

Waste tracking guideline

Seeking an exemption for trackable waste

Under Queensland's Environmental Protection Regulation 2008 (the Regulation) waste management legislation waste handlers are required to submit waste tracking information to the Department of Environment and Heritage Protection (the department) as part of the process for tracking waste types as listed in Schedule 2E of the Regulation.

Schedule 2E of the Regulation is a general description of trackable wastes and does not reflect the wide range of forms in which trackable wastes may exist. Some forms may be quite stable and present no potential hazard to the environment. Similarly, there are circumstances where some trackable wastes may not contain significant concentrations of contaminants and the potential for environmental harm is low. Because of the potentially reduced environmental harm posed by certain types of trackable wastes, the Regulation (s81Y) provides a process for waste handlers¹ to apply for an exemption from the waste tracking provisions where they can demonstrate that the waste does not possess environmentally significant characteristics.

Exemptions

Exemption from the waste tracking provisions is based on consideration of:

- the type of contaminants
- the level and/or concentration of contaminants
- the level of environmental risk
- whether the waste is a dangerous good.

The granting of an exemption to the waste tracking provisions made under s81Y of the Regulation does not alter the fact that all trackable wastes remain regulated wastes. This means that all appropriate approvals and licences must still be in place to transport, receive, recycle, reprocess, treat or store regulated wastes.

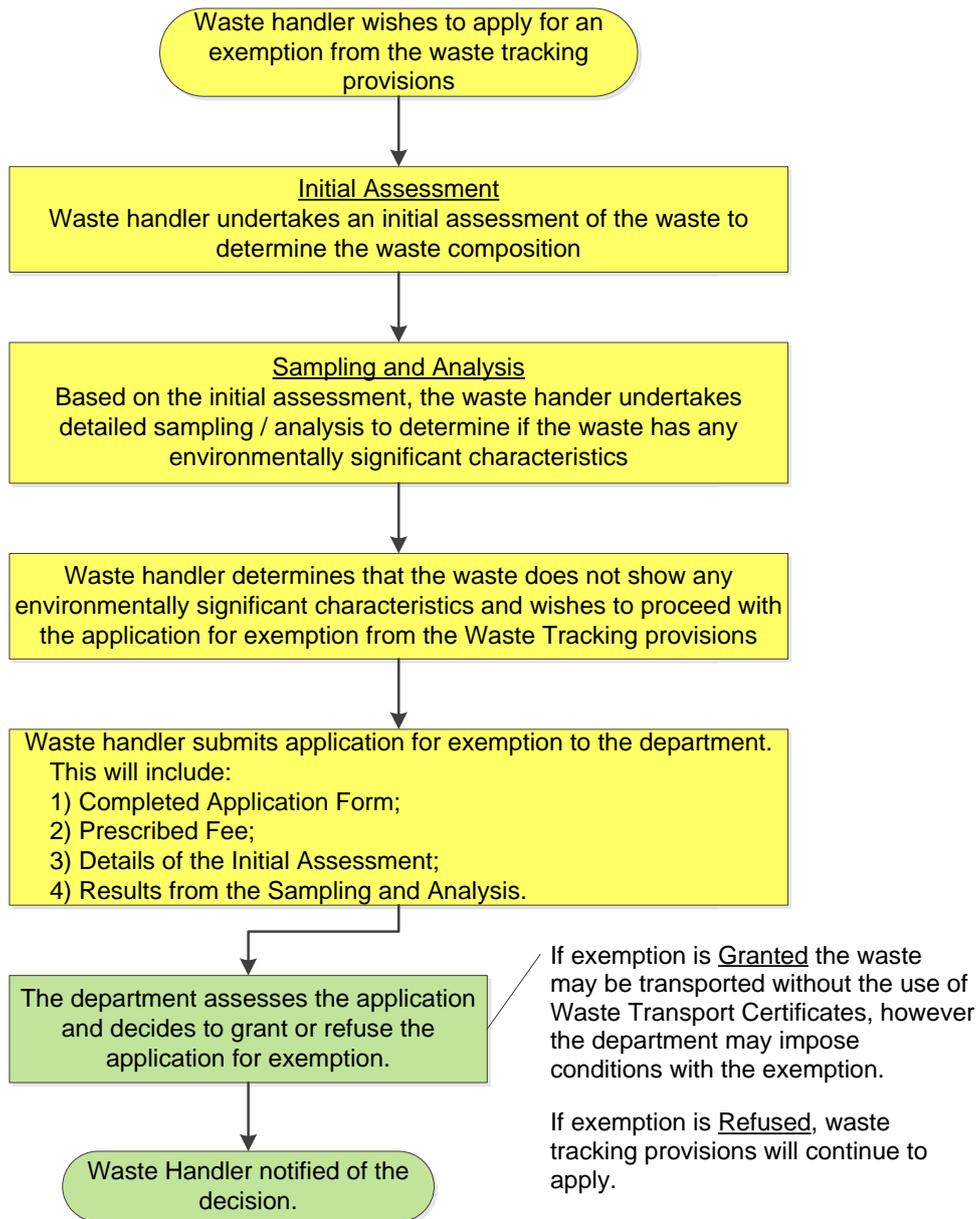
The department will not exempt a waste from the waste tracking provisions if the waste shows an environmentally significant characteristic (as detailed in Appendix 2).

