

Information sheet

Waste Reduction and Recycling Act 2011

Overview of regulated waste categorisation

The purpose of this information sheet is to outline the regulated waste categorisation provisions of Chapter 5, Part 1 and Schedule 9 of the Environmental Protection Regulation 2019 (EP Regulation) for waste generators and receivers. This document is intended for guidance and does not take the place of, or overrule, the relevant legislation. You should refer to the EP Regulation and Waste Reduction and Recycling Act 2011 (WRR Act) to confirm information provided here and to obtain the definitions of relevant terms that have not been included or have been paraphrased (relevant terms from Schedule 19 of the EP Regulation are in bolded italics in this document).

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1. Introduction

Wastes containing certain hazardous properties are classified as regulated waste in the EP Regulation and are subject to more stringent management requirements than other waste, as they may contain contaminants or have properties that present a higher risk to the environment or human health. The previous waste classification system did not consider the concentration of any of the parameters for the waste types listed as regulated waste. A waste would be classified as regulated waste even if the waste had very low levels of a contaminant.

The Environmental Protection (Regulated Waste) Amendment Regulation 2018 (the amending regulation) commenced on 4 February 2019. The amending regulation introduced a new risk-based waste classification framework with two default categories of regulated waste:

- category 1 regulated waste¹ (highest risk); and
- category 2 regulated waste¹ (moderate risk).

The amending regulation also introduced threshold criteria for relevant waste characteristics and a process for testing wastes to determine if a lower risk waste classification is appropriate. A waste generator can accept the default classification and does not have to undertake sampling and testing. If there are no relevant waste characteristics for the type of waste, the default category applies.

2. What is regulated waste?

Regulated waste is **commercial waste** or **industrial waste** of a type, or containing a constituent of a type, listed in Table 1 in Appendix 1 (taken from Schedule 9, Part 1, Column 1 of the EP Regulation²). This table includes the default category of regulated waste (category 1 or category 2).

Regulated waste includes:

- a) for an element—any chemical compound containing the element; and
- b) anything that contains residues of the waste, for example, a container contaminated with the waste (containers will be discussed further in Section 2.1).

However, waste is not regulated waste if:

- a) it is listed Table 2 in Appendix 2 (taken from Schedule 9, Part 3, Division 1 of the EP Regulation²); or
- b) there are **current test results**³ for the waste (where the waste has been tested and shown to be a lower risk category of waste in accordance with the EP Regulation—summarised in this information sheet).

The default categorisation from Table 1 will apply to regulated waste if:

¹ Section 2 of this information sheet discusses what regulated waste is. Regulated waste is defined in section 42 of the EP Regulation. Category 1 and category 2 regulated waste are defined in section 43 of the EP Regulation. Waste is defined in section 8AA of the WRR Act.

² Refer to the EP Regulation and WRR Act to confirm the information provided in this information sheet.

³ Current test results are the waste test results (if they are still current—see Section 4.1 of this information sheet) that show the waste is a lower category than the default category. The waste testing and determination of the waste category must be in accordance with the EP Regulation—summarised in Section 3 of this information sheet. “Current test results” are defined in Schedule 19, Part 2 of the EP Regulation and rely on the definition of “tested waste” and “test results” in sections 50 and 49 of the EP Regulation respectively.

- the generator does not have the waste tested;
- the waste cannot be tested because there are no relevant testing characteristics for the type of waste (e.g. tyres, biosecurity waste⁴, clinical and related waste);
- the waste is tested, but the testing is not in accordance with the EP Regulation requirements. For example:
 - the sampling or testing is not by an appropriately qualified person;
 - leaching analysis is used instead of total quantities for the relevant parameters; or
 - the sampling and testing is not for all the relevant parameters;
- the waste is tested, but the testing does not indicate a different risk category; or
- the waste is tested but the test results³ are no longer current (see Section 4.2 of this information sheet for details of how long test results³ remain current).

The default category is determined by finding the waste types listed in Table 1 that most closely describe or match the waste and noting the corresponding category. The waste type that has the highest risk category is the default category. This method of categorisation is used for determining the default waste category for both **solid waste** and **liquid waste**.

The process for deciding if a waste is regulated waste is summarised in the flowchart in Figure 1.

Note:

- Containers contaminated with waste are discussed in Section 2.1;
- Biosecurity waste is discussed in Section 2.2; and
- The *Environmental Protection Act 1994* (EP Act) has a framework for managing contaminated land. Section 2.3 discusses how the waste categorisation framework and the contaminated land framework interact.

2.1. Containers contaminated with waste

Waste containers that are contaminated with a type of waste listed in Appendix 1 would be regulated waste.

Containers that are returned for refilling with the same product are not considered regulated waste provided:

- the containers have been thoroughly cleaned and clearly identify the previous contents; or
- the product remaining in the containers is not more than 5% of the capacity of the container and the containers are refilled without undergoing any other process.

Waste containers that have been thoroughly cleaned should not be contaminated and should be general waste when disposed of.

Containers would be considered thoroughly cleaned if they clearly identify the previous contents and meet the requirements of the section “Clean containers” in the Environment Protection Authority Victoria’s *Used containers – transport and management* (June 2010), which states:

For the purposes of these guidelines, containers may only be considered clean if they are free of all residues.

There are a number of methods for cleaning containers, but a method that produces the least waste is environmentally, and often economically, preferable.

⁴ While there are no relevant testing characteristics for biosecurity waste, there are circumstances where biosecurity waste is no longer considered to be biosecurity waste. See Section 2.2 for further information.

Any wash-water generated should be incorporated into the batch where practical, especially where additional dilution is required for production processes.

A triple rinse method is indicative of a thorough rinsing process. Every attempt should be made to generate as little wash-water as possible when using this method, whilst still ensuring that the container is free of all residues.

If wash-water cannot be re-used, pressure rinsing will produce less prescribed liquid waste than a triple rinsing method.

It is generally more efficient to clean containers at their point of use, immediately after the container has been emptied. This practice reduces transport of the contaminated container and may make it easier to utilise residues or wash-waters.

Some container designs and materials will be easier to clean than others. Consult with suppliers to check whether alternative containers are available or existing containers can be altered to make cleaning easier. A partnership with a supplier can be an effective way of avoiding and reducing the amount of used containers requiring disposal.

The New South Wales Environment Protection Authority's *Waste classification guidelines – Part 1: Classification of waste* (November 2014) details a triple rinsing procedure.

