 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:

- 7.1. At the time the recovered glass sand is received at the premises, the material must meet all chemical and other material requirements for recovered glass sand which are required on or before the supply of recovered glass sand under 'the recovered glass sand order 2014'.
- 7.2. The recovered glass sand can only be applied to land for the purpose of pipe bedding, drainage or for road making activities.
- 7.3. The consumer must keep a written record of the following for a period of six years:
- the quantity of any recovered glass sand received; and
 - the name and address of the supplier of the recovered glass sand received.
- 7.4. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.5. The consumer must ensure that any application of recovered glass sand to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means a person who applies, or intends to apply, recovered glass sand to land.

recovered glass is glass sourced from the collection of domestic or commercial waste. This includes glass collected from domestic commingled recycling collections. This does not include glass recovered from the sorting or processing of:

- mixed municipal waste, or
- mixed commercial and industrial waste, or
- construction and demolition waste, or
- Cathode Ray Tubes or other glass recovered from electrical equipment, or fluorescent or incandescent lights.

**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 recovered glass sand is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 recovered glass sand 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.



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

The recovered glass sand order 2014

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 recovered glass sand to which 'the recovered glass sand exemption 2014' applies. The requirements in this order apply in relation to the supply of recovered glass sand for application to land for the purpose of pipe bedding, drainage or for road making activities.

1. Waste to which this order applies

- 1.1. This order applies to recovered glass sand. In this order, recovered glass sand means recovered glass that has been processed to produce a 'sand-like' glass material with a particle size diameter generally less than 5 mm, and that contains at least 98% recovered glass.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies recovered glass sand that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of recovered glass sand to a consumer for land application 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.

3. Duration

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

4. Processor requirements

The EPA imposes the following requirements on any processor who supplies recovered glass sand.

Sampling requirements

- 4.1. On or before supplying recovered glass sand the processor must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the recovered glass sand.
 - 4.1.2. Undertake sampling and testing of the recovered glass sand as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the recovered glass sand is generated as part of a continuous process, the processor must undertake the following sampling:
 - 4.2.1. Characterisation sampling of recovered glass sand by collecting 20 composite samples of the waste and testing each sample for the chemical and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Where there is a change in inputs that is likely to affect the properties of the recovered glass sand, characterisation must be repeated. Characterisation samples can be used for routine testing and subsequent calculations. Characterisation must be conducted for recovered glass sand generated and processed during each 2-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the recovered glass sand by collecting either 5 composite samples from every 4,000 tonnes (or part thereof) processed or 5 composite samples every 3 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the recovered glass sand is not generated as part of a continuous process, the processor must undertake one-off sampling of a batch, truckload or stockpile of the recovered glass sand, by collecting 10 composite samples from every 4,000 tonnes (or part thereof) processed and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. The test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 1 and the absolute maximum concentration or other value listed in Column 4 of Table 1 prior to the supply of the recovered glass sand.

Chemical and other material requirements

- 4.4. The processor must not supply recovered glass sand to any person if, in relation to any of the chemical and other attributes of the recovered glass sand:

- 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation, or the routine or one-off sampling, of the recovered glass sand exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or
- 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the recovered glass sand (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
- 4.4.3. The average concentration or other value of that attribute from the routine sampling of the recovered glass sand (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.
- 4.5. The absolute maximum concentration or other value of that attribute in any recovered glass sand supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not required	1
2. Cadmium	0.5	0.5	1.5
3. Lead	50	50	100
4. Arsenic	10	Not required	20
5. Chromium (total)	20	Not required	40
6. Copper	40	Not required	120
7. Molybdenum	5	Not required	10
8. Nickel	10	Not required	20
9. Zinc	100	100	300
10. Total Organic Carbon	1.0%	Not required	2.0%
11. Electrical Conductivity	1 dS/m	1 dS/m	2 dS/m
12. Metals	0.25%	0.25%	0.50%
13. Plaster, clay lumps and other friable materials	0.25%	0.25%	0.50%
14. Rubber, plastic, bitumen, paper, cloth, paint, wood and other vegetable matter	0.3%	0.3%	0.5 %

Test methods

- 4.6. 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.
- 4.7. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the recovered glass sand it supplies 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.
- 4.7.1. Test methods for measuring the mercury concentration:
- 4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated absolute maximum concentration in Table 1, Column 4 (i.e. 0.2 mg/kg dry weight).
 - 4.7.1.2. Report as mg/kg dry weight.
- 4.7.2. Test methods for measuring chemicals 2 - 9:
- 4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 4.7.2.2. 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 stated absolute maximum concentration in Table 1, Column 4, (i.e. 0.15 mg/kg dry weight for cadmium).
 - 4.7.2.3. Report as mg/kg dry weight.
- 4.7.3. Test methods for measuring the total organic carbon content:
- 4.7.3.1. Method 105 (Organic Carbon) and using a 2 gram sample in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.3.2. Reporting as % total organic carbon.
- 4.7.4. Test methods for measuring the electrical conductivity:
- 4.7.4.1. Sample preparation by mixing 1 part recovered aggregate 'as received' with 5 parts distilled water.
 - 4.7.4.2. Analysis using Method 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.4.3. Report in deciSiemens per metre (dS/m).

- 4.7.5. Test method for measuring the attributes 12 - 14:
- 4.7.5.1. NSW Roads & Traffic Authority Test Method T276 Foreign Materials Content of Recycled Crushed Aggregate (or an equivalent method), for the materials listed in 12 - 14 of Column 1, Table 1.
- 4.7.5.2. Report as %.

Notification

- 4.8. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the recovered glass sand:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the recovered glass sand exemption, or a link to the EPA website where the recovered glass sand exemption can be found; and
 - a copy of the recovered glass sand order, or a link to the EPA website where the recovered glass sand order can be found.

Record keeping and reporting

- 4.9. 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 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the recovered glass sand supplied;
 - the quantity of the recovered glass sand supplied; and
 - the name and address of each person to whom the processor supplied the recovered glass sand.
- 4.10. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for recovered glass sand supplied to any consumer of the recovered glass sand.
- 4.11. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Definitions

In this order:

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.

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, recovered glass sand to land.

continuous process means a process that produces recovered glass sand on an ongoing basis.

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

recovered glass is glass sourced from the collection of domestic or commercial waste. This includes glass collected from domestic commingled recycling collections. This does not include glass recovered from the sorting or processing of:

- mixed municipal waste, or
- mixed commercial and industrial waste, or
- construction and demolition waste, or
- Cathode Ray Tubes, or
- other glass recovered from electrical equipment, or
- fluorescent or incandescent lights.

transaction means:

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

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 of the generator and 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 recovered glass sand 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 engineering 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 recovered glass sand 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.

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



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

The recovered plasterboard 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 recovered plasterboard from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and 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 recovered plasterboard order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to recovered plasterboard that is, or is intended to be, applied to land as a soil amendment.
- 1.2. Recovered plasterboard means plasterboard from manufacturing, construction or fit-outs which comprises > 80% calcium sulphate dihydrate, < 10% paper, < 10% natural clays, < 10% paraffin waxes, < 10% mica, < 2% crystalline silica, with minor quantities (< 5%) of starch and fibrous glass.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies or intends to apply recovered plasterboard 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.

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 recovered plasterboard is carried out.

5. Revocation

- 5.1. *The lime and gypsum residues from plasterboard exemption 2006* which commenced on 1 December 2006 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 recovered plasterboard to land as an 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, 110 and 114 of the Waste Regulation.

- 6.2. The exemption does not apply in circumstances where recovered plasterboard is 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:

- 7.1. At the time the recovered plasterboard is received at the premises, the material must meet all chemical and other material requirements for recovered plasterboard which are required on or before the supply of recovered plasterboard under 'the recovered plasterboard order 2014'.
- 7.2. The recovered plasterboard can only be applied to land as a soil amendment.
- 7.3. Prior to application of recovered plasterboard to land the consumer must characterise the soil to which the recovered plasterboard will be land applied and use this characterisation to determine appropriate application rates. The application rate must be equal to or less than the agronomic rate for the most limiting factor.
- 7.4. The consumer must incorporate the recovered plasterboard into the topsoil.
- 7.5. The consumer must keep a written record of the following for a period of six years:
- the quantity of any recovered plasterboard received; and
 - the name and address of the supplier of the recovered plasterboard received.
- 7.6. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.7. The consumer must apply recovered plasterboard to land within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

application 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.

