

The cover features a dark green background with several overlapping, lighter green circular shapes. At the top, there are several thin, curved lines in a light yellow-green color. At the bottom, there are several thin, curved lines in an orange-brown color. The text is centered and white.

National Code of Practice

for Automotive Recyclers Participating
in the National Vehicle Scrappage Program

Created for Environment Canada
by the Automobile Recyclers of Canada

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1.0 PURPOSE

This national code of practice is intended for automotive recyclers participating in the National Vehicle Scrappage Program. It was developed to ensure that recyclers have the most relevant information and tools to prevent hazardous materials contained in end-of-life vehicles from contaminating our water, land, and air during and after the vehicle recycling process.

The code has three goals:

- to convey the legal and mandatory requirements before, during, and after the recycling process;
- to summarize best management practices; and
- to ensure that there is a consistent set of practices that are aligned, as much as possible, with federal, provincial, and municipal laws and regulations as well as with industry stewardship programs, where applicable.

Automotive recyclers that follow the National Code of Practice will realize significant improvements in environmental practices as well as efficiencies within their own businesses.

2.0 INTRODUCTION

There are approximately 20 million personal vehicles registered in Canada. Of them, about 5 million were manufactured before 1996. These older vehicles were not designed to today's stringent smog-forming emission standards and consequently produce 19 times more air pollution than a comparable vehicle built after 2004. Although these older vehicles make up less than one-quarter of the vehicles on the road, they generate as much as half of the smog-forming pollutants.

That is why the Government of Canada, through the stewardship of Environment Canada, is supporting the National Vehicle Scrappage Program—an environmental program that offers Canadians rewards to scrap their old, high-polluting vehicles voluntarily.

To ensure that the older, high-polluting vehicles are dismantled and recycled according to today's environmental standards, the National Vehicle Scrappage Program is working with the Automotive Recyclers of Canada to create a network of automotive recyclers that are trained and have agreed to adopt the National Code of Practice for their daily operations.

The automotive recyclers involved in the National Vehicle Scrappage Program must understand, respect, and demonstrate compliance with this national code of practice.

Environment Canada's mandate is to help prevent pollution and protect the health and well-being of our natural environment. Environment Canada and its partners rely on stakeholders to help make the National Vehicle Scrappage Program successful by properly dismantling and recycling older vehicles and preventing harm to our environment.

The Automotive Recyclers of Canada developed this national code of practice on behalf of Environment Canada.

3.0 TARGETS/RESULTS

The Government of Canada is aiming to have at least 50,000 vehicles scrapped per year voluntarily across Canada. The recycling of the steel from 50,000 vehicles/year in the National Vehicle Scrappage Program will save about 125,000 tonnes per year of carbon dioxide because it is more energy efficient to manufacture steel products from the steel recycled from vehicles than it is to produce new steel from iron ore.

In addition, the National Vehicle Scrappage Program will ensure that the following hazardous materials are recovered annually and recycled in an appropriate manner rather than being released into the environment, where they can cause environmental impacts:

- 250,000 litres of oil and lubricants;
- 150,000 litres of antifreeze;
- 1 million kilograms of lead;
- 250,000 tires;
- 50,000 litres of windshield washer fluid;
- 6,500 kilograms of refrigerants equivalent to approximately 16,250 tonnes of carbon dioxide; and
- 50 kilograms of mercury.

(Numbers above are estimates.)

4.0 DEFINITIONS

Approved refrigerant disposal technician means any person who has successfully completed a CFC/HCFC/HFC refrigerant disposal training program approved by Environment Canada.

Automotive recycler means any person or commercial enterprise that crushes, flattens, or dismantles for parts more than five end-of-life vehicles within a twelve-month period.

Crusher means a mobile or stationary mechanical device that crushes or flattens hulks prior to transportation.

Dismantling area means a covered area with secondary containment where wet parts and hazardous materials are removed.

End-of-life vehicle means a vehicle that has been offered through the program.

Hazardous materials include but are not limited to the following materials (solid, liquid or gas):

- oils, greases, solvents, brake fluid, fuel, and other liquid hydrocarbons;
- active ingredients in antifreeze and windshield washer fluid;
- refrigerants;
- lead–acid batteries, lead tire weights, lead battery cables;
- tires;
- mercury switches; and
- soils, absorbents, and other solids (e.g., sludges) containing hazardous materials.

Hulk means an end-of-life vehicle with hazardous materials removed and whose vehicle identification number (VIN) has been reported to the provincial/territorial authority responsible for de-registering VINs.

Licensed transporter means a transporter licensed by the provincial/territorial government to transport waste and/or hazardous solid and/or liquid materials from the vehicle recycling facility to the proper handling/recycling facility. A copy of the transporter's licence from the province/territory to transport waste oil should be kept on site.

Primary container means any part or container containing liquid hazardous materials.

Sealed part means a part that contains liquid hazardous materials that is sealed and not leaking. Sealed parts include:

- differentials; and
- shock absorbers.

Secondary containment means an impervious retainer or container that has been designed to hold 110% of the maximum volume of liquid hazardous materials stored within a primary container or 25% of the maximum volume of liquid hazardous wastes stored in the area, whichever is larger.

Water bodies means freshwater (e.g., ditch, stream as defined by provincial acts), groundwater (e.g., aquifer), or marine environment on, adjacent to, or underneath the automotive recycler's property. Does not apply to runoff or standing water found on the property.

Wet part means a part that contains or contained liquid hazardous material or a sealed part that is leaking. Excludes empty:

- fuel tanks that have been drained and fuel pump removed;
- windshield washer fluid containers;
- radiator overflow containers; and
- brake master cylinders and power steering assemblies.