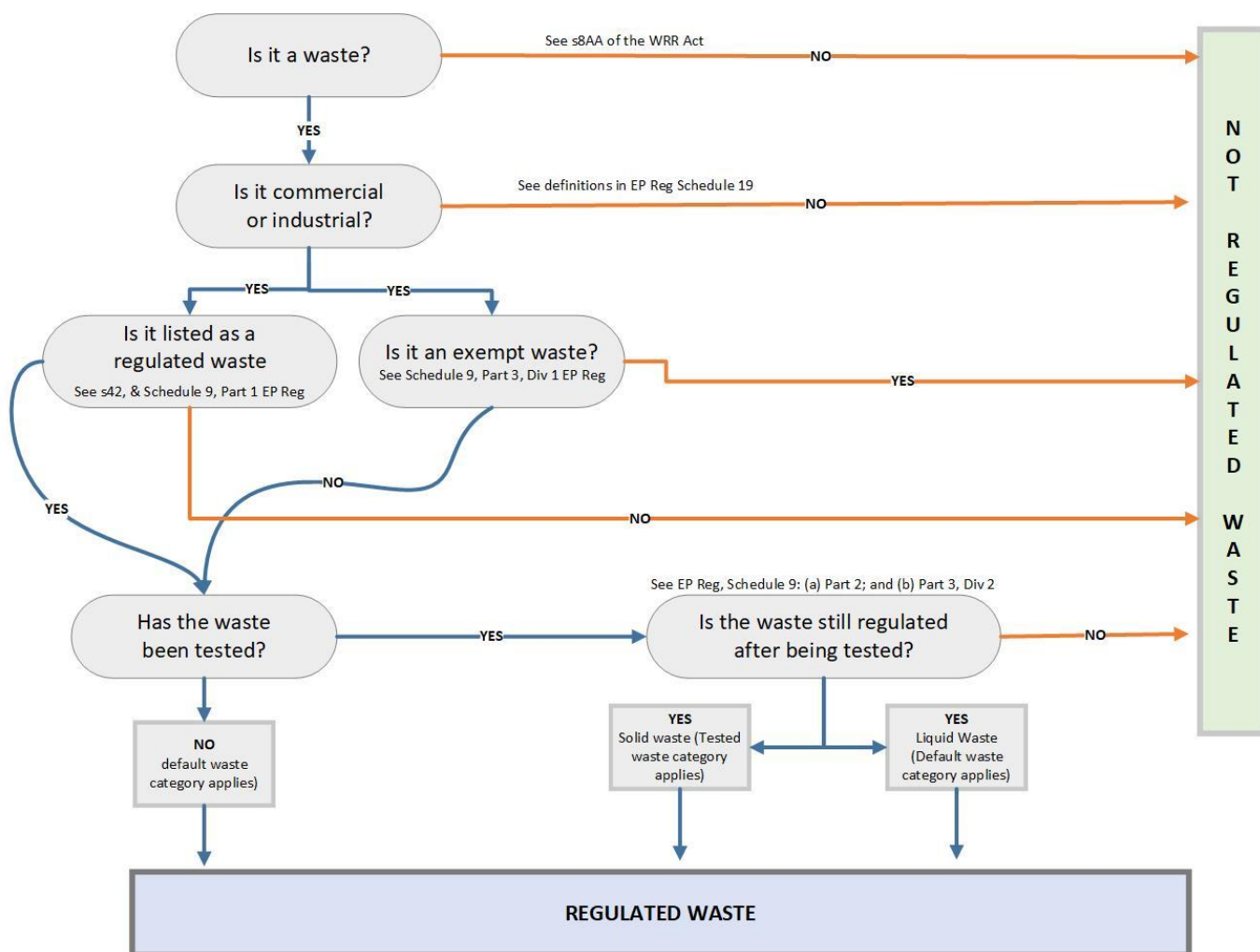


Figure 1: Flowchart summarising the process for determining waste category.

2.2. Biosecurity waste

Biosecurity waste is defined as:

- a) waste that is goods subject to biosecurity control under the *Biosecurity Act 2015 (Cwlth)*; or
- b) goods under the *Biosecurity Act 2015 (Cwlth)* that are or were in contact with waste mentioned in paragraph (a).

If the waste is released from biosecurity control, it will no longer be biosecurity waste. If the waste is not another type of waste listed in Appendix 1, it will be general waste instead of category 1 regulated waste.

The generator⁵, transporter and receiver of the waste will need to:

- keep and provide appropriate records to the administering authority demonstrating that the goods have been released from biosecurity control in accordance with any requirements of the *Biosecurity Act 2015 (Cwlth)*;
- treat these records as current test results and provide a copy when relevant (i.e. generator to provide a copy of the records to the transporter, who then provides a copy to the receiver); and
- ensure that goods released from biosecurity control are managed in accordance with all other requirements of the EP Regulation with respect to waste categorisation and management.

2.3. Soil from a contaminated site

The waste categorisation framework is not designed or intended to be used for contaminated land assessment or site remediation purposes. This means that the notification, assessment and removal of sites relating to the environmental management register (EMR) or contaminated land register (CLR) will continue to be undertaken against contaminated land assessment criteria only and is not impacted by the regulated waste categorisation framework.

Transport and disposal of contaminated soil from properties on the EMR or CLR must be undertaken under a soil disposal permit. The soil disposal permit covers the transport and disposal of the contaminated soil. The waste categorisation provisions of the EP Regulation will not apply to contaminated soil from sites that are on the EMR or CLR.

The contaminated land provisions outline processes for:

- identifying land that should be on the EMR or CLR;
- managing land that is on the EMR or CLR; and
- transporting and disposing of contaminated soil from land that is on the EMR or CLR under soil disposal permits.

These processes do not apply to short-term contamination and the clean-up of spills to avoid land being listed on the CLR (e.g. removing contaminated soil from minor spills at a site that is not on the EMR/CLR). The waste categorisation provisions will apply to the transport and disposal of contaminated soil from these sites.

3. Changing the default waste categorisation

The default categorisation for regulated waste in Appendix 1 applies to a waste unless the waste generator takes action to determine if a lower risk category applies to the waste. The process for this is to:

- identify relevant parameters, if any, and sample the waste
- Note: if there are no relevant parameters for a type of waste, the waste category may not be able to be

⁵ The generator will normally arrange for the waste to go to a facility to treat the waste. The waste will initially be regulated waste and must be dealt with as regulated waste. If the waste is released from biosecurity control after treatment, the treatment facility is effectively the generator of the waste for any subsequent transport and disposal of the waste.

changed. Section 3.2 has more information on the types of regulated waste that can change waste category through testing;

- test the waste; and
- compare the test results³ to the thresholds for the waste categories in Appendices 3 and 4.

This Section gives further detail on the process for changing the categorisation of a regulated waste.

If the process determines the waste is a lower risk category, the waste can be treated as that category of waste while the test results³ are current. The waste is referred to as tested waste⁶. The generator's obligations in relation to tested waste⁶ are detailed in Section 4.

3.1. Who can sample and test?

An appropriately qualified person must sample and test the waste (see sections 45 and 46 of the EP Regulation respectively for the sampling and testing requirements). The person who tests the waste does not have to be the person who sampled the waste.

Appropriately qualified is defined in the *Acts Interpretation Act 1954* as "having the qualifications, experience or standing appropriate to perform the function or exercise the power".

For the purpose of waste categorisation, an appropriately qualified person must be a person who:

- has professional qualifications, training, skills or experience relevant to the nominated subject matter;
- can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature; and
- has hands-on training with an appropriate body or organisation experienced in sampling. Appropriately qualified persons must have demonstrated knowledge and ability to safely take, preserve, store and transport samples within the requirements of this document. This includes refresher training, with records kept on the nature and frequency of the training provided.

For example:

- a professional working in the environmental industry, with an environmentally related degree and experienced in soil and water sampling, would satisfy the requirement of an appropriately qualified person for sampling a range of regulated wastes;
- staff of a NATA accredited laboratory trained in their role would satisfy the appropriately qualified person requirements for testing; and
- a member of a demolition business, trained and competent in sampling for asbestos in various demolition waste types, would satisfy as an appropriately qualified person also, for wastes with this contaminant.

3.2. Types of regulated waste that can change category

The list of types of regulated waste includes both specific elements and broad categories of waste.