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

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 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 recovered plasterboard is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of recovered plasterboard 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 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.



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

The recovered plasterboard order 2014

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 recovered plasterboard to which 'the recovered plasterboard exemption 2014' applies. The requirements in this order apply in relation to the supply of recovered plasterboard for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to recovered plasterboard. In this order, recovered plasterboard means plasterboard from manufacturing, construction or fit-outs which comprises > 80% calcium sulphate dihydrate, < 10% paper, < 10% natural clays, < 10% paraffin waxes, < 10% mica, < 2% crystalline silica, with minor quantities (< 5%) of starch and fibrous glass.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies recovered plasterboard that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of recovered plasterboard to a consumer for land application purposes 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

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

Sampling requirements

- 4.1. On or before supplying recovered plasterboard the processor must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the recovered plasterboard.
 - 4.1.2. Undertake sampling and testing of the recovered plasterboard as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the recovered plasterboard is generated as part of a continuous process, the processor must undertake the following sampling:
 - 4.2.1. Characterisation of the recovered plasterboard by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for recovered plasterboard generated and processed during each 2-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the recovered plasterboard by collecting either 5 composite samples from every 10,000 tonnes (or part thereof) processed or 5 composite samples every 6 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the recovered plasterboard is not generated as part of a continuous process, the processor must undertake one-off sampling of a batch, truckload or stockpile of the recovered plasterboard, by collecting 10 composite samples from every 4,000 tonnes (or part thereof) processed and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. The test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 1 and the absolute maximum concentration or other value listed in Column 4 of Table 1 prior to the supply of the recovered plasterboard.

Chemical and other material requirements

- 4.4. The processor must not supply recovered plasterboard to any person if, in relation to any of the chemical and other attributes of the recovered plasterboard:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine or one-off sampling of the recovered plasterboard exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or
 - 4.4.2. The average concentration or other value of that attribute from the

characterisation or one-off sampling of the recovered plasterboard (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or

- 4.4.3. The average concentration or other value of that attribute from the routine sampling of the recovered plasterboard (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.
- 4.5. The absolute maximum concentration or other value of that attribute in any recovered plasterboard supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not required	1
2. Cadmium	0.5	0.5	1
3. Lead	10	Not required	20
4. Arsenic	10	10	20
5. Chromium (total)	50	50	100
6. Copper	20	20	40
7. Molybdenum	5	Not required	10
8. Nickel	30	30	60
9. Selenium	5	Not required	10
10. Zinc	100	100	200
11. Total Chlorine	0.05%	Not required	0.1%
12. pH *	8 to 11	Not required	7 to 12
13. CaSO ₄ .2H ₂ O	Not Required	Not Required	85%

*Note: The ranges given for pH are for the minimum and maximum acceptable pH values in the recovered plasterboard.

Test methods

- 4.6. 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.
- 4.7. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the recovered plasterboard it supplies 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.

- 4.7.1. Test method for measuring the mercury concentration:

- 4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated maximum average concentration in Table 1, Column 2 (i.e. < 0.1 mg/kg dry weight).
- 4.7.1.2. Report as mg/kg dry weight.
- 4.7.2. Test methods for measuring chemicals 2 - 10:
 - 4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 4.7.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10% of stated maximum concentration in Table 1, Column 2 (i.e. 1 mg/kg dry weight for lead).
 - 4.7.2.3. Report as mg/kg dry weight.
- 4.7.3. Test methods for measuring chlorine:
 - 4.7.3.1. Australian Standard 1038 Coal and coke (or an equivalent analytical method).
 - 4.7.3.2. Report total chlorine as %.
- 4.7.4. Test methods for measuring the total organic carbon content:
 - 4.7.4.1. Method 105 (Organic Carbon) and using a 2 gram sample in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.4.2. Reporting as % total organic carbon.
- 4.7.5. Test methods for measuring the electrical conductivity and pH:
 - 4.7.5.1. Sample preparation by mixing 1 part recovered plasterboard with 5 parts distilled water.
 - 4.7.5.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.5.3. Report electrical conductivity in deciSiemens per metre (dS/m).
- 4.7.6. Test methods for measuring the $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ (gypsum) content:
 - 4.7.6.1. Analysis of total sulphur using ASTM C471M-01 Standard test method for chemical analysis of gypsum and gypsum products (metric) (or an equivalent analytical method)
 - 4.7.6.2. Report as % $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$.

Notification

- 4.8. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the recovered plasterboard:
 - a written statement of compliance certifying that all the requirements set out in this order have been met;

- a copy of the recovered plasterboard exemption, or a link to the EPA website where the recovered plasterboard exemption can be found; and
- a copy of the recovered plasterboard order, or a link to the EPA website where the recovered plasterboard order can be found.

Record keeping and reporting

- 4.9. 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 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the recovered plasterboard supplied;
 - the quantity of the recovered plasterboard supplied; and
 - the name and address of each person to whom the processor supplied the recovered plasterboard.
- 4.10. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for recovered plasterboard supplied to any consumer of the recovered plasterboard.
- 4.11. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Definitions

In this order:

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.

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, recovered plasterboard to land.

continuous process means a process that produces recovered plasterboard on an ongoing basis.

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

transaction means:

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

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 of the generator and 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 recovered plasterboard 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 engineering 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 recovered plasterboard 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The recovered tyres 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 recovered tyres from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and the Waste Regulation in relation to the application of recovered tyres to land, provided the consumer complies with the conditions of this exemption.

This exemption should be read in conjunction with 'the recovered tyres order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to recovered tyres that are, or are intended to be, applied to land for use in civil engineering structures and road making activities (using industry recognised standards such as the Building Code of Australia).
- 1.2. Recovered tyres are a material comprising used, rejected or unwanted tyres, including casings, seconds, shredded tyres or tyre pieces that contain at least 98% tyre material.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, recovered tyres 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.

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 recovered tyres is carried out.

5. Revocation

- 5.1. 'The waste tyre civil engineering exemption 2008' which commenced on 20 June 2008, 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 recovered tyres to land for use in civil engineering structures and road making activities 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 and 142A of the POEO Act (except in relation to land pollution within the meaning of paragraph (a) of the definition of land pollution in the Dictionary to the POEO Act) ; and
- clause 109 and 110 of the Waste Regulation.

- 6.2. The exemption does not apply in circumstances where recovered tyres 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:

- 7.1. At the time the recovered tyres are received at the premises, the material must meet all chemical and other material requirements for recovered tyres which are required on or before the supply of recovered tyres under 'the recovered tyres order 2014'.
- 7.2. The recovered tyres can only be applied to land for use in civil engineering structures and road making activities (using industry recognised standards such as the Building Code of Australia).
- 7.3. The consumer can only apply recovered tyres to land consistent with section 7.2:
- 7.3.1. where they comply with industry recognised standards such as the Building Code of Australia; and
 - 7.3.2. where they are not applied in or beneath water, including groundwater.
- 7.4. The consumer must keep a written record of the following for a period of six years:
- the quantity of any recovered tyres received; and
 - the name and address of the supplier of the recovered tyres received.
- 7.5. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.6. The consumer must ensure that any application of recovered tyres to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

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

**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 recovered tyres are fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 recovered tyres 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.



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

The recovered tyres order 2014

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 recovered tyres to which 'the recovered tyres exemption 2014' applies. The requirements in this order apply to the supply of recovered tyres for application to land for use in civil engineering structures and road making activities (using industry recognised standards such as the Building Code of Australia).

1. Waste to which this order applies

- 1.1. This order applies to recovered tyres. In this order, recovered tyres means used, rejected or unwanted tyres, including casings, seconds, shredded tyres or tyre pieces that contain at least 98% tyre material.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies recovered tyres that have been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of recovered tyres 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

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

Sampling requirements

- 4.1. On or before supplying recovered tyres, the processor must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the recovered tyres.