5.0 ENVIRONMENTAL IMPACTS OF VEHICLES' FLUIDS AND SOLIDS

End-of-life vehicles contain a range of substances that are hazardous to the environment if they are not properly managed and recycled. The following is a summary of the impact these contaminants can have on the environment.

5.1 Refrigerants

Refrigerants found in the air conditioning systems of vehicles typically contain the refrigerants HFC-134a (1,1,1,2-tetrafluoroethane) and to a lesser extent CFC-12 (dichlorodifluoromethane), commonly known as R-12 or Freon-12.

CFC-12 was commonly used in vehicle air conditioning units prior to 1996. Its use was banned because of its significant depleting impacts on the Earth's stratospheric ozone layer. The stratospheric ozone layer is important in filtering out the harmful UVB wavelengths of ultraviolet light. Increased UVB radiation is generally accepted to be a contributing factor to skin cancer and increased ground-level ozone, both of which are significant health risks to humans. Increased UVB radiation also affects the growth of plants on land and of phytoplankton in the water.

CFC-12 is a powerful greenhouse gas. Its global warming potential is 10,900. This means that 1 kilogram of CFC-12 is equivalent to 10.9 tonnes of carbon dioxide gas.

Since 1996, HFC-134a has replaced CFC-12 in air conditioning units because it does not deplete the Earth's ozone layer; however, HFC-134a is also an important greenhouse gas. Its global warming potential is 1,180, meaning that 1 kilogram of HFC-134a is equivalent to 1.18 tonnes of carbon dioxide gas.

Because the National Vehicle Scrappage Program is focused primarily on pre-1996 vehicles, a significant portion of the vehicles with refrigerants will contain CFC-12. Consequently, the management of refrigerants by automotive recyclers is an important component of the National Code of Practice.

5.2 Oil, Antifreeze, and Other Hazardous Fluids

Hazardous fluids include waste oils, fuels, other lubricants, antifreeze, brake fluid, solvents, and windshield washer fluid. Failure to remove the hazardous fluids could result in contamination of soils and/or water, resulting in impacts on drinking water supplies and fish habitat.

5.3 Lead

There are three main sources of lead in end-of-life vehicles: lead–acid batteries, battery cable ends, and tire weights. In addition, lead–acid batteries contain concentrated hydrochloric acid and are a hazard to the environment and worker safety.

Lead is a toxic compound and, if it is left unmanaged, it can contaminate soil and groundwater. People are mainly exposed to lead by breathing it from the air or by ingesting food, water, soil, or dust that had been contaminated with lead. Small amounts of lead can be harmful, especially to infants, young children, and pregnant women. Symptoms of long-term exposure to lower lead levels may be less noticeable but are still serious. Anemia is common, and damage to the nervous system may cause impaired mental functions. Other symptoms are appetite loss, abdominal pain, constipation, fatigue, sleeplessness, irritability, and headaches. Continued excessive exposure, as in an industrial setting, can affect kidney function.

5.4 Tires

On their own, tires do not constitute an environmental threat. However, a tire fire has significant impacts on air, land, and water quality. As well, tire piles provide an excellent breeding ground for mosquitoes that may carry the West Nile virus.

5.5 Mercury

Small amounts of mercury are contained in the convenience light switches under the hood and trunk as well as in anti-lock brake sensors and tire balancing products.

The health effects of elemental mercury depend on the length and type of exposure. For example, if you were to swallow liquid elemental mercury accidentally from a broken fever thermometer, little mercury would be absorbed by your body. However, if you were to inhale the vapour from that mercury spill, it would be more easily absorbed into your body, potentially causing health problems. At higher concentrations, mercury vapour can cause damage to the mouth, respiratory tract, and lungs, and it can lead to death from respiratory failure.

As little as 0.07 milligrams of mercury can have harmful effects on humans. Mercury is especially toxic to young children and women of childbearing age because it inhibits the development of the brain and nervous system.

Mercury can contaminate soils and water bodies, and it poses an air quality problem during the shredding of vehicle hulks by steel recyclers/manufacturers. If mercury switches are not removed prior to arrival at steel recyclers, the contained mercury is released to the air when the vehicle is shredded. Further, 1 gram of mercury, the amount contained in a mercury switch, mixed evenly in a body of freshwater, could contaminate as much as 3.8 million litres beyond safe limits for the protection of aquatic life (0.26 micrograms of mercury per litre of water).

6.0 SUMMARY OF LEGAL AND OTHER REQUIREMENTS

Automotive recyclers in the National Vehicle Scrappage Program are required to follow this code of practice. Although the code itself is not mandated by any particular law or regulation, it takes into account a wide variety of policies, acts, regulations, and requirements. An automotive recycler who is not in compliance with federal, provincial/territorial, or local laws and regulations could be financially liable for the activities and could face federal charges under the *Transportation of Dangerous Goods Act, 1992*, the *Canadian Environmental Protection Act, 1999* and its regulations, or the *Fisheries Act*. That is why it is important for automotive recyclers to know and understand the laws and regulations that govern their area as well as to work with this code of practice.

6.1 Federal Laws

There are a variety of federal acts affecting vehicle recycling:

- *Transportation of Dangerous Goods Act, 1992*;
- *Canadian Environmental Protection Act, 1999* (CEPA); and
- *Fisheries Act*.

Within CEPA, there are four regulations that are germane to automotive recyclers:

- *Ozone-depleting Substances Regulations, 1998*;
- *Federal Halocarbon Regulations, 2003*;
- *Interprovincial Movement of Hazardous Waste Regulations* (2002); and
- *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* (2005).

