BRITISH COLUMBIA
The Best Place on Earth

August 19, 2008

New Permanent Registration Number: # 100413

Amix Salvage & Sales Ltd.
Bernard and Partners
Suite 1500
570 Granville Street
Vancouver BC V6C 3P1

Dear Brian Ross:

Re: Vehicle Dismantling and Recycling Industry Environmental Planning Regulation registrations

This letter is to inform you that the ministry registry system for authorizations has now been updated to include registrations under the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation.

The temporary registration number (# 301) that was sent to you is now replaced with the following permanent registration number - # 100413 (as above). Please indicate this permanent ministry registration number on all future correspondence with the Ministry regarding waste discharges for this facility.

All conditions of your registration remain unchanged. Please contact your Ministry of Environment Regional Office if you have any questions.

Yours truly,

Sara Bacic
Waste Discharge Authorization Administrator

Cc: Environmental Management Section Head, Lower Mainland Region
Environment Canada

Ministry of Environment
Environmental Management Branch
Environmental Protection Division
Mailing Address:
PO Box 9377 Stn Prov Govt
Victoria BC V8W 9M1
Telephone: 250 387-3205
Facsimile: 250 356-0299
Website: www.gov.bc.ca/env

Auth. 105725 Track. 219116

BRITISH COLUMBIA
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Environmental Management Branch
PO Box 9377 Stn Prov Govt
Victoria, BC V8W 9M1
Fax: (250) 356-0299

Courier delivery address: 3rd Floor, 2975 Jutland Rd., Victoria BC V8T 5J9

Registration Form for the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation

This registration form may be submitted to the Ministry of Environment (MOE) by e-mail, fax, registered mail or courier.

Report Type - Indicate one choice (a, b or c)

To update information from a previous registration, a person must re-submit a registration form with all information within 30 days of the changes to the previous registration information. See (b) below.
To cancel a registration, a person must notify a director in writing within 30 days of ceasing operations. See (c) below.
To cancel an existing authorization (e.g., permit), please contact MOE Regional Office.

(a) ☒ Initial registration

Please list any other authorizations (e.g., permit, approval, etc.) that you currently hold for this facility.

Authorization Number	Authorizing Ministry	Description (what for)
4659903	BC Safety Authority	Electrical Operation Permit
GVA0003	Metro Vancouver	Air Permit
BCG-04183	BC Ministry of Environment	Consignor Identification Number

(b) ☐ Update registration — Registration #:

(c) ☐ De-register — Registration #:

Applicant Information

Company Legal Name **OR** First and Last Name	Richmond Steel Recycling Ltd
Doing Business As (if applicable)	

Contact Numbers [e.g., (999) 999-9999]	Phone:	Cell:	Fax:
	(604) 324-4656		(604) 324-8617

E-mail Address	james.botelho@simsmm.com
Legal Address *(as registered with B.C. Registrar of Companies)*	11760 Mitchell Road, Mitchell Island, Richmond, BC V6V 1V8
Mailing Address *(if different from above)*	
Billing Address *(if different from above)*	
Nearest Municipality to the Facility/Site	Richmond, BC

Applicant Contact Information *(name of contact person for ministry staff)*

Contact First and Last Name	James Botelho

Contact Numbers [e.g., (999) 999-9999]	Phone:	Cell:	Fax:
	(604) 324-4656 x7262	s.22	(604) 324-8617

Authorized Agent Information *(to be completed only if representing the applicant)*

Agent's Company Legal Name	
Doing Business As (if applicable)	
Agent's First and Last Name	
Contact Numbers [e.g., (999) 999-9999]	Phone: / Cell: / Fax:
E-mail address	

Applicant's Authorization for Agent

I / we *(applicant)* hereby authorize _____ *(Agent)*

to deal with the Ministry directly on all aspects of this application.

Print name of applicant _____

_____ Date (mmm.dd.yyyy)

Signature of applicant (not agent or representative)

You will need to sign this only if you are authorizing an agent or representative to deal directly with the Ministry on your behalf.

Facility Location and Information

Type of Facility (describe the primary activity of the facility)	Vehicles, Ferrous and Non-ferrous Metals Recycling

Discharge Location: Latitude 49.2009 Longitude 123.0856 Source of Data GPS ☐ or Survey ☐

(Must be in decimal degrees format)

Other ☒ Google Earth (Please list)

Please fill in:

Legal Land Description (Lot/Block/Plan)	Lot 8/District Lot 459/NWD Plan 47113
PID/PIN/Crown File No.	PID 003-456-811
Facility Address (civic address)	11760 Mitchell Road, Mitchell Island, Richmond, BC V6V 1V8
Is Applicant Legal Land Owner	☐ Yes ☒ No *(If NO, please provide details below)*
Legal Land Owner Name	Broadway Properties
Contact Numbers [e.g., (999) 999-9999]	Phone: (604) 876-1188 / Cell: / Fax: (604) 874-5001
E-mail address	info@broadwayproperties.com

Facility Operator (if different than Applica Contact Information)

Operator First and Last Name			
Contact Numbers (e.g., (999) 999-9999	Phone:	Cell:	Fax:
E-mail Address			

Regulation Specific Requirements

Check **one** of the following three boxes:

☐ I am a member of an association that has an Environmental Management Plan for my facility.

Name of Association:			
Address:			
Contact Numbers [e.g., (999) 999-9999]	Phone:	Cell:	Fax:

☒ I have an Environmental Management Plan prepared by a qualified professional for my facility.

Address at which the plan can be viewed and copied	11760 Mitchell Road, Mitchell Island, Richmond, BC V6V 1V8

☐ I do not have an Environmental Management Plan.

Comments:

Print Form

**Note: By submitting this form, you are certifying that the information provided within is true and accurate to the best of your knowledge.

British Columbia Ministry of Environment (MOE)
Environmental Management Act (EMA)
Vehicle Dismantling and Recycling Industry

Environmental Management Plan (Auto Hulk De-Pollution Plan)

Prepared for:

Richmond Steel Recycling Ltd
11760 Mitchell Road
Mitchell Island
Richmond, BC V6V 1V8
Canada

August 2011

Prepared by:

1979 East Broadway Road, Tempe, AZ 85282
Phone: (480) 784-4621 Fax: (480) 784-2207
www.envirosure.com

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LIST OF APPENDICES

This document provides an Environmental Management Plan (EMP) pursuant to the requirements of the British Columbia Ministry of Environment (MOE) Vehicle Dismantling and Recycling Industry Environmental Planning Regulation (the "*VDRIEPR")*. The Vehicle Dismantling Regulations require operators to develop an Environmental Management Plan (this plan) to demonstrate how they are complying with existing environmental protection standards under the Environmental Management Act (EMA) and the regulations listed below. It also imposes a system of monitoring and reporting requirements to ensure operations are carefully managed. A copy of the VDRIEPR is provided in Appendix 1.

The specific regulations (which can all be found at http://www.env.gov.bc.ca) which may apply to vehicle dismantlers are:

- *Hazardous Waste Regulation;*
- *Ozone Depleting Substances and Other Halocarbons;*
- *Spill Reporting Regulation; and*
- *Contaminated Sites Regulation**

*The CSR regulation does not have a direct impact on the day-to-day operations of a vehicle dismantler. See Section 2.5 for more information.

This EMP is prepared for **Richmond Steel Recycling Ltd** (the 'facility').

Address: 11760 Mitchell Road, Mitchell Island
City, Province: Richmond, British Columbia V6V 18V
BC Hazardous Waste Generator Number: ord28446
Consignor Identification Number: BCG-04183
Latitude: 49° 12' 05.4" N
Longitude: 123° 05' 16.2" W
Total Acreage: 7.50 acres (3.035 hectares)

The MOE Guidebook for the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation (the "*Guidebook"*) was used for guidance in the preparation of this plan. It is provided as Appendix 2.

Local regulations [City of Richmond Pollution Prevention and Clean-up Bylaw 8475 (2009)] were also consulted to determine if there were more stringent restrictions on vehicle dismantlers and recyclers. There were no such additional restrictions discovered in these bylaws (see Appendix 3).

This document will describe how the following wastes from wet vehicles (see definition of "wet vehicles" in Section 2 of the Guidebook) will be removed, stored, treated, recycled or disposed of in accordance with the EMA:

- Ozone-depleting substances and other halocarbons;
- Oils, brake fluids, solvents, fuels and other hydrocarbons;
- Antifreeze;
- Lead and lead-acid batteries
- Tires;
- Mercury switches; and
- Windshield washer fluid.

1.1 Employee Training

All employees shall be trained on this Environmental Management Plan within 30 days of its final approval, and then annually thereafter, within 30 days of the anniversary of the final approval date. All

new hires shall be trained on this document within 60 days of hire. All employees shall sign a training log with their printed named, signature, date of training and person responsible for the training on the sign-in log. This log will be kept in Appendix 17 of this plan.

1.2 Compliance Calendar

Key dates to remember in regards to this plan are summarized below in a handy Compliance Calendar:

Compliance Calendar

Event	Daily	Weekly	Monthly	Quarterly	Yearly	Every 2 Years	Every 5 Years
Have an EMP Audit done by a Qualified Professional						X*	
Plan Review (Review, amend or replace)							X*
Train Employees on EMP					X		
Sample Oil/Water Separator					X		
Clean-out Oil/Water Separator				X			
Inspect Hazardous Waste Storage Areas for leaks/spills	X						
Inspect SEDA area for leaks/spills	X						
SEDA Maintenance Inspections		X					
Inspect ASTs for damage or leaks				X			
Integrity Testing of Petroleum Product ASTs					X		
SEDA Operation Training					X		
Review licenses and certifications of contractors & Approved Persons					X		
Ship Hazardous Waste, Tires or Windshield Washer Fluid			X#	X#			
Housekeeping	X						
Hydrostatically test or replace refrigerant storage containers							X
Records and Manifests Storage						X	

*** Within 3 months of anniversary date of plan**
 # Or more frequently as necessary depending on accumulated quantity and type of material

2.1 Vehicle Dismantling and Recycling Industry Environmental Planning Regulation (VDRIEPR)

The VDRIEPR requires all vehicle dismantlers that dismantle more than 5 wet vehicles a calendar year to have an EMP which has been approved by a qualified professional and registered with the Director. The information required for this registration can be found in Section 3 of the VDRIEPR. The facility's completed registration form and subsequent certification will be found in Appendix 4.

The EMP must address the management of the wastes listed in Section 1 of this document. It must also describe the management processes for minimizing or eliminating the discharges of those wastes to the environment and include a contingency plan documenting procedures to be followed in an emergency.

2.1.1 Auditing and Reporting

The VDRIEPR outlines auditing and reporting schedules for two categories of vehicle dismantlers, those that are members of an association and those that are not. An association means an association of two or more facilities, which association includes in its purposes (1) preparing a plan for the purposes of this regulation, and (2) monitoring and reporting on compliance with the plan. This facility (Richmond Steel Recycling LLC) is not a member of an association.

A person operating a facility that is not part of an association must have an audit report prepared by a qualified professional for the period up to the date that is 2 years after the date of registration under this regulation and for each 2-year period thereafter.

It must be in writing and must describe:

- How the wastes described in the plan for the facility were managed;
- Whether the management of those wastes was in accordance with this plan; and
- The effectiveness of the management process used for minimizing or eliminating the discharge of wastes to the environment; and
- It must be completed within 3 months after the end of the 2-year reporting period.

2.1.2 Plan Review

Within 3 months after the each 5th anniversary of the date the facility's registration became effective under this regulation, a person operating a facility for which there is a plan specific to it must:

- Review the plan;
- Amend or replace the plan if necessary to ensure that the plan complies with Subsection (3) of the VDRIEPR, and
- Have the reviewed, amended or replacement plan approved by a qualified professional.

2.2 Hazardous Waste Regulation (HWR)

Vehicle dismantlers may be subject to the Hazardous Waste Regulation (HWR) (http://www.env.gov.bc.ca/epd/main/ema.htm) depending on the quantity of hazardous waste they generate, store, treat or offer for transport. If subject to this regulation, vehicle dismantlers are required to comply with various requirements, including registration, operational and transportation requirements.

Vehicle dismantlers that generate, store, treat, recycle or dispose of hazardous waste in any 30-day period above the thresholds listed in Table 1 (from Column II of Schedule 6 of the HWR) must register the hazardous waste and apply for a Consignor Identification Number by completing Form 1 of Schedule 5 of the HWR and submit it to the Director.

Table 1 – Registration Quantities for Generators and Short Term Storage Facilities

Hazardous Waste	Quantity Threshold (30-day period) for Registration (L or kg)
Waste oil	5,000
Antifreeze (leachable toxic waste)	500
Mercury-containing waste (TDGR Class 8)	100
Fuels (TDGR Class 3)	500
Lead acid batteries	2,000

Facilities that store more than the quantity of hazardous waste listed in Table 1, at any time, are considered short term storage facilities and, as such, must meet the requirements in Parts 2, 3 and 7, and Division 2 of Part 4 of the HWR. Vehicle dismantlers who are not primarily in the business of waste management and who engage in short term, on site, passive storage are provided with some exemptions related to the plan under Section 16 (2) of the HWR.

Richmond Steel Recycling Ltd has registered for and obtained a Consignor Identification Number (CIN) from the MOE, due to its exceedance of the generation and storage threshold for fuels (TDGR Class 3), waste oils and antifreeze. The facility's CIN is BCG-04183.

2.2.1 Hazardous Waste Transportation Requirements

Vehicle dismantlers must not offer for transport hazardous wastes that exceed the quantities in Table 2 (from HWR Section 46) unless the carrier is licensed by the MOE to transport them. These shipments must be manifested and sent to an authorized hazardous waste facility for processing.

