

# Technical Discussion Paper on Proposed Recycling Standards for End-of-Life Vehicles

## 1. Introduction

This technical discussion paper outlines a proposal to implement standards related to end-of-life vehicle (ELV) recycling and to regulate businesses that recycle ELVs. Key components of this proposal that will be described in this paper include:

- proposed amendments to Regulation 347 (General – Waste Management) under the *Environmental Protection Act* (EPA) that would amend the current derelict motor vehicle site exemption so that it applies only to sites that meet prescribed criteria, such as sites that accept and/or store a limited number of end-of-life vehicles;
- proposed standards related to recycling end-of-life vehicles prior to crushing and/or shredding;
- utilizing the Ministry of the Environment's (MOE) Environmental Activity and Sector Registry (EASR) to have persons engaging in ELV processing activities, at sites that meet specific criteria, register these activities with the MOE and require them to comply with prescribed requirements; and
- a phased implementation and compliance enforcement approach to allow the owners of ELV processing facilities time to comply with the new regulatory requirements, register in the EASR and obtain any other MOE approvals as applicable.

The proposed standards and regulatory changes for ELV recycling are a component of the government's Draft Waste Reduction Strategy which was posted to the Environmental Registry in June 2013. As noted in the Strategy:

*The diversion of end-of-life vehicles (ELVs) is occurring on a wide scale in Ontario. Approximately 600,000 vehicles are retired each year in Ontario - this creates more than 150,000 tonnes of vehicle waste that goes to landfill every year.*

*Action needs to be taken, however, to ensure that this diversion occurs in a manner that protects the environment. The government recognizes we need to ensure that when wastes are diverted, they are diverted safely, correctly and sustainably.*

*(Draft Waste Reduction Strategy, 2013)*

## 2. Sector Overview and Current Regulatory Context

### 2.1 Sector Overview

Ontario's automotive recycling industry plays an important role in managing potential environmental impacts from the recycling, processing and disposal of end-of-life vehicles and in contributing to the province's economy. Each year, approximately 600,000 end-of-life vehicles are retired in Ontario, most of which are processed to recover valuable used parts or high-value materials such as metal for recycling. In general, ELV processing consists of three main activities:

- dismantling/depolluting the ELV;
- crushing/compacting the ELV hulk (what remains of the ELV once it has been depolluted and stripped of parts); and
- shredding the ELV hulk.

While many terms can be used for the industry, for the purposes of this report businesses engaging in these activities will be collectively termed “end-of-life vehicle or ELV processing facilities”. This term is further defined in the box below.

Any number of the activities noted above (e.g. ELV dismantling and crushing) may be performed at an ELV processing facility. Other services that businesses may provide include towing, vehicle repair, used car sales and collecting and processing other scrap metals.

*What is meant by **end-of-life vehicle** and **end-of-life vehicle processing facility**?*

For the purposes of this paper an *end-of-life vehicle* is considered to be a motor vehicle that:

- (a) is inoperable, and
- (b) has no market value as a means of transportation, or, has a market value as a means of transportation that is less than the cost of repairs required to put it into operable condition.

This definition is consistent with the current definition for “derelict motor vehicle” in Regulation 347.

An *end-of-life vehicle processing facility* is considered to be a facility at which a person engages in the collection, handling, storage, or processing (removing contaminants, dismantling for parts, flattening, crushing, shredding, etc) end-of-life vehicles. As noted in Section 3 of this report, sites that meet the proposed exemption for an end-of-life vehicle site are not considered to be end-of-life vehicle processing facilities.

It is estimated that there are approximately 700 locations in Ontario that are engaged in one or more of the activities noted above. There are approximately 100 operations that engage in the activity of crushing.

Dismantling operations include parts removal and vehicle depollution (the removal of hazardous materials prior to crushing or shredding) to various degrees and are critical to managing potential adverse environmental effects from the ELVs. Businesses that adopt environmental best practices will look to remove and manage the following types of materials prior to crushing:

- fuels
- lubricating oils including transmission fluids
- brake and steering fluids
- coolant fluids
- refrigerants
- windshield washer fluid
- lead acid batteries or other batteries
- oil filters
- mercury-containing parts
- tires
- lead battery cable connectors, tire weights and any other lead containing parts

Some jurisdictions that regulate the dismantling and depollution of ELVs may require businesses to manage other vehicle components such as air bags or asbestos-containing brake pads. It should also be noted that while good depollution practices will remove the bulk of fluids contained in an ELV, some fluid will remain in the vehicle after depollution.

Dismantling and depollution can involve the use of different equipment such as fluid removal systems, mechanical and manual cutting equipment, and torching and lancing equipment. Businesses may focus solely on ELVs (i.e. a business that only deals with ELVs and the sale of automotive parts) but can also include businesses that may be considered more of a salvage/scrap yard operation (i.e. a recycler that accepts ELVs and other forms of scrap metal including used appliances and metal from construction sites).

Once a vehicle has been dismantled, the processed hulk is usually compacted to reduce the costs of transporting the vehicles to a shredding operation. Crushing or baling equipment can be stationary or mobile. Crushers flatten down the hulk so that approximately 15 vehicles can be transported on a flat trailer. Balers compact the hulk into smaller cubes. Crushing or baling of the hulk may release any remaining fluids in the hulk. However, modern crushing equipment will often have built-in containment systems to collect released fluids. Additional practices can also be employed to contain and capture fluids released during crushing.