In addition, on December 29, 2007, the Minister of the Environment published a notice under CEPA in the *Canada Gazette* requiring that vehicle manufacturers and steel mills prepare and implement pollution prevention plans to deal with releases of mercury from mercury switches in end-of-life vehicles processed by steel mills. The focus will be on the recovery of mercury switches located in hood and trunk convenience lights and in anti-lock brake sensors.

In addition to the above acts and regulations, automotive recyclers located on reserves as defined in the *Indian Act* are subject to the *Indian Reserve Waste Disposal Regulations* (IRWDR). The regulations require the Minister of Indian Affairs and Northern Development (or the council of a band if authorized by the Minister) to issue a permit for the storage of waste. Finally, automotive recyclers located on reserves subject to the *Indian Act* must adhere to the Contaminated Sites Management Policy of Indian and Northern Affairs Canada.

The Appendix has a more detailed explanation of the federal environmental laws that are incorporated into this national code of practice.

6.2 Provincial and Territorial Laws

All provincial and territorial jurisdictions manage hazardous residual substances. The primary legislation for provinces and territories is summarized below.

British Columbia:	<i>Environmental Management Act</i>
Alberta:	<i>Environmental Protection and Enhancement Act</i>
Saskatchewan:	<i>Environmental Management and Protection Act, 2002</i>
Manitoba:	<i>The Dangerous Goods Handling and Transportation Act</i>
Ontario:	<i>Environmental Protection Act</i>
Quebec:	<i>Environment Quality Act</i>
New Brunswick:	<i>Clean Environment Act</i>
Nova Scotia:	<i>Environment Act</i>
Prince Edward Island:	<i>Environmental Protection Act</i>
Newfoundland and Labrador:	<i>Environmental Protection Act</i>
Yukon:	<i>Environment Act</i>
Northwest Territories:	<i>Environmental Protection Act</i>
Nunavut:	<i>Environmental Protection Act</i>

Additionally, four provinces require automotive recyclers to register with the government or to obtain approval to operate.

- In Prince Edward Island, automotive recyclers are governed by the *Automobile Junk Yards Act*.
- In Quebec, automotive recyclers are required to obtain a certificate of authorization issued by the Ministère du Développement durable, de l'Environnement et des Parcs in accordance with section 22 of the *Environment Quality Act*. The Quebec government has issued a guide for automotive recyclers to help them obtain regulatory approvals.
- In British Columbia, automotive and steel recyclers are governed by the *Vehicle Dismantling and Recycling Industry Environmental Planning Regulation*. The B.C. Ministry of Environment has published a guide for automotive recyclers to help them obtain regulatory approvals. For more information on the guide for automotive recyclers, go to www.env.gov.bc.ca/epd/industrial/regs/vehicle/index.htm#1.
- In Nova Scotia, commercial salvage yards operating in an area of 0.25 hectares or greater are required to obtain approval from the N.S. Ministry of Environment.

Most provinces and territories do not consider automotive recyclers to be waste management facilities or require them to obtain consignor identification numbers or approvals in order to operate. These exemptions are primarily because the quantity of hazardous materials recovered by automotive recyclers in a 30-day period is below the registration threshold set by each province/territory.

Finally, most provinces and territories manage hazardous residuals in similar ways. The common approaches of the provinces and territories are as follows.

- Hazardous fluids must be stored in a safe and secure manner, transported by licensed carriers to recycling facilities, and manifested. Spills over thresholds specific to each province/territory must be reported to the provincial/territorial emergency program. The recovered materials are recycled or refined by waste management companies into new products.
- Refrigerants must be tested and removed by a qualified technician.
- Hazardous solids such as contaminated soils and lead products must be manifested and transported by licensed transporters. The contaminated soils are either disposed of in a secure landfill or reclaimed through various decontamination processes. Lead products are recycled into new lead products.
- Used tires are recycled through provincial stewardship programs. The recovered steel is recycled, and the recovered rubber is processed into new products.
- Runoff or discharges to the environment from automotive and steel recyclers must not have an impact on the aquatic environment. Discharge levels are typically set by each province/territory.

6.3 Industry Environmental Programs

In response to provincial laws, several provincial industry associations have developed codes of practice, accreditation programs, or best management practices. The best management practices and accreditation programs are integrated into the National Code of Practice for the National Vehicle Scrappage Program to ensure compatibility with codes of practice at the provincial level.

The programs operated by provincial associations are summarized below.

6.3.1 Quebec

Quebec was one of the first provinces to require automotive recyclers to be certified. In Quebec, automotive recyclers are required to obtain a certificate of authorization, issued by the Ministère du Développement durable, de l'Environnement et des Parcs in accordance with section 22 of the *Environment Quality Act*.

An operator applying for a certificate of authorization under the *Environment Quality Act* must also get a certificate from the registrar or the secretary-treasurer of the municipality where the site is located. In the case of an unorganized territory, the applicant must get a certificate from the regional county municipality confirming that the project is in accordance with all bylaws. In addition, in order to trade scrapped road vehicles and parts from these vehicles, the company must hold a dealer and recycler licence issued by the Société de l'assurance automobile du Québec.

L'Association des Recycleurs de Pièces d'Autos et de Camions (ARPAC) is the largest organization of vehicle recyclers in Quebec, with 85 members. These automotive recyclers are inspected on an annual basis. ARPAC uses a comprehensive guide called *Guide de bonnes pratiques pour la gestion des véhicules hors d'usage*, prepared by the Ministère du Développement durable, de l'Environnement et des Parcs, when completing an inspection of an automotive recycler.