- 4.1.2. Undertake sampling and testing of the recovered tyres as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the recovered tyres are generated as part of a continuous process, the processor must undertake the following sampling:
 - 4.2.1. Characterisation of the recovered tyres by collecting 20 composite samples of the recovered tyres and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for recovered tyres generated and processed during each 2-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the recovered tyres by collecting either 5 composite samples from every 4,000 tonnes (or part thereof) processed or 5 composite samples every 6 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the recovered tyres are not generated as part of a continuous process, the processor must undertake one-off sampling of a batch, truckload or stockpile of the recovered tyres, by collecting 10 composite samples from every 4,000 tonnes (or part thereof) processed and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. The test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 1 and the absolute maximum concentration or other value listed in Column 4 of Table 1 prior to the supply of the recovered tyres.

Chemical and other material requirements

- 4.4. The processor must not supply recovered tyres to any person if, in relation to any of the chemical and other attributes of the recovered tyres:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine sampling of the recovered tyres exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or
 - 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the recovered tyres (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
 - 4.4.3. The average concentration or other value of that attribute from the routine sampling of the recovered tyres (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.

- 4.5. The absolute maximum concentration or other value of that attribute in any recovered tyres supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	0.5	1
2. Cadmium	0.5	0.5	1
3. Lead	25	25	50
4. Copper	25	25	50
5. Nickel	25	25	50
6. Zinc	1.5%	1.5%	3.0%
7. Electrical Conductivity	0.5 dS/m	0.5 dS/m	1 dS/m
8. Plaster, clay lumps and other friable material	0.1%	0.1%	0.2%
9. Plastic, bitumen, paper, cloth, paint, wood and other vegetable matter	0.05%	0.05%	0.1%

Test methods

- 4.6. 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.
- 4.7. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the recovered tyres it supplies 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.
- 4.7.1. Test method for measuring the mercury concentration:
- 4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated maximum average concentration in Table 1, Column 2 (i.e. < 0.1 mg/kg dry weight).
- 4.7.1.2. Report as mg/kg dry weight.
- 4.7.2. Test methods for measuring chemicals 2 - 6:
- 4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
- 4.7.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an

- equivalent analytical method with a detection limit < 10% of stated maximum concentration in Table 1, Column 2 (i.e. 1 mg/kg dry weight for lead).
- 4.7.2.3. Report as mg/kg dry weight.
- 4.7.3. Test methods for measuring the electrical conductivity:
- 4.7.3.1. Sample preparation by mixing 1 part recovered tyres with 5 parts distilled water.
- 4.7.3.2. Analysis using Method 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
- 4.7.3.3. Report electrical conductivity in deciSiemens per metre (dS/m).
- 4.7.4. Test methods for measuring 8 - 9:
- 4.7.4.1. NSW Roads & Traffic Authority Test Method T276 Foreign Materials Content of Recycled Crushed Concrete (or an equivalent method).
- 4.7.4.2. Report as %.

Notification

- 4.8. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the recovered tyres:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the recovered tyres exemption, or a link to the EPA website where the recovered tyres exemption can be found; and
 - a copy of the recovered tyres order, or a link to the EPA website where the recovered tyres order can be found.

Record keeping and reporting

- 4.9. 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 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the recovered tyres supplied;
 - the quantity of the recovered tyres supplied; and
 - the name and address of each person to whom the processor supplied the recovered tyres.
- 4.10. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for recovered tyres supplied to any consumer of the recovered tyres.
- 4.11. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Definitions

In this order:

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.

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, recovered tyres to land.

continuous process means a process that produces recovered tyres on an ongoing basis.

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

transaction means:

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

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 of the generator and 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 recovered tyres 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 engineering 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 recovered tyres 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The steel furnace slag 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 steel furnace slag or blended steel furnace slag from certain requirements under the *Protection of the Environment Operations Act 1997* (POEO Act) and 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 steel furnace slag order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to steel furnace slag and steel furnace slag blended with other materials (blended steel furnace slag) that is, or is intended to be, applied to land as an engineering material.
- 1.2. Steel furnace slag means waste formed from the reaction of molten iron, scrap steel and fluxes in a Basic Oxygen Steel (BOS) furnace during the manufacture of steel. Steel furnace slag does not include any bag house dust or air pollution control residues.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, steel furnace slag or blended steel furnace slag 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.

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 steel furnace slag or blended steel furnace slag is carried out.

5. Revocation

- 5.1. *The steel furnace slag exemption 2013* which commenced on 1 July 2013 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 steel furnace slag or blended steel furnace slag to land as an engineering material 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 steel furnace slag or blended steel furnace slag is received 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.

7. Conditions of exemption

The exemption is subject to the following conditions:

- 7.1. At the time the steel furnace slag or blended steel furnace slag is received at the premises, the material must meet all chemical and other material requirements for steel furnace slag or blended steel furnace slag which are required on or before the supply of steel furnace slag or blended steel furnace under 'the steel furnace slag order 2014'.
- 7.2. The steel furnace slag or blended steel furnace slag can only be applied to land:
- 7.2.1. in cementitious mixes such as concrete, and
 - 7.2.2. in a non-cementitious mix such as engineered fill in earthworks or for roadmaking activities as follows:
 - (a) sealing aggregate,
 - (b) asphalt aggregate,
 - (c) road pavement, base and sub-base structures,
 - (d) engineered fill,
 - (e) subsoil drains, and
 - (f) filter aggregate.

- 7.3. In cementitious mixes the consumer can only apply blended steel furnace slag to land where it complies with a relevant specification or Australian Standard, or supply agreement.
- 7.4. In non-cementitious mixes the consumer can only apply steel furnace slag to land where such application:
- 7.4.1. complies with the relevant specification or Australian Standard, or complies with supply agreement/s, or
 - 7.4.2. complies with a development consent that specifically considers the use of steel furnace slag or blended steel furnace slag, and
 - 7.4.3. is not applied in or beneath water, including groundwater.
- 7.5. The consumer must keep a written record of the following for a period of six years:
- the quantity of any steel furnace slag and blended steel furnace slag received; and
 - the name and address of the supplier of any steel furnace slag and blended steel furnace slag received.
- 7.6. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.7. The consumer must apply steel furnace slag or blended steel furnace slag to land within a reasonable period of time after receipt.

8. Definitions

In this exemption:

application 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.

cementitious mixes means either steel furnace slag or blended steel furnace slag which has been mixed with general purpose cement, lime and other activators for use in bound applications, where the materials must be chemically bound together.

consumer means a person who applies, or intends to apply, steel furnace slag or blended steel furnace slag to land.

non-cementitious mixes means either steel furnace slag or blended steel furnace slag that is not mixed with general purpose cement, lime and other activators or used in bound applications.

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 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 steel furnace slag is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of steel furnace slag 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 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.



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

The steel furnace slag order 2014

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 steel furnace slag or blended steel furnace slag to which 'the steel furnace slag exemption 2014' applies. The requirements in this order apply in relation to the supply of steel furnace slag and blended steel furnace slag for application to land in line with the uses described in 'the steel furnace slag exemption 2014'.

1. Waste to which this order applies

- 1.1. This order applies to steel furnace slag and steel furnace slag blended with other materials (blended steel furnace slag). In this order, steel furnace slag means waste formed from the reaction of molten iron, scrap steel and fluxes in a Basic Oxygen Steel (BOS) furnace during the manufacture of steel. Steel furnace slag does not include any bag house dust or air pollution control residues.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply as relevant, to any person who supplies steel furnace slag or blended steel furnace slag that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of steel furnace slag or blended steel furnace slag 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies steel furnace slag.

Sampling requirements

- 4.1. On or before supplying steel furnace slag, the generator must:

- 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the steel furnace slag.
- 4.1.2. Undertake sampling and testing of the steel furnace slag as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the steel furnace slag is generated as part of a continuous process, the generator must undertake the following sampling:
 - 4.2.1. Characterisation of the steel furnace slag by collecting 20 composite samples of the waste and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of characterisation. Characterisation must be conducted for steel furnace slag generated and processed during each 2-year period following the commencement of the continuous process; and
 - 4.2.2. Routine sampling of the steel furnace slag by collecting either 5 composite samples from every 10,000 tonnes (or part thereof) processed or 5 composite samples every 6 months (whichever is the lesser); and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1 other than those listed as 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously sampled for the purposes of routine sampling. However, if characterisation sampling occurs at the same frequency as routine sampling, any sample collected and tested for the purposes of characterisation under clause 4.2.1 may be treated as a sample collected and tested for the purposes of routine sampling under clause 4.2.2.
- 4.3. Where the steel furnace slag is not generated as part of a continuous process, the generator must undertake one-off sampling of a batch, truckload or stockpile of the steel furnace slag, by collecting 10 composite samples from every 4,000 tonnes (or part thereof) generated and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1.

