

Protection of the Environment Operations (Waste) Regulation 2005 – General Exemption Under Part 6, Clause 51 and 51A

The blast furnace slag exemption 2010

Name

1. This exemption is to be known as 'The blast furnace slag exemption 2010'.

Commencement

2. This exemption commences on 27 December 2010.

Duration

3. This exemption is valid unless revoked by the Environment Protection Authority (EPA) by notice published in the Government Gazette. 'The blast furnace slag exemption 2010' which commenced on 5 March 2010, is revoked from 27 December 2010.

Legislation

4. Under the *Protection of the Environment Operations (Waste) Regulation 2005* (the Regulation):
 - 4.1. Clause 51 (2) authorises the EPA to grant an exemption in relation to any matter or thing including an activity or class of activities, and
 - 4.2. Clause 51A authorises the EPA to exempt a person from any of the following provisions in relation to an activity or class of activities relating to certain waste that is to be land applied or used as a fuel:
 - the provisions of sections 47 to 49 and 88 of the *Protection of the Environment Operations Act 1997* (the Act),
 - the provisions of Schedule 1 to the Act, either in total or as they apply to a particular activity, and
 - the provisions of Part 3 and clauses 45 and 47 of the Regulation.

Exemption

5. In this Notice of Exemption:
 - 5.1. The responsible person listed in Column 1 of Table 1 is exempt from the provision/s listed in Column 2 of that table but only in relation to activities involving the relevant waste and only where the responsible person complies with the conditions referred to in Column 3 of the table.

However, this Notice of Exemption does not exempt the responsible person from the provisions specified in Column 2 where the relevant waste is received at premises that are, despite this exemption, required to be licensed for waste disposal (application to land) activities under the provisions of the Act.
 - 5.2. Where a responsible person complies with the conditions of this Notice of Exemption, the activity referred to in Schedule 1 from which that person is exempt is taken to be a non-scheduled activity for the purposes of the Act.

Table 1

Column 1	Column 2	Column 3
Responsible person	Provisions from which the responsible person is exempt	Conditions to be met by the responsible person
Generator	section 48 of the Act in respect of clause 39 of Schedule 1 to the Act Part 3 of the Regulation	all requirements specified in section 7 and 8
Processor	section 48 of the Act in respect of clause 39 of Schedule 1 to the Act Part 3 of the Regulation	all requirements specified in section 7 and 9
Consumer	section 48 of the Act in respect of clauses 39 and 42 of Schedule 1 to the Act Part 3 of the Regulation section 88 of the Act clause 47 of the Regulation	all requirements specified in section 7 and 10

This Notice of Exemption is a general exemption for the purposes of clause 51(3) of the Regulation.

Definitions

6. In this Notice of Exemption:

Blast furnace slag is a 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.

Characterisation means sampling and testing that must be conducted on the blast furnace slag for the range of chemicals and other attributes listed in Column 1 of Table 2.

Composite sample means a sample that combines 5 discrete sub-samples into a single sample for the purpose of analysis.

Consumer means a person who applies, causes, or permits the application to land of blast furnace slag within the definitions of “application to land” in accordance with the Act. The consumer may be the landholder responsible for the land to which blast furnace slag is applied. Where a person responsible for transporting the blast furnace slag to the land application site is also the party applying the blast furnace slag, this person must meet the responsibilities of the consumer.

Generator means a person who generates, supplies, causes, or permits the supply of blast furnace slag to a processor or consumer. The generator may also be the processor.

NA means not applicable.

Once-off sampling means sampling and testing that must be conducted only once on a batch, truckload or stockpile of blast furnace slag that is not repeated, reproduced and does not form part of a continuous process.

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

Relevant waste means blast furnace slag that meets the requirements of Section 7.

Routine sampling means sampling and testing that must be conducted on the blast furnace slag on an ongoing and regular basis.

