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

The Concrush Recovered Aggregate Order 2021

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 Concrush Pty Ltd recovered aggregate to which 'The Concrush Recovered Aggregate Exemption 2021' applies. The requirements in this order apply in relation to the supply of Concrush recovered aggregate materials for application to land for the purposes of roadbase material, drainage aggregates and packing fines.

1. Waste to which this order applies

1.1. This order applies to Concrush recovered aggregate. In this order, Concrush recovered aggregate means a mixture of aggregates and sand from original concrete that contains hydrated lime and other cementitious materials, recycled concrete (including washout material and wet concrete), bricks, tiles, gravel, asphalt, roadbase and slag roadbase. The Concrush recovered aggregate is processed at Concrush Pty Ltd (21 Racecourse Road, Teralba NSW 2284; Environment Protection Licence EPL Number 13351; and ACN 097 606 543.

2. Persons to whom this order applies

2.1. The requirements in this order apply to Concrush Pty Ltd.

2.2. This order does not apply to the supply of Concrush recovered aggregate to a consumer for land application at a premises for which the consumer holds a licence under the *Protection of the Environment Operations Act 1997* (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 21 December 2021 and is valid until 21 December 2022 unless revoked by the EPA by notice in writing at an earlier date.

4. Revocation

4.1 The Concrush Recovered Aggregate Order 2021 which commenced on 23 March 2020 is revoked from 21 December 2021.

5. Processor requirements

The EPA imposes the following requirements on any processor who supplies Concrush recovered aggregate.

Sampling Requirements

5.1. On or before each transaction, the processor must:

5.1.1. Prepare a written sampling plan which includes a description of sample preparation and storage procedures for the Concrush recovered aggregate.

5.1.2. Undertake sampling and testing of the Concrush recovered aggregate 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).

5.2. Where the Concrush recovered aggregate is generated as part of continuous process, the processor must undertake the following sampling:

5.2.1. Characterisation of the Concrush recovered aggregate 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 samples for the purposes of characterisation. Characterisation must be conducted for Concrush recovered aggregate generated and processed every year following the commencement of the continuous process.

5.2.2. Routine sampling of the Concrush recovered aggregate by collecting either 5 composite samples from every 4000 tonnes (or part thereof) processed or at least 5 composite samples (minimum 1 composite sample per stockpile) 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 'not required' in Column 3. Each composite sample must be taken from a batch, truckload or stockpile that has not been previously samples for the purposes of routine sampling in that 3-month period. 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 purpose of routine sampling under clause 4.2.2.

5.3. Where the Concrush 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 Concrush recovered aggregate, by collection of 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 supply of the Concrush recovered aggregate.

Chemical and other material requirements

5.4. The processor must not supply Concrush recovered aggregate to any person if, in relation to any of the chemical and other attributes of the Concrush recovered aggregate:

5.4.1. 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 Concrush recovered aggregate exceeds the absolute maximum concentration or other value listed in Column 4 of Table 1, or

5.4.2. The average concentration or other value of that attribute from the characterisation or one-off sampling of the Concrush recovered aggregate (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 2 of Table 1, or

5.4.3. The average concentration or other value of that attribute from the routine sampling of the Concrush recovered aggregate (based on the arithmetic mean) exceeds the maximum average concentration or other value listed in Column 3 of Table 1.

5.5. The absolute maximum concentration or other value of that attribute in any Concrush 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	250
4. Arsenic	20	Not required	40
5. Chromium (total)	1,000	1,000	3,200
6. Copper	60	60	150
7. Nickel	40	Not required	80
8. Zinc	200	200	500
9. Electrical Conductivity[1]	NA	NA	NA
10. Metal	1%	1%	2%
11. Plaster	0.25%	0.25%	0.5%
12. Rubber, plastic, paper, cloth, paint and wood	0.2%	0.2%	0.3%
13. Asbestos[2]	NA	NA	No asbestos found
14. Leachable concentration (TCLP) of Chromium[3]	0.1 mg/L	0.1 mg/L	0.2 mg/L

1. Note that while limits are not included for electrical conductivity it must be tested in each sample and records kept of the results.
2. See test method.
3. See test method.

Test methods

5.6. 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.

5.7. The processor must ensure that the chemicals and other attributes (listed in Column 1 of Table 2) in the Concrush 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.

5.7.1. Test methods for measuring the mercury concentration.

5.7.1.1. 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 Column 3 of Table 2 (i.e. < 0.20 mg/kg dry weight).

5.7.1.2. Report as mg/kg dry weight.

5.7.2. Test methods for measuring chemicals 2 to 8.

5.7.2.1. 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).