Shredding involves the actual shredding of materials into smaller pieces as well as the separation and sorting of the material once shredded for acceptance by other operations like a steel mill for metal recycling. Shredding operations will accept ELV hulks (crushed and not crushed) as well as a wide range of other metal waste. Shredding operations are typically stationary and can consist of a series of shredders and sorting stages, each further reducing the size of scrap metal pieces and separating the different metal or non-metal components.

## 2.2 Current Regulatory Context

Currently, paragraph 3 of subsection 5 (1) of Regulation 347 (General – Waste Management) exempts derelict motor vehicle sites from the provisions in Part V of the EPA and the regulation. This includes the requirement to obtain an Environmental Compliance Approval (ECA) for waste management as well as other waste management requirements. There has been some ambiguity as to how this exemption applies to ELV processing facilities. However, as will be seen in Section 3 of this paper, the MOE proposes to clarify the current exemption through a series of proposed amendments to Regulation 347.

The EPA and the *Ontario Water Resources Act* (OWRA) contain additional provisions that may apply to ELV processing facilities in certain circumstances. For example:

- approval requirements for activities mentioned in section 9 of the EPA related to the discharge of contaminants (including noise) into the air;
- approval requirements for activities mentioned in section 53 of the OWRA related to sewage works (including stormwater management systems);
- Ontario Regulation 463/10 (Ozone Depleting Substances and Other Halocarbons) made under the EPA requires refrigerants (i.e. ozone depleting substances) to be properly managed; and
- other provisions under the EPA that deal with environmental incidents such as spills.

ELV processing facilities that have activities that generate noise or other air emissions or that have works for the management of sewage (process wastewater and stormwater) may require an ECA. This would generally include sites where crushers and shredders are operated, or where sewage treatment works and conveyances are installed with discharges to the natural environment.

There are additional provincial, federal, and in some cases, municipal laws that apply specifically to ELV processing facility owners/operators, including:

- pursuant to a notice published under Part 4 of the *Canadian Environmental Protection Act, 1999* vehicle manufacturers and steel mills are required to prepare and implement pollution prevention plans to deal with release of mercury from mercury switches in ELVs - the Switch Out program is the industry's response to this notice;
- under the *Highway Traffic Act* all persons engaged in the business of wrecking or dismantling vehicles shall obtain a licence from the Ministry of Transportation and keep a complete record of all motor vehicles wrecked and transmit the information to the Ministry;
- municipalities have authority under the *Planning Act* and *Municipal Act* to regulate ELV locations and operations (e.g. setbacks); and
- O. Reg. 213/07 (Fire Code) under the *Fire Protection and Prevention Act, 1997* which regulates fire safety standards for equipment, buildings, structures, land and premises.

ELV processing facilities may also be subject to requirements in the following, amongst others:

- *Transportation of Dangerous Goods Act, 1992* and associated regulations;
- *Building Code Act, 1992* and associated codes/regulations;
- *Electricity Act, 1998*, and associated codes/regulations;
- *Technical Standards and Safety Act, 2000* and associated codes/regulations; and
- *Occupational Health and Safety Act*, and related regulations.

## 2.3 Sources of Environmental Emissions

### *Waste*

During the processing and recycling of ELVs, there is the potential for the generation of waste streams. Many of these streams result from the removal of fluids and other contaminants as noted in subsection 2.1 and have the potential to harm the environment if not appropriately managed. Improper management of waste can lead to spills, leaks, and fires that could result in contamination of soil, surface and groundwater and the air.

### *Air*

Activities at ELV processing facilities can generate contaminants that are or may be discharged into the air. Sources of contaminants include diesel engine powered equipment, comfort heating

equipment for various onsite buildings and structures, and torching and lancing equipment. Contaminants that may be discharged can include metal fumes and particulate matter, volatile organic compounds, combustion by-products, and oxides of nitrogen. In addition, fugitive dust emissions may be generated at the site from activities such as onsite vehicle movement on unpaved roadways or areas.

As noted earlier, equipment that discharges or may discharge contaminants into the air at ELV processing facilities may require an approval from the MOE pursuant to Section 9 of the EPA. Ontario Regulation 419/05 Air Pollution – Local Air Quality (O. Reg. 419/05) stipulates maximum emission concentrations for various contaminants at points of impingement as well as the calculation methods that must be used in order to demonstrate compliance.

### *Noise*

Potential sources of noise associated with ELV processing facilities include the following:

- handling equipment including grappling cranes, fork lift trucks and front-end loaders for material movement and stockpiling;
- compaction equipment including crushers, and balers for compaction of metals and metal parts; and,
- diesel engines (stand alone or part of a larger equipment package) to power compaction equipment.

As noted earlier, equipment that discharges or may discharge contaminants (including noise) into the air at ELV processing facilities may require an approval from the MOE pursuant to section 9 of the EPA. The MOE has set out guidelines for evaluating the environmental impact of a noise source in its Noise Pollution Control (NPC) guideline document NPC-300<sup>1</sup>. The guideline sets out procedures and limits that vary depending on the land classification (e.g. urban, suburban, rural), the hours of operation (daytime, day and evening, 24-hour) as well as whether noise receptors are already exposed to elevated background noise such as noise from road traffic.

### *Sewage (Process Wastewater and Stormwater)*

Sewage may be generated at ELV processing facilities and can either be process water from the ELV processing operations or stormwater. Process water from facilities in the sector is limited and if present would arise primarily from metal/equipment washing activities (e.g. parts washers, mobile equipment washing). Potential contaminants in process water may include metals, petroleum compounds (e.g. oil, grease, fuels), suspended solids, and detergents. In urban settings, process water from ELV processing facilities is often discharged to the municipal sanitary sewer. Some facilities may provide treatment using an oil/water separator prior to discharging to the sewer.