Table 2 – Manifest and Transportation Thresholds for Hazardous Wastes

Hazardous Waste	Transportation and Manifest Quantity (L or kg)
Waste Oil	210
Antifreeze	5
Mercury	5
Waste Fuel (Stale Gas)	5
Lead Acid Batteries	1,000
Other Solid Hazardous Waste	5

2.2.2 Performance Standards for Oil/Water Separators

All vehicle dismantlers with oil/water separators or surface runoff (both applicable to this facility) are required to meet the requirements of Section 17 of the HWR and the Effluent Standards from Schedule 1.2 of the HWR. These effluent standards are summarized in Table 3 on the following page.

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The facility has one 2,500-gallon capacity oil/water separator on site located near the central west border of the facility and surface runoff to the North Branch of Fraser River on the southeast edge of the facility property.

Table 3 – Selected Effluent Standards for Oil/Water Separators or Surface Runoff

Parameter	Standard for Discharges to the Environment of Storm Sewers	Standard for Discharges Directed to Municipal or Industrial Effluent Treatment Work
Total Suspended Solids (TSS)	20 mg/L	---
Toxicity*	100% Effluent	50% Effluent
Aluminum, dissolved	0.5 mg/L	2.0 mg/L
Ammonia, total	2.0 mg/L	---
Copper, dissolved	0.1 mg/L	0.3 mg/L
Lead, dissolved	0.1 mg/L	0.3 mg/L
Mercury, total	0.001 mg/L	0.01 mg/L
Zinc, dissolved	0.2 mg/L	0.5 mg/L
Biological Oxygen Demand (BOD)	20 mg/L	---
Oil	10 mg/L	60 mg/L

***96-hour LC50 bioassay with 50% survival of rainbow trout after 96 hours.**

2.3 Ozone Depleting Substances and Other Halocarbons Regulation

The Ozone Depleting Substances and Other Halocarbons Regulation (ODS) - See Appendix 5 - restricts the removal, storage and disposal of refrigerants recovered from wet vehicles. The primary requirement is that only an "approved person" can remove refrigerants from vehicle air conditioners. An "approved person" is defined by the MOE as a person:

- that holds appropriate trade credentials or is an indentured trainee of apprentice in compliance with the *Industry Training Authority Act* or, if that *Act* is not applicable, is qualified in the appropriate trade sector by
    1) having successfully completed a recognized trade school program; or
    2) having had at least one year of supervised practical service experience;
- has successfully completed an environmental awareness course in refrigerant handling approved by Environment Canada and the Ministry of Water, Land and Air Protection; and
- has successfully completed, if servicing motor vehicle air conditioning systems on October 1, 1997, a motor vehicle air conditioning course approved by the Ministry of Water, Land and Air Protection unless the approval is cancelled or suspended under Section 18 of the EMA.

These courses are usually offered by local colleges or the Heating, Refrigeration and Air Conditioning Institute (HRAI). The HRAI will issue a certificate to an individual successfully completing the course.

Richmond Steel will acquire copies of each "Approved Person" license, as well as Anglo-Canadian Automotive Supply's license, and insert them into Appendix 6. These records must be maintained and made available for inspection during normal business hours. The records must include the approved

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person's name, registration number and date the employee/contractor successfully completed the Environmental Awareness Course and the motor vehicle air conditioning course that are required to become an Approved Person.

Typically, vehicle dismantlers hire an approved person with mobile equipment to visit the yard, remove refrigerants and complete the necessary paperwork and labeling of wet vehicles. See Section 3.1 – Ozone-depleting Substances and other Halocarbons for further information.

2.4 Spill Reporting Regulation

The Spill Reporting Regulation requires that all persons that manage hazardous waste to report significant spills to the Provincial Emergency Program at 1-800-663-3456. A spill is considered significant if it is above the thresholds listed in Table 4:

Table 4 – Spill Reporting Thresholds for Hazardous Waste in British Columbia

Hazardous Waste	Spill Reporting Threshold
Oil and Oil-related Products	100 L
Antifreeze	5 L
Waste Gasoline	100 L
Mercury	5 kg
Refrigerants	10 kg

2.5 Contaminated Sites Regulation

The Contaminated Sites Regulation (CSR) is a regulation that deals with the liabilities and obligations resulting from contamination at a site. For vehicle dismantlers, contamination may result from the improper management of wastes. It is important to properly manage the wastes generated at a site in order to avoid the property from becoming contaminated and subsequently, subject to the remediation requirements under the CSR. Please refer to the Ministry of Environment's Land Remediation web site for more information on the CSR: http://www.env.gov.bc.ca/epd/remediation.

2.5.1 Liability

The CSR is a provincial regulation that holds businesses liable if they contaminate the soil or groundwater. The liability for remediation of a contaminated site flows from *Part 4* of EMA. The CSR details additional provisions for contaminated sites and the liability includes past practices.

The best way for vehicle dismantlers to deal with the requirements of the CSR is to establish an efficient and clean operation and prevent spills from occurring in the first place. The clean-up of a contaminated site can be expensive and time consuming.

Spills (large and small) that are not cleaned up immediately may create a long-term liability for vehicle dismantlers. If the vehicle dismantler leases the property, then the owner of the property has a legal right to hold the dismantler responsible for the contamination on site. If the dismantler owns the property, then the dismantler is devaluing their property and may not be able to sell the property without first deducting the environmental liability from the sale price.

3. HAZARDOUS WASTE MANAGEMENT

This section will deal individually with each of the hazardous wastes listed in Section 1 that are of concern to the Vehicle Dismantling and Recycling Industry Environmental Management Plan, and specifically, as they are managed at Richmond Steel Recycling Ltd. Each section will detail removal and storage practices, and how it is managed after removal and storage, including reuse, recycling and disposal. Each section will also detail Spill Contingency Plans and the Best Management Practices (BMPs) being taken by the facility to minimize or eliminate exposure of each of these wastes to the environment.

3.1 Ozone-Depleting Substances and other Halocarbons

Ozone-depleting substances (ODSs), such as R12 or HFC134 (the most common refrigerants found in vehicles) are highly regulated and require careful management. A full list of Class I, II and III ODSs and other Halocarbons can be found in Schedule A of the ODR (R12 is a Class I ODS and HFC134 is a Class III ODS). Class I ODSs are more harmful to the ozone layer than Classes II or III and have a high potential to contribute to global warning. For example, 2 kg of R12 released to the atmosphere has the same effect as 21.2 metric tons of carbon dioxide (CO_2), while 2 kg of HFC134 is equivalent to 2.6 metric tons of CO_2. The average vehicle contains 2 kg of refrigerant.

3.1.1 Removal

A vehicle dismantler must not allow the release of any ODS or other Halocarbon as listed in Schedule A of the ODR from the vehicle air conditioner; any container, device or equipment used in the evacuation and storage of the ODS; or during the disposal or destruction of R12 or HFC134.

A third-party licensed refrigerant removal contractor, Anglo-Canadian Automotive Supply Ltd (www.anglocan.com), has been contracted by Richmond Steel to provide a mobile service that is brought on site to remove refrigerants from wet vehicles by "approved persons" in accordance with the Code of Practice set forth in the ODR. Anglo-Canadian Automotive Supply Ltd is located at 1495 Frances Street in Vancouver, BC. All refrigerant removed from wet vehicles is removed from the site by Anglo-Canadian Automotive Supply Ltd. Richmond Steel must ensure that the devices used to remove R12 or HFC134 meet or exceed the the performance standards SAE Standard J1990, J2209 or J2210 and that only certified "Approved Persons" are used to evacuate them (See Section 2.3). Each removal service is recorded on a Refrigerant Removal Log with the quantity and type of refrigerant that has been removed, the technician's name and registration number, and the date of removal. Record of the volume of each type of refrigerant evacuated by each Approved Person shall also be kept. All refrigerant removal records are kept within Appendix 7 of this plan so that they can be available for inspection during normal business hours.

Refrigerants are removed before any other vehicular fluids or parts are removed, unless something else (for example, crankcase oil) is leaking and needs to be removed first. No wet vehicle or air conditioning unit is allowed to be disposed of until all refrigerants have been evacuated first. After removal, the approved person places a tag on the wet vehicle clearly indicating that the refrigerant has been completely evacuated.

3.1.2 Storage

Richmond Steel temporarily stores evacuated refrigerants from wet vehicles in containers that shall be properly labeled, including the ASHRAE refrigerant number, and be hydrostatically tested and/or

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replaced every 5 years. Richmond Steel stores these containers under overhead coverage in the SEDA area until they can be transported off-site for recycle by Anglo-Canadian Automotive Supply Ltd.

3.1.3 Treatment and Disposal

There is no on-site treatment, recycling or reuse of refrigerants at the facility. Refrigerants are removed from the site by mobile refrigerant evacuation trucks operated by Anglo-Canadian Automotive Supply Ltd and shipped to Ontario for disposal.

3.1.4 Contingency Plans for Spills

Anglo-Canadian Automotive Supply Ltd uses refrigerant evacuation devices which meet or exceed the performance standards set out in Schedule B of the ODR to prevent the release of the ozone depleting substance into the environment. The refrigerant storage equipment is hydrostatically tested at least once every 5 years to ensure reliability.

Any release of 10 kg or more of R12 or HFC134 must be promptly reported in accordance with notification procedures set out in the EMA Spill Reporting Regulation (SRR) – See Appendix 5. There have been no recorded releases at the facility of ozone-depleting substances or other halocarbons within the last two (2) years (as of the date of this plan).

3.1.5 Best Management Practices for Minimization of Releases

The following Best Management Practices (BMPs) shall be utilized by the facility to ensure minimization of environmental exposure from Ozone Depleting Substances and other Halocarbons:

- Refrigerants are checked and removed in the dismantling area by a mobile recovery unit before the wet vehicle is dismantled or drained of other fluids.
- Only approved persons from a contracted mobile recovery company are hired to check and removed refrigerants from wet vehicles.
- Wet vehicles are tagged with marker pens to indicate that all refrigerants have been evacuated. The tag shall include the approved person's name and registration number and shall be cross-referenced to the Refrigerant Removal Record or logbook.
- All approved persons used at the facility will have a copy of the approved person's HRAI certificate and a description of the equipment used on file.
- The facility will keep on file a record of each wet vehicle checked and evacuated by the approved person.
- No vehicle or air conditioning unit will be dismantled or disposed of until evacuation of refrigerants (or certification of lack thereof) is completed.

3.2 Used Oils and Related Hydrocarbon Fluids

Wet vehicles typically contain several different types of petroleum-based hydrocarbon fluids (oils), including gear oil, lubricating oil, hydraulic oil, cutting oil, brake fluid, power steering fluid and other refined oils or synthetic oils. The average vehicle will contain approximately six (6) liters of used oil or oil-related products. These products are considered a hazardous waste under the EMA's HWR. Used oil filters will also be included in this category as they are also considered a hazardous waste.

3.2.1 Removal

After refrigerants have been evacuated from wet vehicles, the wet vehicles are brought to the Dismantling Area, which is in the northwest quadrant of the site (see Site Map in Appendix 8). Wet vehicles that have leaking oils may be drained of that particular oil before the refrigerants are evacuated. Leaking vehicles have higher priority than those without leaks. Tires, batteries, mercury switches and the air conditioning unit (after evacuation) are all removed first before the wet vehicle is lifted to remove the remainder of the fluids (oils and fuel). The dismantling area has overhead coverage in the form of a large canvas covering to protect it from precipitation events and potential stormwater runoff contamination.

The wet vehicle is then lifted by a SEDA Fluid Evacuation Station (manufactured by Recyclers Source – See manufacturer's brochures in Appendix 9) which has a 3-ton adjustable height tilting hydraulic lift that allows simultaneous liquid removal from both above and below the vehicle. The tilting mechanism allows an extra 0.5-0.75 gallons of fuel removal. It is also fire and explosion certified and sits above a certified sealed catchment tub that satisfies secondary containment codes should a rare spill occur during draining activities. The station uses high-efficiency suction (air-powered) to remove fluids and employs a gearbox drilling machine to effectively drain a wet vehicle in 6 to 8 minutes.

Facility employees are trained and certified to operate this machinery so that spills and leaks are minimized. Only trained and certified operators are authorized to use the equipment. Training records are kept in Appendix 10.

3.2.2 Storage

For oils and related hydrocarbons, removed fluids are pumped from the SEDA station to a 1,240-liter Used Oil Above-Ground Storage Tank (AST), located west of the SEDA station. This AST is a self-contained double-walled steel tank store in an outdoors uncovered area north of the covered dismantling area. Used oils are generally shipped off-site once a week or as necessary to keep under the 5,000 liter registration and storage threshold (see Section 2.2). Oil filters are drained, collected and stored in 55-gallon steel drums with lock-rim lids which are stored indoors in the Non-ferrous Warehouse, which is adjacent to the SEDA station.

3.2.3 Treatment and Disposal/Recycling

Once used oils have been removed from the wet vehicles and pumped to the AST, there is no post-treatment of the used oil at the facility. Richmond Steel uses M&R Environmental Ltd (www.mrenviro.com) as their preferred used oils and used oil filters disposal/recycling contractor. They are a registered collector of used oils by the British Columbia Used Oil Management Program and are licensed under the provisions of the EMA to transport Hazardous Waste (License #LT1074) by the Province of British Columbia. M&R Environmental Ltd is located at 4623 Byrne Road in Burnaby, BC. M&R Environmental Ltd ensures that its employees comply with all applicable environmental laws,

regulations and internal company policies to ensure proper removal and disposal of used oils and oil filters from the facility.

Hazardous waste manifests are filled out for each load of used oils or used oil filters that M&R Environmental ships off-site. Used oils are pumped into properly placarded oil tank trucks, while used oil filter drums, which are properly labeled and palletized, are loaded onto transport trucks for shipment to M&R's disposal and recycling facility. Hazardous waste manifests for the shipment of used oils and oil filters for the previous 2 years can be found in Appendix 11. Approximately 2,000-3,000 liters of used/waste oils is shipped off-site per month, which is below the average 30-day legal threshold of 5,000 L for generation or short-term storage of used oils (see Section 2.2).