The ARPAC inspection focuses on the removal, storage, and management of the following hazardous materials:

- waste oils;
- fuels;
- antifreeze;
- windshield washer fluid;
- lead-acid batteries;
- oil filters;
- automobile components containing mercury;
- air conditioning system refrigerants;
- deployed airbags;
- used solvents;
- contaminated absorbents;
- sandblasting residues;
- sludge, accumulated in the oily water treatment systems;
- wheel weights and lead battery connectors;
- tires;
- old engines and parts contaminated by hydrocarbons; and
- empty fuel tanks.

6.3.2 Ontario

The Ontario Automotive Recyclers Association has developed a draft environmental code of practice based on the province's environmental legislation.

The Ontario code of practice focuses on all the hazardous residuals outlined in the National Vehicle Scrappage Program with the exception of windshield washer fluid.

More information on the draft environmental code of practice is available at www.oara.com.

6.3.3 Alberta

The Alberta Automotive Recyclers and Dismantlers Association has developed a comprehensive Best Yard Guide to help automotive recyclers and dismantlers.

The guide outlines best management practices for:

- fuels (gasoline, diesel, propane);
- motor oil;
- transmission fluids;
- brake fluids;
- power steering fluids;
- antifreeze;
- air conditioning fluids;
- batteries;
- tires; and
- spill response and equipment.

6.3.4 British Columbia

The Automotive Recyclers' Environmental Association (AREA) has developed and implemented the Automotive Recycling Code of Practice to meet all the federal and provincial regulatory requirements.

Under the B.C. *Vehicle Dismantling and Recycling Industry Environmental Planning Regulation*, automotive recyclers are required to prepare an environmental management plan that:

- describes how the hazardous materials listed in Section 5 are stored, treated, recycled, or disposed of, in compliance with the *Environmental Management Act* and applicable regulations;
- sets out the management processes for minimizing or eliminating the discharge of wastes to the environment and includes a contingency plan documenting procedures to be followed during an emergency; and
- has been reviewed and approved by a qualified professional.

For more information about AREA's Environmental Program in British Columbia, go to www.area-bc.ca.

6.4 Local Governments

In addition to the federal and provincial/territorial laws, there are a variety of bylaws enacted by local governments as part of solid waste management planning requirements. Recyclers should be aware of and comply with local bylaws that affect their business. Local government environmental bylaws typically focus on:

- non-hazardous materials such as cardboard, paper, and brush;
- discharge levels to storm or sewage systems; and
- aesthetic or noise requirements.

7.0 CODE OF PRACTICE

The Code of Practice for the National Vehicle Scrappage Program is organized by hazardous material and then by processing area.

7.1 Re-sale

Because the National Vehicle Scrappage Program is designed to reduce harmful emissions from older engines by permanently removing these older vehicles from the road, automotive recyclers involved in the program must not resell the vehicles, the engines, or engine parts from the Scrappage Program under any circumstance.

Additionally, the vehicle identification number (VIN) for the vehicle must be transferred into an "Irreparable, Parts Only" or similar status within the timeframe allotted by the respective provincial/territorial department of transportation.

7.2 Administration

7.2.1 Records

Records relating to the transportation and manifesting of waste oil, waste antifreeze, and lead-acid batteries must be kept on site for two years.

A copy of the transporter's licence for the transportation of waste oil, antifreeze, batteries, sludges, and contaminated soils must be kept on site.

Records of employees or contractors that are qualified as refrigerant disposal technicians to test and remove refrigerants must be kept on site for a minimum of two years. Records created by the refrigerant disposal technician that tested and removed refrigerants from end-of-life vehicles must be kept on site for two years.

7.2.2 Training

All automotive recyclers enrolled in the National Vehicle Scrappage Program must attend (either online or in person) the training program provided through the program. The training program will summarize the legal and operational requirements of the National Vehicle Scrappage Program and will provide practical best management practices for participants to continually improve their business.

7.2.3 Compliance

Automotive recyclers that are enrolled in the National Vehicle Scrappage Program must be authorized by the program managers before they receive any vehicles for recycling and will be audited to ensure that they are using current practices under the code.

Authorized recyclers must comply with the specific requirements of the National Vehicle Scrappage Program and should be committed to continual improvement of environmental performance.

7.3 Spills

All automotive recyclers experience leaks and spills; however, they should also take action to prevent leaks and spills by training their staff and modifying their operations. It takes time to clean up leaks and spills and to dispose of the contaminated soils and absorbents.

7.3.1 Leaks

Leaks must be cleaned up on a regular and frequent basis. If the leak occurs on an impermeable surface, absorbent material should be used to recover the hazardous liquid. If the leak occurs on a permeable surface, the contaminated soil should be dug up with a shovel.

A waste management company licensed by the province/territory must dispose of the contaminated absorbents and soils as hazardous waste.

7.3.2 Small Spills

Small spills (under 100 litres) must be cleaned up immediately. If the small spill occurs on an impermeable surface, absorbent material should be used to contain and recover the hazardous liquid. If the spill occurs on a permeable surface, the contaminated soil should be dug up with a shovel.

A waste management company licensed by the province/territory must be used to dispose of the contaminated absorbents and soils as hazardous waste.

Employees should be trained to notify the owner or manager if they discover or cause a small spill.

Owners and managers should review the effectiveness of existing operating and emergency procedures after each spill.

7.3.3 Large Spills

Large spills (over 100 litres) must be reported to provincial/territorial and municipal authorities. If the spill occurs in a fish-bearing stream or it damages fish habitat, it must be reported to federal authorities as well.

Every effort should be made to contain large spills and prevent hazardous liquids from leaving the property and entering the environment. Berms or secondary containment systems are the best method of preventing large spills from migrating off site.