Stormwater (which includes precipitation as well as snow/ice melt water) at ELV processing facilities has the potential to come into contact with spilled fluids, leaking or oily machinery and outdoor storage piles that may consist of wet parts (e.g. a part that contains or contained liquid

---

<sup>1</sup> The MOE finalized NPC-300 on October 21, 2013. NPC-300 replaces previous noise-related guideline publications including NPC-205, NPC-232, and LU-131.

hazardous material) or oily parts or materials. This can lead to the generation of contaminated stormwater, which may migrate off-site if not appropriately managed.

Expected contaminants in stormwater may include metals, petroleum compounds (e.g. oil, grease), suspended solids, acids, antifreeze etc. In Ontario, stormwater management at sector facilities can vary substantially. Some larger facilities have installed sophisticated collection systems consisting of asphalt or concrete storage areas that drain to tanks, or collection systems that drain to a stormwater management pond. Smaller facilities may only employ oil/water separators which may be mandated by municipalities, or other measures to prevent stormwater from impacting neighbouring properties.

In general, sewage works used for the collection, transmission, treatment and disposal of sewage require an ECA under Section 53 of the OWRA. This applies to both process water and stormwater. The issued ECA will likely contain conditions on the works (e.g. design standards or effluent limits) to mitigate impacts on the receiving water body into which the treated effluent will discharge. In the case of stormwater management, sewage works are often proposed as a result of the stormwater management planning that is typically required when a facility owner is seeking site plan approval from the local municipality. The objectives for the works will be derived from this planning process and will often involve input from the local conservation authority (if one exists). Depending on the nature of process water or stormwater discharge from the site, additional provincial and federal approvals may be required.

### **3. Proposed Changes to Derelict Motor Vehicle Definition and Derelict Motor Vehicle Site Exemption**

The current definition of a derelict motor vehicle in Regulation 347 is as follows:

*“derelict motor vehicle” means a motor vehicle that,*

- a. is inoperable, and*
- b. has no market value as a means of transportation, or, has a market value as a means of transportation that is less than the cost of repairs required to put it into operable condition.*

Subsection 5 (1) of Regulation 347 includes derelict motor vehicle sites in a list of waste disposal sites that are exempt from Part V of the EPA as well as Regulation 347.

In order to implement proposed standards for the management of ELVs, the MOE is proposing to amend these parts of Regulation 347 as noted below.

First, the MOE is proposing to replace the term “derelict motor vehicle” with “end-of-life vehicle”. Parts a and b of the definition would not be changed. The term “derelict motor vehicle site” would also be changed to “end-of-life vehicle site”. The MOE is proposing this change to update the terminology to that used by industry and other jurisdictions and to avoid potential confusion with the implementation of proposed regulatory requirements that refer to end-of-life vehicles.

Second, the MOE is proposing to limit the “end-of-life vehicle site” exemption only to sites that satisfy specific criteria. It is proposed to limit the exemption to only those sites that:

- a. at any time have no more than ten (10) ELVs stored at the site;

- b. receive no more than two (2) ELVs at the site per year; and
- c. do not flatten, crush, shear or shred an ELV or part of an ELV.

The revised exemption is intended to only exempt sites that may have a small number of ELVs for reasons other than engaging in ELV processing (e.g. hobbyists that intend to restore an ELV or use its parts to restore another vehicle).

Scoping the exemption in this manner would mean that the majority (if not all) ELV processing facilities in the province would be subject to requirements in Part V of the EPA and any applicable requirements in Regulation 347. These requirements would include the need to obtain a waste approval for activities mentioned in s.27 of the EPA<sup>2</sup>. Furthermore requirements for hazardous waste and liquid industrial waste (referred to as “subject waste” in Regulation 347) may also apply. These requirements are set out in sections 17.1 to 27 of Regulation 347 and include registering as a subject waste generator and completing waste manifests for shipments of subject waste sent from the facility. The statute and regulation should be consulted directly and are available at [www.e-laws.gov.on.ca](http://www.e-laws.gov.on.ca). Additional information is also available on the MOE’s Business Hazardous Waste webpage located at the following link:

[www.ene.gov.on.ca/environment/en/subject/hazardous\\_waste/STDPROD\\_080435.html](http://www.ene.gov.on.ca/environment/en/subject/hazardous_waste/STDPROD_080435.html)

#### 4. Proposed End-of-Life Vehicle Depollution Standards and Depollution Notice

The MOE is proposing regulatory standards for the depollution of end-of-life vehicles in Ontario. It is proposed that all ELVs that are ultimately crushed or shredded in Ontario, be subject to the depollution standard below.

##### ***Proposed ELV Depollution Standards***

Prior to an end-of-life vehicle being flattened, crushed or shredded it must be depolluted through the removal of the following materials or components:

- fuels
- lubricating oils including transmission fluids
- brake and steering fluids
- coolant fluids
- refrigerants
- windshield washer fluid
- lead-acid batteries or other batteries that are integral to starting or powering the vehicle
- oil filters
- mercury-containing convenience lighting switches and anti-lock braking system (ABS) sensor modules
- tires
- lead battery cable connectors, tire weights and any other lead containing parts.