As the consignor, the facility, if offering for transportation used oils in excess of 210 liters, is required to:

- Use a transporter that is licensed under Section 45 of the HWR to transport used oil. The transporter must have a valid Hazardous Waste Transport License issued by the MOE. A copy of the transporter's license to transport used oils/oil filters shall be kept on file at the facility.
- As a facility with a Consignor ID Number, ensure the manager retains Copy 2 of the manifest and mails Copy 1 to the Ministry of Environment within 3 days.
- Store all records related to the transportation of hazardous waste for a minimum of two (2) years.

3.2.4 Contingency Plans for Spills

Minor spills of oils or other hydrocarbon fluids at the facility will be handled in one of the following ways:

- If occurring on an impervious surface, the spilled material will be soaked up using dry absorbent materials (such as vermiculite) or with absorbent booms, pillows or blankets. All used absorbent materials will be stored and properly labeled in a UN-rated drum that is compatible with the material until it can be compliantly shipped off-site for disposal as a hazardous waste.
- If occurring on a bare soil surface, the spilled material will be soaked up as well as possible with dry absorbents or absorbent booms, pillows or blankets. Any soil that is still visibly stained after absorbent use will be removed by shovel. All used absorbent materials and contaminated soil will be stored and properly labeled in a UN-rated drum that is compatible with the material until it can be compliantly shipped off-site for disposal as a hazardous waste.
- If small spills occur during SEDA evacuation and are captured by the SEDA sealed catchment tub, the material can be removed by pump suction and transferred to the appropriate waste fluid AST.
- After the spill has been cleaned up, an inventory of spill kit materials will be taken. All spill kit materials will be replenished as soon as possible, but no later than 2 weeks after the inventory.

Major or significant spills of oils or other hydrocarbon fluids at the facility will be handled in the following manner, in accordance with the facility Spill Prevention, Control and Countermeasures (SPCC) Plan and with the EMA Spill Reporting Regulation (if the spill reporting threshold of 100 L is exceeded):

- Upon discovery of a significant spill, an employee will immediately notify the properly trained Spill Coordinator (designated by a duly authorized facility official). The Spill Coordinator has the authority and training to mobilize the appropriate personnel and equipment needed after

first assessing the nature and extent of the spill and the potential threat to human life and the environment.

- The Spill Coordinator shall take all reasonable and practical measures, having due regard for the safety of the public and himself or herself, to stop, contain and minimize the effects of the spill.
- As necessary, the Spill Coordinator will evacuate personnel and notify local authorities (police, fire departments) if area control or evacuation of the surrounding community is recommended. He/she shall activate emergency response personnel and equipment and enlist outside emergency services if needed.
- The Spill Coordinator will authorize immediate action to contain the spill to the site. If the spill should near an outfall to the Fraser River, the Spill Coordinator will authorize appropriate further actions to stop and/or significantly impede the migration of the spill. Storm water drains in the path of the spill shall have covers immediately placed over them and absorbent booms surrounding them to protect them from spill contamination.
- The oil/water separator shall not be used as part of the spill containment strategy.
- Once the spill has been stopped and contained, the spilled material, to the extent feasible, will be recovered, reclaimed or disposed of. Materials such as absorbents and contaminated soil and water will be disposed of in compliance with all applicable regulatory requirements.
- The Spill Coordinator will keep a log of activities during the spill event, including the nature and approximate extent of the spill, the response actions taken, any outside assistance required or obtained, the quantity and disposition of spill materials, an initial assessment of environmental damage (if any) and any contact made (verbal or written) with regulatory agencies.
- If the spill has exceeded the 100 L Spill Reporting Threshold, the Spill Coordinator will immediately report the spill to the Provincial Emergency Program (PEP) of British Columbia by telephoning 1-800-663-3456. This report shall include, at a minimum:
    a) the reporting person's name and telephone number;
    b) the name and telephone number of the person who caused the spill (if any);
    c) the location and time of the spill;
    d) the type and quantity of the substance spilled;
    e) the cause and effect of the spill;
    f) details of action taken or proposed to stop, contain and minimize the effects of the spill;
    g) a description of the spill location and of the area surrounding the spill;
    h) the details of further action contemplated or required;
    i) the names of any agencies on the scene; and
    j) the names of other persons or agencies advised concerning the spill.
- After the spill has been cleaned up, an inventory of spill kit materials will be taken. All spill kit materials will be replenished as soon as possible, but no later than 2 weeks after the inventory.

There have no significant spills of Oils and Related Hydrocarbon Fluids at the facility within the past two (2) years (as of the date of this plan).

3.2.5 Best Management Practices for Minimization of Releases

The following Best Management Practices (BMPs) shall be utilized by the facility to ensure minimization of environmental exposure from Oils and Related Hydrocarbon Fluids:

- Ensure all ASTs are either constructed of double-walled steel for self-containment or are within reinforced concrete secondary containment areas. Consider overhead coverage and a secondary containment berm for the AST storage area.

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- Ensure all ASTs are inspected quarterly to ensure tank integrity and the absence of leaks. Annual petroleum product AST integrity tests using approved methods are recommended.
- Ensure all liquid chemicals containers 55-gallons (200 L) or greater are stored on secondary containment pallets or within secondary containment areas.
- Ensure all ASTs are equipped with a liquid-level gauging device and/or high-level alarms to minimize the inadvertent overfilling of a tank.
- The SEDA evacuation station has a certified sealed catchment tub that satisfies secondary containment codes should a rare spill occur during draining activities.
- Inspect and maintain the canvas overhead coverage of the SEDA evacuation station to minimize the overflow of the catchment tub during precipitation events.
- Only authorized and trained personnel shall be allowed to evacuate wet vehicles using the SEDA equipment.
- Ensure all wet vehicles are completely drained of all fluids before being stored as hulks or shredded.
- Ensure all drivers of oil transport trucks are licensed and certified to load and unload oil-related products and that copies of their registrations are kept on file.
- Ensure persons transporting waste oils (hazardous wastes) in excess of 210 liters are licensed under Section 45 of the HWR and have a valid HW Transport Licensed issued by the MOE. Ensure a copy of the transporter's license to transport Hazardous Wastes is kept on site.
- Ensure all connections during loading or unloading of oil products are spill-proof and are checked for proper fitting and absence of leaks during fluid transfer.
- Spill kits with adequate spill response materials shall be no more than 25 feet from any loading/unloading zone or from any area where oils are removed or transported.
- Loading and unloading of oils or other related fluids shall be avoided during precipitation events if outdoors, or conducted under the dismantling area canopy.
- Facility personnel shall be present at all times during the loading or unloading of oils or related products.
- Ensure storm water drains have appropriate covers stored nearby in the event of a spill.
- Storm water diversion devices such as berms, curbs, dikes, retention areas or retaining walls shall be used to prevent any spills from reaching a navigable water source (i.e., the Fraser River).
- The on-site 2,500-gallon oil/water separator shall have its outflow tested at least once per year to ensure that the concentration of oil is <10mg/L if the discharge is to storm sewers (applicable to facility). Ensure that the oil/water separator is not used as part of any spill response strategy.
- Adequate lighting shall be provided at the facility to identify and control a spill should one occur at night.
- All facility personnel shall be trained in Spill Prevention and Response procedures, Emergency Evacuation procedures and Storm Water Pollution Prevention procedures within 60 days of hire and annually thereafter.
- The following spill prevention equipment shall be provided, adequately stocked and maintained on-site:
    - Storm water drain covers
    - Bulk absorbent material; absorbent booms, pillows and blankets
    - Brooms and other necessary spill preventative equipment; metal tools, such as shovels, must be non-sparking
    - Prominently located fire extinguishers
    - Prominently located Emergency first-aid kits
    - Explosion-proof flashlights and batteries
    - Cell phones or radio equipment for emergency notification of management and appropriate emergency response personnel.

3.3 Fuels

Gasoline (fresh and stale), diesel fuel, propane and natural gas are the typical fuels encountered by vehicle dismantlers. Fuels on wet vehicles typically average 20 liters. The majority of fuels can be reused, and if recycled, they are not considered a hazardous waste, as they are being used for their intended purpose. All efforts should be made to reuse fuels by transporting them to on-site vehicles. This includes propane and natural gas. Waste or stale gasoline is gasoline that has lost its "high grade" and cannot be reused in other vehicles. Stale gasoline must be disposed of as a hazardous waste (TDGR Class 3) and is considered such if transported off-site. Alternative fuels, such as hydrogen, are not addressed in this plan.

3.3.1 Removal

Fuels are removed from wet vehicles while they are on the SEDA hydraulic lift (after refrigerants, tires, batteries and mercury switches have been removed). The SEDA equipment can simultaneously remove oils and fuels at the same time. The tilting mechanism on the lift is useful in draining the last 0.5-0.75 gallons of fuel. Only authorized and trained personnel are allowed to operate the SEDA equipment to drain fluids from wet vehicles. Fire extinguishers are kept close by the SEDA equipment in case of the accidental ignition of spilled or leaked fuel.

3.3.2 Storage

Stale gasoline or diesel fuel pumped from wet vehicles from the SEDA station is transferred to the 1,240-liter Reclaimed Gasoline AST west of the SEDA station. Gasoline that is not stale is transferred to the 2,140-liter Unleaded Gasoline AST. This AST is also a steel double-walled self-contained AST that is stored outdoors in the uncovered area north of the covered dismantling area. Propane or natural gas removed from vehicle tanks shall be transferred to empty propane tanks on-site and reused by on-site vehicles.

3.3.3 Treatment and Disposal/Recycling

Reusable unleaded gasoline removed from vehicles is frequently used in on-site vehicles or employee vehicles. Stale gasoline is shipped off-site as a hazardous waste. Richmond Steel uses Lamb Fuels of Chula Vista, California, as their approved contractor for the disposal of waste fuels, who in turn contract Fox Fuels Sales & Distribution Ltd at 816 264th Street, Aldergrove, BC, as their preferred shipper to ship stale gasoline off-site from Richmon Steel.

Shipments of stale gasoline in excess of 5 L are required to be manifested, so all stale fuel shipments transported by M&R Environmental are manifested (the facility ships an average of 3,000 to 4,000 L of stale gasoline per month). This monthly average quantity is above the legal threshold (500 L) for generation or short-term storage, which requires the facility to have a Consignor Identification Number (see Section 2.2). Hazardous waste manifests for shipments of stale gasoline for the past two (2) years can be found in Appendix 12.

As a consignor that offers more than 5 L of Hazardous Waste Fuels for transport, the facility must also comply with the same set of requirements outlined at the end of Section 3.2.3.

3.3.4 Contingency Plans for Spills

Contingency plans for the spills of fuels are the same as they are for used/waste oils and related hydrocarbons (See section 3.2.4), including the Spill Reporting Threshold (100 L).

The only difference for fuels is that there is an increased danger to human life due to the flammability of fuels. If a significant fuel spill occurs, the Spill Coordinator must assess the situation to determine if there are any sources of ignition that could cause the spilled fuel to ignite or explode. The Spill Coordinator must immediately act to have the source of ignition deactivated or removed from the area, if possible.

Outside emergency agencies should be immediately notified should an ignition of spilled fuel occur and the area should be immediately evacuated according to the Site Evacuation Plan.

Fire retardant suits or clothing should be worn by any person involved in the draining, loading or unloading of fuels in case of an ignition.

There have been no significant spills of Fuels at the facility within the past two (2) years (as of the date of this plan).

3.3.5 Best Management Practices for Minimization of Releases

The following Best Management Practices (BMPs) shall be utilized by the facility to ensure minimization of environmental exposure from Fuels:

- Use the same set of BMPs that are set forth in section 3.2.5 for used/waste oils and other hydrocarbons, with the exception of:
  - Ensure persons transporting stale gasoline (hazardous wastes) in excess of 5 liters are licensed under Section 45 of the HWR and have a valid HW Transport Licensed issued by the MOE. Ensure a copy of the transporter's license to transport Hazardous Wastes is kept on site.
- And, additionally, use the following BMPs:
  - Remove gasoline from wet vehicles by suction only. Do not puncture fuel tanks to remove fuels as that could cause a spark and ignition or explosion of the fuel.
  - Ensure waste gasoline and diesel fuel are not mixed with used oils.
  - Ensure all employees involved in the transfer (draining, loading or unloading) of fuels are wearing fire-retardant suits, gloves and hoods to protect from accidental ignition of fuels.

3.4 Antifreeze

Antifreeze, or ethylene glycol, is a chemical used in vehicle radiators that is generally mixed with water in a 50/50 ratio to effectively raise the boiling point and lower the freezing point of water used to cool engines. It is toxic and water-soluble and is contaminated with rust inhibitors and corrosion products (including lead from the radiator). Spills of antifreeze easily penetrate soil and can cause the ground to be contaminated. Contaminated and spent antifreeze is considered a Leachable Toxic Waste by the HWR. Antifreeze that can be reused is not considered a Hazardous Waste, as it can be reused in the way originally intended. However, Richmond Steel does not reuse used antifreeze. The average wet vehicle contains about 8 liters of antifreeze.

3.4.1 Removal

Antifreeze is drained from wet vehicle radiators and cooling systems while it is on the SEDA station hydraulic lift. Antifreeze is first drained from the bottom of the radiator and the remainder is removed by the SEDA air suction system.

3.4.2 Storage

Waste antifreeze that is evacuated from wet vehicles at the SEDA station is pumped to a 600-liter steel double-walled self-contained Waste Antifreeze AST that is north of the covered dismantling area.

3.4.3 Treatment and Disposal/Recycling

Waste antifreeze is shipped off-site as a Leachable Toxic Waste. Shipments must be manifested in quantities of 5 kg or more. The facility ships approximately 500 L per month in a single shipment, so the shipments are manifested. Richmond Steel uses M&R Environmental Ltd as their preferred Hazardous Waste transporter. Details about M&R are provided in Section 3.2.3. Hazardous waste manifests for the past two (2) years for waste antifreeze can be found in Appendix 13. The registration and storage legal threshold for antifreeze (500 L) is occasionally exceeded, which requires the facility to have a Consignor Identification Number (See Section 2.2).

