Registration guidance manual for generators of liquid industrial and hazardous waste

Ontario

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The guidance manual outlines Ontario's hazardous waste management rules and the requirements for generators, carriers and receivers of subject waste as set out in Ontario Regulation 347 and Ontario Regulation 323/22.

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1. Introduction

Ontario has a comprehensive legislative and regulatory framework in place to ensure that hazardous waste and liquid industrial waste (LIW) are managed in an environmentally safe manner. This framework — consisting of the *Environmental Protection Act* (EPA), the *Resource Recovery and Circular Economy Act* (RRCEA), and regulations under each — provides the Ministry with the authority to regulate and enforce the management of hazardous waste and LIW throughout the province.

Ontario's framework applies both a listing and testing approach to determine what constitutes hazardous waste. This is similar to the approach used by the United States Environmental Protection Agency. Generators of subject wastes are required to report their waste management activities including identifying the wastes they generate, where they are generated and how they are managing that waste by submitting a Generator Registration Report (GRR) through the Registry operated and maintained by the Registrar of the Resource Productivity and Recovery Authority (RPRA). Information from GRRs provide the Ministry with information that enables the Ministry to develop waste profiles that promote effective waste monitoring and control.

This manual has been prepared to help waste generators comply with the generator registration and reporting requirements of Regulation 347. Under this regulation, waste generators are required to evaluate their wastes and, if the wastes are determined to be a subject waste, to submit a GRR through the Registry. It is a provincial offence to store, process, dispose or transport liquid industrial or hazardous wastes unless the generator has electronically submitted a GRR or the generator has been approved to use paper forms under section 27.1 of Regulation 347 and a generator registration document for the generator has been posted on the Registry. Out-of-province waste generators who have their liquid industrial or hazardous wastes transported to a waste disposal site in Ontario must also register their wastes through the Registry. Carriers or receivers are not permitted to accept these wastes from any out-of-province generator unless the generator has electronically submitted a GRR or the generator has been approved to use paper forms under section 27.1 of Regulation 347 and a generator registration document for the generator has been posted on the Registry.

The registration of subject wastes takes place in two steps:

Step 1: Determine whether or not you need to register your waste. The sections below will help you determine whether or not you need to register your waste. You may determine that your wastes are not subject to the registration and reporting requirements of Regulation 347, and you do not need to take any further action. However, if you determine that your wastes are subject to the regulation's registration and reporting requirements, you are required by law to identify your site (and each of the wastes generated there) by submitting a GRR through the Registry.

Step 2: Submit the GRR through the Registry. This manual explains each line of the report and the information that must be entered.

The Ministry may review the report after you have submitted it.

Please also note that this manual should be used in conjunction with Regulation 347 and Ontario Regulation 323/22. The following provisions of Regulation 347 require compliance with or refer to the manual:

- section 17.2
- subsections 18 (1), (2), (6) and (7.2)
- subsection 19 (1)
- subsection 21 (1)
- subsections 23 (2), (4) and (5)
- subsections 24 (2), (4)
- subsection 25 (2), (6) and (7)
- subsection 27 (1) and (3)
- subsection 27.1 (1) and (4)
- subsection 27.2 (2)
- subsections 80 (2) and (3)

The following provisions in Ontario Regulation 323/22 require compliance with or refer to the manual:

- subsection 2 (7)
- subsection 6 (1)

The manual has also been prepared to help you interpret and comply with the requirements of Regulation 347 and Ontario Regulation 323/22. This information is not, and should not be construed as, legal advice. Please review the relevant provisions of Regulation 347 and Ontario

Regulation 323/22. If you have any questions about the application or interpretation of certain provisions or have other legal questions, you should consult a lawyer. You should also use the LDR handbook in conjunction with this manual, to better understand the responsibilities and regulatory requirements for hazardous waste generators, processors, carriers and receivers under the LDR program.

Glossary of terms

The following descriptions of terms are provided for guidance purposes only and may include additional information when compared to the defined terms in regulation.

The terms below that are marked by an asterisk (*) mean that the term is not defined in Regulation 347 (General – Waste Management) made under the *Environmental Protection Act*.

Users of the Registration Guidance Manual for Generators of Liquid Industrial and Hazardous Waste (manual) should refer to the applicable sections (for example, Section 1) of Regulation 347 made under the *Environmental Protection Act* and Ontario Regulation 323/22 (Subject Waste Program) made under the *Resource Recovery and Circular Economy Act, 2016* for all of the legal definitions that are contained in the regulation.

Aqueous Waste

> Waste that is aqueous and contains less than 1% total organic carbon by weight, and less than 1% total suspended solids by weight. Concentration requirements for aqueous wastes are based on analysis of composite samples on a milligram per litre (mg/L) basis.

*** Biomedical Waste**

> Waste that is generated from the health care sector and activities that may pose potential risks to public health, safety and the environment. Biomedical waste is defined in Guideline C-4, Management of Biomedical Waste in Ontario, November 2009, as amended from time to time.

Carrier

> The operator of a waste transportation system, including any person who is engaged in the off-site transportation of waste by air, rail, road, highway or water.

Characteristic Waste

> Hazardous waste that is corrosive waste, ignitable waste, leachate toxic waste, or reactive waste.

Debris

Solid waste that has a particle size of more than 60 millimetres, and includes material that remains with debris when simple mechanical means or simple physical means are used to separate material that is debris from material that is not debris.

Debris Mixture

A mixture of debris and other material where, based on visual inspection, the volume of the mixture is made up primarily of debris.

*** De-characterized Waste**

Treated characteristic waste that no longer exhibits the characteristics of a corrosive waste, ignitable waste, leachate toxic waste, or reactive waste.

Director

Refers to the applicable Director for the appropriate related section of Regulation 347 or the *Environmental Protection Act*.

*** Director's Letter of Equivalent Treatment**

A written approval that can be used solely to authorize a variance to the technology-based land disposal treatment requirements, based on a determination of equivalent treatment.

Empty Container

A container from which all wastes and other materials have been removed, using the removal practices such as pumping or pouring commonly used for the specific materials, which contains less than 2.5 centimetres of material on the bottom of the container.

*** Environmental Compliance Approval (ECA)**

An approval issued under Part II.1 of the *Environmental Protection Act* (EPA) in respect of activities mentioned in sections 9 (with respect to air emissions) and 27 (with respect to waste management systems and waste disposal sites) of the *Environmental Protection Act* and section 53 (with respect to sewage works) of the *Ontario Water Resources Act* (OWRA). A person may not engage in the activities mentioned unless done under and in accordance with the requirements set out in the ECA, which governs how the activity is undertaken. Section 27 of the EPA states that "no person shall use, operate, establish, alter, enlarge or extend a waste management system or a waste disposal site except under and in accordance with an environmental compliance approval". Unless otherwise noted, this manual uses the term ECA to refer to a waste environmental compliance approval issued under the EPA. For further information on a

waste ECA, please refer to the Environmental Compliance Approval webpage at Ontario.ca.

*** EPA or *Environmental Protection Act***

Refers to the *Environmental Protection Act*, R.S.O. 1990, c. E. 19.

Generator

The operator of a waste generation facility. This includes the original generator of the waste, as well as all subsequent generators that are involved in the chain of custody of the waste, such as a transfer station that receives waste and then ships it to another receiver. When the waste moves from the transfer station to another receiver, the transfer station is considered to be the generator for the subsequent shipment from its facility.

Generator Registration Document

The information about waste generated at a waste generation facility and the facility's registration status that is described in section 6 of Ontario Regulation 323/22 (Subject Waste Program) made under the RRCEA and posted on the Registry.

Generator Registration Report (GRR)

The report required under section 18 of Regulation 347 which includes the information submitted through the Registry by the waste generator, about the wastes generated at the waste generation facility.

Hazardous Waste

Hazardous waste is defined in Section 1 of Regulation 347. The definition includes wastes that are characteristic waste, listed waste, pathological waste, PCB waste or radioactive waste. The definition also provides specific exclusions. (See Exemptions section for further information on exclusions)

*** Hazardous Waste Number**

A four-character code (a letter followed by three numbers) used to identify individual listed wastes in Column 1 of Schedule 1, Part A and Part B of Schedule 2 and Schedule 3 of Regulation 347 and individual characteristic wastes in Column 1 of Schedule 5 of Regulation 347. These numbers are consistent with the United States Environmental Protection Agency's (USEPA) hazardous waste numbers. The Ministry assigned a hazardous waste number to the listed waste or characteristic waste if there was no USEPA hazardous waste number already available (see the E-series wastes in Schedule 5).

*** Lab Pack**

An overpack container, usually a steel or fibre drum, that generally contains small quantities of chemicals, and where each waste is individually packaged and packed together into a common container.

Land Disposal

The deposit or disposal of waste upon, into, in or through land, including, the deposit of the waste at a dump, the landfilling of the waste, the discharge of the waste into a geological formation by means of a well and the landfarming of the waste, in the case of a petroleum refining waste, and land disposed has a corresponding meaning.

*** Land Disposal Restrictions (LDR)**

The requirements of Sections 74 through 85 of Regulation 347, which prohibit the disposal of hazardous wastes that are listed wastes or characteristic wastes until they have been treated to meet the land disposal treatment requirements.

*** Land Disposal Treatment Requirements**

Identified in Schedule 1, Part A and Part B of Schedule 2 and Schedule 3 of Regulation 347 for listed wastes and in Schedule 5 of Regulation 347 for characteristic wastes. Land disposal treatment requirements are specified as either concentration-based numerical levels or as specified methods of treatment. Regulated constituents must be treated to meet the treatment requirements prior to land disposal.

*** LDR Notification Form**

The LDR questionnaire in the GRR will indicate if the LDR Notification Form needs to be completed for listed wastes or characteristic wastes. The LDR notification form is part of the GRR and identifies the type of waste and treatment required or completed. Waste generators can use this form to meet their obligation to notify under the LDR program by providing it to the receiver of the waste.

Liquid Industrial Waste (LIW)

LIW is defined in Section 1 of Regulation 347. The regulatory definition provides specific exclusions. (See Exemptions section for further information on exclusions)

Listed Waste

Hazardous waste that is an acute hazardous waste chemical (Part A of Schedule 2 of Regulation 347), a hazardous industrial waste (Schedule 1 of Regulation 347), a hazardous waste chemical (Part B of Schedule 2 of Regulation 347), or a severely toxic waste (Schedule 3 of Regulation 347).

*** Manifest**

A document called a manifest that is completed through the Registry or, in unusual circumstances, was obtained from the Ministry. Manifests are required to ship subject waste off-site from a generator to a receiver.

*** Ministry**

Means the Ministry of the Environment, Conservation and Parks unless otherwise noted.

*** Municipal Hazardous or Special Waste (MHSW) (formerly called Household Hazardous Waste (HHW))**

Municipal hazardous or special waste" has the same meaning as in subsection 1 (1) of Ontario Regulation 323/22 (Subject Waste Program) made under the RRCEA and means waste that consists of municipal hazardous waste or municipal special waste, or any combination of them, whether or not the waste is owned, controlled or managed by a municipality, but does not include used or unused lubricating oil; (“déchets municipaux dangereux ou spéciaux”). Examples of this type of waste include waste paints, solvents, batteries, items containing mercury, pharmaceutical wastes, unused cleaning products from homes, etc.

*** Municipal Hazardous or Special Waste (MHSW) Depot**

A facility that accepts municipal hazardous or special waste from consumers.
A MHSW depot has a valid ECA to accept MHSW, unless the facility is specifically exempt from this requirement. MHSW depots typically accept household wastes such as paints, solvents, batteries, mercury-containing items, etc. Some MHSW depots may also accept small quantities of waste from industrial, commercial and institutional (IC&I) waste generators.

Non-aqueous Waste

Waste that is not aqueous waste. Concentration requirements for non-aqueous wastes are based on analysis of grab samples on a milligram per kilogram (mg/kg) basis.

*** North American Industry Classification System (NAICS) Code**

A six-digit industry classification numbering system that describes the nature of a business.

*** On-site**

Management of waste at the location where the waste is generated. Waste may be processed or disposed of without leaving its point of generation. Specific provisions are included in Regulation 347 with respect to on-site waste management (see Section 17.1 and Section 17.2 of Regulation 347). Note: certain on-site disposal methods (for example, landfill, landfarm or incineration) require an ECA for a waste disposal site.

Ontario Regulation 323/22

Refers to Ontario Regulation 323/22 (Subject Waste Program) made under the RRCEA.

*** OWRA facility**

Sewage works or wastewater treatment plant with an ECA issued under Part II.1 of the EPA for activities under section 53 of the *Ontario Water Resources Act*.

Receiver

The operator of any facility to which waste is transferred by a carrier. This includes transfer stations, processing facilities and final disposal sites.

*** Recyclable Material**

Those wastes that meet the requirements of subsection 3 (2) of Regulation 347. Recyclable waste materials are exempt from Part V of the EPA and Regulation 347.

Registry

The electronic public registry known in English as the Resource Productivity and Recovery Registry and in French as Registre de la productivité et de la récupération des ressources. The Registry is maintained and operated by the Registrar of the Resource Productivity and Recovery Authority.

*** Regulated Constituents**

Any generic name or other description listed in the regulated constituent column in Schedule 1, Part A and Part B of Schedule 2 and Schedules 3, 5 and 6 of Regulation 347. All regulated constituents in a listed waste or characteristic waste must meet the treatment requirements before land disposal.

*** Regulation 347**

Refers to Regulation 347 of the Revised Regulations of Ontario, 1990 (General - Waste Management) made under the EPA.

*** Remediation Waste**

Waste generated during the clean-up of contaminated sites. Such wastes are not generated during the course of normal industrial or manufacturing operations, but rather are the result of spills of hazardous waste, or product chemicals, or through historical management practices.

RRCEA

The *Resource Recovery and Circular Economy Act, 2016*.

Site

A site means one property and includes nearby properties owned or leased by the same person where passage from one property to another involves crossing, but not travelling along, a public highway.

*** Small Quantity Exemption (SQE)**

An exemption provided for some waste types under the definitions of hazardous waste and LIW. The exempted quantities vary and depend on the specific waste characterization. Accordingly, this exemption cannot be determined until the waste has been evaluated and the waste characterization established. Although the SQE quantities of waste are exempt from generator registration and reporting requirements, the small quantity is still waste, and must be transported by an approved waste carrier and disposed of at an approved waste receiver.

*** Small Quantity Generator (SQG)**

An operator of a waste generation facility that produces a total of less than 100 kg of hazardous waste chemicals, hazardous industrial wastes, plus characteristic wastes, in any given month. Section 80 of Regulation 347 outlines special provisions for small quantity waste generators with respect to LDR requirements and the conditions that must be met.

*** Soil**

In this manual soil is unconsolidated earth material composing the superficial geologic strata (material overlying bedrock) consisting of clay, silt, sand or gravel size particles.

Soil Mixture

Includes a mixture of soil and liquids, sludges or solids, where, (a) the mixture cannot be separated by simple mechanical removal processes; and (b) based on visual inspection, the volume of the mixture is made up primarily of soil or other finely divided material that is similar to soil.

*** Specific Gravity**

The ratio of the weight or mass of a given volume of substance to that of an equal volume of another substance (water for liquids and solids).

Subject Waste

A term defined in Section 1 of Regulation 347. Subject waste means hazardous waste and LIW, as well as waste that was characteristic waste but that has been treated so that it is no longer characteristic waste if the waste may not be disposed of by land disposal under subsection 79 (1). However, the definition of "subject waste" does not include a number of wastes, including intact waste batteries that are destined for a waste battery recovery facility and waste from the professional office of a member of the Royal College of Dental Surgeons of Ontario. See subsection 1 (3) of Regulation 347 for a complete list. The term is used in a number of sections of Regulation 347, such as the generator registration and manifesting sections.

Thermal Treatment

Includes incineration, gasification, pyrolysis or plasma arc treatment. Thermal treatment is not considered processing.

Tonnage Fee Exempt Recycling Facilities Directory

The list available on the Registry and maintained by the Registrar as required under section 2 of Ontario Regulation 323/22.

Toxicity Characteristic Leaching Procedure (TCLP)

This term is defined in Section 1 of Regulation 347. This procedure is an analytical test method that is used to identify whether a waste exhibits the characteristic of leachate toxicity, and to measure compliance with treatment standards.

*** Underlying Hazardous Constituent (UHC)**

A regulated constituent of a characteristic waste identified in Schedule 6 of Regulation 347, which, if present, must be treated to meet land disposal treatment requirements, but nonetheless does not cause the waste to exhibit a hazardous waste characteristic.

*** Waste Characterization (formerly referred to as Waste Characteristic)**

Identified by a single letter that indicates the type of hazardous waste or LIW it contains, based on the chemical characteristics or source of a waste material. The waste characterization identifies the hazard associated with the waste. A waste may have more than one waste characterization.

*** Waste Class**

A three-digit number assigned to a generic waste description used to classify the type of waste being managed. Waste classes are included in the ECA for waste carriers and receivers, to identify the waste streams that they are permitted to handle or manage. A list of Ontario waste classes can be found in Appendix A: Ontario Waste Classes.

*** Waste ECA**

An environmental compliance approval issued under Part II.1 of the *Environmental Protection Act* (EPA) in respect of activities mentioned in section 27 of the *Environmental Protection Act* with respect to waste management systems and waste disposal sites.

Waste Generation Facility

Those facilities, equipment, and operations that are involved in the production, collection, handling or storage of waste at a site.

*** Waste Number**

The combination of the three-digit waste class and the single-letter primary waste characterization used to classify a waste stream for generator registration and manifesting purposes.

List of acronyms

ASTM

American Society for Testing and Materials

CAS #

Chemical Abstracts Service Registry Number

ECA

Environmental Compliance Approval

EGN

Emergency Generator Number

EPA

Environmental Protection Act, R.S.O. 1990, c. E. 19

GRR

Generator Registration Report

HWIN

Hazardous Waste Information Network

IC&I

Industrial, Commercial and Institutional (Generators)

LDR

Land Disposal Restrictions

LIW

Liquid Industrial Waste

MHSW

Municipal Hazardous or Special Waste

NAICS

North American Industry Classification System

OWRA

Ontario Water Resources Act, R.S.O. 1990, c. O.40

PCB

Polychlorinated Biphenyls

RPRA

Resource Productivity and Recovery Authority

RRCEA

Resource Recovery and Circular Economy Act, 2016, S.O. 2016 c. 12

SQE

Small Quantity Exemption (Waste)

SQG

Small Quantity Generator

TCLP

Toxicity Characteristic Leaching Procedure

TDGA

Transportation of Dangerous Goods Act, 1992 (Canada)

UHC

Underlying Hazardous Constituent

USEPA

United States Environmental Protection Agency

WDTA

Waste Diversion Transition Act, 2016, S.O. 2002, c. 12. Sched. 2

WEEE

Waste Electrical and Electronic Equipment

Important aspects of the manual for waste generators

Key aspects of the manual are as follows:

- The manual provides the Ministry's guidance on who needs to register. It also provides an overview of Ontario's hazardous waste management rules and the requirements for generators, carriers and receivers of subject waste.
- The manual identifies information that must be included in a generator registration report (GRR), manifest and notice of storage for the purposes of complying with Regulation 347.
- The manual includes the regulatory requirements in Regulation 347 that put in place a land disposal restrictions (LDR) program. Under these rules, listed wastes and characteristic wastes that are to be land disposed must first be treated to meet specific land disposal treatment requirements. The manual describes how the LDR requirements affect the registration process, and provides information on the program, including reporting, notification, record-keeping, waste analysis and land disposal treatment requirements for hazardous waste. For more detailed information on the LDR program, please also consult the Land Disposal Restrictions (LDR) Handbook (handbook).

- This manual includes flow charts that are designed to help generators determine whether they need to register and includes a section that explains Ontario's LDR requirements, and how to determine if they apply to a generator's waste stream.
- Regulation 347 contains a number of descriptive schedules that list various hazardous wastes. These schedules reflect the changes that relate to the province's LDR program. The lists in the schedules contain not only the hazardous waste number and waste description, but also the regulated constituents and their corresponding LDR treatment standards.
- The manual also identifies requirements for on-site processing of wastes that are subject to the LDR rules. For example, the LDR program includes additional treatment, notification and record-keeping requirements for wastes that are processed on-site. It also requires generators to register subject wastes which are no longer hazardous, but which need further treatment to meet the land disposal treatment requirements.
- The manual also explains a number of other regulatory requirements in Regulation 347 that are designed to improve the management of subject wastes. The requirements outlined below may apply not only to generators that are subject to LDR requirements, but also to all waste generation facilities that are used primarily for activities other than waste management. This will depend on the type of wastes generated (non-hazardous and hazardous) and the waste activities conducted on-site.
    - Mixing, blending and bulking of wastes
        - To improve the management of wastes, Regulation 347 prohibits the mixing of hazardous wastes with other wastes or materials for purposes other than processing. This provision may affect hazardous waste generators, carriers and receivers, unless this activity is authorized by a waste Environmental Compliance Approval (ECA) issued under the *Environmental Protection Act* (EPA). The provision also ensures that dilution cannot be used to avoid meeting the LDR treatment standards.
    - On-site storage of subject wastes
        - The regulation contains notification, management, and record-keeping requirements for wastes that are stored on-site at a waste generation facility for more than 90 days.
        - An ECA is required for wastes stored on-site for more than 24 months.
    - On-site processing of wastes
        - The regulation describes when waste ECAs are required and when waste ECAs are not required when generators are processing wastes on-site to clarify existing practices to ensure consistency with respect to on-site processing.
- The manual clarifies current practices to improve waste management and to ensure greater consistency across the province.
- The manual also includes the following items:
    - an explanation of the Tonnage Fee Exempt Recycling Facilities Directory, including how it works and how a company becomes listed

    - a discussion on how to determine the appropriate waste classes for generator waste streams
    - a discussion on manifesting
- The manual contains additional information on waste management practices in Ontario.
- Appendix D: Questions and answers include questions and answers about the requirements for generator registration.

2. Generator registration process

2.1 How to determine if registration is required

Waste generators need to determine if the wastes they produce or accumulate are subject to Ontario's registration and reporting requirements. This section of the manual provides a systematic approach to reaching this determination. It also explains how to determine the hazardous waste numbers (if applicable), waste characterizations and corresponding waste class that must be entered on the GRR for each waste stream.

2.1.1 Who is a generator

Regulation 347 defines a generator as the operator of a waste generation facility. A waste generation facility is defined to mean facilities, equipment and operations that are involved in the production, collection, handling and storage of waste at a site. The definition of generator would include operators of commercial and manufacturing facilities that produce wastes, as well as operators of waste disposal, transfer, bulking or processing facilities that forward materials off-site for subsequent waste management.

Certain receivers of subject waste who are not the final destination for the waste (such as a transfer station or processing facility) become waste generators by managing the waste, and therefore, subject to the generator registration and reporting requirements that are outlined in this section. Receivers of non-subject waste may also become waste generators by managing the waste that they receive. For example, municipal hazardous or special waste (MHSW) depots receive waste that is not subject waste from domestic sources, and later ship the collected waste for disposal. As a result, MHSW depots are subject to the province's generator registration and reporting requirements. These facilities must therefore characterize the waste they collect and ensure that any waste that is either hazardous waste or LIW is appropriately managed.

2.1.2 What is a waste

Wastes are defined in the EPA, and Regulation 347 also designates specific wastes. Waste includes all materials that are normally considered waste — such as ashes, garbage, domestic waste, industrial waste, commercial waste, construction debris and residues from industrial and commercial activities. Economic value is not a reliable indicator of whether or not a material is a waste. For example, while some waste materials are sold for their heating value, or otherwise reused, recycled, recovered or reclaimed — they are still wastes under Ontario law, and must be managed appropriately.

All outputs from waste transfer, bulking, or processing facilities are considered to be wastes. Such outputs include oil that is recovered from oily water treatment facilities, and blended or bulked waste solvents that are destined either for disposal or recycling. Commercial waste chemicals that either are or contain a commercial chemical product or by-product, including those that are off-specification or that have exceeded their expiry date, are also considered to be wastes.

By contrast, by-products or intermediates from a series of traditional metal refining operations, such as mineral or metal recovery, are not considered to be wastes. For example, sludges from an electrolytic recovery process for metals, such as nickel, which are later processed to remove precious metals such as silver, are not considered to be wastes.

Section 2 of Regulation 347 designates a number of materials as waste. Section 3 of Regulation 347 sets out a number of requirements that, when met, exempt certain wastes from the requirements of Part V of the EPA and Regulation 347. However, these materials are still wastes, and must be managed with care.

To ensure that your hazardous waste and LIW are being managed appropriately, you should familiarize yourself with the EPA and Regulation 347 including the Land Disposal Restriction requirements.

2.1.3 Determining when waste is generated

To determine when a waste has been generated, generators need to consider the point at which their process ends. In the case of listed wastes, determining when a waste has been generated can usually be accomplished by following the descriptions of wastes provided in the detailed schedules of Regulation 347. All wastes that meet the descriptions in these schedules are considered to have been generated and must therefore be handled as hazardous wastes. In the case of wastes that are not listed in the schedules, the waste is considered to have been generated after the process is completed — for example, at the end of a manufacturing process, or at the last stage of any process that generates the waste. Once the process has been completed and the wastes have been collected, the generator must classify them properly according to the regulation.

When a material may be a subject waste, but is still in use or in equipment that, by its nature, is designed to capture and hold material until the equipment is serviced, the material is not yet considered to be a subject waste. The material is only a subject waste when the generator removes it from the equipment — for example, when waste oil is collected during the servicing of equipment, or when dust is removed from vacuum equipment or a baghouse.

Regulation 347 requires generators to keep each waste stream separate and to characterize it individually before determining whether or not the wastes can be mixed. For example, if a manufacturing process has three waste streams that exit the system from three different pipes, each of the three waste streams must be characterized to identify whether it is hazardous, and to determine if Ontario's land disposal restriction (LDR) requirements apply. This must be done before the generator can determine if any of the three waste streams may be mixed or combined into a single collection vessel. Determining whether the LDR requirements apply must occur at the point of generation, to prevent the waste from being diluted and thus avoiding proper treatment.

A generated waste may be characterized as either a hazardous waste or LIW. The characterization depends on the various definitions for hazardous waste and LIW in Regulation 347, and the small quantity exemptions provided for each type of waste. Most wastes become either hazardous waste or LIW when the generator accumulates them in an amount that is equal to or greater than the small quantity exemption (SQE) amount for the waste. The Determining the characterization of your waste stream section provides detailed information about SQE for each type of hazardous waste and LIW.

Depending on the types of wastes generated at a facility, Regulation 347 may restrict generators from mixing and processing them. This is particularly important with wastes that are required to meet the province's land disposal treatment requirements. Restrictions on mixing of waste with other wastes or materials are discussed in the Managing your waste section.

2.1.4 What is a hazardous waste

Hazardous wastes are wastes that, when present in quantities and concentrations that are high enough, pose a threat to human health or the environment if they are improperly stored, transported, treated or disposed. Accordingly, hazardous wastes require special handling and management. To manage hazardous wastes appropriately, there must be systematic control of how they are collected, stored, transported, treated, recovered and disposed.

Improper management or disposal of hazardous wastes can have a direct or indirect impact on many aspects of the environment, human health and the economy. For example, improper waste disposal practices or leachate from landfills that are not designed to accept these wastes may contaminate ground water and surface water.

While Ontario's industrial and manufacturing sectors generate most hazardous wastes, the commercial and institutional sectors, as well as individual households, also generate significant quantities of hazardous waste. Most of the hazardous wastes covered by Regulation 347 are identified through a listing and testing approach.

Hazardous wastes include:

- Listed wastes:
    - Listed wastes include specific waste streams and wastes from industrial processes, waste chemicals and severely toxic wastes. A listed waste is defined in Regulation 347 as a hazardous waste that is: an acute hazardous waste chemical (Part A of Schedule 2); a hazardous industrial waste (Schedule 1); a hazardous waste chemical (Part B of Schedule 2); or, severely toxic waste (Schedule 3). These schedules of Regulation 347 identify the listed wastes and their associated treatment requirements.
- Characteristic wastes:
    - Characteristic wastes are identified through testing. Characteristic waste is defined in Regulation 347 as hazardous waste that is: corrosive waste; ignitable waste; leachate toxic waste; or, reactive waste. Schedule 5 of Regulation 347 identifies the characteristic wastes and their associated treatment requirements.
- Pathological wastes:
    - Pathological wastes include human and animal remains and other non-anatomical waste that is infected with a communicable disease. Pathological wastes are included in the biomedical waste definition in Guideline C-4, Management of Biomedical Waste, which provides best management practices to generators, carriers and receivers of biomedical waste.
- PCB wastes:
    - PCB waste has the same meaning as in Regulation 362 and includes PCB equipment, PCB liquid or PCB material.
- Radioactive wastes:
    - Radioactive waste — except radioisotope wastes that are produced as part of the nuclear fuel cycle and are disposed of in a landfill site in accordance with the written instructions of the Canadian Nuclear Safety Commission, formerly the Atomic Energy Control Board — is considered to be hazardous waste. The Ministry regulates radioactive waste that contains naturally occurring radioactive material on a case-by-case basis. Generators of radioactive waste should contact the Ministry for further information on the appropriate management of waste that contains naturally occurring radioactive material (NORM).

2.1.4.1 The mixture and derived-from rules for hazardous waste

The mixture and derived-from rules apply to listed wastes, pathological wastes and radioactive wastes.

The Mixture Rule — The mixture rule states that a listed waste, pathological waste or radioactive waste that is mixed with any other waste or material retains its waste characterization, even if it is processed at an approved facility, unless the waste ECA for the facility specifically states otherwise. For example, if a hazardous industrial waste listed in Schedule 1 of Regulation 347 (i.e., a listed waste) is mixed with a non-hazardous waste, the mixture is considered to be a listed waste, and must be managed accordingly. The mixture rule is designed to provide an incentive for generators to segregate different waste types, while helping to prevent the dilution of a specified hazardous waste to alter its primary characterization.

The Derived-from Rule — Under the derived-from rule, a waste is considered to be derived from a listed waste, pathological waste or radioactive waste if the waste is blended, stabilized, processed or disposed. A waste that is subject to the derived-from rule therefore retains its hazardous waste characterization even if it is processed at an approved facility, unless the waste ECA for the facility specifically states that the resulting waste no longer retains the original hazardous waste characterization. For example, a listed waste (for example, a Schedule 1 hazardous industrial waste) that has been processed to reduce its toxicity and any residual from the processing are both considered to be listed wastes after they have been treated, and must be disposed of at an approved hazardous waste facility.

The intent of the mixture and derived-from rules is to prevent the mixing or processing of a waste so that it no longer meets the original definition of hazardous waste, without addressing its hazardous constituents. Any waste that is mixed with one of these hazardous wastes retains its waste classification and must continue to be managed appropriately as a hazardous waste. Please note, however, that the mixture and derived-from rules do not apply to PCB waste or characteristic waste.

Regulation 347 also contains provisions for waste generators, carriers and receivers that specifically prevent the mixing blending, bulking or intermingling of hazardous wastes with any other wastes or materials. These activities are permitted only under certain conditions, or if they are authorized by the conditions of a waste ECA. In general, hazardous wastes that are not similar in nature (for example, solids and liquids) and that do not have the same waste number (i.e., the same waste class and waste characterization) cannot be mixed. The Managing your waste section discusses the limitations on mixing that apply to all hazardous wastes in more detail.

The details of these provisions, as they relate to activities that take place at the waste generation site, are presented in Mixing, blending and bulking of hazardous wastes. The provisions identify the conditions under which mixing, blending, bulking or intermingling of hazardous wastes is permitted at the waste generator's facility. The restrictions are most stringent for wastes that are subject to the LDR requirements. There are also specific provisions for carriers and receivers. Please note that these restrictions apply only to hazardous wastes, and that Regulation 347 does not prevent the mixing, blending, bulking or intermingling of LIW with similar wastes.

Generators should also note that Regulation 347 contains provisions that exclude some wastes from the derived-from rule. These provisions include exemptions specified in the regulation (in Schedules 1.1, 2.1, and 2.2 of Regulation 347), through the formal de-listing process, or through a waste ECA.

2.1.4.2 How to de-list a hazardous listed waste

A generator or receiver can submit an application to the Ministry to de-list or review the status of a listed waste. Most wastes from specific sources are listed because of the toxicity of the waste's constituents. However, a listed waste may no longer exhibit hazardous characteristics if a facility uses or processes raw materials differently from the industrial processes that were considered when the listing was developed. These exclusions may be approved if the waste does not have characteristics that are similar to the characteristics of the waste from which it was derived.

An application to de-list a hazardous waste that is a listed waste must include the results of comprehensive testing and analysis to demonstrate that the waste does not meet any of the criteria for which it was originally listed, or exhibit other hazardous properties or hazardous constituents at significant levels. De-listing applications are subject to a technical evaluation by the Ministry as well as public consultation. It should be emphasized here that this type of review pertains only to a specific waste from a specific facility. Further details on de-listing can be found in Guideline C-16-1 "Guidance Manual for Hazardous Waste Categorization and Review, Volume B, Guidance Manual for the Review of Wastes Listed in Regulation 347". This guideline also covers the listing process for hazardous wastes.

In certain cases, listed wastes that have been treated may be disposed of in a non-hazardous waste facility, provided that a waste ECA has been issued stating that in the opinion of the issuing Director, the waste that is produced in accordance with the waste ECA does not have characteristics similar to the characteristics of the hazardous waste from which it was derived and provided that the treated waste is also not a characteristic waste. In such cases, the treated listed waste is no longer considered to be a listed waste, since the Director has determined that the derived-from rule does not apply. The determination that a waste is no longer a listed waste is based on the same principles used to de-list a hazardous waste through the regulatory de-listing process.

Listed wastes and characteristic wastes may be subject to the land disposal restrictions. Further information on the LDR program is provided in the Land disposal restrictions of this manual.

2.1.5 Liquid industrial waste (LIW)

LIW are wastes from industrial or commercial sources that are liquid waste, but not hazardous waste. For registration purposes, the criterion for determining whether a waste is liquid is the slump test, which is set out in Schedule 9 of Regulation 347.

While LIW must be registered and reported through the Registry, they are not subject to the same level of regulation as hazardous wastes. For example, the mixture and derived-from rules do not apply to LIW. Moreover, while LIW must be managed at an approved facility, they are not subject to land disposal restrictions. Please see the section on Exemptions for information about exemptions from the definition of LIW.

2.1.6 Special cases

2.1.6.1 Remediation waste

Industrial sites may become contaminated through spills of hazardous waste or product chemicals, or through historical management practices. Wastes that are generated when such sites are being de-contaminated are called remediation wastes.

In general, the strict application of the mixture and derived-from rules is not appropriate for remediation wastes. Typically, the remediation waste generated at contaminated sites is in the form of large quantities of soil or a soil mixture that contain relatively low concentrations of chemicals. Moreover, it is often difficult to determine if a listed waste has contaminated a soil or a soil mixture, because remediation waste is often the product of the historical activities carried out at a facility. Strictly applying the mixture and derived-from rules to a soil or a soil mixture at contaminated sites could result in many tonnes of a soil or a soil mixture being classified as hazardous waste, despite the fact that these wastes generally have low concentrations of chemicals and pose little real threat to health or the environment. In addition, managing a soil or a soil mixture as a listed waste would also act as a significant disincentive to site remediation. For these reasons, a soil or a soil mixture or a debris or a debris mixture generated during remediation activities is normally identified as hazardous waste only if it exhibits a hazardous waste characterization other than the listed waste characterizations.

This approach does not apply, however, to a soil or a soil mixture that is known to have been contaminated by a listed waste due to an immediate spill or other activity. In such cases, the resulting waste must always be managed at a hazardous waste facility, since the derived-from rule applies.

Contaminated soils can present health or environmental risks if they are not properly handled and disposed of, and remediation wastes must be characterized to determine if they exhibit any characteristics of hazardous waste. If a remediation waste is determined to be hazardous, it is subject to the requirements of Regulation 347, including the requirements of the LDR program.

The LDR provisions in Regulation 347 do not apply to contaminated soils during the course of on-site remediation activities. However, the LDR requirements do apply to a soil or a soil mixture when it is managed as a waste, including on-site or off-site land disposal of the waste. See the Land Disposal Treatment Requirements section on soils for more information.

2.1.6.2 Waste that is debris

Debris or a debris mixture can include glass, metal, plastic, brick, concrete, wood and other, similar materials that are produced during site remediation or building demolition. Debris or a debris mixture that is considered to be hazardous waste may be contaminated with either a listed waste or a characteristic waste. As with remediation waste, if debris or a debris mixture is known to have been contaminated by a listed waste, it must be managed in accordance with the rules for the listed waste with which it is contaminated. However, where the source of contamination is due to historical practices at a site, and debris or a debris mixture is not known to have been contaminated by a listed waste, the debris or debris mixture is only considered to be hazardous if it exhibits a hazardous waste characterization other than the listed waste characterizations.

If debris or a debris mixture is a listed waste or a characteristic waste and is being land disposed, it is subject to LDR requirements and must be treated to meet the treatment standards. See the Land Disposal Treatment Requirements section on debris for more information.

2.1.7 Subject waste

Subject waste is a term used to identify the types of wastes that must be registered and reported through the Registry. The movement of these wastes must be tracked through the Registry. Carriers and receivers of subject wastes must meet the requirements of Part V of the EPA, as well as Regulation 347.

Subject waste means hazardous waste, LIW and waste that was characteristic but that has been treated so that it is no longer characteristic waste, if the waste may not be disposed of by land disposal under subsection 79 (1).

Wastes that may be subject wastes include wastes that have been de-characterized so that they no longer exhibit the characteristics of a corrosive waste, ignitable waste, leachate toxic waste, or reactive waste. But these wastes cannot be land disposed because they need further treatment to meet the land disposal treatment requirements for additional regulated constituents that are listed in Schedule 6 of Regulation 347.

As a result, de-characterized wastes that have other regulated constituents at concentrations that are at or above the treatment requirements in Schedule 6 and cannot be land disposed, remain a subject waste, and the generator is required to register it. De-characterized wastes that do not have other regulated constituents, or that have regulated constituents at concentrations that meet the treatment requirements and can therefore be land disposed, are not considered to be subject wastes. As a result, the generator is not required to register these wastes.

Some specific wastes are exempted from the definition of subject waste and are therefore exempt from the registration and reporting requirements that apply to other hazardous wastes and LIWs. The exemptions from the definition of subject waste are discussed in the next section of the manual.

2.2 Exemptions

2.2.1 Exemptions available through definitions, Section 1 of Regulation 347

Regulation 347 contains a number of provisions that exempt certain waste streams from the definitions of hazardous waste, LIW, or subject waste (see Section 1 of Regulation 347 for definitions), or from the sections of the regulation that apply to generator registration and manifesting. Exempted wastes do not have to be registered or manifested. However, while these exempted wastes are not subject to registration and manifesting, they must be managed appropriately, and transported and disposed of by approved carriers and receivers (i.e., companies and facilities that are approved for the type of waste being carried or received). Please note that for hazardous waste and LIW exclusions, the wastes must generally be characterized before it can be determined whether or not they are exempt from registration.

2.2.1.1 Hazardous waste and liquid industrial waste definitions

The definitions of hazardous waste and LIW in Section 1 of Regulation 347 specify that certain wastes are excluded from these definitions. While such materials are still considered to be wastes, the requirements for registration and manifesting do not apply. In some cases, other regulatory requirements must be met in order for a waste to be excluded from a definition.

2.2.1.1.1 Hauled sewage

Hauled sewage, generically referred to as septage, is exempt from the definitions of LIW and hazardous waste. Hauled sewage (also known as septage) refers to waste from portable toilets, holding tanks, septic and aerobic systems that are regulated under Part 8 of the Ontario Building Code (OBC). This exemption applies to waste suitable for storage, treatment or disposal in a sewage system regulated under Part 8 that is not disposed of at the site where it is produced. However, the exemption does not include waste from an OWRA facility where the waste is transferred by a sewer, or waste from a vehicle's holding tank. Septage haulers are exempt from generator registration. However, they must obtain the appropriate approval for the purposes of transporting the waste. The land application of septage requires a waste disposal site ECA. However, treated septage may also be land-applied under a Non-Agricultural Source Materials (NASM) Plan approved by the Ministry of Agriculture, Food and Rural Affairs and issued under Ontario Regulation 267/03 (General) made under the *Nutrient Management Act, 2002*.

2.2.1.1.2 Sewage sludge

Wastes from municipally owned sewage works, Crown-owned sewage works or sewage works owned by the Ontario Clean Water Agency (OCWA) under an agreement with a municipality and approved under the OWRA, are also exempt from the definitions of LIW and hazardous waste. Wastes from privately owned sewage works that only receive wastes that are similar in character to domestic sewage, not including industrial sewage, are also exempt. Sewage sludge refers to raw, untreated municipal wastewater solids. Treated sewage sludge is referred to as sewage biosolids, which are nutrient-rich organic materials. Haulers of sewage biosolids are exempt from generator registration.

2.2.1.1.3 Domestic wastes

Household wastes are exempt from the definitions of LIW and hazardous waste. Once a household waste is collected at a MHSW depot, however, the exemption no longer applies if it is characterized as a hazardous waste or LIW, and the waste becomes subject to generator registration and reporting requirements. This exemption applies only to domestic waste from households, and does not include waste from institutions, hotels, motels, etc.

2.2.1.1.4 Incinerator ash

Incinerator ash (bottom ash) resulting from the incineration of waste that is neither hazardous waste nor LIW is exempt from the definition of hazardous waste. Incinerator ash does not include fly ash. Incinerator ash is defined as ash residue that contains less than 10% combustible material by weight.

2.2.1.1.5 Small quantities exemption (SQE)

The regulation provides exemptions for some types of SQE waste under the definitions of LIW and hazardous waste. The exempted quantities vary, depending on the characterization of the specific waste. As a result, the exemption cannot be confirmed until the waste has been evaluated and the primary waste characterization established. Although small quantities of a waste may be considered non-hazardous, and thus exempt from generator registration and reporting requirements, the small quantity is still considered to be waste, and must be transported by an appropriately approved waste carrier and disposed of at an approved facility.

