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.