As a consignor that offers more than 5 L of Hazardous Waste Fuels for transport, the facility must also comply with the same set of requirements outlined at the end of Section 3.2.3.

No antifreeze is recycled for reuse at the facility.

3.4.4 Contingency Plans for Spills

Minor spills of antifreeze at the facility will be handled in one of the following ways:

- If occurring on an impervious surface, the spilled material will be soaked up using multipurpose absorbent booms, pillows or blankets. All used absorbent materials will be stored and properly labeled in a materially compatible drum until it can be compliantly shipped off-site. Antifreeze contaminated materials are also considered as a hazardous waste.
- If occurring on a bare soil surface, the spilled material will be soaked up as well as possible with multipurpose absorbent booms, pillows or blankets. Any soil that is still visibly stained after absorbent use will be removed by shovel. All used absorbent materials and contaminated soil will be stored and properly labeled in a materially compatible drum until it can be compliantly shipped off-site for disposal as a hazardous waste.

- If small spills occur during SEDA evacuation and are captured by the SEDA sealed catchment tub, the material can be removed by pump suction and transferred to the appropriate waste fluid AST.
- After the spill has been cleaned up, an inventory of spill kit materials will be taken and all spill kit materials will be replenished as soon as possible.

Major or significant spills of antifreeze at the facility will be handled in the following manner, in accordance with the facility Spill Prevention, Control and Countermeasures (SPCC) Plan and with the EMA Spill Reporting Regulation (if the spill reporting threshold of 5 L is exceeded):

- Upon discovery of a significant spill, an employee will immediately notify the properly trained Spill Coordinator (designated by a duly authorized facility official). The Spill Coordinator has the authority and training to mobilize the appropriate personnel and equipment needed after first assessing the nature and extent of the spill and the potential threat to human life and the environment.
- The Spill Coordinator shall take all reasonable and practical measures, having due regard for the safety of the public and himself or herself, to stop, contain and minimize the effects of the spill.
- As necessary, the Spill Coordinator will notify local authorities (police, fire departments) if area control of the surrounding community is recommended. He/she shall activate emergency response personnel and equipment and enlist outside emergency services if needed.
- The Spill Coordinator will authorize immediate action to contain the spill to the site. If the spill should near an outfall to the Fraser River the Spill Coordinator will authorize appropriate further actions to stop and/or significantly impede the migration of the spill. Storm water drains in the path of the spill shall have covers immediately placed over them and absorbent booms surrounding them to protect them from spill contamination.
- The oil/water separator shall not be used as part of the spill containment strategy.
- Once the spill has been stopped and contained, the spilled material, to the extent feasible, will be recovered, reclaimed or disposed of. Materials such as absorbents and contaminated soil and water will be disposed of compliantly in accordance will all applicable regulatory requirements.
- The Spill Coordinator will keep a log of activities during the spill event, including the nature and approximate extent of the spill, the response actions taken, any outside assistance required or obtained, the quantity and disposition of spill materials, an initial assessment of environmental damage (if any) and any contact made (verbal or written) with regulatory agencies.
- If the spill has exceeded the 5 L Spill Reporting Threshold, the Spill Coordinator will immediately report the spill to the Provincial Emergency Program (PEP) of British Columbia by telephoning 1-800-663-3456. This report shall include, at a minimum:
  a) the reporting person's name and telephone number;
  b) the name and telephone number of the person who caused the spill (if any);
  c) the location and time of the spill;
  d) the type and quantity of the substance spilled;
  e) the cause and effect of the spill;
  f) details of action taken or proposed to stop, contain and minimize the effects of the spill;
  g) a description of the spill location and of the area surrounding the spill;
  h) the details of further action contemplated or required;
  i) the names of any agencies on the scene; and
  j) the names of other persons or agencies advised concerning the spill.
- After the spill has been cleaned up, an inventory of spill kit materials will be taken and all spill kit materials will be replenished as soon as possible.

There have no significant spills of Antifreeze at the facility within the past two (2) years (as of the date of this plan).

3.4.5 Best Management Practices for Minimization of Releases

The following Best Management Practices (BMPs) shall be utilized by the facility to ensure minimization of environmental exposure from Antifreeze:

- Ensure all antifreeze is removed from wet vehicles in the dismantling area, at the SEDA station, and that the secondary containment catchment tub is free of other liquids. The SEDA evacuation station has a certified sealed catchment tub that satisfies secondary containment codes should a rare spill occur during draining activities.
- Ensure that all wet vehicle parts that may have contained antifreeze are completely drained and removed from the vehicle.
- Provide an adequate level of containment and protection from any residual antifreeze leakage from radiators.
- Ensure all waste antifreeze is transferred to the Waste Antifreeze AST.
- Ensure all tanks used for the storage of waste antifreeze are materially compatible with their contents and are stored away from storm drains.
- Ensure all ASTs are either constructed of double-walled steel for self-containment or are within reinforced concrete secondary containment areas. Consider overhead coverage and a secondary containment berm for the AST storage area.
- Ensure all ASTs are inspected quarterly to ensure tank integrity and the absence of leaks.
- Ensure all liquid chemicals containers 55-gallons (200 L) or greater are stored on secondary containment pallets or within secondary containment areas.
- Ensure all ASTs are equipped with a liquid-level gauging device and/or high-level alarms to minimize the inadvertent overfilling of a tank.
- Inspect and maintain the canvas overhead coverage of the SEDA evacuation station to minimize the overflow of the catchment tub during precipitation events.
- Ensure persons transporting waste antifreeze (hazardous waste) in excess of 5 liters are licensed under Section 45 of the HWR and have a valid HW Transport Licensed issued by the MOE. Ensure a copy of the transporter's license to transport Hazardous Wastes is kept on site.
- Ensure all connections during loading or unloading of waste antifreeze are spill-proof and are checked for proper fitting and absence of leaks during fluid transfer.
- Spill kits with adequate spill response materials shall be no more than 25 feet from any loading/unloading zone or from any area where oils are removed or transported.
- Loading and unloading of waste antifreeze shall be avoided during precipitation events if outdoors, or conducted under the dismantling area canopy.
- Facility personnel shall be present at all times during the loading or unloading of waste antifreeze.
- Ensure storm water drains have appropriate covers stored nearby in the event of a spill.
- Storm water diversion devices such as berms, curbs, dikes, retention areas or retaining walls shall be used to prevent any spills from reaching a navigable water source (i.e., the Fraser River).
- The on-site 2,500-gallon oil/water separator shall have its outflow tested at least once per year to ensure that the concentration of lead (which is often present in waste antifreeze) is <0.10mg/L if the discharge is to storm sewers (applicable to facility). Ensure that the oil/water separator is not used as part of any spill response strategy.
- Adequate lighting shall be provided at the facility to identify and control a spill should one occur at night.

- All facility personnel shall be trained in Spill Prevention and Response procedures, Emergency Evacuation procedures and Storm Water Pollution Prevention procedures within 60 days of hire and annually thereafter.
- The following spill prevention equipment shall be provided, adequately stocked and maintained on-site:
  - Storm water drain covers
  - Bulk absorbent material; absorbent booms, pillows and blankets
  - Brooms and other necessary spill preventative equipment; metal tools, such as shovels, must be non-sparking
  - Prominently located fire extinguishers
  - Prominently located Emergency first-aid kits
  - Explosion-proof flashlights and batteries
  - Cell phones or radio equipment for emergency notification of management and appropriate emergency response personnel.

3.5 Lead and Lead-Acid Batteries

Lead is a toxic metal that is found in lead-acid batteries, at the end of battery cables and as balancing weights on wheel rims. Lead and lead-acid batteries are considered a hazardous waste by the HWR when it is shipped off-site for recycle or disposal. Wet vehicles contain on average about 20 kg of lead.

3.5.1 Removal

Batteries and battery cables are removed from wet vehicles in the dismantling area after the refrigerants have been removed and before the wet vehicles are lifted by the SEDA station hydraulic lift to remove fluids. Tires and wheels are removed first, and lead weights on the wheel rims are removed after the tires are separated from the rims. The lead terminals of battery cables are also removed from the cables and stored with the lead wheel weights.

3.5.2 Storage

Lead weights and battery terminals are stored in plastic 5-gallon pails with lids which are kept inside the non-ferrous warehouse until they are sold for recycle. Lead-acid batteries are kept in one of two plastic tote boxes that can hold approximately 30 batteries each. The tote boxes are stored under the canopy over the dismantling area until they are picked up for disposal (the totes are replaced by the shipper when picked up for recycle).

3.5.3 Treatment and Disposal/Recycling

Lead-acid batteries are shipped off-site by Interstate Batteries of British Columbia, located at 20148 102nd Avenue in Langley, BC, which has been contracted by Richmond Steel. Batteries are picked up when there are about 1½ tote boxes worth of batteries accumulated (approximately twice a month), before they meet the 1,000 kg manifest threshold (see Table 2). Interstate Batteries records shipments on a pick-up slip (waybill), a copy of which is given to Richmond Steel to keep on file. Batteries are shipped inside the plastic totes they are stored in and both totes are replaced by Interstate Batteries each time they pick up a load. Richmond Steel typically ships 1500-2000 kg of lead-acid batteries per month. Interstate Batteries recycles batteries under the guidelines of the MOE. The battery waybills (pick-up slips) are kept with the Hazardous Waste manifests of other materials in Appendix 14. Lead weights and battery terminals are not shipped off as hazardous waste; rather, they are sold to lead recyclers.

3.5.4 Contingency Plans for Spills

The following contingency plans are used in case of a minor lead-acid battery spill (which contains diluted hydrochloric acid and dissolved lead):

- Inform the facility Spill Coordinator of the spill. He/she will coordinate properly trained employees to clean up the spill and make a record of the spill.
- Employees should wear rubber gloves, boots and aprons, and splash goggles to protect themselves from spilled battery acid.
- Clean up battery acid spills with soda ash. Maintain adequate supplies of soda ash in nearby spill kits. Replenish supply as needed. Employees handling soda ash should wear appropriate respiratory protection (dust masks) to avoid inhaling soda ash particles.
- Place battery-acid contaminated soda ash in a properly labeled plastic container and shipped off-site as a hazardous waste.

- If battery acid spill was on native soil instead of an impervious surface, neutralize with soda ash and remove all contaminated soil, as well, with shovel. Place spill material in a plastic container that is properly labeled as hazardous waste and ship off-site with a licensed HW transporter.

Significant spills (those that would have to be reported) from lead-acid batteries (200 kg or greater) are highly unlikely, but would be cleaned up and disposed of in the same manner as a minor spill.

There have been no significant spills of lead-acid batteries at the facility in the previous two (2) years (as of the date of this plan).

3.5.5 Best Management Practices for Minimization of Releases

The following Best Management Practices (BMPs) shall be utilized by the facility to ensure minimization of environmental exposure from Lead-acid batteries:

- Ensure lead-acid batteries are carefully removed in the dismantling area and put immediately into the plastic leak-proof battery tote boxes. Do not use metal containers to store batteries.
- Ensure battery tote boxes either have lids, or are stored under overhead coverage to avoid contact with precipitation.
- Inspect battery tote boxes on a regular basis to ensure that they are sound and not cracked or leaking fluids.
- Ensure spill kits are not located more than 25 feet away from dismantling area.
- Ensure battery storage is separated from storage of other metals to prevent metal corrosion from battery acid.
- Ensure other types of batteries are separated from lead-acid batteries.
- Ensure batteries are not stored near storm drains or stormwater outfalls.
- Ensure employees wear eye protection and rubber gloves when handling batteries and that eye wash stations are located nearby in case of accidental splashes of battery acid into eyes.
- The on-site 2,500-gallon oil/water separator shall have its outflow tested at least once per year to ensure that the concentration of lead is <0.10mg/L if the discharge is to storm sewers (applicable to facility). Ensure that the oil/water separator is not used as part of any spill response strategy.
- Adequate lighting shall be provided at the facility to identify and control a spill should one occur at night.
- All facility personnel shall be trained in Spill Prevention and Response procedures, Emergency Evacuation procedures and Storm Water Pollution Prevention procedures within 60 days of hire and annually thereafter.
- The following spill prevention equipment shall be provided, adequately stocked and maintained on-site:
  - Storm water drain covers
  - Bulk absorbent material; absorbent booms, pillows and blankets
  - Brooms and other necessary spill preventative equipment; metal tools, such as shovels, must be non-sparking
  - Prominently located fire extinguishers
  - Prominently located Emergency first-aid kits
  - Explosion-proof flashlights and batteries
- Cell phones or radio equipment for emergency notification of management and appropriate emergency response personnel.

3.6 Mercury Switches

Mercury switches, which contain small amounts of the very toxic element, mercury (Hg), are commonly found in hoods, trunks, convenience lighting assemblies and anti-lock brake systems on vehicles. Mercury switches typically contain about one gram of mercury, and mercury is a highly toxic marine pollutant (and toxic to all living things), even in small quantities. If the metal casing of the mercury switch were to be broken while still inside the wet vehicle, the mercury would be released and would contaminate the wet vehicle. The leachate extraction concentration of 0.1 mg/L of mercury would be exceeded and the wet vehicle would then be classified as a hazardous waste (TDGR Class 8). Import automotive manufacturers ceased using mercury switches in the 1990s and North American manufacturers ceased placing mercury switches in new cars in 2003. Still, there are plenty of vehicles still on the highways that do contain these devices and may one day end up at a vehicle dismantling facility. Therefore, vehicle dismantlers must check each vehicle received for these devices and remove them prior to shredding hulk vehicles.

3.6.1 Removal

After removal of refrigerants, tires and batteries from wet vehicles, and before they are drained of fluids, the vehicles are inspected for the presence of mercury switches, which are immediately removed. Employees must be trained as to what mercury-containing devices look like, where they will typically be found, and how to safely remove them without releasing any mercury within. Once all mercury switches, light assemblies and anti-lock brake systems containing mercury have been removed, the wet vehicle will then be stationed for fluids removal.