2.2.1.1.6 Empty containers or liners

Depending on the characterization of the material they once contained, empty containers or inner liners may or may not be exempt from registration and manifesting under the definition of hazardous waste. As with SQE waste, the exemption for empty containers or liners cannot be determined until the waste has been evaluated, and the primary waste characterization has been established.

Regulation 347 defines an "empty container" as a container from which wastes and other materials have been removed, using common removal practices such as pumping or pouring, and which contains less than 2.5 centimetres of material on the bottom of the container.

2.2.1.1.7 Exemptions that are specific to LIW

The following wastes are only exempt from the definition of LIW; they do not apply to hazardous wastes.

- Discharges to sanitary sewers
- Wastes or wastewater discharged directly by a generator to a sanitary sewer (either municipally owned or privately owned) that is located at the waste generation site. Please note: The discharge to sanitary sewer exemption does not apply to hazardous wastes
- Wastes that result directly from food processing and preparation operations (Food processing and preparation operations include food packing, food preserving, wine making, cheese making and restaurants)
- Waste from the operation of a water works subject to the OWRA
- Drilling fluids and produced waters associated with the exploration, development or production of crude oil or natural gas
- Processed organic waste (Processed organic waste includes waste that is predominantly organic in composition and has been treated by aerobic or anaerobic digestion, or another means of stabilization, and includes residue from sewage works that are subject to the provisions of OWRA)
- Asbestos waste

2.2.1.2 Subject waste definition

The definition of subject waste in Section 1 of Regulation 347 specifies wastes that are excluded from the definition, which can be found in subsection 1 (3). Wastes that are excluded from the definition of subject waste do not require registration or reporting through the Registry but are still wastes that:

- may still meet the definitions of hazardous waste or LIW
- must be managed or disposed of at an appropriately approved facility
- when transported, must be shipped with an appropriately approved carrier

Please note that some of the exclusions have specific requirements that must be met in order for the waste to be excluded from the definition.

2.2.1.3 Retail motor vehicle service station or service facility wastes

(Please note: This exemption is limited to retail motor vehicle service stations or service facilities that have a valid written agreement for the collection and management of their wastes

from the servicing of motor vehicles with a waste management system that has a waste ECA to haul the hazardous waste or LIW off-site.)

Wastes resulting from the servicing of motor vehicles at retail motor vehicle service stations or service facilities are excluded from the definition of subject waste.

A retail motor vehicle service station or servicing facility provides services to the public for any type of motor vehicle (for example, public vehicle). Facilities that meet these requirements may include gasoline service stations, automotive repair garages, car washes and service centres at automobile dealerships, auto body shops that are open to the public, marinas that service boats for the public, and farm equipment dealers that perform retail servicing. Facilities used by organizations to service their own fleet vehicles — such as government, utilities, bus, transport, rent-a-car or heavy equipment companies — do not qualify for the exemption unless they provide retail services as the primary function of their business.

This exemption only applies to subject waste from the servicing of motor vehicles. Such wastes can include used lubricating oil, service station interceptor waste, water pump-out from underground storage tanks, waste batteries, waste antifreeze, liquid waste paints and waste solvents. However, please note that the exemption does not apply to wastes generated by activities that are not associated with the servicing of motor vehicles (for example, site remediation waste).

A Ministry document entitled, "Best Management Practices — Procedures for the Handling and Disposal of Selected Wastes from Retail Motor Vehicle Servicing Facilities (Formerly Guideline C-11-1)," has been developed to address the appropriate management of these wastes. This document provides further information about managing the wastes that are typically generated at these facilities and the details that must be included in the written agreement referred to above.

2.2.1.4 Specifically exempted facilities

Waste from:

- a nursing home as defined under the *Nursing Homes Act*
- a home as defined under the Homes for the *Aged and Rest Homes Act*
- a home for special care as defined under the Homes for *Special Care Act*
- the professional office of a member of the Royal College of Dental Surgeons of Ontario
- the professional office of a member of the College of Physicians and Surgeons of Ontario

The wastes that are excluded from the subject waste definition for the professional office of a member of the Royal College of Dental Surgeons of Ontario and the professional office of a member of the College of Physicians and Surgeons of Ontario are wastes that are solely from a single doctor’s office or single dentist’s office. Wastes that are consolidated from multiple

doctors' or dentists' offices (for example, professional offices in a medical or dental building) are not excluded from the subject waste definition.

Wastes from the facilities described above that are not subject waste, but are hazardous waste or LIW, must be handled at approved facilities.

2.2.1.5 Intact waste batteries

Damaged, spent, worn out or discarded intact electric batteries that are destined for waste battery recovery facilities are excluded from the definition of subject waste. A "waste battery recovery facility" is a site at which intact waste batteries are received for recovery of battery components and there is no disposal of intact waste batteries or of recovered battery components.

2.2.1.6 Common mercury waste

Common mercury waste that is destined for a common mercury waste recovery facility is excluded from the definition of subject waste.

"Common mercury waste" means:

- electrical switches, thermostats or fluorescent lamps that contain mercury and that are damaged, worn out or discarded
- thermometers, barometers or other measuring devices that contain mercury and that are damaged, worn out or discarded
- discarded material that contains mercury from dental procedures carried out by a member of the Royal College of Dental Surgeons of Ontario

A "common mercury waste recovery facility" is a site at which common mercury waste is received for recovery of mercury and, where there is no disposal of common mercury waste or mercury.

2.2.1.7 Waste electrical and electronic equipment (WEEE)

Intact WEEE that is destined for a site for the recovery of materials is excluded from the definition of subject waste. WEEE has the same meaning as in Ontario Regulation 389/16 (Waste Electrical and Electronic Equipment) made under the *Waste Diversion Transition Act, 2016*, and includes common items such as televisions, computers, printers and fax machines.

2.2.1.8 Printed circuit boards

Intact waste printed circuit boards that are destined for a site, where they will be processed for the recovery of materials, are excluded from the definition of subject waste.

2.2.1.9 Excess soil that is liquid soil

Excess soil that is liquid soil, unless the liquid soil is hazardous waste, is excluded from the definition of subject waste.

2.2.2 Exemptions from Part V of the EPA and Regulation 347, section 3 of Regulation 347

Section 3 of Regulation 347 identifies wastes that are exempt from Part V of the EPA and Regulation 347. Although these materials are considered to be wastes, they are not subject to generator registration and reporting requirements, as long as they meet the Section 3 requirements. Please note that there are sites that receive these wastes but do not meet the Section 3 requirements. These sites are waste management operations that require a waste ECA, even though some or all of the waste is processed for recovery or reclamation.

The wastes in Section 3 that are exempted from the requirements of both Part V of the EPA and Regulation 347 are listed below. Please note that the full text of Section 3 is not included here, and that this section also addresses wastes that are neither hazardous waste nor LIW. The Section 3 exemptions include:

- agricultural wastes
- inedible material within the meaning of Ontario Regulation 31/05 (Meat) made under the *Food Safety and Quality Act, 2001*
- any material that is condemned or derived from a carcass at a registered establishment within the meaning of the *Meat Inspection Act* (Canada)
- dead farm animals within the meaning of Ontario Regulation 106/09 (Disposal of Dead Farm Animals) made under the *Nutrient Management Act, 2002* or regulated dead animals within the meaning of Ontario Regulation 105/09 (Disposal of Deadstock) made under the *Food Safety and Quality Act, 2001*
- inert fill
- rock fill or mill tailings from a mine

With respect to hazardous waste and LIW, the following may be exempt from the requirements of both Part V of the EPA and Regulation 347.

Please note that for certain exemptions to apply, there are documentation requirements that need to be met. These are described under Documentation requirements for specific section 3 exemptions. If you have a waste stream and are unsure if it meets any of the Section 3 recyclable material exemptions, please contact the Ministry for assistance.

2.2.2.1 Generic recyclable material exemption — (covered in paragraph 1 of subsection 3 (2) of Regulation 347)

Municipal waste, hazardous waste or LIW, other than used, shredded or chipped tires, that is transferred by a generator for direct transportation to a site, and that is:

- to be wholly used at a site in an ongoing agricultural, commercial, manufacturing or industrial process or operation that is used principally for functions other than waste management and does not involve combustion or land application of the waste
- neither excess soil, other than excess soil described in subsection 3 (8) of Ontario Regulation 406/19 (On-Site and Excess Soil Management) made under the Act, nor processed organic waste from a composting facility, and the waste is transferred by a generator for direct transportation to a site,
    - to be promptly packaged for retail sale, to meet a realistic market demand
    - to be offered for retail sale to meet a realistic market demand

In every sense, the waste described above can be used as raw material, and as such is exempt from registration and reporting requirements and all other provisions of Regulation 347 and Part V of the EPA. To qualify for this exemption, the waste must be used completely, either in a process or operation whose function is not waste management or be taken directly for retail sale or prompt packaging before retail sale.

While "wholly" has not been defined, it means that all of the wastes must enter the process or operation. If the waste is used as a substitute for virgin material and is processed in the same unit as virgin material, it is exempt. For example, if lead dross is fed with lead concentrate into a sintering plant before smelting, the waste meets the requirement for this exemption. Minor modifications to the wastes, such as incidental sedimentation in storage tanks where treatment is not intended, may be acceptable. However, major pre-processing (for example, calcining, roasting, sintering) of the waste on its own before it is used is not permissible in this exemption. For example, the breaking of lead acid batteries before the battery lead is fed into a smelter is not exempt.

In most cases, it is possible to determine whether or not the function of a process is for waste management by reviewing the viability of the process if the waste were not available. Processes or operations that are not viable without the incoming wastes are considered to be in the business of waste management. If only waste is being used in the process, and no virgin materials are used, the facility is considered a waste management operation, and therefore requires the appropriate waste ECA. For example, an oily water treatment facility is not viable without oily water. The facility is thus considered to be a waste management facility, and the oily water does not meet the requirements of the exemption described in subsection 3 (2).

By contrast, a metal degreasing operation can continue to operate without waste solvents. The supply of waste solvents is simply an alternative that is substituted for virgin solvents to obtain an economic benefit. Facility operators should be aware that the use of a waste as a substitute

reagent (for example, a re-hydrating agent) in a process that is recognized as waste management does not make the waste exempt in accordance with subsection 3 (2).

The difference between ongoing manufacturing operations and waste management activities can also be illustrated through the example of recycling metal-bearing wastes. In the primary metal industry, where ores or concentrates are processed, metal-bearing wastes may be fed into the smelter operation in the same process as the ores or concentrates for metal recovery. In this case, the metal-bearing wastes are considered to meet the requirements of the subsection 3 (2) exemption. However, in the secondary metal industry, where wastes are the only feedstock for the recovery of metal at the facility, the operation is considered to be engaging in waste management. In this case, the metal-bearing wastes do not meet the requirements of the general recyclable material exemption in subsection 3 (2).

Processes that combust waste or apply waste to land are not included in the exemptions described in Section 3, and thus would not meet the recyclable material requirements described above.

Waste that is packaged "as is" without any processing before packaging is considered to be "promptly packaged." If a waste is broadly available for purchase by interested consumers, it is considered to be offered for retail sale. However, this does not mean that the waste is available for purchase by a manufacturer as a raw material.

2.2.2.2 Specific recyclable material exemptions (covered in paragraphs 6 to 13 of subsection 3 (2) of Regulation 347)

- Pickle liquor transferred by a generator for direct transportation to a site at which it is to be wholly utilized as a treatment chemical in:
    - a sewage works that is subject to the OWRA
    - a sewage works outside Ontario, if the utilization of pickle liquor for this purpose is acceptable to the environmental regulatory authority in the jurisdiction where the sewage works is located, or
    - a wastewater treatment facility that discharges into a sanitary sewer
- Solid photographic waste that contains silver, including spent chemical recovery cartridges that contain silver, when the waste is transferred by a generator and destined for a site at which it is to be processed for the recovery of silver.
- Waste paint or waste coatings transferred by a generator and destined for a site at which the waste is to be used in an ongoing manufacturing process for the production of paint or coatings, if the process does not involve combustion of the waste and the paint or coatings that are produced are not used as fuel.
- Emission control dust from the primary production of steel in electric furnaces, if the dust is transferred by a generator for direct transportation to a site at which it is to be used as a feedstock in an ongoing high-temperature metal recovery process in a rotary kiln, flame reactor, electric furnace, plasma arc furnace, slag reactor, industrial furnace or combination of a rotary hearth furnace and electric furnace.

- Spent activated carbon transferred by a generator for direct transportation to a site at which it is to be used in a process to reactivate activated carbon.
- Metal-bearing waste, other than lead acid batteries or aqueous waste, that is transferred by a generator for direct transportation to a smelter at which the waste is to be used as a feedstock in an ongoing operation for the recovery of metal-including waste that, for the purpose of being used as a feedstock, is processed through size reduction, blending, calcining, roasting, sintering, drying, pelletizing, cleaning, leaching or separation of solids from liquids, but not including waste that, for the purpose of being used as a feedstock, is processed in any other manner.
- Printed circuit boards that are waste and that are transferred by a generator and destined for a smelter at which they are to be used as a feedstock in an ongoing operation for the recovery of metal.
- Waste that is to be processed and used at the same site at which it is generated, if:
    - neither the processing nor the use of the waste involves combustion or land application of the waste, and
    - the waste is not PCB waste, PCB soil or a PCB soil mixture

The specific Section 3 exemptions that are listed above are waste management processes that do not fit the generic recyclable material exemption. However, the Ministry wishes to promote these recycling activities, and when these wastes are managed as described, they are exempt from Part V of the EPA and Regulation 347, including generator registration and reporting requirements.

"Direct" transportation for generic and specific recyclable material exemptions means that the waste must go directly from the generator to the end user. In such cases, no intermediate transfers may take place while the waste is on the way to the recycling site.

By contrast, waste that is "destined" to go to a recycling site for generic and specific recyclable material exemptions means that the waste can go indirectly from the generator to the end user. Intermediate transfers can take place while the waste is en route to the recycling site. However, no processing, except bulking for transporting purposes, may take place at the intermediate sites.

2.2.2.3 Documentation requirements for specific section 3 exemptions

In order to maintain the validity of the exemptions that require direct transportation, the carrier must also comply with Section 3 (3) of Regulation 347. The carrier must have in his or her possession a document from the owner or operator of the site to which the material is being transported, and this document must:

- indicate that the owner or operator of the site agrees to accept the material
- specify the use that will be made of the material, and

- stipulate that the transported material is being shipped to an ongoing process or operation that is currently in operation, if the exemption refers to an ongoing process or operation

For the exemptions that stipulate "destined" to be valid, the above requirements are also required for the carrier and any owner or operator of any transfer station at which the material is collected, handled, stored or transferred before reaching the site to which the material is destined. No processing is permitted at any intermediate site.

2.2.3 Exemption for selected waste depots

Sections 43 through 60 of Regulation 347 provide the regulatory requirements for selected waste depots. If a facility meets the regulatory requirements, it is exempt from generator registration and manifesting, and does not need an ECA for a waste disposal site.

The purpose of a selected waste depot is to provide a location for consumers to return selected wastes to a retail facility for proper management (for example, when "do-it-yourself" oil change waste is returned to a facility that sells oil). Only businesses that sell goods or service motor vehicles as one of their primary functions can set up a selected waste depot to take back wastes generated from selected products that are regularly sold at the business. The depot must be located at the business site and managed by the person who owns or has the charge, management or control of the business. Selected wastes that can be accepted at a depot include waste anti-freeze, waste oil filters, and waste lubricants (crankcase oil, gear oil, transmission fluid and hydraulic fluid).

A business that sets up a selected waste depot in accordance with the regulation must also follow the operating standards set out in the regulation. Meeting the standards allows the selected wastes from the "Do-It-Yourself" consumer and small quantity-exempt generator to be returned to retailers and service stations without waste management system (carrier) requirements for the generator, waste disposal site (receiver) requirements for the depot, and generator registration and manifesting requirements for the depot when the selected wastes are being shipped off-site.

Since these wastes are hazardous waste or LIW, the depot must therefore ensure that these wastes are managed by approved facilities.

Selected Waste Depots must have one or more valid written agreements with a waste management system that has a waste ECA to accept the selected wastes and have them hauled off-site.

An example of a selected waste depot could include a retail business that sells goods to the public, in which anti-freeze and oil products are among those goods. This facility has the option of setting up a selected waste depot on-site that accepts waste anti-freeze and waste oil from

consumers. The wastes may be collected on-site, and then sent for appropriate management at an approved facility, using an approved waste hauler.

2.2.4 Exemption for field operations

Sections 29.1 to 29.5 of Regulation 347 provide the regulatory requirements for field operations. Field operations are activities or services that are performed by companies (or a public sector agency) and are part of their regular duties. Wastes that are generated from carrying out these activities or services require proper management. If the activity or service is not performed, the waste would not be generated.

A field operation activity or service must take place away from the company's normal place of business (i.e., at a "remote site"), either on property owned by the company or on the property of another company that authorizes the activity or service to take place. If a company (or public sector agency) goes to a "remote site" and wishes to manage a waste that has already been generated (i.e., not from the activity or service that is to be performed) then it is not considered a field operation.

The field operations provisions eliminate the need for carrier and transfer station ECA's in certain special situations. Generator registration and manifest requirements are also removed. In general, wastes generated from a field operation can be transported to a facility referred to as a local waste transfer facility without the need for generator registration at the field site or a manifest to transport the waste from the field site. Neither the carrier nor local waste transfer facility needs to obtain an ECA.

These exemptions are intended for operations that generate waste but are located in places that make it difficult to comply with the waste management requirements previously mentioned. Examples include: locations that are very remote or difficult to access and where, for example, mining and exploratory work takes place; operations that take place away from a permanent site, such as servicing manholes or pole-top transformers; or operations such as carpet cleaning or elevator repair that are performed on behalf of another company but away from the operator's base of operation.

Field operations are not intended for companies that provide waste management services or for operations that generate waste on-site as part of their normal business. It includes conditions and restrictions that allow companies to consolidate wastes at a specific location, at which the registration, manifesting and waste ECA requirements apply.

In 2022, the Ministry expanded the Regulation 347 definition of "mobile health care" — an activity referenced within the definition of field operations. The amendment allows a variety of health care related activities such as: blood collection, collection of specimens, and administration of vaccines to fall under the field operations exemption. Examples include:

blood donation events at libraries or shopping malls or vaccine events held at temporary locations.

2.2.5 Exemption for waste from COVID-19 antigen point-of-care testing

Section 29.6 of Regulation 347 provides the regulatory requirements for waste generated from undertaking COVID-19 Antigen Point-of-Care Testing (POCT). Persons who generate waste from administering antigen POCT are exempt from certain regulatory requirements such as registration, manifesting and specific management requirements that apply to the hazardous waste. This applies to all subsequent persons who handle this POCT waste, including those who collect, transport, and store the waste on a temporary basis in Ontario. In addition, facilities that collect, handle, temporarily store, transfer, and transport COVID-19 testing waste are exempt from the requirement in the EPA to have an environmental compliance approval. (Note: The exemptions only apply to waste generated from antigen POCT kits. They do not apply to other hazardous waste that a facility might generate.)

In addition, these exemptions do not apply to the rules governing the treatment, processing, deposit or disposal of POCT kits. Waste from POCT kits must still be finally disposed of at an authorized hazardous waste disposal site.

Those who are handling COVID-19 testing waste would be expected to follow ministry guidance on handling, storage, and transportation.

The exemptions found in section 29.6 of the regulation only apply if the COVID-19 testing waste is destined for final disposal in Ontario at a waste facility that is approved for the treatment and final disposal of hazardous waste. If a person decides to export COVID-19 testing waste to another jurisdiction, they cannot rely on the section 29.6 exemptions in Regulation 347. They must comply with the normal requirements related to the registration, reporting, manifesting and management of hazardous waste.

2.3 Overview of waste streams requiring generator registration

Generators are required to register subject wastes that are generated at a facility, even if the wastes are not being shipped off-site. Figure 1: Overview of waste streams requiring generator registration identifies the most common waste streams and situations that require registration with the Ministry. The figure is included in the manual to provide an overview of waste management activities that affect generator registration. To determine if your specific waste stream must be registered, you will need to follow the process outlined in Figure 2: Do any exemptions apply to your waste including characterizing the waste and determining whether Ontario's land disposal restrictions apply.

The final determination of whether you need to register your waste stream is based on the waste characterization, whether the LDR requirements apply and how the waste will ultimately be managed.

A detailed explanation for each of the situations shown in Figure 1: Overview of waste streams requiring generator registration is provided below.

2.3.1 Waste shipped off-site

Any subject waste that is transported off-site must be registered. This requirement includes any subject waste hauled to an off-site waste management facility, wastes that are sent to a facility on the Tonnage Fee Exempt Recycling Facilities Directory, and liquids that are transported to an off-site OWRA-approved facility.

2.3.2 Off-site waste management facilities

A characteristic waste that is subject to the LDR requirements and treated on-site so that it has been de-characterized after treatment but remains a subject waste (i.e., the waste cannot be land disposed because the regulated constituents in Schedule 6 of Regulation 347 do not meet the treatment requirements), must be registered before it is hauled to an off-site waste management facility. A characteristic waste that is subject to the LDR requirements and fully treated on-site (i.e., de-characterized and the regulated constituents in Schedule 6 meet the treatment requirements) is no longer a subject waste and registration is not required when it is hauled off-site for disposal.

2.3.3 On-site processing of listed wastes or characteristic wastes that are subject to LDR

When subject wastes are processed on-site and the processed waste or residual from the waste processing remains a subject waste, the province's registration requirements apply, and the generator must prepare a waste analysis plan as outlined in Section 85 of Regulation 347.

If the on-site processed waste or residual from the waste processing is not a subject waste, registration is not required, but a waste analysis plan as outlined in Section 85 of Regulation 347 is required, and records must be maintained for LDR purposes. Generators must also provide notification to the receiver to meet the LDR requirements for treated characteristic wastes (i.e., wastes that can be land disposed under Section 79 of Regulation 347) when they are disposed off-site. Please see Section 84 of Regulation 347 and the Notification, Record-Keeping and Waste Analysis Plan Requirements section for further details.

2.3.4 On-site processing of wastes that are not subject to LDR

Wastes that are managed by other on-site processes, such as bulking or blending operations, do not need to be registered prior to processing, if the waste is not subject to land disposal restrictions. However, subject wastes (including any residues) that are subsequently hauled off-site must be registered. Wastes that are bulked or blended and returned to an on-site process operation do not require registration.

2.3.5 On-site waste disposal

All subject wastes that are disposed of at an on-site waste management facility must be registered. Examples of on-site disposal include thermal treatment such as incineration, on-site combustion such as boilers or space heaters, landfilling, landfarming and use of a waste-derived fuel. Any residues that are subject waste must also be registered. Please note that thermal treatment is not considered processing.

2.3.6 OWRA facility (wastewater treatment) — hazardous waste discharges to final stage only

For OWRA facilities (wastewater treatment processes), registration is only required for all of the independent hazardous waste discharges to the final stage of the OWRA facility (wastewater treatment). Wastes discharged to intermediate stages in the overall process do not require registration. Discharges from the final stage of the OWRA facility to a watercourse do not need to be registered. If the waste is subject waste, sludges and skimmed waste from the OWRA facility must be registered.

2.3.7 Discharge to municipal sanitary sewers

Hazardous wastes discharged to a municipal sanitary sewer must be registered. A generator that discharges hazardous wastes into a drain that leads to a municipal sewer must register each hazardous waste being discharged. Laboratory facilities, such as educational, research and quality control laboratories, are required to estimate the types and quantities of hazardous wastes that are disposed of in this manner, and to ensure that they are registered appropriately.

Generators should also note that discharges of hazardous waste to sanitary sewers are permitted only in accordance with municipal by-laws governing sewer use.

2.3.8 Off-site water pollution control plants

All hazardous wastes and LIW hauled off-site to an OWRA-approved Water Pollution Control Plant (WPCP)/ Wastewater Treatment Plant (WWTP) must be registered. By contrast, wastewater discharges from an OWRA-approved WPCP/WWTP to a watercourse do not need to be registered. Similarly, residues that are produced through the treatment process do not need to be registered, provided that a municipality, the Crown or the Ontario Clean Water Agency under an agreement with a municipality, owns the WPCP/WWTP.

2.3.9 On-site storage

All subject wastes must be registered at the point of generation. Therefore, all subject wastes stored more than 90 days at a waste generation facility must be registered.

When a generator registers a waste that is being stored on-site for more than 24 months, an ECA number or the PCB storage site approval number must be provided, as applicable.

Final disposal sites can also be waste generating facilities, if the residues or discharges from the facilities are subject wastes. Any facilities engaging in on-site waste management activities producing wastes (for example, sludges, skimmings, etc.) become generating facilities and the resulting wastes may be subject to registration. Small quantity exemptions may apply to these situations.

2.3.10 Figure 1: Overview of waste streams requiring generator registration

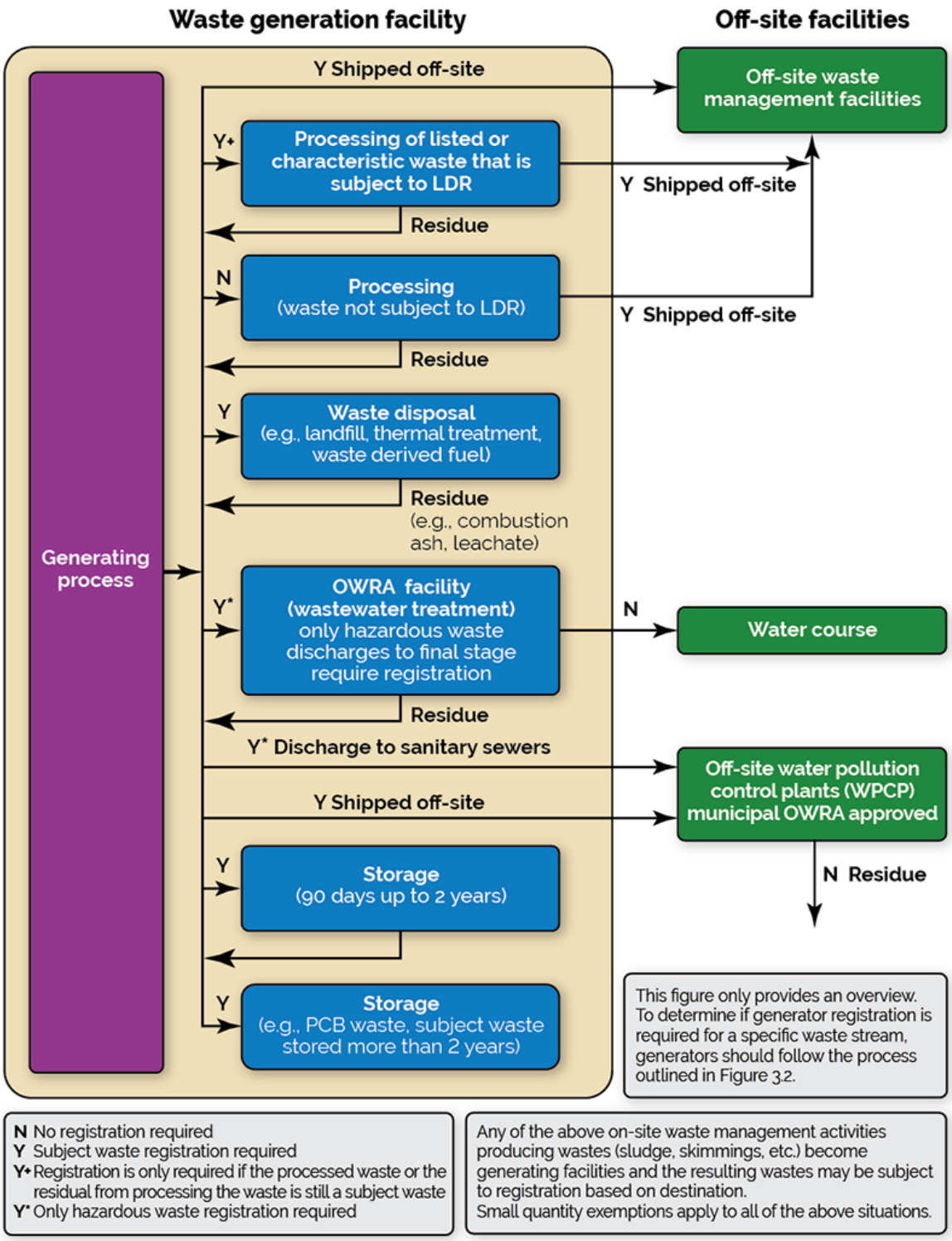


Figure 1 is a graphical representation of the information in the Overview of waste streams requiring generator registration section. To determine if generator registration is required for a specific waste stream, generators should review the How to determine if registration is required section.

Figure notes

- N – No registration required
- Y – Subject waste registration required
- Y+ – Registration is only required if the processed waste or the residual from the processed waste is still subject waste
- Y* – Only hazardous waste registration required

Any of the above on-site waste management activities producing wastes (sludge, skimmings, etc.) become generating facilities and the resulting wastes may be subject to registration based on destination. Small quantity exemptions apply to all of the above situations.

The waste characterization process is outlined in the Determining the characterization of your waste stream section of this manual. After completing this process, you need to determine whether the LDR requirements apply for the purposes of registration (see LDR and other regulatory requirements).

Once you have confirmed that your waste requires registration, you will need to identify the appropriate waste class. Guidance on this process is provided in the Determining the appropriate waste class for the generator's waste stream section of the manual.

2.4 Determining registration and other regulatory requirements

The Ministry has developed a number of flowcharts to guide generators through the process of determining whether they need to register their waste, and to help them identify other regulatory requirements related to registration. Generators also need to know if the LDR requirements apply to their wastes, since this will have a bearing on the generator registration process. The flowchart below identifies the steps that generators should follow to determine if they need to register their waste, and whether there are other regulatory provisions that require them to provide additional information.

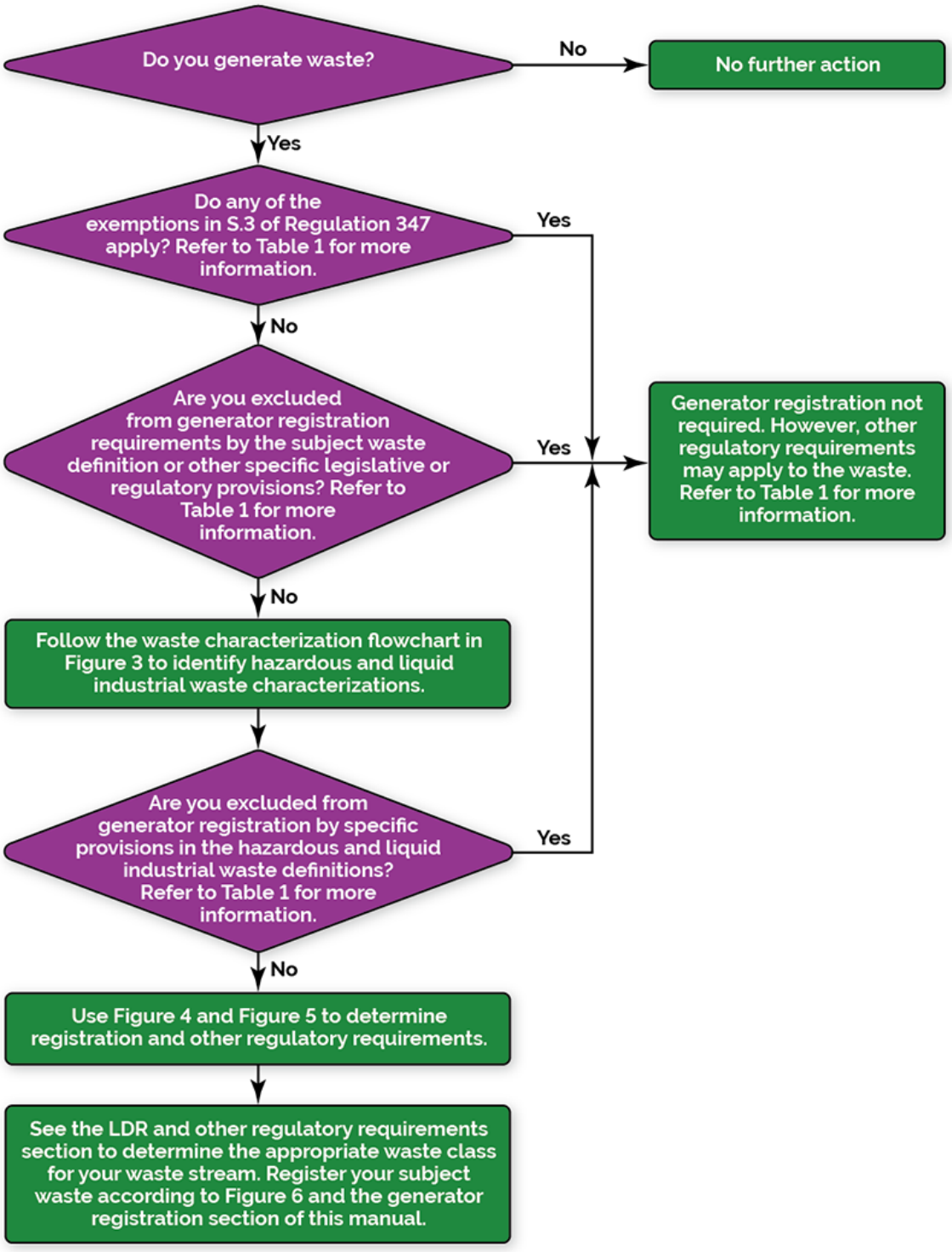
The first step in determining whether registration is required is to determine whether you generate waste, and if so, whether your waste is subject to any registration exemptions or exclusions.

The generation of waste and the legislative and regulatory provisions that may exempt specific wastes from some regulatory requirements (for example, registration) are discussed earlier in

this section of the manual. The Exemptions from waste generator registration table below summarizes the exemptions discussed in the section entitled Exemptions along with exemptions from the generator registration requirement through exemptions in the definitions of subject waste, hazardous waste, and LIW.

If you are a generator and your waste qualifies for any of these exemptions, including any associated regulatory requirements that make your waste eligible for the exemption, generator registration is not required. By contrast, if your waste does not meet the exemption requirements, you need to characterize your waste (please see Determining the characterization of your waste stream and Figure 3: Waste characterization flowchart). In the case of both hazardous waste and LIW, you cannot determine whether your waste is exempt from registration under the definitions outlined above until you have characterized the waste.

2.4.1 Figure 2: Do any exemptions apply to your waste



This figure is a graphical representation of the information in Table 1.

2.4.2 Table 1: Do any exemptions apply to your waste

Question	Section of Regulation 347	Requirements
Do you generate waste?	• Not Applicable	• Not Applicable.
Is your waste exempt from Part V of the EPA and Regulation 347?	• Section 3	• Waste characterization and generator registration not required. • If exempt through paragraph 1i, 6, 9, 10 or 11 of Section 3 (2), you must meet the requirements of Section 3 (3) of Regulation 347. • If exempt through paragraph 7 or 8 of Section 3 (2), you must meet the requirements of Section 3 (3.1) of Regulation 347.
Is your waste excluded from the definition of subject waste?	• S.1 of Regulation 347 • S.1 (3) 1 to 6 of Regulation 347 • See Exemptions — Subject Waste Definition	• Generator registration not required. • Although exempt from the subject waste definition, the waste may still meet the definition of hazardous waste or LIW. • Waste must be managed or disposed of at a facility approved for these types of hazardous waste or LIW and, if shipped, must be with an appropriately approved carrier. • If waste is from the servicing of motor vehicles at a retail motor vehicle service station or service facility, there must be a written agreement for the collection and management of the waste with a waste management system approved under the Act (see Best Management Practices — Procedures for the Handling and Disposal of Selected Wastes from Retail Motor Vehicle Serving Facilities — formerly Guideline C11-1).

		• If waste is WEEE or printed circuit boards, the waste must be destined for a site at which they are to be processed for the recovery of materials. • If waste is intact waste batteries, or common mercury waste the waste must be destined for a waste battery recovery facility or common mercury waste recovery facility, respectively.

Is your waste excluded from generator registration by other specific legislative or regulatory provisions?	Exemptions through the EPA, other Acts, or Regulation 347
	• Treated wastewater discharged to watercourses from OWRA approved facilities
	• Selected waste depots (Section 43-60 of Regulation 347)
	• Field operations (Section 29.1-29.5 of Regulation 347)
	• Section 29.6 of Regulation 347
	• ECA
		• Generator registration not required.
		• For OWRA facilities, registration of hazardous waste discharged into the final stage of treatment facility and subject wastes generated by these facilities are not exempt.
		• Must meet all associated requirements in Regulation 347 or other Ministry documents to be exempt from generator registration requirement.
		  ○ Section 43-60 for selected waste depots
		  ○ Section 29.1-29.5 for field operations
		  ○ Section 29.6 for waste from COVID-19 Antigen Point-of-Care Testing
		  ○ Other Ministry documents (i.e. ECA).

Is your waste excluded from the definition of hazardous waste?	• Section 1 of Regulation 347, items (l) through (u) of the definition of hazardous waste • Waste characterization must be completed	• Generator registration not required. • These non-hazardous wastes must be managed or disposed of at an appropriately approved facility and if shipped must be with an appropriately approved carrier.
Is your waste excluded from the definition of liquid industrial waste?	• Section1 of Regulation 347, items (a) through (i) of the definition of LIW	• Generator registration not required. • These non-hazardous wastes must be managed or disposed of at an appropriately approved facility and if shipped, must be with an appropriately approved carrier.

2.5 Determining the characterization of your waste stream

This section of the manual is designed to help generators determine if their waste meets the criteria for hazardous waste or LIW. The first step in determining the characterization of your waste is to identify any constituents in the waste that could make it hazardous. This can be done through a combination of testing and applying the generator's own knowledge of the waste stream, and is discussed in more detail in the Waste analysis requirements section below.

The second step in the process of waste characterization is to determine whether registration is required, as outlined in Figure 3: Waste characterization flowchart. This figure will help you identify those waste characterizations that are primary and those that are secondary.

You should also ensure that you follow the waste characterization flowchart and associated explanations through to completion, to ensure that you have identified all of your subject wastes. At the same time, you will need to identify the appropriate waste class for each of your waste streams. The Determining the appropriate waste class for the generator's waste stream section provides guidance on choosing the most appropriate waste class for your waste.

Please note that determining the characterization of your waste stream must be done at the point of generation (please see the Determining when waste is generated section for more information). Wastes should not be bulked, blended or mixed in any way until the characterization process has been completed.

2.5.1 Waste analysis requirements

Generators need to have enough knowledge about their waste streams to be able to characterize them accurately, in order to determine whether or not each waste Figure 3: Waste characterization flowchart stream needs to be registered. In some cases, the waste may need to undergo laboratory testing, while in others the generator's knowledge of the waste may be all that is needed to characterize the waste appropriately. In many cases, a combination of the generator's knowledge and laboratory testing will be the best approach to characterization.

As a generator, you are responsible for accurately characterizing and registering the waste. Your records are subject to Ministry inspection, and they must demonstrate that the waste analysis you carried out resulted in the waste being characterized appropriately. Generators must maintain at least three (3) years' worth of records at the waste generation facility showing all data, analysis and other information used to prepare the GRR. Waste analysis does not have to be repeated to characterize the waste unless there is a change to the process or materials used in the process that produces it. As a result, generators should retain their waste analysis and other relevant records for as long as they continue to generate the waste, and for the required period after they cease generating it.

2.5.1.1 Waste characterization using generator knowledge

There are a number of cases where the generator's knowledge of the waste may be sufficient to characterize the waste stream appropriately. For example, if you know that your waste is a hazardous waste chemical, you do not have to perform an analysis to confirm this.

Similarly, it may not be necessary to test listed wastes in a laboratory. For example, if an industrial process that is identical to the process described in the listing generates a listed waste, analysis may not be necessary to identify the waste stream's hazardous characteristics. If the waste stream is not a listed waste, information from the Safety Data Sheets (SDS) or laboratory analysis can be used to determine if the waste exhibits any of the characteristics of hazardous waste.

By contrast, in the case of wastes that are subject to LDR requirements, the generator's knowledge may not be sufficient for characterization. In such cases, additional analysis and assessment may be needed to identify the regulated constituents in the waste that have to be treated.

2.5.1.2 Waste characterization using laboratory analysis

If laboratory testing is needed to characterize your waste stream, you should use your knowledge of the waste to help determine the specific analyses that are needed, since it is only necessary to analyze the waste for constituents that are reasonably expected to be present.

For hazardous industrial wastes, if the production process differs from the process described in the listing in Regulation 347, generators may need to test their waste for additional constituents that may be present. Again, however, the specific analysis carried out should be based on the generator's knowledge of the process used and the waste being produced. For example, if all of the chemicals used in the industrial process are inorganic, it is not necessary to test the waste for organic compounds.

A similar approach is recommended for characteristic wastes. Depending on the origin of the waste, lab testing may be needed to identify whether the waste is corrosive, ignitable, and/or leachate toxic. The analyses conducted should be based on the generator's knowledge of the waste stream. For example, when you are analysing for leachate toxicity you should test for contaminants that can reasonably be expected to be present in the waste. With this approach, a complete analysis to identify all the possible contaminants that can cause a waste to be leachate toxic would only be necessary if there was no information on the history or origin of the waste.

