

End of Waste Code
Sugar Refinery Clarifier Sludge
(ENEW07576119)

Waste Reduction and Recycling Act 2011



Version history

Version	Date	Description of changes
1.00	20 December 2019	Commencement of EOW code on gazettal
1.01	23 June 2023	Minor update to reflect the definition of waste moving into the <i>Waste Reduction and Recycling Act 2011</i> . This does not impact the interests of the producer or user of the resource.

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1. Explanatory Statement

This End of Waste (EOW) code for **sugar refinery clarifier sludge** has been issued by the **chief executive** in accordance with section 159 of the *Waste Reduction and Recycling Act 2011* (WRR Act).

This EOW code states when the **sugar refinery clarifier sludge** becomes a **resource** and any relevant requirements and/or conditions for its use. If the **resource** is not being used in accordance with the relevant requirements and/or conditions of this EOW code, or another type of permit that allows for its use, it is considered a waste under section 8AA of the WRR Act and must be disposed of appropriately at a facility that is **lawfully** able to receive the waste.

2. Guidance

2.1 Resource use versus activity

An EOW code states when a waste stops being a waste following any necessary processing or treatment. A waste becomes a **resource** when it has been determined to meet the requirements of an EOW code. It may be necessary to treat or process the waste prior to meeting those requirements. An Environmental Authority (EA) under the *Environmental Protection Act 1994* (EP Act) is required where an activity being undertaken triggers the threshold for any environmentally relevant activity (ERA). This means that treating or processing the waste to meet the resource quality criteria under the EOW code may require an EA under the EP Act if the activity meets the threshold for an ERA.

2.2 Resource versus waste

A waste that is a **resource** under an EOW code is considered a **resource** only for the use(s) approved in an EOW code. If a **resource** does not meet the requirements of the EOW code and/or is not used in accordance with the EOW code, it is not deemed a **resource**. It remains a waste and must be managed in accordance with waste management requirements under the EP Act and the WRR Act and their subordinate legislation.

A **resource** approved under an EOW code, is deemed to be a waste again, if it is disposed of at a waste disposal facility, or if it is deposited at a place in a way that would, apart from its use approved under an EOW code, constitute a contravention of the general littering provision or the illegal dumping of waste provision under the WRR Act.

2.3 Failure to comply

It is an offence under section 158(1) of the WRR Act for a **registered resource producer** to produce the **resource**, or use, sell or give away the **resource** if they do not comply with the requirements under an EOW code. Further, it is an offence under section 158(2) of the WRR Act for a **person** to use the **resource** in a way, or for a purpose, that does not comply with an EOW code. These offences carry a maximum penalty of 1,665 penalty units for an individual and 8,325 penalty units for a corporation¹.

Please refer to Appendix A of this EOW code for general obligations for all **persons** operating under this EOW code, which includes the **resource users**.

2.4 Lawfulness of the activity

The issuing of this EOW code for the use of a **resource** does not warrant or imply the **lawfulness** of the activity under all legislation, or that approvals necessary under other legislation have or will be approved. It is the

¹ The value of a penalty unit is stated in the *Penalties and Sentences Regulation 2015* (Qld).

responsibility of the **registered resource producer** and **resource user** to identify and obtain all other approvals necessary for the relevant activities.

3. Period of this EOW code

This EOW code takes effect from 20 December 2019 and remains in force until it is amended, cancelled or suspended by the **chief executive**².

4. Waste to which this EOW code applies

This EOW code is limited to **sugar refinery clarifier sludge** which has been **lawfully** generated as a liquid by-product during the **clarification** of **raw sugar syrup** to produce **refined sugar**. The **sugar refinery clarifier sludge** becomes a **resource** when the requirements and conditions under this EOW code are met.

5. Person to whom this EOW code applies

5.1 Registered resource producers of the resource

5.1.1 A **registered resource producer** for this EOW code must comply with the stated registered resource producer requirements in Section 6 – Registered Resource Producer Requirements.

5.2 Resource users

5.2.1 The **resource user** must only use the **resource** in a way, and for a purpose allowed under this EOW code.

5.2.2 The **resource user** must comply with the stated conditions of use in Section 7 – Conditions of Use.

² If an EOW code is to be amended, cancelled or suspended, the chief executive will provide an opportunity to make written submissions by providing a proposed action notice to the registered resource producers; and publishing the proposed action notice on the department's [website](#).