Exemption example

A person operates a food processing facility. Waste from the facility includes filter cake (a trackable waste), which is sent away for disposal at the end of each week. The filter cake derives only from the washing of vegetables and consists almost entirely of sand and dirt. Analysis of the filter cake establishes that it does not show any environmentally significant characteristics. An exemption may be given provided that the waste continues to not show any environmentally significant characteristics.

¹ Waste generators, transporters and receivers all have waste tracking responsibilities. Collectively they are referred to as waste handlers.

Process for seeking an exemption for transport of trackable wastes



Information to be provided by the applicant

Initial assessment

The applicant must assess the waste against the environmentally significant characteristics listed in Appendix 1. The following steps are involved in an initial assessment of waste characteristics:

- review the process by which the waste is produced to identify potential contaminants
- identify raw materials and process by-products with the likely variation of these materials
- access information sources such as the raw material supplier and material safety data sheets to assist in determining the likely contaminants in the waste
- identify the various components of the waste stream to determine waste segregation, cleaner production and waste minimisation opportunities.

This initial assessment forms the basis for analysis of the waste. A report of the initial assessment should be provided with the application for exemption. The assessment serves as a screening process for identifying wastes that are likely to have environmentally significant characteristics. If any environmentally significant characteristics are evident at this early stage, potentially costly sampling and analyses can be avoided.

Sampling and analysis

Where the initial assessment shows the waste could be exempted, a sampling and analysis program is to be conducted to determine the typical properties and concentrations of contaminants and to quantify any adverse properties (e.g. flammability or contamination) that have been identified in the assessment. An application for exemption should include a justification for the frequency, sampling locations and details of the sampling procedures used.

Analysis must be conducted at NATA (National Association of Testing Authorities Australia) registered laboratories or equivalent, using methodology equivalent to that used in SW-846 Test Methods for Evaluating Solid Waste, APHA Standard Methods for Water and Wastewater Analysis or as set out in the Australian Dangerous Goods Code.

Sufficient samples need to be taken at representative locations to ensure the waste is characterised, and that significant variations are identified. It is not possible to provide a standard rule for the number of samples required to sufficiently characterise waste streams, the sample number being dependant on the variation in the waste over time.

Review of results

Analytical results should be reviewed against the characteristics set out in Schedule 2G of the Regulation (see Appendix 1). The first step is to ascertain whether the waste is a Class 1, 3, 4, 5, 6, 8 or 9 dangerous good. If the waste is not a dangerous good, then an assessment of environmental impacts should be undertaken. The degree of environmental impact depends on the concentration of contaminants in the waste and the availability of those contaminants to receptors in the environment.

In order to assist industry in assessing its waste for possible exemptions, contaminant threshold concentration tables (Tables 1 and 2) have been adapted from the New South Wales Environmental Protection Authority Guidelines for Solid and Liquid Waste, the Australian and New Zealand Environment and Conservation Council, the National Health and Medical Research Council Contaminated Soil Investigation Thresholds, and United States Environmental Protection Agency criteria. A differentiation in form has been made because, generally, contaminants present in aqueous waste are more readily available to the environment than contaminants in solid waste. Paint Test USEPA SW-846 Test Methods for the Evaluation of Solid Waste should be used to determine whether a waste is a solid or a liquid.

The tables do not provide an exhaustive list of contaminants, but list those contaminants commonly found in solid and liquid wastes. A contaminant-specific assessment should be conducted for unlisted contaminants.

If the applicant is able to demonstrate that the concentration of contaminants in the trackable waste is less than the threshold values, then the waste may be exempted from tracking. If the waste contains concentrations of contaminant(s) above the threshold, then a more detailed assessment of the availability of the contaminant(s) should be undertaken if the exemption application is to proceed. An appropriate test procedure is the USEPA Toxicity Characteristics Leaching Procedure (TCLP) for solid wastes, which provides an estimate of the solubility of contaminants.