Chemical and other material requirements

- 4.4. The generator must not supply steel furnace slag to any person if, in relation to any of the chemical and other attributes of the steel furnace slag:
 - 4.4.1. The concentration or other value of that attribute of any sample collected and tested as part of the characterisation or the routine or one-off sampling of the steel furnace slag exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or
 - 4.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the steel furnace slag (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or
 - 4.4.3. The average concentration or other value of that attribute from the routine sampling of the steel furnace slag (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.

- 4.5. The absolute maximum concentration or other value of that attribute in steel furnace slag supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 4 of Table 1.

Table 1

Column 1	Column 2	Column 3	Column 4
Chemicals and other attributes	Maximum average concentration for characterisation (mg/kg 'dry weight' unless otherwise specified)	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	Not Required	1
2. Cadmium	0.5	0.5	1
3. Lead	10	10	20
4. Arsenic	5	Not Required	10
5. Beryllium	10	Not Required	20
6. Boron ¹	NA	NA	NA
7. Chromium (total)	1000	Not Required	2000
8. Copper	20	Not Required	40
9. Molybdenum	15	15	30
10. Nickel	30	30	60
11. Selenium	2	Not Required	5
12. Zinc	50	50	100
13. Leachable concentration (TCLP) of Chromium	0.1 mg/L	0.1 mg/L	0.2 mg/L
14. Leachable concentration (TCLP) of Zinc	0.5 mg/L	0.5 mg/L	1.0 mg/L
15. Electrical Conductivity ¹	NA	NA	NA
16. pH ²	7.5 to 12.5	Not Required	7 to 13

¹While limits are not included for boron and electrical conductivity these must be tested in each sample and a record kept of the results.

²The ranges given for pH are for the minimum and maximum acceptable pH values in the steel furnace slag.

Test methods

- 4.6. The generator 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.
- 4.7. The generator must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the steel furnace slag 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.

- 4.7.1. Test method for measuring the mercury concentration:
- 4.7.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated maximum average concentration in Table 1, Column 2 (i.e. < 0.1 mg/kg dry weight).
 - 4.7.1.2. Report as mg/kg dry weight.
- 4.7.2. Test methods for measuring chemicals 2 - 12:
- 4.7.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 4.7.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10% of stated maximum average concentration in Table 1, Column 2 (i.e. 1 mg/kg dry weight for lead).
 - 4.7.2.3. Report as mg/kg dry weight.
- 4.7.3. Test method for measuring attributes 13 - 14:
- 4.7.3.1. USEPA SW-846 Method 1311 Toxicity characteristic leaching procedure (or an equivalent analytical method).
 - 4.7.3.2. Report as mg/L.
- 4.7.4. Test methods for measuring the electrical conductivity and pH:
- 4.7.4.1. Sample preparation by mixing 1 part steel furnace slag with 5 parts distilled water.
 - 4.7.4.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.7.4.3. Report electrical conductivity in deciSiemens per metre (dS/m).

Notification

- 4.8. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the steel furnace slag:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the steel furnace slag exemption, or a link to the EPA website where the steel furnace slag exemption can be found; and
 - a copy of the steel furnace slag order, or a link to the EPA website where the steel furnace slag order can be found.

Record keeping and reporting

- 4.9. The generator must keep a written record of the following for a period of six years:
- the sampling plan required to be prepared under clause 4.1.1;
 - all characterisation, routine and/or one-off sampling results in relation to the steel furnace slag supplied;
 - the quantity of any steel furnace slag supplied; and

- the name and address of each person to whom the generator supplied the steel furnace slag.
- 4.10. The generator must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for steel furnace slag supplied to any processor or consumer of the steel furnace slag.
- 4.11. The generator must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.7.

5. Processor requirements

The EPA imposes the following requirements on any processor who supplies blended steel furnace slag.

- 5.1. The processor may only blend steel furnace slag with materials that are the subject of Resource Recovery Exemptions and Resource Recovery Orders if that material complies with all of the chemical and other material requirements under its Resource Recovery Order, and is able to be applied to land under its Resource Recovery Exemption for the same purpose(s) described in clause 5.1.1 and 5.1.2:
- 5.1.1. in cementitious mixes such as concrete, and
 - 5.1.2. in non-cementitious mixes such as an engineered fill in earthworks or for roadmaking activities as follows:
 - 5.1.2.1. sealing aggregate,
 - 5.1.2.2. asphalt aggregate,
 - 5.1.2.3. road pavement, base and sub-base structures,
 - 5.1.2.4. engineered fill,
 - 5.1.2.5. subsoil drains, and
 - 5.1.2.6. filter aggregate.

Notification

- 5.2. On or before each transaction, a processor must provide the following to each person to whom the processor supplies the blended steel furnace slag:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the steel furnace slag exemption, or a link to the EPA website where the steel furnace slag exemption can be found; and
 - a copy of the steel furnace slag order, or a link to the EPA website where the steel furnace slag order can be found.

Record keeping and reporting

- 5.3. The processor must keep a written record of the following for a period of six years:
- the quantity of any steel furnace slag received from the generator and the generator's name and address. This doesn't have to be met by non-processing suppliers.
 - the quantity of any blended steel furnace slag supplied; and
 - the name and address of each person to whom the processor supplied the blended steel furnace slag.

- 5.4. The processor must provide, on request, the most recent characterisation and sampling (whether routine or one-off or both) results for steel furnace slag supplied to any consumer of the steel furnace slag.

6. Definitions

In this order:

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.

cementitious mixes means either steel furnace slag or blended steel furnace slag which has been mixed with general purpose cement, lime and other activators for use in bound applications, where the materials must be chemically bound together.

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, steel furnace slag or blended steel furnace slag to land.

continuous process means a process that produces steel furnace slag on an ongoing basis.

generator means a person who generates steel furnace slag for supply to a processor or consumer.

non-cementitious mixes means either steel furnace slag or blended steel furnace slag that is not mixed with general purpose cement, lime and other activators or used in bound applications.

non-processing supplier means a person who supplies, causes, or permits the supply of cementitious mixes to a consumer and who does not undertake any processing of steel furnace slag.

processor means a person who processes, mixes, blends, or otherwise incorporates steel furnace slag into blended steel surface slag for supply to a consumer.

transaction means:

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

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 of the generator and processor and 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 steel furnace slag 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 engineering 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 steel furnace slag 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.



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

The solid food 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 solid food waste 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 solid food waste order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to solid food waste that is, or is intended to be, applied to land as a soil amendment.
- 1.2. Solid food waste means solid food waste from the manufacture, preparation, sale or consumption of food but does not include post-consumer food waste, grease trap waste, animal waste or liquid waste.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, solid food waste 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.

4. Premises to which this exemption applies

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

5. Revocation

- 5.1. 'The solid food waste exemption' 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 solid food waste 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 solid food waste is 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:

- 7.1. At the time the solid food waste is received at the premises, the material must meet all material characteristics for solid food waste which are required on or before the supply of solid food waste under 'the solid food waste order 2014'.
- 7.2. Where solid food waste has decomposed or changed characteristics such that it meets the definition of liquid food waste prior to land application, 'the liquid food waste exemption 2014' must apply.
- 7.3. The solid food waste can only be applied to land as a soil amendment.
- 7.4. The solid food waste can only be ploughed or mixed into the land and must be incorporated into the topsoil at the time of application. Incorporation means that the solid food waste is completely covered by soil following land application.
- 7.5. The consumer must ensure that the solid food waste is appropriately contained on receipt at the land application site, such that leaching or runoff of waste is prevented prior to land application. The containment must also ensure minimal risk of exposure to and transfer of pathogenic materials from the site by vectors (animals, birds and insects).
- 7.6. The consumer must calculate application rates prior to the solid food waste being land applied. The application rates must be equal to or less than the agronomic rate for the most limiting factor.
- 7.7. The consumer must ensure that they do not cause or permit the migration of leachate from the premises from solid food waste following receipt at the land application site, but prior to land application, and when applying solid food waste to land.