6. Registered Resource Producer Requirements

Registration under this EOW code	
(6.1)	Prior to operating under this EOW code, the producer of the resource must register with the chief executive by giving a notice in the approved form ³ to become a registered resource producer for this EOW code.
Approved resource	
(6.2)	The approved resource is sugar refinery clarifier sludge which complies with <i>Requirement (6.3)</i> of this EOW code.
(6.3)	The registered resource producer must not use, sell or give away the resource unless it complies with all of the following criteria and quality characteristics: <ul style="list-style-type: none"> a) is generated during the clarification of raw sugar syrup to produce refined sugar; and b) does not contain more than the 'maximum permissible concentration of impurities' for fertiliser in accordance with Biosecurity Regulation 2016.
Resource monitoring	
(6.4)	The registered resource producer must sample, measure and record the nutrient content of the resource for at least nitrogen, phosphorus and potassium, on an annual basis as a minimum.
(6.5)	All analysis required under this EOW code must be carried out by a laboratory that has NATA certification, or an equivalent certification, for such analyses.
Information to be provided	
(6.6)	The registered resource producer must provide the following to the resource user upon establishment of an arrangement to sell or give away the resource , and annually thereafter: <ul style="list-style-type: none"> a) a copy of the EOW code for <i>Sugar Refinery Clarifier Sludge (ENEW07576119)</i>⁴; b) the registered resource producer's business name, ABN and address; c) confirmation in writing that the resource being supplied is compliant with the requirements of this EOW code; d) a most recent certificate of analysis for the nutrient content of the resource as per <i>Requirement (6.4)</i>; and e) safety data sheet for the resource.
Records	
(6.7)	The registered resource producer must keep the following records for each load of the resource provided to a resource user : <ul style="list-style-type: none"> a) quantity (in cubic metres) of the resource supplied;

³ The approved form, *Registered Resource Producer for an EOW code*, is available on the Queensland Government website at www.qld.gov.au, using the publication number (ESR/2018/4082) as a search term.

⁴ This can be a physical copy, an electronic copy or a link to the chief executive's [website](#) where this EOW code is available.

	<p>b) the certificate of analysis for the nutrient content of the resource as per <i>Requirement (6.4)</i>; and</p> <p>c) business name, ABN and address of the person receiving the resource.</p>
(6.8)	<p>All records required to be kept by the registered resource producer under this EOW code must be:</p> <p>a) kept by the registered resource producer for a period of not less than five (5) years; and</p> <p>b) provided to the chief executive upon request and in the format requested and time period specified.</p>
Notification of emergencies, incidents and breaches	
(6.9)	Any breach of a requirement of this EOW code must be reported to the chief executive as soon as practicable and within 24 hours of becoming aware of the breach.
(6.10)	Records of any breach of a requirement of this EOW code, including full details of the breach and any subsequent actions taken, must be kept and provided to the chief executive upon request and in the format requested and time period specified.

7. Conditions of Use

Approved uses	
(7.1)	The approved resource is sugar refinery clarifier sludge which complies with <i>Requirement (6.3)</i> of this EOW code and is applied to agricultural land as a fertiliser .
Resource use	
(7.2)	Prior to application of the resource to agricultural land , an appropriately qualified person must determine the agronomic loading rate after considering the resource composition, crop nutritional demand and soil characteristics of the site of use .
(7.3)	The resource must only be applied to the site of use at the agronomic loading rate determined by an appropriately qualified person .
(7.4)	<p>The resource user must maintain the following records for all applications of the resource to agricultural land:</p> <p>a) details of the assessment carried out by the appropriately qualified person to determine the agronomic loading rates in accordance with <i>Condition (7.2)</i>;</p> <p>b) details of the site of use on which application occurs (e.g. soil pH, farm map, block/paddock details and/or GPS coordinates);</p> <p>c) date of application of the resource; and</p> <p>d) actual application rate (expressed as the quantity (e.g. cubic metres per hectare per application)) for each application.</p>
Storage of the resource	
(7.5)	The resource must be stored in a way that prevents or minimises contact with stormwater or runoff.