The requirement to remove the listed materials or components before crushing or shredding is comparable with other jurisdictional requirements and/or best practices. This includes requirements under the European Union *End-of-Life Vehicle Directive*, British Columbia’s

<sup>2</sup> Note that Section 5 of this paper proposes to allow ELV processing facilities (that meet specific criteria) to register their activities in the EASR rather than having to obtain a waste approval.

*Vehicle Dismantling and Recycling Industry Environmental Planning Regulation* as well as the *Canadian Auto Recyclers' Environmental Code (CAREC)* and requirements or guidelines developed by Vermont, New York, California and Ohio. The MOE may consider adding other vehicle components to the list above (e.g. materials subject to waste diversion programs such as aftermarket audio/video devices) depending on the comments received on this proposal.

To provide documented evidence that the ELV has been depolluted, the MOE is proposing to require by regulation that all depolluted ELVs be accompanied by a notice that at a minimum contains the information noted in the text box below. Note that the notice could be prepared to apply to a single ELV or to a group of ELVs that have been depolluted.

#### ***Proposed ELV Depollution Notice***

A depollution notice must be generated for any depolluted ELV. The notice must include the following information:

- the business name and address of the ELV processing site where the depollution occurred;
- the Environmental Activity and Sector Registry Number or Environmental Compliance Approval Number associated with the ELV processing facility that conducted the depollution (these approvals will be discussed further in Section 5);
- the date on which ELV depollution was completed for each vehicle; and
- the vehicle identification numbers (VIN) of all ELVs that are part of the shipment.

The proposal would work as follows for crushing and shredding operations:

#### ***Crushing Operations***

Any operation that crushes vehicles received from another facility that undertook the depollution must retain a copy of the depollution notice issued from that facility at the site. If the crushed vehicles are transferred to another facility, such as a metal shredding operation, a copy of the notice must be conveyed to the receiver.

#### ***Shredding Operations***

Metal shredding operations must also receive and hold copies of the depollution notices that include all the vehicles that are received having been depolluted elsewhere.

It is important that businesses keep records of all ELVs that they depollute as well as any depolluted ELVs that they may receive, as a way to ensure that depollution has occurred as well as for compliance purposes. The above approach sets a standard, province-wide notice requirement. Businesses would have to maintain their records and only submit them to the MOE if requested (e.g. for the purposes of an audit or inspection). While minimum content requirements of the notice are proposed, the method would be flexible so that industry could be innovative in meeting this requirement. For instance, the notice could be conveyed electronically.



## 5. ELV Processing Facilities and the Environmental Activity and Sector Registry (EASR)

### 5.1 Background and Approach

In October, 2011, the MOE implemented the EASR as part of its risk-based environmental approvals program, which allows businesses to register prescribed activities in the EASR instead of seeking an ECA through the normal application and review process. The EASR is a public, web-based registry system, and is intended for activities that are routine, well understood and have minimal environmental impacts when complying with standard regulatory requirements.

Persons who are engaging in a prescribed activity are required to register the activity in the EASR and comply with eligibility and operating requirements that are set out in regulation. These requirements could be comprised of, but not limited to, design requirements, pollution control measures and best management practices in the industry. Persons engaging in a prescribed activity are also required to maintain their registrations with up-to-date information.

#### ***EASR Eligibility Requirements and Operating Requirements***

To clarify the interpretation of the sections that follow, it is important to note that the EASR involves two types of rules: eligibility requirements and operating requirements.

- Eligibility requirements are rules that describe the range of activities that can be registered in the EASR. If the eligibility requirements are met, the activity is subject to the EASR regulation, including the requirement to register. If the eligibility requirements are not met, the activity requires an Environmental Compliance Approval (ECA).
- If an activity is eligible, operating requirements specified in the EASR regulation must be met. The operating requirements can include required pollution controls, operational practices and other conditions to mitigate potential negative environmental impacts.

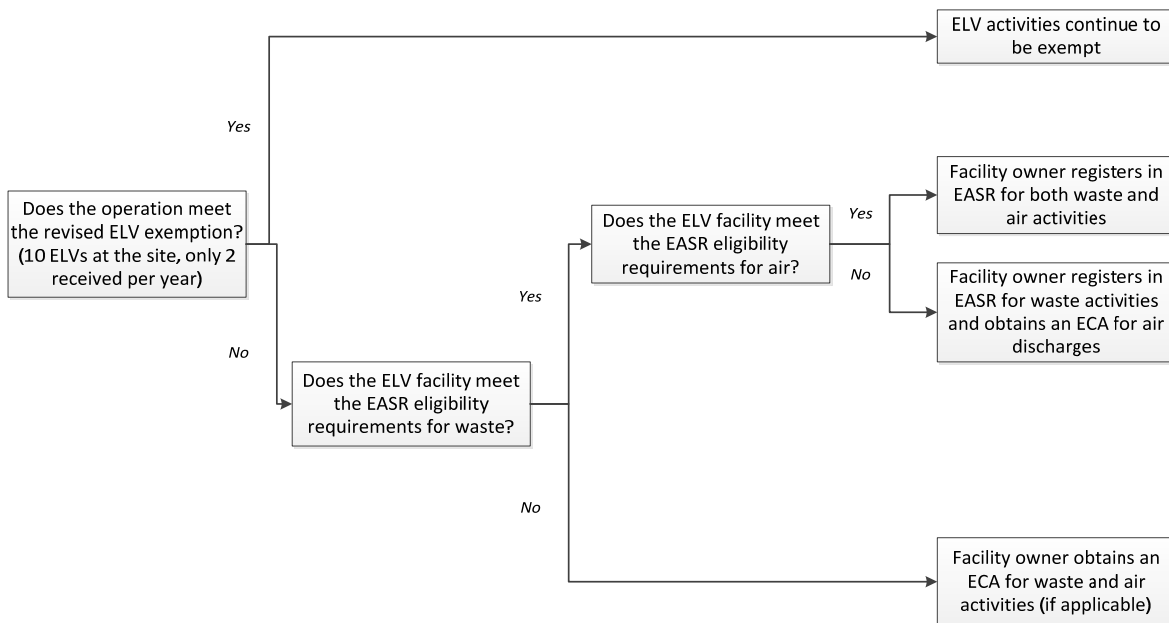
When developing a regulation to include a new activity/sector on the EASR, the MOE undertakes a comprehensive technical analysis and consultation process. This process includes the following steps:

1. Detailed scoping and technical assessment of activity/sector including:
  - engineering analysis;
  - risk evaluation and modeling;
  - jurisdictional review; and
  - evaluation of local concerns/complaints and past administrative compliance with requirement to obtain an approval.
2. Development of draft Registry requirements.
3. Public consultation on a technical discussion paper describing draft requirements (this technical discussion paper).

4. Development of a draft regulation.
5. Public consultation on a draft regulation.
6. Finalizing of regulation and implementation.

It is important to note that while Steps 3 and 5 specifically provide for broad public input through comment on postings on the Environmental and Regulatory Registries, the MOE is also engaging with relevant interested groups (industry, associations, Aboriginal organizations/communities and technical specialists) to inform each step of the process.

The MOE is proposing to prescribe waste and air activities in respect of ELV processing facilities for the purposes of the EASR, rather than require each facility to individually prepare an application for an ECA for those activities. The proposed EASR eligibility requirements have been set out with the intent of trying to capture the vast majority of ELV processing facilities under the EASR registration process. However, if a facility does not meet the eligibility criteria for waste or air/noise, they may require additional approvals. To clarify which sites continue to be exempt, which can register in EASR and those that need additional approvals, a decision tree in Figure 5.1 is provided below.



**Figure 5.1:** Proposed EASR/Approvals Pathways for ELV Processing Facilities

It should be noted that as the Ontario Water Resources Act (OWRA) applies today, it is proposed that facilities would continue to require separate approvals (if required) for sewage works if they discharge to the natural environment (includes ditches, storm sewers). Due to the varying nature of the sewage management that may occur at different facilities and their surrounding environment, the MOE is not proposing standard EASR requirements for sewage works at this time.

## 5.2 Proposed Eligibility Requirements

The activities at ELV processing facilities that are to be prescribed for the EASR are defined in the box below.

### ***Prescribed Activities***

- The use, operation, establishment, alteration, enlargement or extension of an end-of-life vehicle processing facility that meets the eligibility criteria for waste management.
- The use, operation, construction, alteration, extension or replacement of any plant, structure, equipment, apparatus, mechanism or thing that discharges or may discharge a contaminant to air that is used at an end-of-life vehicle processing facility that meets the eligibility criteria for air/noise.

In the description of prescribed activities, language has been selected to align with the legal requirements under the EPA for waste and air approvals. This is done to convey that if a facility is an ELV processing facility and it meets the eligibility criteria for air and waste, it will not need any further waste or air approvals.

Eligible processing of ELVs that may take place at the ELV processing facility includes all dismantling and depolluting activities as well as crushing/compaction of the dismantled ELV hulk. All sites where these activities take place are proposed to be subject to the registration requirements for the registry with some exceptions provided in the additional eligibility criteria outlined below.

As noted in section 2 above, some ELV sites engage in the crushing/compaction of vehicles. The crushing equipment can be permanently located at the site or it can be brought to the site for temporary use by a mobile operator. As per the prescribed activities above, the use of crushing equipment at the site is prescribed for EASR as part of this proposal. Mobile crushers brought to the site can be operated under the EASR site registration but may still require an Environmental Compliance Approval for any air and noise emissions when operated at other locations that are not subject to the EASR regime for ELV processing sites.

### ***Eligibility Criteria for Waste Management***

*ER-1: The facility does not engage in the following waste management activities:*

- disposal of waste by depositing it into the land (i.e. landfill waste); and*
- processing waste via thermal treatment.*

While it is not expected that ELV processing facilities would engage in permanent waste disposal or thermal treatment of wastes (i.e. incineration), ER-1 ensures that these waste management activities are not inadvertently included in the EASR.

It should be noted that there are no plans to change the current approvals regime or regulatory requirements within Regulation 347 related to the use of waste derived fuels for this proposal.

*ER-2: The facility only receives and/or manages the following wastes:*

- end-of-life vehicles or parts thereof;*
- metal; and/or*
- the following waste appliances: refrigerators; freezers; stoves; ovens; clothes washers; clothes dryers; dishwashers; air conditioners; barbecues; heaters; microwave ovens; food processors; lawn mowers or similar household appliances.*

It is recognized that in addition to ELVs some sites may also accept and/or process other metal waste (i.e scrap metal). ER-2 is proposed to allow ELV processing facilities that register their activities to accept and manage other forms of scrap metal.

It should be noted that there are other waste materials and waste management activities that have been designated as exempt for the purpose of waste management requirements under Regulation 347 and the EPA. For example, waste printed circuit boards may be exempt under circumstances set out in paragraph 12 of subsection 3 (2) in Regulation 347. These other exemptions may apply to other materials received at the facility and ER-2 should not be interpreted as changing what is currently exempt. If another material is an exempt waste it may be received and managed so long as it continues to be exempt.