3.6.2 Storage

Mercury devices that have been removed from wet vehicles are stored whole in plastic pails and locked in a cabinet in the SEDA area. Once per month, the mercury pellets in the switches are removed and placed into containers that are supplied by the Mercury Switch Out Program (see Section 3.6.3 below). These containers are pre-labeled for shipment and once they are full, the transporter is notified and they are shipped off-site (see Section 3.6.3 below).

3.6.3 Treatment and Disposal/Recycling

Mercury-containing waste is considered a hazardous waste under the HWR. The generation and storage threshold for mercury-containing waste is 100 kg (gross weight of mercury-containing waste). The manifest threshold for mercury (mercury contained) is 5 kg. Richmond Steel does not meet either of these thresholds, as they only ship 1-1.5 kg mercury (mercury contained) per month. Richmond Steel uses the Mercury Switch Out Program, which was begun by the Clean Air Foundation in 2001, as the collector of its mercury switches (at no cost to Richmond Steel). The switches are collected and sent to Fluorescent Lamp Recycling in Ayr, Ontario, where they are put into long term storage to ensure the mercury is not released to the environment. The Mercury Switch Out Program provides the pre-labeled container into which the mercury switch pellets are placed, and a prepaid courier waybill to send with the container once it is full. The Program also provides instructional manuals on how to remove the mercury switches from trunks, hoods and anti-lock brake systems. Information on this program can be found at http://www.cleanairfoundation.org/switcheout/register_so.asp. The company that ships the mercury containers is Tri-Arrow Industrial Recovery Inc. (Ph. #604-597-7334) at 13364 Comber Way in Surrey, BC. Copies of the waybills used for the Mercury Switch Out Program will be found in Appendix 15.

3.6.4 Contingency Plans for Spills

Should an unlikely spill of mercury from a mercury switch occur, the following contingency plans are in place:

- Inform the facility Spill Coordinator of any amount of spilled mercury. He/she will coordinate the clean-up detail and make a record of the spill.
- If the spill occurs on an impervious surface, the spilled mercury (which is a liquid metal at room temperature) can be absorbed with powder absorbents or dirt, and then vacuumed up with a Shop-vac.
- The mercury-contaminated dirt or absorbent (which would have to be removed from the Shop-Vac) would then be considered a hazardous waste and would have to be disposed as such.
- If the spill occurs on native soil, the soil can be removed by shovel and placed into an appropriately-sized container (plastic or metal). This container than would have to be shipped off-site as hazardous waste.
- If a mercury switch casing was broken inside a wet vehicle while being dismantled and all of the mercury could not be removed, then the wet vehicle would have to be segregated on-site and shipped off-site as a hazardous waste, as the 0.1 mg/L leach extraction concentration of mercury would have been exceeded.
- An estimate of the amount of mercury released must be made and indicated on any shipping papers describing the mercury-containing waste.

Significant spills of mercury (those that would have to be reported) of 5 kg or more are extremely unlikely.

There have been no mercury spills at the facility in the previous two (2) years (as of the date of this plan).

3.6.5 Best Management Practices for Minimization of Releases

The following Best Management Practices (BMPs) shall be utilized by the facility to ensure minimization of environmental exposure from Mercury:

- Ensure that employees are properly trained how to find and remove mercury switches safely from wet vehicles without damaging the casings and releasing the mercury. The Mercury Switch Out Program (described in Section 3.6.3) provides free instructional manuals which can be used to train employees to safely locate and remove mercury switches.
- Ensure all vehicles are thoroughly inspected for mercury switches and that all switches have been removed prior to crushing and shredding the car hulk.
- Ensure mercury switch removal is done in the dismantling area with appropriate secondary containment that will prevent any spilled mercury from entering storm drains or stormwater outfalls.
- Ensure mercury switch pellets are stored in containers supplied by the Mercury Switch Out Program and are shipped off-site when the container is full.

3.7 Windshield Washer Fluid

Windshield washer fluid contains a variety of compounds that make it toxic, so it must be removed from vehicles before crushing and shredding. The VDRIEPR considers it a waste that must be managed under this plan, but it is not considered a hazardous waste under the HWR. However, it is still toxic and can cause soil contamination as defined by the Contaminated Sites Regulation. Since it is not considered a hazardous waste, there are no legal thresholds for the generation, storage or transportation of windshield washer fluid. Consequently, some vehicle dismantlers, including Richmond Steel Recycling, give the product away to employees or customers for reuse. Wet vehicles typically contain 1-2 liters of windshield washer fluid.

3.7.1 Removal

Windshield washer fluid removal is done on the SEDA station hydraulic lift after refrigerants, tires, batteries and mercury switches have been removed. Air-powered suction hoses on the SEDA equipment accomplish this removal.

3.7.2 Storage

Windshield washer fluid is evacuated by the SEDA equipment and transferred to a 600 L double-walled steel AST that is stored outdoors in the area north of the covered dismantling area. There is no overhead coverage for the AST area.

3.7.3 Treatment and Disposal/Recycling

Some of the windshield washer fluid that is removed from wet vehicles is given away to employees or customers for reuse. However, the majority of it is shipped off-site approximately once or twice per quarter or when the Windshield Washer Fluid AST is about half full (approximately 300 L). Richmond Steel Recycling currently uses M&R Environmental Ltd (see Section 3.2.3) as their preferred transporter of waste windshield washer fluid. As it is not considered a hazardous waste, shipments do not have to be manifested. However, shipment waybills are filled out detailing quantity shipped and copies of those waybills can be found in Appendix 16.

3.7.4 Contingency Plans for Spills

Spills of windshield washer fluid at the facility will be handled in one of the following ways:

- Inform the Spill Coordinator there has been a spill. He/she will coordinate a spill response team to clean-up the spill and make a record of the spill.
- If occurring on an impervious surface, the spilled material will be soaked up using multipurpose absorbent booms, pillows or blankets. All used absorbent materials will be stored and properly labeled in a materially compatible drum until it can be compliantly shipped off-site. Material contaminated with windshield washer fluid is not considered a hazardous waste.
- If occurring on a bare soil surface, the spilled material will be soaked up as well as possible with multipurpose absorbent booms, pillows or blankets. Any soil that is still visibly stained after absorbent use will be removed by shovel. All used absorbent materials and contaminated soil will be stored and properly labeled in a materially compatible drum until it can be compliantly shipped off-site (not considered a hazardous waste).

- If small spills occur during SEDA evacuation and are captured by the SEDA sealed catchment tub, the material can be removed by pump suction and transferred to the appropriate waste fluid AST.
- After the spill has been cleaned up, an inventory of spill kit materials will be taken and all spill kit materials will be replenished as soon as possible.

3.7.5 Best Management Practices for Minimization of Releases

The following Best Management Practices (BMPs) shall be utilized by the facility to ensure minimization of environmental exposure from Windshield Washer Fluid (WWF):

- Ensure all WWF is removed from wet vehicles in the dismantling area, at the SEDA station, and that the secondary containment catchment tub is free of other liquids. The SEDA evacuation station has a certified sealed catchment tub that satisfies secondary containment codes should a rare spill occur during draining activities.
- Ensure all WWF is transferred to the Windshield Washer Fluid AST (or to an appropriate container if being reused by an employee or customer).
- Ensure all tanks used for the storage of WWF are materially compatible with their contents and are stored away from storm drains.
- Ensure all ASTs are either constructed of double-walled steel for self-containment or are within reinforced concrete secondary containment areas. Consider overhead coverage and a secondary containment berm for the AST storage area.
- Ensure all ASTs are inspected quarterly to ensure tank integrity and the absence of leaks.
- Ensure all liquid chemicals containers 55-gallons (200 L) or greater are stored on secondary containment pallets or within secondary containment areas.
- Ensure all ASTs are equipped with a liquid-level gauging device and/or high-level alarms to minimize the inadvertent overfilling of a tank.
- Inspect and maintain the canvas overhead coverage of the SEDA evacuation station to minimize the overflow of the sealed catchment tub during precipitation events.
- Ensure all connections during loading or unloading of waste antifreeze are spill-proof and are checked for proper fitting and absence of leaks during fluid transfer.
- Spill kits with adequate spill response materials shall be no more than 25 feet from any loading/unloading zone or from any area where oils are removed or transported.
- Loading and unloading of WWF shall be avoided during precipitation events if outdoors, or conducted under overhead coverage.
- Facility personnel shall be present at all times during the loading or unloading of waste antifreeze.
- Ensure storm water drains have appropriate covers stored nearby in the event of a spill.

3.8 Tires

Tires are considered an environmental risk by the VDRIEPR due to the impact they could have on the environment in the unlikely event that they catch on fire. They are therefore included as a waste that must be managed under this plan. There are no legal thresholds for the storage of tires, although it is recommended that no more than 1,000 tires be stored on a site at any given time. Most vehicles have four tires.

3.8.1 Removal

After refrigerants are removed from wet vehicles and the vehicle has been put on the SEDA station hydraulic lift, the wheels and tires are removed. Tires are then separated from the wheel rims. Lead weights are removed from the rims at this time also, as previously described.

3.8.2 Storage

Tires that have been separated from the rims are stored in stacked piles on an asphalt surface just outside the covered dismantling area. Richmond Steel usually has less than 200 tires on site at any one time. There is no overhead coverage for the tire storage area.

3.8.3 Treatment and Disposal/Recycling

Richmond Steel Recycling Ltd is part of the Tire Stewardship BC Program which is a not-for-profit society formed to manage British Columbia's tire recycling program. Under this program, collected tires are ground into rubber crumbs that are used in a variety of different products, including athletic tracks and synthetic turf fields, and as an asphalt roadway resurfacing component. Approximately 20% of scrap tires are used as a fuel supplement in the paper pulp and cement industries. The program collects an Advance Disposal Fee, commonly referred to as an *eco fee*, on the sale of every new tire in British Columbia from participating retailers. The fees are used to pay for transporting and recycling BC generated scrap tires ensuring that the tires are disposed in an environmentally friendly manner.

Scrap tires generated at Richmond Steel Recycling are shipped out on roughly a monthly basis. The tires are shipped to Pacific Shredding Ltd at 1108 Derwent Way on Annacis Island in Delta, BC (Ph. #604-524-6313). Copies of shipment waybills for the tires can be found in Appendix 16.

3.8.4 Contingency Plans for Spills/Fires

There are no spill contingency plans for tires, as they are not a liquid, and are not considered as a spill hazard. However, there are contingency plans for tire fires, which are considered unlikely, considering the short turn-around time for tire storage at the site. However, should a tire fire start, the following contingency plans would be in place:

- The facility Emergency Coordinator should be notified immediately.
- Using the fire extinguishers located within 75 feet of the tire storage area, site personnel should attempt to extinguish any incidental fires of combustible materials or other heat sources near the tire pile that could ignite a tire fire. Fire extinguishers may be employed for single-tire fire, but should not be relied upon for completely extinguishing such a fire.
- If the fire cannot be extinguished immediately, the Emergency Coordinator will dial 911 to report the fire emergency, which will be responded to by the local fire department.

- Personnel at the scene may attempt to put out the tire fire by dumping soil onto the burning tire from the bucket of a backhoe or front end loader. However, personnel should remain upwind, and avoid inhalation of the tire smoke.
- Site personnel should not attempt to put out a fire involving multiple tires without proper firefighting training and equipment.
- If immediate attempts at fire suppression using a fire extinguisher and/or soil are unsuccessful, the Emergency Coordinator shall order the evacuation of plant personnel to a safe distance.
- The Emergency Coordinator will keep a log of activities concerning the fire, including the date and time, the probable cause, the number of tires involved, any other materials or structures involved, the immediate response actions taken, any outside assistance required or obtained, and an initial assessment of environmental damage (if any) and any contact made (verbal or written) with regulatory agencies.
- An inventory of fire extinguishers will be taken after the fire is put out, and any used extinguishers shall be replaced before continuing operations in this area of the facility.

3.8.5 Best Management Practices for Minimization of Releases

The following Best Management Practices (BMPs) shall be utilized by the facility to ensure minimization of environmental exposure from Tires:

- Limit the amount of tires stored on-site at any one time to 200 tires.
- Limit the height of any tire storage pile to twenty (20) feet.
- Do not store tires more than 150 feet away from any 20-feet wide access route that allows fire control equipment to access the pile. Keep access routes to tire piles free of rubbish, equipment or other materials.
- Do not allow storage of tires within 3 feet of any property line. Do not store tires in any fashion that exceeds six (6) feet in height if stored between 3 and 10 feet of any property line.
- Keep tire storage areas at least 50 feet away from any designated smoking areas. Post “No Smoking” signs near tire storage areas.
- Do not allow welding or torch-cutting within 50 feet of tire storage piles.
- Keep scrap tires under canopy or provide tarp coverage for them during precipitation events to reduce tire particulate contamination of stormwater and to prevent stagnant water (a possible mosquito breeding source) from accumulating inside tires.
- Keep tire storage away from storm drains, or use diversionary systems, such as berms, curbs, or straw wattles around the tire storage area, to prevent migration of particulate and/or toxic matter during precipitation events.
- Keep tires away from incompatible substances such as acids or flammable materials such as gasoline.
- Ship used tires off-site at least on a monthly basis or when tire volume approaches 200 tires.

3.9 Soils (Leachable Toxic Waste)

Any spills onto the surface of the ground (bare soil areas) have the potential to contaminate the soil. Depending on the substance spilled and the quantity, the soil may be classified as a hazardous waste (see Sections 3.2.4, 3.3.4, 3.4.4, 3.5.4, and 3.6.4). In order to determine if the soil is a hazardous waste, a composite sample of the soil must be tested per Schedule 4, Part 2 of the HWR, which describes the testing method for leachable toxic waste. Table 1 of Schedule 4 lists the Leachate Quality Standards. If the contaminant concentration exceeds the standards listed in Table 1 of Schedule 4 of the HWR, the soil is classified as a hazardous waste and must be handled accordingly.

This section will cover only with only minor spills (55-gallon drum spills of material or less). For larger spills or site remediation efforts, the Contaminated Sites Regulation should be consulted.