Some types of regulated waste obviously align with attributes and substances that can be tested to change category of waste (for example lead, copper, cyanide etc.).

Other types of regulated waste are not (or are not completely) covered by the attributes and substances. For example:

- wastes that do not have corresponding parameters (attributes or substances in the relevant tables) that would enable testing and a potential change to the waste category. These cannot change category. For example:

⁶ Defined in section 50 of the EP Regulation.

- item 49—pharmaceuticals, drugs and medicines;
- item 60—tellurium and tellurium compounds;
- wastes that have limited corresponding parameters that do not cover all the type of regulated waste. Therefore the testing would only change the waste category if the other parameters are not present. For example:
 - item 14—chromium compounds (hexavalent and trivalent)
There are levels for hexavalent only. Therefore the default category applies if the chromium exists in the trivalent form; and
 - item 35—material containing polychlorinated biphenyls (PCBs), polychlorinated naphthalenes (PCNs), polychlorinated terphenyls (PCTs) or polybrominated biphenyls (PBBs)
There are levels for PCBs only. Therefore the default category applies if PCNs, PCTs or PBBs are present.

Similarly, for the broad categories of waste there are:

- wastes that do not have corresponding parameters that would enable testing and a potential change to the waste category; and
- wastes that have corresponding parameters that may or may not be representative of the potential impact of the type of regulated waste. Testing and a potential change to the waste category would be appropriate where the corresponding parameters are representative of the potential impact. Otherwise it will not be appropriate and the waste will retain the default category.

The following types of regulated waste are considered to be within these two classifications:

1 Wastes that do not have corresponding parameters—testing and waste categorisation do not apply

Item	Type	Category
2	animal effluent and residues, including abattoir effluent and poultry and fish processing wastes	2
10	biosecurity waste⁷	1
15	clinical and related waste	1
19	encapsulated, chemically-fixed, solidified or polymerised wastes	2
22	fire debris and fire washwaters	1
24	fly ash	1
25	food processing waste (other than liquid food processing waste)	2
26	grease trap waste	2
33	lead acid batteries (intact)	2
34	liquid food processing waste	2
45	oxidising agents	1
49	pharmaceuticals, drugs and medicines	1
56	sewage sludge and residues, including nightsoil and septic tank sludge	2
63	tyres	2
65	vegetable oils	2
66	waste containing peroxides other than hydrogen peroxide	2
69	waste from the manufacture, formulation or use of biocides or phytopharmaceuticals	1
75	waste from the manufacture or preparation of pharmaceutical products	1
76	waste of an explosive nature, other than an explosive within the meaning of the <i>Explosives Act 1999</i>	1

⁷ Biosecurity waste was item 53 quarantine waste in the Environmental Protection Regulation 2008.

Item 19 Encapsulated, chemically-fixed, solidified or polymerised wastes is default category 2 regulated waste. This waste is generated when regulated waste that is not suitable for disposal is processed to reduce the leachability of the waste so it is suitable for disposal. Once appropriately treated, the waste will continue to be classified as item 19 encapsulated, chemically-fixed, solidified or polymerised wastes.

However, most of the types of waste being immobilised would be category 1 regulated waste because of the elements present (e.g. antimony, arsenic, barium, beryllium, boron, cadmium etc.). This issue is dealt with in Section 3.3.

2 Wastes that sometimes will be considered to have corresponding parameters

Item	Type	Category
12	chemical waste arising from a research and development or teaching activity, including new or unidentified material and material whose effects on human health or the environment are not known	1
21	filter cake, other than filter cake waste generated from the treatment of raw water for the supply of drinking water	1
54	residues from industrial waste treatment or disposal operations	1
58	tannery wastes, including leather dust, ash, sludges and flours	1
67	waste from a heat treatment or tempering operation that uses cyanides	1
68	waste from surface treatment of metals or plastics	2
70	waste from the manufacture, formulation or use of inks, dyes, pigments, paints, lacquers or varnish	2
71	waste from the manufacture, formulation or use of organic solvents	1
72	waste from the manufacture, formulation or use of photographic chemicals or processing materials	2
73	waste from the manufacture, formulation or use of resins, latex, plasticisers, glues or other adhesives	1
74	waste from the manufacture, formulation or use of wood-preserving chemicals	1

For example

Item 12—Chemical waste arising from a research and development or teaching activity, including new or unidentified material and material whose effects on human health or the environment are not known.

It is not possible to test and reclassify waste that includes “new or unidentified material and material whose effects on human health or the environment are not known”. Therefore the default waste category cannot be changed in this circumstance.

Where the waste arises from a research and development or teaching activity and none of the waste is “new or unidentified material and material whose effects on human health or the environment are not known”, then testing and reclassification of the waste can be done where there are relevant parameters for all the types of regulated waste present. While the waste could be tested, the lower quantities and the large number of parameters relevant for the waste may deter testing.

3.3. Encapsulated, chemically-fixed, solidified or polymerised wastes

For simplicity encapsulated, chemically-fixed, solidified or polymerised wastes will be referred to as immobilised waste in this Section.

The EP Regulation does not clearly state how the category 2 classification of immobilised waste interacts with the category 1 classification of the elements in the waste. This Section considers the issues with immobilised waste and how it can be classified.

There are no approved processes for immobilising waste. Nor are there standards setting out when a waste has been effectively immobilised. There are types of waste that could not be landfilled without immobilisation as they would not meet the landfill's waste acceptance criteria. In addition liquid waste is not able to be accepted for disposal at a landfill. Liquid waste must be mixed with solid material so it can be landfilled. This does not make it solidified waste. Solidifying waste is a process for binding waste into a solid mass (e.g. mixing the waste with cement powder so the waste will set hard).

Immobilisation, especially for liquid waste, is more than just mixing the waste with other material. The Western Australian Department of Environment and Conservation's *Landfill waste classification and waste definitions 1996 (as amended December 2009)* definition of immobilisation captures the essence of what encapsulating, chemically-fixing, solidifying or polymerising wastes represents. It defines immobilisation as the "process of fixing or locking up contaminants in a waste such as to render it suitable for long-term disposal".

Waste will be considered to be immobilised if the waste meets the relevant toxicity characteristic leaching procedure (TCLP) requirements of the landfill where the waste will be disposed. Waste that is considered immobilised is item 19 and is category 2 regulated waste. It cannot change to non-regulated waste by testing and it will not be considered to be the category for the specific elements it contains.

Liquid waste that has just been mixed with other material, rather than being solidified, would be considered:

- regulated waste based on the default categorisation or the testing of the liquid prior to mixing with other material if the other material is not regulated waste; or
- regulated waste based on both the categorisation of the liquid prior to mixing with other material and the categorisation of the other material if the other material is regulated waste.

3.4. What must be sampled and tested?

The parameters for testing are in Appendix 3 for **solid waste** and Appendix 4 for **liquid waste**. The parameters listed include attributes (such as pH or the presence of asbestos, etc.) and substances (such as arsenic, copper, various pesticides etc.).

Categorisation of **solid waste** requires testing for total values (as dry weight) for each relevant hazard parameter. Leachability testing, using either the toxicity characteristic leaching procedure (TCLP), or the Australian standard leaching procedure (ALSP) or any other methodology, is not required for **solid waste** categorisation purposes under the EP Regulation.