*ER-3: The facility does not accept or manage any PCB waste, radioactive waste or biomedical waste.*

Although ER-2 allows for other wastes to be managed at the site, ER-3 is proposed to prevent these sites from accepting and managing PCB, radioactive or biomedical wastes. This would also include waste that contains these wastes as well (e.g. a transformer contaminated with PCBs).

#### *Eligibility Related to Air/Noise Emissions*

Air and noise emissions from ELV processing facilities can be mitigated through control equipment, facility design, adherence to other existing regulations and best management practices. To limit the potential impacts from onsite equipment that may cause air and/or noise emissions, the following eligibility criteria are proposed:

*ER-4: The facility must not use any shredding or rotary shearing/shredding equipment.*

The use of rotor type shredding and shearing equipment can result in air and noise emission impacts to the environment. Due to the complexity and site-specific nature of this type of processing it is proposed that facilities engaging in shredding/shearing continue to require Environmental Compliance Approvals to cover these air/noise related activities.

*ER-5: Any torching or lancing of materials done at the facility must:*

- i. be done at a minimum distance of 10 metres away from all property boundaries of the facility;*  
*and*
- ii. not be done for more than 4 hours on any day under normal operation.*

As noted previously in the paper, air emissions from the use of torching and lancing equipment could potentially have negative off-site environmental impacts. To mitigate potential impacts, ER-5 is proposed to limit the use of this equipment. A setback of 10 meters is proposed to prevent torching and lancing activities from being done close to property lines of the site which could be located next to residential property or other receptors. A four hour daily usage limit is proposed since a majority of sites conduct torching and lancing for short durations.

*ER-6: Crushing equipment that is operated for any period of time on more than 7 days in any 3 month period must be:*

*i. located a minimum distance of 250 m from the property boundary of the closest noise receptor;*

*OR*

*ii. have a barrier with a minimum density of 20 kg/m<sup>2</sup> installed that blocks the line of sight between the crushing equipment and the receptor.*

The crushing of ELVs can produce levels of noise at the facility that may impact neighbouring properties. However, most ELV processing facilities do not use crushing equipment on a daily basis nor may they have permanent crushing equipment located at their site. ER-6 proposes criteria for crushing equipment if it is used more than 7 days in any 3 month period. As will be seen in the operating requirements, the MOE is proposing to also restrict when the equipment can be operated as well as require records on when it is used.

### 5.3 Proposed Operating Requirements

The following are proposed operating requirements that persons operating EASR-eligible ELV processing facilities will need to follow. They are intended to minimize environmental impacts and have been specified because they support the analysis used to generate the eligibility requirements noted above. These requirements are in addition to the general depollution standard and depollution notice requirements proposed in Section 4 of this paper.

#### *ELV Processing Requirements*

Contamination can occur at sites where materials are stored outdoors or the processing of ELVs is done outdoors where precipitation can come in contact with materials or hazardous liquids. Operating requirements are proposed below to mitigate soil, surface and groundwater contamination.

*OR-1: Depollution of ELVs must be conducted inside a building or under a covered structure and on an impermeable surface.*

Conducting depollution inside or under a covered structure will help prevent spilled or leaked fluids from entering the environment and/or contaminating groundwater. An impermeable surface is intended to be made of material that will prevent the migration of leaked or spilled fluids into the ground (e.g. concrete).

*OR-2: Any equipment used for crushing of waste must be able to capture and contain fluids released during crushing. Crushing equipment must also be located on an impermeable surface that is capable of preventing fluids released during crushing from leaving the area where the equipment is located.*

*OR-3: All flattened or crushed ELVs that are stored at the site must be stored on an impermeable surface that is capable of preventing fluids released from the ELVs leaving the area where they are stored.*

Crushing of ELVs releases fluids that may be present even after depollution has occurred. OR-2 is intended to ensure that the crushing equipment has the ability to capture and contain these fluids. The crushing equipment must also be located on an impermeable surface that has the

ability to contain any spilled fluids. If a facility owner intends to store the hulks once they are crushed they must also be stored on an impermeable surface as OR-3 requires.

### *Waste Storage Requirements*

The proper storage of waste is critical to prevent contamination of the environment. The following operating requirements are proposed to mitigate risks from waste storage.

*OR-4: Each type of fluid collected during the dismantling of waste shall be collected and stored in separate sealed containers. All containers stored at the site must be stored above-ground and on an impermeable surface located inside a building or under a covered structure.*

*Secondary containment must be provided for all containers storing fuels or fluids.*

*Secondary containment can consist of double-walled tanks. If storage areas are designed to provide secondary containment they should be sized so as to provide a minimum impoundment volume equal to the greater of:*

- 110% of the volume of the largest storage container; or*
- 100% of the volume of the largest storage container plus the greater of 10% of the volume of the largest tank or 10% of the aggregate volume of all remaining tanks.*

*OR-5: Wet parts shall be stored on an impermeable surface located inside a building or under a covered structure.*

OR-4 ensures that storage containers and tanks are protected from weather conditions and that the potential hazards from mixing of liquids are minimized. Requirements for secondary containment are in line with the MOE's Guidelines for Environmental Protection Measures at Chemical and Waste Storage Facilities (PIBS #5113e). Wet parts, which include internal components that are contaminated with liquids such as motor oil should also be stored in accordance with OR-5 to prevent migration of spilled or leaked fluids to the environment. OR-4 and OR-5 are in line with current requirements in the CAREC.