General conditions

7. This Notice of Exemption is subject to the following conditions:
 - 7.1. The chemical concentration or other attribute of the blast furnace slag listed in Column 1 of Table 2 must not exceed any of the following:
 - 7.1.1. the absolute maximum concentration or other value listed in Column 4 of Table 2,
 - 7.1.2. for characterisation or once-off tests, the maximum average (based on the arithmetic mean) concentration or other value listed in Column 2 of Table 2, and
 - 7.1.3. for routine tests, the maximum average (based on the arithmetic mean) concentration or other value listed in Column 3 of Table 2.
 - 7.2. The blast furnace slag can only be applied to land as an engineering fill in earthworks or for road making activities as follows:
 - 7.2.1. engineered fill,
 - 7.2.2. engineered pavements (base and sub-base coarse),
 - 7.2.3. filter aggregate
 - 7.2.4. asphalt aggregate
 - 7.3. The blast furnace slag can only be applied to land consistent with section 7.2 where:
 - 7.3.1. it complies with a relevant specification or Australian Standard or supply agreement/s, and
 - 7.3.2. planning or development consent that has specifically considered the use of blast furnace slag has been granted for the project.
 - 7.4. The blast furnace slag can be applied to land consistent with section 7.2 when blended with other exempted materials, provided that the blended materials have been validated as compliant with the conditions of each individual exemption, for the use specified in each exemption.

Generator responsibilities

8. The following conditions must be met by the generator for this exemption to apply:
 - 8.1. Sampling must be undertaken in accordance with Australian Standard 1141 Methods for sampling and testing aggregates (or equivalent). Sampling and information on sample storage and preparation must be detailed in a written sampling plan.
 - 8.2. Where the blast furnace slag is generated as part of a continuous process, the generator must undertake characterisation and routine sampling according to the requirements listed in Column 1 and Column 2 of Table 3, for the range of chemicals and other attributes listed in Column 1 of Table 2.
 - 8.3. Where the blast furnace slag is not generated as part of a continuous process, the generator may undertake once-off sampling of a batch, truckload or stockpile of blast furnace slag according to the requirements listed in Column 3 of Table 3, for the range of chemicals and other attributes listed in Column 1 of Table 2.
 - 8.4. Where there is a change in inputs that is likely to affect the properties in the blast furnace slag, characterisation must be repeated. Characterisation samples can be used for routine testing and subsequent calculations.
 - 8.5. Generators must keep a written record of all characterisation, routine and/or once-off test results for a period of five years.

- 8.6. Records of the quantity and proposed use of blast furnace slag supplied to the processor or consumer and the processor or consumer's name and address must be kept for a period of five years.
- 8.7. The generator of blast furnace slag must provide a written statement of compliance to the processor or consumer with each transaction, certifying that the blast furnace slag complies with the relevant conditions of this exemption.
- 8.8. The generator of blast furnace slag must make information on the latest characterisation and routine test results available to the processor and consumer.
- 8.9. The generator of blast furnace slag must use due diligence to ensure that the relevant waste is utilised in applications that are consistent with the conditions of this exemption.

Processor responsibilities

9. The following conditions must be met by the processor for this exemption to apply:

- 9.1. Records of the quantity and proposed use of blast furnace slag supplied to the consumer and the consumer's name and address must be kept for a period of five years.
- 9.2. Records of the quantity of blast furnace slag received by the processor from the generator, and the generators name and address, must be kept for a period of five years.
- 9.3. The processor of blast furnace slag must provide a written statement of compliance to the consumer with each transaction, certifying that the blast furnace slag complies with the relevant conditions of this exemption.
- 9.4. The processor of blast furnace slag must make information on the latest characterisation and routine test results available to the consumer.
- 9.5. The processor of blast furnace slag must use due diligence to ensure that the relevant waste is utilised in applications that are consistent with the conditions of this exemption.

Consumer responsibilities

10. The following conditions must be met by the consumer for this exemption to apply:

- 10.1. Records of the quantity and use of the blast furnace slag received by the consumer and the suppliers' name and address must be kept for a period of five years.
- 10.2. The blast furnace slag must not be applied in or beneath water including groundwater.
- 10.3. The consumer should note that regardless of having an exemption, the use of blast furnace slag remains subject to all other relevant environmental regulations within the Act and Regulations, including but not limited to land pollution (s142A) and water pollution (s120).
- 10.4. The consumer must land apply the relevant waste within a reasonable period of time.

Chemical and other material property requirements

11. This Notice of Exemption only applies to blast furnace slag where the chemical and other attributes listed in Column 1 of Table 2 comply with the chemical concentrations and other values listed in Column 2, Column 3 and Column 4 of Table 2, when analysed according to test methods specified in Column 5 of Table 2. Note that while limits are not included for boron and electrical conductivity, these must be tested in each sample and records kept of results.