3.9.1 Removal

Spill-contaminated soil should be removed by shovel, backhoe or any other method that will remove all of the contaminated soil. The contaminated soil should be sampled (composite samples should be taken) and should be placed in UN-rated steel drums (sized accordingly to the amount of material contaminated). The composite soil samples should be sent to an accredited laboratory to determine leachable chemical concentrations for comparison to Toxic Leachate Waste standards.

3.9.2 Storage

Contaminated soils shall be stored in UN-rated steel drums with lock-rim lids and appropriately labeled as to the nature of the spill contents (e.g., oil-contaminated soil) and stored in a designated area (preferably indoors or under canopy) until toxic leachate testing is completed. Once testing is completed and it is determined whether the waste is classified as hazardous or not, the drum(s) shall be coordinated for shipment to a disposal facility.

The contaminated soil may be temporarily placed in a pile by the backhoe or shovel, provided that the pile is on an impervious surface that is covered with a polyethylene sheet. The excavated pile would then also need to be covered with polyethylene or some kind of tarp that is weighted down to prevent the wind from blowing it off and to protect the pile from precipitation events. If after testing the soil pile is classified as a Toxic Leachate Waste, then the contents of the pile shall be transferred to UN-rated steel drums and properly labeled. It shall then be coordinated for HW shipment with a licensed HW transporter.

3.9.3 Treatment and Disposal/Recycling

Depending on the nature of the contaminated soil and whether or not it is hazardous, the facility shall coordinate a shipping company to remove the waste. If it is hazardous, the shipper must be licensed to ship hazardous wastes. The Manifest Threshold for Leachable Toxic Waste is 5 kg/L. Spill reporting thresholds depend on the material spilled. Refer to the Spill Reporting Regulation for applicable threshold limits. Hazardous Waste manifests must be kept on site for a minimum of two years. Any HW manifests for shipments of Toxic Leachable Waste will be found in Appendix 16.

If the contaminated soil does not exceed any of the Toxic Leachate limits and is not considered a hazardous waste, the soil may be shipped off-site in lined and covered roll-offs or dump trucks to appropriate landfills.

3.9.4 Contingency Plans for Spills

There are no contingency plans for the spill of Leachable Toxic Waste, as it is itself the result of a spill. All of the spill contingency plans for the particular substances outlined in the above sections should be followed. Contamination is preventable and vehicle dismantlers should look at the practices that can cause contamination on their property. The most common sources of spills at a vehicle dismantler are:

- failure to use drip pans in the receiving or dismantling area;
- storage of wet parts without any sort of containment;
- storing of wet vehicles in hulk storage areas;
- failure to crimp and plug lines on hulks and wet parts;
- removal of wet parts outside of the dismantling area;
- leaks from equipment such as forklifts or crushers;
- loose or improper fitting connections of fluid draining equipment or ASTs; and
- accidental puncture or spilling of drums or tanks of chemicals.

3.9.5 Best Management Practices for Minimization of Releases

The following Best Management Practices (BMPs) shall be utilized by the facility to ensure minimization of environmental exposure from Leachable Toxic Waste:

- Ensure UN-rated steel drums are used to store contaminated soils if they are considered a Toxic Leachate Waste. Steel drums provide the necessary strength to store contaminated solids.
- Ensure drums are stored on a permeable surface so that any spilled contaminated soils can be easily cleaned up. Ensure drum lids are securely fastened.
- Leave expansion room (for volatiles) in drums of at least 3".
- Employ polyethylene sheeting over an impervious surface to temporarily store excavated contaminated soils while they are awaiting laboratory testing. Ensure that the temporary pile is also covered with a polyethylene sheet or tarp that is weighted down to prevent removal by wind and to protect from precipitation events. Use absorbents booms or straw wattles around the pile to prevent migration of any fluids from the pile.
- Ensure all spills are cleaned up immediately after discovery.
- Ensure transporters are licensed to transport contaminated solids. The transported must have a valid Hazardous Waste Transport Licensed (if the waste is hazardous) issued by the MOE.
- Ensure hazardous waste shipments of Toxic Leachable Waste are manifested if the if the waste exceeds the Manifest Threshold of 5 kg/L.

4. QUALIFIED PROFESSIONAL APPROVAL

Environmental Management Plan (EMP) Approval

I certify that I am a *Qualified Professional*, working as an environmental scientist and certified hazardous materials manager (CHMM), who is certified through the Institute of Hazardous Materials Management (IHMM), an organization that is accredited by the American National Standards Institute (ANSI) under ANSI/ISO/IEC 17024, the international standard for personnel certification programs, and am acting under that organization's code of ethics and am subject to disciplinary action by that organization. I also certify that through suitable education, experience, accreditation and knowledge, I may be reasonably relied on to provide advice within my area of expertise. By signature below, I also hereby approve this Environmental Management Plan under the Vehicle Dismantling and Recycling Environmental Planning Regulation.

Name (Print)	Title/Organization	Date	Signature
Hal Rosen, CHMM	Owner/ Envirosure Solutions LLC	10/26/11	

5. FACILITY CERTIFICATION OF PLAN

I certify that, to the best of my knowledge and belief, this document is a true, accurate, and complete representation of the environmental management systems and practices in place at Richmond Steel Recycling Ltd, for the purpose of dismantling wet vehicles in an environmentally conscious and regulatory-compliant manner. I am aware that there are significant penalties for submitting false information, including the possibility of fine for knowing violations.

Facility Official Name (Print)	Title	Date	Signature
James Botelho	SHEC Manager	Oct 26 - 2011	

Appendix 1

Vehicle Dismantling and Recycling Industry Environmental Planning Regulation (VDRIEPR)

B.C. Reg. 200/2007 Deposited June 21, 2007

O.C. 447/2007 effective September 1, 2007

Environmental Management Act

VEHICLE DISMANTLING AND RECYCLING INDUSTRY

ENVIRONMENTAL PLANNING REGULATION

Contents

1 Definitions

In this regulation:

"Act" means the *Environmental Management Act*;

"association" means an association of two or more facilities, which association includes in its purposes

(a) preparing a plan for the purposes of this regulation, and

(b) monitoring and reporting on compliance with the plan;

"facility" means an establishment that is engaged in the vehicle dismantling and recycling industry;

"motor vehicle" has the same meaning as in the *Motor Vehicle Act*:

"plan" means an environmental management plan required under section 2 (1);

"qualified professional" , in relation to a duty or function under this regulation, means an applied scientist or technologist specializing in an applied science or technology applicable to the duty or function, including, if applicable and without limiting this, agrology, biology, chemistry, engineering, geology or hydrogeology and who

(a) is registered in British Columbia with the appropriate professional organization, is acting under that organization's code of ethics and is subject to disciplinary action by that organization, and

(b) through suitable education, experience, accreditation and knowledge, may be reasonably relied on to provide advice within their area of expertise;

"vehicle dismantling and recycling industry" has the same meaning as in Schedule 2 of the Waste Discharge Regulation;

"wet vehicle" means a motor vehicle that

(a) is no longer used for transportation purposes, and

(b) has not been reduced to a steel hulk or to a steel hulk with only the plastic, fabric or foam components still attached.

2 Requirement for an environmental management plan

(1) A person that operates or plans to operate a facility that dismantles more than 5 wet vehicles in a calendar year must

(a) either

(i) have an environmental management plan for waste management, reduction or prevention, or

(ii) be a member of an association that has an environmental management plan for waste management, reduction or prevention, and

(b) register with a director under section 3.

(2) A person must comply with subsection (1),

(a) if operating the facility on or before September 1, 2008, on or before that date, and

(b) otherwise, before beginning to operate the facility.

(3) A plan for the purposes of this section must

(a) be approved by a qualified professional,

(b) describe how each of the following wastes will be removed from wet vehicles at facilities to which the plan applies:

(i) ozone depleting substances and other halocarbons;

(ii) oils, brake fluids, solvents, fuels and other hydrocarbons;

(iii) antifreeze;

(iv) lead and lead-acid batteries;

(v) tires;

(vi) mercury switches;

(vii) windshield washer fluid,

(c) describe how each waste referred to in paragraph (b) will be stored, treated, recycled or disposed of in compliance with the Act and applicable regulations, and

(d) set out

(i) management processes for minimizing or eliminating the discharge of wastes to the environment, and

(ii) a contingency plan documenting procedures to be followed during an emergency.

(4) Within 3 months after each 5th anniversary of the date their registration is effective under section 3 (2), a person operating a facility for which there is a plan specific to the facility must

(a) review the plan,

(b) amend or replace the plan if necessary to ensure that that person has a plan that complies with subsection (3), and

(c) have the reviewed, amended or replacement plan approved by a qualified professional.

(5) Within 3 months after September 1, 2013 and within 3 months of each fifth anniversary of that date, an association that has a plan for 2 or more facilities must

(a) review the plan,

(b) amend or replace the plan if necessary to ensure that the association has a plan that complies with subsection (3), and

(c) have the reviewed, amended or replacement plan approved by a qualified professional.

3 Registration

(1) A person described in section 2 (1) must register by providing all the following information to a director in a form approved by the director:

(a) the full legal name of the individual, partnership, corporation or other entity operating or planning to operate the facility;

(b) the name, address and telephone number of an individual who is located at or near the facility and is the local contact for the facility;

(c) the address of the facility and the legal description of the land on which the facility is located;

(d) the address at which the plan that applies to the facility may be viewed or copied;

(e) confirmation that the facility has a plan that complies with section 2 (3), or is a member of an association that has a plan that complies with section 2 (3) and the name, address and telephone number of that association;

(f) any other relevant information the discharger wishes to provide.

(2) Registration under this section takes effect on the date a complete registration is received by a director.

(3) A person registered under this section must provide a director with written notice within 30 days after

(a) a change in information provided in the person's registration, or

(b) ceasing to

(i) operate the facility, or

(ii) dismantle more than 5 wet vehicles in a calendar year.

4 Reporting by facility

(1) A person operating a facility that is not a member of an association must have a report prepared by a qualified professional on the matters described in subsection (2) (b)

(a) for the period up to the date that is 2 years after the date of registration under this regulation, and

(b) for each 2-year period after that date.

(2) A report under subsection (1) must

(a) be in writing,

(b) describe

(i) how the wastes described in the plan for the facility were managed,

(ii) whether the management of those wastes was in accordance with the plan, and

(iii) the effectiveness of the management processes used for minimizing or eliminating the discharge of wastes to the environment, and

(c) be completed within 3 months after the end of each 2-year period described in subsection (1).

5 Reporting by association

(1) An association that has prepared a plan for more than one facility must have a report prepared by a qualified professional on the matters described in subsection (2) (d)

(a) for the period up to September 1, 2010, and

(b) for each 2-year period after that date.

(2) A report under subsection (1) must

(a) be in writing,

(b) provide the name and address of each facility to which the plan applies,

(c) specify how many members of the association were audited for compliance with the plan and the identity of each of those members, and

(d) describe

(i) how the wastes described in the plan were managed by each facility audited,

(ii) whether the management of those wastes was in accordance with the plan, and

(iii) the effectiveness of the management processes used for minimizing or eliminating the discharge of wastes to the environment, and

(e) be completed within 3 months after the end of each period described in subsection (1).

(3) An association that has at least 3 members must audit

(a) one third of its members for a report under this section, and

(b) each of its members at least once in the course of completing 3 consecutive reports under this section.

(4) An association that has 2 members must audit

(a) one member for a report under this section, and

(b) each of its members at least once in the course of completing 2 consecutive reports under this section.

6 Maintaining a plan

At all times, a person operating a facility that has its own plan, and an association that has a plan for 2 or more facilities, must maintain the plan, and amend it as necessary, so that if a person complies with the plan, the person also complies with the requirements of the Act and applicable regulations.

7 Records

(1) A person described in section 2 (1) must keep, at the address required under section 3 (1) (d) for the person's registration form, an up-to-date copy of the plan that applies to the facility, and the report prepared under section 4 or 5, as applicable, in relation to the plan.

(2) On request of a director or officer, a person described in subsection (1) must produce the plan or report to the director or officer for inspection or copying.

8 Offences and penalty

(1) A person described in section 2 (1) who is not a member of an association commits an offence and is liable on conviction to a fine of not more $200 000 if the person does any of the following:

(a) fails to have a plan when required under section 2 (2);

(b) fails to register with a director when required under section 2 (2);

(c) has a plan that contains false or misleading information;

(d) provides false or misleading information in a registration form;

(e) fails to have a reviewed, amended or replacement plan approved by a qualified professional within the period established by section 2 (4);

(f) fails to have a report prepared when required under section 4 (1);

(g) has a report prepared that

(i) does not comply with section 4 (2), or

(ii) contains false or misleading information;

(h) fails to maintain the plan as required under section 6.

(2) An incorporated association, or each member of an unincorporated association, that does any of the following commits an offence and is liable on conviction to a fine of not more than $200 000:

(a) fails to have a plan prepared when the facilities to which the plan relates are required under section 2 (2) to have a plan;

(b) has a plan that contains false or misleading information;

(c) fails to have a reviewed, amended or replacement plan approved by a qualified professional within the period established by section 2 (5);

(d) fails to have a report prepared when required under section 5;

(e) has a report prepared that

(i) does not comply with section 5 (2), and with section 5 (3) or (4) as applicable, or

(ii) contains false or misleading information;

(f) fails to maintain the plan as required under section 6.

(3) A member of an association commits an offence and is liable on conviction to a fine of not more $200 000

(a) whether or not the association is incorporated, if the person

(i) does not have a plan,

(ii) fails to register with a director when required under section 2 (2),

(iii) has a plan that includes false or misleading information, or

(iv) provides false or misleading information in a registration form, and

(b) if the association is incorporated and the association

(i) fails to have a plan reviewed, amended or replaced when required under section 2 (5),

(ii) fails to have a report prepared when required to do so under section 5,

(iii) has a report prepared that

(A) does not comply with section 5 (2), and with section 5 (3) or (4) as applicable, or

(B) contains false or misleading information, or

(iv) fails to maintain the plan as required under section 6.