*OR-6: Any cleaning solutions or materials used to clean and maintain equipment used or operated at the facility or to clean up spills and cleaning supplies that come in contact with the cleaning solutions or a spill before disposal shall be stored in sealed containers when not in use.*

ELV processing facilities can use and store varying amounts of materials required for cleaning parts and equipment as well as chemicals to clean up spilled fluids. OR-6 is proposed to limit potential emissions from these materials as well as to ensure their proper handling and storage and is based on best management practices.

OR-7 through OR-11 contain additional requirements for the handling of hazardous materials processed at an ELV processing facility that may cause environmental or human health impacts if released to the environment.

Some materials that require special handling at an ELV site include mercury switches, batteries, fuels and other automotive fluids, antifreeze, lead containing parts, refrigerants and tires. With respect to refrigerants and tires there are existing regulatory requirements for both that facilities may be currently required to follow.

Regulation 463/10 – Ozone Depleting Substances and Other Halocarbons has several requirements for refrigerants listed in the regulation that may apply in respect of any refrigerants that may be on the ELV processing site.

For tires, section 6 of Regulation 347 states that any facility that stores or stockpiles more than 5000 tires or 300 cubic metres of tires must have an ECA as a waste transfer and processing site. There are additional requirements for tire storage outlined in other Ontario regulations such as the Ontario Fire Code due to fire hazards from storing tires.

*OR-7: If subject waste is stored for longer than 90 days at the site, the local MOE district office must be notified.*

*OR-8: Subject waste must not be stored on site for longer than 24 months.*

ELV sites process or recycle some fluids and materials that are classified as subject waste in Regulation 347. It is currently a requirement under Regulation 347 that a notice is sent to the Regional MOE Director (of the local Regional/District office) the first time subject waste is stored on site for more than 90 days and updated records must be kept at the site. In addition, if subject wastes are stored on site for more than 24 months, an application for an Environmental Compliance Approval must be made. A best management practice to minimize potential environmental impacts and reduce the likelihood of spills or contamination is to limit the amount of subject waste that is stored on site, and to schedule regular pickups from an approved hauler or recycler.

OR-7 and OR-8 mirror requirements in Regulation 347. It should be noted that OR-8 is not intended to apply to certain waste fluids such as windshield washer fluid that facilities may be selling or giving away to customers.

*OR-9: All lead-containing materials, excluding batteries must be stored in containers that have a cover or are stored inside a building or under a covered structure.*

*OR-10: All lead-acid batteries shall be stored in impermeable, acid resistant containers that have a cover or are stored inside a building or under a covered structure. Other batteries that are removed must also be stored inside a building or under a covered structure. Measures are required to prevent short circuiting (e.g. capping battery terminals).*

*OR-11: All mercury-containing parts that are removed shall be stored in impermeable and sealed containers stored inside a building.*

*OR-12: All storage containers described in this section must have a label that identifies their contents.*

OR-9, OR-10 and OR-11 are similar to requirements in other jurisdictions or in best practice guidelines including the CAREC. OR-11 is primarily intended for items such as mercury switches. Proper labelling of containers as per OR-12 is important for carriers, receivers, employees, and emergency personnel.

### *Spill Prevention and Cleanup Requirements*

The following requirements are proposed to ensure spills are cleaned up if they occur and that spill response planning is undertaken at the facility. These requirements are in addition to existing requirements for spills response given in the EPA (Part X).

*OR-13: All storage areas at the facility must be inspected at a minimum once per week for spills and/or leaks.*

*OR-14: Spilled fluids or fuel shall be prevented from entering floor drains at the facility that may discharge to the natural environment, a stormwater management system or a storm sewer.*

*OR-15: The facility must have a spills prevention and management plan setting out, at a minimum, the following information:*

- i. procedures for the cleanup of a spill of any chemical or waste that will be present at the facility;*
- ii. materials to be used to clean up spills;*
- iii. the location of all floor drains;*
- iv. the location of materials that may be used to temporarily seal floor drains in the event of a spill; and*
- v. the names of the persons who are to be notified in the event of a spill*

OR-13 is proposed for ensuring routine inspections at the facility are conducted to identify spilled fluids or stored parts and equipment that may be leaking fluids. OR-14 and OR-15 above are intended for the proper management of a spill once it has been identified.

### *Requirements to Mitigate Air/Noise Emissions*

*OR-16: Torching, lancing and crushing equipment shall only be operated at the site between 7am-7pm.*

OR-16 is proposed to further limit potential air or noise impacts from the use of the listed equipment.

*OR-17: The following equipment shall be used, operated and maintained in a manner that satisfies the recommendations of the manufacturer of the equipment:*

- i. equipment used to flatten or crush ELVs; and*
- ii. any equipment used to mechanically remove fuel or fluids from an ELV.*

Proper maintenance of the equipment in OR-17 will assist in avoiding spills or other problems caused by lack of maintenance.



*OR-18: For management of fugitive dust on facility roads and unpaved areas:*

- i. for unpaved areas, a dust suppression program is implemented to effectively manage dust in accordance with site conditions;*
- ii. for paved roads, a road watering and/or road sweeping program is in place to effectively manage dust in accordance with site conditions;*
- iii. a speed limit of 25 kilometers per hour, or more stringent, is posted and enforced at the site;*
- iv. establish and maintain a vegetative cover in areas not used for site operations; and*
- v. good housekeeping practices are employed to ensure that there is no track-out of particulate matter on roadways adjacent to the entry points to the facility.*

Facilities can generate dust from the movement of trucks and equipment on any unpaved roads that exist on the site. OR-18 is intended to prevent fugitive dust emissions from impacting air and water quality.