While leachability is not considered for the waste categorisation, it may be needed for regulated waste going to landfill or another waste management facility to show that the waste meets the landfill's or other facility's waste acceptance criteria.

The waste characterisation process does not require sampling for all the attributes and substances listed in Appendices 3 and 4 (for **solid waste** and **liquid waste** respectively). Only the **relevant attributes** and **relevant substances** need to be sampled. These are attributes and substances that could reasonably be expected to be present in the waste giving regard to:

- the source, type and quality of materials involved in the generation of the waste; and
- the way in which the waste was generated.

For example, if a liquid waste comes from a business that dismantles used lead acid batteries, it would be appropriate to sample and test for pH and lead. It would not normally be relevant to sample and test for cyanide, petroleum products, polychlorinated biphenyls and pesticides.

It is not always clear when it is relevant to include a substance for testing. This is especially true for per- and poly-fluoroalkyl substances (PFAS).

PFAS

The PFAS National Environmental Management Plan lists many waste types in which PFAS has been found and activities that generate PFAS containing waste. It is also important to consider the way in which the waste was generated, for example, whether there was a known or suspected PFAS containing release, product, input or process used in its generation.

Management principles and guidance in the PFAS National Environmental Management Plan are to be considered if the waste contains PFAS to inform appropriate management.

As PFAS are a broad class of substances and laboratory standards are not available for every potential PFAS compound, testing must include standard analysis for easily identifiable PFAS and additional testing that shows presence/absence of other PFAS, namely the total oxidisable precursor assay (TOP assay) mentioned in the PFAS National Environmental Management Plan or an equivalently accurate detection method.

3.5. How is the waste to be sampled and tested?

The appropriately qualified person must sample and test the waste under a protocol.

A protocol is defined in section 579B of the EP Act and describes a procedure that is to be followed in certain circumstances, such as a taking samples, performing analysis on samples and reporting of the results or interpretation of the analysis. The relevant protocol will be the first applicable existing protocol from the following list:

1. a protocol the department publishes and makes available for inspection by members of the public; or
2. a protocol issued by the Australian and New Zealand Environment Conservation Council before 1 January 2009 (if 1 does not apply); or
3. a protocol under an Australian Standard or joint Standards Australia and Standards New Zealand standard (if 1 and 2 do not apply); or
4. a protocol issued by a Ministerial Council established by the Council of Australian Governments (if 1, 2 and 3 do not apply); or
5. a protocol of an entity other than the department that the department publishes and makes available for inspection by members of the public (if 1, 2, 3 and 4 do not apply).

The department has not published a protocol when this information sheet was published. Nor has the department published a protocol of another entity. A protocol is under development and will be published on the department's website at <https://www.business.qld.gov.au/running-business/environment/waste-management/regulated-waste/classification>.

3.5.1. Sampling the waste

An appropriately qualified person must take samples of the waste under a protocol for each **relevant attribute** and **relevant substance**. The appropriately qualified person would design a sampling strategy that:

- identifies all the **relevant attributes** and **relevant substances** for the waste;
- ensures samples obtained faithfully represent the waste being categorised. It cannot be assumed that the waste is homogeneous and an appropriately qualified person undertaking the sampling must ensure that the sampling strategy is sufficient to account for:
 - the nature and quantities of any distinct liquid or solid layers in the waste material; and

- the variability of the waste quality. If the samples will not be representative of the waste over time, testing must be undertaken for each waste load;
- identifies the test method with a level of reporting appropriate for comparison with the threshold levels for the **relevant attributes** and **relevant substances**

Note: Two relevant substances have a threshold level of zero. One is PFAS for solid and liquid waste. The other is persistent organic pollutant (other) (POP (other)) for liquid waste. These are discussed in Section 3.6.1;

- identifies the appropriate containers and preservation required by the laboratory that will be testing the samples (normally a NATA-accredited laboratory); and
- identifies whether in-situ testing will be included for pH and/or conductivity.

3.5.2. Testing the waste

An appropriately qualified person must test the waste samples under a protocol for each **relevant attribute** and **relevant substance**.

Only NATA-accredited laboratories should perform testing of waste samples, except under the following circumstances:

- a NATA-accredited laboratory is not available locally and the waste samples cannot be transported to a laboratory for testing within the holding time period required for the waste samples; or
- testing is for pH and/or conductivity, which are deemed suitable for in-situ testing.

In-situ testing must still be undertaken by an appropriately qualified person under a protocol.

Where testing is undertaken at a non-NATA accredited laboratory, the waste generator should request from the laboratory and keep a record of the following information:

- quality assurance documentation demonstrating the competence of the laboratory to undertake the tests, with respect to NATA requirements, required for each **relevant attribute** and **relevant substance** being tested; and
- a statement detailing any deviations from NATA requirements.

3.6. Comparing the test results³ to the category threshold levels

The appropriate waste category is determined by comparing each test result to the corresponding threshold level. The category will change to a lower risk category if the comparison results in a lower risk category for all the **relevant attributes** and **relevant substances**.

For **solid waste** the waste categorisation is the highest risk category of the comparison results for all the **relevant attributes** and **relevant substances** (see Section 3.6.2 for more information).

For **liquid waste** the waste categorisation will be the default categorisation if the comparison results do not all have a lower risk category for all the **relevant attributes** and **relevant substances** (see Section 3.6.3 for more information).

The comparison is straightforward for most threshold levels. However, the **solid** and **liquid waste** threshold level for PFAS is zero (see item 35 in table 3b for **solid waste** and item 35 in table 4b for **liquid waste**). The liquid waste threshold for POP (other) is also zero (see item 36 in table 4b for **liquid waste**). Section 3.6.1 examines how to compare results where the threshold level is zero.

3.6.1. Comparing test results³ when the threshold level is zero

The threshold level of zero for PFAS and POP (other) is taken to mean less than the level of reporting (LOR) limit provided:

- the testing uses a NATA-accredited test method for that parameter; and
- the test selected has an LOR that is the best achievable for that parameter (i.e. the most sensitive with the lowest LOR).

In these cases, where testing is undertaken and the result is below the LOR, this is taken to be zero.

Testing with a higher LOR is not acceptable when testing to change the waste categorisation. However, testing for a higher LOR can be used for other purposes—for example, to confirm that PFAS or POP (other) is present. If the waste is expected to contain greater than trace levels of a substance, then testing using a higher LOR is acceptable to show presence of the substance above zero but not absence of the substance. If testing at a higher LOR shows absence, additional testing to lowest trace LOR is necessary to confirm absence. If a NATA-accredited test method is not available, or does not faithfully indicate the presence or absence of the substance or class of substances, a quality assured method recognised in Queensland or national guidance must be used instead.

3.6.2. Comparing test results³ to the thresholds for solid waste

For **solid waste**, the test results³ for the **relevant attributes** and **relevant substances** (expressed as dry weight) are compared to the corresponding threshold values to determine the waste category (not regulated, category 1 or category 2 regulated waste). The waste category is the highest risk category of the comparison results for all the **relevant attributes** and **relevant substances**. The waste category will change to the lowest risk category if all of the test results³ meet the criteria for the lowest risk category.