- 7.8. The consumer must apply a livestock-withholding period of 30 days (90 days for lactating and newborn animals) following the land application of solid food waste.
- 7.9. Where solid food waste is intended to be land applied within 4 weeks of any other exempted waste, an investigation to determine the suitability of the proposed application must be undertaken prior to the waste being received at the application site. A report must be prepared including, but not necessarily limited to, information detailing how the receiving site will benefit from multiple wastes being applied, how the matrices and constituents of the different wastes will interact, and what application rates will be appropriate to minimise the potential for environmental harm. The investigation should determine whether the land application will deliver a net benefit. Where a net benefit is not demonstrated the land application of solid food waste must not proceed. A written record of the report must be kept for a minimum period of three years.
- 7.10. The consumer must keep a written record of the following for a period of six years:
- the quantity of any solid food waste received; and
 - the name and address of the supplier of the solid food waste received.
- 7.11. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.12. The consumer must ensure that any application of solid food waste 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.

consumer means a person who applies, or intends to apply, solid food waste 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.

liquid food waste means liquid food waste from the manufacture, preparation, sale or consumption of food.

liquid waste means any waste (other than special waste) that exhibits any of the following:

- a) has an angle of repose of less than 5 degrees above horizontal, or
- b) becomes free-flowing at or below 60°C or when it is transported, or
- c) is generally not capable of being picked up by a spade or shovel.

As defined in the POEO Act.

post-consumer food waste means food waste generated by the end consumer of food and collected from kerbside collections either as a single stream or co-collected with garden waste.

**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 solid food waste is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 solid food waste 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.



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

The solid food waste order 2014

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 solid food waste to which 'the solid food waste exemption 2014' applies. The requirements in this order apply in relation to the supply of solid food waste for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to solid food waste. In this order, solid food waste means solid food waste from the manufacture, preparation, sale or consumption of food but does not include post-consumer food waste, grease trap waste, animal waste or liquid waste.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies solid food waste that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of solid food waste 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies solid food waste.

General conditions

- 4.1. On or before supplying solid food waste, the generator must ensure that:
 - 4.1.1. the solid food waste does not include post-consumer food waste, grease trap waste, animal waste or liquid waste.

- 4.1.2. the solid food waste is not corrosive, and does not contain any physical contaminants, including but not limited to glass, metal, rigid plastics, flexible plastics or polystyrene.
- 4.1.3. the solid food waste is in a form and condition that is suitable for land application.

Notification

- 4.2. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the solid food waste:
 - a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the solid food waste exemption, or a link to the EPA website where the solid food waste exemption can be found; and
 - a copy of the solid food waste order, or a link to the EPA website where the solid food waste order can be found.

Record keeping and reporting

- 4.3. The generator must keep a written record of the following for a period of six years:
 - the quantity of the solid food waste supplied; and
 - the name and address of each person to whom the generator supplied the solid food waste.
- 4.4. The generator must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1.

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

consumer means a person who applies, or intends to apply, solid food waste 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.

generator means a person who generates solid food waste.

post-consumer food waste means food waste generated by the end consumer of food and collected from kerbside collections either as a single stream or co-collected with garden waste.

transaction means:

- in the case of a one-off supply, the supply of a batch, truckload or stockpile of solid food waste that is not repeated.

- in the case where the supplier has an arrangement with the recipient for more than one supply of solid food waste the first supply of solid food waste as required under the arrangement.

**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 of the generator and 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 solid food waste 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 engineering 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 solid food waste 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.

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



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

The stormwater 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 stormwater 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 stormwater order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to stormwater that is, or is intended to be, applied to land.
- 1.2. Stormwater means rainfall that runs off all urban surfaces such as roofs, pavements, carparks, roads, gardens and vegetated open spaces.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, stormwater 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.

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 stormwater is carried out.

5. Revocation

- 5.1. 'The stormwater exemption 2008' which commenced on 20 June 2008 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 stormwater to land 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 stormwater is 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:

- 7.1. The stormwater can only be applied to land within the definitions of "application to land".
- 7.2. The consumer must ensure that any application of stormwater to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

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

**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 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 stormwater is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of stormwater 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 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.



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

The stormwater order 2014

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 stormwater to which 'the stormwater exemption 2014' applies. The requirements in this order apply in relation to the supply of stormwater for application to land.

1. Waste to which this order applies

- 1.1. This order applies to stormwater. In this order, stormwater means rainfall that runs off all urban surfaces such as roofs, pavements, carpark, roads, gardens and vegetated open spaces.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies stormwater that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of stormwater to a consumer 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Definitions

In this order:

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.

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

**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 of the generator and 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 stormwater 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 engineering 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 stormwater 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.

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



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

The excavated public road material 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 excavated public road material 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 excavated public road material order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to excavated public road material that is, or is intended to be, applied to land within the road corridor for public road related activities including road construction, maintenance and installation of road infrastructure facilities.
- 1.2. Excavated public road material means materials:
 - being rock, soil, sand, bitumen, reclaimed asphalt pavement, gravel, slag from iron and steel manufacturing, fly and bottom ash, concrete, brick, ceramics and materials that hold a resource recovery order for use in road making activities; and
 - that have been excavated during the construction and maintenance of council and RMS public roads and public road infrastructure facilities.

This does not include any waste that contains coal tar or asbestos, or any waste that is classified as hazardous, restricted solid, special or liquid waste as defined in the Act.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, excavated public road material 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.

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 excavated public road material is carried out.

5. Revocation

- 5.1. 'The excavated public road material exemption 2012' which commenced on 11 May 2012 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 excavated public road material to land within the road corridor for public road related activities including road construction, maintenance and installation of road infrastructure facilities 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 excavated public road material is 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:

- 7.1. The excavated public road material can only be applied to land within the road corridor for public road related activities including road construction, maintenance and installation of road infrastructure facilities.
- 7.2. The excavated public road material can only be stored within the road corridor at the site where it is to be applied to land.
- 7.3. The excavated public road material cannot be applied to private land.
- 7.4. The consumer must ensure that any application of excavated public road material to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

application 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.

coal tar means the by-product of the thermal processing of coal and means material that has or reasonably is suspected to have present volatile organic contaminants, such as phenols, as well as other toxic materials such as polycyclic aromatic hydrocarbons (PAHs).

consumer means a person who applies, or intends to apply, excavated public road material to land.

council means the council of a local government area.

public roads means:

- (a) any road that is opened or dedicated as a public road, whether under the *Roads Act 1993* (the *Roads Act*) or any other act or law, and
- (b) any road that is declared to be a public road for the purposes of the *Roads Act*.

public road infrastructure facilities means:

- (a) tunnels, ventilation shafts, emergency accessways, vehicle or pedestrian bridges, causeways, road-ferries, retaining walls, toll plazas, toll booths, security systems, bus lanes, transit lanes, transitways, transitway stations, rest areas and road related areas (within the meaning of the *Road Transport (General) Act 2005*), and
- (b) associated public transport facilities for roads used to convey passengers by means of regular bus services within the meaning of the *Passenger Transport Act 1990*, and
- (c) bus layovers that are integrated or associated with roads (whether or not the roads are used to convey passengers by means of regular bus services within the meaning of the *Passenger Transport Act 1990*), and
- (d) traffic control facilities (as defined by the *Transport Administration Act 1988*), RMS road safety training facilities and safety works.

RMS means the Roads and Maritime Services of New South Wales.

road corridor means land that is used for the purposes of a road or road infrastructure facilities or for maintaining or constructing a road or road infrastructure facilities and that is owned or managed by the RMS or council.

**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 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 excavated public road material is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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.

The receipt of excavated public road material 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 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.



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

The excavated public road material order 2014

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 excavated public road material to which 'the excavated public road material exemption 2014' applies. The requirements in this order apply in relation to the supply of excavated public road material for application to land within the road corridor for public road related activities including road construction, maintenance and installation of road infrastructure facilities.