### *Personnel Training Requirements*

*OR-19: The owner of the facility or manager of the facility if the owner does not manage the facility and all employees that engage in ELV processing activities at the facility must receive training on the following:*

- i. relevant waste management legislation, regulation, guidelines and environmental management practices;*
- ii. materials accepted on site;*
- iii. major environmental concerns pertaining to the dismantling of vehicles;*
- iv. good housekeeping practices;*
- v. occupational health and safety concerns pertaining to the materials being handled;*
- vi. hazardous materials handling and identification;*
- vii. spills prevention and response plans;*
- viii. practices to ensure appropriate process water and stormwater management;*
- ix. general inspection/maintenance requirements;*
- x. complaint response procedures; and*
- xi. documentation/manifesting procedures.*

*OR-20: The facility owner must keep documentation and records related to the site personnel training requirements in OR-19. Records would include the materials used for training and an ongoing log of the site personnel who have been trained.*

An employee training program is proposed in OR-19 to enhance the level of compliance with regulatory requirements and to prevent spills through knowledge of the required practices in dismantling vehicles.

### *Other Documentation Requirements*

*OR-21: The facility owner will be required to keep inspection, maintenance and repair records with respect to any of the equipment noted in OR-17 that is permanently kept at the facility.*

*OR-22: Any complaints received must be addressed in the following ways:*

- 1) The local MOE District Manager must be notified of each environmental complaint and the measures taken to address the cause of the complaint. This notification is to be completed within TWO business days of the receipt of the complaint.*
- 2) A complaints log must be kept in which the following information is recorded:*
  - a record of the date and time each complaint was received;*
  - a record describing the complaint;*
  - a record describing the measures taken, if any, to address the complaint; and*
  - if it is a written complaint, a copy of the complaint.*

*OR-23: The facility owner must keep a record of all end-of-life vehicles received at the facility. This record must include, at a minimum:*

- the VIN number of each vehicle;*
- the date that depollution of the end-of-life vehicle was completed; and*
- the person/business to which the depolluted vehicle was transferred.*

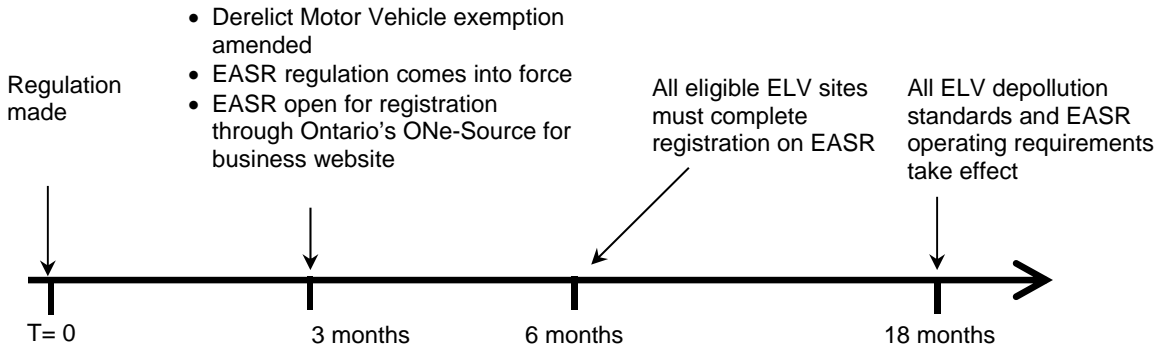
*OR-24: The facility owner must keep a record of each day that crushing equipment is operated at the facility.*

OR-21 through OR-24 are documentation and record keeping requirements that must be followed by each facility. OR-22 has been implemented in all EASR regulations to date for other activities and sectors and ensures proper documentation of complaints. OR-23 is proposed to complement the requirement for issuing standard depollution notices. This will also be for comparison of issued depollution notices and the records maintained at the site, if appropriate, for compliance purposes. OR-24 is proposed to ensure compliance with ER-6. For the records maintained in OR-22 to OR-24, the records are proposed to be kept for a period of 5 years from the date they are created.

## **6. Phased Implementation and Compliance Approach**

It is recognized that existing ELV processing facilities would need time to transition to the new regime, including being subject to new requirements and in some cases modify their facilities to comply with the proposed requirements.

For this reason the implementation timeline is proposed in Figure 6.1. This outline of timing would be dependent on the date that regulatory changes are approved, should the proposal move forward. It is important to note that this phased implementation allows time for making the sector aware of the changes (first 3 months), to undertake the online registration process (3-6 months), and to make the facility and operational changes needed to comply with the new standards (to 18 months).



**Figure 6.1:** Proposed Implementation Timeline

*Compliance Approach*

The MOE's compliance approach for end-of-life-vehicle processors will be risk-based in accordance with the MOE's Compliance Policy and with consideration for the phased implementation of the proposed requirements. This approach will utilize existing tools to assess and enforce compliance such as compliance assistance, audits, inspections, orders and voluntary/mandatory abatement to manage compliance-related matters.

In addition to the compliance actions taken by the ministry, the online EASR registry enables increased transparency, allowing the public to search geographically to find registrations related to facilities in their local community.