Records	
(7.6)	The resource user must record the following information for each load of the resource received by the resource user under this EOW code: <ul style="list-style-type: none"> a) business name, ABN and address of the registered resource producer who supplied the resource; b) date the resource user received the resource; and c) quantity (in cubic metres) of the resource received by the resource user.
(7.7)	All records required to be kept by the resource user under the conditions of this EOW code must be: <ul style="list-style-type: none"> a) kept by the resource user for a period of not less than five (5) years; and b) provided to the chief executive upon request and in the format requested and time period specified.
Notification of emergencies , incidents and breaches	
(7.8)	Any breach of a condition of this EOW code must be reported to the chief executive as soon as practicable and within 24 hours of becoming aware of the breach.
(7.9)	Records of any breach of a condition of this EOW code, including full details of the breach and any subsequent actions taken, must be kept and provided to the chief executive upon request and in the format requested and time period specified.

8. Definitions

Words and phrases used throughout this EOW code **in bold** are defined below. Where a definition for a term used in this EOW code is sought and the term is not defined within this EOW code the definitions provided in the relevant legislation shall be used.

'ABN' means Australian Business Number which is a unique 11 digit number issued by the Australian Business Register and identifies a business in Australia.

'agricultural land' means land used for agricultural crops which includes horticulture, turf and land growing field crops or pastures.

'appropriately qualified person' means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards, methods or literature.

'Biosecurity Regulation 2016' means the most recent version of the Queensland Biosecurity Regulation which is in force at the time of generation and/or use of the **resource**.

'chief executive' means the Department of Environment and Science or its successor.

'clarification' means the process of treating **raw sugar syrup** with calcium phosphate at a sugar refinery to remove suspended particles and some of the colour of the raw sugar via flotation, thereby producing **sugar refinery clarifier sludge**.

'emergency(ies)' means a situation where either human health or safety is threatened, or serious or material environmental harm has been or is likely to be caused; and urgent action is necessary to protect the health or safety of persons, or prevent or minimise the harm, or rehabilitate or restore the environment because of the harm.

'fertiliser' (as defined in *Schedule 2 – Code of Practice for the Labelling of Fertilisers and for Contaminants in Fertilisers* of the **Biosecurity Regulation 2016**) means a 'substance that is manufactured, represented, supplied or used for the purpose of directly or indirectly—

- a) fertilising soil; or
- b) supplying nutrients to plants; or
- c) conditioning the soil by altering the chemical, physical or biological condition of the soil;

however, does not include a substance declared, under a Commonwealth Act or regulation, to be an agricultural chemical product or a veterinary chemical product.

'lawful(ly)' means allowed or permitted by law and not contrary to law.

'load' means the volume of **resource** put in or on something for conveyance or transportation, carried at one time. A truck and trailer carrying the **resource** is considered as one load as well as multiple bins travelling by rail. Where the **resource** is transported via conveyor systems, information should be recorded on a daily basis until the transfer ceases.

'NATA' means the National Association of Testing Authorities.

'nutrient' (as defined in Schedule 2 of the Biosecurity Regulation 2016) means any of the following elements if it is included in a fertiliser for the purpose of supporting plant growth: boron, calcium, chlorine, cobalt, copper, iron, magnesium, manganese, molybdenum, nitrogen, phosphorus, potassium, selenium, silicon, sulphur and zinc.

'person' means an individual or a corporation.

'raw sugar syrup' means sucrose which is extracted from sugarcane and contains residual molasses.

'records' include breach notifications, written procedures, analysis results, monitoring reports and monitoring programs required under a condition or requirement of this EOW code.

'refined sugar' is produced when **raw sugar syrup** is processed to remove residual molasses.

'registered resource producer(s)' means a **person** who produces the **resource** and has registered with the **chief executive** (in accordance with *Requirement (6.1)*) to use, sell or give away the **resource** to be used under this EOW code.

'resource' means **sugar refinery clarifier sludge** that meets the criteria and quality characteristics in *Requirement (6.3)* of this EOW code.

'resource user(s)' means a **person** who uses the **resource** for a use approved under this EOW code and in such a manner which does not cause any **environmental harm**, and includes the producer who uses the **resource**.

'safety data sheet' means a document containing data regarding the properties of the **resource** which provides information on handling or working with that substance in a safe manner; and includes information such as physical data toxicity, environmental characteristics, health effects, first aid, reactivity; and storage, disposal, protective equipment and spill handling procedures.