Examples for **solid waste** are included in the following table and in a worked example:

Default category	Category from testing for each parameter	Applicable category with explanation
Category 1	Parameter 1—Category 1 Parameter 2—Category 2 Parameter 3—Not regulated	Category 1— No change as the highest risk category for the test results is the same as the default category
Category 1	Parameter 1—Category 2 Parameter 2—Not regulated	Category 2— Change to category 2 as this is the highest risk category for the test results and is lower than the default category
Category 1	Parameter 1—Category 2 Parameter 2—Category 2	Category 2— Change to category 2 as this is the highest risk category for the test results and is lower than the default category
Category 1	Parameter 1—Not regulated Parameter 2—Not regulated	Not regulated— Change to not regulated as all the test results are for this lower risk category
Category 2	Parameter 1—Category 1 Parameter 2—Category 2 Parameter 3—Not regulated	Category 1— Change to category 1 as this is the highest risk category for the test results Note: this is higher than the default category
Category 2	Parameter 1—Category 2 Parameter 2—Not regulated	Category 2— No change as the highest risk category for the test results is the same as the default category
Category 2	Parameter 1—Not regulated Parameter 2—Not regulated	Not regulated— Change to not regulated as all the test results are for this lower risk category

Worked example

Consider a **solid waste** containing cyanide. It would be regulated waste under items 7, 16 and 17 of Appendix 1.

Item	Type	Category
7	basic (alkaline) solutions and bases (alkalis) in solid form	2
17	cyanides (inorganic)	1
18	cyanides (organic)	1

As the waste types indicate both category 1 and category 2 for the waste, the default category with the highest risk applies. Therefore the waste is default category 1 regulated waste.

If the waste categorisation process was followed and the waste had a pH of 6.6 and 900mg/kg of cyanide, then these test results would be compared with the relevant portions of the tables in Appendix 3 (shown below).

Item	Attribute	Not regulated	Category 2 regulated waste	Category 1 regulated waste
1	pH	6.5 - 9	2 – <6.5 or >9 - 12.5	<2 or >12.5 ⁸
		Test result		

The pH test result indicates categorisation as not regulated.

Item	Substance	Not regulated (mg/kg)	Category 2 regulated waste ¹³ (mg/kg)	Category 1 regulated waste (mg/kg)
17	cyanide	<240	240 - 960	>960
			Test result	

The cyanide test result indicates categorisation as category 2 regulated waste.

As both categorisations are lower risk than the default categorisation, the categorisation changes. The highest risk category applies and the waste is category 2 regulated waste.

3.6.3. Comparing the test results³ to the thresholds for liquid waste

The process for changing the default categorisation for **liquid waste** is slightly different from the process for **solid waste**. For **solid waste** there are three sets of thresholds to compare test results³ against—category 1 regulated waste, category 2 regulated waste and not regulated. For **liquid waste** there are only two sets of thresholds to compare test results³ against—the default category and not regulated. This means that **liquid waste** can change classification to “not regulated” or remain as the default category. It cannot change from category 1 to category 2 regulated waste or from category 2 to category 1 regulated waste. Therefore, the waste category only changes if all of the test results³ indicate the not regulated category is applicable.

Examples for **liquid waste** are included in the following table and in a worked example:

Default category	Category from testing for each parameter	Applicable category with explanation
Category 1	Parameter 1—Default category Parameter 2—Not regulated	Category 1— No change as the default category is the highest risk category for the parameters tested
Category 1	Parameter 1—Not regulated Parameter 2—Not regulated	Not regulated— Change to not regulated as all the test results meet the not regulated category
Category 2	Parameter 1—Default category Parameter 2—Not regulated	Category 2—

⁸ From section 43(2)(b)(i) of the EP Regulation.

Default category	Category from testing for each parameter	Applicable category with explanation
		No change as the default category is the highest risk category for the parameters tested
Category 2	Parameter 1—Not regulated Parameter 2—Not regulated	Not regulated— Change to not regulated as all the test results meet the not regulated category

Worked example

Consider a **liquid waste** containing cyanide. It would be regulated waste under items 7, 16 and 17 of Appendix 1.

Item	Type	Category
7	basic (alkaline) solutions and bases (alkalis) in solid form	2
17	cyanides (inorganic)	1
18	cyanides (organic)	1

As the waste types indicate both category 1 and category 2 for the waste, the default category with the highest risk applies. Therefore, the waste is default category 1 regulated waste.

If the waste categorisation process was followed and the waste had a pH of 6.6 and 90µg/L of cyanide, then these test results would be compared with the relevant portions of the tables in Appendix 4 (shown below).

Item	Attribute	Not regulated	Regulated (default category applies – see Table 1)
1	pH	6.5 - 10.5	<6.5 or >10.5
		Test result	

The pH test result indicates categorisation as not regulated.

Item	Substance	Not regulated (µg/L)	Regulated (µg/L) Default category applies
17	cyanide	<70	≥70
			Test result

The cyanide test result indicates the default categorisation still applies.

The categorisation would only change to not regulated if all the test results showed a risk category of not regulated. As this is not the case, the waste keeps the default categorisation of category 1 regulated waste.

4. What happens if the waste changes category?

If the waste changes category, the waste is referred to as tested waste⁶. While testing results remain valid, the waste can be transported and processed or disposed of under the EP Regulation as the category of waste it became through the testing process.

However, the waste classification does not affect requirements for transport of waste to or from other States and Territories and waste requirements under other Queensland legislation⁹. For example, dangerous goods requirements; or the requirements for transportation of waste interstate do not change because of a change to the waste classification under the EP Regulation.

⁹ From 1 July 2019, a waste levy is payable under the WRR Act. The levy is payable by operators of waste facilities for the waste they dispose of at their landfill. The rate of levy payable varies depending on the waste classification.

This Section outlines how long waste testing results remain valid, when earlier retesting can be required and what the notification, reporting and record keeping requirements are for tested waste⁶.

4.1. How long are test results³ current?

Under section 48 of the EP Regulation, the results of waste testing for wastes that are generated from the same processes and input materials are valid for a period of three months from the testing report date. In this situation the test results³ will remain current and can be used for all further waste loads that are generated in that period. This approach reduces the number of ongoing waste tests required and the associated costs to waste generators in circumstances where the quality of each waste load is not expected to change.

However, if a change occurs in the process or materials used to produce the waste and the change could be reasonably expected to change the quality of the waste generated, the test results³ will cease to be current and the waste must be retested (section 48 of the EP Regulation). If the retest shows the default category still does not apply, then the results of the retest become the current test results³.

Waste testing results will also cease to be current if a request is made to retest the waste by an authorised person under section 47 of the EP Regulation. If the retest shows the default category still does not apply, then the results of the retest become the current test results³.

For wastes that are not generated from the same processes or input materials, or that are expected to be of variable quality, testing must be undertaken for each waste load.

4.2. What records must be kept?

A generator¹⁰ of tested waste⁶ is required to keep records of all loads of tested waste⁶ that are transported to a receiver¹⁰. The record must include the **prescribed information**¹⁰ in Section 4.3, be in the approved form and be kept by the generator for at least 5 years (see section 52 of the EP Regulation).

A copy of the records must also be given to the receiver¹⁰ on, or prior to, delivery of a load of waste. The receiver¹⁰ is also required to keep a copy of the record in the approved form for 5 years (see section 53 of the EP Regulation).

The approved form *Record of tested waste* is available on the department's website at <https://www.business.qld.gov.au/running-business/environment/waste-management/regulated-waste/classification> or at www.qld.gov.au using the publication number ESR/2019/4862 as a search term).