1. Waste to which this order applies

- 1.1. This order applies to excavated public road material. In this order, excavated public road material means materials:
- being rock, soil, sand, bitumen, reclaimed asphalt pavement, gravel, slag from iron and steel manufacturing, fly and bottom ash, concrete, brick, ceramics and materials that hold a resource recovery order for use in road making activities; and
 - that have been excavated during the construction and maintenance of council and RMS public roads and public road infrastructure facilities.

This does not include any waste that contains coal tar or asbestos, or any waste that is classified as hazardous, restricted solid, special or liquid waste as defined in the Act.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies excavated public road material that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of excavated public road material 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Generator requirements

The EPA imposes the following requirements on any generator who supplies excavated public road material.

Notification

- 4.1. On or before each transaction, the generator must provide the following to each person to whom the generator supplies the excavated public road material:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the excavated public road material exemption, or a link to the EPA website where the excavated public road material exemption can be found; and
 - a copy of the excavated public road material order, or a link to the EPA website where the excavated public road material order can be found.

Record keeping and reporting

- 4.2. The generator must keep a written record of the following for a period of six years:
- the quantity of any excavated public road material supplied; and
 - the name and address of each person to whom the generator supplied the excavated public road material.

5. Definitions

In this order:

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.

coal tar means the by-product of the thermal processing of coal and means material that has or reasonably is suspected to have present volatile organic contaminants, such as phenols, as well as other toxic materials such as polycyclic aromatic hydrocarbons (PAHs).

consumer means a person who applies, or intends to apply, excavated public road material to land.

council means the council of a local government area.

generator means a person who generates excavated public road material.

public roads means:

- (a) any road that is opened or dedicated as a public road, whether under the *Roads Act 1993* (the Roads Act) or any other act or law, and
- (b) any road that is declared to be a public road for the purposes of the Roads Act.

public road infrastructure facilities means:

- (a) tunnels, ventilation shafts, emergency accessways, vehicle or pedestrian bridges, causeways, road-ferries, retaining walls, toll plazas, toll booths, security systems, bus lanes, transit lanes, transitways, transitway stations, rest areas and road related areas (within the meaning of the *Road Transport (General) Act 2005*), and
- (b) associated public transport facilities for roads used to convey passengers by means of regular bus services within the meaning of the *Passenger Transport Act 1990*, and
- (c) bus layovers that are integrated or associated with roads (whether or not the roads are used to convey passengers by means of regular bus services within the meaning of the *Passenger Transport Act 1990*), and
- (d) traffic control facilities (as defined by the *Transport Administration Act 1988*), RMS road safety training facilities and safety works.

RMS means the Roads and Maritime Services of New South Wales.

road corridor means land that is used for the purposes of a road or road infrastructure facilities or for maintaining or constructing a road or road infrastructure facilities and that is owned or managed by the RMS or council.

transaction means:

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

**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 of the generator and 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 excavated public road material 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 engineering 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 excavated public road material 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.

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



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

The treated drilling mud 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 treated drilling mud 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 treated drilling mud order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to treated drilling mud that is, or is intended to be, applied to land as engineering fill or for use in earthworks.
- 1.2. Treated drilling mud means drilling mud that has undergone dewatering such that the resultant solid:
 - does not have an angle of repose of less than 5 degrees above horizontal; or
 - does not become free-flowing at or below 60 degrees Celsius or when it is transported; or
 - is generally capable of being picked up by a spade or shovel.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, treated drilling mud 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.

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 treated drilling mud is carried out.

5. Revocation

- 5.1. 'The treated drilling mud exemption 2011' which commenced 24 January 2011 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 treated drilling mud to land as engineering fill or for use in earthworks 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 treated drilling mud is 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:

- 7.1. At the time the treated drilling mud is received at the premises, the material must meet all chemical and other material requirements for treated drilling mud which are required on or before the supply of treated drilling mud under 'the treated drilling mud order 2014'.
- 7.2. The treated drilling mud can only be applied to land as engineering fill or for use in earthworks.
- 7.3. The consumer must keep a written record of the following for a period of six years:
- the quantity of any treated drilling mud received; and
 - the name and address of the supplier of the treated drilling mud received.
- 7.4. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.5. The consumer must ensure that any application of treated drilling mud to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means a person who applies, or intends to apply, treated drilling mud to land.

drilling fluid means a mixture of water and chemical additives including but not limited to bentonite, soda ash (sodium carbonate), sodium hydroxide, lime and polymers.

drilling mud means a mixture of naturally occurring rock and soil, including but not limited to materials such as sandstone, shale and clay, and drilling fluid generated during drilling operations such as horizontal directional drilling or potholing. This does not include drilling mud that has been generated by:

- (a) deep drilling for mineral, gas or coal exploration, or
- (b) drilling through contaminated soils, acid sulphate soils (ASS) or potential acid sulphate soils (PASS).

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 treated drilling mud is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 treated drilling mud 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.



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

The treated drilling mud order 2014

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 treated drilling mud to which 'the treated drilling mud exemption 2014' applies. The requirements in this order apply in relation to the supply of treated drilling mud for application to land as engineering fill or for use in earthworks.

1. Waste to which this order applies

- 1.1. This order applies to treated drilling mud. In this order, treated drilling mud means drilling mud that has undergone dewatering such that the resultant solid:
- does not have an angle of repose of less than 5 degrees above horizontal; or
 - does not become free-flowing at or below 60 degrees Celsius or when it is transported; or
 - is generally capable of being picked up by a spade or shovel.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies treated drilling mud that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of treated drilling mud 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

The EPA imposes the following requirements on any processor who supplies treated drilling mud.

Sampling requirements

- 4.1. On or before supplying treated drilling mud, the processor must:
 - 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the treated drilling mud.
 - 4.1.2. Undertake sampling and testing of the treated drilling mud as required under clauses 4.2 and 4.3 below. The sampling must be carried out in accordance with the written sampling plan and Australian Standard 1141.3.1-2012 Methods for sampling and testing aggregates – Sampling – Aggregates (or equivalent).
- 4.2. Where the treated drilling mud is generated as part of a continuous process, the processor must undertake routine sampling of the treated drilling mud by collecting 10 composite samples per 100 tonnes (dry weight) (or part thereof) processed, and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1.
- 4.3. Where the treated drilling mud is not generated as part of a continuous process, the processor must undertake one-off sampling of a batch, truckload or stockpile of the treated drilling mud, by collecting 5 composite samples from every 10 tonnes (dry weight) (or part thereof) processed and testing each sample for the chemicals and other attributes listed in Column 1 of Table 1.
- 4.4. The test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 1 and the absolute maximum concentration or other value listed in Column 4 of Table 1 prior to the supply of the treated drilling mud.

Chemical and other material requirements

- 4.5. The processor must not supply treated drilling mud to any person if, in relation to any of the chemical and other attributes of the treated drilling mud waste:
 - 4.5.1. The concentration or other value of that attribute of any sample collected and tested as part of the routine or one-off sampling, of the treated drilling mud exceeds the absolute maximum concentration or other value listed in Column 3 of Table 1, or
 - 4.5.2. The average concentration or other value of that attribute from the routine or one-off sampling of the treated drilling mud (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1.
- 4.6. The absolute maximum concentration or other value of that attribute in any treated drilling mud supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 3 of Table 1.

Table 1

Column 1	Column 2	Column 3
Chemicals and other attributes	Maximum average concentration (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	1
2. Cadmium	0.5	1
3. Lead	50	100
4. Arsenic	20	40
5. Chromium (total)	50	100
6. Copper	50	100
7. Nickel	30	60
8. Zinc	100	200
9. Electrical Conductivity	1.5 dS/m	3 dS/m
10. pH *	6 to 9	5.5 to 10
11. Total Polycyclic Aromatic Hydrocarbons (PAHs)	20	40
12. Benzo(a)pyrene	0.5	1
13. Total Petroleum Hydrocarbons (TPHs)	250	500
14. Total Chlorinated Hydrocarbons	0.5	1

*Note: The ranges given for pH are for the minimum and maximum acceptable pH values in the treated drilling mud.

Test methods

- 4.7. 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.
- 4.8. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 1) in the treated drilling mud it supplies 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.
- 4.8.1. Test methods for measuring the mercury concentration:
- 4.8.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated absolute maximum concentration in Table 1, Column 3 (i.e. < 0.2 mg/kg dry weight).
- 4.8.1.2. Report as mg/kg dry weight.
- 4.8.2. Test methods for measuring chemicals 2 - 8:
- 4.8.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.