(4) Subsection (3) (b) does not apply to a member if the member,

(a) in relation to subsection (3) (b) (i), has a reviewed, amended or replacement version of the association's plan approved by a qualified professional when the association is required to do so under section 2 (5),

(b) in relation to subsection (3) (b) (ii), has a report on the association's plan prepared under section 4 when the association is required to do so under section 5,

(c) in relation to subsection (3) (b) (iii), when the association is required to have a report prepared that complies with section 5 (2), and with section 5 (3) or (4) as applicable, has a report prepared that

(i) complies with section 4 (2), and

(ii) does not contain false or misleading information, and

(d) in relation to subsection (3) (b) (iv), maintains the association's plan as required under section 6.

[Provisions of the *Environmental Management Act*, S.B.C. 2003, c. 53, relevant to the enactment of this regulation: sections 21, 138 and 139]

Appendix 2

Ministry of Environment (MOE) Guidebook for the VDRIEPR

Guidebook for the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation

Ministry of Environment
Environmental Protection Division
July 2008

Limitation of Liability and User's Responsibility

The primary purpose of this guidance document for the vehicle dismantling and recycling industry is to highlight the requirements of the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation with regard to the development of environmental management plans.

While every effort has been made by the authors and the British Columbia Ministry of Environment (MOE) to ensure the accuracy and completeness of these materials, these materials should not be considered to be the final word in the areas of practice they cover. The qualified professional must use his/her own professional expertise and judgment to ensure that any plans or reports prepared for clients meet the requirements of the regulation and all applicable regulations under the *Environmental Management Act.* It is the discharger's responsibility to comply with all applicable regulations.

All information in this guidance document is provided entirely "as is" and no representations, warranties or conditions, either expressed or implied, are made in connection with your use of, or reliance upon, this information. This information is provided to you as the user entirely at your own risk.

The MOE will not be liable for any claims, damages or losses of any kind whatsoever arising out of the use of, or reliance upon, this information.

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Section 1: Background Information

1.1 Vehicle Dismantling and Recycling Industry Environmental Planning Regulation (VDRIEPR)

- The vehicle dismantling and recycling industry is required to comply with a number of regulations under the *Environmental Management Act* (EMA).
- The VDRIEPR, which was enacted on September 1, 2007 requires individual operators or industry associations (acting on behalf of their members) to develop environmental management plans that demonstrate how they will comply with existing regulations under EMA. All operators that dismantle 5 or more wet vehicles in a calendar year must register with the Ministry of Environment by September 1, 2008. The registration must state that their operation has an environmental management plan in place.
- The regulation also requires a system of monitoring and reporting to keep operators in compliance with their plans.

1.2 Purpose of the Guidebook

The Ministry of Environment prepared this guidebook to assist vehicle dismantlers and recyclers in meeting the requirements of the regulation.

Steel recyclers that process larger quantities of hazardous wastes from end-of-life vehicles are subject to sections of the Hazardous Waste Regulation (HWR) not covered in this guidance document. However, this does not preclude these larger scale operators from having to comply with the requirements.

1.3 How to Use the Guidebook

The guidebook is divided into seven sections. Section 1 provides background information on the VDRIEPR and an introduction to the purpose of this guidebook. Section 2 summarizes the requirements of the regulations in "plain language". Sections 3, and 4 summarize the legal requirements, compliance requirements and best management practices for hazardous liquids, solids and refrigerants respectively. Section 5 summarizes best management practices for work areas at the site. Section 6 provides additional background information related to environmental programs for vehicle dismantlers in other jurisdictions.

Vehicle dismantlers can use this guidebook as a tool to aid with developing environmental management plans and monitoring check lists. The guidebook does not address some of the zoning and bylaw issues which are the responsibility of local

governments. Vehicle dismantlers are encouraged to contact their local governments to inquire about any specific regional requirements.

Section 2: Regulatory Requirements

2.1 Definitions

There are a variety of terms that are used in this guidebook and in the regulations that vehicle dismantlers must know. The definitions are:

"Approved Person" (*as in the Ozone Depleting Substances and Other Halocarbons Regulation)* means a person who:

> (a) holds appropriate trade credentials or is an indentured trainee or apprentice in compliance with the *Industry Training Authority Act* or, if that *Act* is not applicable, is qualified in the appropriate trade sector by
>
> (i) having successfully completed a recognized trade school program, or
>
> (ii) having at least one year of supervised practical service experience,
>
> (b) has successfully completed an environmental awareness course approved by Environment Canada and the Ministry of Water, Land and Air Protection, and
>
> (c) has, if servicing motor vehicle air conditioning systems on or after October 1, 1997, successfully completed a motor vehicle air conditioning course approved by the Ministry of Water, Land and Air Protection unless the approval is cancelled or suspended under section 18 of the *Environmental Management Act*;

"Association" means an association of two or more facilities, which association includes in its purposes

> a) preparing a plan for the purposes of this regulation, and
>
> b) monitoring and reporting on compliance with the plan.

"Environmental Management Plan" means a document approved by a qualified professional that describes how the wastes from wet vehicles (listed below) will be removed, stored, treated, recycled or disposed of in accordance with the *Environmental Management Act*. In addition, the plan must set out management processes for minimizing or eliminating the discharge of wastes to the environment and a contingency plan documenting procedures to be followed during an emergency.

"Wastes" means those substances defined by Section 2(3)(b) the VDRIEPR:

- ozone depleting substances and other halocarbons;
- oils, brake fluids, solvents, fuels and other hydrocarbons;
- antifreeze;

- lead and lead-acid batteries;
- tires;
- mercury switches; and
- windshield washer fluid.

"Hazardous Waste" means a waste gas, liquid, or solid as defined by the Hazardous Waste Regulation. Tires and windshield washer fluid are wastes as listed above but are not classified as hazardous wastes in accordance with the HWR. Vehicle dismantlers must take special attention to hazardous wastes as there are additional registration, storage and transportation requirements.

"Hulk" means a wet vehicle that has been de-registered (Vehicle Identification Number has been submitted to the Motor Vehicle Branch) and the wastes have been removed in accordance with the requirements of the *Environmental Management Act*.

"Motor Vehicle" has the same meaning as in the *Motor Vehicle Act* and would include motor cycles.

"Qualified Professional", in relation to a duty or function under this regulation, means an applied scientist or technologist specializing in an applied science or technology applicable to the duty or function, including, if applicable and without limiting this, agrology, biology, chemistry, engineering, geology or hydrogeology and who

(a) is registered in British Columbia with the appropriate professional organization, is acting under that organization's code of ethics and is subject to disciplinary action by that organization, and

(b) through suitable education, experience, accreditation and knowledge, may be reasonably relied on to provide advice within their area of expertise;

"Secondary Containment" means the containment of a volume of hazardous wastes that is 110% of the largest container or 25% of the total volume of containers.

"Vehicle Dismantling and Recycling Industry" *has the same meaning as in Schedule 2 of the Waste Discharge Regulation.*

Means establishments except home-based businesses, educational facilities and establishments of hobbyists or artisans, engaged in wrecking or dismantling vehicles or in recycling or disposing of parts and other waste material from vehicles.

"Wet Part" means a vehicle part that contains or contained wastes excluding shock absorbers, non-leaking differentials and empty gasoline tanks.

"Wet Vehicle" a motor vehicle that

a) is no longer used for transportation purposes, and

b) has not been reduced to a steel hulk or to a steel hulk with only the plastic, fabric or foam components still attached.

2.2 Provincial Jurisdiction

The majority of vehicle dismantlers are located on lands that are subject to the provincial acts and regulations. The provincial *Environmental Management Act* and its associated regulations provide the primary regulatory framework for the management of wastes by vehicle dismantlers.

In addition to the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation (Guidebook Section 2.2.1), there are other regulations associated with the *Environmental Management Act* that focus specifically on the management of wastes in British Columbia. These are:

- The Hazardous Waste Regulation (Section 2.2.2) manages hazardous wastes (e.g., lead, contaminated soils, etc.) as well as hazardous liquid wastes (e.g., waste oil, antifreeze, windshield washer fluid etc);

- The Ozone Depleting Substances and Other Halocarbons Regulation (Section 2.2.3) focuses specifically on the management of refrigerants;

- The Spill Reporting Regulation (Section 2.2.4) outlines the requirements for vehicle dismantlers to report spills to the Provincial Emergency Program; and

- The Contaminated Sites Regulation (CSR) (Section 2.2.5) is also of interest to vehicle dismantlers; however, the CSR does not have a direct impact on the day-to-day operations of a vehicle dismantler. Consequently, the requirements of the CSR would not be included in an environmental management plan.

2.2.1 Vehicle Dismantling and Recycling Industry Environmental Planning Regulation

The Vehicle Dismantling and Recycling Industry Environmental Planning Regulation (VDRIEPR) requires all vehicle dismantlers that dismantle more than 5 wet vehicles in a calendar year to have an environmental management plan (EMP) and register with the Director by September 1, 2008. See the Ministry of Environment's web site for further information and to download registration forms: http://www.env.gov.bc.ca/epd/industrial/regs/vehicle/index.htm.

The information required for registration can be found in Section 3 of the VDRIEPR and is summarized below:

- The full legal name of the entity operating the facility;
- The name, address and telephone number of an individual who is located at or near the facility and is the local contact for the facility;
- The address of the facility and the legal description of the land on which the facility is located;

- The address at which the plan may be viewed or copied; and
- Confirmation that the facility has a plan that complies with the requirement of the regulation or is a member of an association that has a plan that complies with the regulation.

The environmental management plan (EMP) must address the management of the following wastes:

- Ozone depleting substances and other halocarbons;
- Oils, brake fluids, solvents, fuels and other hydrocarbons;
- Antifreeze;
- Lead and lead-acid batteries;
- Waste tires;
- Mercury switches; and
- Windshield washer fluids.

Vehicle dismantlers must, by September 1, 2008, have an EMP, approved by a qualified professional that:

- describes how the wastes listed above are stored, treated, recycled or disposed of in compliance with the *Environmental Management Act* and applicable regulations; and
- 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.

The VDRIEPR outlines auditing and reporting schedules for two categories of vehicle dismantlers, those that are members of an association and those that are not. Please refer to the VDRIEPR (Appendix 1) for exact details and dates. Generally, every five years the EMP must be reviewed, amended and approved by a qualified professional, and every two years each vehicle dismantler must have a qualified professional prepare an audit report. The audit report must describe:

- how the wastes listed above were managed;
- whether the management of wastes was in accordance with the facility's EMP; and
- the effectiveness of the management processes used for minimizing or eliminating the discharge of wastes to the environment.

2.2.2 Hazardous Waste Regulation[1]

Vehicle dismantlers may be subject to the Hazardous Waste Regulation (HWR) depending on the quantity of hazardous waste they generate, store, treat or offer for transport. If they are subject to the regulation, vehicle dismantlers are required to comply with various requirements, including registration requirements, operational requirements, and transportation requirements.

[1] The HWR is in the process of being reviewed. Please refer to the HWR for current requirements.

Registration Requirements:

Vehicle dismantlers generating hazardous waste in a 30-day period above the thresholds listed in Table 1 must register the hazardous waste and apply for a Consignor Identification Number by completing Form 1 of Schedule 5 of the HWR and submit it to a director. See Appendix 5 of the HWR to obtain the registration form for the Consignor Identification Number: http://www.qp.gov.bc.ca/statreg/reg/E/EnvMgmt/EnvMgmt63_88/63_88_04.htm#Schedule5. Vehicle dismantlers that store, treat, recycle or dispose of hazardous waste above the thresholds listed in Table 1 must also register and obtain a Consignor Identification Number.

Table 1: Registration Quantities for Generators and Short Term Storage Facilities (from Column II of Schedule 6 of the Hazardous Waste Regulation)

Hazardous Waste	**Generator or Storage Quantity Thresholds (L or kg)**
Waste oil	5,000
Antifreeze (leachable toxic waste)	500
Mercury containing waste (TDGR Class 8)	100
Fuels (TDGR Class 3)	500
Lead acid batteries	2,000

Operational Requirements for Short Term Storage Facilities:

Vehicle dismantlers storing more than the quantity of hazardous waste set out in Table 1, at any time, are considered short term storage facilities. As short term storage facilities, they must store hazardous waste as specified in Parts 2, 3, and Division 2 of Part 4 of the HWR.

Vehicle dismantlers who are not primarily in the business of waste management and who engage in short term, on site, passive storage are provided with some exemptions under the HWR Section 16 (2) related to plans.

Note that if a vehicle dismantler is processing, treating or disposing of hazardous waste on site, the facility would be considered a hazardous waste management facility and would not receive the above-mentioned plan exemptions. Additional requirements under the HWR would apply.

Transportation Requirements:

All vehicle dismantlers must not offer for transport hazardous waste in quantities that exceed the thresholds in Table 2 (from HWR Section 46) unless the carrier is licensed to

transport the specific wastes by the Ministry of the Environment. The shipment must also be manifested and sent to an authorized hazardous waste facility for processing.

Table 2: Manifest and Transportation Thresholds for Hazardous Wastes

Hazardous Waste	Transportation and Manifest Quantity (L or kg)
Waste Oil	210
Antifreeze	5
Mercury	5
Waste Fuel (Stale Gas)	5
Lead Acid Batteries	1,000
Other Solid Hazardous Waste	5

Performance Standards for Oil/Water Separators:

All vehicle dismantlers with oil/water separators or surface runoff are required to meet the requirements of Section 17 of the HWR and the Effluent Standards from Schedule 1.2 of the Hazardous Waste Regulation. The effluent standards of the HWR are summarized in Table 3.