5.7.2.2. 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 Column 3 of Table 2, (e.g. 10 mg/kg dry weight for lead).

5.7.2.3. Report as mg/kg dry weight.

5.7.3. Test methods for measuring electrical conductivity.

5.7.3.1. Sample preparation by mixing 1 part excavated natural material with 5 parts distilled water.

5.7.3.2. 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).

5.7.3.3. Report deciSiemens per metre (dS/m).

5.7.4. Test method for measuring the attributes 10 - 12.

5.7.4.1. NSW Roads & Traffic Authority Test Method T276 Foreign Materials Content of Recycled Crushed Aggregate (or an equivalent method).

5.7.4.2. Report as percent (%).

5.7.5. Test method for measuring asbestos.

5.7.5.1. Analysis must include qualitative and quantitative analysis of asbestos.

5.7.5.2. The weight of the sample must be recorded prior to analysis.

5.7.5.3. A minimum of 1 kilogram of Concrush recovered aggregate must be analysed.

5.7.5.4. Analysis must comply with the Australian Standard AS4964-2004, *Method for the qualitative identification of asbestos in bulk samples*, Standards Australia, with the exception of sieve size.

5.7.5.5. Analysis must gravimetrically determine the mass of asbestos containing material ('ACM') (bonded asbestos) retained on a 7mm sieve and assumes 15% of ACM as asbestos.

5.7.5.6. Analysis must gravimetrically determine the mass of asbestos fines ('AF') and fibrous asbestos ('FA') retained on and passing

a 2mm sieve post 7mm sieving. Assumes AF and FA are 100% asbestos containing. Asbestos retained must be calculated as a percentage of the total sample weight.

5.7.5.7. Qualitative analysis must be undertaken by using phase-contract microscopy (PCM) or polarised-light microscopy (PLM) as asbestos identification.

5.7.5.8. Where a laboratory has qualitatively observed asbestos present in a sample through PCM or PLR analysis, but has quantitatively measured that asbestos is below the reporting limit, the laboratory must still report that asbestos was observed.

5.7.6. Test method for measuring leachable concentration (TCLP) of Chromium

5.7.6.1. USEPA SW-846 Method 1311 Toxicity characteristic leaching procedure (or an equivalent analytical method).

5.7.6.2. Report as mg/L.

Notification

5.8. On or before each transaction, the processor must provide the following to each person to whom the processor supplies Concrush recovered aggregate:

- a written statement of compliance certifying that all the requirements set out in this order have been met;
- a copy of 'The Concrush Recovered Aggregate Exemption 2021', or a link to the Concrush website where the Concrush Recovered Aggregate Exemption 2021 can be found; and
- a copy of the 'The Concrush Recovered Aggregate Order 2021' or a link to the Concrush website where the Concrush Recovered Aggregate Order 2021 can be found.

Record keeping and reporting

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

- The sampling plan required to be kept under clause 4.1.1.
- all sampling results in relation to Concrush recovered aggregate supplied;
- the quantity of Concrush recovered aggregate supplied; and
- Either the name and address of each person to whom the processor supplied Concrush recovered aggregate, or the registration details of the vehicle used to transport the Concrush recovered aggregate.

5.10. The processor must provide, on request all sampling results for Concrush recovered aggregate supplied to any consumer of Concrush recovered aggregate.

5.11. The processor of Concrush recovered aggregate must make all information relating to the supply of the material available to the EPA upon request.

5.12. The processor must notify the EPA within 7 days of becoming aware that it has not complied with any requirement in clauses 4.1 to 4.7.

6. Definitions

In this order:

application or apply to land means applying to land by:

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

asbestos has the same meaning as in Schedule 1 to the POEO Act.

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, Concrush recovered aggregate to land.

processor means a person who generates Concrush recovered aggregate for supply to a consumer. The processor in this order is Concrush Pty Ltd (ACN: 097 606 543).

roadbase means the layer of aggregates under the paved layer of a road.

slag roadbase means roadbase that contains slag, a by-product of iron and steel manufacturing processes.

transaction means:

- in the case of a one-off supply, the supply of a batch, truckload or stockpile of Concrush recovered aggregate that is not repeated.
- In the case where a supplier has an arrangement with the recipient for more than 1 supply of Concrush recovered aggregate, the first supply of Concrush recovered aggregate as required under the arrangement.

21/12/2021

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Notes

The EPA may amend or revoke this order at any time. It is the responsibility of the processor to ensure it complies with all relevant requirements of the most current order.

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 Concrush 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 Concrush 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.