If a large spill occurs on an impervious surface, absorbent material should be used to recover the hazardous liquid. If the spill occurs on a permeable surface, the contaminated soil should be dug up with a shovel.

A waste management company licensed by the province/territory must be used to dispose of the contaminated absorbents and soils as hazardous waste.

Employees should be trained on how to respond to all spills and should have access to adequate protective equipment.

Provincial/territorial department of environment and municipal emergency phone numbers should be posted in a conspicuous place for easy reference during an emergency.

7.4 Hazardous Materials

7.4.1 Waste Oil

There are approximately 4 litres of waste oil in the average vehicle. Most provinces and territories have a used oil management program that will assist automotive recyclers to transport and recycle the oil safely.

- Spills of waste oil must be cleaned up.
- Shipments of waste oil must be manifested (and/or recycling dockets manifested) if the quantities exceed provincial/territorial thresholds.
- Waste oil must be recycled or burned for energy recovery in an approved provincial/territorial facility.
- Records relating to the transportation and manifesting of waste oil must be kept on site for two years.
- Large spills must be reported to provincial/territorial and/or federal authorities, depending on the source.
- Waste oil in runoff or discharge from an oil/water separator must be below provincial/territorial guidelines.

7.4.2 Waste Antifreeze

Antifreeze that can be resold or reused is not considered waste and is not subject to the manifesting and reporting sections of the code.

- Spills of waste antifreeze must be cleaned up.
- Shipments of waste antifreeze must be manifested (and/or recycling dockets manifested) if the quantities exceed provincial/territorial thresholds.
- Records relating to the transportation and manifesting of waste antifreeze must be kept on site for two years.
- Large spills must be reported to the provincial/territorial emergency call centre.

7.4.3 Refrigerants

All end-of-life vehicles with air conditioning units must be tested for the presence of refrigerants and all refrigerant must be removed as per the provincial/territorial regulations relevant to their facility.

7.4.4 Other Fluids

There are a variety of other fluids (i.e., brake fluid, transmission fluid, power steering fluid, windshield washer fluid) that **must** be recovered and recycled.

- Windshield washer fluid that can be resold or reused is not considered waste and is not subject to the manifesting and reporting requirements of the code.
- All fluids should be drained in the dismantling area.
- Windshield washer fluid must be removed and should be offered to employees and customers for use in their vehicles.
- Brake, transmission, and power steering fluid must be removed and should be mixed with waste oil.

7.4.5 Lead and Waste Lead–Acid Batteries

Lead–acid batteries, tire weights, and lead battery cable connectors are the primary sources of lead in end-of-life vehicles.

- Reusable lead–acid batteries should be resold and reused where possible.
- A licensed waste transporter must be used for shipments of waste lead–acid batteries and a shipment manifest (and/or recycling docket) should be completed if quantities exceed thresholds.
- Lead battery cables must be removed before hulk crushing and must be recycled.
- Lead tire weights must be removed before hulk crushing and must be recycled.
- All lead products must be stored in primary covered containers. They can be stored indoors or outdoors.

7.4.6 Tires

Tires come in a variety of shapes and sizes and can be resold if there is sufficient tread.

- Fewer than 1,000 tires can be stored in a pile on site at any given time.
- Used tires **must** be removed from the hulk before shredding.
- Used tires must be sent to an appropriate recycling facility for processing.
- Lead weights must be removed from the tire rims.
- Space saver and spare tires must be treated in the same manner as tires.

7.4.7 Mercury

Mercury switches are common in convenience lights under the hood and in the trunk as well as in some anti-lock brake sensors.

Import automotive and North American manufacturers ceased using mercury convenience switches in the mid-1990s and in 2003, respectively.

Automotive recyclers must be enrolled in the mercury Switch Out or equivalent program.

7.4.8 Contaminated Soils, Sludges, and Absorbents

Every automotive recycler will accumulate a variety of materials that are contaminated with oil, lubricants, and antifreeze.

- Sludges, contaminated soils, and absorbents (including rags) that are saturated with oil, antifreeze, or other hazardous fluids must be stored in appropriately covered and labelled primary containers.
- Sludges, absorbents, and contaminated soils can be stored together.
- A licensed transporter must be used to dispose of sludges, absorbents, and contaminated soils.

7.5 Automotive Recycler Processing Areas

This section presents the Code of Practice based on the different processing areas at a typical automotive recycler. As some automotive recyclers do not crush or store hulks on their property, relevant sections of the Code of Practice do not apply to them.

7.5.1 Receiving Area

The receiving area is where the vehicles are parked and wait to be moved into the dismantling area for processing.

- All leaks and spills must be cleaned up and the contaminated soils disposed of as hazardous waste.
- Oil-contaminated absorbents and soils from spills must be disposed of as hazardous residuals.
- Runoff from the receiving area must not be contaminated.
- The surface does not need to be paved—it can be permeable.
- All vehicles should be checked for leaks when they arrive.

7.5.2 Dismantling Area

The dismantling area is the primary location where fluids and wet parts are removed.

- The area must have an impermeable surface (typically concrete).
- The area must be covered to keep precipitation away from spills and leaks.
- The area must be high enough to avoid flooding during average precipitation events.
- Oil-contaminated absorbents and rags must be disposed of as hazardous residuals.

(Gasoline can be removed outside the dismantling area to avoid risk of fire. Fuel should be removed in a well-ventilated area, and spilled fuel must be cleaned up. Propane that cannot be reused should be flared outside the dismantling area.)

7.5.3 Hulk Storage Area

Once the hazardous materials have been removed in the dismantling area, the hulk is either crushed or, in the event a part or component can be sold, stored in the hulk storage area.