2.5.2 Using the waste characterization flowchart

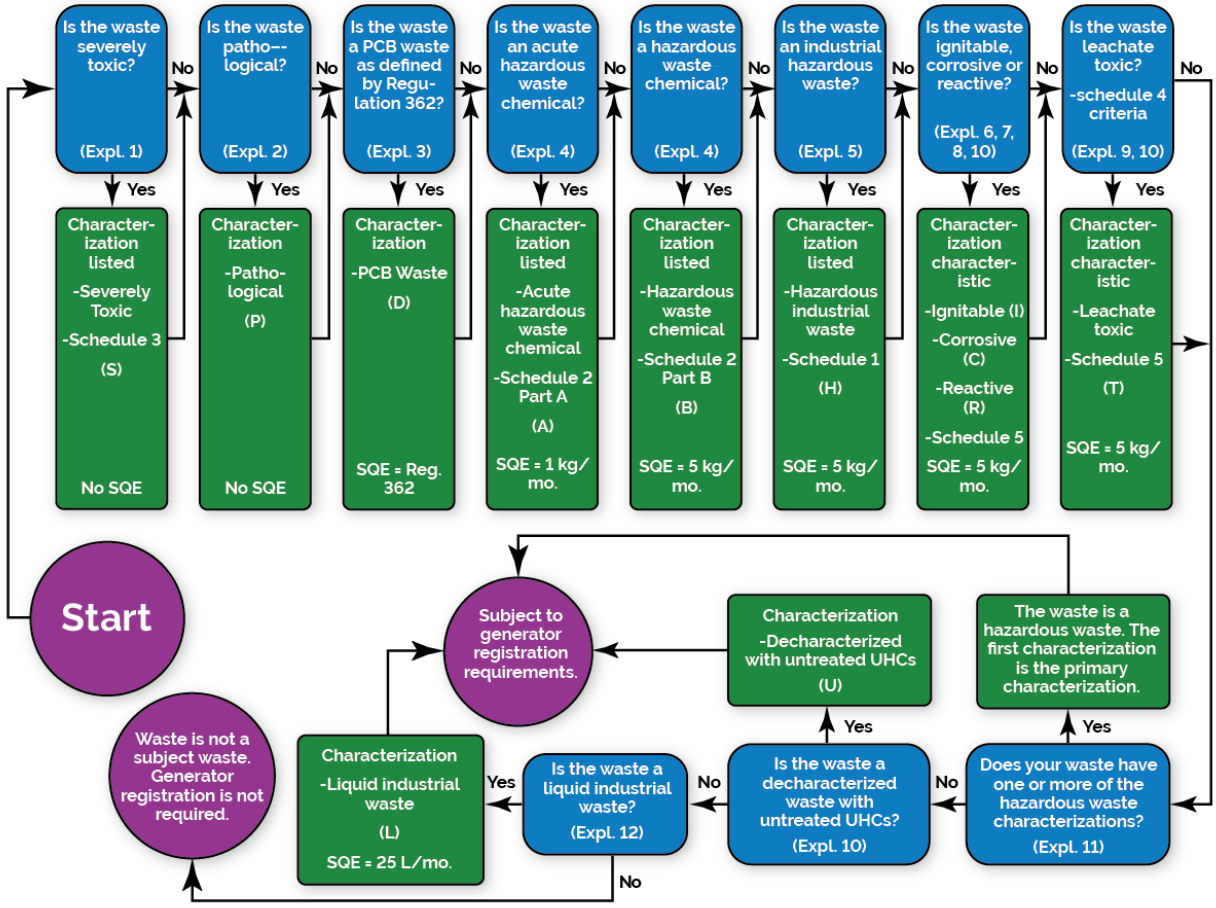
Figure 3: Waste characterization flowchart is designed to help you bring a systematic approach to determining whether or not you need to register your facility and the wastes it produces. This section of the manual contains the explanations that appear throughout the flowchart.

Please note that you need to follow the flowchart in Figure 3: Waste characterization flowchart through to completion for each waste stream, to ensure that you have identified and prioritized all characterizations for a particular waste. If more than one waste characterization applies, the first characterization identified using the flowchart is defined as the primary characterization that you should report for all subject wastes. Any additional characterizations that you identify using the flowchart are defined as secondary characterizations. For wastes that are subject to LDR notification requirements, you must identify all additional secondary characterizations for each waste stream and report them in the LDR notification form of the GRR.

All subject waste generated on-site must be registered, even if it is not shipped off-site. Please note that after a characteristic waste is fully treated to meet the land disposal treatment requirements, it is no longer a subject waste.

Please do not attempt to complete your GRR until you have followed the flowchart through to completion for each waste stream and have read all the relevant explanations.

2.5.3 Figure 3: Waste characterization flowchart



This flowchart is a graphical representation of the information contained in the Determining the characterization of your waste stream section.

2.5.4 Flowchart explanations

2.5.4.1 Explanation 1 — Severely toxic waste

Severely toxic wastes are characterized as wastes that contain one or more of the contaminants listed in Schedule 3 of Regulation 347 at a concentration greater than one part per million. Severely toxic wastes could include pesticides such as 2,4,5-T and pentachlorophenol, but are unlikely to include industrial waste streams. Please note that a mixture of severely toxic waste and any other waste or material remains severely toxic waste.

Similarly, waste that is derived from severely toxic waste remains severely toxic waste unless it is produced in accordance with an ECA that states that, in the opinion of the Director, the waste

that is produced in accordance with the ECA does not have characteristics similar to the characteristics of the severely toxic waste from which it was derived.

Please note that there is no SQE for severely toxic wastes, and that empty containers and liners are also considered to be hazardous waste.

If you generate a waste that is severely toxic, you will need to specify the following information on the GRR:

- Waste characterization — Severely toxic (S)
- Waste Class — Select the three-digit waste class number from Appendix A: Ontario waste classes next to the listing that best describes your waste
- Waste Number — Add the letter "S" to the waste class number to specify the above waste characterization, for example, 242S
- Hazardous Waste Number — select the four-character code (a letter followed by three numbers) found in Column 1 of Schedule 3, used to identify individual Severely Toxic wastes (for example, S001)

Please note that severely toxic wastes are subject to LDR treatment requirements before land disposal.

2.5.4.2 Explanation 2 — Pathological waste

Regulation 347 defines pathological waste, in part as follows:

i. any part of the human body, including tissues and bodily fluids, but excluding fluids, extracted teeth, hair, nail clippings and the like, that are not infectious
ii. any part of the carcass of an animal infected with a communicable disease or suspected by a licensed veterinary practitioner to be infected with a communicable disease, or
iii. non-anatomical waste infected with a communicable disease

If you are in doubt as to whether or not your waste is pathological, you should consult with, for example, a licensed medical practitioner, a veterinary doctor or a bio-safety officer. Please also note that a mixture of a pathological waste and any other waste or material remains pathological waste. Waste that is derived from pathological waste also remains pathological waste, unless it is produced in accordance with an ECA that states that, in the opinion of the Director, the waste that is produced in accordance with the ECA does not have characteristics similar to the characteristics of pathological waste.

Please note that there is no SQE for pathological wastes, and that empty containers and liners are also pathological waste unless they have been incinerated, autoclaved or otherwise sterilized to make them non-infectious.

If you generate a pathological waste, you will need to specify the following information on the GRR:

- Waste characterization — Pathological waste (P)
- Waste Class — Select the three-digit waste class number 312 from Appendix A: Ontario waste classes
- Waste Number — Add the letter "P" to the waste class number to specify the above waste characterization, 312P. Please note that no other combination of waste class and characterization can be used to identify pathological waste
- Hazardous Waste Number — Not Applicable

Pathological wastes are not subject to Ontario's LDR treatment requirements.

2.5.4.3 Explanation 3 — PCB waste

PCB waste in Regulation 347 has the same meaning as in Regulation 362. In general, PCB wastes are wastes that contain PCBs at concentrations greater than 50 parts per million (ppm) by weight. Please refer to Regulation 362 for further details.

Electrical or other equipment that contains PCBs that is still in service is not considered to be waste, and thus does not require registration. However, if the equipment comes out of service or the PCB liquid is drained from the equipment, registration is required. PCB wastes that are stored on a site, whether or not this is authorized by any other regulation, must be registered.

If you generate PCB wastes or have PCB wastes stored, you will need to specify the following information on the GRR:

- Waste characterization — PCB waste (D)
- Waste Class — Select the three-digit waste class number 243 from Appendix A: Ontario waste classes of this manual
- Waste Number — Add the letter "D" to the waste class number to specify the above waste characterization, 243D. Please note that no other combination of waste class and characterization can be used to identify PCB waste
- Hazardous Waste Number — Not Applicable

Regulation 347 prohibits the land disposal of PCB wastes. Generators should note, however, that wastes containing PCBs that do not meet the definition of PCB waste may exhibit a characteristic of hazardous waste (see leachate toxic wastes).

Generators of PCB wastes must also meet federal reporting requirements for PCBs. Visit Environment and Climate Change Canada's website for more information on the Canadian Environmental Protection Act Registry.

2.5.4.4 Explanation 4 — Acute hazardous waste chemical and hazardous waste chemical

For wastes that are commercial chemical products or combinations of commercial chemical products, generators must consider Part A of Schedule 2 (acute hazardous waste chemical) and Part B of Schedule 2 (hazardous waste chemical) of Regulation 347.

It is important to note that Part A and Part B of Schedule 2 are lists of products or by-products that are seldom disposed of, but, for whatever reason, become wastes. These are not lists of contaminants that, if present in a waste stream, make the waste stream hazardous.

Acute hazardous waste chemicals or hazardous waste chemicals are commercial chemical products or manufacturing intermediates that are off-specification or otherwise unacceptable for use from time to time. Commercial waste chemicals include materials such as pharmaceutical or pesticide waste products that contain active ingredients in Part A or Part B of Schedule 2. Active ingredients are chemical constituents that have been included in a formulated product for an intended effect. For example, a waste pesticide formulation that includes dieldrin (which is listed in Part A of Schedule 2) as an active ingredient would be classified as an acute hazardous waste chemical.

A mixture of an acute hazardous waste chemical and any other waste or material remains an acute hazardous waste chemical. In the same way, a mixture of a hazardous waste chemical and any other waste or material remains a hazardous waste chemical.

Waste derived from an acute hazardous waste chemical remains an acute hazardous waste chemical — unless it is produced in accordance with an ECA that states that, in the opinion of the Director, the waste that is produced in accordance with the ECA does not have characteristics similar to the characteristics of the acute hazardous waste chemical from which it was derived. Similarly, waste derived from a hazardous waste chemical remains a hazardous waste chemical — unless it is produced in accordance with an ECA that states that, in the opinion of the Director, the waste that is produced in accordance with the ECA does not have characteristics similar to the characteristics of the hazardous waste chemical from which it was derived.

For the wastes listed in Part A of Schedule 2, or wastes that contain active ingredients in Part A of Schedule 2, the small quantity exemption (SQE) is one kg of waste per month. If you generate one kg or more of this type of waste in a one-month period, or accumulate one kg or more at your site over any period, the small quantity exemption does not apply, and you must register the hazardous waste. For example, if your facility generates 0.5 kg per month but accumulates waste for six months before shipping it off-site for disposal, the waste is not eligible for a small quantity exemption, since the total quantity accumulated is greater than the small quantity exemption.

Containers with 20 litres or more of capacity that previously contained products in Part A of Schedule 2 are considered hazardous waste unless they have been triple-rinsed with an

appropriate solvent. Inner liners that weigh 10 kg or more and that previously contained products in Part A of Schedule 2 are also considered hazardous waste, unless they have been triple-rinsed with an effective solvent.

Generators should carefully review Part A and Part B of Schedule 2. While there are a number of ways of naming any chemical, the chemical abstracts service registry number (CAS # number) is a unique number assigned to each chemical.

To determine whether a waste chemical is in these schedules, generators should search for the CAS # number, if available. Otherwise, the synonyms for each chemical must be identified and each synonym compared to the schedules, which are arranged alphabetically. For commercial chemical products that are known only by the trade name, generators should contact the supplier to identify the generic name or CAS # number of the active ingredients, so they can be compared with the schedules.

If you generate a waste that is found in Part A of Schedule 2, or that contains active ingredients in Part A of Schedule 2, you will need to specify the following information on the GRR:

- Waste characterization — Acute Hazardous Waste Chemical (A)
- Waste Class — Select the three-digit waste class number from Appendix A: Ontario waste classes next to the listing that best describes your waste. For example, the number could be 148 if the chemical is inorganic, 263 if the chemical is organic, or 261 if the waste is pharmaceutical
- Waste Number — Add the letter "A" to the waste class number to specify the above waste characterization, for example, 148A, 263A or 261A
- Hazardous Waste Number — select the four-character code (a letter followed by three numbers) found in Column 1 of Part A of Schedule 2, which is used to identify individual Acute Hazardous Waste Chemicals (for example, P026)

Acute hazardous waste chemicals are subject to LDR treatment requirements before land disposal.

For wastes listed in Part B of Schedule 2 or wastes containing active ingredients in Part B of Schedule 2, the SQE is five kg of waste per month. If you generate five or more kg of this type of waste in a one-month period, or accumulate five or more kg at your site over any period, the SQE does not apply, and you are required to register the hazardous waste. Empty containers and inner liners that contained products in Part B of Schedule 2 are not considered to be hazardous waste.

If you generate a waste that is found in Part B of Schedule 2 or that contains active ingredients in Part B of Schedule 2, you will need to specify the following information on the GRR:

- Waste characterization — Hazardous waste chemical (B)
- Waste Class — Select the three-digit waste class number from Appendix A: Ontario waste classes, next to the listing that best describes your waste. For example, the number could be 148 if the chemical is inorganic, 263 if the chemical is organic or 261 if the waste is pharmaceutical
- Waste Number — Add the letter "B" to the waste class number to specify the above waste characterization (for example, 148B, 263B or 261B)
- Hazardous Waste Number — select the four-character code (a letter followed by three numbers) found in Column 1 of Part B of Schedule 2, which is used to identify individual Hazardous Waste Chemicals (for example, U021)

Hazardous waste chemicals are subject to LDR treatment requirements before land disposal.

2.5.4.5 Explanation 5 — Hazardous industrial waste

Industrial waste streams that are considered to be hazardous are listed in Schedule 1 of Regulation 347.

A mixture of a hazardous industrial waste and any other waste or material remains a hazardous industrial waste. Waste that is derived from hazardous industrial waste remains hazardous industrial waste — unless it is produced in accordance with an ECA that states that, in the opinion of the Director, the waste that is produced in accordance with the ECA does not have characteristics similar to the characteristics of the hazardous industrial waste from which it was derived.

For hazardous industrial waste, the SQE is five kg per month. If you generate five or more kg in a one-month period, or accumulate five or more kg at your site over any period, the SQE does not apply, and you are required to register the hazardous waste. Empty containers and inner liners that contained wastes listed in Schedule 1 are not considered hazardous wastes.

If you generate a waste that is listed in Schedule 1, you will need to specify the following information on the GRR:

- Waste characterization — Hazardous industrial waste (H)
- Waste Class — Select the three-digit waste class number from Appendix A: Ontario waste classes, next to the listing that best describes your waste
- Waste Number — Add the letter "H" to the waste class number to specify the above waste characterization (for example, 211H)
- Hazardous Waste Number — select the four-character code (a letter followed by three numbers) found in Column 1 of Schedule 1, which is used to identify individual Hazardous Industrial Wastes (for example, F001 or K001)

Hazardous industrial wastes are subject to LDR treatment requirements before land disposal.

2.5.4.6 Explanation 6 — Ignitable waste

Wastes that are ignitable are defined in Regulation 347 by any of four criteria listed below.

- It is a liquid, other than an aqueous solution containing less than 24% alcohol by volume, and has a flash point less than 61° C, as determined by any of the following test methods:
    - ASTM D-56-79
    - ASTM D-3243-77
    - ASTM D-3278-78
    - ASTM D-93-79
    - as determined by an equivalent test method approved by the Director

  Examples of ignitable liquid waste include ethanol, varsol, gasoline or petroleum distillates.

- It is a solid and is capable, under standard temperature and pressure, of causing fire due to friction, absorption of moisture, or spontaneous chemical changes, and when ignited burns so vigorously and persistently that it creates a danger.

  An example of an ignitable solid waste is sodium metal.

- It is a Class 2.1 Flammable Gas within the meaning of paragraph 2.14(a) of the Transportation of Dangerous Goods Regulations (TDGR) made under the *Transportation of Dangerous Goods Act* (Canada).

  Class 2, Division 1 gases in the TDGR are identified as:

    - Class 2.1, Flammable Gases, which consists of gases that, at 20° C and an absolute pressure of 101.3 kPa:
        i. are ignitable when in a mixture of 13% or less by volume with air, or
        ii. have a flammability range with air of at least 12 percentage points determined in accordance with tests or calculations in ISO 10156

  Examples of ignitable gases include methane (natural gas), butane or butane mixtures, and propane.

- It is a Class 5.1 Oxidizing Substance within the meaning of paragraphs 2.24(a) of the Transportation of Dangerous Goods Regulations made under the *Transportation of Dangerous Goods Act* (Canada), or it is a Class 5.2 Organic Peroxide within the meaning of paragraphs 2.24(b) of the Transportation of Dangerous Goods Regulations made

under the *Transportation of Dangerous Goods Act* (Canada). This includes substances such as chlorates, permanganates, and nitrates that readily yield oxygen to stimulate, or contribute to, the combustion of other materials. Substances that contain the bivalent -O-O- structure are also considered to be oxidizers.

To assist in your evaluation, Schedule 1 of TDGR lists a number of oxidizing substances and organic peroxides as Class 5 dangerous goods. These are substances that have a 5.1 or 5.2 designation in column 3 of this list. In the same manner, Schedule 1 of the TDGR lists a number of ignitable and flammable gases as Class 2 dangerous goods. These are substances that have a 2.1 designation in column 3 of this list.

For ignitable wastes the SQE is five kg per month. If you generate five or more kg in a one-month period, or accumulate five or more kg at your site over any period, the SQE does not apply, and you must register the hazardous waste. Empty containers and liners that contained ignitable wastes are not considered to be hazardous waste.

If you generate a waste that is an ignitable waste, you will need to specify the following information on the GRR:

- Waste characterization — Ignitable waste (I)
- Waste Class — Select the three-digit waste class number from Appendix A: Ontario waste classes, next to the listing that best describes your waste
- Waste Number — Add the letter "I" to the waste class number to specify the above waste characterization (for example, 213I)
- Hazardous Waste Number — select the four-character code D001 found in Column 1 of Schedule 5 of Regulation 347, used to identify Ignitable Characteristic wastes

You may also be required to specify the following information on the GRR:

- Underlying Hazardous Constituent (UHC) — select the regulated constituents found in Column 1 of Schedule 6 of Regulation 347 that are present in the waste at the point of generation, if its concentration is at or above the treatment requirement described in the schedule.

Ignitable wastes are subject to land disposal treatment requirements before land disposal. If you process ignitable wastes on-site that will be land disposed, please also see Explanation 10 on de-characterized waste with untreated UHCs.

2.5.4.7 Explanation 7 — Corrosive waste

Wastes that are corrosive are defined in Regulation 347 by any of the three criteria listed below.

- It is aqueous and has a pH less than or equal to 2.0, or greater than or equal to 12.5, as determined by a pH meter.
- It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 millimetres per year at a test temperature of 55° C, using the National Association of Corrosion Engineers (NACE) test method TM-01-69 or an equivalent test approved by the Director.
- It is a solid and, when prepared in a mixture or solution with distilled water that is 50% waste by weight, has a pH less than or equal to 2.0 or greater than or equal to 12.5, as determined by a pH meter — other than:
    - solid incinerator ash or fly-ash from a woodwaste combustor site, or
    - solid wastes generated by a manufacturer of pulp, paper, recycled paper, corrugated cardboard or other paper products

For corrosive wastes the SQE is five kg per month. If you generate five or more kg in a one-month period, or accumulate five or more kg at your site over any period, the SQE does not apply, and you are required to register the hazardous waste. Empty containers and inner liners that contained corrosive wastes are not considered to be hazardous waste.

If you generate a waste that is a corrosive waste, you will need to specify the following information on the GRR:

- Waste characterization — Corrosive waste (C)
- Waste Class — Select the three-digit waste class number from Appendix A: Ontario waste classes, beside the listing that best describes your waste
- Waste Number — Add the letter "C" to the waste class number to specify the above waste characterization (for example, 111C)
- Hazardous Waste Number — select the four-character code D002 found in Column 1 of Schedule 5 of Regulation 347, which is used to identify Corrosive Characteristic wastes

You may also be required to specify the following information on the GRR:

- Underlying Hazardous Constituent (UHC) — select the regulated constituents found in Column 1 of Schedule 6 of Regulation 347 that are present in the waste at the point of generation, if its concentration is at or above the treatment requirement described in the schedule.

Corrosive wastes are subject to land disposal treatment requirements before land disposal. If you process corrosive wastes on-site that will be land disposed, see also Explanation 10 on de-characterized waste with untreated UHCs.

2.5.4.8 Explanation 8 — Reactive waste

Regulation 347 defines reactive waste as a waste that can exhibit a range of diverse properties. Generally, the intent is to include wastes that are susceptible to violent/vigorous reactions or

are likely to generate toxic fumes. A reactive waste is one that meets any of the criteria listed below, which are used to define reactive wastes in Regulation 347:

- it is normally unstable and readily undergoes violent change without detonating
- it reacts violently with water
- it forms potentially explosive mixtures with water
- when mixed with water it generates toxic gases, vapours or fumes in a quantity great enough to present danger to human health or the environment
- it is a cyanide- or sulphide-bearing waste which, when exposed to pH conditions between 2.0 and 12.5, can generate toxic gases, vapours or fumes in a quantity great enough to present danger to human health or the environment
- it is capable of detonation or explosive reaction if it subjected to a strong initiating source or if it is heated under confinement
- it is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure
- it is a Class 1 Explosive within the meaning of section 2.9 of the Transportation of Dangerous Goods Regulations made under the *Transportation of Dangerous Goods Act* (Canada)

For reactive wastes the SQE is five kg per month. If you generate five or more kg in a one-month period, or accumulate five or more kg at your site over any period, the SQE does not apply, and you must register the hazardous waste. Empty containers or inner liners that contained reactive wastes are not considered to be hazardous waste.

If you generate a waste that is reactive, you will need to specify the following information on the GRR:

- Waste characterization — Reactive waste (R)
- Waste Class — Select the three-digit waste class number from Appendix A: Ontario waste classes, next to the listing that best describes your waste
- Waste Number — Add the letter "R" to the waste class number to specify the above waste characterization (for example, 263R)
- Hazardous Waste Number — select the four-character code D003 found in Column 1 of Schedule 5 of Regulation 347, which is used to identify Reactive Characteristic wastes

You may also be required to specify the following information on the GRR:

- Underlying Hazardous Constituent (UHC) — select the regulated constituents found in Column 1 of Schedule 6 of Regulation 347 that are present in the waste at the point of generation, if its concentration is at or above the treatment requirement outlined in the schedule.

Reactive wastes are subject to land disposal treatment requirements before land disposal. If you process reactive wastes on-site that will be land disposed, please also see Explanation 10 on de-characterized waste with untreated UHCs.

2.5.4.9 Explanation 9 — Leachate toxic waste

Leachate toxic waste means a waste that produces leachate that contains any of the contaminants listed in Schedule 4 of Regulation 347 — if these contaminants are at a concentration that is equal to or in excess of the concentration specified for that contaminant in Schedule 4, using the Toxicity Characteristic Leaching Procedure (TCLP). This characterization, as described by the TCLP, applies to both liquid and solid wastes, and includes multi-phase wastes. This test identifies the leachability of hazardous constituents, and is used to determine if a waste is hazardous.

The determination of leachate toxicity is not limited to wastes that will be land disposed. Leachate toxicity describes a characterization of hazardous waste, and may apply to any kind of waste, regardless of how it will be disposed. The term "leachate toxic" should not be confused with leachate that is produced at a landfill site.

For leachate toxic wastes the SQE is five kg of waste per month. If you generate five or more kg in a one-month period, or accumulate five or more kg at your site over any period, the SQE does not apply, and you are required to register the hazardous waste. Empty containers and inner liners that contained leachate toxic wastes are not considered to be hazardous waste.

If you generate a waste that is leachate toxic waste, you will need to specify the following information on the GRR:

- Waste characterization — Leachate toxic waste (T)
- Waste Class — Select the three-digit waste class number from Appendix A: Ontario waste classes, beside the listing that best describes your waste
- Waste Number — Add the letter "T" to the waste class number to specify the above waste characterization (for example, 131T)
- Hazardous Waste Number — select the four-character code (a letter followed by three numbers) found in Column 1 of Schedule 5 of Regulation 347, which is used to identify individual Leachate Toxic wastes (for example, D004)

You may also be required to specify the following information on the GRR:

- Underlying Hazardous Constituent (UHC) — select the regulated constituents found in Column 1 of Schedule 6 of Regulation 347 that are present in the waste at the point of generation, if its concentration is at or above the treatment requirement outlined in the schedule.

Leachate toxic wastes are subject to land disposal treatment requirements before land disposal. If you process leachate toxic wastes on-site that will be land disposed, please also see Explanation 10 on de-characterized waste with untreated UHCs.

2.5.4.10 Explanation 10 — De-characterized waste with untreated UHCs

On or after December 31, 2009, subject waste includes waste that was characteristic waste but that has been treated so that it is no longer characteristic waste, but does not meet the LDR treatment requirements in subsection 79 (1) of Regulation 347. Typically, this is waste that has been treated to remove the hazardous characteristic but that still requires further treatment of regulated constituents to meet the land disposal treatment requirements in Schedule 6 of Regulation 347. De-characterized wastes that will be land disposed and have UHCs that do not meet the Schedule 6 standards must be registered and manifested when they are shipped off-site. See the LDR and Other Regulatory Requirements section for more information.

If a characteristic waste has been treated so that it is no longer hazardous but does not meet the land disposal treatment requirements in subsection 79 (1) (i.e., additional regulated constituents from Schedule 6 still require treatment), the waste must be registered if it is shipped off-site. The waste characterization that has been created for these de-characterized wastes is U. This waste characterization applies once the Schedule 6 treatment standards take effect, on December 31, 2009.

If you generate a waste that is de-characterized, you will need to specify the following information on the GRR:

- Waste characterization — De-characterized Waste with Untreated UHCs (U)
- Waste Class — Select the three-digit waste class number from Appendix A: Ontario waste classes, beside the listing that best describes your waste
- Waste Number — Add the letter "U" to the waste class number to specify the above waste characterization (for example, 113U)
- Hazardous Waste Number — select the four-character code (a letter followed by three numbers) found in Column 1 of Schedule 5 of Regulation 347, which is used to identify individual Characteristic wastes (for example, D001 or E001). The original hazardous waste number for the untreated characteristic waste should be used
- Underlying Hazardous Constituent (UHC) — select the regulated constituents found in Column 1 of Schedule 6 that are present in the waste at the point of generation, if its concentration is at or above the treatment requirement

Fully treated characteristic wastes that are not subject to LDR requirements do not need to be registered.

2.5.4.11 Explanation 11 — Hazardous waste

If a waste exhibits any of the waste characterizations discussed in explanations 1 through 9, it is considered to be a hazardous waste and is therefore subject to generator registration and manifesting provisions. Listed and characteristic wastes (explanations 1 and 4 through 9) are also subject to LDR requirements if they are to be land disposed. See the LDR and Other Regulatory Requirements section for more information.

The first characterization identified in the flow chart is defined as the primary waste characterization for the waste, and this is used to identify the appropriate waste class for the purposes of registration. However, all additional secondary characterizations must also be identified. For wastes that are subject to LDR notification requirements, all characterizations must be identified for each waste stream, and reported in the LDR notification form of the GRR .

If you generate a characteristic waste (explanations 6 through 9) that is being processed on-site, the waste may remain a subject waste after processing if the waste will be land disposed. Please see Explanation 10 for further information.

Where it is desirable to manage a number of wastes with different primary characterizations as a single load, the combined load is referred to as a "lab pack." Further information about lab packs can be found in Lab Packs section of this manual.

A number of explanations refer to waste that is derived from waste with a specified characterization. A waste subject to the derived-from rule retains its waste characterization, even if it is processed at an approved facility — unless the ECA for the facility specifically states that the resulting waste no longer retains the original hazardous characterization. A number of explanations also indicate that waste that is mixed with any other waste or material retains its original hazardous characterization. The mixture and derived-from rules are discussed in the mixture and derived-from rules for hazardous waste section.

There are additional limitations on the mixing of hazardous wastes with other wastes or materials, particularly for wastes that are subject to LDR. The conditions under which mixing of hazardous wastes can occur at a waste generation facility without an ECA are outlined in the Regulatory Requirements section. Hazardous waste exemptions are discussed in the Exemptions section.

2.5.4.12 Explanation 12 — Liquid industrial waste

LIW are also subject to generator registration and manifesting provisions. These wastes include any liquid waste from industrial, commercial, manufacturing, research or experimental activities. Liquid wastes include wastes that are obvious liquids, such as spent acid solutions, as well as those sludges that fail the slump test included in Schedule 9 of Regulation 347.

The slump test involves placing the waste in question in a 30&bsp;cm open inverted cone. The cone is removed and the immediate decrease (slump) in the height of the waste material is measured. If the material slumps so that the original height is reduced by 15 cm or more, the waste is a liquid. Please refer to Regulation 347 for further details.

For LIW, the SQE is 25 litres per month. If you generate 25 or more litres in a one-month period, or accumulate 25 or more litres at your site over any period, the SQE does not apply, and you are required to register the LIW.

If you generate a LIW, you are required to specify the following information on the GRR:

- Waste characterization — Liquid industrial waste (L)
- Waste Class — Select the three-digit waste class number from Appendix A: Ontario waste classes, beside the listing that best describes your waste
- Waste Number — Add the letter "L" to the waste class number to specify the above waste characterization (for example, 121L)
- Hazardous Waste Number — Not Applicable

LIW is not subject to LDR requirements. LIW exemptions are discussed in the Hazardous Waste and Liquid Industrial Waste Definitions section. These exemptions are listed in the definition of LIW in Section 1 of Regulation 347. If your waste is not any of the hazardous waste characterizations and is also not a LIW waste, then it is not a subject waste.

2.6 LDR and other regulatory requirements

Once you have characterized your waste and determined that it must be registered, you also need to determine if Ontario's land disposal restrictions apply. How you register your subject wastes (for example, characteristic waste) depends on whether the land disposal treatment requirements apply, and whether you must provide additional information during the registration process.

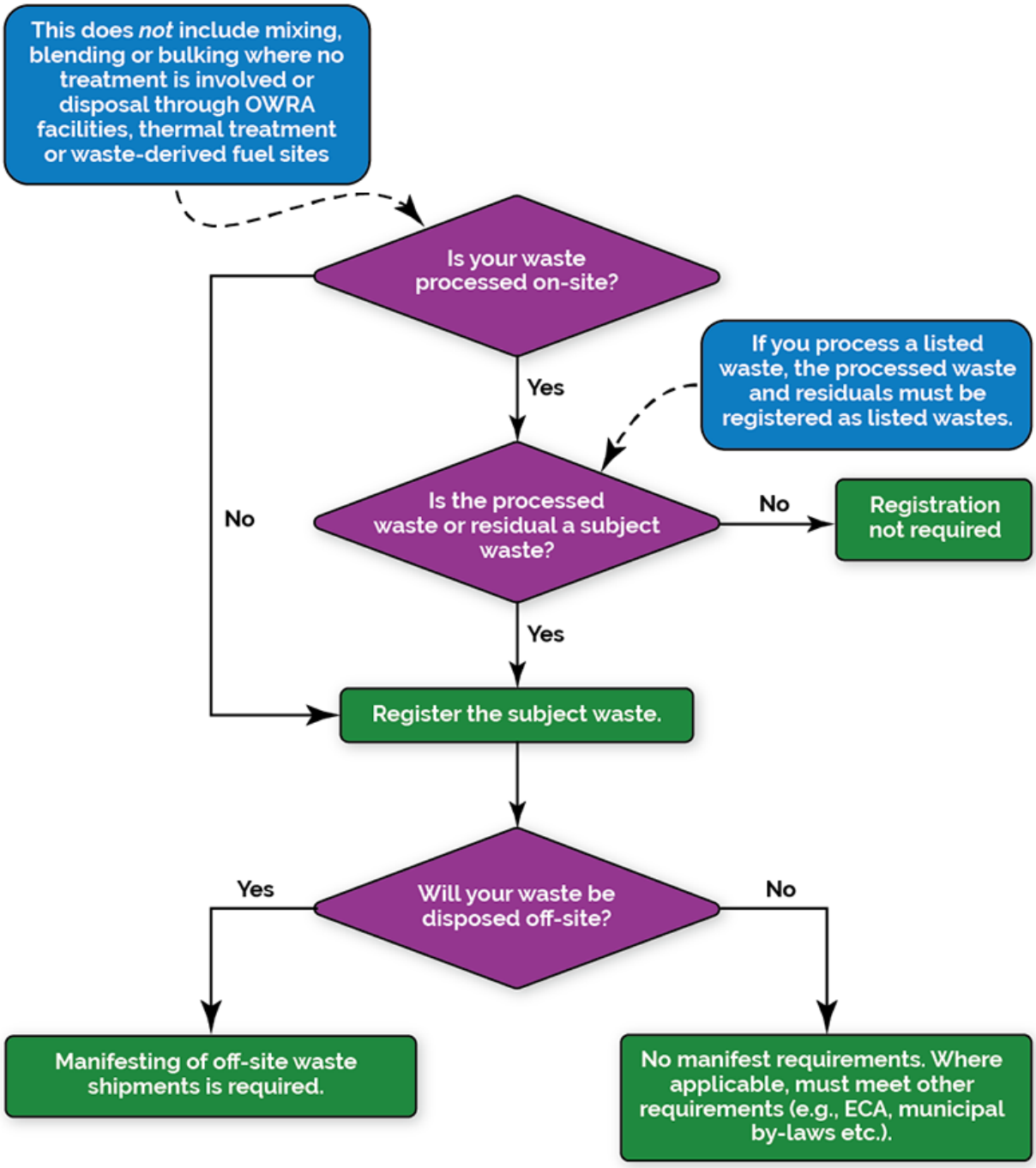
Appendix F: Declaration of wastes subject to land disposal restrictions provides a series of questions that when answered, will help you determine if you are required to provide additional information by filling out the LDR Notification portion of the GRR. Note: If you register a waste with a characterization of L, P or D you are not required to answer any of these questions. These questions will help you determine whether your waste is subject to LDR.

If your facility is a MHSW depot, you should refer to section 9.5.2 Wastes from municipal hazardous or special waste (MHSW) depots for more information. Figure 7: Declaration of waste streams subject to land disposal restrictions is included in the manual, and this flowchart includes the special situation of MHSW depots.

Appendix F: Declaration of wastes subject to land disposal restrictions will help you determine whether the LDR requirements apply. Once the determination is made, proceed to either Figure 4: Registration and other regulatory requirements: Wastes mot subject to the LDR program or Figure 5: Registration and other regulatory requirements: Wastes subject to the LDR program. These flowcharts are provided to help you identify the registration and other regulatory requirements for your waste. In some cases, you may determine that your waste does not need to be registered (for example, for characteristic wastes processed on-site, registration is not required if both the processed waste and residual are not subject wastes). Please note that processing does not include disposal (for example, OWRA treatment, incineration, waste-derived fuel), nor does it include mixing, blending or bulking that does not result in any treatment of the waste.

Once you have identified which waste streams need to be registered, the Determining the appropriate waste class for the generator's waste stream section provides information to help you determine the appropriate waste class, which is needed when you are registering your waste. Please see section 10.1 Managing your waste for further information on managing your hazardous wastes and the regulatory requirements associated with different waste management methods.

2.6.1 Figure 4: Registration and other regulatory requirements: Wastes not subject to the LDR program



This flowchart is a graphical representation of the information immediately below.

You must have completed the Determining the characterization of your waste stream section for each waste generated at the facility and identified whether the LDR program requirements apply to your waste before completing the Figure 4 flowchart. If the waste is subject to LDR program requirements, go to Figure 5: Registration and other regulatory requirements: wastes subject to the LDR program.

2.6.2 Registration and other regulatory requirements: Wastes not subject to the LDR program (text version)

You must have completed the Determining the Characterization of Your Waste Stream section for each waste generated at the facility and identified whether the LDR program requirements apply to your waste before completing the steps described below. If the waste is subject to LDR program requirements, go to Figure 5: Registration and other regulatory requirements: Wastes subject to the LDR program.

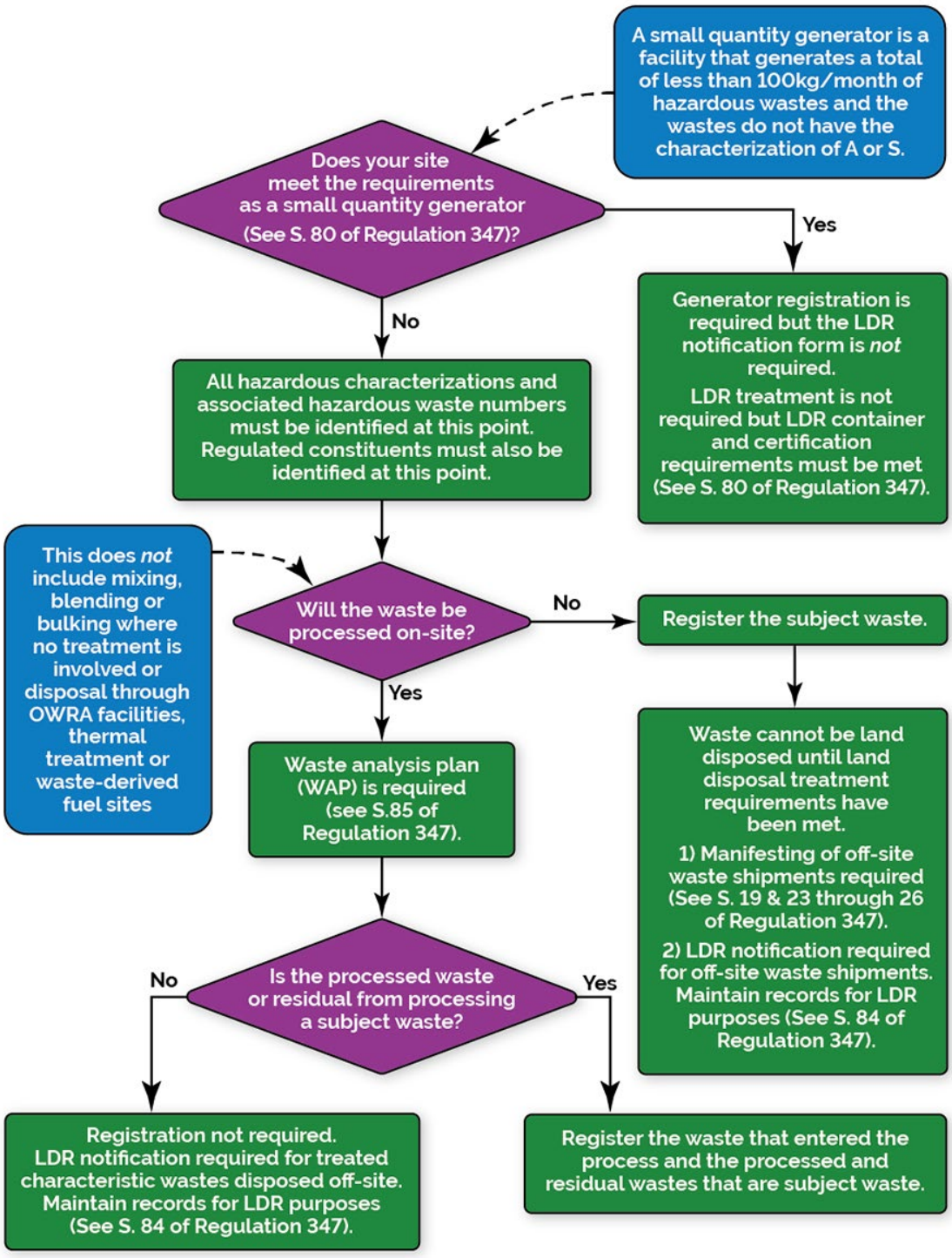
Step 1. Is your waste processed on-site? This does not include mixing, blending or bulking where no treatment is involved or disposal through OWRA facilities, thermal treatment or waste-derived fuel sites. If yes, go to Step 2. If no, skip to Step 3.

Step 2. Is the processed waste or residual a subject waste? Note that if you process a listed waste, the processed waste and residuals must be registered as listed wastes. If no, registration is not required. If yes, go to Step 3.

Step 3. Register the subject waste. (See Figure 6a and Figure 6b: How to complete the intended waste management portion of the waste generator registration process on how to register.) Go to Step 4.

Step 4. Will your waste be disposed off-site? If no, there are no manifest requirements. Where applicable, must meet other requirements (for example, ECA, municipal by-laws etc). If yes, manifesting of off-site waste shipments is required. (See Sections. 19 and 23 through 26 of Regulation 347 and section 6 Manifesting.)

2.6.3 Figure 5: Registration and other regulatory requirements: Wastes subject to the LDR program



This flowchart is a graphical representation of the information immediately below.

You must have completed the waste characterization flowchart (Figure 3) for each waste generated at the facility and identified whether the LDR program requirements may apply to your waste before completing the Figure 5 flowchart.

2.6.4 Registration and other regulatory requirements: Wastes subject to the LDR program (text version)

You must have completed the waste characterization flowchart (Figure 3) for each waste generated at the facility and identified whether the LDR program requirements may apply to your waste.

Step 1. Does your site meet the requirements as a small quantity generator? (See section 80 of Regulation 347 and section 9.5.1 Wastes from a small quantity generator (SQG) . Note that a small quantity generator is a facility that generates a total of less than 100 kg/month of hazardous wastes and the wastes do not have the characterization of A or S. If yes, generator registration is required but the information contained in the LDR Notification Form is not required. LDR treatment is not required but LDR container and certification requirements must be met. If no, go to Step 2.

Step 2. All hazardous characterizations and associated hazardous waste numbers must be identified at this point. Regulated constituents must also be identified at this point. (See section 9.4 Land disposal treatment requirements for the land disposal treatment requirements.) Go to Step 3.

Step 3. Will the waste be processed on-site? Note that this does not include mixing, blending or bulking where no treatment is involved or disposal through OWRA facilities, thermal treatment or waste-derived fuel sites. If no, register the subject waste. Note that waste cannot be land disposed until land disposal treatment requirements have been met. If yes, proceed to Step 4.

- Manifesting of off-site waste shipments required. (See sections 19 & 23 through 26 of Regulation 347 and section 6 Manifesting.
- LDR Notification required for off-site waste shipments. Maintain records for LDR purposes. (See section 84 of Regulation 347 and section 9.8 Notification, Record-Keeping and Waste Analysis Plan Requirements.