- 4.8.2.2. 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 stated absolute maximum concentration in Table 1, Column 3 (i.e. 10 mg/kg dry weight for lead).
 - 4.8.2.3. Report as mg/kg dry weight.
- 4.8.3. Test methods for measuring electrical conductivity and pH:
- 4.8.3.1. Sample preparation by mixing 1 part treated drilling mud with 5 parts distilled water.
 - 4.8.3.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.8.3.3. Report electrical conductivity in deciSiemens per metre (dS/m).
- 4.8.4. Test method for measuring PAHs and benzo(a)pyrene:
- 4.8.4.1. Analysis using USEPA SW-846 Method 8100 Polynuclear aromatic hydrocarbons (or an equivalent analytical method).
 - 4.8.4.2. Calculate the sum of all 16 PAHs for total PAHs.
 - 4.8.4.3. Report total PAHs as mg/kg dry weight.
 - 4.8.4.4. Report benzo(a)pyrene as mg/kg.
- 4.8.5. Test method for measuring TPHs:
- 4.8.5.1. Method 506 (Petroleum Hydrocarbons) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.8.5.2. Report as mg/kg dry weight.
- 4.8.6. Test methods for measuring total chlorinated hydrocarbons:
- 4.8.6.1. Analysis using USEPA SW-846 Method 8021B Aromatic and halogenated volatiles by gas chromatography using photoionization and/or electrolytic conductivity detectors (or an equivalent analytical method).
 - 4.8.6.2. Calculate the total sum of carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethene (2 isomers), dichloromethane (methylene chloride), 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride and hexachlorobutadiene concentrations.
 - 4.8.6.3. Report total chlorinated hydrocarbons as mg/kg.

Notification

- 4.9. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the treated drilling mud:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the treated drilling mud exemption, or a link to the EPA website where the treated drilling mud exemption can be found; and
 - a copy of the treated drilling mud order, or a link to the EPA website where the treated drilling mud order can be found.

Record keeping and reporting

- 4.10. 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 4.1.1;
 - all routine or one-off sampling results in relation to the treated drilling mud supplied;
 - the quantity of the treated drilling mud supplied; and
 - the name and address of each person to whom the processor supplied the treated drilling mud.
- 4.11. The processor must provide, on request, the most recent sampling (whether routine or one-off or both) results for treated drilling mud supplied to any consumer of the treated drilling mud.
- 4.12. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.8.

5. Definitions

In this order:

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.

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, treated drilling mud to land.

continuous process means a process that produces treated drilling mud on an ongoing basis.

drilling fluid means a mixture of water and chemical additives including but not limited to bentonite, soda ash (sodium carbonate), sodium hydroxide, lime and polymers.

drilling mud means a mixture of naturally occurring rock and soil, including but not limited to materials such as sandstone, shale and clay, and drilling fluid generated during drilling operations such as horizontal directional drilling or potholing. This does not include drilling mud that has been generated by:

- (a) deep drilling for mineral, gas or coal exploration, or
- (b) drilling through contaminated soils, acid sulphate soils (ASS) or potential acid sulphate soils (PASS).

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

transaction means:

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

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 of the processor and 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 treated drilling mud 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 engineering 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 treated drilling mud 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.

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



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

The treated grease trap 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 treated grease trap waste 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 treated grease trap waste order 2014'.

1. Waste to which this exemption applies

- 1.1. This exemption applies to treated grease trap waste that is, or is intended to be, applied to land as a soil amendment.
- 1.2. Treated grease trap waste means grease trap waste that has undergone treatment according to the following:
 - screening to remove physical contaminants;
 - leaving the grease trap waste to settle by operation of gravity for at least 4 hours, so that the floating fats and oils, the aqueous liquid waste and the settleable portions of the grease trap waste separate; and
 - the floating layer must either be removed or be incorporated into the bottom settled layer following saponification by the addition of lime.

2. Persons to whom this exemption applies

- 2.1. This exemption applies to any person who applies, or intends to apply, treated grease trap waste 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.

4. Premises to which this exemption applies

- 4.1. This exemption applies to the premises at which the consumer's actual or intended application to land of treated grease trap waste is carried out.

5. Revocation

- 5.1. 'The treated grease trap waste exemption 2008' which commenced on 20 June 2008 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 treated grease trap waste 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 treated grease trap waste is 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:

- 7.1. At the time the treated grease trap waste is received at the premises, the material must meet all chemical and other material requirements for treated grease trap waste which are required on or before the supply of treated grease trap waste under 'the treated grease trap waste order 2014'.
- 7.2. The treated grease trap waste can only be applied to land as a soil amendment.
- 7.3. Where the oil and grease content of the treated grease trap waste is 50% or greater the consumer must ensure that the application rate does not exceed 100 t/ha (wet weight) at any location. Where the oil and grease content of the treated grease trap waste is measured at less than the values listed in Column 1 of Table 1 the consumer may apply the material at a rate up to the corresponding rate in Column 2 of Table 1.

Table 1

Column 1	Column 2
Oil and grease content (%)	Maximum application rate (wet t/ha)
<50	120
<40	150
<30	200
<20	300
<10	600

- 7.4. The consumer must ensure that at the time of application the treated grease trap waste is injected into the soil at a depth of between 10cm and 30cm below the soil surface.
- 7.5. The consumer must ensure that the treated grease trap waste does not flow across the surface of the land.
- 7.6. The consumer must ensure that treated grease trap waste is not applied to land in areas where the site characteristics specified in Column 1 of Table 2 do not comply with the requirements listed in Column 2 of Table 2.

Table 2

Column 1	Column 2
Site Characteristic	Requirement
Slope	< 10%
Drainage	No application of wastes permitted in: - Waterlogged soil; and/or - Slow or highly permeable soil
Depth to bedrock	> 60 cm
Surface rock outcrop	< 10%

- 7.7. The consumer must ensure that treated grease trap waste is not applied to land within the buffer zones for protected areas specified in Table 3.

Table 3

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
Farm dams	20	30	5
Drinking water bores	250	250	250
Other bores	50	50	50
Farm driveways and fence lines	5	5	5
Native forests and other significant vegetation types	10	10	5
Animal enclosures	25	50	25
Occupied dwelling	50	100	50

Residential zone	250	500	250
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- 7.8. The consumer must ensure that livestock are withheld from all land which has had treated grease trap waste applied for a period of 30 days following application.
- 7.9. The consumer must keep a written record of the following for a period of six years:
- the quantity of any treated grease trap waste received; and
 - the name and address of the supplier of the treated grease trap waste received.
- 7.10. The consumer must make any records required to be kept under this exemption available to authorised officers of the EPA on request.
- 7.11. The consumer must ensure that any application of treated grease trap waste to land must occur within a reasonable period of time after its receipt.

8. Definitions

In this exemption:

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.

consumer means a person who applies, or intends to apply, treated grease trap waste to land.

grease trap waste means any grease, oils, solids, water or other matter resulting only from the preparation or manufacturing of food that is collected in a grease trap in the usual course of the operation of the grease trap. This definition includes dissolved air flotation (DAF) units used to treat grease trap waste, but does not include grease trap waste collected from grease traps in hospitals and shopping centres other than those solely from the preparation of food.

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

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 treated grease trap waste is fit for the purpose the material is proposed to be used for, and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

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 treated grease trap waste 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.



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

The treated grease trap waste order 2014

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 treated grease trap waste to which 'the treated grease trap waste exemption 2014' applies. The requirements in this order apply in relation to the supply of treated grease trap waste for application to land as a soil amendment.

1. Waste to which this order applies

- 1.1. This order applies to treated grease trap waste. In this order, treated grease trap waste means grease trap waste that has undergone treatment according to the following:
- screening to remove physical contaminants;
 - leaving the grease trap waste to settle by operation of gravity for at least 4 hours, so that the floating fats and oils, the aqueous liquid waste and the settleable portions of the grease trap waste separate; and
 - the floating layer must either be removed or be incorporated into the bottom settled layer following saponification by the addition of lime.