- The following hazardous materials must have been drained from the hulk before it is stored in the hulk storage area:
 - oil;
 - transmission fluid;
 - brake fluid;
 - differential oil if differential is leaking;
 - antifreeze;
 - mercury switches; and
 - windshield washer fluid.
- Spills **must** be cleaned up.
- Runoff from the hulk storage area **must not** be contaminated with oil, antifreeze, or other fluids.

7.5.4 Crushing Area

Once the automotive recycler no longer wants the hulk, it is sold to metal recyclers, where the ferrous and non-ferrous metal is recovered and sent to steel mills to be re-smelted. Most of the larger automotive recyclers have a crusher or a location where mobile crushers operate. Smaller automotive recyclers simply transport vehicle hulks to the metal recycler without crushing.

- All hulks being crushed **must** have had all hazardous residuals removed:
 - refrigerants;
 - oils and other lubricating fluids;
 - antifreeze;
 - brake fluids and windshield washer fluid;

- lead products (tire weights, lead battery cables, and lead–acid batteries);
 - used tires; and
 - mercury switches.
- Spills of fluids in the crusher area must be cleaned up.
 - Runoff from the crusher area must not be contaminated with oil, antifreeze, or other fluids.

7.5.5 Wet Parts Storage Area

Wet parts are parts that have contained hazardous liquids, such as radiators, transmissions, and power steering units. Dry parts include differentials and shock absorbers.

Note that leaking differentials must be treated as wet parts and that drained wet parts can be left on hulks in the hulk storage area.

- Spills to the ground must be cleaned up.

7.5.6 Hazardous Fluid Storage Area

The storage of hazardous fluids is of primary concern to automotive recyclers because of the risk of large spills.

Gasoline is a particular concern because of its flammability. Special precautions dictated by the Fire Marshall should take precedence.

The Code of Practice for the hazardous fluid storage area is as follows.

- Spills **must** be cleaned up.

7.6 Equipment and Infrastructure

7.6.1 Spill Kit(s)

Automotive recyclers must have a spill kit in the dismantling and holding areas that is adequate to deal with a potential leak or spill.

Contaminated absorbent pads must be disposed of by a licensed transporter.

7.6.2 Oil/Water Separators

Many automotive recyclers have oil/water separators on site. In general terms, oil/water separators should be used to intercept runoff from a site and to separate any oil and allow solids to settle. Oil/water separators should not be used for spill control or to treat runoff from the dismantling area or from pressure washers. They are not designed to treat water and water will not pass water quality tests if a separator is used for these purposes.

- Debris and sludge should be removed as required and transported to a disposal facility by a licensed transporter.
- Discharge should be sampled once per year.
- The discharge from an oil/water separator must be below provincial/territorial water quality thresholds.

7.6.3 Solvent Tanks

Many automotive recyclers have tanks filled with cleaning solvents to clean parts prior to shipping.

- Spills **must** be cleaned up.

7.6.4 Pressure Washers

Many automotive recyclers have pressure washers to clean parts prior to shipping.

- Oil and grease from the over-spray must be cleaned up and disposed of as contaminated soil.

7.6.5 Equipment

Every automotive recycler has equipment such as loaders or forklifts to load and move vehicles and hulks in the yard. The forklifts and loaders may leak oil, antifreeze, and hydraulic fluid.

- Leaks and spills from equipment must be cleaned up and the contaminated soils and materials disposed of as contaminated soil.
- Forklifts, loaders, and other machines should be maintained properly in order to prevent leaks.

7.7 Runoff

Rain and snow management are important considerations for automotive recyclers. Heavy precipitation events, snow accumulation, and fire fighting activities can result in surface runoff that causes hazardous materials and deleterious substances to migrate to sewer systems or the environment.

With respect to snow, automotive recyclers must do one of the following.

- Snow contaminated with hazardous materials can be stored in the yard. The subsequent runoff must be treated prior to discharge to sewer or the environment. Filtration of runoff through absorbent pads or oil/water separators is considered adequate.
- Snow contaminated with hazardous materials can be removed from the property to an approved snow impoundment facility that has adequate treatment of the subsequent snowmelt.

With respect to rain, automotive recyclers must ensure that runoff from the property does not contain hazardous materials or deleterious substances. Runoff must be filtered through a treatment system, oil/water separator, or absorbent pads to prevent the off-site migration of hazardous materials.

With respect to fire fighting activities (e.g., runoff from a tire fire), automotive recyclers must work with responding municipal, provincial/territorial, and federal officials to minimize the amount of deleterious material that migrates off site and enters the environment.

7.8 Metal Recyclers

Metal recyclers collect vehicle hulks from automotive recyclers and scrap processors, and shred the hulks into fist-sized pieces. The output from the shredder is ferrous metal, non-ferrous metal (including copper and aluminum), and shredder residue. The shredder residue from automobiles consists of glass, wood, rubber, and plastics (including foam).

Automotive recyclers should sell vehicle hulks only to metal recyclers that are approved through the Automotive Recyclers of Canada.

The approved metal recyclers will:

- be in compliance with all federal, provincial/territorial, and local government laws and regulations;
- ensure all vehicles, regardless of their source, are free from waste materials identified in this code;
- properly dispose of automotive shredder fluff and automotive shredder residue; and
- have programs in place to minimize automotive shredder fluff and automotive shredder residue.

APPENDIX: FEDERAL ENVIRONMENTAL LAWS AND REGULATIONS

Introduction

There are several federal legislative and policy requirements that automotive recyclers must respect in the Code of Practice for automotive recyclers.