Step 4. Waste analysis plan (WAP) is required. (See section 85 of Regulation 347 and section 9.8.2 Waste analysis plan requirements . Proceed to Step 5.

Step 5. Is the processed waste or residual from the processing a subject waste? If yes, register the waste that entered the process and the processed and residual wastes that are subject waste. If no, registration is not required. LDR Notification is required for treated characteristic wastes disposed off-site. Maintain records for LDR purposes. (See section 84 of Regulation 347 and section 9.8 Notification, record-keeping and waste analysis plan requirements.

2.7 Determining the appropriate waste class for the generator's waste stream

In Ontario, the waste class is a three-digit number. Each number is assigned to a generic waste description that is used to classify the type of waste being managed. Ontario waste classes are a vital component of registration and manifesting. The waste classes are included in an ECA for waste carriers or receivers, to identify the waste streams they are permitted to handle or manage. The various waste classes can be found in Appendix A: Ontario waste classes.

A very large number of different waste streams are generated in Ontario each year. The Ministry has consolidated these streams into a total of 53 waste classes. These waste classes are divided into three major categories: inorganic wastes, organic wastes and other wastes. In turn, these three major categories are further subdivided into minor groups that describe the waste types or similar waste groupings. Finally, there are three-digit waste classes within each minor group — classes that describe wastes that are similar in composition, physical properties and generation source.

Please note that the waste class is not used to indicate the hazard associated with the waste. However, the hazard associated with the waste may help you to determine the appropriate waste class of the waste(s) in your waste stream.

This section of the manual provides a description of each waste class, along with examples of appropriate waste streams. The examples are intended to guide you in deciding on identifying an appropriate waste class for your waste, but they are not intended to be exhaustive lists of all the potential waste streams included for each waste class. In cases where the examples provided do not clearly represent a given waste stream, you should use the waste description to choose the appropriate waste class.

As a waste generator, you are responsible for assessing the waste(s) you produce and for complying with Ontario's registration and related waste management requirements.

2.7.1 Choosing a waste class by major or minor category

When selecting an appropriate waste class, it is often easiest to begin by determining the major category that represents the waste stream, followed by the appropriate minor category, before you select the most reasonable waste class. In some cases, however, this approach may not always result in the selection of the most appropriate waste class. To determine the most appropriate waste description, you can use the minor or major category that best describes the waste. If you have any doubt about the appropriate waste class, you should base your waste class selection on the description that best fits your waste. The following example illustrates how this approach works.

Example: A spent alkaline battery may be classified as either 122 (alkaline solutions, sludges and residues containing other metals and non-metals, not containing cyanides) or as 146 (other specified inorganic sludges, slurries and solids). If the spent battery is being registered due to the corrosivity that results from high alkalinity, then the appropriate waste class is 122, since this falls under the minor category of alkaline solutions. If the spent battery is not being registered due to its alkaline nature, then the appropriate waste class may be 146.

2.7.2 Choosing a waste class by using the description of the waste stream

In some instances, a specific waste class accurately describes a waste stream, but the waste stream does not appear to belong under the major or minor category. In such cases, you should still choose the waste class that best describes the waste stream, even though the major or minor category may not seem appropriate. The waste class that best describes the waste stream should always be chosen.

Example: Waste oil-based paint is an organic waste stream. However, it is most accurately described by the inorganic waste class 145 (wastes from the use of paints, pigments and coatings).

2.7.3 Choosing a waste class by using the "main component" rule

Where two or more waste classes could reasonably be used to describe the waste stream, the waste class that appears to be the most relevant should be chosen. You may encounter this situation where your waste stream contains components that, if they were separate, would have resulted in you choosing a different waste class for each component.

Similarly, a situation could arise where a waste stream could be described differently according to its individual components, rather than to how it was generated. The applicable waste class is usually selected based on the largest component or group of components that are present in the waste stream that share the same waste class, rather than on the most hazardous contaminant present. If you have any doubt about the appropriate waste class, you should base your waste class selection on the description that best fits your waste.

Example: A waste stream contains 75% crankcase oil, 15% water, 5% dirt and solids, and 5% gasoline. The appropriate waste class for this mixture is 252 (waste crankcase oils and lubricants) because the greatest proportion of the waste (75%) falls under this class. Although gasoline likely has the most hazardous waste characterization, waste class 221 (light fuels — gasoline, kerosene, diesel) would not be chosen because it does not reflect the main component of this waste stream.

Notable exceptions to this "main component" rule are the waste classes 241, 242, 243, 312 and 321, which are special cases and are addressed separately below. Aqueous wastes and contaminated solid wastes can also pose problems when applying the "main component" rule. For example, most acid, alkaline and aqueous salt solutions are composed largely of water. This aqueous composition is an important consideration and should not be disregarded when choosing the appropriate waste class for these types of wastes. Normally, water and non-hazardous solids are disregarded when considering components of a waste, unless these are an integral part of the waste description. These special cases are discussed in the following sections.

2.7.3.1 Special waste classes

There are several waste classes that are unique, in that relatively small amounts of a particular contaminant in the waste stream dictate the appropriate waste class. These special waste classes are:

- 241 — halogenated solvents and residues
- 242 — halogenated pesticides and herbicides
- 243 — polychlorinated biphenyls (PCBs)
- 312 — pathological wastes
- 321 — wastes from the manufacture of explosives and detonation products

Waste class 241 (halogenated solvents and residues) should be selected whenever a waste stream contains a minimum of 2% of halogenated organic materials by weight.

Waste class 242 (halogenated pesticides and herbicides) should be used whenever a waste stream is contaminated with halogenated pesticides and herbicides at a level great enough that its hazardous primary characterization results from the presence of these contaminants.

Waste classes 243 and 312 are similar, in that they must both be selected based on the primary characterization of the waste. Any waste that has a primary hazardous characterization identified as PCB waste (D) must also have the associated waste class of 243. The same applies for a primary hazardous characterization of pathological waste (P) and the waste class of 312. The waste numbers 243D and 312P are fixed, and no other waste class may be used with the waste characterizations D and P for PCB and pathological wastes.

A similar situation occurs with waste class 321. Any wastes that are not federally regulated under the *Explosives Act* (Canada), and that result from the manufacture of explosives and detonation products characterized as reactive (this is the Ontario waste characterization for explosive wastes) are automatically classified as 321R. Unlike the situation for 243D and 312P, however, the characterization of reactive can be used in conjunction with other waste streams.

2.7.3.2 Contaminated solids

Although the "main component" rule can generally be used to determine waste class numbers, one significant area where the rule cannot be easily applied involves solids that are normally non-hazardous, but that have become contaminated, for example, from a spill, leak, deliberate mixing or accident.

Wastes that do not need to be registered, such as non-hazardous solids including soils, sand, rubble, rock, glass and wood do not normally require a waste class number. However, when these non-hazardous solid wastes become contaminated with a subject waste, they may require a waste class number. In such cases, the primary waste characterization of the contaminant that made the material hazardous is used to determine the appropriate waste class.

To determine the waste class for contaminated solids, the degree of contamination is also important. If there is sufficient contamination, the entire waste may have the same primary waste characterization as the contaminant and may therefore have the same waste class as the contaminant.

Example: Soil becomes contaminated with diesel fuel. The diesel fuel is an ignitable waste (I) identified as waste class 221. If the waste soil is tested and found to be ignitable, it would be classified as an ignitable waste (I). In this case, its waste class should also be 221, like the diesel fuel.

If the primary waste characterization of the solid waste differs from that of its contaminant, waste class 146 (other specified inorganic sludges, slurries and solids) or 270 (other specified organic sludges, slurries and solids should be used to classify the solid waste. There are several reasons for a difference in primary waste characterization, including situations where a solid that was initially non-hazardous becomes contaminated through some previous exposure to an unknown contaminant.

Example: Soil becomes contaminated with diesel fuel. The diesel fuel is ignitable waste (I) having the waste class 221. If the soil is found to be leachate toxic waste (T) due to the presence of inorganic contaminants in the diesel fuel ignitable waste (I), then it should be identified as waste class 146, which is the general waste class for inorganic solids, because the soil does not share the same characterization as the fuel that contaminated it.

2.7.3.3 Aqueous wastes

The "main component" rule is also relevant where waste streams contain mostly water. Many of these wastes are appropriately classified using one of the "aqueous waste" classes. These include acid solutions (111-114), alkaline solutions (121-123), aqueous salts (131-135), landfill leachate (149) and inert inorganic wastes (150).

For other wastes that are not specifically included in one of these "aqueous waste" classes, you can apply the "main component" rule to help determine the waste class. However, in these cases, the aqueous portion of the waste should be ignored, and the waste should be classified based on the remaining composition of the waste. Thus an aqueous waste could have the waste class of an organic waste.

Example: An underground gasoline storage tank is contaminated with water. While most of the waste is made up of water, this constituent can be ignored, since it is not a hazardous component. The waste is therefore considered to be waste gasoline and identified as waste class 221.

2.7.4 Combining wastes into a single waste stream

To classify your waste stream appropriately, it is important to determine if the various wastes in the stream need to be registered individually as separate waste streams, or if they can be combined and registered as a single waste stream. This is not always an easy task. Any mixture of wastes, even if they form a multi-phase mixture, must be considered as a single waste stream for registration purposes. At the same time, however, wastes should only be mixed, blended or bulked under certain conditions.

To determine if a waste can be mixed, blended or bulked with other wastes, you must first identify the type of wastes that are being generated. Each waste must be characterized at the point of generation to identify whether it is hazardous, what type of hazardous waste it is, and whether it is subject to the LDR requirements. At this point you can determine whether each of the wastes can be mixed, blended or bulked with any other waste.

When the wastes are physically separate, each waste generated can be considered and managed as an individual waste stream. However, the Ministry recognizes that generators need some flexibility when registering their waste streams, especially when the wastes are generated from the same or similar operations, such as waste lubricants from various machinery and wastewaters from various cleaning/rinsing operations. Such wastes may contain similar (though chemically different) components, and can reasonably be considered as one waste stream and mixed together. However, mixing similar wastes for the purpose of classification should not be confused with mixing them for the purposes of treatment or dilution.

Here are some considerations that can help you determine when wastes may be mixed, blended or bulked or may be separately managed:

- Do the wastes have the same waste class?
- Are the waste characterizations the same for each waste?
- Are the composition and physical state of the wastes similar?
- Can the wastes be managed using the same processing or disposal method?
- Have the wastes been generated from similar operations?

If the answer to any of the first four considerations above was "NO," it probably means that the waste streams should not be mixed. Please see the Managing Your Waste section for more information about on-site processing of waste and mixing restrictions. A review of the mixing restrictions is particularly important for generators that have waste that will be land disposed.

2.7.5 Lab packs

"Lab packs" represent something of a special situation that does not follow any of the "standard" waste classification rules. The term "lab pack" was originally applied to small quantities of miscellaneous chemicals that were generated in a laboratory. Today, lab packs involve registering multiple wastes that are packaged together — using only two waste classes — 148 and 263. These waste classes are used for all lab-packed wastes, even though individual wastes in the lab pack may be more appropriately registered with other waste classes.

To use the lab pack designation, each of the wastes must be kept segregated in its own separate container inside the lab pack. These individual wastes are then "over-packed" and shipped for disposal. Individual wastes should not be bulked before disposal, both for safety reasons and because mixing may not be permitted, due to restrictions on mixing of hazardous wastes with other wastes or materials (Please see the Managing Your Waste section for more information).

The original intent of lab packs was to reduce the administrative effort and time required to register and manifest a multitude of wastes whose total quantity was relatively small. The use of lab packs has since been expanded to include larger quantities of each waste stream, and to accommodate situations other than those found in laboratories — such as plant closings, inventory clean-ups, research and development areas, and municipal hazardous or special waste collections. Any situation where many chemicals need to be registered but are only present in relatively small quantities may warrant the use of the "lab pack" registration.

When registering and shipping lab packs, the waste characterization used should represent the "worst" waste that is included in the lab pack (i.e., the first waste characterization identified when following Figure 3: Waste characterization flowchart). For example, a lab pack may contain individual containers of hazardous wastes with waste characterizations such as I, B, C, T, and A. In this case, the lab packed waste would be registered with a waste characterization of "A" since this is the first waste characterization identified in the flowchart.

Generators must be aware of restrictions that apply to larger quantities of specific waste streams or larger total lab packs shipped for disposal. In particular, quantity and waste type restrictions apply to small quantity generators whose waste is subject to land disposal restrictions.

2.7.5.1 Lab packs and generators with small quantity exempt (SQE) waste

In general, small quantity exempt (SQE) generators are not required to register or manifest their waste. However, if a generator uses a lab pack for SQE waste, the Ministry recommends that the generator register and classify the lab packs using waste classes 148 or 263. The registration should include the worst waste characterization for the wastes that are included in the lab pack, and the waste should be manifested on shipment to a certified carrier and receiver. The generator should identify the hazardous waste number that is appropriate for the most hazardous waste in the lab pack when registering.

2.7.5.2 Lab packs and small quantity generators (SQGs)

Lab packs that come from a small quantity generator (SQG) and also meet the requirements of Section 80 of Regulation 347 (a properly labelled, sealed container) are not subject to LDR treatment requirements. In such cases, the Ministry recommends that generators register and classify the lab pack as 148 or 263, identifying the worst waste characterization for the wastes in the lab pack and manifesting when shipping off site. Since the SQG exemption from meeting the LDR treatment standards does not apply to acute hazardous waste chemicals or severely toxic wastes, these wastes cannot be added to the lab pack, and must be dealt with separately. Generators should enter the hazardous waste number that is appropriate for the most hazardous waste in the lab pack in their registration.

2.7.5.3 Lab packs and large quantity generators

Generators that have wastes that are subject to LDR, but do not meet the quantity requirements for Section 80 SQG provisions, or that have acute hazardous waste chemicals or severely toxic wastes, may still use lab packs to package their wastes. These lab-packed wastes are subject to all LDR requirements. Those requirements include reporting the hazardous waste number and applicable regulated constituent for each hazardous waste in the lab pack in the LDR notification form as primary and additional characterizations. Lab packs may be registered and classified as 148A, 263A or 242S, and manifested on shipment.

Please note that providing the information requested in the LDR Notification Form is a one-time notification requirement. Updates will be required if additional waste with different hazardous waste numbers are placed in the lab pack. For generators, the advantage of using lab packs is that one waste stream can be registered for all the different wastes, rather than registering each separate waste stream.

2.7.5.4 Lab packs that are not land disposed

For lab packs that will not be land disposed, the lab packs may be registered and classified as 148A or 263A and manifested on shipment. Generators should use the hazardous waste number appropriate for the most hazardous waste in the pack.

2.8 Determining waste streams at waste receiving sites

Determining and registering waste classes for waste streams is handled somewhat differently at waste receiving facilities such as waste transfer stations, waste processing sites and MHSW depots than at the facility where the wastes were originally generated. Since the receiving facilities can handle such a wide variety of wastes, and since their list of registered waste streams can become somewhat lengthy, a broader definition of "waste stream" may be used in accordance with the facility's ECA. While the receiving site still needs to register for each waste stream it accepts, the description of each waste stream can be more generic, allowing several different incoming waste streams with the same waste class to be included under the same outgoing waste stream registration.

For example, a facility may receive a number of different wastes, all identified by the waste class 113. Although these wastes may be from different processes at different facilities, the wastes may be bulked together and processed, or shipped off-site as a single waste stream, provided that they all fit within the 113 waste class and have similar characterizations, composition and treatment or disposal requirements.

For receiving facilities, an important consideration when registering waste streams is to determine if the wastes are compatible, both chemically and in terms of the required treatment method. Where wastes are chemically compatible, share treatment requirements, and have the same waste class, they may be registered as a single waste stream. If the wastes have different waste classes, they can only be mixed and registered as a single waste stream if this is specifically allowed for those waste streams through the facility's ECA.

Restrictions on the mixing, blending, bulking and intermingling of hazardous wastes with other wastes or materials became effective in March 2006. As a result, the ECA for waste disposal sites and waste transportation systems must specifically authorize these operations to mix hazardous wastes with any other waste or material.

Another consideration for receiving facilities is the ability to use special consolidated waste stream classifications. The use of these special waste classes by waste receiving sites recognizes that certain waste streams may be routinely bulked or blended together, either for processing or to improve handling efficiencies, before the waste is shipped off-site for common treatment or disposal. The following four waste classes have been created to allow for such waste bulking: 254, 270, 281 and 282. Please note that the ability to bulk different waste streams must be recognized in the site's ECA.

3. How to submit a generator registration report

Generators of subject waste are required to submit a Generator Registration Report (GRR) through the Registry when they first generate subject waste (see section 18(1) of Regulation 347). If you have determined that you are a generator of subject waste, you must register your waste generation facility by completing a GRR through the Registry. As part of the registration process, you will be creating a site profile that describes your site, the company's officials and your subject wastes. Your site profile will then become part of your generator registration document which will be posted on the Registry.

If there is any change to the information in the GRR, including changes to a generator's process(es) or waste stream(s), that requires revisions to the site profile, a supplementary generator registration report must be completed and submitted through the Registry within 15 days of the change (see Section 18(6) of Regulation 347). See Supplementary Generator Registration Report (Revisions) for more information.

If the subject waste identified on the GRR is hazardous waste, the generator must determine if the LDR program requirements apply for each hazardous waste stream identified. LDR requirements are explained in the Land Disposal Restrictions (LDR) section. Generators whose waste is subject to the LDR program should also refer to the LDR Handbook for additional details.

For the purpose of recovering its costs, RPRA may set and require payment of fees (S. 41 RRCEA). These fees are posted on RPRA's Hazardous Waste Program Registry webpage.

Each waste generation facility requires its own GRR. If a generator operates multiple waste generation facilities, separate GRRs must be submitted for each facility.

The Registry is the online generator registration and manifesting system for generators, carriers and receivers of subject waste. The Registry also provides generators of waste that are subject to LDR requirements with a way of notifying the receiver of the waste's LDR requirements.

Specific "how to" instructions for how to complete registration through the Registry are provided on RPRA's Hazardous Waste Program Registry webpage.

Please note that you should not attempt to complete the generator registration process until you have properly characterized your waste and determined your appropriate waste class(es).

3.1 Generator registration

This part of the manual describes all the information required for generators submitting their GRR, with explanations to help generators complete the registration process appropriately.

The following sections describe the information that generators must provide when completing their GRR. Additional information may be required for waste streams that are subject to LDR reporting and notification requirements.

3.1.1 Generator identification

3.1.1.1 Legal company name and company operating name

You must register your company's full legally registered name, as well as the company's full operating name, if this is different from the legal name.

3.1.1.2 Waste generation activity

For each facility the generator should identify to the best of their knowledge, whether the operations that are generating the subject waste will continue for an extended period of time (for example, on-going waste generation for the foreseeable future), a short period of time (for example, a fixed term project with an estimated end date), a one-time event (for example, clean-up, maintenance, repair, etc.) and how often waste is expected to be shipped off-site from the facility.

3.1.1.3 (Generator) registration number

The Registry issues a unique generator registration number upon completion of registration. For waste generation facilities based outside Ontario, the generator should provide the registration or notification number assigned by the facility's local environmental authority.

3.1.1.4 Facility location

You must complete a separate registration for each site where your wastes are generated. The definition of a "site" is provided in Regulation 347 and means one property (including nearby properties that are owned or leased by the same person or company, where passage from one property to the next involves crossing but not traveling along a public highway). You must provide the waste generation facility's full site address. The Municipality refers to lower tier and single tier municipalities and First Nation communities.

3.1.1.5 Mailing address

You must provide your company's full mailing address (i.e., street name, number and postal code).

3.1.1.6 Primary hazardous waste contact

The primary hazardous waste contact is the individual who is responsible for managing or is responsible for staff that manages the hazardous waste and LIW at the generation facility. This person should be familiar with all the wastes for which they have management responsibility, should be able to answer technical questions relating to the facility and also be able to provide assistance in the event of an emergency.

3.1.1.7 Alternate contact

The generator may also identify an alternate contact who is also responsible for hazardous waste management at the facility.

3.1.1.8 North American Industry Classification System (NAICS) Codes

It is necessary to identify the industry sectors that the generator facility represents, and the Registry uses the North American Industry Classification System (NAICS) for this purpose. Accordingly, you should enter the six-digit NAICS code which best describes the nature of business at the facility (each generation facility requires a separate NAICS code). While more than one NAICS code may apply to a particular facility, generators should enter the primary NAICS code during registration and, if necessary, up to two additional codes.

For a complete description of NAICS codes and further information, visit Statistics Canada's website.

3.1.1.9 Ontario liquid industrial/hazardous waste receiver sites

Operators of waste generation facilities that are transfer and processing facilities that are approved to receive subject waste and then ship it off-site are required to register as generators. If you are such a facility you must indicate this during the registration process and provide your ECA number. Most generators in Ontario are not approved as waste receivers.

3.1.1.10 Municipal hazardous or special waste (MHSW) depots and contaminated site remediation

MHSW depots and contaminated sites that generate remediation waste need to be registered, and any subject waste that leaves the site needs to be manifested. MHSW depots and contaminated sites that generate remediation waste and that meet the applicable criteria in

sections 3 and 4 of Ontario Regulation 323/22 are not required to pay subject waste fees. Most generators in Ontario are not an operator of an MHSW depot or contaminated site. The Ministry will review generator registrations where the waste generation facility has been identified as an MHSW depot or contaminated site and provide confirmation to the Registrar of RPRA that the applicable criteria have been satisfied under O. Reg. 323/22, in which case no subject fees are required to be paid.

3.1.1.11 MHSW depots

Waste generation facilities that are MHSW depots need to submit a GRR through the Registry.

If your site is a MHSW depot, and the waste generated is solely as a result of collection of MHSW from the general public, please submit a copy of documentation showing your approval to operate an MHSW depot (i.e., ECA) with your Generator Registration Report through the Registry. The subject waste fee exemption may be applied upon the review of a Director in the Ministry, where the Director is satisfied that the generator and the waste meet the requirements in Ontario Regulation 323/22. In some cases, a site that generates subject waste as part of its normal operations may also be a MHSW depot. In this case, you should submit two generator registration reports: (1) a GRR for the collected MHSW wastes; (2) a GRR for the subject wastes that are not collected MHSW waste.

3.1.1.12 Contaminated site remediation

Waste generation facilities that generate waste because of contaminated site remediation need to submit a GRR through the Registry.

If the site is located in Ontario and is contaminated and all your waste results from activities that were carried on at the site for the purpose of remediating contaminated soil or other contaminated materials located on, in, or under the site, please submit supporting documentation that shows the site address, reasons for remediation, sources of contamination, types of wastes generated, expected duration of project, etc. along with the Generator Registration Report through the Registry . In some cases, a waste generation facility that generates subject waste as part of its normal operations may also be a contaminated site. In this case, you should submit two generator registration reports: (1) a GRR for the subject wastes that are the remediation wastes from the contaminated site: (2) a GRR for the other subject wastes that are generated as part of normal operations.

Subject waste fees are required unless the Director is satisfied that the subject waste was generated at a waste generation facility in Ontario as a result of one of the following actions undertaken to remediate contaminated soil or other material in, on or under the soil:

- actions to complete a Phase II environmental assessment report
- actions to complete a risk assessment
- actions to comply with any order issued under the *Environmental Protection Act*

- actions to meet the applicable site condition standards in the Ministry's "Soil, Ground Water and sediment Standards for Use under Part XV.1 of the *Environmental Protection Act*
- an action that the Director is satisfied was undertaken for a purpose that is consistent with the above purposes

The Ministry has accepted a Phase II environmental assessment report, site specific risk assessment, remediation report, a consultant's proposal or an order issued under the EPA to clean up the site.

3.1.1.13 On-site management

As part of the registration process, for each waste stream you must indicate if your facility stores, processes or disposes of subject waste on-site. Please note that on-site management does not include the blending, bulking or mixing of wastes. Generators should indicate whether they will be registering a waste as temporarily stored (for more than 90 days but 24 months or less), stored for longer than 24 months (i.e., PCB waste, or waste that is being stored in accordance with an ECA), processed (i.e., treated) or disposed of (for example, incinerated or landfilled) on-site.

3.1.2 Waste identification

You must complete waste identification for each waste stream generated at a facility, even if you will be registering several waste streams using the same waste number (waste class and characterization).

This situation can arise if you have a number of different waste generating processes at your facility that produce similar wastes, or a single waste generating process that produces more than one waste stream that will be registered using the same waste number. In such cases, you need to complete a separate waste identification for each of the waste streams, because the description of the waste and the generating process are different, even though the waste number is the same. For example, you may generate waste from tank bottoms as well as spill clean-up residues that will both be registered using the waste number (for example, 221T). You are required to register these waste streams individually because they come from different sources with different waste descriptions, despite their common waste number, and they should be managed separately at the waste generation facility.

The descriptions provided for the waste and the generating process must be detailed enough for both the generator and Ministry inspectors to be able to readily identify the individual waste streams and their origins, and to correlate the registration information to the specific wastes and generating processes within the waste generation facility. The waste description should differentiate between two processes in a facility where the wastes are managed separately but registered with the same waste number. For example, the waste description for

two processes registered using the same waste number might be "wastewater treatment sludge - leachate toxic for X (i.e., identify the constituents)", while the waste stream and generating process description might be "sludge containing heavy metals from process #1, building A" and "sludge containing heavy metals from process #3, building C", respectively.

For each subject waste generated at the waste generation facility, you must identify if the waste is being stored or processed on-site, disposed of on-site or shipped off-site. Where the waste is processed on-site, you may need to register the wastes that entered the process, the processed waste and any residuals from the processing. How the waste is registered depends on its waste characterization, whether it is to be land disposed, and whether it has received any treatment. Figure 4: Registration and other regulatory requirements: Wastes not subject to the LDR program or Figure 5: Registration and other regulatory requirements: Wastes subject to the LDR program will help you to determine if you need to register your waste. Figure 6a and 6b: How to complete the intended waste management portion of the waste generator registration process provides a flowchart to help you to identify how each of your subject wastes should be registered.

3.1.2.1 Waste class

Provide the waste class that you identified during your waste characterization. The Ontario waste class is a three-digit number (for example, 263, 121, etc.).

3.1.2.2 Waste type

You must select a general description of your waste from a predetermined list of examples. Select the one that best describes your waste.

3.1.2.3 Primary characterization

You must provide the primary characterization that you identified when you characterized your waste. The primary characterization is the first characterization of a waste found when you follow the waste characterization flowchart (for example, A, B, C, etc.). If you are registering a de-characterized waste that will be land disposed, and the waste is no longer hazardous but remains subject waste (i.e., regulated constituents in Schedule 6 of Regulation 347 still require treatment before land disposal), the primary characterization is U.

3.1.2.4 Hazardous waste number

From the schedules located in Regulation 347, you will need to obtain the primary hazardous waste number that best describes your waste stream. This is the entry in the first column of each schedule (for example, F007 for spent cyanide plating bath solution from electroplating operations). The hazardous waste number must be entered for all wastes with a primary characterization other than D, P or L. If your waste has more than one characterization, you should use the hazardous waste number associated with the primary characterization. If you

are registering a de-characterized waste, you should use the original hazardous waste number for the untreated waste.

3.1.2.5 Physical state

Describe the physical state of the waste stream (i.e., either solid, liquid or gas).

3.1.2.6 Specific gravity

If the physical state of the waste is liquid, you must provide the specific gravity of the waste stream.

3.1.2.7 Waste number

The waste number consists of the three-digit number (Ontario waste class) plus a single letter (primary waste characterization), (for example, 263A, 121L, etc.).

3.1.2.8 Description of waste

You must provide a general description of your waste and, where appropriate, include details such as the colour, principal components, contaminants and contaminant concentrations in the waste.

3.1.2.9 Description of generating process

You must provide a general description of the generating process for the subject waste. Where applicable, you should include details such as a generic process name, feed materials and products. If your waste is generated by pollution control equipment, you should provide a description of the process or operation that generated the discharge or emission.

3.1.2.10 Physical state

Describe the physical state of the waste stream (i.e., either solid, liquid or gas).

3.1.2.11 Specific gravity

If the physical state of the waste is liquid, you must provide the specific gravity of the waste stream.

3.1.2.12 Waste number

The waste number consists of the three-digit number (Ontario waste class) plus a single letter (primary waste characterization), (for example, 263A, 121L, etc.).

3.1.2.13 On-site waste management

Information about the management of waste streams on-site must be provided if your waste generation facility is located in Ontario. On-site waste management activities include: (1) storage for more than 90 days but 24 months or less; (2) storage for a period greater than 24 months; (3), processing and (4) disposal of a waste stream - all at the location where the waste was generated.

These four (4) activities require registration: Please note that a waste stream may be managed and reported in more than one activity (for example, waste is processed on-site and also disposed of on-site); or stored on-site and then sent off-site for disposal.

The GRR does not need to include information about on-site waste handling, bulking of like wastes prior to treatment or disposal, and waste transfer to a waste transportation vehicle.

3.1.2.13.1 (1) On-site storage for more than 90 days but 24 months or less

Generators who temporarily store hazardous waste on site for a period of between 90 days and 24 months must register through the Registry. The registration shall contain information about:

- the reason for storing the waste
- an estimate of the amount of waste to be stored or expected to be stored
- the manner in which the waste is stored
- the anticipated manner of disposal of the stored waste
- the date upon which the generator began storing the subject waste
- whether or not the amount of waste to be stored will increase over time and if so, the expected accumulation rate and maximum amount to be stored

A separate registration must be completed for each waste to be stored on site for longer than 90 days.

3.1.2.13.2 (2) On-site storage for a period longer than 24 months

If a generator stores a waste on site for a period longer than 24 month the generator must provide all the information required for waste stored at a facility for a period between 90 days and 24 months.

In addition, generators must provide the PCB storage site approval number or the ECA number that authorizes the storage of the waste.

When reporting the generator will provide a start date for the storage, and a review date of up to one year, by which time a generator would need to return to the report and confirm the information or make any necessary changes.

3.1.2.13.3 (3) On-site processing

A waste stream that is managed on-site using any of the following activities must be registered under On-site Processing:

1. processing (waste ECA required)
2. processing (exempt from the Act, pursuant to Section 17.1 of Regulation 347)

Generators who process subject waste on-site must register it as On-site Processing if:

- the subject waste is processed such that the processed waste remains a subject waste, or
- the residual from the processing of the waste is a subject waste

Registration of a subject waste is not required if the waste is processed on-site, and as a result of the processing it is no longer a subject waste, and any residual from the processing is not a subject waste.

A subject waste that is processed on-site by any activity that changes the nature of the waste must be registered as On-site Processing. This requirement includes activities such as mixing of different types of waste to carry out treatment (for example, mixing an acid and a base to effect neutralization), and activities that involve adding other materials to treat the waste (for example, chemical oxidation). Processing does not include mixing of like wastes where there is no change in the nature of the waste. If subject wastes are mixed in accordance with an ECA and no processing takes place, the mixed waste should not be registered under On-site Processing.

If an ECA is required for on-site processing of a subject waste, the waste must be registered as On-site Processing (please see the Regulatory Requirements section for information about when an ECA is required to process waste on-site). Processing does not include the activities listed under On-site Disposal (for example, incineration, OWRA facility, etc.).

Generators who process subject waste on-site must identify whether the processing was carried out in accordance with a waste ECA or if the processing did not require a waste ECA in accordance with Section 17.1 of Regulation 347. If a waste ECA was issued for on-site waste management activities, the generator must provide the ECA number.

If either the processed waste or the residual from the waste processing is a subject waste, the generator must submit information about each processed or residual waste stream through the Registry, according to how it will be managed. If the subject waste is to be shipped off-site or further managed on-site after processing, the generator must submit information about each processed waste or residual through the Registry.

The processed waste or residual may have the same waste number as the waste number for the waste at the point of generation or may be different. For example, where more than one waste is processed on-site using the same treatment method, and the resulting processed waste is a subject waste, the generator must:

- register each of the waste streams under On-site Processing
- register the resulting subject waste, and
- add the waste number for the resulting subject waste to all of the waste streams that were registered under On-site Processing

Generators who process hazardous waste on-site are not required to provide information with respect to the land disposal treatment requirements when they register a waste stream as On-site Processing. However, this information may be required when a subject waste is registered for off-site shipment. Generators who process listed wastes and characteristic wastes on-site may be subject to LDR requirements, including the requirement for a waste analysis plan. The generator may also be subject to LDR notification requirements pursuant to Section 84 of Regulation 347 for a waste stream registered as on-site processing, if a characteristic waste was processed to meet the land disposal treatment requirements and will be disposed of off-site (for more information, see the Notification, record-keeping and waste analysis plan requirements section).

When reporting on-site processing for a waste, the generator may provide a date range of up to a year and an estimated quantity to be processed in that date range. The generator must then report the actual quantity before the end of the date range and update the end date if necessary.

3.1.2.13.4 (4) On-site disposal

A waste stream that is managed on-site using any of the following activities must be registered and reported as On-site Disposal:

1. incineration
2. thermal treatment (non-incineration)
3. landfill
4. landfarm
5. discharge to sanitary sewer (hazardous discharges only)
6. OWRA facility (on-site treatment - hazardous waste discharges to final stage only)
7. use as a waste-derived fuel
8. other on-site disposal (the generator must identify the disposal method)

If a subject waste is processed on-site or stored prior to on-site disposal, the waste must also be registered and reported as On-site Processing or as Storage, as the case may be.

If an ECA has been issued for on-site disposal of the waste (for example, thermal treatment, landfill, etc.), the generator must provide the ECA number. When reporting on-site disposal, the generator may provide a date range of up to a year and an estimated quantity to be disposed in that date range. The generator must then report the actual quantity at or before the end of the date range and update the end date if necessary.

If the waste stream that is being disposed of on-site was a listed waste or characteristic waste at the point of generation (i.e., all wastes except those with the primary characterizations of L, D and P) and the waste will be land disposed, the generator must confirm that the on-site activities were conducted in accordance with Ontario's LDR requirements (i.e., meeting the land disposal treatment requirements and preparing a waste analysis plan).

There may be cases where a residual resulting from one of the disposal practices above is a subject waste (for example, residue from the incineration of hazardous waste or from an OWRA facility) that requires further management, either on- or off-site. In such cases, if a subject waste is to be shipped off-site or further processed or disposed of on-site, it must be registered and reported separately as a new waste stream.

3.1.2.14 Off-site waste management

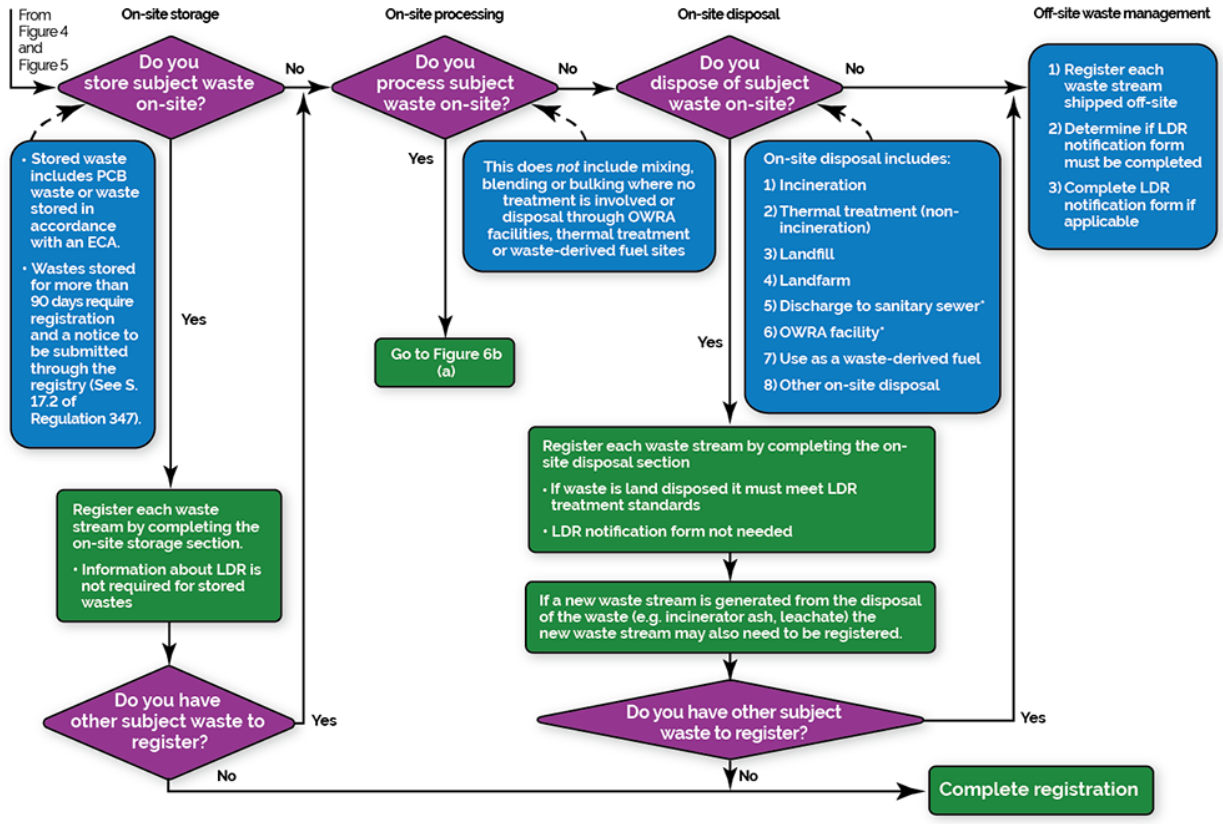
All waste streams that will be shipped off-site must be registered. For waste streams that are hazardous waste (other than PCB (D) or pathological (P) waste) the GRR includes a series of questions to determine if the information contained in the LDR notification form is required. The generator may determine by answering these questions that the LDR Notification part of the GRR does not need to be completed for the waste stream. If so, additional information (for example, ECA number) may be required where indicated. The questions that help to determine if the completion of the LDR notification form is required are provided in Appendix F: Declaration of wastes subject to land disposal restrictions and in Figure 7: Declaration of waste streams subject to land disposal restrictions.

All generators who produce a listed waste or characteristic waste that will be land disposed are required to fill in the LDR portion of the GRR. The LDR notification form has been designed so that it not only meets generator registration requirements but can also be provided by the generator to the receiver to meet the notification requirements (see Section 84 of Regulation 347). The Registry allows generators to complete the LDR notification form and attach it to the first manifest being sent to the receiver or send it to the receiver ahead of the first shipment of the waste stream. Please note, any change to the treatment requirements of the waste stream would require an updated LDR notification form to be provided to the receiver.

Generators are responsible for identifying whether or not their waste is subject to the LDR requirements when they register each waste stream. Although a generator may ask the receiver or carrier of the waste how the waste will be managed and whether it will be land disposed, it is the generator who must determine whether the LDR requirements apply. If

generators are uncertain about whether the LDR requirements apply, they should complete the LDR notification form and forward the information to the receiver of the waste.

3.1.3 Figure 6a: How to complete the intended waste management portion of the waste generator registration process

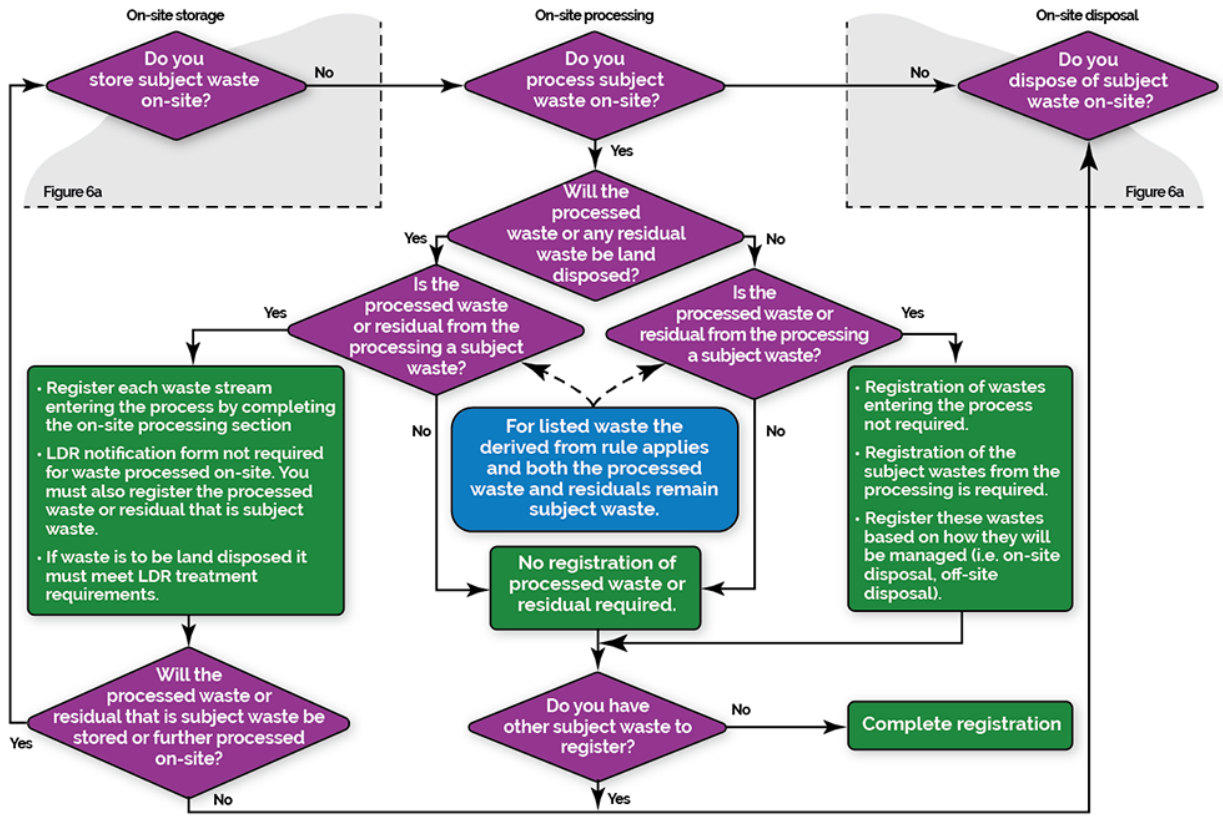


This flowchart is a graphical representation of the information immediately below.