Table 2

Column 1	Column 2	Column 3	Column 4	Column 5
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)	Test method specified within Section
1. Mercury	0.5	Not Required	1	13.1
2. Cadmium	0.5	0.5	1	13.2
3. Lead	10	10	20	13.2
4. Arsenic	5	Not Required	10	13.2
5. Beryllium	10	Not Required	20	13.2
6. Boron	NA	NA	NA	13.2
7. Chromium (total)	50	Not Required	100	13.2
8. Copper	10	Not Required	20	13.2
9. Molybdenum	5	5	10	13.2
10. Nickel	10	Not Required	20	13.2
11. Selenium	2	Not Required	5	13.2
12. Zinc	25	25	50	13.2
13. Electrical Conductivity	NA	NA	NA	13.3
14. pH *	7.5 to 12.5	Not Required	7 to 13	13.3

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

Sampling and testing requirements

12. This Notice of Exemption only applies to blast furnace slag sampled according to the requirements in Table 3.

Table 3

Column 1	Column 2	Column 3
Characterisation sampling frequency	Routine sampling frequency	Once-off sampling frequency
20 composite samples, by taking 1 composite sample from a different batch, truckload or stockpile. This must be repeated every 2 years.	Either 5 composite samples per 10,000 tonnes or 5 composite samples per 6 months.	10 composite samples per 4,000 tonnes e.g. discrete once-off delivery or ship load.

Test methods

13. All testing must be undertaken by analytical laboratories accredited by the National Association of Testing Authorities, or equivalent. All chemicals and other attributes listed in Column 1 of Table 2 must be measured in accordance with the test methods specified below:

- 13.1. Test method for measuring the mercury concentration in blast furnace slag:
 - 13.1.1. Particle size reduction & sample splitting may be required.
 - 13.1.1. 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 2, Column 4 (i.e. 0.2 mg/kg dry weight).
 - 13.1.2. Report as mg/kg dry weight.
- 13.2. Test method for measuring chemicals 2 - 12 in blast furnace slag:
 - 13.2.1. Particle size reduction & sample splitting may be required.
 - 13.2.2. Sample preparation by digestion using USEPA SW-846 Method 3051A Microwave assisted acid digestion of sediments, sludges, soils, and oils.
 - 13.2.3. 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 2, Column 4 (i.e. 2 mg/kg dry weight for lead).
 - 13.2.4. Report as mg/kg dry weight.
- 13.3. Test methods for measuring the electrical conductivity and pH in blast furnace slag:
 - 13.3.1. Sample preparation by mixing 1 part blast furnace slag with 5 parts distilled water.
 - 13.3.2. 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).
 - 13.3.3. Report electrical conductivity in deciSiemens per metre (dS/m).

Exemption Granted

Christopher McElwain
Acting Waste Management
Environment Protection Authority
by delegation

Notes

The EPA may amend or revoke this exemption at any time. It is the responsibility of the generator, processor and consumer to ensure that they comply with all relevant requirements of the most current exemption. The current version of an exemption will be available on the EPA website: www.environment.nsw.gov.au

In gazetting this general exemption, the EPA is exempting the relevant waste from the specific requirements of the Act and Regulations as stated in this exemption. The EPA is not in any way endorsing the use of this substance or guaranteeing that the substance will confer benefit.

The EPA may grant specific exemptions in certain circumstances in recognition of intellectual property rights or where it is necessary to impose specific conditions on the use or application of a waste.

The use of exempted material remains subject to other relevant environmental regulations within the Act and Regulations. For example, a person who pollutes land (s142A) or water (s120), or does not meet the special requirements for asbestos waste (clause 42), regardless of having an exemption, is guilty of an offence and subject to prosecution.

For the purposes of arrangements between a generator, a processor and a consumer, a 'transaction' is taken to mean the contractual agreement between the two parties which specifies the exchange of waste material from one party to another. A 'statement of compliance' must be in writing and be provided with each transaction.

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

The consumer should assess whether or not the exempted material is fit for the purpose the material is proposed to be used and whether this use will cause harm. The consumer may need to seek expert engineering or technical advice.

This exemption does not apply to any material received at a premises that is required to be licensed for waste disposal (application to land) activities under the provisions of the Act. This exemption does not remove the need for a site at which processing occurs to be licensed, if required under Schedule 1 of the Act.

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 Material Safety Data Sheet (MSDS).

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 the development consent requirements of the land.

All records required to be kept under this exemption must be made available to authorised officers of the EPA upon request.

Failure to comply with the conditions of this Notice of Exemption may constitute an offence under clause 51 of the Regulation and the responsible person will be required to comply with the normal regulatory provisions.