The federal acts that have a bearing on the activities of automotive recyclers are the:

- *Transportation of Dangerous Goods Act, 1992*;
- *Canadian Environmental Protection Act, 1999 (CEPA)*;
- *Indian Act*; and
- *Fisheries Act*.

Within CEPA, there are several regulations that could have a bearing on the work of automotive recyclers. The germane regulations under CEPA are:

- *Ozone-depleting Substances Regulations, 1998*;
- *Federal Halocarbon Regulations, 2003*;
- *Interprovincial Movement of Hazardous Waste Regulations (2002)*;
- *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (2005)*; and
- *Environmental Emergency Regulations (2003)*.

In addition, the automotive recyclers located on lands owned by the federal government (including reserves set apart for the use and benefit of a band under the *Indian Act* and treaty lands) are subject to the Treasury Board Federal Contaminated Sites and Solid Waste Landfills Inventory Policy. The automotive recyclers on reserves under the *Indian Act* are subject to the Contaminated Sites Policy of Indian and Northern Affairs Canada.

Application

The following text cites various federal policies, acts, and regulations that could have an impact on the work of automotive recyclers. Most automotive recyclers are located on provincial lands; however, some are located on federal lands, including reserves under the *Indian Act*. The following table provides a summary of the federal policies and legislation that apply, depending on the location of the property.

Applicability of Federal Policies, Acts, and Regulations

JURISDICTION	FEDERAL POLICIES	FEDERAL ACTS	FEDERAL REGULATIONS
Provincial/territorial lands	Not applicable	Applicable	Applicable
Federal lands north of the 60 th parallel (including reserves under the <i>Indian Act</i>)	Treasury Board Federal Contaminated Sites Policy; Indian and Northern Affairs Canada Contaminated Sites Management Policy	Applicable	Applicable
Treaty lands	Not applicable	Applicable	Applicable

Based on the above table, automotive recyclers located on either provincial/territorial or federal land must comply with federal acts and regulations. In addition, automotive recyclers located on federal lands north of the 60th parallel must comply with the Treasury Board Contaminated Sites Policy and the Indian and Northern Affairs Canada Contaminated Sites Management Policy (if applicable).

Federal Policies

Treasury Board of Canada Secretariat

The Treasury Board Federal Contaminated Sites and Solid Waste Landfills Inventory Policy is the only environmental policy that would affect automotive recyclers located on federal lands.

The policy requires that custodial departments establish and maintain a database of contaminated sites on their lands. The information is provided to the Treasury Board of Canada Secretariat for incorporation into the Federal Contaminated Sites Inventory.

Indian and Northern Affairs Canada

The Indian and Northern Affairs Canada (INAC) Contaminated Sites Management Policy provides an appropriate level of direction in order to meet the requirements of the Treasury Board while supporting the principles of the INAC Sustainable Development Strategy.

The policy is intended to provide guidance on the management of contaminated sites located on reserve lands, on federal lands north of the 60th parallel, and on any other lands for which INAC has custodial responsibility. INAC is committed to managing contaminated sites in a cost-effective and consistent manner in order to reduce and eliminate, where possible, risk to human and environmental health and liability associated with contaminated sites.

Automotive recyclers on reserves under the *Indian Act* would be affected by this and related INAC policies.

Federal Legislation

Transportation of Dangerous Goods Act, 1992

In Canada, no person shall handle, offer for transport, transport, or import on federal roads and highways any dangerous goods unless

- (a) the person complies with all applicable prescribed safety requirements;
- (b) the goods are accompanied by all applicable prescribed documents; and
- (c) the means of containment and transport comply with all applicable prescribed safety standards and display all applicable prescribed safety marks.

The federal *Transportation of Dangerous Goods Regulations* provide the specific requirements for automotive recyclers (or their contractor) that are transporting oils, mercury, or lead-acid batteries. Used oil is a Class 3 Dangerous Good, while mercury and lead-acid batteries are Class 8 Dangerous Goods. All three substances are categorized in Packing Group 3, indicating that while the hazard level is low, adequate precautions (as outlined in this code of practice) are required by the licensed transporter.

The *Transportation of Dangerous Goods Act, 1992* is an important piece of legislation; however, the number of federal roads in Canada is limited. The Trans-Canada Highway is the best example of a federal road. Most other roads are under provincial jurisdiction; legislation at the provincial/territorial level provides equivalency.

Canadian Environmental Protection Act, 1999

The *Canadian Environmental Protection Act, 1999* (CEPA) has a variety of sections and associated regulations that are germane to activities carried out by automotive recyclers.

CEPA states that the protection of the environment is essential to the well-being of Canadians and that the primary purpose of CEPA is to contribute to sustainable development through pollution prevention. Pollution prevention includes the appropriate management of toxic products used by automotive recyclers and the toxic substances that should be removed from end-of-life vehicles.

Schedule 1 of CEPA lists all substances that have been determined to be toxic as defined by the act. The following compounds that may be associated with automotive recycling are found in Schedule 1:

- chlorofluorocarbons (e.g., CFC-12);
- carbon tetrachloride solvents;
- lead;
- mercury; and
- volatile organic compounds, including methane and HFC-134a.

There are provisions in CEPA to manage toxic substances. These provisions include the authority to create regulations and to use non-regulatory management approaches such as pollution prevention planning (Part 4) and environmental emergency planning (Part 8).

On December 29, 2007, the Minister of the Environment issued a notice in the *Canada Gazette* requiring that vehicle manufacturers and steel mills prepare and implement pollution prevention plans to deal with releases of mercury from mercury switches in end-of-life vehicles processed by steel mills. The focus will be on the recovery of mercury switches located in hood and trunk convenience lights and in anti-lock brake sensors.