All generators must identify the waste and identify the management process for each waste stream being registered.

*Hazardous waste discharges only. For OWRA facilities, hazardous discharges to final stage only.

3.1.4 Figure 6b: How to complete the intended waste management portion of the waste generator registration process (continued)



This flowchart is a graphical representation of the information immediately below.

3.1.5 How to complete the intended waste management portion of the waste generator registration process (text version)

3.1.5.1 On-site storage

Step 1. Do you store waste on-site? Note that:

- stored waste includes PCB waste and waste stored in accordance with an ECA
- waste stored for more than 90 days requires registration and a Notice to be submitted through the registry (See 17.2 of Regulation 347)

If yes, go to Step 2. If no, go to the On-Site Processing Section.

Step 2. Register each waste stream by completing the on-site storage section. Information about LDR is not required for stored wastes. Proceed to Step 3.

Step 3. Do you have other subject waste to register? If yes, go to On-Site Processing. If no, complete your registration.

3.1.5.2 On-site processing

Step 1. Do you process subject waste on-site? This does not include mixing, blending or bulking where no treatment is involved, or disposal through OWRA facilities, thermal treatment or waste-derived fuel sites. If no, go to On-Site Disposal. If yes, go to the 'How to Complete the Intended Waste Management Portion of the Waste Generator Registration Process (continued)' section.

3.1.5.3 On-site disposal

Step 1. Do you dispose of subject waste on-site? Note that on-site disposal includes:

- incineration
- thermal treatment (non-incineration)
- landfill
- landfarm
- discharge to sanitary sewer (hazardous discharges only)
- OWRA facility (hazardous waste discharges to final stage only)
- use as a waste-derived fuel
- other on-site disposal

If no, go to Off-Site Waste Management. If yes, go to Step 2.

Step 2. Register each waste stream by completing the on-site disposal section.

- If waste is land disposed it must meet LDR treatment standards
- A LDR notification form is not required

Go to Step 3.

Step 3. If a new waste stream is generated from the disposal of the waste (e.g. incinerator ash, leachate) the new waste stream may also need to be registered. Go to Step 4.

Step 4. Do you have other subject waste to register? If yes, go to the Off-Site Waste Management section. If no, complete your registration.

3.1.5.4 Off-site waste management

Step 1. Register each waste stream to be shipped off-site.

- determine if the LDR notification form is required
- complete the LDR notification form if applicable

Complete your registration.

3.1.6 How to complete the intended waste management portion of the waste generator registration process (continued)

3.1.6.1 On-site processing (continued)

Step 1. Will the processed waste or any residual waste be land disposed? If yes, go to Step 2. If no, go to Step 3.

Step 2. Is the processed waste or residual from the processing a subject waste? Note that for listed waste the derived from rule applies and both the processed waste and residuals remain subject waste. If yes, go to Step 4. If no, go to Step 5.

Step 3. Is the processed waste or residual from the processing a subject waste? Note that for listed waste the derived from rule applies and both the processed waste and residuals remain subject waste. If no, go to Step 5. If yes, go to Step 6.

Step 4. Register each waste stream entering the process.

- A LDR notification form is not required for waste processed on-site. You must also register the processed waste or residual that is subject waste.
- If waste is to be land disposed it must meet LDR treatment requirements.

Go to Step 7.

Step 5. No registration of processed waste or residual required. Go to Step 8.

Step 6. Register these wastes based on how they will be managed (e.g. on-site disposal, off-site, storage, etc.).

- Registration of wastes entering the process not required.
- Registration of the subject wastes from the processing is required.

Go to Step 8.

Step 7. Will the processed waste or residual that is subject waste be stored or further processed on-site? If yes, go to the On-Site Storage section. If no, go to the On-Site Disposal section.

Step 8. Do you have other subject waste to register? If no, complete your registration. If yes, go to the On-Site Disposal section.

3.1.7 Land disposal restrictions notification form

Generators who produce subject waste that is listed waste or characteristic waste that will be shipped off-site for land disposal must complete the LDR notification form containing the information set out below. Please see Appendix E: Generator registration and land disposal restrictions reporting for additional information.

A separate LDR notification form must be completed for each subject waste stream that is generated at the facility and will be land disposed, or where the final disposition of the waste is unknown. Once the form has been completed, it is also the generator's responsibility to provide the information in the form to the initial receiver of the waste, in accordance with Section 84 of Regulation 347. This can be done by using the Registry, or by providing the required information in a different format.

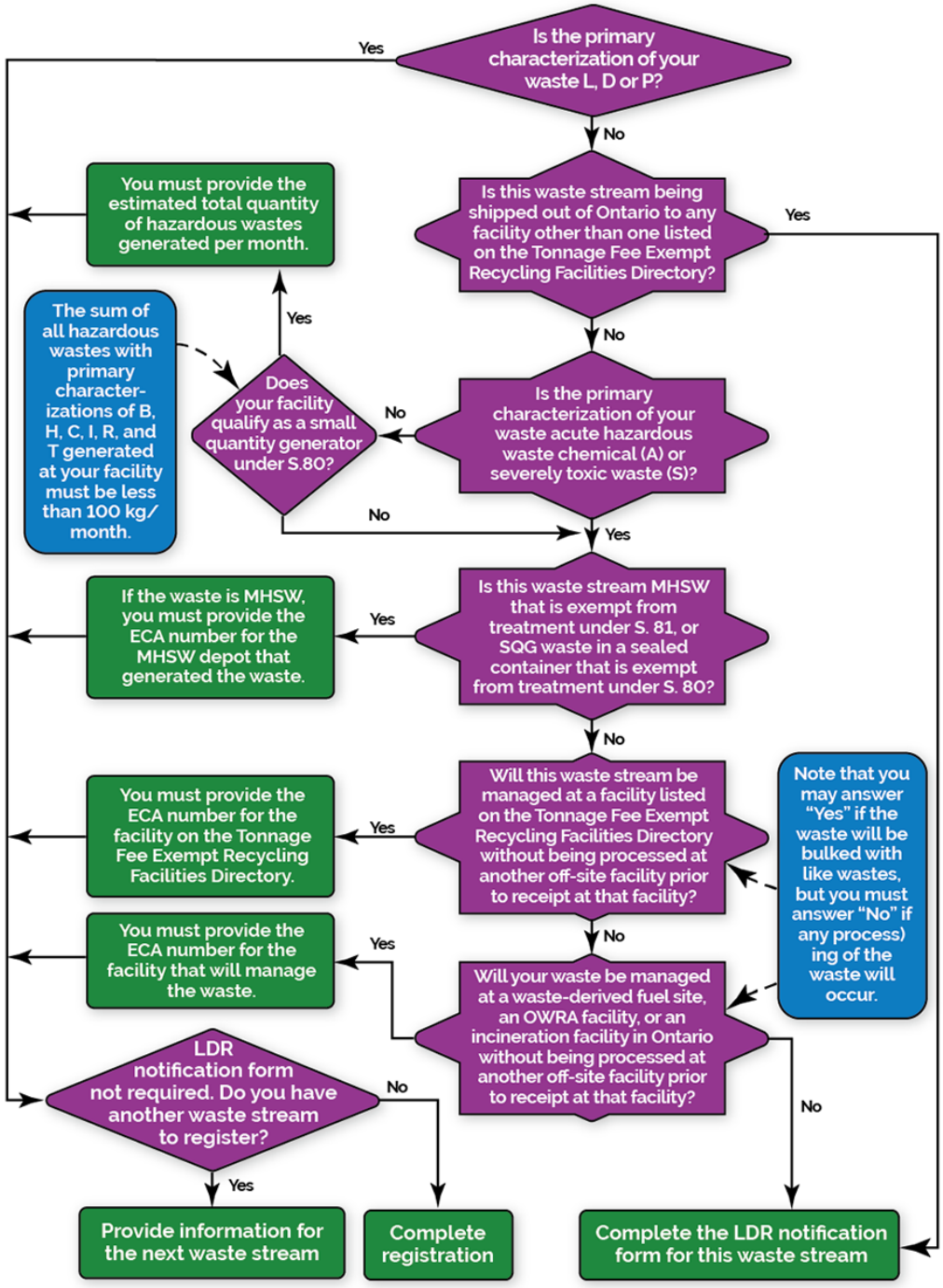
3.1.7.1 Aqueous or non-aqueous waste for the LDR notification form

Aqueous wastes are wastes that contain less than 1% total organic carbon by weight, and less than 1% total suspended solids by weight. Non-aqueous wastes are wastes that do not meet the criteria for aqueous wastes. You must identify if your waste is aqueous or non-aqueous.

3.1.7.2 Alternate treatment standards

For wastes that are soil or soil mixtures or debris or debris mixtures, generators may choose to meet the alternate treatment standards. If this is your preferred option, you must indicate that alternate treatment standards apply, and indicate whether your waste is a soil or a soil mixture or a debris or a debris mixture. If you indicate that your waste is a debris or a debris mixture, you must indicate what type of debris or debris mixture it is. The types of debris include glass, metal, plastic, rubber, brick, cloth, concrete, paper, pavement, rock, and wood. If the waste is a mixture of debris types, you must list all the types of debris in the mixture.

3.1.8 Figure 7: Declaration of waste streams subject to land disposal restrictions



This flowchart is a graphical representation of the text contained in [Appendix F: Declaration of wastes subject to land disposal restrictions](). If you are unsure how your waste will be managed once it is sent off-site, you must complete the LDR notification form.

3.1.8.1 Hazardous waste numbers for the LDR notification form

When characterizing your waste stream (please see Determining the Characterization of your Waste Stream) you may have identified multiple characterizations (i.e., the waste may have more than one waste characterization, for example, H and T). For each waste characterization (except for P, D or L), you must provide the following information:

- hazardous waste number(s)
- for each hazardous waste number, the generic name and associated CAS #
- number if the waste is listed in Part A or Part B of Schedules 2, Schedule 3, or Schedule 5 of Regulation 347; or a description of the waste if the waste is listed in Schedule 1 of Regulation 347, and
- the treatment sub-category (if applicable)

Any waste generation facility that mixes wastes that are subject to LDR in accordance with Regulation 347 or applicable ECA, must identify all hazardous waste numbers for each individual waste that entered the combined waste stream.

Some facilities (for example, transfer stations) bulk similar wastes together that are subject to LDR and send the bulked waste to a receiver. These facilities must report in the LDR notification form for their operation all of the hazardous waste numbers from the incoming LDR notification forms that they received from generators for each of the wastes that are bulked together.

Similarly, a processing facility that mixes LDR wastes before treatment to meet land disposal treatment requirements must report in its LDR notification form all hazardous waste numbers from the incoming LDR notification forms that were received from generators for the wastes that were mixed.

Failure to report all hazardous waste numbers from the incoming wastes when registering a waste that is made up of mixed, blended, bulked, or processed wastes could constitute dilution (please see the Waste management section for more information on when like wastes can be bulked).

3.1.8.2 Regulated constituents

Generators must provide additional information in this section of the LDR notification form for all listed wastes in Schedule 1, Part A or Part B of Schedule 2 and Schedule 3 and for all characteristic wastes in Schedule 5. For each hazardous waste number, you must list all regulated constituents (i.e., each constituent with a treatment standard) that are known or expected to be present at concentrations at or above the standard at the point of generation. For most characteristic wastes, this requirement includes all regulated constituents listed in Schedule 6 of Regulation 347 that may require treatment. You must also specify the type of characteristic wastes (for example, corrosivity, ignitability, etc.) in this section.

The Registry will provide you with a menu from which you can select the regulated constituents. The choices in each menu are based on the hazardous waste number(s) you have already entered.

For listed wastes, generators may be registering either a treated or untreated waste. Accordingly, you must list all of the regulated constituents with concentrations at or above the treatment requirements that are or were present in the waste before treatment.

For characteristic wastes, generators may be registering an untreated waste, a waste that has been treated to address only its hazardous characteristic, or a waste that has been treated to address both the hazardous characteristic and all other regulated constituents in Schedule 6. In all cases, you are required to list all of the regulated constituents with concentrations at or above the treatment requirements that are or were present in the waste before treatment, as well as the type of characteristic(s) that required treatment.

If wastes have been bulked, blended, or mixed before processing, the regulated constituents from all the incoming wastes must be identified for the resulting waste that is being shipped off-site - even if the bulking, blending or mixing process diluted any of the constituent concentrations below the treatment standard.

For all regulated constituents identified on the form you must identify which regulated constituents have been treated to meet the land disposal treatment requirement and which haven't.

3.1.8.3 Variance from a treatment standard

Most generators will not need to complete this part of the LDR notification form, which must be completed only if the Ministry has issued a variance for a particular waste stream. An explanation is provided in the Variances section. Approval for a variance from a treatment standard may be provided through an ECA for the generator or receiver of the waste, through a Director's letter of equivalent treatment, or through a regulatory exemption.

If the Ministry has granted a variance for the waste stream, the generator must identify the approval number for the variance that amended the treatment standard on the LDR notification form. If the variance is time-limited, the time limits of the variance must also be provided. Similarly, if an equivalent method of treatment has been approved, the approved treatment method must be identified. The generator should also check to ensure that the receiver has a copy of the variance.

3.1.8.4 Confirmation of treatment status

To identify the treatment status of the waste stream that will be shipped off-site, generators should choose the appropriate statement from the following list:

For characteristic wastes, choose one of the following:

- waste has been fully treated to remove the hazardous characteristic and meets the underlying hazardous constituent (UHC) standards in Schedule 6
- waste has been partially treated for the regulated constituents identified above and will be shipped off-site for further treatment
- waste has been treated to remove the hazardous characteristic, but requires further treatment to meet the underlying hazardous constituent (UHC) standards in Schedule 6 for UHC(s) identified above
- waste is being sent off-site to meet the land disposal treatment requirements for the regulated constituents identified above
- waste is being shipped out of Ontario

For listed wastes, mixtures that include a listed waste, or waste derived from a listed waste, choose one of the following:

- waste has been partially treated for the regulated constituents identified above and will be shipped off-site for further treatment
- waste has been treated and meets the land disposal treatment requirements for regulated constituents identified above
- waste has no regulated constituents present or all regulated constituents are already below the land disposal treatment requirements
- waste is being sent off-site to meet the land disposal treatment requirements for the regulated constituents identified above
- waste is being shipped out of Ontario

Although completion of the LDR notification form meets generator registration requirements for LDR wastes, the information on the form must be sent to the facility that will receive the waste, where notification is required for subject wastes (please see the Notification Requirements section for more information on LDR notification requirements).

3.2 Supplementary generator registration report

Should there be a change in the information in a GRR, a supplementary GRR needs to be submitted in accordance with S. 18(6) of Regulation 347. The supplemental registration report shall include the information needed to update the previously submitted GRR information, if that information is no longer correct or valid. Examples of a change include:

- a change in company name, mailing address or telephone number
- a change in the official responsible or main contact for the generator
- the need to register additional waste streams
- a change in waste characterization or waste class
- a change in treatment requirements for LDR wastes
- site closures (facility no longer generates or stores subject waste)

Please note that if you are relocating to a new site, you must register that site as a new facility (i.e., complete a new GRR for the new site). If the facility you are currently operating or for which you have recently ceased operations at is no longer generating subject waste that you are the operator for, this change in operations can be reported by deactivating the facility in the registry.

As a waste generator, it is your responsibility to complete and submit a supplementary GRR if any changes occur. This report must be completed within 15 days of the date the change took place.

3.3 Emergency generator registration

In the event of a spill or environmental emergency, please contact the Ministry's Spills Action Centre (SAC) at 1-800-268-6060. SAC is staffed on a 24-hour basis to receive and record province wide reports of spills and to co-ordinate appropriate responses. SAC also provides a special emergency generator number (EGN) and a unique incident report number. All spills and environmental emergencies must be reported to SAC before an EGN can be issued.
The EGN must be obtained from SAC before any subject waste can be removed from the site.

Once received, the EGN must be used in the Registry to complete a streamlined registration that is intended to facilitate quick access to manifests so as to not impede the removal of the contaminant as expediently as possible. A streamlined registration in the Registry must be completed before any subject waste can be removed from the site and each subsequent manifest in respect of that site related to the spill or environmental emergency must be entered into the Registry before that subject waste can be removed from the site.

3.3.1 Emergency generator registration information requirements

The information required to complete the streamlined EGN registration is as follows:

3.3.1.1 Legal company name and company operating name

You must register your company's full legally registered name, as well as the company's full operating name, if this is different from the legal name.

3.3.1.2 Waste generation activity

For each facility the generator should identify to the best of their knowledge, whether the operations that are generating the subject waste will continue for an extended period of time (for example, on-going waste generation for the foreseeable future), a short period of time (for example, a fixed term project with an estimated end date), a one-time event (for example, clean-up, maintenance, repair, etc.) and how often waste is expected to be shipped off-site from the facility.

3.3.1.3 Emergency generator number (EGN)

The Registry requires that the generator provides an Emergency Generator Registration (EGR) number. This is the EGN that was provided by SAC.

3.3.1.4 Facility location

You must provide the waste generation facility's (in this case, the spill or emergency location) full site address.

3.3.1.5 Mailing address

You must provide your company's full mailing address (i.e., street name, number and postal code).

3.3.1.6 Primary hazardous waste contact

The primary hazardous waste contact is the individual who is responsible for managing or is responsible for staff that manages the hazardous waste and LIW at the spill or emergency. This person should be familiar with all the wastes for which they have management responsibility, should be able to answer technical questions relating to the facility and also be able to provide assistance in the event of an emergency.

3.3.1.7 Alternate contact

The generator may also identify an alternate contact who is also responsible for hazardous waste management at the facility.

3.3.1.8 North American Industry Classification System (NAICS) Codes

It is necessary to identify the industry sectors that the generator facility represents, and the Registry uses the North American Industry Classification System (NAICS) for this purpose. Accordingly, you should enter the six-digit NAICS code which best describes the nature of business at the facility (each generation facility requires a separate NAICS code). While more

than one NAICS code may apply to a particular facility, generators should enter the primary NAICS code during registration and, if necessary, up to two additional codes.

For a complete description of NAICS codes and further information, visit Statistics Canada's website.

3.3.1.9 Waste class

Provide the waste class that you identified during your waste characterization and select the most appropriate waste type that describes your waste from a drop-down list. The Ontario waste class is a three-digit number (for example, 263, 121, etc.).

3.3.1.10 Primary characterization

You must provide the primary characterization that you identified when you characterized your waste. The primary characterization is the first characterization of a waste found when you follow the waste characterization flowchart (for example, A, B, C, etc.). If you are registering a de-characterized waste that will be land disposed, and the waste is no longer hazardous but remains subject waste (i.e., regulated constituents in Schedule 6 of Regulation 347 still require treatment before land disposal), the primary characterization is U.

3.3.1.11 Hazardous waste number

From the schedules located in Regulation 347, you will need to obtain the primary hazardous waste number that best describes your waste stream. This is the entry in the first column of each schedule (for example, F007 for spent cyanide plating bath solution from electroplating operations). The hazardous waste number must be entered for all wastes with a primary characterization other than D, P or L. If your waste has more than one characterization, you should use the hazardous waste number associated with the primary characterization. If you are registering a de-characterized waste, you should use the original hazardous waste number for the untreated waste.

3.3.1.12 Waste number

The waste number consists of the three-digit number (Ontario waste class) plus a single letter (primary waste characterization), (for example, 263A, 121L, etc.).

3.3.1.13 Physical state

Describe the physical state of the waste stream (i.e., either solid, liquid or gas).

3.3.2 Completion of regular registration requirements after emergency generator registration

By enabling generators to obtain an EGN for the removal of subject waste that has resulted from a spill or environmental emergency, the Ministry recognizes that meeting the regular GRR requirements, including LDR requirements, may not be feasible in the immediate response to a spill or environmental emergency, particularly with respect to the characterization of the waste and treatment that may be required. However, once the immediate threat from the spill has been addressed, the owner of the waste is responsible for its complete characterization and for submitting a supplemental GRR to update the initial registration that was submitted as an emergency generator registration. This must include satisfying LDR requirements and all other registration requirements in section 3.1. The supplemental GRR must be submitted through the Registry within 90 days, as per subsection 18 (13) of Regulation 347.

Emergency generator registration is only intended to facilitate the immediate cleanup and removal of waste from a spill or environmental emergency, to protect public safety, remediate the situation and return the site back to its normal intended use as soon as possible. Emergency generator registration is not available for non-emergency situations such as process aberrations, upsets, one-time waste removals or other unusual circumstances that do not require immediate removal of the waste. In such situations, the registration process is available on a 24/7 basis through the Registry.

3.4 Responsibilities of the generator after registration

After registering successfully, a generator registration document for your facility will be posted on the Registry. The generator registration document contains your generator registration number and waste numbers, and you must use these numbers on manifests during all subsequent transactions involving subject wastes that are generated at your facility.

As a registered generator, you are responsible for ensuring that a generator registration document for your facility has been posted on the Registry, and that the information posted is correct. Please note that subject waste cannot be transferred until the generator has electronically submitted a GRR or the generator has been approved to use paper forms under section 27.1 and a generator registration document has been posted for that facility with the waste number for that subject waste.

Each waste generator is responsible for selecting accurate waste numbers. The waste numbers posted on the generation registration document for your facility should not be considered as confirmation of the accuracy of the information that you submitted during registration. If, due to new information or re-assessment of information submitted, you feel that your waste is incorrectly classified, you will need to revise your GRR by submitting a supplementary GRR.

3.4.1 Post-registration review

After your generator registration document has been posted on the Registry, your facility may be subject to a more detailed review of its waste management practices by the Ministry. The Ministry may conduct a detailed post-registration review that could result in requests for additional information or site visits.

It is also important to note that, as a waste generator, you are responsible for the characterization of your wastes and the information submitted on the generator registration report. The Ministry's review is only intended to assist you in this process. If your waste is found to be incorrectly characterized, or the information on your registration is incorrect even after your generator registration document has been posted, you could be liable for prosecution.

3.5 Information made available to the public

Section 6 of Ontario Regulation 323/22 requires the Registrar to post a generator registration document for each waste generation facility as soon as possible after a GRR for a facility is submitted through the Registry. The information available to the public is the following:

- the date on which the Generator Registration Report was submitted through the Registry
- the name of the generator, facility location, contact information for the generator and generator registration number
- any waste numbers included in the report

4. Notice of on-site storage for a period of more than 90 days

The first time that a subject waste is stored for more than 90 days, a notice must be submitted through the Registry. The notice must contain the following information, which includes information about the facility and information required for the registration of on-site storage for a period more than 90 days but 24 months or less, described in the '(1) On-site Storage for more than 90 days but 24 months or less' section of this manual:

- the name of the and location of the waste generation facility where the waste is stored
- a description of the waste being stored including information about the waste consistent with the generator registration requirements. (See section 3.1.2 Waste identification for more information)
- the reason for storing the waste
- the anticipated manner of disposal of the stored waste
- an estimate of the amount of waste being stored or expected to be stored
- the manner in which the waste is stored
- the date upon which the generator began storing the subject waste
- whether or not the amount of waste to be stored will increase over time and if so, the expected accumulation rate and maximum amount to be stored

A notice that has been submitted through the Registry must be updated if any of the information has changed within five (5) business days after the change.

The 90-day storage period begins as soon as a subject waste is first stored at a waste generation facility. The 90-day storage period does not start when a container used to store the waste is full and ready to be shipped off-site for disposal. For waste streams that have a small quantity exemption associated with their primary characteristic, the waste is first considered to be stored when an amount equal to or greater than the SQE amount has been accumulated in a container or other means of storage. In the case of wastes for which there is no small quantity exemption, the 90-day period begins as soon as any amount of the waste is accumulated in a container or other means of storage. A brief discussion on when a waste is generated and becomes a subject waste is included in the Determining when waste is generated section.

5. Fees

As of January 1, 2023, RPRA is authorized under section 41 of the RRCEA to set and collect fees respecting the subject waste program.

Generators of subject waste are required to pay any applicable subject waste fees required to be paid by RPRA. RPRA must set the fees in accordance with Ontario Regulation 323/22. Please see RPRA's Hazardous Waste Program Registry webpage for further information on fees and how they are calculated.

5.1. Fee exemptions

As per Ontario Regulation 323/22, some generators are not required to pay subject waste fees. This section of the manual explains the three circumstances in which tonnage fees cannot be collected by RPRA in relation to the subject waste program:

- the subject waste is not hazardous waste
- Tonnage Fee Exempt Recycling Facilities Directory
- previous payment or exemption

5.1.1 The subject waste is not hazardous waste

If the subject waste is liquid industrial waste or waste described in clause (b.1) of the definition of "subject waste" in the regulation, no fees based on tonnage (weight, mass, volume or other quantity-based measure) of the waste can be applied to the waste.

5.1.2 Previous payment or exemption

No tonnage fees may be collected in respect of the waste where a generator has already paid, or is exempt from paying, tonnage fees for that waste. This also applies to hazardous waste from which the hazardous waste was derived. For example, no tonnage fee may be collected relating to waste that has been received at a transfer station in Ontario that is then shipped out from that transfer station because a tonnage fee would have already been paid previously for that waste. In contrast, tonnage fees could be collected respecting waste being shipped to Ontario from a transfer station in another jurisdiction.

5.1.3 Waste generation facility exemptions

Some generators are exempt from subject waste fees:

- waste generation facilities that have been acknowledged as MHSW (formerly HHW) facilities in Ontario, where the subject waste is only generated as a result of the collection of hazardous and special waste from the general public and is not treated or disposed of at the site (see MHSW Depots for more information)
- waste generation facilities that have been acknowledged as contaminated sites located in Ontario, where subject waste generated is a result of site remediation activities. (See: Contaminated Site Remediation for more information)
- the subject waste is generated as a result of a spill, process aberration or upset or the circumstances described in section 22(2) of Regulation 347, the generator requires a registration number to comply with the Regulation, and, the generator has notified the Ministry and the Spills Action Centre and has been provided a generator registration number

5.2 Tonnage fee exempt recycling facilities directory (see section 2 of O. Reg. 323/22)

The Tonnage Fee Exempt Recycling Facilities Directory includes facilities that process wastes to recover some portion of the material. The activities carried on at these facilities do not meet the requirements of section 3 of Regulation 347 for an exemption from Part V of the EPA, but the Ministry considers the material recovery that takes place at these recycling facilities to be beneficial. See Ontario Regulation 323/22 for more information on how facilities can be added to the Directory.

In order for one of these facilities to be added to the Directory in respect of a waste class, they must receive the relevant subject wastes from a registered generator. The facilities that receive the wastes must have a waste ECA (inside Ontario) or other permit (outside Ontario) issued by the environmental regulator in the host jurisdiction to carry on their operation. In the U.S., if the facility is operating under an exemption to the requirement to get a permit the facility should provide a letter from the applicable regulatory body indicating that the facility is exempt from the permit requirement.

A person who operates a facility that receives and processes hazardous waste to create a new product may submit a written request to the Director for the facility to be added to the Tonnage Fee Exempt Recycling Facilities Directory.

The Tonnage Fee Exempt Recycling Facilities Directory is posted on the Registry, and the exemption from the tonnage fees is applicable to the acceptable waste classes from the time of posting.

In order for a facility to be added to the Directory, the Director must be satisfied of the following upon receiving the written request (see subsection 2 (6) of O. Reg. 323/22):

- the hazardous waste will be transferred by a generator for direct transport to the facility
- the hazardous waste will be accepted at the facility for the primary purpose of reusing, recycling or reclaiming the waste through a manufacturing process or operation
- the hazardous waste will be used as feedstock in the manufacturing process or operation
- the process or operation will not involve combustion or land application of the hazardous waste or use of the hazardous waste as fuel or fuel supplement
- there is a demonstrated market demand for the product to be created by the manufacturing process or operation
- the product to be created by the manufacturing process or operation does not pose a substantial hazard to human health or the environment when used as intended

The Director's determination of whether there is a primary purpose of reuse, recycling or reclamation is either based on whether the waste is being processed to recover a usable material or that it is being regenerated. Some examples of recycled waste include:

- the recovery of metal from hazardous wastes such as spent batteries, photographic wastes, spent catalysts and PCB-contaminated electrical equipment
- the regeneration of spent solvents
- the re-refining of used oil

A numerical recovery target is not used as an indicator of recycling, since the number, which depends on the type of waste and the recycling process being used, could vary significantly. Previous manifest data (waste type and quantities received, waste types and quantities shipped out), however, are tabulated and reviewed.

The written request to the Director must include the following information:

- the name and location of the facility, including the name and contact information of the person who can speak to the operations at the facility
- a description of the waste and the waste number that has been used in manifesting the waste
- a copy of the Safety Data Sheet, if available
- information respecting any other waste received at the facility, including a description of each waste
- a copy of all environmental compliance approvals in respect of the facility, or, in the case of a facility outside of Ontario, all similar instruments from the applicable jurisdiction
- the name and contact information of the environmental regulatory agency in the jurisdiction (if the facility is located outside Ontario)

- information describing the manufacturing process or operation in which the hazardous waste will be used, including the quantities of product that will be created
- information outlining a demonstrated market demand for the product, and
- documentation indicating the product created does not pose a substantial hazard to human health or the environment when used as intended
    - this could include documentation indicating that the product meets any established relevant technical specifications/standards that are used for virgin material with the same purpose or that the product does not exhibit any additional hazardous characteristic(s) that equivalent products do not exhibit

Please note that the listing of a facility in the Directory does not result in exemptions from any other requirements related to recycling (for example, these facilities are not exempt from Part V of the EPA and Regulation 347 under section 3 of Regulation 347).

5.3 Payment and refund of fees imposed before January 1, 2023

Prior to January 1, 2023, Fees were calculated by adding three components together:

- a $50 (initial or annual) base fee component (this is called the "base fee component" or "base fee")
- a fee of $5 per manifest used during the calendar year in which the most recent GRR is submitted (this is called the "manifest component")
- a fee of $30 per tonne of hazardous waste generated (this is called the "tonnage component")

Any fees that were calculated based on reported activities that occurred prior to January 1, 2023 remain payable and due to the Minister of Finance.

Refunds of fees paid for activities that occurred before January 1, 2023 in an HWIN account are available under the following circumstances:

- funds remaining in an HWIN account when the account is being closed
- multiple payments deducted from an HWIN account for a single transaction
- if an overpayment occurred because the amount of hazardous waste actually disposed of in the previous year was less than the amount used to calculate the fee submitted
- prepaid account balances that remain after all activities from prior to January 1, 2023 have been reported and fees paid

Requests for refunds must be submitted by an authorized person listed in the HWIN registration. (ie. Company Official and Additional HWIN Administrators)

Generators must submit the following information in writing:

- name of requestor (must be listed on the HWIN registration)
- generator number
- company name
- Canada Revenue Agency business number
- company mailing address
- reason for the refund request
- amount to be refunded
- statement confirming that 2022 and earlier manifests are all reflected in the HWIN account(s) and all outstanding fees are fully paid

Please note that it may take approximately 6 weeks to issue a refund cheque. Cheques will be made payable to the registered company. Direct-to-Credit Card refunds can only be completed for the full amount of the original transaction — partial refunds are not possible.

Requests can be submitted via the following methods:

By visiting Hazardous Waste Information Network and following instructions in the refund policy link

By email:
HazardousWasteProgram@ontario.ca

By mail:
Environmental Monitoring & Reporting Branch, Area "M"
Ontario Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West
Toronto ON M4V 1P5

6. Manifesting

A manifest is a document used to track the movement of liquid industrial and hazardous wastes (subject wastes) as they move from a generator to an off-site receiving facility. Manifests are used to identify the type of waste being shipped, overall volumes and the movements of the waste from generator to carrier to receiver to ensure that these wastes are managed appropriately.

There are three parts to the manifest: the generator portion, the carrier portion and the receiver portion.

The Registry will aid generators to complete a manifest by importing information about the waste generation facility and the waste stream(s) to be shipped directly from the facility registration. It will also aid carriers and receivers by pulling information from their Registry accounts to help populate their portions of the manifest.

Prior to the waste leaving the waste generation facility, both the generator and carrier must certify the manifest information they submitted.

6.1 Manifest information requirements

The following information is required on a manifest to meet the requirements of Regulation 347.

6.1.1 Generator manifest information

- Company name (Operating Name)
- Mailing address associated with the waste generation facility
- Contact information for the generator (for example, e-mail and phone number)
- Address of the facility (site address)
- Name and signature of person signing as an authorized representative of the generator
- Waste stream information:
    - waste number (waste class and characterization)

    - shipping name
    - quantity shipped and unit of measurement
    - physical state
- Intended receiver:
    - ECA number (or jurisdictional registration number if the receiver is outside of Ontario)
    - receiver company name
    - receiver mailing address
    - receiver facility site address
    - contact information for the receiver (for example, e-mail and phone number)

6.1.2 Carrier manifest information

- ECA number
- Company name (Operating Name)
- Carrier mailing address
- Contact information (for example, e-mail and phone number)
- Vehicle information as necessary (for example, trailer registration, etc.)
- Name and signature of person signing as a representative of the carrier

6.1.3 Receiver manifest information

- ECA number (or jurisdictional registration number if the receiver is outside of Ontario)
- Receiver company name
- Receiver mailing address
- Receiver facility site address
- Contact information for the receiver (for example, e-mail and phone number)
- Name and signature of person signing as a representative of the receiver
- Quantity received and unit of measurement
- Handling code (the final method of handling at the receiver's location should be entered):
    - 01 storage
    - 02 thermal treatment
    - 03 chemical treatment
    - 04 physical treatment
    - 05 biological treatment
    - 06 secure landfill
    - 07 recycling
    - 08 solidification
    - 09 other [please specify]
- Date and time that the shipment of waste is received at the receiving site

- Any applicable comments (for example, if the quantity of wastes received is significantly different than the recorded quantity being shipped that was noted by the generator, the receiver may provide a comment to explain the difference.)
- Whether or not the shipment was accepted or refused
- Name and signature of person signing as a representative of the receiver

Note: Every carrier who is the operator of a waste transportation system that is subject to an environmental compliance approval to operate as a dust suppression waste management system may deposit for the purpose of dust suppression, in accordance with the approval, dust suppressant at a dust suppression site designated in the approval and, where that is done, shall, at the time of completion of the deposit, complete receiver information on the manifest.

Please visit RPRA's Hazardous Waste Program Registry webpage for information and instruction on how to complete a manifest through the Registry.

When completing a manifest for waste shipments in Ontario, generators are responsible for meeting all provincial, federal and international regulatory requirements. Please contact the appropriate federal government department for guidance and instructions regarding federal requirements.

The next section of the manual describes manifest procedures that have been developed in Ontario to handle special situations.

6.2 Load refusal (section 27 of Regulation 347)

If a receiver refuses a shipment of subject waste, the carrier should consult and obtain instructions from the generator before attempting to deliver the waste to a different receiver. If the carrier cannot conveniently make a different transfer, the carrier may return the waste to the generator, updating the manifest through the Registry. See section 27 of Regulation 347.

When a receiver refuses to accept a shipment of waste, the receiver must submit refusal report information through the Registry. This includes the following: What waste was refused (for example, all of the load or part of the load); The reason for the refusal. Once the receiver has completed their portion of the manifest, the generator or carrier can then submit through the Registry the new intended receiver information (either the generator identified in the generator manifest information, or an alternate receiver) where the waste will be diverted to and continue to the destination. The new receiver (including the generator if the waste is being returned to the generator) will then be required to complete the receiver manifest information for the new manifest through the Registry.

6.3 The use of the manifest for exempt waste

If another jurisdiction requires the manifesting of a shipment of a waste that is exempt from Ontario's manifesting requirements (such as the requirements under the Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations under the *Canadian Environmental Protection Act, 1999*) the Ministry suggests that the generator obtain the appropriate manifest forms from the regulatory agency that requires them.

The use of the Registry for manifests is intended to meet Ontario's Regulation 347 requirements. While the Registry has also been designed to help regulated parties meet some federal regulations, it is the responsibility of the regulated party to determine if any other jurisdictional requirements are met.

6.4 Corrections to manifests

If an error has been made on the manifest, the error must be corrected:

Any correction initiated by a generator, carrier or receiver must be agreed to by all those that have already confirmed their portion of the manifest. For example, if a receiver initiates a correction and the carrier and generator have already certified and submitted their portion of the manifest, then both the carrier and generator must confirm the correction before the manifest is complete. If a carrier initiates a correction before the receiver accepts the waste, then the generator must confirm the correction. Finally, a generator may make corrections to the manifest up to the time when a carrier certifies and submits the manifest with no further confirmation from other parties. For manifests that have already been confirmed as received by the receiver, the person initiating the correction would contact RPRA to make the correction.

6.5 Shipments of exempt waste — International and inter-provincial movements

In special situations, some hazardous wastes may be exempt from generator registration and manifesting requirements in Ontario (please see section 2.2 Exemptions). Manifesting may be required under another regulation, however, if these wastes are being shipped internationally or inter-provincially. The most common situation where this arises in Ontario involves waste that meets the requirements of sub-paragraph 1 i of paragraph 1 of sub-section 3 (2) of Section 3 of Regulation 347, where:

- the shipments must be direct between Ontario generators and the out-of-province receiver
- the waste must be wholly used at the receiving facility in an ongoing agricultural, commercial, manufacturing or industrial process, or an operation used principally for

functions other than waste management, and the process or operation does not involve combustion or land application of the waste

- while transporting the material, the carrier must have in his or her possession a document from the owner or operator of the site to which the material is being transported in which the owner or operator agrees to accept the material, specifies what use will be made of it, and stipulates that the process or operation is ongoing at the time the material is being transported

For the international and inter-provincial movement of such hazardous waste, direct shipments of waste from Ontario generators to out-of-province receivers are exempt from Part V of the *Environmental Protection Act* and Regulation 347, provided that the above requirements are met. The Ministry therefore does not require either waste manifesting or generator registration for such direct shipments.

For shipments of wastes that do not require manifesting in Ontario, the Ontario generator is responsible for complying with the regulatory and legislative requirements of other applicable jurisdictions. These responsibilities may include compliance with requirements under the federal government's the Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations (XBR), under the *Canadian Environmental Protection Act*, or the requirements under the federal government's *Transportation of Dangerous Goods Act* and its regulations.

Should these or any other applicable regulations (i.e., in the receiving jurisdiction) require the use of a waste manifest; the Ministry suggests that the generator obtain the necessary manifests from the regulatory agency that requires them. If any of these other regulations require that a copy of the manifest be sent to the Ontario Ministry, the generator must fill in the Ontario Generator Registration Number section on the form with "Exempt" and must also indicate in the Provincial Code section (i.e., Ontario Waste Class) that the waste is "Exempt."

Generators are discouraged from using the Ontario manifest to ship non-subject waste.

7. Submitting information to the Registry

7.1 Certification

Before submitting any information through the Registry, including a GRR, manifest and 17.2 notice, the user must provide an electronic certification as part of the submission, with the name of the individual submitting the information, and confirming that all information submitted through the Registry is accurate.

7.2 Delegating registration and reporting (section 27.2 of Regulation 347)

A generator who is required to submit a document through the Registry may authorize a delegate (a third party) to submit the information on their behalf. If a generator chooses to enlist a delegate to register and/or report on their behalf, both the generator and the delegate must have a written agreement between both parties.

Note: a generator who has enlisted a delegate remains solely responsible for meeting the applicable information reporting requirements and paying any applicable fees. This includes requirements to report, update and ensure the accuracy of all information submitted through the Registry.

The written agreement is intended to ensure there is a clear understanding of what the generator's responsibilities are, and what the delegate and the generator have agreed the delegate will complete on behalf of the generator.

Both the generator and the delegate are required to keep a copy of the written agreement for the entire duration of the agreement, and for at least two (2) years after the agreement has ended.

The agreement must contain the following information:

- the legal name (and operating name if different) and address of the generator and waste generation facility(ies) to which the delegation agreement applies
- the name of the organization acting as the delegate
- the effective date and length of time the agreement is in place

- a name and contact information (phone number and email address) of a representative from each party to the agreement
- a statement that the generator is aware that they remain responsible for meeting the requirements of Ontario Regulation 347 under the EPA and Ontario Regulation 323/22 under the RRCEA including requirements to report, update and ensure the accuracy of all information submitted through the Registry and pay any applicable fees
- a signature of a representative from each party to the agreement
- a plan for how the generator would meet any record retention requirements and how the generator would obtain access to the records that were submitted on their behalf, if the delegate no longer reports activities on behalf of the generator
- the activities that have been delegated (for example, all registration and reporting responsibilities, manifesting limited to certain waste class(es), fee payment activities), and whether the delegation is a partial delegation of registration and reporting responsibilities or a full delegation of responsibilities

Both the generator and the delegate must have the written agreement available to show a ministry provincial officer if requested.

It remains the generator's responsibility to ensure all reporting requirements are met, all reports (registration, manifests, on-site reports) are accurate, and any applicable fees are paid.

7.3 Use of information submitted to Registry

Information that is submitted through the Registry will be accessed and used by the Ministry to determine compliance by generators, carriers and receivers with legal requirements related to subject waste. Compliance and enforcement actions may also result from inaccurate information submitted through the Registry, or a person's failure to submit required information.

For the purpose of pursuing an investigation, Ministry investigators may, without prior judicial authorization, access and use information that is submitted to the Registry.

The ministry also publishes an annual Public Information Dataset which provides the information from the generator registration document as well as information about the facility and company location, contact person information, the wastes that were generated at the facility as well as information about how the waste was managed.

8. Registration and reporting submissions — Undue hardship (section 27.1 of Regulation 347)

- 8.1 Instructions for submitting paper reports and registration

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All registration and reporting requirements are required to be submitted through the Registry electronically. However, if complying with requirements to submit through the Registry would impose undue hardship on the person, they can apply to the Director for approval to satisfy registration or reporting requirements by using a paper document.

Before applying to the Director for approval, first consider having a delegate register and report through the Registry on your behalf.

