



# **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**

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>
<b>Chemicals and other attributes</b>	<b>Maximum average concentration for characterisation</b> (mg/kg 'dry weight' unless otherwise specified)	<b>Maximum average concentration for routine testing</b> (mg/kg 'dry weight' unless otherwise specified)	<b>Absolute maximum concentration</b> (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](http://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.