4.3. Prescribed information that must be provided

Under section 50 of the EP Regulation, the **prescribed information**¹⁰ provided to a receiver¹⁰ must include:

- whether the load is **general waste** or regulated waste;
- if the load is regulated waste, whether it is category 1 or category 2 regulated waste; and
- the **current test results**³ for the waste.

The **current test result**³ must include sufficient information for the receiving facility to make a critical evaluation of its contents. This must include the following for each **relevant attribute** and **relevant substance** (analyte):

- sample identification (e.g., description, location, sample number and unique laboratory number);
- date and time of sampling;
- identification of in situ measurements;

¹⁰ Generator of tested waste⁶, receiver of tested waste⁶ and prescribed information are defined in section 50 of the EP Regulation.

- reference to analytical method used;
- date of analysis;
- accurate description of the parameter(s);
- quality assurance assessment for the analysis; and
- results.

Results should be reported in units specified in the EP Regulation for each **relevant attribute** and **relevant substance**. The limit of reporting for each **relevant attribute** and **relevant substance** should be quoted with the test results³. Concentrations below the limit of reporting should be quoted as a 'less than' (<) relevant numerical value e.g. <0.1mg/kg.

A copy of the report and associated quality assurance documentation attesting to the reliability of the result provided by the testing laboratory that complies with NATA requirements will be considered sufficient information to meet this requirement.

If a receiver¹⁰ becomes aware of an omission or inaccuracy in the **prescribed information**¹⁰ about a load of tested waste⁶ they must notify the administering authority within 24 hours. Tested waste⁶ is defined in section 50 of the EP Regulation as waste that has **current test results**³.

The receiver¹⁰ is not expected to do a critical review of the test results for each waste load. They are, however, expected to notify the department if they become aware or have reason to believe that the information provided may not be correct. For example, through handling of the material it appears to behave or have characteristics that are not consistent the results that have been provided, they are obligated to notify the administering authority, who may investigate further.

The receiver¹⁰, as the environmental authority holder, is also expected to comply with the environmental authority conditions such as the waste acceptance criteria. Compliance with the waste acceptance criteria would require an appropriate level of questioning to ensure confidence in whatever information is provided by the waste generator/transporter.

If the receiver¹⁰, as the owner or operator of the landfill, asks a waste transporter for information about the type and amount of waste being delivered, it is an offence under section 113(2)(c) of the EP Regulation for the waste transporter to not give the information.

If the waste transporter does not provide the requested information, or is not willing or able to provide information that gives the receiver¹⁰ confidence that it actually is the category of waste claimed and/or can be disposed of at the landfill, the receiver¹⁰ would not be obliged to take the waste (and should not take the waste if not satisfied it meets the waste acceptance criteria).

5. Offences

There are various offences in the waste categorisation provisions:

- in section 49 relating to interfering with the sampling or testing or otherwise jeopardising the accuracy of test results³ for waste;
- in section 51 relating to notification and reporting changes in waste categorisation;
- in section 52 relating to records the waste generator must keep; and
- in section 53 relating to records the waste receiver¹⁰ must keep and the requirement to notify the department on becoming aware of an omission or inaccuracy in the **prescribed information**¹⁰ for a load.

6. Further information

A protocol for sampling and testing waste is being developed and when finalised will be available on the department's website at <https://www.business.qld.gov.au/running-business/environment/waste-management/regulated-waste/classification> the approved form *Record of tested waste* is available on the same webpage (or at www.qld.gov.au using the publication number ESR/2019/4862 as a search term).

If you have any further questions, please contact Permit and Licence Management on 1300 130 372 (option 4).

Disclaimer

While this document has been prepared with care it contains general information and does not profess to offer legal, professional or commercial advice. The Queensland Government accepts no liability for any external decisions or actions taken on the basis of this document. Persons external to the Department of Environment, Science and Innovation should satisfy themselves independently and by consulting their own professional advisors before embarking on any proposed course of action.

Approved:

Date: 14 May 2021

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Version history

Version	Date published	Comments
1.00	18 June 2019	First published.
2.00	18 October 2019	Added Sections "Containers contaminated with waste", "Types of regulated waste that can change category" and "Encapsulated, chemically-fixed, solidified or polymerised wastes". Updated for the change from the EP Regulation 2008 to the EP Regulation 2019.
3.00	14 May 2021	Added Section 2.2 "Biosecurity waste", added additional details about appropriately qualified persons to Section 3.1, corrected the category 2 threshold for pH in Section 3.6.2 and Table 3a of Appendix 3 and corrected the threshold for PFAS and persistent organic pollutant (other) in Table 4b of Appendix 4.
3.01	14 April 2022	Facsimile number removed.
3.02	5 February 2024	Definition of waste now in <i>Waste Reduction and Recycling Act 2011</i> , Updating relevant legislation references. Updating links to documents. Small grammatical/reference corrections.

Appendix 1 Types of regulated waste and default waste categorisation

Table 1 – From Part 1 of Schedule 9 of the EP Regulation

Refer to the EP Regulation to confirm the information provided here

Item	Type	Category
1	acidic solutions and acids in solid form	2
2	animal effluent and residues, including abattoir effluent and poultry and fish processing wastes	2
3	antimony and antimony compounds	1
4	arsenic and arsenic compounds	1
5	asbestos	2
6	barium compounds, other than barium sulfate	1
7	basic (alkaline) solutions and bases (alkalis) in solid form	2
8	beryllium and beryllium compounds	1
9	boron compounds	1
10	biosecurity waste ¹¹	1
11	cadmium and cadmium compounds	1
12	chemical waste arising from a research and development or teaching activity, including new or unidentified material and material whose effects on human health or the environment are not known	1
13	chlorates	1
14	chromium compounds (hexavalent and trivalent)	1
15	clinical and related waste	1
16	copper compounds	1
17	cyanides (inorganic)	1
18	cyanides (organic)	1
19	encapsulated, chemically-fixed, solidified or polymerised wastes	2
20	ethers	1
21	filter cake, other than filter cake waste generated from the treatment of raw water for the supply of drinking water	1
22	fire debris and fire washwaters	1
23	fluorinated organic compounds (total)	1
24	fly ash	1
25	food processing waste (other than liquid food processing waste)	2
26	grease trap waste	2
27	halogenated organic solvents	1
28	highly odorous organic chemicals, including mercaptans and acrylates	1
29	inorganic fluorine compounds, other than calcium fluoride	1
30	inorganic sulphides	2
31	isocyanate compounds	1
32	lead and lead compounds	1
33	lead acid batteries (intact)	2
34	liquid food processing waste	2
35	material containing polychlorinated biphenyls (PCBs), polychlorinated naphthalenes (PCNs), polychlorinated terphenyls (PCTs) or polybrominated biphenyls (PBBs)	1
36	mercury and mercury compounds	1

¹¹ Biosecurity waste was item 53 quarantine waste in the Environmental Protection Regulation 2008.