The list below is a non-exhaustive list of factors that may be considered by the Director in determining whether undue hardship exists:

- protected grounds under the Human Rights Code, and
- exceptional circumstances that result in severe, non-temporary, and unusual disruption in operations

Please submit your request for the Director to:

HazardousWasteProgram@ontario.ca

or to the following mailing address

Environmental Monitoring and Reporting Branch, Area "M"
Ontario Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West
Toronto ON M4V 1P5

Note: If a person intends to make a request that is in combination with a emergency generator number provided by Spills Action Centre, the request should be made to the Spills Action Centre Environmental Officer who is receiving the emergency report and issuing the Emergency Generator Number.

A request for undue hardship should include the following information:

- contact information for the individual submitting the request, including name, phone number and email address
- the generator number(s) if already registered and details of the waste generation facility(ies) which the application is being submitted for
- a detailed factual description of the factors resulting in an undue hardship, including efforts to mitigate the circumstances
- a statement that the generator has considered and is not able to have a delegate report through the electronic registry on their behalf, and an explanation why
- time-period that the circumstances of undue hardship are expected to last

The Ministry will contact you if there is a need for additional information as a part of the request.

Please note that the use of paper documents for submissions will likely delay a generator's ability to ship waste off site. From the time that the paper document is received by the Ministry, it may take up to 6 weeks to have the Generator Registration Document posted on the Registry. Generators should plan for this in determining their waste management strategy.

If approved, the Ministry will contact you with the details of the approval and guidance on how to submit paper reports in place of submitting through the Registry. Additional information is also listed below. Paper forms submitted to the Ministry without the approval of the Director will not be accepted by the Ministry.

Please also note that a generator who is approved to submit paper documents and requires a generator registration, is not a registered generator until a Generator Registration Document is posted on the Registry. A carrier cannot transfer subject waste using a paper manifest from a generator that is required to complete a generator registration report until the generator registration document is posted on the Registry.

Paper documents are to be submitted to the Director. The Director will then submit the information contained in the forms into the Registry on behalf of the regulated person.

Before submitting any paper form, you must certify the form with the name of the individual submitting the information, that this individual is authorized to provide the information and that all information submitted is accurate. The certified person must also sign the forms.

A generator who submits paper documents must pay any applicable fees directly to RPRA.

8.1 Instructions for submitting paper reports and registration

8.1.1 Generator registration report

A copy of the GRR is available for download from the Government of Ontario Central Forms Repository. Please use this report to submit:

- an initial generator registration report
- a supplementary generator registration report (revision to your registration)

Please see the section 3. How to submit a generator registration report for guidance on the information required in the GRR. Please note that if an LDR Notification Form is required, a paper copy is required to be sent to the receiver with the first load or before the first load is shipped.

Information on completing registration using the paper form is provided below. If there is any change to the information contained in the GRR, a supplemental GRR must be submitted within 15 days of the change.

8.1.1.1 Initial generator registration report

If you are submitting your GRR for an Ontario facility and it is the first GRR for the facility, a generator registration number will be issued by the Registry after the Director has entered the information contained in the paper GRR into the Registry on behalf of the Generator.

Applicants located outside Ontario should enter the site identification/registration number assigned by their provincial/state environmental authority, or other number issued by the government of their local jurisdiction, if appropriate. For these applicants, the GRR cannot be processed without a number.

For an initial GRR, all sections of the report must be completed. The paper GRR must contain all the information that is required to be electronically submitted under Part 3 of this Manual.

8.1.1.2 Supplementary generator registration report (revision)

If you are submitting a supplemental GRR please enter your generator registration number on the document as well as the revision to existing information or additional information that you are required to provide.

8.1.1.3 Waste identification

Please see the list of information in section 3.1.2. Waste identification of this Manual for a list of the information required to be included in the GRR.

8.1.1.4 LDR notification form

In addition to providing all the LDR information required under Section 3 of this Manual a generator also must complete a paper LDR Notification Form for each waste stream. This notification form is integrated into the electronic Registry but must be completed separately if using paper.

The Registry's LDR Notification Form can be used to meet the LDR requirement to notify the receiver of information about the hazardous waste. However, when you are completing a paper form of the GRR you need to provide some additional information in the LDR Notification Form that links this form to the information in the Generator Identification and Waste Identification sections of the GRR. Each LDR Notification Form completed must be dated and include your Generator Registration Number (if this is an initial GRR the number will be available once the GRR is entered into the Registry), and the waste number (class and characterization) and waste description from the Waste Identification section.

To meet LDR notification requirements, please make a copy of the LDR Notification Form and send it to the receiver of the waste on or before the first waste shipment. If there is a change in the characterization of the waste or information related to the LDR reporting and notification requirements, you will need to revise the LDR Notification Form, notify the receiver of the change, and complete a supplemental GRR. The LDR Notification Form must therefore always be dated, to distinguish it from any previous notification forms relating to the waste stream.

8.1.1.5 Record keeping

A copy of all GRRs and supplemental GRRs submitted must be kept at the waste generation facility for at least 2 years from the time of submission.

8.1.2 Notice of on-site storage for a period of more than 90 days

The information required in the paper notice is the same as the information required in the electronic notice submitted through the Registry. See section 4. Notice of on-site storage for a period of more than 90 days for more information. A copy of this form is available for download from the Government of Ontario Central Forms Repository.

For each subject waste being stored, a separate paper notice can be submitted at any time once subject waste is being stored but must be submitted to the Ministry within 5 days of the waste being stored for 90 days at the latest. A record of the information submitted to the Director must be retained at the location where the waste is being stored and kept for at least two years after the waste is no longer stored.

8.1.3 Manifest

If a request to use paper manifests is approved, the Ministry will provide paper manifests with the approval.

Please note that if a person is approved to submit paper manifests instead of through the Registry, all parties involved in the manifests (for example, generator, carrier and receiver) must only use paper. Manifests can not be submitted partially on paper and partially through the Registry.

When using a paper manifest, the generator must ensure that six (6) copies of the manifest are made and distributed appropriately and that each manifest for each shipment has a unique identification number on it that is included in all six copies of that manifest.

Generators, carriers and receivers must provide the following information when completing the paper manifest.

8.1.3.1 Generator manifest information

- Identify the company name, the Ontario generator registration number, business (mailing) address, the telephone number for the generator and the address from which the waste is being shipped.
- Identify the company name, receiver number (Ontario ECA number or number issued by local jurisdiction if outside of Ontario), business (mailing) address, email address, and telephone number for the intended receiver and the address of the site that is intended to receive the waste.
- Identify the provincial waste code for each waste (i.e., the waste number which consists of the three-digit number (Ontario waste class) plus a single letter (waste characterization), for example, 263A).
- Identify the quantity of waste being shipped and the units of measurement (in kg or litres) of each waste listed.
- Identify the physical state of each waste listed (i.e., solid, liquid or gas).
- Print the generator's name and telephone number and sign the form to certify that the information provided is correct and complete.

8.1.3.2 Carrier manifest information

- Identify the company name, Ontario ECA number, business (mailing) address, and the carrier's telephone number.
- As necessary, identify the vehicle, trailer license number and province or territory of registration for each trailer or car being used to transport the waste. Please include both the vehicle and the trailer license numbers.

- The carrier's authorized representative must print his/her name and telephone number and sign the form to certify that the wastes described by the generator have been received for delivery to the intended receiver.

8.1.3.3 Receiver manifest information

- Identify the company name, the receiver number (Ontario ECA number or number issued by local jurisdiction if outside of Ontario), business (mailing) address, and telephone number of the receiver and the address of the site receiving the waste.
- Identify the date and time that the shipment of waste is received at the receiving site.
- Identify the quantity of each waste received and the units of measurement (in kg or litres).
- If the quantity of wastes received is significantly different than the recorded quantity being shipped that was noted by the generator, the receiver may provide a comment to explain the difference.
- Enter the handling code for each waste to identify the waste management activities used by the receiver of the manifest. Choose one of the following handling codes for each waste listed on the manifest:
    - 01 storage
    - 02 thermal treatment
    - 03 chemical treatment
    - 04 physical treatment
    - 05 biological treatment
    - 06 secure landfill
    - 07 recycling
    - 08 solidification
    - 09 other [please specify]

  If a waste will be handled by a series of methods at a receiving facility, the final method of handling at the receiver's location should be entered. For example, at a facility where the waste is first stored or processed before secure landfilling, the 06 code for secure landfill should be used. For waste that is shipped to a transfer station where no processing will occur, the most appropriate handling code is the 01 code for storage. Please note that the handling code is not the code for any treatment or disposal that may occur at a facility to which the waste is transferred on a subsequent manifest.

- For each waste listed, please indicate whether or not the shipment was accepted or refused.
- The receiver's authorized representative must print his/her name and telephone number and sign the form to certify that the information provided is correct and complete.

8.1.3.4 Distribution of the paper manifest

The distribution of the paper manifest throughout the shipment process is explained in detail below, to help clarify the responsibilities of the generator, carrier and receiver with respect to using paper manifests for subject waste shipments within Ontario, from other jurisdictions into Ontario, and from Ontario to other jurisdictions.

8.1.3.4.1 Shipments within Ontario

The responsibilities of the generator, carrier, and receiver with respect to the distribution of the manifest copies and provision of the appropriate copies to the Ministry can be summarized as follows:

- the generator, carrier and receiver must ensure that their respective generator, carrier, and receiver manifest information is completed
- at the time of the transfer the generator shall complete the generator information on the manifest and the carrier shall complete the carrier information on the manifest before the waste leaves the generation facility
- the generator provides one (1) copy of the manifest with generator manifest information and carrier manifest information complete to the director within three (3) days of the transfer
- the generator retains one copy of the manifest with generator manifest information and carrier manifest information complete at the waste generation facility for a period of two (2) years
- the carrier carries four (4) copies of the manifest with the generator manifest information and carrier manifest information completed for transport with the shipment
- upon delivering the shipment to the receiver, the carrier provides all four (4) remaining copies to the receiver's authorized representative
- the receiver obtains four (4) copies of the manifest from the carrier and completes the receiver information on the manifest
- the receiver retains one (1) copy of the completed manifest for a period of two (2) years
- the receiver provides one (1) copy of the completed manifest to the carrier at the time of the transfer
- the receiver provides one (1) copy of the completed manifest to the generator within three (3) days
- the generator retains the copy of the completed manifest received from the receiver for a period of two (2) years
- the carrier retains the copy of the completed manifest provided by the receiver for a period of two (2) years
- the receiver provides one (1) copy of the completed manifest to the director within three (3) days of the transfer
- the generator shall, within four (4) weeks after the transfer, confirm that the waste was delivered to the intended receiver or to another receiver approved to accept the waste,

and, if the generator does not confirm the delivery within that period, the generator shall, within six (6) weeks after the transfer, notify the director in writing that the delivery has not been confirmed

Dust suppression

Every carrier who is the operator of a waste transportation system that is subject to an environmental compliance approval to operate as a dust suppression waste management system may deposit for the purpose of dust suppression, in accordance with the approval, dust suppressant at a dust suppression site designated in the approval and, where that is done, shall:

- at the time of completion of the deposit, complete receiver information on the manifest
- provide one copy of the completed manifest to the director within three (3) working days after the deposit
- retain one copy of the completed manifest for two (2) years
- provide one copy of the completed manifest to the generator within three (3) days after the deposit
- the generator retains the copy of the completed manifest received from the carrier for a period of two (2) years
- the generator shall, within four (4) weeks after the transfer, confirm that the waste was delivered to the intended receiver or to another receiver approved to accept the waste, and, if the generator does not confirm the delivery within that period, the generator shall, within six (6) weeks after the transfer, notify the director in writing that the delivery has not been confirmed

8.1.3.4.2 Shipments into Ontario from other jurisdictions

No carrier shall bring subject waste into Ontario for purposes of transport to a receiving facility in Ontario unless for each truckload or portion thereof, the carrier has completed the carrier manifest information and provided the manifest to the generator to complete the generator manifest information and the manifest with the generator information and the carrier information completed, accompanies the waste.

The responsibilities of the generator, carrier, and receiver with respect to the distribution of the manifest copies and provision of the appropriate copies to the Ministry can be summarized as follows:

- the generator, carrier and receiver must ensure that their respective generator, carrier, and receiver manifest information is completed
- at the time of the transfer the generator shall complete the generator information on the manifest and the carrier shall complete the carrier information on the manifest before the waste leaves the generation facility

- the carrier provides one (1) copy of the manifest with generator manifest information and carrier manifest information complete to the director within three (3) days of the transfer
- the carrier carries four (4) copies of the manifest with the generator manifest information and carrier manifest information completed for transport with the shipment
- upon delivering the shipment to the receiver, the carrier provides four (4) copies to the receiver's authorized representative
- the receiver obtains four (4) copies of the manifest from the carrier and completes the receiver information on the manifest
- the receiver retains one (1) copy of the completed manifest for a period of two (2) years
- the receiver provides one (1) copy of the completed manifest to the carrier at the time of the transfer
- the receiver provides one (1) copy of the completed manifest to the generator within three (3) days
- the carrier retains the copy of the completed manifest provided by the receiver for a period of two (2) years
- the receiver provides one (1) copy of the completed manifest to the director within three (3) days of the transfer
- the generator shall, within four (4) weeks after the transfer, confirm that the waste was delivered to the intended receiver or to another receiver approved to accept the waste, and, if the generator does not confirm the delivery within that period, the generator shall, within six (6) weeks after the transfer, notify the director in writing that the delivery has not been confirmed

Dust suppression

Every carrier who is the operator of a waste transportation system that is subject to an environmental compliance approval to operate as a dust suppression waste management system may deposit for the purpose of dust suppression, in accordance with the approval, dust suppressant at a dust suppression site designated in the approval and, where that is done, shall:

- at the time of completion of the deposit, complete receiver information on the manifest
- provide one copy of the completed manifest to the director within three (3) working days after the deposit
- retain one copy of the completed manifest for two (2) years
- provide one copy of the completed manifest to the generator within three (3) days after the deposit
- the generator retains the copy of the completed manifest received from the carrier for a period of two (2) years
- the generator shall, within four (4) weeks after the transfer, confirm that the waste was delivered to the intended receiver or to another receiver approved to accept the waste, and, if the generator does not confirm the delivery within that period, the generator

shall, within six (6) weeks after the transfer, notify the director in writing that the delivery has not been confirmed

8.1.3.4.3 Shipments from Ontario into other jurisdictions

No carrier shall transport subject waste out of Ontario destined for a receiving facility outside Ontario unless the carrier has reason to believe the intended receiver is willing to complete the receiver information of the applicable manifest completed for that load of waste.

The responsibilities of the generator, carrier, and receiver with respect to the distribution of the manifest copies and provision of the appropriate copies to the Ministry can be summarized as follows:

- the generator, carrier and receiver must ensure that their respective generator, carrier, and receiver manifest information is completed
- at the time of the transfer the generator shall complete the generator information on the manifest and the carrier shall complete the carrier information on the manifest before the waste leaves the generation facility
- the generator provides one (1) copy of the manifest with generator manifest information and carrier manifest information complete to the director within three (3) days of the transfer
- the generator retains one copy of the manifest with generator manifest information and carrier manifest information complete at the waste generation facility for a period of two (2) years
- the carrier carries four (4) copies of the manifest with the generator manifest information and carrier manifest information completed for transport with the shipment
- upon delivering the shipment to the receiver, the carrier provides four (4) copies to the receiver's authorized representative for completion of the receiver information on the manifest
- the receiver retains one (1) copy of the completed manifest for a period of two (2) years
- the carrier provides one (1) copy of the completed manifest to the generator within three (3) days
- the carrier retains one (1) copy of the completed manifest for a period of two (2) years
- the carrier provides one (1) copy of the completed manifest to the director within three (3) days of the transfer
- the generator shall, within four (4) weeks after the transfer, confirm that the waste was delivered to the intended receiver or to another receiver approved to accept the waste, and, if the generator does not confirm the delivery within that period, the generator shall, within six (6) weeks after the transfer, notify the director in writing that the delivery has not been confirmed

Note:

- If the carrier is aware that the receiver has not complied with clause 4 (b), the carrier shall notify the Director as soon as reasonably possible of:
    a. the number of the manifest
    b. the name of the receiver, if it is not the same as the name of the intended receiver included in the information submitted by the generator
    c. the date of the transfer to the receiver

8.1.4 Load refusals (section 27 of Regulation 347)

In the case where the receiver does not accept all of the subject waste or part of the subject waste sent from a generator using a paper manifest, the refusing receiver must complete a paper load refusal report referencing the refused manifest number and provide a copy of it to the Ministry within three (3) working days of the refusal. A copy of this form is available for download from the Government of Ontario Central Forms Repository. See section 6.2. Load refusal for more information.

If the waste is being returned to the generator, the responsibilities of the generator and carrier, with respect to the distribution of the manifest copies and provision of the appropriate copies to the Ministry can be summarized as follows:

- upon refusal the carrier retains all four (4) remaining copies of the manifest
- if the waste is being returned to the generator, the generator obtains four (4) copies of the manifest from the carrier and at the time of transfer completes the receiver information on the manifest
- the generator retains one (1) copy of the completed manifest for a period of two (2) years
- the generator provides one (1) copy of the completed manifest to the carrier at the time of the transfer
- the generator provides one (1) copy of the completed manifest to the Ministry within three (3) days
- the carrier retains one (1) copy of the completed manifest received from the generator for a period of two (2) years

If the waste is being sent to a different receiver, the new receiver replaces the intended receiver as the party responsibility for meeting the responsibilities of the receiver on the manifest.

9. Land disposal restrictions (LDR)

9.1 Introduction

Ontario's LDR program was put in place to strengthen the regulatory framework for hazardous waste management, and to enhance the harmonization of the province's hazardous waste rules with those of the U.S., our largest hazardous waste trading partner.

The LDR program requirements set out in Regulation 347 prohibit the disposal of untreated hazardous waste in or on the land, unless the waste meets specific treatment requirements to reduce the mobility and/or toxicity of its hazardous components.

More detailed information on the LDR program is provided in the Land Disposal Restrictions Handbook.

9.2 Overview of the LDR program

The LDR program affects hazardous waste generators, carriers and receivers. The program requires the treatment of hazardous wastes that will be land disposed in Ontario to:

- substantially diminish the waste's toxicity by destroying or removing its harmful constituents, or
- reduce the mobility of the waste's contaminants

The LDR program includes the following key elements:

- Each type of hazardous waste must meet a specific land disposal treatment requirement before being land disposed. The treatment requirements can include meeting a specific concentration limit or using a specific treatment technology. For a hazardous waste whose LDR requirement is a concentration limit, any suitable technology can be used for its treatment.

- The LDR program includes alternate treatment standards for waste soils or soil mixtures and waste debris or debris mixtures.
- The LDR program prohibits the mixing, blending or bulking of hazardous wastes with other wastes or materials, to prevent meeting the land disposal treatment requirements through dilution. However, Ontario's rules allow wastes to be mixed, blended or bulked when this is done to meet a treatment standard, or under the terms permitted by an ECA.
- The LDR program includes on-site storage requirements for waste generation facilities. These requirements provide some flexibility for generators, enabling them to accumulate sufficient volumes of waste before disposal, while at the same time ensuring that temporary storage of wastes is carried out appropriately.
- Under the LDR program, hazardous waste generators are required to evaluate their waste streams and how they are managed, and to determine whether additional information is required for LDR purposes. Generators that are required to identify the regulated constituents in their hazardous wastes can do so either by using analytical testing or their detailed knowledge of the waste they produce.
- The LDR program includes formal notification and reporting requirements for generators and processors of hazardous wastes. Processors that treat these wastes to meet a treatment requirement are also required to complete a waste analysis plan.
- Specific variances to a land disposal treatment requirement may be obtained through a Director's letter of equivalent treatment, through Environmental Compliance Approvals issued on a case-by-case basis, or through future amendments to the regulation, if warranted.

9.3 Applicability of the land disposal treatment requirements

The LDR program specifies the land disposal treatment requirements for all listed wastes and characteristic wastes that will be land disposed in Ontario. The treatment requirements apply to both the generated waste itself and to any residuals from the processing of the waste, if the residuals are also listed wastes or characteristic wastes.

These wastes are considered to be land disposed if they are deposited or disposed upon, into, in or through land. The term land disposal is defined in subsection 1 (1) of Regulation 347 and includes activities such as the disposal of wastes at a dump, a landfill or landfarm, as well as the discharge of wastes into a geological formation (i.e., deep well disposal). Ontario's land disposal treatment requirements are in addition to the province's approvals requirements for waste disposal facilities. However, the temporary placement of remediation waste on land at a contaminated site as part of a site remediation plan is not considered to be land disposal.

The following wastes are not subject to Ontario's land disposal treatment requirements:

- non-hazardous wastes
- liquid industrial wastes
- small quantity exempt (SQE) wastes
- Part V exempt wastes (for example, agricultural wastes, recyclable wastes)

The following hazardous wastes are subject to Ontario's land disposal treatment requirements, and cannot be land disposed unless they have been treated to meet specific LDR treatment requirements:

- listed wastes:
    - acute hazardous waste chemical (A)
    - hazardous industrial waste (H)
    - hazardous waste chemical (B)
    - severely toxic waste (S)
- characteristic wastes:
    - corrosive waste (C)
    - ignitable waste (I)
    - leachate toxic waste (T)
    - reactive waste (R)

The LDR program does not include land disposal treatment requirements for the following hazardous wastes:

- PCB waste as defined in Regulation 362 (i.e., >50 ppm PCB), which is prohibited from land disposal (Section 74 of Regulation 347).
- Pathological waste as defined in Regulation 347. Pathological waste is included in the biomedical waste definition in Guideline C-4, Management of Biomedical Waste.
- Radioactive waste — radioactive waste, except radioisotope wastes (i.e., produced as part of the nuclear fuel cycle) disposed of at a landfill site in accordance with the written instructions of the Canadian Nuclear Safety Commission, formerly the Atomic Energy Control Board, is hazardous waste. By contrast, the Ministry regulates radioactive waste that contains naturally occurring radioactive material (NORM) on a case-by-case basis.

If a waste contains PCBs at a concentration of less than or equal to 50 ppm, and is therefore not defined as a PCB waste, the waste could still be tested and be found to be leachate toxic for , which is a contaminant listed in Schedule 4 (Leachate Quality Criteria) of Regulation 347. If this is the case, the waste would have to meet the land disposal treatment requirements for E018 in Schedule 5 of Regulation 347, including the standards in Schedule 6 of Regulation 347, before it can be land disposed.

If a waste is a biomedical waste, which includes pathological waste, please refer to Guideline C-4, Management of Biomedical Waste.

Hazardous wastes are not required to meet the LDR requirements for treatment before they are:

- treated and discharged to surface water
- discharged to a sewer or to another facility approved under the OWRA
- sent to a recycling facility on the Tonnage Fee Exempt Recycling Facilities Directory for recovery of materials from the waste, or
- disposed of at an approved incineration facility or waste-derived fuel site

A number of other LDR requirements (for example, registration, notification) may apply, depending on how the hazardous wastes are managed before they are received at the above facilities.

Residuals from the management methods listed above may also be subject to the LDR program's registration, notification and treatment requirements at the new point of generation. For example, if the original waste was a listed waste, the resulting treatment residuals remain a listed waste. If the original waste was not a listed waste, the treatment residuals must be characterized to determine what type of hazardous waste it is. In such cases, if the treatment residuals are to be land disposed, the LDR program's treatment requirements would apply, depending on the characteristics of the residuals.

9.4 Land disposal treatment requirements

The land disposal treatment requirements are found in Schedule 1, Part A and Part B of Schedule 2, Schedule 3 and Schedule 5 of Regulation 347. For each hazardous waste, the schedules provide a hazardous waste number, a description of the waste or process, the regulated constituent(s) and a specific treatment requirement for both aqueous and non-aqueous forms of the hazardous waste. Waste generators need this information for each waste stream that is generated at their facility and may also need to provide the information in the LDR notification form of the GRR.

9.4.1 Identifying the treatment requirements

Generators can identify the type of hazardous waste they produce either by using chemical analysis, by using their own detailed knowledge of the waste, or a combination of the two. Identifying the land disposal treatment requirement that applies to your waste is based on the hazardous waste number for each type of waste. Additional analysis and/or knowledge may be needed to identify the regulated constituents, including additional regulated constituents listed in Schedule 6 of Regulation 347 for characteristic wastes. The waste characterization process is explained in section 2.5. Determining the characterization of your waste stream.

If there are any changes in the raw materials or in the process that generates the waste, and these changes could affect the composition of the waste or its physical or chemical properties,

generators are required to review or repeat the waste characterization and identify the appropriate land disposal treatment requirements.

Hazardous waste generators are responsible for identifying all applicable hazardous waste numbers for each type of waste stream. In some cases, hazardous waste numbers may have sub-categories that involve different land disposal treatment requirements. If this is the case, generators are required to identify the correct sub-category for the hazardous waste number in the LDR notification form.

There are two types of land disposal treatment requirements; numerical standards (which involve concentration limits) and treatment methods and standards (which involve treatment codes).

If numerical standards are specified for a waste, the concentration of each regulated constituent in the waste must be below the land disposal treatment requirement before the waste may be land disposed. By contrast, if treatment codes are required to treat a waste, the waste must be treated using the treatment methods set out in Schedule 7 of Regulation 347 for that treatment code before the waste may be land disposed.

In some cases, the land disposal treatment requirement specifies one or more treatment codes, while in other cases the treatment requirement specifies a choice of treatment codes. In either case the waste needs to be treated using the applicable treatment method and standard described in Schedule 7. Each treatment code has a corresponding treatment method and standard.

9.4.1.1 Treatment requirements for listed wastes

The land disposal treatment requirements for listed wastes are included in Schedule 1, Part A and Part B of Schedule 2 and Schedule 3 of Regulation 347. The schedules identify the hazardous waste, its hazardous waste number, the regulated constituent(s) in the waste and the corresponding land disposal treatment requirement for each. Please note that all of the treatment requirements must be met for each regulated constituent in the waste stream.

The derived-from rule applies to listed wastes. Accordingly, listed wastes remain listed wastes after they have been treated to meet the land disposal treatment requirements. The treated wastes must therefore be disposed of at a facility that is approved to accept hazardous wastes. Facilities that receive these wastes for treatment and disposal must ensure that the wastes meet the applicable land disposal treatment requirements before they are land disposed.

There may be certain cases where a listed waste that has been treated to meet the land disposal treatment requirements may be disposed of in a non-hazardous waste disposal facility. For example, the treated listed waste has been delisted through an ECA that states that in the opinion of the issuing Director, the waste that is produced in accordance with the ECA does not have characteristics similar to the characteristics of the listed waste from which it was derived

(i.e., the treated listed waste is no longer considered to be a listed waste as the Director has determined that the derived-from rule does not apply) and provided that the treated waste is also not a characteristic waste. For more information, see the How to de-list a hazardous listed waste section.

9.4.1.2 Treatment requirements for characteristic wastes

The land disposal treatment requirements for characteristic wastes are included in Schedule 5 of Regulation 347. This schedule identifies the hazardous waste, its hazardous waste number, the regulated constituent(s) in the waste and the corresponding treatment requirements for each. All the treatment requirements must be met for each regulated constituent in the waste. Moreover, if the waste stream is characterized by more than one hazardous waste number, it must meet the land disposal treatment requirement for each number before it can be land disposed.

Most of the land disposal treatment requirements in Schedule 5 also include a requirement to meet the standards in Schedule 6 of Regulation 347. As a result, the generator must identify the constituent(s) that caused the waste to be characteristic, as well as any other regulated constituent in Schedule 6 that may be present in the waste at a concentration at or above the Schedule 6 standard at the point of generation. This information must be reported in the LDR notification form.

Schedule 6 lists additional regulated constituents for characteristic wastes and their associated treatment requirements. The treatment requirements are typically referred to as Universal Treatment Standards (UTS) and the regulated constituents in Schedule 6 are often referred to as Underlying Hazardous Constituents (UHC).

If a characteristic waste is de-characterized, but still has regulated constituents that do not meet the standards in Schedule 6, it cannot be land disposed. In such cases, the waste remains a subject waste and the generator needs to register the waste. The questionnaire in the GRR will indicate if the LDR Notifications Form needs to be filled out for this waste stream.

Once a characteristic waste has been treated and meets the treatment requirement in Schedule 5 for the regulated constituent that made it hazardous (and if applicable, treated to meet the treatment requirement for any regulated constituent in Schedule 6), it can be land disposed at a facility that is approved to accept non-hazardous waste or a facility that is approved to accept hazardous waste. Facilities that receive these wastes for treatment and disposal must ensure that the wastes meet the applicable land disposal treatment requirements before land disposal.

9.4.1.2.1 Ignitable waste

The treatment requirements for ignitable wastes are separated into two groups: ignitable wastes with greater than or equal to 10% total organic carbon, and all other ignitable wastes.

Ignitable wastes must be treated to remove the characteristic and meet Schedule 6 standards or be treated by a specified technology.

9.4.1.2.2 Corrosive waste

Corrosive wastes must be treated to remove the characteristic and meet Schedule 6 standards.

9.4.1.2.3 Reactive waste

There are several sub-categories for reactive wastes. Depending on the type of waste, some must be treated to remove the characteristic and meet Schedule 6 standards, while others only require the removal of the characteristic. Reactive cyanides must meet concentration-based standards for cyanides.

9.4.1.2.4 Leachate toxic waste

In general, leachate toxic wastes must be treated to meet a specific numerical standard for the characteristic(s) and must meet Schedule 6 standards for all other regulated constituents that may be present. Certain leachate toxic wastes (i.e., some cadmium, mercury, and lead-based wastes) have different land disposal treatment sub-categories based on the type of waste and the concentration of its regulated constituent.

Some leachate toxic wastes have a treatment requirement in Schedule 5 that reads "Meet Schedule 6 standards and best efforts to achieve" the specified concentration limit for the contaminant listed in Schedule 4 of Regulation 347 (i.e., removal of the characteristic). For these wastes, any regulated constituents listed in Schedule 6 that are present in the waste must meet the Schedule 6 standard. As well, where possible, best efforts must be used to treat the waste to the specified concentration limit so that it is no longer a characteristic waste. If the waste remains leachate toxic after treatment for the contaminant, it must be land disposed in a facility that is approved to accept hazardous wastes, provided that all the other regulated constituents in the waste meet Schedule 6 standards.

9.4.1.3 Wastes that are both listed and characteristic

Hazardous wastes that are to be land disposed must meet the treatment requirements for all applicable hazardous waste numbers for wastes that are both listed and characteristic.

For example, if a listed waste exhibits a characteristic because of a contaminant listed in Schedule 4 of Regulation 347 that is one of the regulated constituents identified for that listed waste, the waste only has to be treated to meet the treatment requirements for the listed waste. However, if the listed waste exhibits a characteristic because of a contaminant listed in Schedule 4 that is not one of the regulated constituents identified for that listed waste, the waste has to be treated to meet both the treatment requirements for the hazardous waste

number assigned to the listing and for the hazardous waste number(s) assigned to the characteristic.

The treated waste can only be disposed of at an approved hazardous waste facility unless an ECA has been issued that states that the treated waste is no longer a hazardous waste.

All of the hazardous waste numbers must be identified in the LDR notification form, unless the land disposal treatment requirement for the listed waste contains the regulated constituent that caused the waste to be defined as a characteristic waste.

Example: The regulated constituents for the listed waste with the hazardous waste number K002 are chromium and lead. If a K002 waste exhibits a characteristic for a contaminant other than chromium and lead (i.e., cyanide), it is also a characteristic waste and the hazardous waste number (i.e., E006 for cyanide) must be identified. However, the hazardous waste numbers for chromium (D007) and lead (D008) do not apply, since these regulated constituents are included in the K002 listing.

9.5 Exemptions from land disposal treatment requirements

9.5.1 Wastes from a small quantity generator (SQG)

Section 80 of Regulation 347 includes provisions that exempt wastes in a sealed container from the requirement to meet Ontario's land disposal treatment requirements before they are land disposed. These provisions do not exempt these wastes from all LDR requirements. Rather, they establish alternate management requirements (for example, container and certification requirements) that must be met in order for the wastes to be exempt from the treatment requirements.

This exemption is for wastes produced by generators that produce a total of less than 100 kg of hazardous industrial waste (H), hazardous waste chemical (B) and characteristic waste (I, C, R, or T) in any month. Such generators are referred to as small quantity generators (SQGs). Please note, however, that the Section 80 exemption does not apply to severely toxic wastes or acute hazardous waste chemicals. Generators of these wastes must always treat these wastes to meet the land disposal treatment requirements.

It is important to note that the wastes generated by small quantity generators (SQGs) are not the same wastes covered by the small quantity exemptions (SQE), which are exemptions under the definitions of liquid industrial waste and hazardous waste. The provisions in Section 80 for a SQG do not exempt these wastes from the definition of hazardous waste. As a result, SQGs may still need to meet all of the other hazardous waste requirements for these wastes, including registration, manifesting and transportation by a Ministry-approved carrier to manage the specified class of waste.

Under the provisions of Section 80, SQGs can have their waste(s) land disposed without meeting the land disposal treatment requirements, provided that they:

- generate the waste(s) at their waste generation facility and do not mix, blend or bulk them with other wastes or materials
- place the waste(s) into a sealed container that weighs no more than 250 kg, including the weight of the container
- the container and its seal comply with the requirements of this manual, and
- affix a signed certificate to the sealed container

The signed certificate affixed to the sealed container must include the following information:

- The name, address, telephone number and generator number of the generator. This information relates to the site where the waste(s) is generated.
- The statements described in subsection 80 (3) of Regulation 347 that certify the security of the container and its contents, where the waste(s) was produced, and the weight of the container.
- A description of the contents of the container, including a description of the waste(s) inside and the appropriate waste number(s) and quantities of each waste. If more than one waste is included in the container, the description of the contents should be preceded by the designation "Lab-Packed Contents".
- A signature (and printed name) and the date on which the certificate was signed. The certificate must be signed by an individual at the generating site who is knowledgeable about the contents of the container, and thus in a position to confirm that the information included on the certificate is accurate.

The wastes in the sealed container will continue to be exempt from Ontario's land disposal treatment requirements as long as the container is not opened and does not appear to be broken or leaking at any time before its land disposal. Please note, however, that although these wastes are not required to meet the land disposal treatment requirements, they are still considered to be hazardous wastes, and must be managed or disposed of at an approved hazardous waste receiving site.

A generator is free to select an effective/appropriate method of sealing the containers. Whichever method is chosen, it must be apparent that the seal has not been broken or tampered with upon receipt of the waste at a waste-receiving site. Examples of security seals that can be used for hazardous waste containers include serialized plastic cargo seals, pull seals, padlocks or security wire seals, as well as tamper-evident tape.

Further information about the disposal of hazardous waste in accordance with the SQG provisions can be found in the Land Disposal Restrictions Handbook.

9.5.2 Wastes from municipal hazardous or special waste (MHSW) depots

Section 81 of Regulation 347 includes provisions that exempt specific wastes from meeting the land disposal treatment requirements if they are collected at an approved waste disposal site (for example, a MHSW depot) that is operated for the collection of MHSW, from the general public.

If these sites collect this waste and also collect wastes from other generators (typically those in the industrial, commercial and institutional (IC&I) sector) in quantities that meet the small quantity exemptions in the various hazardous waste definitions in Regulation 347, they are not required to have these wastes treated to meet the LDR treatment requirements before the wastes are land disposed. MHSW depots that handle, bulk and temporarily store such wastes can send them for land disposal at an approved facility without meeting the LDR treatment and notification requirements, provided that the wastes are not processed or disposed of on-site.

Some MHSW depots may also be approved to accept larger volumes of wastes from IC&I generators, including hazardous wastes. Any hazardous waste collected at an approved MHSW depot that is not a MHSW or SQE waste is not included in the Section 81 provisions, and thus may be subject to the LDR requirements.

The owner/operator of a MHSW depot is obliged to demonstrate at all times that the provisions of Section 81 apply to the wastes received at the facility. For facilities that are approved to receive wastes only from domestic sources and SQE wastes from IC&I generators, the requirements of the facility's ECA ensure that the provisions of Section 81 are met. However, additional measures such as labels and/or security seals similar to those used for wastes that meet the SQG provisions of Section 80 may be helpful to demonstrate compliance with the LDR requirements (please see the handbook for an example of a label that could be used).

Facilities that are approved to accept hazardous wastes (for example, wastes that are equal to or exceed the SQE) from IC&I generators must ensure compliance with the LDR requirements. If wastes are accepted from a SQG, the provisions in Section 80 must be met in order to land dispose these wastes without treating them to meet the LDR treatment requirements. Wastes from a generator that are accepted in amounts greater than those specified for SQGs must meet the land disposal treatment requirements before the wastes are land disposed. MHSW depots should also check with their waste management service providers to determine if any additional, company-specific requirements apply.

For more information on the Section 81 provisions and how they affect these sites, please refer to the handbook.

9.6 Hazardous wastes that are lab-packed

A lab pack is a term used to identify a common container, usually a steel or fibre drum, which generally contains small quantities of waste chemicals that are individually packaged and then over-packed in the common container. Lab packs are used to transport these wastes to a waste management facility.

The Ministry recommends that generators separate lab packs into those that contain wastes that have to meet LDR treatment requirements and those that contain wastes that do not have to meet the LDR treatment requirements. If lab-packed wastes that do not have to meet land disposal treatment requirements are mixed with wastes that do have to meet the treatment requirements, the combined wastes must meet the land disposal treatment requirements. Please note that the LDR program does not include alternate treatment requirements for lab-packed hazardous wastes.

The contents of a lab pack are subject to specific LDR requirements, depending on the type of waste, the status of the generator and how the waste in the lab pack is to be disposed. Generators should also note that:

- SQE wastes are not hazardous by definition, and that lab packs containing only SQE wastes are thus exempt from land disposal treatment requirements
- lab-packed hazardous wastes generated by a SQG that meet the requirements in Section 80 of Regulation 347 do not have to meet land disposal treatment requirements before land disposal
- hazardous wastes that are not SQE wastes or wastes generated by a SQG and are to be land disposed can be lab packed, but the wastes must meet LDR registration, notification and land disposal treatment requirements

Generators are responsible for determining whether LDR requirements apply to their wastes, and for notifying the receiver about the nature of the wastes and the land disposal treatment requirements that must be met. Information on registration, manifest and notification requirements for lab-packed wastes can be found in the section 2.7.5. Lab Packs.
The LDR Handbook also includes information on the management of hazardous wastes that are shipped in lab packs and subject to LDR requirements.

Lab-packed hazardous wastes may only be received at a facility that is approved to accept and transfer each type of hazardous waste in the lab pack. If the lab packs are unpacked and processed or bulked with similar wastes, the facility must be approved to process each type of hazardous waste contained in the pack. If any of the wastes from a lab pack are to be land disposed, the land disposal treatment requirements apply to each waste, unless the wastes and the lab pack meet the requirements in Section 80 of Regulation 347. If a lab pack meeting the requirements of Section 80 is opened by a transfer or processing facility, the facility must

ensure that each hazardous waste in the pack that is to be land disposed meets the applicable land disposal treatment requirements.

In addition, if a lab pack is to be unpacked and sorted with the possibility that any of the individual hazardous wastes in the lab pack will be land disposed, the initial generator must ensure that the LDR notification requirements are met for all of the wastes in the lab pack. This includes reporting the hazardous waste number for each waste in the LDR notification form of the GRR.

Generators of hazardous wastes that must meet LDR requirements but do not meet the SQG provisions in Section 80, or generators of acute hazardous waste chemicals or severely toxic wastes, may still lab-pack their wastes. However, these generators must ensure that the LDR notification requirements are met for all the wastes in the lab pack, and must also include the hazardous waste number for each waste when they complete the LDR notification form of the GRR.

LDR requirements do not apply to hazardous wastes that are lab-packed and are not to be land disposed (for example, lab packs that are going directly to an incineration facility). If the generator sends the lab-packed wastes to a processing facility before they are to be sent to an incineration facility, the land disposal treatment and notification requirements do not apply — provided that the wastes are only being bulked with like wastes, and that no other processing of the waste occurs. In such cases, however, the generator must still complete the GRR.

9.7 Alternate treatment standards

Ontario's LDR program includes alternate treatment standards for a soil or a soil mixture and a debris or a debris mixture that is a listed waste or characteristic waste. These wastes may be treated in accordance with the waste-specific land disposal treatment requirements, or in accordance with the alternate treatment standards described in Section 82 (soil or a soil mixture) and Section 83 (debris or a debris mixture) of Regulation 347.

9.7.1 Soils

As described in section 2.1.4. What is a hazardous waste the mixture and derived-from rules are not strictly applied to waste soils (remediation wastes) from brownfield sites. Such remediation wastes are only deemed to be hazardous wastes when they are determined to be a characteristic waste.

The alternate treatment standards for waste that is a soil or a soil mixture are identified in Section 82 of Regulation 347. The land disposal treatment requirements for these wastes are as follows:

- the characteristics that make the wastes ignitable, corrosive and reactive must be removed
- for leachate toxic wastes, all regulated constituents listed in Schedule 6 of Regulation 347 that are present in the waste must be treated so that:
    - the concentration after treatment is not more than 10% of the concentration before treatment (i.e., 90% reduction in the concentration of the regulated constituent), or
    - the concentration after treatment is less than 10 times the standard shown in Column 4 of Schedule 6. Please see the example below

Soils may be land disposed without treatment if they are not ignitable, reactive or corrosive, and if none of the constituents listed in Schedule 6 is present at a concentration of more than 10 times the value listed in Column 4 of Schedule 6.

After a soil has been treated so that it meets the alternate treatment standard, it may still be a characteristic waste because it is leachate toxic. In such cases, the waste must be disposed of at a facility that is approved to accept hazardous wastes, and will then be deemed to have met the land disposal treatment requirements. If the waste is no longer a hazardous waste after treatment, it can be disposed of in a non-hazardous waste receiving facility.

If residuals from the treatment of soils that were a listed waste or characteristic waste are hazardous waste, they must be treated to meet the land disposal treatment requirement for the new waste stream. This provision applies unless the residuals are a soil or a soil mixture, in which case the alternate treatment standards can be used to meet the treatment requirement before land disposal.