In addition to the recent notice for mercury, there are four regulations under CEPA that govern the management of hazardous materials by automotive recyclers. The four regulations are:

- *Federal Halocarbon Regulations, 2003*;
- *Ozone-depleting Substances Regulations, 1998*;
- *Interprovincial Movement of Hazardous Waste Regulations*; and
- *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations*.

Federal Halocarbon Regulations, 2003

The *Federal Halocarbon Regulations, 2003* apply only to recovery systems that are owned by the Crown or are located on federal lands or lands subject to the *Indian Act*. The regulations set the terms and conditions under which automotive recyclers on federal lands and lands under the *Indian Act* recover refrigerants in end-of-life vehicles. The regulations state that no person shall release or allow or cause the release of a halocarbon unless the release results from the purge system and emits less than 0.1 kg of halocarbons per kilogram of air purged to the environment.

The regulations cover both CFC-12 and HFC-134a.

Ozone-depleting Substances Regulations, 1998

The *Ozone-depleting Substances Regulations, 1998* are the primary implementation mechanism for *The Montreal Protocol on Substances That Deplete the Ozone Layer*. The regulations control the import and export of refrigerants from Canada; they apply to CFC-12 but not to HFC-134a.

The regulations state that no person shall:

- import a controlled substance (e.g., CFC-12) from a country or export a controlled substance to a country that has not signed the Montreal Protocol;
- import, without a permit (issued under paragraph 33(1)(a) of the same regulations), a controlled substance that is recovered, recycled, reclaimed, used, or for destruction; or
- export a controlled substance without a permit (issued under paragraph 33(1)(b) of the same regulations).

Automotive recyclers should ensure that if they (or their contractor) remove CFC-12 from end-of-life vehicles, the general provisions of the *Ozone-depleting Substances Regulations, 1998* are followed. This includes determining the fate of the CFC-12 after it is removed from the vehicle.

Fortunately, the use of CFC-12 was banned in 1995 and it is found only in vehicles that were manufactured prior to that year. As a result, vehicles with CFC-12 are becoming rare, and, in time, these sections of the regulations will not be relevant to automotive recyclers.

Interprovincial Movement of Hazardous Waste Regulations

The *Interprovincial Movement of Hazardous Waste Regulations* apply to the transport within Canada of hazardous waste. The regulations may apply to the interprovincial transportation of 5 litres or more of used oil or 5 kilograms or more of mercury or lead–acid batteries (*Transportation of Dangerous Goods Act, 1992 Class 8*), among other substances.

The regulations require that no person shall transport the above quantities of used oil, mercury, or lead–acid batteries within Canada unless the waste is accompanied by a manifest in accordance with these regulations.

The vast majority of automotive recyclers contract the transportation and disposal of hazardous substances to waste management contractors. It is possible that the waste management contractors could transport the hazardous materials across provincial borders. As a result of this possibility, automotive recyclers must know the fate of the hazardous materials generated on site and ensure that waste management contractors are in compliance with the provisions of the *Interprovincial Movement of Hazardous Waste Regulations* if the materials are to be shipped across provincial borders.

Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations

The purpose of the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* is to protect Canada's environment and the health of Canadians from the risks posed by the transboundary movement of hazardous wastes and hazardous recyclable materials through exports from and imports into Canada and to meet Canada's international obligations. The regulations replace the former *Export and Import of Hazardous Wastes Regulations* adopted in 1992 under the authority of the former *Canadian Environmental Protection Act* (1988).

Automotive recyclers typically contract with waste management companies to manage and dispose of their hazardous materials. It is possible that the waste management companies could export hazardous substances across international borders.

As a result of this possibility, automotive recyclers must know the fate of the hazardous materials generated on site and ensure that waste management contractors are in compliance with the provisions of the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* if the materials are to be shipped across international borders.

Indian Act

The *Indian Act* is the primary instrument providing for the management of affairs on reserves. The *Indian Act* authorizes the government to make regulations concerning certain aspects of environmental protection.

Indian Reserve Waste Disposal Regulations

Waste disposal on reserves is currently regulated by the *Indian Reserve Waste Disposal Regulations*, which require a permit issued by Indian and Northern Affairs Canada or a band council to operate a dump, to use a site for waste disposal or storage, or to burn waste on reserves.

Automotive recyclers intending to establish waste disposal or storage areas on reserves under the *Indian Act* are required to obtain such a permit.

Fisheries Act

The *Fisheries Act* provides for the protection of fish and fish habitat in Canada. The act is the federal legislation that has the greatest bearing on the activities of automotive recyclers as it simply prohibits the deposit of substances that are deleterious or harmful to fish under normal circumstances into fish-bearing waters.

In addition, section 38(4) requires automotive recyclers to report spills that deposit a deleterious substance in water frequented by fish and spills that damage fish habitat. The spills must be reported to an inspector or appropriate authority.

Automotive recyclers need to be aware of the provisions of the *Fisheries Act* and understand that most hazardous materials used on site or recovered from end-of-life vehicles are harmful to fish. A simple rule of thumb is that if the product has or had a consumer or Workplace Hazardous Materials Information System (WHMIS) poison symbol on the label, the product is deleterious and harmful to fish.

Automotive recyclers must be aware that virtually every stream, tributary, and ditch is considered a fish-bearing stream by Fisheries and Oceans Canada. The runoff of hazardous products to ditches, storm drains, and small streams eventually ends up in fish-bearing waters, and the automotive recycler responsible for the release of the hazardous substance would consequently be in violation of the *Fisheries Act*.