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Item	Type	Category
37	metal carbonyls	1
38	mineral oils	2
39	nickel compounds	1
40	non-toxic salts, including, for example, saline effluent	2
41	oil and water mixtures or emulsions, or hydrocarbons and water mixtures or emulsions	2
42	organic phosphorous compounds	1
43	organic solvents, other than halogenated solvents, including, for example, ethanol	1
44	organohalogen compounds, other than another substance stated in this schedule	1
45	oxidising agents	1
46	per- and poly-fluoroalkyl substances	1
47	perchlorates	1
48	pesticides, including organochlorine	1
49	pharmaceuticals, drugs and medicines	1
50	phenols and phenol compounds, including chlorophenols	1
51	phosphorus compounds, other than mineral phosphates	2
52	polychlorinated dibenzo-furan (any congener)	1
53	polychlorinated dibenzo-p-dioxin (any congener)	1
54	residues from industrial waste treatment or disposal operations	1
55	selenium and selenium compounds	1
56	sewage sludge and residues, including nightsoil and septic tank sludge	2
57	surface active agents (surfactants) containing principally organic constituents, whether or not also containing metals and other inorganic materials	2
58	tannery wastes, including leather dust, ash, sludges and flours	1
59	tarry residues arising from refining, distillation or any pyrolytic treatment	1
60	tellurium and tellurium compounds	2
61	thallium and thallium compounds	2
62	triethylamine catalysts for setting foundry sands	2
63	tyres	2
64	vanadium compounds	2
65	vegetable oils	2
66	waste containing peroxides other than hydrogen peroxide	2
67	waste from a heat treatment or tempering operation that uses cyanides	1
68	waste from surface treatment of metals or plastics	2
69	waste from the manufacture, formulation or use of biocides or phytopharmaceuticals	1
70	waste from the manufacture, formulation or use of inks, dyes, pigments, paints, lacquers or varnish	2
71	waste from the manufacture, formulation or use of organic solvents	1
72	waste from the manufacture, formulation or use of photographic chemicals or processing materials	2
73	waste from the manufacture, formulation or use of resins, latex, plasticisers, glues or other adhesives	1
74	waste from the manufacture, formulation or use of wood-preserving chemicals	1
75	waste from the manufacture or preparation of pharmaceutical products	1
76	waste of an explosive nature, other than an explosive within the meaning of the <i>Explosives Act 1999</i>	1
77	wool scouring wastes	2
78	zinc compounds	1

Appendix 2 Waste that is not regulated waste

Table 2 – From Schedule 9, Part 3, Division 1 of the EP Regulation

Refer to the EP Regulation to confirm the information provided here

	Types of waste that are not regulated waste
1	intact or partly disassembled televisions
2	intact or partly disassembled electronic equipment designed to be used with a television <i>Examples— video players, DVD players, games units, set-top boxes</i>
3	intact or partly disassembled computers <i>Examples— desktop computers, notebook computers, laptop computers, tablets</i>
4	intact or partly disassembled equipment designed to be used with computers <i>Examples— keyboards, mice, hard drives, scanners, printers, multi-function devices, speakers, web cameras</i>
5	intact or partly disassembled internal computer components <i>Examples— network or graphics cards, motherboards, optical drives</i>
6	intact or partly disassembled automotive equipment <i>Examples— vehicles, engines, transmissions, differentials</i>
7	mobile phones
8	mobile phone accessories <i>Example— mobile phone chargers</i>
9	batteries typically used in small electronic devices or handheld devices <i>Examples of handheld devices— mobile phones, digital cameras, keyboards, toys and torches</i>
10	whitegoods
11	treated timber, other than sawdust or shavings
12	groundwater or treated groundwater necessarily or unavoidably brought to the surface of the earth as part of an industrial process, if the groundwater— (a) has a pH of at least 6 but not more than 10.5; and (b) has an electrical conductivity of less than 15,000µS/cm
13	waste architectural and decorative paints collected, stored and transported in accordance with a product stewardship , unless the paint— <ul style="list-style-type: none"> • is a bagged render • is texture coating • contains isocyanates • is paint stripper • is an industrial paint • is anti-fouling paint
14	containers of waste architectural and decorative paints mentioned in item 13 that are collected, stored and transported in accordance with a product stewardship , unless the paint is in a spray pack
15	tallow
16	treated clinical waste
17	related waste that has been treated to render it non-infectious

Appendix 3 Categorisation thresholds for solid tested waste⁶

Refer to the EP Regulation to confirm the information provided here

Table 3a – Attributes

Item	Attribute	Not regulated ¹²	Category 2 regulated waste ¹³	Category 1 regulated waste
1	pH	6.5 - 9	2 – <6.5 or >9 - 12.5	<2 or >12.5 ¹⁴
6	asbestos more than 0.01% (w/w)	Not present	Present	-

Table 3b – Substances (note that the substances are grouped by type rather than alphabetically as in the EP Regulation)

Item	Substance	Not regulated ¹⁵ (mg/kg)	Category 2 regulated waste ¹³ (mg/kg)	Category 1 regulated waste ¹⁶ (mg/kg)
Inorganic species				
2	antimony	<9	9 - 36	>36
3	arsenic	<300	300 - 1,200	>1,200
4	barium	<4,500	4,500 - 18,000	>18,000
7	beryllium	<90	90 - 360	>360
8	boron	<20,000	20,000 - 80,000	>80,000
9	cadmium	<90	90 - 360	>360
13	chromium (hexavalent)	<300	300 - 1,200	>1,200
14	copper	<220	220 - 880	>880
27	lead	<300	300 - 1,200	>1,200
28	mercury	<80	80 - 320	>320
30	molybdenum	<117	117 - 468	>468
31	nickel	<1,200	1,200 - 4,800	>4,800
43	selenium	<700	700 - 2,800	>2,800
45	silver	<117	117 - 468	>468
55	vanadium	<117	117 - 468	>468
58	zinc	<400	400 - 1,600	>1,600
Anions				
16	cyanide	<240	240 - 960	>960
26	fluoride	<930	930 - 3,720	>3,720
Organic species				
Petroleum hydrocarbons				
37	petroleum hydrocarbons (C6 to C9)	<950	950 - 3,800	>3,800
38	petroleum hydrocarbons (C10 to C36)	<5,300	5,300 - 21,200	>21,200
Polycyclic aromatic hydrocarbons				
6	benzo(a)pyrene	<3	3 - 12	>12
42	polycyclic aromatic hydrocarbons ¹⁷ (total)	<300	300 - 1,200	>1,200
Monocyclic aromatic hydrocarbons				
5	benzene	<5	5 - 20	>20
54	toluene	<1,470	1,470 - 5,880	>5,880
25	ethylbenzene	<17	17 - 68	>68

¹² From Column 2 of Table 1 in Schedule 9, Part 3, Division 2 of the EP Regulation.

¹³ From section 43(4) of the EP Regulation, category 2 regulated waste is regulated waste other than category 1 regulated waste.

¹⁴ From section 43(2)(b)(i) of the EP Regulation.

¹⁵ From Column 2 of Table 2 in Schedule 9, Part 3, Division 2 of the EP Regulation.

¹⁶ From Column 2 of the table in Schedule 9, Part 2 of the EP Regulation.

¹⁷ Defined in Part 1 of Schedule 19 of the EP Regulation.