2. Persons to whom this order applies

- 2.1. The requirements in this order apply, as relevant, to any person who supplies treated grease trap waste that has been generated, processed or recovered by the person.
- 2.2. This order does not apply to the supply of treated grease trap waste 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 24 November 2014 and is valid until revoked by the EPA by notice published in the Government Gazette.

4. Processor requirements

The EPA imposes the following requirements on any processor who supplies treated grease trap waste.

Sampling requirements

- 4.1. On or before supplying treated grease trap waste, the processor must:
- 4.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the treated grease trap waste.
 - 4.1.2. Undertake sampling and testing of the treated grease trap waste as required under clause 4.2 below.
- 4.2. The processor must undertake the following sampling:
- 4.2.1. Routine sampling in accordance with Column 1 of Table 1 and testing each sample for the chemical and other attributes listed in Column 1 of Table 2. Each individual sample must be taken from a batch, truckload or stockpile that has not been previously sampled, or
 - 4.2.2. Where the volume of treated grease trap waste received at the premises is insufficient to satisfy the requirements of routine sampling, the processor may undertake one-off sampling of each truck of treated grease trap waste supplied under this order in accordance with Column 2 of Table 1. Each composite sample must be tested for the chemicals and other attributes listed in Column 1 of Table 2. The test results for each composite sample must be validated as compliant with the maximum average concentration or other value listed in Column 2 of Table 2 and the absolute maximum concentration or other value listed in Column 3 of Table 2 prior to the supply of treated grease trap waste.

Table 1

Column 1	Column 2
Routine sampling frequency	One-off sampling frequency
<ul style="list-style-type: none"> • 1 individual sample per day for 1 week (5 samples) to produce a composite sample. Repeat each week (i.e. equates to 4 composite samples per month), and • 5 individual samples per month selected at random to produce a composite sample (i.e. 1 composite sample per month). 	<ul style="list-style-type: none"> • 1 composite sample per truckload

Chemical and other material requirements

- 4.3. The processor must not supply treated grease trap waste to any person if, in relation to any of the chemical and other attributes of the treated grease trap waste:
- 4.3.1. The concentration or other value of that attribute of any sample collected and tested as part of the routine or one-off sampling of the treated grease trap waste exceeds the absolute maximum concentration or other value listed in Column 3 of Table 2, or

- 4.3.2. The average concentration or other value of that attribute from the routine sampling of the treated grease trap waste (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 2.
- 4.4. The absolute maximum concentration or other value of that attribute in any treated grease trap waste supplied under this order must not exceed the absolute maximum concentration or other value listed in Column 3 of Table 2.

Table 2

Column 1	Column 2	Column 3
Chemicals and other attributes	Maximum average concentration for routine testing (mg/kg 'dry weight' unless otherwise specified)	Absolute maximum concentration (mg/kg 'dry weight' unless otherwise specified)
1. Mercury	0.5	1
2. Cadmium	0.5	1
3. Lead	50	100
4. Arsenic	10	20
5. Chromium (total)	50	100
6. Copper	150	250
7. Nickel	30	60
8. Selenium	2.5	5
9. Zinc	200	350
10. Boron	30	60
11. Electrical Conductivity ¹	NA	NA
12. pH ¹	NA	NA
13. Oil and grease ¹	NA	NA
14. Nitrogen (total) ¹	NA	NA
15. Moisture content ¹	NA	NA

1. Note that while limits are not included for electrical conductivity, pH, oil and grease, nitrogen, and moisture content, these must be tested in each sample and records kept of results.

Test methods

- 4.5. 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.
- 4.6. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 2) in the treated grease trap waste it supplies 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.
- 4.6.1. Test method for measuring the mercury concentration:

- 4.6.1.1. Analysis using USEPA SW-846 Method 7471B Mercury in solid or semisolid waste (manual cold vapour technique), or an equivalent analytical method with a detection limit < 20% of the stated maximum average concentration in Table 1, Column 2 (i.e. < 0.1 mg/kg dry weight).
 - 4.6.1.2. Report as mg/kg dry weight.
- 4.6.2. Test methods for measuring chemicals 2 - 9:
- 4.6.2.1. Sample preparation by digesting using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 4.6.2.2. Analysis using USEPA SW-846 Method 6010C Inductively coupled plasma - atomic emission spectrometry, or an equivalent analytical method with a detection limit < 10% of stated maximum concentration in Table 1, Column 2 (i.e. 1 mg/kg dry weight for lead).
 - 4.6.2.3. Report as mg/kg dry weight.
- 4.6.3. Test method for measuring the boron concentration:
- 4.6.3.1. Water soluble boron using a calcium chloride extractable method. Rayment, G.E. and Higginson, F.R. 1992. Method 12C1 or 12C2. In Australian laboratory handbook of soil and water chemical methods, Inkata Press, Australia (or an equivalent analytical method with a detection limit for hot water soluble boron or calcium chloride extractable boron < 10% of stated total concentration).
 - 4.6.3.2. Report as mg/kg dry weight
- 4.6.4. Test methods for measuring the electrical conductivity and pH:
- 4.6.4.1. Sample preparation by mixing 1 part treated grease trap waste with 5 parts distilled water.
 - 4.6.4.2. Analysis using Method 103 (pH) and 104 (Electrical Conductivity) in Schedule B (3): Guideline on Laboratory Analysis of Potentially Contaminated Soils, National Environment Protection (Assessment of Site Contamination) Measure 1999 (or an equivalent analytical method).
 - 4.6.4.3. Report electrical conductivity in deciSiemens per metre (dS/m).
- 4.6.5. Test method for measuring the oil and grease content:
- 4.6.5.1. USEPA SW-846 Method 9071B n-Hexane Extractable Material (HEM) for Sludge, Sediment, and Solid Samples (or an equivalent analytical method). Note that the Soxhlet extraction may need to be repeated for samples containing large quantities of oil and grease.
 - 4.6.5.2. Report oil and grease in mg/kg dry weight.
- 4.6.6. Test method for measuring nitrogen:
- 4.6.6.1. Total nitrogen – semimicro Kjeldahl. Rayment, G.E. and Higginson, F.R. 1992. Method 7A1 or 7A2. In Australian laboratory handbook of soil and water chemical methods, Inkata Press, Australia (or an equivalent analytical method).
 - 4.6.6.2. Report nitrogen in % dry weight.

- 4.6.7. Test method for measuring the moisture content:
- 4.6.7.1. USEPA SW-846 Method 9001 Determination of water in waste materials by quantitative calcium hydride reaction (or an equivalent analytical method).
 - 4.6.7.2. Report moisture content in % w/w.

Notification

- 4.7. On or before each transaction, the processor must provide the following to each person to whom the processor supplies the treated grease trap waste:
- a written statement of compliance certifying that all the requirements set out in this order have been met;
 - a copy of the treated grease trap waste exemption, or a link to the EPA website where the treated grease trap waste exemption can be found; and
 - a copy of the treated grease trap waste order, or a link to the EPA website where the treated grease trap waste order can be found.

Record keeping and reporting

- 4.8. 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 4.1.1;
 - all routine and/or one-off sampling results in relation to the treated grease trap waste supplied;
 - the quantity of the treated grease trap waste supplied; and
 - the name and address of each person to whom the processor supplied the treated grease trap waste.
- 4.9. The processor must provide, on request, the most recent sampling (whether routine or one-off or both) results for treated grease trap waste supplied to any consumer of the treated grease trap waste.
- 4.10. The processor must notify the EPA within seven days of becoming aware that it has not complied with any requirement in clause 4.1 to 4.6.

5. Definitions

In this order:

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.

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, treated grease trap waste to land.

grease trap waste means any grease, oils, solids, water or other matter resulting only from the preparation or manufacturing of food that is collected in a grease trap in the usual course of the operation of the grease trap. This definition includes dissolved air flotation (DAF) units used to treat grease trap waste, but does not include grease trap waste collected from grease traps in hospitals and shopping centres other than those solely from the preparation of food.

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

transaction means:

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

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Environment Protection Authority

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Notes

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Any person or entity which supplies treated grease trap waste 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 engineering 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 treated grease trap waste 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. Failure to comply with the conditions of this order constitutes an offence under clause 93 of the Waste Regulation.

By Authority

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