Table 1 – Solid (non-liquid) waste

Contaminant	Threshold (mg/kg)
Antimony Sb	20
Arsenic As	20
Benzene	1
Benzo(a) pyrene	2
Beryllium	20
Boron B	300
Cadmium Cd	20
Chromium Cr	100
Copper Cu	300
Cyanides (total)	50
Fluoride	500
Formaldehyde	10
Lead Pb	100
Mercury Hg	1
Nickel Ni	100
Organochlorine Pesticides	2
PAH (total)	50
PCBs	2
Phenols	200
Selenium	20
Total Petroleum Hydrocarbons	5000
Xylene	200
Zinc Zn	500

Table 2 – Liquid waste

Contaminant	Threshold (mg/L)
Arsenic As	5.0
Benzene	0.5
Beryllium Be	1.0
Cadmium Cd	1
Chromium Cr	5
Copper Cu	15
Cyanides (total)	5
Fluoride	25
Formaldehyde	1
Lead Pb	5
Mercury Hg	0.2
Nickel Ni	5
Organochlorine Pesticides	2
PAH (total)	2
PCBs	2
Phenols	10
Selenium	1
Silver	5
Total Petroleum Hydrocarbons	500
Xylene	50
Zinc Zn	500

More information

For more information visit the department’s website www.ehp.qld.gov.au, phone the department’s Trackable Waste Regulation and Support Unit on (07) 3330 5677 or email waste.track@ehp.qld.gov.au.

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 and Heritage Protection should satisfy themselves independently and by consulting their own professional advisors before embarking on any proposed course of action.

Appendix 1 – Environmentally significant characteristics

UN Class*	Code	Reasons for control
1	H1	Explosive – An explosive substance or waste is a solid or liquid substance or waste (or mixture of substances or wastes) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings.
3	H3	Flammable liquids – The word ‘flammable’ has the same meaning as ‘inflammable’. Flammable liquids are liquids, or mixtures of liquids, or liquids containing solids in solution or suspension (for example, paints, varnishes, lacquers, etc., but not including substances or wastes otherwise classified on account of their dangerous characteristics), which give off flammable vapour at temperatures of not more than 60.5 degrees Celsius, closed-cup test, or not more than 65.6 degrees Celsius, open-cup test. (Since the results of open-cup tests and of closed-cup tests are not strictly comparable and even individual results by the same test are often variable, regulations varying from the above figures to make allowances for such differences would be within the spirit of the definition.)
4.1	H4.1	Flammable solids – Solids or waste solids, other than those classified as explosives, which under conditions encountered in transport are readily combustible, or may cause or contribute to fire through friction.
4.2	H4.2	Substances or wastes liable to spontaneous combustion – Substances or wastes liable to heat spontaneously under normal conditions encountered in transport, or to heating up in contact with air, and being then liable to catch fire.
4.3	H4.3	Substances or wastes which, in contact with water, emit flammable gases – Substances or wastes that by interaction with water are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.
5.1	H5.1	Oxidising – Substances or wastes which, while in themselves not necessarily combustible, may, generally by yielding oxygen, cause or contribute to the combustion of other materials.
5.2	H5.2	Organic peroxides – Organic substances or wastes containing the bivalent-O-structure are thermally unstable substances which may undergo exothermic self-accelerating decomposition.
6.1	H6.1	Poisonous (acute) – Substances or wastes liable either to cause death or serious injury or to harm human health if swallowed or inhaled or by skin contact.
6.2	H6.2	Infectious substances – Substances or wastes containing viable micro-organisms or their toxins which are known or suspected to cause disease in animals or humans
8	H8	Corrosives – Substances or wastes which, by chemical action, will cause severe damage when in contact with living tissue, or in the case of leakage, will materially damage or destroy other goods or the means of transport. They may also cause other hazards.
9	H10	Liberation of toxic gases in contact with air or water – Substances or wastes which, by liberation with air or water, are liable to give off toxic gases in dangerous quantities.
9	H11	Toxic (delayed or chronic) – Substances or wastes which, if they are inhaled or ingested or if they penetrate the skin, may involve delayed or chronic effects, including carcinogenicity.
9	H12	Ecotoxic – Substances or wastes which if released present or may present immediate or delayed adverse impacts to the environment by means of bioaccumulation and/or toxic effects upon biotic systems.
9	H13	Capable of yielding another material which possesses H1–H12 – Capable by any means, after disposal, of yielding another material, e.g. leachate, which possesses any of the characteristics listed above.
		Other reasons – Potential to have a significant adverse impact on ambient air quality. Potential to have a significant adverse impact on ambient marine, estuarine or fresh water quality.

*UN Class and Code relates to the hazard classification system included in the United Nations Recommendations on the Transport of Dangerous Goods as used in Australia.