Example (all concentrations are mg/L TCLP) — soil that is leachate toxic for cadmium (for example, cadmium level exceeds Schedule 4 value of 0.5 mg/L):

- no treatment is required if the cadmium concentration is below 1.1 mg/L (10 times the value in column 4 of Schedule 6)
- treatment is required if the initial concentration of cadmium in the soil is more than 1.1 mg/L. The treatment needs to achieve:
    - a cadmium concentration of 1.1 mg/L or less, or
    - a cadmium concentration above 1.1 mg/L, provided that the concentration after treatment is not more than 10% of the concentration before treatment (i.e., from 20 mg/L to 2 mg/L).

The soil may be disposed of at a non-hazardous waste facility only if the cadmium concentration in the treated soil is below 0.5 mg/L (leachate quality criteria from Schedule 4 of Regulation 347).

9.7.2 Debris

Section 83 of Regulation 347 identifies the alternate treatment standards for waste that is a debris or a debris mixture. These standards are technology-based. Schedule 8 of Regulation 347 (Alternative Treatment for Hazardous Debris) lists the technologies that may be used, the standards for each debris type, and any restrictions on the use of the technology based on the contaminant being treated.

The alternate treatment standards for a debris or a debris mixture cannot be used if the debris mixture includes:

- lead acid batteries, cadmium batteries, or radioactive lead solids
- process residuals such as smelter slag, residues from the treatment of wastewater or other waste, sludge and residues from the treatment of sludge, and residues from air pollution control equipment, or
- intact containers of hazardous waste that are not ruptured and that retain at least 75% of the volume of the original container

If the above waste materials are segregated from a debris mixture, the remaining waste that is a debris or a debris mixture can be treated using the alternate treatment standards. The segregated waste materials above must be treated in accordance with the waste-specific land disposal treatment requirements.

Schedule 8 lists the methods that may be used to treat a waste that is a debris or a debris mixture. The treatment method(s) must address all of the regulated constituents in the debris, as well as each type of debris in a debris mixture. One or more treatment technologies may be required — and if an immobilization technology is used, it must be the last technology used.

Only debris or a debris mixture that is deemed to be a listed waste or characteristic waste is subject to the land disposal treatment requirements. The debris or debris mixture must be treated in accordance with one or more of the treatment methods in Schedule 8 and must no longer display a characteristic after treatment. After treatment, material that is still debris must be separated from material that is not debris. Residual that is not debris is subject to the waste-specific land disposal treatment requirements for a listed waste or characteristic waste. Regulation 347 contains specific provisions for residual waste that is reactive because of the presence of cyanide, and for layers of waste removed by spalling.

The alternate treatment standards in Schedule 8 are separated into three groups of technologies: extraction, destruction and immobilization. Debris or a debris mixture contaminated with a listed waste and treated using an immobilization technology must be disposed of in an approved hazardous waste receiving facility. By contrast, listed waste or characteristic waste that is a debris or a debris mixture that has been treated using extraction or destruction technologies and that is no longer a characteristic waste may be disposed of in a non-hazardous waste receiving facility.

9.8 Notification, record-keeping and waste analysis plan requirements

The LDR program includes requirements that affect the generator registration process. The program also introduces notification and record-keeping requirements, as well as the requirement to develop a waste analysis plan when treating hazardous wastes to meet the land disposal treatment requirements. Together, these requirements are designed to ensure that the appropriate information about the nature of the wastes and the type and status of treatment is known — and that this information is recorded and transferred to the receivers of these wastes, and available to the Ministry to facilitate its abatement activities.

To standardize and facilitate the notification process, the Ministry has included an LDR notification form as part of the GRR. This form is designed to include all the information that needs to be transferred to the receiver to meet Regulation 347's LDR notification requirements. Generators and operators of processing facilities are required to comply with these requirements.

As noted earlier, the LDR notification form can be completed in the Registry so that the form can be transferred to a receiver. While generators may decide to use a different form for transfers to a receiver, the form they use must meet the LDR notification requirements and include all the information required in the LDR notification form.

The following subsections of the manual outline the requirements of Sections 84 and 85 of Regulation 347 for generators and processors of hazardous wastes who are affected by the LDR requirements.

9.8.1 Generators

9.8.1.1 Notification requirements (section 84 of Regulation 347)

Generators of hazardous wastes that may be subject to the LDR program's notification requirements can include the original waste generator or any subsequent receiver (for example, transfer station or processing facility) involved in the production, collection, handling or storage of these wastes.

Once a generator has determined all of the characteristics for a waste and that the waste is subject to generator registration requirements, the generator must determine whether the land disposal treatment requirements apply, and whether additional information is required for LDR purposes. During the generator registration process, the generator must assess all listed wastes and characteristic wastes to determine whether there is a requirement to provide the receiver of the waste with the additional information.

The GRR includes a helpful questionnaire that is designed to determine if the waste being registered is subject to the LDR requirements. By completing the questionnaire for each hazardous waste stream, generators will determine if they need to complete the LDR notification form of the GRR.

Notification is a one-time requirement that provides the receiver with information about the waste, the relevant treatment requirement and whether the waste has been partially or fully treated. This must be done either before or on the first transfer of the waste. If, after the first notification, the description of the waste or the physical or chemical properties of the waste change, the generator must notify the receiver of the change by providing the updated information from the GRR to the receiver before or at the first time the waste is received at the receiving facility.

For the purposes of notification, a receiver can include a transfer station, a facility where the waste is being treated or a disposal facility. In the case of transfer stations, the receiver must register and forward the information about the waste to the next receiver. If like wastes are bulked at a transfer station, the waste that is shipped off-site must be registered, and the information from the bulked waste streams must be included in the notification form sent to the next receiver. Moreover, if any processing of the waste occurs at a facility, the processor must identify this in the notification form provided to the next receiver. Finally, if the Ministry has provided a variance from a treatment requirement for a specific waste, the generator must include information about the variance (for example, approval number, effective dates).

If a waste generation facility treats wastes on-site to meet land disposal treatment requirements, the generator must also comply with the requirements specified in Section 85 of Regulation 347.

The waste generator may use the Registry to supply the information in the notification form to the receiver with a manifest or may print the LDR Notification form from the Registry and supply the information to the receiver by either providing a paper copy of the information or providing access to an electronic display of the information. (Note: The Registry will automatically include an LDR Notification form with all manifests that contain waste streams where an LDR Notification form is required).

A generator of a listed waste or characteristic waste is not required to meet the LDR notification requirements, provided that all of the waste is managed by one of the methods described below:

- treated and discharged to surface water, discharged to sewer or to another facility approved under the OWRA
- sent to a recycling facility that appears on the Tonnage Fee Exempt Recycling Facilities Directory for recovery of material from the waste
- disposed of at an approved incineration facility
- disposed of at a waste-derived fuel site

Listed waste or characteristic waste that does not have to meet the LDR notification requirements must be shipped directly to the facilities listed above or shipped indirectly to them through a transfer/processing facility, as long as the activities conducted at the facility are limited to bulking of like wastes that are also destined and managed at the same facility.

If any processing occurs at an off-site facility before the waste arrives at the intended receiving facility, the original generator needs to complete the notification form and send it to the initial receiver. Processing for this purpose includes mixing, blending or other intermingling of the waste with any other waste or material, but does not include bulking of like wastes or mixing of wastes in accordance with an ECA. Please see section 10.1.1. Mixing, blending and bulking of hazardous wastes for more information on this requirement. Please also note that the residuals from the management methods identified above may be subject to the registration and LDR requirements at the new point of generation.

Hazardous wastes that are shipped out-of-province are subject to the LDR notification requirements, unless they are sent directly to a facility on the Tonnage Fee Exempt Recycling Facilities Directory or to another off-site facility where only bulking of the hazardous waste occurs before being received at a facility on the Tonnage Fee Exempt Recycling Facilities Directory.

9.8.1.2 Notification requirements for sealed containers from a small quantity generator (SQG)

A small quantity generator that meets the requirements of Section 80 is not required to complete the notification form. However, these generators are required to provide information to the receiver by means of a certificate on the container. See Appendix B: Sample certificate for sealed container for more information.

9.8.1.3 Record-keeping requirements

Once the information needed for notification has been provided to the receiver, the generator is responsible for maintaining the following information:

- a record of all the information provided to the receiver
- the name of the receiver
- the date that the information was provided to the receiver

Information must be stored at the waste generation facility for a period of at least two (2) years.

9.8.2 Processors

9.8.2.1 Notification requirements (section 84 of Regulation 347)

Any waste generation facility or receiving facility that processes hazardous waste to address a treatment requirement and later ships the waste off-site must comply with the notification requirements in Section 84, which oblige them to notify the next receiver about the nature of the waste and its treatment status.

The notification and record-keeping requirements for facilities that treat these wastes and then ship them off-site as either fully or partially treated wastes are identical to the requirements outlined above for generators. The requirement to complete the LDR notification form and provide it to the next receiver is a one-time requirement that must be completed on or before the first transfer of the waste.

Generators must provide notification for LDR purposes for each type of treated waste to all waste disposal facilities that receive the wastes. The details of the type of notification vary, depending on the type of waste and extent of treatment as follows:

9.8.2.1.1 Listed wastes

- Listed wastes must be disposed of at an approved hazardous waste facility. The receiving facility that will further treat or dispose of the waste must receive a notification that contains all of the information in the LDR notification form for the treated waste.

9.8.2.1.2 Partially treated and de-characterized wastes

- Partially treated and de-characterized wastes are no longer hazardous but are still a subject waste (i.e., they cannot be land disposed because some of the regulated constituents do not meet Ontario's treatment requirements). The receiving facility that further treats the waste must therefore receive a notification that contains the information in the LDR notification form for the partially treated waste.

9.8.2.1.3 Fully treated characteristic waste

- Fully treated characteristic wastes can be disposed of in a hazardous or non-hazardous waste receiving facility. The receiving facility that will dispose of the waste must receive a notification containing a statement that the waste was characteristic waste, but that it has been treated to meet all the LDR treatment requirements and may thus be land disposed.

If the residual from the processing of these hazardous wastes is a listed waste or characteristic waste, and the residual needs to be processed to meet a treatment requirement before land

disposal, the processor must comply with the registration, notification and record-keeping requirements for generators for the residuals.

The receiver that processes these wastes and ships them off-site to a recycling facility on the Tonnage Fee Exempt Recycling Facilities Directory, an OWRA-approved facility or a waste-derived fuel or incineration facility would follow the same requirements described above for a generator who sends waste to these facilities. Any residues from the processing of the waste to make it amenable to management at one of these facilities may be subject to registration, notification and record-keeping requirements.

When residues that are subject to LDR requirements are being registered, the GRR must contain the information provided by the original waste generators in the LDR notification forms for all wastes that entered into the process that generated the residues.

9.8.2.2 Waste analysis plan requirements (section 85 of Regulation 347)

Section 85 of Regulation 347 contains the requirements for a written plan (i.e., waste analysis plans). These requirements apply to all processors (for example, processing on-site at a waste generation facility or processing off-site at a treatment facility) that treat hazardous wastes to meet land disposal treatment requirements. The development of these plans will ensure that sufficient chemical analysis is conducted to demonstrate that the wastes have been appropriately treated to meet the treatment requirement for each of their regulated constituents.

The waste analysis plan should include the following:

- the requirements for regular and detailed chemical and physical testing of representative samples of the wastes that are treated
- the requirements to ensure that the testing will provide all information necessary to treat the waste in accordance with land disposal treatment requirements
- the frequency with which testing will be conducted
- the treatment method to be used to comply with the land disposal treatment requirements

The requirement to prepare a waste analysis plan applies to generators that treat waste on-site at the waste generation facility and any off-site treatment facilities. This includes generators that treat characteristic waste on-site to meet the LDR treatment requirements so that the waste shipped off-site is no longer subject waste.

For more detailed information on the contents of the waste analysis plan, please refer to the LDR handbook.

For wastes that are treated at a facility listed on the Tonnage Fee Exempt Recycling Facilities Directory, a facility approved under the OWRA, or waste-derived fuel or incineration facility, a

waste analysis plan is not required when these wastes are processed or disposed. However, a waste analysis plan is required for the processing of any residuals these facilities generate that are subject to land disposal treatment requirements.

9.8.2.3 Record-keeping requirements

The notification and record-keeping requirements for processors that treat hazardous wastes to meet a land disposal treatment requirement are the same as the notification and record-keeping requirements outlined in the section above for generators.

A waste generation facility or receiving facility that processes hazardous waste to meet a land disposal treatment requirement is required to develop and maintain a written plan while the treatment is occurring, and for at least two (2) years after the facility ceases to treat the waste. The individual responsible for following the plan must record every test result conducted in accordance with the plan and retain this record for at least two (2) years. The written plan and records must be kept at the site where the processing takes place and must be made available to the Ministry on request.

9.9 Variances

For each type of hazardous waste, Regulation 347 identifies a corresponding land disposal treatment requirement. However, the Ministry recognizes that there may be special circumstances where meeting a specific treatment requirement for a hazardous waste is not possible before land disposal. Depending on those circumstances, the Ministry may provide some flexibility by granting a variance in the application of a land disposal treatment requirement. Specific variances to a land disposal treatment requirement may be obtained through a Director's letter of equivalent treatment, an ECA issued on a case-by-case basis, or through a future amendment to the regulation, if warranted.

A waste that has been provided with a specific variance can be land disposed, provided that it is first treated in accordance with the specified variance. However, the waste continues to be subject to any other LDR requirements (for example, registration, notification, waste analysis plan, etc.). If a variance to a land disposal treatment requirement is obtained, it must be documented on the LDR notification form. A brief description of the variances that may be available is provided below. For additional information on the application of these variances and how to request a variance to a treatment requirement, please refer to the LDR handbook.

9.9.1 Variance from a treatment requirement

This variance may be considered when the land disposal treatment requirement is either a specific technology method or a numerical standard. Typically, the variance would deal with a waste that is significantly different than the waste used to set the land disposal treatment requirement and would address a specific waste stream at a specific waste generation facility.

In the event that the Ministry considered a variance from a land disposal treatment requirement for a specific waste stream at a waste generation facility, the variance could be implemented on a case-by-case basis through the facility's ECA, or for the ECA for a processing or disposal facility.

When warranted, the Ministry may also consider implementing a generic treatability variance by proposing an amendment to Regulation 347. In such cases, the proponent would need to demonstrate that an alternate technology could be used to accomplish the LDR requirement, or that the treatment requirement specified in the regulation is not attainable using the available technologies. A generic treatability variance could result in a new treatability group and a corresponding land disposal treatment requirement that applies to all wastes that meet the criteria of the new group. Generic treatability variances have already been included in Regulation 347 through the alternate treatment standards for a soil or a soil mixture and a debris or a debris mixture.

9.9.2 Equivalent treatment method variance

This variance may be considered when the land disposal treatment requirement sets out a specific technology. The variance could allow for the use of another type of technology, if a case can be made that the alternate technology provides an equivalent level of treatment to the technology specified in the regulation.

Regulation 347 contains a provision for this type of variance that allows the Director upon Ministry review, to approve an equivalent level of treatment to a specific land disposal treatment requirement. This variance could also be implemented through an ECA.

10. Waste management

10.1 Managing your waste

This section of the manual provides information to help generators manage their hazardous wastes appropriately. It discusses what is considered mixing, blending, bulking and intermingling of hazardous wastes at waste generation and waste receiving facilities. It also identifies the main regulatory requirements associated with different waste management options for wastes that are managed on-site and off-site, as well as providing information to help generators understand the provisions of Section 17.1 and Section 17.2 of Regulation 347, which explain when an ECA is required for waste management activities that take place at the waste generation facility.

The requirements for on-site storage, mixing (including blending, bulking and intermingling) and processing of wastes may apply to waste generation facilities that are used mainly for activities other than waste management, as well as to sites that generate hazardous wastes that are subject to the land disposal treatment requirements. Whether or not these sections of the regulation apply depends on the type of wastes being generated (non-hazardous and hazardous) and the type of waste activities being carried out on-site. These requirements are further discussed below.

10.1.1 Mixing, blending and bulking of hazardous wastes

Regulation 347 limits mixing, blending, bulking or other intermingling of hazardous waste with any other waste or material at the waste generation facility, during transfer to a waste transportation vehicle, and at waste disposal sites.

The mixing, blending and bulking restrictions apply only to hazardous waste. Regulation 347 does not prevent the mixing, blending or bulking of LIW with similar wastes, and the province's restrictions on these activities are most stringent for wastes that are subject to the LDR requirements.

To determine if a waste can be mixed, blended or bulked with other wastes, the generator first has to identify the type of wastes being generated. Each waste must be characterized at the point of generation to determine if it is hazardous, what type of hazardous waste it is, and whether it is subject to LDR requirements. These steps must be completed before it can be determined whether the waste can be mixed, blended or bulked with any other waste or material. In general, the bulking of waste is not prohibited, provided that the wastes are similar in nature (for example, solids bulked with other solids, liquids bulked with other liquids), they

have the same waste number (i.e., same waste class and waste characterizations) and that no processing takes place.

Once the generator has identified the waste characterization, the waste class, and whether the waste is subject to the LDR requirements for each hazardous waste, a determination can be made on whether mixing, blending or bulking of the waste with another waste or material can take place.

In general, the mixing, blending and bulking of hazardous wastes is limited by the physical state of the waste, the waste class and hazardous waste characterization. However, if a waste is subject to the LDR requirements, the type of treatment needed to meet the treatment requirement must also be considered. Only wastes that are amenable to the same treatment may be considered for mixing, blending or bulking, even if they have the same waste class and waste characterization. Considerations that can help in determining when hazardous wastes may be mixed, blended or bulked or separately managed include the following:

- Do the wastes have the same waste class?
- Are the waste characterizations the same for each waste?
- Are the wastes similar in composition and physical state?
- Can the wastes be managed using the same method of treatment or disposal?
- Have the wastes been generated from similar operations?

In general, a "NO" answer for any of the first four considerations above means that the waste streams should not be mixed, blended or bulked.

Generators should also keep in mind that the mixture and derived-from rules apply to certain hazardous wastes (for example, listed wastes). When one of these wastes is mixed with any other waste or material or when another waste is derived from this waste, the waste retains the original waste characterization (i.e., a listed waste remains a listed waste), even after it has been treated.

The mixture rule ensures that the waste continues to be defined as a hazardous waste, to prevent the avoidance of appropriate waste management because of dilution. This rule applies if a listed waste (or other waste to which the mixture and derived-from rules apply) is mixed with any other waste or material. The mixed waste maintains its classification as a listed waste, and must be managed as such, even if the hazardous nature of the waste was changed through dilution during the mixing process.

As a general rule, wastes that must meet land disposal treatment requirements may be mixed, blended or bulked if all the wastes are amenable to the same treatment to meet the treatment requirement (i.e., different waste streams need to be treated using the same technology) and all regulated constituents identified in the individual waste streams are reported and treated to meet the treatment requirements (for example, the bulking has not diluted the regulated

constituents that have been identified in the individual wastes streams with no processing taking place).

Wastes that are subject to the LDR requirements may be mixed, blended or bulked on-site if it is part of a treatment process designed to permit the land disposal of the waste. The regulation also allows a generator to mix, blend or bulk different types of wastes that are subject to the LDR requirements if the generator is sending these wastes to a receiving facility that is approved to mix, blend or bulk these different types of wastes. However, the generator would need a document from the receiver confirming that the receiving facility will take the mixed, blended or bulked wastes. If these conditions are met, the generator may mix, blend or bulk these wastes on-site (please see the Regulatory Requirements for more information).

If mixing, blending or bulking is being conducted at a waste management facility or through a waste management system, the owner/operator of the facility or system should have the ECA updated to reflect the approved activity that is taking place. This should help remove any doubts about the status of different wastes that are being mixed, blended or bulked. An ECA can be amended to identify the specific waste classes that are allowed to be mixed, blended or bulked. Updating the ECA will also help the waste generator comply with the requirements of subsections 17.1 (2) 5 and 17.1 (2) 11, if the generator plans to mix, blend or bulk wastes subject to the LDR requirements on-site, in accordance with a receiver's ECA.

10.1.1.1 Examples of what is considered mixing and what is not considered mixing

The following examples are not intended to be exhaustive, but rather to provide guidance for generators with respect to the mixing of hazardous wastes.

Examples of mixing:

- wastes with the same waste class and waste characterization and the same physical state, unless the waste is subject to LDR requirements, in which case further restrictions may apply
- wastes that are generated from similar processes (for example, waste oils collected from various locations within a plant - i.e., bulking)
- where processing occurs as a result of mixing (for example, acid and base results in neutralized waste, although additional land disposal treatment requirements may apply)
- mixing of different waste classes limited to 251, 252 and 253 combined to create 254 at transfer stations
- wastes that can be processed using the same treatment method to meet land disposal treatment requirements

Please note that if a waste is subject to the LDR requirements, an ECA may be required, as set out in Section 17.1 of Regulation 347, even in the cases where mixing is allowed such as the cases illustrated above. In some cases, the generator may obtain an ECA for mixing. In other cases, where it is specified in Regulation 347, the ECA for the receiving facility or the waste

transportation system may be sufficient, provided that the generator has a document from the facility that confirms its willingness to accept the mixed waste.

Examples of what is not considered mixing:

- wastes that are not "like" wastes (for example, oil and solvent)
- wastes with different primary waste characterizations (for example, T and H, L and T)
- wastes that are not in the same physical state (for example, liquid and solid)
- wastes that are not similar in composition (for example, organic and inorganic)
- wastes that have different land disposal treatment requirements that cannot be achieved using the same method of treatment
- if combining the wastes results in dilution of regulated constituents with no processing taking place (for example, two wastes that are subject to the LDR requirements with different metal constituents are combined to dilute the metals so that the combined waste is not hazardous for either metal)
- wastes that are subject to the LDR requirements are combined with wastes that are not subject to the LDR requirements
- combining wastes to change the nature of the wastes (for example, a T (leachate toxic) waste and non-hazardous waste combined to create a non-hazardous waste)

Where wastes are combined and it is not considered mixing, the nature of the more hazardous component or the more stringent treatment requirement will apply (for example, if L and H wastes are mixed, the mixture must be classified as H (the mixture rule). If a waste subject to LDR requirements is mixed with a waste that is not subject to LDR requirements, the entire mixture must be treated to the applicable land disposal treatment requirements.

10.1.2 Regulatory requirements

Table 2 below outlines the main regulatory requirements associated with each of those waste management options, according to whether the waste is being managed on- or off-site. Each of the regulatory requirements identified in the table are briefly discussed in this section.

10.1.2.1 Registration

No subject waste may be transported within Ontario without a valid generator registration document. Generators are required to register each subject waste stream produced at each operational site.

10.1.2.2 Land disposal restrictions (LDR)

The LDR program requires that generators of hazardous wastes ensure that these wastes are pre-treated to specified treatment requirements before the wastes can be land disposed. Waste generators are responsible for determining whether Ontario’s LDR requirements apply

to their waste stream, and for notifying the receiver about the nature of the waste and the treatment standards that must be met.

Land disposal treatment requirements apply to all listed wastes and characteristic wastes that will be land disposed. Restrictions apply to waste that are subject to LDR requirements with respect to mixing, blending and bulking of the waste and other waste processing activities conducted on-site. Waste cannot be diluted in order to avoid meeting the required treatment. Generators that process LDR waste on-site are also required to develop and maintain a waste analysis plan, and maintain records for at least two (2) years.

As indicated in Table 2 - Options for managing hazardous waste and associated regulatory requirements, certain waste management activities, such as waste sent to a facility on the Tonnage Fee Exempt Recycling Facilities Directory, are not considered to be land disposal. Generators whose waste is not subject to LDR at the waste generation facility are not required to complete the LDR notification form and do not need to comply with LDR notification requirements. Although some wastes may not be subject to LDR requirements at the original waste generation facility, wastes that are generated through processing (i.e., at a facility on the Tonnage Fee Exempt Recycling Facilities Directory) must be characterized, and the processed waste may be subject to LDR requirements at the new point of generation, if the waste is to be land disposed.

10.1.2.3 Table 2: Options for managing hazardous waste and associated regulatory requirements

Management option	Type of waste or management method	Regulatory requirement: Generator registration Location of waste management activity: On-site	Regulatory requirement: Generator registration Location of waste management activity: Off-site	Regulatory requirement: LDR [1] Location of Waste Management Activity: On-site	Regulatory requirement: LDR [1] Location of waste management activity: Off-site	Regulatory requirement: Part V (Processor)[2] Location of waste management activity: On-site	Regulatory requirement: Part V (Processor)[2] Location of waste management activity: Off-site
Reuse	N/A	No	N/A	No	N/A	No	N/A
Recycle (S.3)	N/A	No	No	No	No	No	No
Tonnage Fee Exempt recycling	N/A	N/A	Yes	N/A	No	N/A	Yes
Processing	Hazardous waste other than a listed waste or characteristic waste	Yes	Yes	No	No	No [3]	Yes
Processing	Listed waste	Yes	Yes	Yes	Yes	No [3]	Yes
Processing	Characteristic waste (non-LDR)	No	Yes	No	Yes	No [3]	Yes

Processing	Characteristic waste (LDR)	Yes [4] (No [5])	Yes	Yes	Yes	No [3]	Yes
Waste-derived fuel	N/A	Yes	Yes	No	No	No/Yes [6]	No/Yes [6]
Disposal	Land disposal (characteristic waste and listed waste)	Yes	Yes	Yes	Yes	Yes	Yes
Disposal	Land disposal (hazardous waste other than characteristic waste or listed waste)	Yes	Yes	No	No	Yes	Yes
Disposal	Incineration	Yes	Yes	No	No	Yes	Yes
Disposal	OWRA, sewer	Yes	Yes	No	No	No	No
Storage	N/A	Yes	N/A	No	N/A	Yes [7]	N/A

10.1.2.4 Waste environmental compliance approval

Section 27 of the EPA states that "no person shall use, operate, establish, alter, enlarge or extend a waste management system or a waste disposal site except under and in accordance with an environmental compliance approval". The ECAs are issued under Part II.1 of the EPA. Generators, carriers, processors and receivers of hazardous waste must operate within the parameters of their waste ECA.

Regulation 347 exempts certain activities from the requirements of Section 27 of the EPA. The Section 3 exemptions in Regulation 347 are discussed earlier in this manual. In addition, Section 17.1 of the regulation outlines the provisions with respect to activities that can be carried out at the generator's site without an ECA.

Generators should note that this manual identifies when a waste ECA is required under the EPA. Generators should also be aware that they might need to comply with other federal, provincial and local regulations and bylaws.

10.1.3 On-site storage, processing and other waste management practices

Regulation 347 contains provisions that apply to all waste generators with respect to how the waste is managed at their site. These provisions (found in Section 17.1 and Section 17.2 of Regulation 347) relate to on-site storage, mixing and processing of waste. The on-site waste management provisions (detailed in Section 17.1 of Regulation 347) apply to both municipal waste and subject waste. The on-site storage provisions (found in Section 17.2 of Regulation 347) apply only to subject waste.

The on-site waste management practices and on-site storage provisions in Sections 17.1 and 17.2 of Regulation 347 apply to all waste generation facilities that are used mainly for activities other than waste management. Please note that there are specific cases where Sections 17.1 and 17.2 of Regulation 347 do not apply, and these are described at the end of this section.

10.1.3.1 On-site processing and other waste management practices

(In this section, the use of the term "mixing" includes mixing, bulking, blending or intermingling with any other waste or material.)

Section 17.1 of Regulation 347 applies to all waste generation facilities that handle, mix or process wastes. It identifies the conditions under which a waste ECA is not required for various types of waste management practices. Generators should note that although a waste ECA may not be required for these activities, other approval requirements (for example, for air quality, wastewater discharges) could apply. Generators should also note that Section 17.1 does not

apply to a third party who may be contracted to process waste at a waste generation facility, and that in such cases an ECA may be required for mobile waste processing units.

Section 17.1 and Section 17.2 apply to waste generation facilities whose principal function is not waste management. Waste that comes to a waste generation facility from off-site generators must be both legally transported to the facility and legally received by the facility in accordance with Part V of the EPA and Regulation 347.

If the waste is generated on-site, or obtained legally from off-site generators, an ECA is not required for the on-site waste management practices described below. Waste that is obtained at a waste generation facility from off-site generators must be both legally transported to the facility and legally received by the facility in accordance with Part V of the EPA and Regulation 347. Obtaining the waste legally does not simply mean that the waste was transported by an approved carrier. The waste generation facility must also be able to receive the waste legally (for example, have an ECA for this purpose, or not be required to have an ECA to accept the waste).

10.1.3.1.1 Waste handling

No ECA is required for activities related to the production, collection, handling or storage for 24 months or less of subject waste.

10.1.3.1.2 Waste processing

No ECA is required for the processing of waste on-site, unless the processing involves any of the following:

- the combustion or land application of municipal waste, hazardous waste or LIW
- the mixing of any waste or other material with wastes that are subject to LDR treatment requirements, or
- the processing of soil, except if the processing is permitted to be carried out under Ontario Regulation 406/19 (On-Site and Excess Soil Management) made under the Act

There are specific circumstances in which the processing of waste on-site may involve combustion of municipal waste, or the mixing of hazardous wastes that are subject to LDR requirements. In these circumstances, no waste ECA is required if:

- the processing of municipal waste occurs at an on-site incinerator where no hazardous waste or LIW is incinerated (this specific case is outlined in Section 28 of Regulation 347)
- the processing includes the mixing of characteristic or listed waste with other waste or material if it is part of the processing needed to meet the LDR requirements

- the processing includes the mixing of characteristic or listed waste with other waste or material if the waste is transported to a receiving facility that has an ECA that permits this practice, and the receiver has agreed to accept the processed waste

10.1.3.1.3 Waste recycling

No ECA is required for the processing of waste so that it becomes exempt from Part V of the EPA, in accordance with the requirements of paragraph 7 of subsection 3 (1) of Regulation 347.

10.1.3.1.4 Wastewater discharge

No ECA is required for wastes introduced or processed to be introduced into a sewage works or sewage system that is subject to the OWRA, or that was established before August 3, 1957, or that is regulated under Part 8 of Division B of Ontario Regulation 332/12 (Building Code) made under the *Building Code Act, 1992*.

10.1.3.1.5 Retail sale

No ECA is required for the packaging or offering of waste for retail sale, or any processing needed to package or offer the waste for retail sale, to meet a realistic market demand.

10.1.3.1.6 Waste transfer to a waste transportation vehicle

A waste generation facility does not need an ECA for the transfer of waste to a waste transportation vehicle in the following three scenarios:

- when municipal waste or subject waste that is not subject to LDR requirements is being transferred
- when hazardous waste that is subject to LDR requirements is being transferred but not mixed with any other waste or material
- when hazardous waste that is subject to LDR requirements is mixed with any other waste or material and being transferred, provided that:
    - the mixing is in accordance with the ECA for the receiving facility, and the carrier has a document from the receiver agreeing to accept the mixed waste, or
    - the mixing is in accordance with the ECA for a waste transportation system that includes the vehicle to which the waste is being transferred

10.1.3.2 On-site storage of subject waste

The requirements of Section 17.2 of Regulation 347 apply to waste generation facilities that store subject waste. A summary of these requirements is provided below. In addition to these storage requirements, the Ministry has developed guidelines, entitled "Guidelines for environmental protection measures at chemical and waste storage facilities, May 2007." The

guidelines are designed for use by owners, operators and designers of chemical and waste storage facilities, as well as Ministry staff. The guidelines will help these user groups to assess the necessary environmental protection measures for chemical and waste storage areas. The guidelines are not intended to replace, but rather to supplement existing codes and regulations.

Waste generators are required to properly manage wastes at their facilities, and to ensure that the wastes are stored in an environmentally safe manner. Wastes must be stored, handled and maintained to prevent leaks or spills, or damage to or deterioration of the container in which the wastes are stored.

The first time that a subject waste is stored for more than 90 days, generators must provide a notice through the Registry that informs the Ministry about the stored waste and future plans regarding its storage and disposal. For more information about this requirement please see Section 4. Notice of on-site storage for a period of more than 90 days.

Please note that completing or updating a Notice in the Registry with the information about the stored wastes allows the generator to meet the legal obligations of Section 17.2 paragraph 7ii of Regulation 347 with respect to record-keeping so long as the information on the Registry is accessible at the site where the waste is stored.

The information that was submitted through the Registry must be updated within five business days only if there is a change in the original information submitted, or if the waste generation facility closes.

Subject waste cannot be stored for more than 24 months at a waste generation facility unless the facility has made a completed application for an ECA.

The 90-day storage period begins as soon as a subject waste is first stored at a waste generation facility. The 90-day storage period does not start when a container used to store the waste is full and ready to be shipped off-site for disposal. For waste streams that have a small quantity exemption associated with their primary characteristic, the waste is first considered to be stored when an amount equal to or greater than the SQE amount has been accumulated in a container or other means of storage. In the case of wastes for which there is no small quantity exemption, the 90-day period begins as soon as any amount of the waste is accumulated in a container or other means of storage. A brief discussion on when a waste is generated and becomes a subject waste is included in the section 2.1.3. Determining when waste is generated.

Subject waste cannot be stored for more than 24 months unless a completed application for an ECA has been made to the Ministry. Information on submitting an application can be found in the Ministry's Guide for applying for an environmental compliance approval. The 24-month period begins when the subject waste is first stored. This provision is designed to ensure that subject waste is stored appropriately, but not indefinitely. At the same time, it ensures that wastes that are subject to LDR requirements will not be stored indefinitely as a means of avoiding appropriate treatment.

The 24-month limit on storage does not apply to a waste that is stored at a site in a manner that allows it to be emptied or removed and disposed of on a regular basis, more frequently than every 24 months (for example, waste stored in a drum that is emptied for disposal every six months on an ongoing basis). The requirement for an ECA permitting long-term storage applies to facilities where wastes have been in storage for an extended period of time (for example, a drum of waste that has been filled and stored for more than 24 months) and where no reasonable effort has been made to dispose of the waste.

10.1.4 Specific cases where section 17.1 and section 17.2 do not apply

Section 17.1 and Section 17.2 of Regulation 347 do not apply to PCB waste. Generators that handle, store or process PCB waste on-site must do so in accordance with Regulations 362, 352 and other provisions in Regulation 347. Please also note that there are federal government regulations covering PCB storage and processing that apply to these wastes.

10.1.5 Requirements for waste disposal sites and waste management systems

The following is a summary of the requirements in Section 14.0.1 and 16 (1) 5.1 of Regulation 347 that deal with the mixing of hazardous wastes for waste disposal sites and waste management systems.

Section 14.0.1 of Regulation 347 provides that hazardous waste which is managed at or transferred to a waste disposal site may only be mixed with other waste or material in accordance with the ECA for the waste disposal site. Paragraph 5.1 of subsection 16 (1) of Regulation 347 provides that hazardous waste transferred to or from, or transported in, a waste transportation vehicle may only be mixed with other waste or material if:

- the mixing is in accordance with the ECA issued for the receiving facility named in the related manifest, and the carrier has a document from the receiving facility agreeing to accept the mixed waste, or
- the mixing is in accordance with the ECA for a waste transportation system that includes the waste transportation vehicle

Footnotes

- [1] ^ Although LDR requirements may not always be applied at the point of generation, wastes generated from these waste management activities must be characterized to determine if the waste is hazardous and subject to the LDR requirements, even if the waste was not considered an LDR waste at the original waste generation facility (for example, waste that is sent to a facility on the Tonnage Fee Exempt Recycling Facilities Directory).
- [2] ^ In this case, the processor is the generator when the processing in done on-site, and the receiver if the processing is done off-site. If a third party is contracted to process the waste at a waste generation facility, the third party must have an ECA for the mobile treatment unit.
- [3] ^ To be exempt from the requirement for a waste ECA, the on-site processing must be in compliance with Section 17.1 of Regulation 347.
- [4] ^ Registration is required if the processed waste or residual from the processing is a subject waste.
- [5] ^ Registration is not required if the processed waste or residual from the processing is not a subject waste.
- [6] ^ Sections 28.3, and 28.5 of Regulation 347 identify the ECA requirements for waste-derived fuel sites. The requirement is based on the source of the waste-derived fuel, the quantity of waste-derived fuel utilized, and the date the site first began operating.
- [7] ^ A waste ECA (waste disposal site) is required for the storage of subject waste for periods of more than two (2) years.

11. Environmental links

- Canadian Council of Ministers of the Environment (CCME)
- Environment and Climate Change Canada homepage
- Environment and Climate Change Canada - Pollution and Waste
- Land Disposal Restrictions (LDR) Handbook
- Ministry environmental permissions
- Ministry contact information for District and Regional Offices
- Ministry hazardous waste management: business and industry page
- Ministry homepage
- Ontario statutes and regulations
- R.R.O. 1990, Regulation 347, General - Waste Management
- O. Reg. 323/22: Subject Waste Program
- USEPA Land Disposal Restrictions for Hazardous Waste
- Resource Productivity and Recovery Authority Hazardous Waste Program Registry

12. Appendices

12.1 Appendix A: Ontario waste classes

12.1.1 Inorganic wastes

12.1.1.1 Acid solutions

Number	Waste product	Examples
111	Spent pickle liquor	Acid solutions of sulphuric and hydrochloric acids containing ferrous salts from steel pickling.
112	Acid solutions, sludges and residues containing heavy metals	Solutions of sulphuric, hydrochloric and nitric acids containing copper, nickel, chromium, zinc, cadmium, tin, lead or other heavy metals; chromic acid waste; acidic emission control sludges from secondary lead smelting.
113	Acid solutions, sludges and residues containing other metals and non-metals	Solutions of sulphuric, hydrochloric, hydrofluoric and nitric acids containing sodium, potassium, calcium, magnesium or aluminum; equipment cleaning acids; cation regenerant; reactor acid washes; catalyst acid and acid washes.
114	Other inorganic acid wastes	Off-specification acids; by-product hydrochloric acid; dilute acid solutions; acid test residues.

12.1.1.2 Alkaline solutions

Number	Waste product	Examples
121	Alkaline solutions, sludges and residues containing heavy metals	Metal finishing wastes; plating baths; spent solutions containing metals such as copper, zinc, tin, cadmium; case hardening sludges; spent cyanide destruction residues; dewatered solids from metal and cyanide finishing wastes and cyanide destruction.
122	Alkaline solutions, sludges and residues containing other metals and non-metals, not containing cyanides	Alkaline solutions from aluminum surface coating and etching; alkali cleaner waste; waste lime sludges and slurries; anion regenerants.
123	Alkaline phosphates	Bonderizing waste; zinc phosphates; ferrous phosphates; phosphate cleaners.

12.1.1.3 Aqueous salts

Number	Waste product	Examples
131	Neutralized solutions, sludges and residues containing heavy metals	Metal finishing waste treatment sludges containing copper, nickel, chromium, zinc or cadmium; neutral salt bath sludges and washes; lime sludge from metal finishing waste treatment; dewatered solids from these processes
132	Neutralized solutions, sludges and residues containing other metals	Aluminum surface coating treatment sludges; alum and gypsum sludges.

12.1.1.3 Aqueous salts

Number	Waste product	Examples
133	Brines, chlor-alkai sludges and residues	Waste brines from chlor-alkali plants; neutralized hydrochloric acid; brine treatment sludges; dewatered solids from brine treatment.
134	Wastes containing sulphides	Petroleum aqueous refinery condensates.
135	Wastes containing other anions	Waste containing chlorates; hypochlorite; bromate or thiosulphate.

12.1.1.4 Miscellaneous inorganic wastes and mixed wastes

Number	Waste product	Examples
141	Inorganic waste from pigment manufacturing	Wastewater and sludges from the production of chrome yellow, molybdate orange, zinc yellow, chrome green and iron pigments; dewatered solids from these sources.
142	Primary lead, zinc and copper smelting wastes	Slurries, sludges and surface impoundment solids; treatment plant sludges; anode slimes and leachate residues; dewatered solids from these sources.
143	Residues from steel making	Emission control sludges and dusts; precipitator residues from steel plants; dewatered solids from these sources.
144	Liquid tannery waste sludges	Lime waste mixtures; chrome tan liquors; dehairing solutions and sludges.
145	Wastes from the use of paints, pigments and coatings	Paint spray booth sludges and wastes; paper coating wastes; ink sludges; paint sludges.

12.1.1.4 Miscellaneous inorganic wastes and mixed wastes

Number	Waste product	Examples
146	Other specified inorganic sludges, slurries or solids	Flue gas scrubber wastes; wet fly ash; dust collector wastes; metal dust and abrasives wastes; foundry sands; mud sediment and water; tank bottoms from waste storage tanks that contained mixed inorganic wastes; heavy sludges from waste screening/filtration at transfer/processing sites not otherwise specified in this table.
147	Chemical fertilizer wastes	Solutions, sludges and residues containing ammonia, urea, nitrates and phosphates from nitrogen fertilizer plants.
148	Miscellaneous waste inorganic chemicals	Waste inorganic chemicals including laboratory, surplus or off- specification chemicals, that are not otherwise specified in this table.
149	Landfill leachate	Surface run-off and leachate collected from landfill sites.
150	Inert inorganic wastes	Sand and water from catch basins at car washes; slurries from the polishing and cutting of marble.

12.1.2 Organic wastes

12.1.2.1 Non-halogenated spent solvents

Number	Waste product	Examples
211	Aromatic solvents and residues	Benzene, toluene, xylene solvents and residues
212	Aliphatic solvents and residues	Acetone, methylethylketone and residues, alcohols, cyclohexane and residues.
213	Petroleum distillates	Varsol, white spirits and petroleum distillates, thinners.

12.1.2.2 Fuels

Number	Waste product	Examples
221	Light fuels	Gasoline, kerosene, diesel, tank drainings/washings/bottoms, spill clean-up residues.
222	Heavy fuels	Bunker, asphalts, tank drainings/washings/bottoms, spill clean-up residues.

12.1.2.3 Resins and plastics

Number	Waste product	Examples
231	Latex wastes	Waste latexes, latex crumb and residues.
232	Polymeric resins	Polyester, epoxy, urethane, phenolic resins, intermediates and solvent mixtures.
233	Other polymeric wastes	Off-specification materials, discarded materials from reactors.