'site of use' means the relevant location(s) where the **resource user** uses the **resource** in accordance with this EOW code.

'sugar refinery clarifier sludge' means a liquid by-product which has been **lawfully** generated during **clarification** of **raw sugar syrup** to produce **refined sugar**.

- END -

Appendix A —General obligation for all persons

This appendix is not intended to provide a comprehensive assessment of all obligations under Queensland law. It provides some general information and persons are encouraged to familiarise themselves with all requirements related to their specific operation.

Responsibilities under the *Environmental Protection Act 1994*

All persons within the State of Queensland must also meet their obligations under the *Environmental Protection Act 1994*, and the regulations made under that Act.

General environmental duty

Section 319 of the *Environmental Protection Act 1994* states that we all have a general environmental duty. This means that we are all responsible for the actions we take that affect the environment. We must not carry out any activity that causes or is likely to cause environmental harm unless we take all reasonable and practicable measures to prevent or minimise the harm. To decide what meets your general environmental duty, you need to consider:

- the nature of the harm or potential harm
- the sensitivity of the receiving environment
- the current state of technical knowledge for the activity
- the likelihood of successful application of the different measures to prevent or minimise environmental harm that might be taken
- the financial implications of the different measures as they would relate to the type of activity.

It is not an offence not to comply with the general environmental duty. However, maintaining your general environmental duty is a defence against the following acts:

- (a) an act that causes serious or material environmental harm or an environmental nuisance
- (b) an act that contravenes a noise standard
- (c) a deposit of a contaminant, or release of stormwater run-off, mentioned in section 440ZG.

More information is available on the Department of Environment and Science website www.des.qld.gov.au.

Some relevant offences under the *Environmental Protection Act 1994*

Causing serious or material environmental harm (sections 437–39)

Material environmental harm is when the harm is not trivial or negligible in nature. Serious environmental harm is harm that is irreversible, of a high impact or widespread, or that is caused to an area of high conservation value or special significance. Damages, or costs required to rehabilitate the environment, of over \$5000 constitutes material environmental harm and damages, or costs required to rehabilitate the environment, of over \$50,000 constitutes serious environmental harm.

Serious or material environmental harm excludes environmental nuisance.

Causing environmental nuisance (section 440)

Environmental nuisance is unreasonable interference with an environmental value caused by aerosols, fumes, light, noise, odour, particles or smoke. It may also include an unhealthy, offensive or unsightly condition because of contamination.

Depositing a prescribed water contaminant in waters (section 440ZG)

Prescribed water contaminants include a wide variety of contaminants listed in Schedule 10 of the Environmental Protection Regulation 2019.

It is your responsibility to ensure that prescribed water contaminants are not left in a place where they may or do enter a waterway, the ocean or a stormwater drain. This includes making sure that stormwater falling on or running across your site does not leave the site contaminated. Where stormwater contamination occurs you must ensure that it is treated to remove contaminants. You should also consider where and how you store material used in your processes onsite to reduce the chance of water contamination.

Placing a contaminant where environmental harm or nuisance may be caused (section 443)

A person must not cause or allow a contaminant to be placed in a position where it could reasonably be expected to cause serious or material environmental harm or environmental nuisance.

Some relevant offences under the *Waste Reduction and Recycling Act 2011*

Littering (section 103)

Litter is any domestic or commercial waste and any material a person might reasonably believe is refuse, debris or rubbish. Litter can be almost any material that is disposed of incorrectly. Litter includes cigarette butts and drink bottles dropped on the ground, fast food wrappers thrown out of the car window, poorly secured material from a trailer. However, litter does not include any gas, dust, smoke or material emitted or produced during, or because of, the normal operations of a building, manufacturing, mining or primary industry.

Illegal dumping of waste (section 104)

Illegal dumping is the dumping of large volumes of litter (200 litres or more) at a place.

Failure to comply with EOW code (section 158)

A registered resource producer for an EOW code must not use, sell or give away the resource unless the registered resource producer complies with the requirements of the EOW code relating to the resource.

A person, other than a registered resource producer, must not use a resource in a way, or for a purpose, that does not comply with an EOW code for the resource.

Approved:

9 December 2019

Enquiries:

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