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Item	Substance	Not regulated ¹⁵ (mg/kg)	Category 2 regulated waste ¹³ (mg/kg)	Category 1 regulated waste ¹⁶ (mg/kg)
57	xylenes (total)	<174	174 - 696	>696
44	styrene (vinyl benzene)	<1,800	1,800 - 7,200	>7,200
Chlorinated hydrocarbons				
10	carbon tetrachloride	<2	2 - 8	>8
11	chlorobenzene	<84	84 - 336	>336
12	chloroform	<1	1 - 4	>4
17	dichlorobenzene (1,2-dichlorobenzene)	<540	540 - 2,160	>2,160
18	dichlorobenzene (1,4-dichlorobenzene)	<8	8 - 32	>32
19	dichloroethane (1,2-dichloroethane)	<1	1 - 6	>6
20	dichloroethylene (1,1-dichloroethylene)	<69	69 - 276	>276
21	dichloromethane (methylene chloride)	<105	105 - 420	>420
46	tetrachloroethane (1,1,1,2-tetrachloroethane)	<6	6 - 24	>24
47	tetrachloroethane (1,1,2,2-tetrachloroethane)	<6	6 - 24	>24
48	tetrachloroethylene	<24	24 - 96	>96
49	trichloroethane (1,1,1-trichloroethane)	<2,430	2,430 - 9,720	>9,720
50	trichloroethane (1,1,2-trichloroethane)	<0.45	0.45 - 1.8	>1.8
51	trichloroethylene	<1	1 - 5	>5
56	vinyl chloride	<0.18	0.18 - 0.72	>0.72
Phenols				
52	trichlorophenol (2,4,5-trichlorophenol)	<1,890	1,890 - 7,560	>7,560
53	trichlorophenol (2,4,6-trichlorophenol)	<19	19 - 76	>76
15	cresol (total)	<4,000	4,000 - 16,000	>16,000
40	phenols (total)	<40,000	40,000 - 160,000	>160,000
Nitroaromatics and ketones				
24	dinitrotoluene (2,4-dinitrotoluene)	<5	5 - 20	>20
32	nitrobenzene	<15	15 - 60	>60
29	methyl ethyl ketone	<8,100	8,100 - 32,400	>32,400
Specific persistent organic pollutants (POPs)				
22	2,4-D dichlorophenoxyacetic acid (2,4-dichlorophenoxyacetic acid)	<210	210 - 840	>840
1 ¹⁸	aldrin and dieldrin (total)	<10	10 - 40	>40
33	organochlorine pesticides ¹⁷ (total)	<50	50 - 200	>200
34	organophosphate pesticides ¹⁷ (total)	<250	250 - 1,000	>1,000
41	polychlorinated biphenyls (PCBs)	<2	2 - 50	>50
35	per- and poly-fluoroalkyl substances (PFAS)	0	-	>0
36	persistent organic pollutant (other) ¹⁷	<50	50 - 200	>200

¹⁸ This is duplicated in the EP Regulation as item 23 "dieldrin and aldrin (total)" with the same thresholds.

Appendix 4 Categorisation thresholds for liquid tested waste⁶

Refer to the EP Regulation to confirm the information provided here

Table 4a – Attributes

Item	Attribute	Not regulated ¹⁹	Regulated (default category applies – see Table 1)
1	pH	6.5 - 10.5	<6.5 or >10.5
2	conductivity (electrical)	less than 1,200µS/cm	≥1,200µS/cm
3	biological oxygen demand	less than 15mg/L	≥15mg/L
4	flashpoint, for waste that is less than 24% alcohol (v/v)	less than 60°C	≥60°C
5	peroxides (other than hydrogen peroxide) more than 0.01% (v/v)	not present	present
6	asbestos more than 0.01% (w/w)	not present	present

Table 4b – Substances (note that the substances are grouped by type rather than alphabetically as in the EP Regulation).

Item	Substance	Not regulated ²⁰ (µg/L)	Regulated (µg/L) Default category applies
Inorganic species			
2	antimony	<60	≥60
3	arsenic	<200	≥200
4	barium	<40,000	≥40,000
7	beryllium	<1,200	≥1,200
8	boron	<3,700	≥3,700
9	cadmium	<2	≥2
13	chromium (hexavalent)	<10	≥10
14	copper	<14	≥14
27	lead	<34	≥34
28	mercury	<6	≥6
30	molybdenum	<1,000	≥1,000
31	nickel	<110	≥110
43	selenium	<110	≥110
45	silver	<1	≥1
55	vanadium	<172	≥172
58	zinc	<30	≥30
Anions			
16	cyanide	<70	≥70
26	fluoride	<30,000	≥30,000
Organic species			
Petroleum hydrocarbons			
39	petroleum hydrocarbons (total)	<6,000	≥6,000
Polycyclic aromatic hydrocarbons			
6	benzo(a)pyrene	<0.2	≥0.2

¹⁹ From Column 3 of Table 1 in Schedule 9, Part 3, Division 2 of the EP Regulation.

²⁰ From Column 3 of Table 2 in Schedule 9, Part 3, Division 2 of the EP Regulation.

Item	Substance	Not regulated ²⁰ (µg/L)	Regulated (µg/L) Default category applies
42	polycyclic aromatic hydrocarbons ¹⁷ (total)	<0.2	≥0.2
Monocyclic aromatic hydrocarbons			
5	benzene	<20	≥20
54	toluene	<16,000	≥16,000
25	ethylbenzene	<6,000	≥6,000
57	xylenes (total)	<12,000	≥12,000
44	styrene (vinyl benzene)	<600	≥600
Chlorinated hydrocarbons			
10	carbon tetrachloride	<60	≥60
11	chlorobenzene	<6,000	≥6,000
12	chloroform	<4	≥4
17	dichlorobenzene (1,2-dichlorobenzene)	<30,000	≥30,000
18	dichlorobenzene (1,4-dichlorobenzene)	<800	≥800
19	dichloroethane (1,2-dichloroethane)	<60	≥60
20	dichloroethylene (1,1-dichloroethylene)	<500	≥500
21	dichloromethane (methylene chloride)	<220	≥220
46	tetrachloroethane (1,1,1,2-tetrachloroethane)	<11	≥11
47	tetrachloroethane (1,1,2,2-tetrachloroethane)	<2	≥2
48	tetrachloroethylene	<82	≥82
49	trichloroethane (1,1,1-trichloroethane)	<16,000	≥16,000
50	trichloroethane (1,1,2-trichloroethane)	<0.82	≥0.82
51	trichloroethylene	<6	≥6
56	vinyl chloride	<6	≥6
Phenols			
52	trichlorophenol (2,4,5-trichlorophenol)	<2,400	≥2,400
53	trichlorophenol (2,4,6-trichlorophenol)	<200	≥200
15	cresol (total)	<3,000	≥3,000
40	phenols (total)	<11,600	≥11,600
Nitroaromatics and ketones			
24	dinitrotoluene (2,4-dinitrotoluene)	<5	≥5
32	nitrobenzene	<3	≥3
29	methyl ethyl ketone	<11,200	≥11,200
Specific persistent organic pollutants (POPs)			
22	2,4-D dichlorophenoxyacetic acid (2,4-dichlorophenoxyacetic acid)	<600	≥600
1 ²¹	aldrin and dieldrin (total)	<6	≥6
33	organochlorine pesticides ¹⁷ (total)	<0.00011	≥0.00011
34	organophosphate pesticides ¹⁷ (total)	<0.035	≥0.035
41	polychlorinated biphenyls (PCBs)	<0.00074	≥0.00074
35	per- and poly-fluoroalkyl substances (PFAS)	0	>0
36	persistent organic pollutant (other) ¹⁷	0	>0

²¹ This is duplicated in the EP Regulation as item 23 “dieldrin and aldrin (total)” with the same thresholds.