12.1.2.4 Halogenated organic wastes

Number	Waste product	Examples
241	Halogenated solvents and residues	Spent halogenated solvents and residues such as perchloroethylene, halogenated still bottoms; residues and catalysts from trichloroethylene and carbon tetrachloride (dry cleaning solvents); halogenated hydrocarbon manufacturing or recycling processes.
242	Halogenated pesticides and herbicides	2,4-D, 2,4,5-T wastes, chlordane, mirex, silvex, pesticide solutions and residues.
243	Polychlorinated biphenyls (PCB)	Askarel liquids such as Aroclor, Pydraul, Pyranol, Therminol FR, Inerteen, and other PCB contaminated materials.

12.1.2.5 Oily wastes

Number	Waste product	Examples
251	Waste oils/sludges (petroleum based)	Oil/water separator sludge; dissolved air flotation skimming; heavy oil tank drainage; slop oil and emulsions.
252	Waste crankcase oils and lubricants	Collected service station waste oils; industrial lubricants; bulk waste oils.
253	Emulsified oils	Soluble oils; waste cutting oils; machine oils.
254	Oily water/waste oil from waste transfer/processing sites	Waste oil and oily water limited to classes 251, 252 and 253 that have been bulked/blended/processed at a waste transfer/processing site.

12.1.2.6 Miscellaneous organic wastes and mixed wastes

Number	Waste product	Examples
261	Pharmaceuticals	Pharmaceutical and veterinary pharmaceutical wastes other than biologicals and vaccines; solid residues and liquids from veterinary arsenical compounds.
262	Detergents and soaps	Laundry wastes.
263	Miscellaneous waste organic chemicals	Waste organic chemicals including laboratory surplus or off-specification chemicals that are not otherwise specified in this table.
264	Photo processing wastes	Photochemical solutions, washes and sludges.
265	Graphic arts wastes	Adhesives; glues; miscellaneous washes; etch solutions.
266	Phenolic waste streams	Cresylic acid; caustic phenolates; phenolic oils; creosote.
267	Organic acids	Carboxylic or fatty acids; formic, acetic, propionic acid wastes; sulphamic and other organic acids that may be amenable to incineration.
268	Amines	Waste ethanolamines; urea; tolidene; Flexzone waste; Monex waste.
269	Organic non- halogenated pesticide and herbicide wastes	Organophosphorus chemical wastes; arsenicals; wastes from MSMA and cacodylic acid.
270	Other specified organic sludges, slurries and solids	Tank bottoms from mixed organic waste bulking tanks at waste transfer sites; mixed sludges from waste screening/filtration at waste transfer/processing sties not otherwise specified in this table.

12.1.2.7 Processed organic wastes from transfer stations

Number	Waste product	Examples
281	Non-halogenated rich organics	Blended/bulked non-halogenated solvents, oils and other rich organics prepared at transfer/processing sites for incineration.
282	Non-halogenated lean organics	Blended/bulked aqueous wastes prepared at transfer/processing sites for incineration and contaminated with non-halogenated solvents, non- halogenated oils and other non-halogenated organics.

12.1.2.8 Plant and animal wastes

Number	Waste product	Examples
311	Organic tannery wastes	Fleshings; trimmings; vegetable tan liquors; Bate solutions.
312	Pathological wastes	Human anatomical waste; infected animal carcasses; other non- anatomical waste infected with communicable diseases; biologicals and vaccines.

12.1.3 Other wastes

12.1.3.1 Explosive manufacturing wastes

Number	Waste product	Examples
321	Waste from the manufacture of explosives and detonation products	Wastewater treatment sludge; spent carbon; red/pink waters from TNT manufacturing; residues from lead base initiating compounds.

12.1.3.2 Compressed gases

Number	Waste product	Examples
331	Waste compressed gases, including cylinders	Methane(natural gas); nitrous or nitric oxide; propane; butane

12.1.4 Examples of common waste numbers

(The combination of the 3 digit waste class and waste characterization)

Waste numbers	Examples
112C	Corrosive acidic wastes, for example, battery acid
122C	Corrosive alkaline waste, for example, alkaline cleaners
145H	Paint wastes and coatings, alkyd or oil based
145L	Paint wastes and coatings, latex or water based
146T	Solid waste with metal contaminants, for example, some foundry sands, soils, metal dust
148A	Miscellaneous inorganic chemicals, for example, lab packs
211H	Aromatic solvents, for example, benzene, toluene, xylene
212H	Aliphatic solvents, for example, acetone, methyl ethyl ketone (MEK)
212L	Ethylene glycol (antifreeze)
213I	Petroleum distillates, for example, Varsol
221I	Light fuels, for example, gasoline, kerosene, diesel
241H	Halogenated solvents, for example, perchloroethylene (perc from dry cleaners)

Waste numbers	Examples
243D	PCBs
251L	Oil and water mixtures/sludges (non-emulsified)
252L	Crankcase (engine) oil, lubricants, grease
252T	Crankcase (engine) oil, lubricants containing heavy metals, for example, lead
253L	Emulsified oil and water, for example, cutting oil
263A	Miscellaneous organic chemicals, for example, lab packs
264L	Photo finishing waste, for example, developer
264T	Photo finishing waste, for example, fixer
312P	Pathological/biomedical

Note: For other wastes, please follow the instructions in this manual.

12.2 Appendix B: Sample certificate for sealed container

Section 80(3) of Regulation 347 states that the certificate must contain the following:

- the name, address and telephone number of the generator
- a statement that, pursuant to subsection (1), sections 75, 77 and 79 do not apply to the land disposal of the sealed container, as long as:
    - the container does not appear to be broken or leaking, and
    - the seal does not appear to be broken or tampered with
- a description of the contents of the container, including:
    - a statement that all the waste in the container is hazardous industrial waste, hazardous waste chemical or characteristic waste
    - a statement that no waste in the container has been mixed, blended, bulked or in any other way intermingled with any other waste or material, and
    - a statement that the waste in the container was produced at the generator's waste generation facility
- a statement that the waste generation facility produces a total of less than 100 kilograms of hazardous industrial waste, hazardous waste chemical and characteristic waste in any month
- a statement that the container and its seal comply with any requirements of the Manual
- a statement that the total weight of the container and its contents does not exceed 250 kilograms

The LDR Handbook contains a sample certificate available for download.

12.3 Appendix C: Ministry regional and district offices

For emergencies, please contact the Spills Action Centre at 1-800-268-6060.

Access the Ministry district locator.

Central Region

Barrie District Office
54 Cedar Pointe Dr. Unit 1201 Barrie ON L4N 5R7
Toll-free: 1-800-890-8511
Tel: 705-739-6441
Fax: 705-739-6440

Halton-Peel District Office
4145 North Service Rd Suite 300 Burlington ON L7L 6A3
Toll-free: 1-800-335-5906
Tel: 905-319-3847
Fax: 905-319-9902

Toronto District Office
5775 Yonge St., 9th floor
Toronto ON M2M 4J1
Tel: 416-326-6700
Fax: 416-325-6346

York Durham District Office
230 Westney Rd. S., 5th floor Ajax ON L1S 7J5
Toll-free: 1-800-376-4547
Tel: 905-427-5600
Fax: 905-427-5602

West Central Region

Guelph District Office
1 Stone Road W. Guelph ON N1G 4Y2
Toll-free: 1-800-265-8658
Tel: 519-826-4255
Fax: 519-826-4286

Hamilton District Office
119 King St. W, 9th floor Hamilton ON L8P 4Y7
Toll-free: 1-800-668-4557
Tel: 905-521-7650
Fax: 905-521-7806

Niagara District Office
301 St. Paul St., 9th floor St. Catharines ON L2R 3M8
Toll-free: 1-800-263-1035
Tel: 905-704-3900
Fax: 905-704-4015

Southwest Region

London District Office
733 Exeter Road London ON N6E 1L3
Toll-free: 1-800-265-7672
Tel: 519-873-5000
Fax: 519-873-5020

Owen Sound District Office
101 17th Street E. Owen Sound ON N4K 0A5
Toll-free: 1-800-265-3783
Tel: 519-371-2901
Fax: 519-371-2905

Sarnia District Office
1094 London Road Sarnia ON N7S 1P1
Toll-free: 1-800-387-7784
Tel: 519-336-4030
Fax: 519-336-4280

Windsor Area Office
4510 Rhodes Drive Unit 620 Windsor ON N8W 5K5
Toll-free: 1-800-387-8826
Tel: 519-948-1464
Fax: 519-948-2396

Eastern Region

Kingston District Office
Unit 3, 1259 Gardiners Rd, Kingston, ON K7P 3J6
Toll-free: 1-800-267-0974
Tel: 613-549-4000
Fax: 613-548-6908

Belleville Area Office
345 College St. E. Belleville ON K8N 5S7
Toll free from area code 613: 1-800-860-2763
Tel: 613-962-9208
Fax: 613-962-6809

Ottawa District Office
103-2430 Don Reid Drive Ottawa ON K1H 1E1
Toll-free: 1-800-860-2195
Tel: 613-521-3450
Fax: 613-521-5437

Cornwall Area Office
113 Amelia St. Cornwall ON K6H 3P1
Toll free number for area code 613: 1-800-860-2760
Tel: 613-933-7402
Fax: 613-933-6402

Peterborough District Office
300 Water Street, Robinson Place Peterborough ON K9J 8M5
Toll free from area codes 613/705/905: 1-800-558-0595
Tel: 705-755-4300
Fax: 705-755-4321

Northern Region

Sudbury District Office
199 Larch St. Suite 1201 Sudbury ON P3E 5P9
Toll free from area codes 705/807: 1-800-890-8516
Tel: 705-564-3237
Fax: 705-564-4180

Sault Ste Marie Area Office
110-70 Foster Dr. Sault Ste. Marie ON P6A 6V4
Tel: 705-942-6354
Fax: 705-942-6327

Thunder Bay District Office
435 James St. S. Suite 331, 3rd floor Thunder Bay ON P7E 6S7
Toll free from area codes 705/807: 1-800-875-7772
Tel: 807-475-1205
Fax: 807-475-1754

Kenora Area Office
808 Robertson St., P.O. Box 5150 Kenora ON P9N 3X9
Toll free from area code 807: 1-888-367-7622
Tel: 807-468-2718
Fax: 807-468-2735

Timmins District Office
Ontario Gov't Complex 5520 — Hwy 101 East
P.O. Bag 3080 South Porcupine ON P0N 1H0
Toll free in area codes 705/807: 1-800-380-6615
Tel: 705-235-1500
Fax: 705-235-1520

North Bay Area Office
191 Booth Road Units 16 & 17 North Bay ON P1A 4K3
Toll-free: 1-800-609-5553
Tel: 705-497-6865
Fax: 705-497-6866

12.4 Appendix D: Questions and answers

12.4.1 General questions — Regulation 347 and generator registration

12.4.1.1 Question 1

What do I need to do to meet the LDR requirements for my waste and how do the requirements affect approved waste transfer and processing facilities?

12.4.1.2 Answer

You need to either treat the wastes on site (this may require an ECA) to meet land disposal treatment requirements or arrange for the wastes to be treated by an approved waste management facility. You must complete the LDR notification form to reflect LDR requirements and the treatment status of your waste. You must also provide notification to the waste receiver either before or at the time of the delivery of the first shipment of waste.

Due to the restrictions on mixing, blending, bulking or other intermingling of hazardous waste with other waste or material, waste management facilities that conduct these activities (for example, processing that is not dilution) need to ensure that they are approved for these activities on their waste ECA. These facilities also need to provide guidance to waste generation facilities that are planning to mix LDR wastes on-site, to ensure that they do so in accordance with the waste receiver's ECA.

All waste management facilities that receive and transfer or process LDR wastes also have additional administrative requirements. For example, waste receiving facilities must receive LDR notification forms before they accept LDR wastes for handling. Moreover, the generator registration and LDR notification requirements must be complied with for all LDR wastes that are shipped from a facility for subsequent management. The regulation also requires processors of LDR wastes to maintain a waste analysis plan.

In addition, the regulation may make it desirable to build new treatment facilities or to expand existing facilities. In both cases, new approvals or amendments to existing approvals will be required.

12.4.1.3 Question 2

Are lab packs subject to LDR requirements?

12.4.1.4 Answer

Lab packs that come from small quantity generators that meet the requirements of S. 80 of Regulation 347 (SQG exemption) are not subject to land disposal treatment requirements. Since the SQG exemption from the land disposal treatment requirements does not apply to acute hazardous waste chemicals or severely toxic wastes, these wastes cannot be included in the container and must be dealt with separately.

Generators that have wastes that are subject to land disposal treatment requirements but do not meet the requirements for SQGs, or that have acute hazardous waste chemicals or severely toxic wastes, can still package their wastes as lab packs. However, these lab- packed wastes are subject to all land disposal treatment requirements, including reporting of the hazardous waste number for each waste in the lab pack in the LDR notification form.

12.4.1.5 Question 3

How is the management and subsequent registration of waste derived from the management of "lab packs" at a waste management facility with a waste ECA affected by the "mixture" and "derived-from" rules?

12.4.1.6 Answer

In situations where a number of different wastes are being managed, it is often useful from an administrative standpoint to assume the worst likely hazardous waste characterization for all the wastes, and to manage a number of wastes as a single load. This situation arises frequently in laboratories during inventory clean-up, and lab packs are often used in this scenario. Lab packs involve the packing of individual wastes in their own separate containers that are put in a single larger container, and then managing the whole load using either the waste class of 148 (inorganic wastes) or 263 (organic wastes). The use of "lab packs" is not limited to laboratories.

When registering and shipping lab packs, the waste characterization chosen should represent the "worst" type of waste that is included in the lab pack (i.e., the first waste characterization identified when following the Waste Characterization flowchart). For example, a lab pack may contain individual containers of hazardous wastes with waste characterizations of I, B, C, T, and A. In this case, the lab packed waste would be registered with a waste characterization of "A" since this is the first waste characterization identified in the flowchart.

Lab packs received by a waste management facility may simply be transferred and shipped out in the same containers in which they arrived. In such situations, the outgoing lab pack should retain its original waste class and characterization.

The ECA of a waste management facility may allow lab packs to be emptied and the individual waste containers from inside the lab pack to be sorted according to their characterization. Contents from these individual containers could then be poured into larger storage containers for bulking purposes — for example, by pouring the contents of small containers of "I" wastes into a larger storage container that also contains "I" wastes. With this type of mixing, the contents of the larger storage container maintain an "I" characterization, despite the fact that the smaller containers of "I" waste originally came from a lab pack that had an "A" characterization.

Wastes that are packaged in a sealed container in accordance with the SQG provisions of the LDR program may also be lab packed. However, it should be noted that sealed containers from SQG that are to be land disposed cannot contain wastes with the characterizations "A" or "S." In addition, liquids should not be included in sealed SQG containers that are being sent for land disposal. Generators, therefore, should segregate wastes that will be packaged in a sealed container for land disposal from wastes that are being managed in another way through a lab pack.

When handling sealed containers that are to be land disposed, waste management facilities should ensure that the containers are not registered with the waste characterizations "A" or "S," since these wastes may not be included in sealed containers under the provisions of Section 80 of Regulation 347. Wastes that are received in sealed containers from SQGs and are subsequently unpacked at a waste management facility no longer meet the SQG provisions of the LDR program. Accordingly, these wastes become subject to the LDR program's provisions when they are being land disposed.

12.4.1.7 Question 4

When am I required to register my waste — when it is initially generated, or before it is transferred? Do I need to register if I don't ship any waste off-site during a calendar year?

12.4.1.8 Answer

The requirement to register waste generated at a waste generation facility applies both prior to the waste's transfer and, when the waste is produced on an on-going basis. When a waste is first generated, it must be registered before it is transferred. If the transfer does not take place immediately, the waste must be registered before the passing of 90 days after it has been produced, collected, handled or stored. If a waste is produced, collected, handled or stored, but not transferred from the waste generation facility (i.e., because it is being managed on-site) it must also be registered.

Please note that if the waste is temporarily stored, the 90 day reporting requirement applies (see subsection 17.2 of Regulation 347).

12.4.1.9 Question 5

I am currently registered for a hazardous waste with a leachate toxic (T) characterization. Upon analyzing a sample using the TCLP, I've determined that the waste is not hazardous. Can I remove the waste from my generator registration document?

12.4.1.10 Answer

Information posted on the generator registration document on the Registry should reflect the information you submitted on the GRR. It is your responsibility to correct the information on your generator registration document whenever it is no longer accurate. You can submit a supplemental Generator Registration Report at any time identifying that you no longer generate a particular subject waste, but it must be submitted within 15 days of a change from the information submitted.

12.4.1.11 Question 6

I have always managed my used oil as a liquid industrial waste (L) is this correct?

12.4.1.12 Answer

As the waste generator, you are responsible for ensuring that the liquid industrial waste is actually non- hazardous. Liquid wastes, such as waste oil, may exhibit various hazardous characterizations, including leachate toxicity (T), since the TCLP applies to both liquid and solid wastes. For liquids with less than 0.5 per cent filterable solids, the liquid is considered the TCLP extract. If a liquid tests hazardous under the TCLP and is not otherwise exempt from generator registration requirements, it is hazardous waste.

12.4.1.13 Question 7

I generate hazardous waste but do not use manifests. I dispose of the waste on-site. Do I need to register?

12.4.1.14 Answer

Yes. All generators of subject waste, including those that manage the waste through on-site disposal, must register. You are required to estimate the quantity of subject waste you expect to generate over a period of time up to a year when you complete the generator registration process, and will be expected to report the actual quantity disposed on-site at the end of that period. You must also keep records for at least two (2) years of the quantity, waste number and method of disposal used for each subject waste that you dispose of on-site.

12.4.1.15 Question 8

If I store my waste on-site, when do I need to have an ECA in order to continue storing this waste? How do I apply for an ECA for on-site storage?

12.4.1.16 Answer

An ECA is required for on-site storage of a subject waste for a period longer than 24 months. To apply for an ECA, please visit the Ministry Environmental Permissions webpage or contact your local Ministry district office.

12.4.2 Registration of wastes affected by the LDR pogram

12.4.2.1 Question 9

LDR would apply to my waste if I disposed of it in Ontario, but it is being sent out of province for disposal. How do I register this waste?

12.4.2.2 Answer

If you are shipping listed waste or characteristic waste out of the province, you must meet LDR requirements. You must complete the LDR portion of generator registration and LDR notification form, unless the waste is destined for processing exclusively at a facility on the Tonnage Fee Exempt Recycling Facilities Directory. This requirement ensures that information about the waste is transferred to the receiver of the waste in the event that the waste does not end up going to the intended out-of-province receiver and could thus wind up being managed or disposed of in an Ontario facility.

12.4.2.3 Question 10

How do I determine if my current knowledge of my waste is sufficient for LDR waste characterization purposes and generator registration, or whether I should perform additional analysis?

12.4.2.4 Answer

Generators are responsible for properly characterizing the wastes that they generate. If you generate a listed waste through a process that is similar to that described in the listing, or if you generate hazardous waste chemicals, additional analysis is probably not needed to characterize the waste and identify the required treatment. If you do not have enough analytical data on the presence and concentration of regulated constituents in the waste, you can either perform analytical testing or identify that all regulated constituents need to be addressed. If there is a difference between your process and the process identified in the appropriate listing for your

waste, you should determine whether your waste exhibits any additional hazardous characteristics that would not have been present in the waste described in the listing.

If you generate a characteristic waste and the treatment standard indicates that Schedule 6 standards must be met, you should conduct additional analysis to identify the concentration of any additional regulated constituents listed in Schedule 6 that might be present at or above the treatment standards, based on the nature of the waste and the waste generation process.

12.4.2.5 Question 11

How do I determine if the LDR notification requirements apply to my waste?

12.4.2.6 Answer

If you generate a listed waste or a characteristic waste, LDR requirements may apply. If you will be shipping subject waste off-site, the questionnaire provided in Appendix F: Declaration of wastes subject to land disposal restrictions should be completed to identify whether registration as an LDR waste is required. If you are uncertain how the waste will be managed once it is shipped off-site, you must complete the LDR notification form and notify the receiver of the waste of the information contained in the form.

If you change from on-site to off-site treatment or vice versa, or the degree of on-site treatment has changed (for example, from partial treatment to full treatment) you must update the LDR notification form to reflect this change. If you ship the waste off-site for treatment and the receiver changes, the GRR does not need to be updated, but you need to send the LDR notification form to the new receiver.

There are cases where registration of your waste as an LDR waste is not required; however, in such cases, other LDR requirements may apply. If you treat characteristic waste on-site to meet LDR standards, or if you meet SQG provisions (for example, sealed container requirements in Section 80 of Regulation 347) and the waste will be land disposed, you should refer to section 9. Land disposal restrictions to identify your LDR program requirements.

12.4.2.7 Question 12

I treat characteristic waste on-site to remove the hazardous characteristic prior to land disposal. My treated waste contains regulated constituents from Schedule 6 that I will not be treating. When is this waste considered to be a subject waste, and what are my registration, manifesting and LDR requirements?

12.4.2.8 Answer

A characteristic waste that has been treated in accordance with the LDR requirements, but contains regulated constituents that do not meet the Schedule 6 standards is subject waste. Registration and manifesting of the treated waste is required.

All generators that treat characteristic wastes that will be land disposed require a waste analysis plan.

Notification to the receiver must also be provided for treated wastes.

12.4.2.9 Question 13

What is the difference between the small quantity exemptions that are part of the hazardous waste and liquid industrial waste definitions and the small quantity generator provisions that are part of the LDR program requirements?

12.4.2.10 Answer

For many of the different types of hazardous waste (hazardous industrial waste, ignitable waste, corrosive waste, etc.), the province provides a small quantity exemption (SQE) that is identified in the definition of hazardous waste in Section 1 of Regulation 347 (please see section 2.3. Overview of waste streams requiring generator registration). The SQE amounts are not hazardous wastes or liquid industrial wastes, but are still wastes and can be transported and properly disposed of without having to register these wastes. However, the small quantity exemptions are only valid if you generate less than the quantity specified in a one-month period, or if you never accumulate an amount that is equal to or more than the SQE amount on the site at any one time.

By contrast, the small quantity generator (SQG) provisions under the Land Disposal Restrictions (LDR) program are available to generators that produce a total of less than 100 kg of hazardous industrial waste (H), hazardous waste chemical (B) and characteristic waste (I, C, R, or T) in any month and transport these wastes in sealed containers to be land disposed. These wastes are exempt from meeting the land disposal treatment requirements if the generator follows the container and labelling requirements identified in Section 80 of Regulation 347 (please see section 9.5.1 Waste from a small quantity generator (SQG)). Please note, however, that the SQG provisions cannot be used for hazardous waste that is acute hazardous waste chemical or severely toxic waste.

12.4.2.11 Question 14

Is a new waste generated after mixing or processing more than one hazardous waste?

12.4.2.12 Answer

12.4.2.12.1 Mixed wastes

If a hazardous waste is mixed with any other waste or material, the mixed waste retains the characterizations of all the wastes in the mixture. If, for example, an LDR waste has been mixed under the terms of an ECA, all hazardous waste numbers and all regulated constituents that are present in each of the individual wastes that went into the mixed waste must be reported in the LDR Notification Form for both listed wastes and characteristic wastes. For LDR wastes, it is therefore very important that the individual wastes be characterized at the original point of generation, prior to any mixing.

When registering wastes that have been mixed, the most appropriate waste class should be chosen when the mixed waste is being registered. Generally, this will be the waste class that best represents the bulk of the mixed waste stream (see section 2.7. Determining the appropriate waste class for the generator's waste stream on choosing waste classes). The primary characterization of the mixed waste is the first characterization you encounter that applies to the wastes in your mixture when you follow Figure 3: Waste characterization flowchart.

12.4.2.12.2 Processed wastes

For processed wastes that are listed wastes, the treated waste and treatment residual always retain the characterizations of the wastes that entered the treatment process along with their associated hazardous waste numbers, unless a valid ECA specifies otherwise.

There are only two cases where treated waste or treatment residuals are considered to be a new point of generation that requires a new waste characterization after processing, and both of these cases are only for characteristic wastes. If the treated waste or residual is subject waste, it retains the initial waste characterization, unless a new characteristic (i.e., C, I, R or T) is created by the processing or there is a change in the treatability group. Treatability groups are aqueous wastes, non-aqueous wastes, and soils or debris, for which different treatment standards apply.

If there is a change in treatability group after the processing of a characteristic waste, the processed waste or residual is considered to be a new point of generation, and the newly generated waste must be characterized. In addition, if a new characteristic (i.e., C, I, R or T) is created through the processing of a characteristic waste, the processed waste or residual waste is considered to be a new point of generation and must be characterized at that point.

It should be noted that Regulation 347 contains a specific provision for treated characteristic wastes where a regulated constituent becomes concentrated above the standard by the required treatment. In such cases, if a regulated constituent in the treated waste increases, further treatment is not required — provided that the concentration of the regulated constituent was below the numerical treatment standard before treatment (see subsection 79 (3) of Regulation 347 for details on this provision).

In the two cases for characteristic wastes identified above (i.e., a change in treatability group or a new characteristic as a result of processing), the characterization of each of the wastes that entered the treatment process is not carried through when the newly generated waste is being registered. For example, if an aqueous waste that is characteristic waste is treated and the residual is a non-aqueous waste (i.e., a new treatability group), it is considered to be a new point of generation, and the non-aqueous waste generated by the treatment process needs to be characterized. The non-aqueous waste needs to be registered and treated, if required, in accordance with the new characterization. The characterization of the aqueous waste that entered the treatment process is not carried through when registering the non- aqueous waste generated from the treatment.

12.4.2.13 Question 15

How do you characterize residues that are generated at waste management facilities that are not considered land disposal (for example, OWRA facilities, facilities on the Tonnage Fee Exempt Recycling Facilities Directory, incineration facilities, waste-derived fuel sites)?

12.4.2.14 Answer

In Ontario, the management of wastes at certain facilities is not considered land disposal (for example, OWRA facilities, facilities on the Tonnage Fee Exempt Recycling Facilities Directory, incineration facilities, waste-derived fuel sites) and for the purpose of the LDR program are considered to be a new point of generation for the residues. All the hazardous waste numbers of the wastes that enter these facilities are not carried through to the residues for LDR purposes since the original waste generators were not required to provide this information to the facilities (provided that the wastes were not processed before being received at these sites).

The residues from these facilities need to be characterized at the new point of generation and must meet the requirements of Regulation 347, including registering and meeting applicable treatment requirements for the newly characterized residues. If the wastes that are going for final disposal (i.e., incineration facility or waste derived fuel site) are a listed waste, then the waste residues remain a hazardous waste because of the derived-from rule and if land disposed, must be treated to meet the land disposal treatment requirements based on the hazardous waste characteristic exhibited by the residues and disposed of at a hazardous waste facility.

12.4.3 LDR-specific questions

12.4.3.1 Question 16

How does the LDR program affect my contaminated site remediation?

12.4.3.2 Answer

Ontario has put in place various Acts, regulations and guidelines governing site remediation activities. The implementation of the LDR program does not change existing site remediation requirements. However, hazardous wastes that are generated from site remediation activities and are to be land disposed may be subject to the LDR requirements.

Land disposal treatment requirements do not apply to in-situ soils or for the excavation of contaminated soils. Existing provisions regarding on-site remedial activities remain in effect. Land disposal treatment requirements only apply once a decision is made to remove the soils from the remediation site, and if the soils are characterized as hazardous waste and are to be land disposed. Land disposal of soils that have been excavated from a site may include waste soils sent off-site to be land disposed or soils that will be permanently disposed at another on-site location unrelated to the area of the site remediation (for example, on-site landfill).

If the waste generated through site remediation activities meets the definitions of soil, soil mixture, debris or debris mixture, then alternate treatment standards available under the LDR program may apply to the waste.

12.4.3.3 Question 18

Do Land Disposal Restrictions apply to a one-time accidental spill of hazardous waste?

12.4.3.4 Answer

Yes. If the waste is hazardous (either listed or characteristic) and will be land disposed, the land disposal treatment requirements and all other LDR requirements apply.

LDR requirements include notification to the receiver of information about the waste before or at the time the waste is received at the receiving facility. The Ministry recognizes that meeting LDR notification requirements may not be feasible in the immediate response to a spill, particularly with respect to a comprehensive characterization of the waste and treatment that may be required. However, once the immediate threat from the spill has been addressed, the generator is responsible for the waste's characterization, and for providing the LDR notification to the receiver of the waste.

If the waste generated through a one-time accidental spill meets the definition of soil or soil mixture, alternate treatment standards available under the LDR program may apply.

12.4.3.5 Question 18

Who is required to have a written plan (i.e., waste analysis plan), and does this include generators who treat their waste on-site?

12.4.3.6 Answer

Anyone who processes LDR wastes must have a waste analysis plan. This includes:

- generators that treat LDR wastes on-site at the original waste generation facility
- waste management companies that treat LDR waste off-site
- facilities that conduct partial treatment of LDR waste
- facilities that conduct full treatment of LDR waste
- processors that treat characteristic waste to meet the land disposal treatment requirement for disposal at a non-hazardous waste facility, even if no subject waste is subsequently sent off-site for disposal

12.4.3.7 Question 19

I operate a non-hazardous waste landfill and receive notifications from generators that treat characteristic waste to meet LDR requirements. What are my record-keeping requirements with respect to notifications received for these wastes?

12.4.3.8 Answer

The LDR program does not specify record-keeping requirements for the final disposal facilities that receive LDR wastes. You should therefore maintain such records in the same manner as the other records you maintain with respect to the waste, as required by regulation and/or through your ECA.

12.4.3.9 Question 20

I process characteristic waste on-site to remove the characteristic before the waste is land disposed. What are my requirements and how do I need to deal with the regulated constituents in Schedule 6?

12.4.3.10 Answer

All regulated constituents in Schedule 6 must be treated to meet the land disposal treatment requirements.

Before implementation of the LDR program, characteristic wastes required treatment only if disposal was at a non-hazardous waste landfill. Now, the land disposal treatment requirements

for a characteristic waste must be met prior to land disposal, even if the waste will be sent for disposal at a hazardous waste landfill.

Please see Question 21 for more information on the registration requirements for characteristic waste that are processed on-site.

Any facility that processes a characteristic waste on-site is required to have a waste analysis plan. Moreover, LDR notification requirements apply to any treated or untreated characteristic waste that is shipped off-site for land disposal, whether the waste is disposed at a non-hazardous waste or hazardous waste facility.

12.4.3.11 Question 21

Do I need to register if I process characteristic waste on-site?

12.4.3.12 Answer

If the de-characterized waste or residual will not be land disposed, there are no requirements for registration. If the de-characterized waste or residual will be land disposed, you may be required to register. The table below summarizes the registration requirements for generators that de-characterize their waste on-site.

On-site processing (characteristic removed)	Subsequent waste management	Registration requirements
• **Processed on-site** • **Treatment residual is not subject waste**	Not land disposed	• No registration required
• **Processed on-site** • **Treatment residual is subject waste**	Not land disposed	• Register treatment residual • No LDR information required

• **Processed on-site**
• **No UHCs in treated waste**
• **Treatment residual is not subject waste**
	Land disposal	• No registration required, however:
		  ○ if land disposed off-site, generator has notification and waste analysis plan (WAP) requirements
		  ○ if land disposed on-site, generator must be able to demonstrate that land disposal treatment requirements were met; WAP required

• **Processed on-site**
• **No UHCs in treated waste**
• **Treatment residual is subject waste**
	Land disposal of treated waste or further treatment and land disposal of treatment residual	• Register individually each waste entering treatment process under on-site processing
		• Register treatment residual – LDR Notification Form required if residual will be land disposed off-site
		• Registration of treated waste not required, however:
		  ○ if off-site land disposal, generator still has notification and WAP requirements
		  ○ if on-site land disposal, generator must be able to demonstrate that land disposal treatment requirements were met; WAP required

On-site processing (characteristic removed)	Subsequent waste management	Registration requirements
• **Processed on-site** • **UHCs in treated waste**	Off-site treatment for UHCs and land disposal	• Register individually each waste entering treatment process under on-site processing • Register treated waste — LDR Notification Form required • If treatment residual is subject waste it also needs to be registered LDR Notification Form required if residual will be land disposed off-site

12.4.3.13 Question 22

I send my hazardous waste for incineration. Do LDR program requirements apply to this waste?

12.4.3.14 Answer

In Ontario, incineration is considered to be final disposal. Therefore, LDR reporting and notification requirements do not apply to the hazardous waste at the point of generation (i.e., the waste generation facility) provided that the waste will be wholly managed through incineration and the waste is not processed at another facility prior to being incinerated. If any processing of the waste takes place prior to its arrival at the incineration facility, the original waste generator must comply with all LDR requirements, including registration and notification requirements. Following incineration, the incineration facility must characterize the residue and determine whether LDR requirements apply, as the incineration facility is considered a new point of generation.

12.4.3.15 Question 23

How does the LDR program affect waste that is disposed of at a landfarm?

12.4.3.16 Answer

While the LDR program does not prohibit the use of landfarms, it does require that hazardous wastes applied to the land at these facilities meet the land disposal treatment requirements. Liquid industrial wastes are not affected by the LDR program. Hazardous wastes that meet the land disposal treatment requirements can be applied to the land in accordance with the landfarm ECA.

12.4.3.17 Question 24

I have a leachate toxic waste with a hazardous waste number in the E100-series. This waste has a treatment requirement that indicates "best efforts to achieve (removal of the characteristic)." What happens if I can’t remove the characteristic?

12.4.3.18 Answer

If the characteristic of an E100-series waste cannot be removed, the waste may be land disposed, but the disposal must be at a hazardous waste landfill. When completing the LDR notification form, the processor must indicate that although the characteristic waste meets the treatment requirement (since best efforts were made), it must be disposed at a hazardous waste facility because the characteristic that makes the waste hazardous has not been removed.

12.4.3.19 Question 25

I have a soil that is leachate toxic with a hazardous waste number in the E100-series (for example, E- 115, malathion). There is no standard in the UTS table (Schedule 6) for the

constituent that makes the waste leachate toxic (for example, malathion). What is the alternate treatment standard for this soil?

12.4.3.20 Answer

If any other regulated constituents are present in the soil at more than 10 times the value listed in Schedule 6, those regulated constituents must be treated to meet the alternate treatment standards. Since the contaminant that caused the waste to be leachate toxic is not listed in Schedule 6, treatment for this constituent (for example, malathion) is not required for the waste to be land disposed, although the waste must be disposed in a hazardous waste landfill. If the contaminant that caused the waste to be leachate toxic (for example, malathion) is treated so that the waste is no longer leachate toxic, and any other regulated constituent is also treated accordingly, the soil may be disposed in a non-hazardous waste landfill.

12.5 Appendix E: Generator registration and land disposal restrictions reporting

12.5.1 Generator registration

Generators of waste streams that are subject to the land disposal restrictions (LDR) program are required to provide additional information during registration. Generators may need to conduct additional assessments for subject wastes potentially affected by the LDR requirements, to identify the presence of regulated constituents that may need treatment before land disposal.

With the implementation of the land disposal treatment requirements, it is mandatory for generators to provide additional information about the types of hazardous waste streams being registered. This provision includes generators that have treated characteristic wastes that no longer meet the definition of hazardous waste but are subject waste because the wastes do not meet the land disposal treatment requirements (see the Treatment requirements for characteristic wastes section of this manual for information on characteristic wastes affected by the Schedule 6 treatment standards).

All listed and characteristic wastes have to meet the applicable land disposal treatment requirements identified in Schedules 1 through 3, and Schedule 5, before these wastes are land disposed. All generators of listed and characteristic wastes that will be shipped off-site, including treated characteristic wastes with regulated constituents that do not meet the Schedule 6 treatment standards, must determine for each waste stream being registered, whether the LDR Notification Form needs to be completed. Completion of the questionnaire (if required) will indicate to the generator whether additional information about the waste stream needs to be provided during registration.

Please see section 3.1.2. Waste identification and section 3.1.7. Land disposal restrictions notification form for details about the information that is needed in the GRR.

12.6 Appendix F: Declaration of wastes subject to land disposal restrictions

The waste identification section of the GRR includes a series of questions that when answered, will help you determine if you are required to fill out the LDR Notification Form (see Figure 7: Declaration of waste streams subject to land disposal restrictions for a flowchart format).

- Does your waste stream require LDR treatment and you would like to go directly to the LDR requirements?
    - A generator may know that the LDR Notification Form needs to be filled out for the waste stream being registered and wishes to go directly to the LDR Notification Form without completing the questionnaire.
    - If the answer to this question is Yes, the generator goes directly to the LDR Notification Form to complete it. If the answer is No, proceed to the next question.
- Is the primary characterization of this waste stream liquid industrial (L), PCB (D) or pathological (P)?
    - The LDR Notification Form of the GRR must be completed only for listed or characteristic hazardous waste, including waste that has been treated so that it is no longer hazardous. Liquid industrial (L), PCB (D) or pathological (P) wastes are not subject to LDR requirements.
    - If the answer to this question is Yes, The LDR Notification Form is not required for this waste stream. If the answer is No, proceed to the next question.
- Is this waste stream being shipped out of Ontario to any facility not listed in the Tonnage Fee Exempt Recycling Facilities Directory?
    - LDR information must be provided for all listed and characteristic hazardous wastes even if they will be shipped out of Ontario for treatment or disposal.
    - If the answer to this question is Yes, the LDR Notification Form must be completed for this waste stream. If the answer is No, proceed to the next question.
- Are you unsure of any applicable exemptions or where your waste stream will be managed?
    - If a generator is unaware of any applicable exemptions that may remove the need to complete the LDR Notification Form or where and how the waste is to be managed (e.g. whether it is to be land disposed), the LDR Notification Form needs to be completed.
    - If the answer to this question is Yes, the generator goes directly to the LDR Notification Form to complete it. If the answer is No, proceed to the next question.
- Is the primary characterization of your waste acute hazardous waste chemical (A) or severely toxic waste (S)?
    - If the answer is Yes, proceed to the next question as there is no exemption from LDR treatment standards for generators of small quantities of this waste stream.
    - If the answer is No, you must answer the second part of the question: does your facility qualify as a small quantity generator under S. 80?

    - In order to qualify as a small quantity generator, the sum of all hazardous wastes with primary characterizations B, H, C, I, R, and T generated at your facility must be less than 100 kg/month and all conditions of Section 80 and the manual with respect to the disposal of SQG waste must be met (see section 9.5.1. Wastes from a small quantity generator (SQG)).
    - If the answer to this question is Yes, you must provide an estimate of the total quantity of B, H, C, I, R & T hazardous wastes generated per month.
      The LDR Notification Form is not required for this waste stream.
    - If the answer is No, proceed to the next question.
- Is this waste stream Municipal Hazardous or Special Waste that is exempt under Section 81 of Regulation 347 or waste received at your transfer station that is a small quantity generator (SQG) waste in a sealed container that is exempt under Section 80 of Regulation 347?
    - This question is for MHSW depots and receiving facilities that may accept and transfer wastes that are exempt under Sections 80 and 81 of Regulation 347. In order for these wastes to remain exempt, the requirements of Sections 80 or 81 must continue to be met (see section 9.5.1. Wastes from a small quantity generator (SQG) and section 9.5.2. Wastes from municipal hazardous or special waste (MHSW) depots). Most generators are not receiving facilities and will answer No to this question.
    - If the answer is Yes because the waste stream is MHSW that meets the S. 81 requirements, you must enter the ECA number of the MHSW depot that generated the waste. The LDR notification Form is not required for this waste stream.
    - If the answer is Yes because the waste stream is SQG waste that meets the Section 80 requirements, no additional information is required.
      The LDR notification Form is not required for this waste stream.
    - If the answer is No, proceed to the next question. The waste stream does not meet the requirements of either Sections 80 or 81.
- Will this waste stream be managed at a facility listed on the Tonnage Fee Exempt Recycling Facilities Directory without being processed at another off-site facility prior to receipt at the facility? (Note that you may answer "Yes" if the waste will be bulked with like wastes, but you must answer "No" if any processing of the waste will occur).
    - The LDR Notification Form is required only if the waste will be processed at an intermediate facility prior to receipt at the facility. The waste may be shipped via a transfer station where the waste may be bulked with other like wastes, but the waste must not be processed or mixed with any other waste or material at a transfer station prior to receipt at the facility on the Tonnage Fee Exempt Recycling Facilities Directory, unless the mixing is conducted in accordance with an ECA and the mixed waste will be wholly managed at the facility on the Tonnage Fee Exempt Recycling Facilities Directory.
    - If the answer to this question is Yes, you must provide the ECA number for the facility on the Tonnage Fee Exempt Recycling Facilities Directory that will receive the waste. The LDR Notification Form is not required for this waste stream.
    - If the answer to this question is No, proceed to the next question.
- Will this waste stream be managed at any of the following facilities in Ontario without being processed at another off-site facility prior to receipt at the facility listed below?

(Note that you may answer "Yes" if the waste will be bulked with like wastes, but you must answer "No" if any processing of the waste will occur):

- OWRA facility
  Incineration facility
  Waste-derived fuel site
- The LDR Notification Form is required ONLY if the waste will be processed at an intermediate facility prior to receipt at one of the facilities listed above. The waste may be shipped via a transfer station where the waste may be bulked with other like wastes, but the waste must not be processed or mixed with any other waste or material at a transfer station prior to receipt at one of the facilities listed above, unless the mixing is conducted in accordance with an ECA and the mixed waste will be wholly managed at the identified receiving facility.
- If the answer to this question is Yes, you must provide the ECA number for the facility that will manage the waste. The LDR Notification Form is not required for this waste stream.
- If your waste will not be managed at any of these facilities, or it will be partially managed at one or more of these facilities, the answer to this question is No, and the LDR Notification Form must be completed for this waste stream.

Your generator registration will not be complete until the LDR Notification Form has been completed for all listed and characteristic waste streams, including characteristic wastes that have been treated to meet LDR standards, unless your answers to the questions above indicate that the form is not required.

Any transfer station or processing facility that receives wastes destined for a facility listed on the Tonnage Fee Exempt Recycling Facilities Directory, OWRA, waste-derived fuel or incineration facility also needs to make the declaration above when completing their GRR with respect to the intended destination for their waste.