Table 3: Selected Effluent Standards for Parameters from Schedule 1.2 of the Hazardous Waste Regulation

Parameter	Standard for Discharges to the Environment or Storm Sewers*	Standard for Discharges Directed to Municipal or Industrial Effluent Treatment Works*
Total Suspended Solids	20	-
Toxicity**	100% Effluent	50% Effluent
Aluminum, dissolved	0.5	2.0
Ammonia, total	2.0	-
Copper, dissolved	0.1	0.3
Lead, dissolved	0.1	0.3
Mercury, total	0.001	0.01
Zinc, dissolved	0.2	0.5
BOD	20	-
Oil	10	60
* Maximum concentration in (mg/L) unless otherwise specified. ** 96-hr LC50 bioassay with 50% survival of rainbow trout after 96 hours.		

Note: Local municipal government requirements may be more restrictive.

2.2.3 Ozone Depleting Substances and Other Halocarbons Regulation

The Ozone Depleting Substances and Other Halocarbons (ODS) Regulation (http://www.qp.gov.bc.ca/statreg/reg/E/EnvMgmt/387_99.htm) restricts the removal, storage and disposal of refrigerants recovered from wet vehicles. The primary requirement is that only an "approved person" can service a motor vehicle air conditioner, including the removal of refrigerants. The approved person definition from the ODS Regulation is provided in Section 2.1 (Definitions) of this guidebook. In addition to holding an appropriate trade credential (e.g., automotive service technician, refrigeration and air conditioning mechanic), an approved person must have also successfully completed an approved environmental awareness course in refrigerant handling and an approved motor vehicle air conditioning course. These courses are usually offered by local colleges or the Heating, Refrigeration and Air Conditioning Institute (HRAI) (http://www.hrai.ca/).

Typically, vehicle dismantlers hire an approved person with mobile equipment to visit the yard, remove refrigerants and complete the necessary paper work and labeling of wet vehicles. Refer to Section 4 Refrigerants, for further information.

2.2.4 Spill Reporting Regulation

The Spill Reporting Regulation[2] requires all persons that manage hazardous waste to report significant spills to the Provincial Emergency Program at 1-800-663-3456. A spill is considered significant if it is above the thresholds listed in Table 4 below:

Table 4: Spill Reporting Thresholds for Hazardous Waste in British Columbia

Hazardous Wastes	Spill Reporting Threshold
Oil and Oil Related Products	100 L
Antifreeze	5 L
Waste Gasoline	100 L
Mercury	5 kg
Refrigerants	10 kg

2.2.5 Contaminated Sites Regulation

The Contaminated Sites Regulation (CSR) is a regulation that deals with the liabilities and obligations resulting from contamination at a site. For vehicle dismantlers, contamination may result from the improper management of wastes. It is important to

[2] The Spill Reporting Regulation is currently under review. The data listed in this guidebook includes amendments up to B.C. Reg. 220/2006, July 21, 2006. Please check with the Ministry of Environment for the most up to date version of the regulation at http://www.env.gov.bc.ca/eemp/overview/leg_program.htm.

properly manage the wastes generated at a site in order to avoid the property from becoming contaminated and subsequently, subject to the remediation requirements under the CSR. Please refer to the Ministry of Environment's Land Remediation web site for more information on the CSR: http://www.env.gov.bc.ca/epd/remediation/.

2.2.5.1 Liability

The CSR is a provincial regulation that holds businesses liable if they contaminate the soil or groundwater. The liability for remediation of a contaminated site flows from Part 4 of EMA. The CSR details additional provisions for contaminated sites and the liability includes past practices.

The best way for vehicle dismantlers to deal with the requirements of the CSR is to establish an efficient and clean operation and prevent spills from occurring in the first place. The clean up of a contaminated site can be expensive and time consuming.

Spills (large and small) that are not cleaned up immediately may create a long-term liability for vehicle dismantlers. If the vehicle dismantler leases the property, then the owner of the property has a legal right to hold the dismantler responsible for the contamination on site. If the dismantler owns the property, then the dismantler is devaluing their property and may not be able to sell the property without first deducting the environmental liability from the sale price.

2.3 Federal Jurisdiction

In British Columbia, approximately 12 vehicle dismantlers (or 10% of vehicle dismantlers) are located on federal lands including Indian Act Reserves. Vehicle dismantlers located on federal lands must comply with the Federal Acts and Regulations and with the Treasury Board's Contaminated Sites Policy and INAC's Contaminated Sites Management Policy (if applicable).

As the federal requirements are similar to the provincial regulations, vehicle dismantlers located on federal lands can use the operational checklists in this document to determine their compliance with federal laws.

Section 3: Hazardous Wastes

The dismantling of wet vehicles requires the management of a variety of hazardous wastes (solid, liquid or gas). The well-managed yard develops a variety of procedures and training programs to ensure their employees manage the hazardous wastes in an appropriate manner.

Well-managed vehicle dismantlers handle hazardous wastes in the following ways:

- Wet vehicles are assessed when received and dismantled immediately if they are observed to have a leak. Wet vehicles that are leaking in the receiving area have adequate spill control equipment (i.e., drip pans).
- Wet parts are removed in the dismantling area only.
- The dismantling area is made of an impermeable material, has a roof or cover to keep out precipitation, and does not have any drains.
- The floor of the dismantling area has some sort of secondary containment.
- The drums of hazardous wastes are stored adjacent to the dismantling area and the area has secondary containment.
- Drums are shipped when they are full and a minimal amount of hazardous wastes are stored on site.
- The dismantling and wet parts storage areas have adequate spill prevention and control equipment.
- All wet parts containing hazardous wastes are removed in the dismantling area prior to storage in the hulk storage area.
- Spills in receiving and hulk storage areas are cleaned up immediately.
- Employees are trained in spill prevention and spill control procedures and follow company procedures.

3.1 Oils and Related Fluids

Used oil means automotive lubricating oil, cutting oil, fuel oil, gear oil, hydraulic oil or any other refined petroleum based oil or synthetic oil.

For the purpose of this guidebook, oil filters are considered a hazardous waste and the average wet vehicle will contain approximately six litres of used oil or oil related products.

The British Columbia Used Oil Management Program is the stewardship agency tasked with the collection and disposal of used oil. The BC Used Oil Management Program will pay vehicle dismantlers for the waste oil and oil filters recovered from wet vehicles. For more information about the program go to: http://www.usedoilrecycling.com/en.

3.1.1 Legal Requirements

Used oil and oil related products are considered a hazardous waste and must be managed in an appropriate manner. The legal thresholds for used oil are listed in Table 5.

Table 5: Summary of Used Oil Thresholds

Registration	Storage	Manifest	Spill
5,000 L	5,000 L	210 L	100 L

If the vehicle dismantler handles more than approximately 800 wet vehicles in an average 30-day period (800 x 6 L avg/car = 5,000 L) or stores more than 5,000 litres of waste oil, the yard will be required to obtain a Consignor Identification Number from the Ministry of Environment. See Form 1 of Schedule 5 of the Hazardous Waste Regulation to obtain the registration form for the Consignor Identification Number: http://www.qp.gov.bc.ca/statreg/reg/E/EnvMgmt/EnvMgmt63_88/63_88_04.htm#Schedule5 .

Further, if the vehicle dismantler stores more than 5,000 litres of waste oil at a site or processes more than 800 wet vehicles in an average 30-day period at a site, they will need to meet Parts 2, 3 and 7 and Division 2 of Part 4 of the HWR. The vehicle dismantlers that are required to meet these additional requirements in the HWR should contact their qualified professional for an explanation of the additional requirements.

All vehicle dismantlers with oil/water separators are required to test the outflow (Diagram 1 in Section 5.2.3) and ensure that the concentration of oil is less than 10 mg/L if they discharge to ditches or storm sewers and 60 mg/L if they discharge to sanitary sewers (Table 3). Note that the municipal standard for the discharge of oil may be more stringent.

Because oil is considered a hazardous waste, all vehicle dismantlers that offer for transportation used oil in quantities greater than 210 litres are required to:

- Use a transporter that is licensed under Section 45 of the HWR to transport used oil. The transporter must have a valid Hazardous Waste Transport License issued by the Ministry of Environment.
- If the vehicle dismantler does not have a Consignor Identification Number, ensure the transporter puts the multiple load manifest number on the invoice. If the vehicle dismantler has a Consignor Identification Number, ensure the manager retains Copy 2 of the manifest and mails Copy 1 to the Ministry of Environment within three days.

- Store all records related to the transportation of hazardous waste for a minimum of two years.

Used oil filters are also considered hazardous waste and all vehicle dismantlers should dispose oil filters in the same manner as used oil.

Vehicle dismantlers that burn waste oil for heat must comply with Section 41 of the Hazardous Waste Regulation and ensure the concentration of contaminants in the waste oil to be burned are below the following thresholds:

Total Arsenic:	5 mg/L
Total Cadmium:	2 mg/L
Total Organic Halogens (as Cl):	1500 mg/L
Total Chromium:	10 mg/L
Total Lead:	50 mg/L
Total PCBs:	3 mg/L

All vehicle dismantlers are required to report oil spills over 100 litres. Use the Provincial Emergency Program's (PEP) hotline to report all oil spills over 100 litres (1-800-663-3456).

3.1.2 Operational Checklist

The following questions can be used as a checklist for managing hazardous wastes.

1. Does the transporter have a current Hazardous Waste Transport License for used oil and oil filters issued by the provincial Ministry of Environment?

2. Does the transporter manifest each shipment of used oil and used oil filters and put the manifest number on each shipping form?

3. Do you keep the transporter's shipping record for two or more years?

4. Do you know the used oil spill thresholds that must be reported to the Provincial Emergency Program?

5. Are oil spills (large and small) cleaned up immediately?

6. Do you sample your oil/water separator at least once per year and do the results meet the thresholds listed in Table 3 (skip this question if you do not have an oil/water separator)?

7. Are all wet vehicles drained of used oil and used oil filters removed before hulk is stored or crushed?

If you answered NO to any one of these questions, you should adjust your operations. The Best Management Practices outlined below provide guidance on making operational changes.

3.1.3 Best Management Practices:

The following Best Management Practices have been used successfully in British Columbia by vehicle dismantlers. If the volume of used oil exceeds the registration and storage thresholds listed in Table 5, additional Best Management Practices should be implemented.

Dismantling:

- All used oils, oil related products and oil filters are removed from all the wet vehicles in the dismantling area and transferred quickly to the used oil storage area.
- All wet parts that previously contained oil or oil related products are removed from the wet vehicle in the dismantling area.
- The dismantling area is kept dry, not subject to flooding during normal precipitation events, has an impervious floor and has an adequate level of secondary containment.
- The dismantling area is kept clean and uncluttered.
- Oil/water separator is cleaned out on a regular basis (twice a year at a minimum).
- The discharge from the oil/water separator meets discharge requirements.

Storage:

- Used oil and filters are stored in separate marked containers with an adequate lid and secondary containment.
- Containers of waste oil are stored in a covered area without drains (oil/water separators are not designed to intercept large spills).
- Containers storing used oil and filters are protected from precipitation.
- Wet parts that have been removed from wet vehicles are stored in an area with an adequate level of containment for any residual oil (e.g., drip pans) and are protected from precipitation (e.g., covered area).

Recycling:

- Used oil and used oil filters are sold to the British Columbia Used Oil Management Association (BCUOMA). http://www.usedoilrecycling.com/en
- Waste oil burned on site in waste oil burners is tested to ensure contaminants are below the thresholds listed in Section 3.1.1.

Containers:

- Steel drums are used to store used oil. Plastic containers are acceptable, but the plastic deteriorates over time and will eventually fail. Plastic containers are also more susceptible to puncture or vandalism causing a major spill. Remember that spills over 100 litres (i.e., one half of a 220 litre drum) will necessitate an immediate call to the Provincial Emergency Program (1-800-663-3456) to report the spill.

Spills:

Ensure spill kits have materials and equipment to contain spills, absorb oil and oil related products. Materials and equipment include:

- shovels and pails to clean up contaminated solids and gravels in the receiving, hulk storage and the crusher areas;
- adsorbent materials to clean-up oil and oil related products in the dismantling and wet parts storage areas; and
- storage drums to collect contaminated solids and gravels.

- Ensure oil contaminated solids and materials (e.g., absorbent, rags) are disposed of as a hazardous waste.
- Ensure the Provincial Emergency Program (1-800-663-3456) phone number is visible on the wall for all employees. The clean up of a major spill will be expensive and if the spill migrates off the site into sewers, storm drains or fish bearing waters, charges by the regulatory agencies could occur.
- Oil/water separator should not be used as part of the spill containment strategy. Large oil spills will pass through an oil/water separator and into the environment.
- Ensure staff are trained on how to handle used oil, in spill prevention and in what to do in the event of a large spill.

Records:

- Ensure a copy of current transporter's license to transport waste oil and used oil filters are kept on file.
- Ensure all shipment records have a manifest number.
- Ensure all records are kept for a minimum of two years.

3.2 Antifreeze

Antifreeze is another hazardous waste found in vehicles. It is toxic, water-soluble and contaminated with rust inhibitors and corrosion products including lead (from the solder in the radiator). Spills of antifreeze easily penetrate the soil and can cause the ground to be contaminated.

If the antifreeze is reusable it is not considered a waste. As such, the legal disposal requirements do not apply and the product can be sold or given away to employees or customers.

3.2.1 Legal Requirements

Antifreeze that contains rust inhibitors and corrosion products and waste antifreeze (i.e., not reusable antifreeze) is usually considered a leachable toxic waste by the Hazardous Waste Regulation (HWR). The legal thresholds for waste antifreeze are listed in Table 6.

Table 6: Legal Thresholds for Waste Antifreeze

Registration	Storage	Manifest	Spill
500 L	500 L	5 L	5 L

The vehicle dismantler is required to register with the Ministry of Environment and obtain a Consignor Identification Number if they drain more than approximately 60 wet vehicles in an average 30-day period or store more than 500 litres of waste antifreeze. The threshold of 60 wet vehicles assumes the average wet vehicle contains eight litres of antifreeze. See Form 1 of Schedule 5 of the HWR to obtain the registration form for the Consignor Identification Number:
http://www.qp.gov.bc.ca/statreg/reg/E/EnvMgmt/EnvMgmt63_88/63_88_04.htm.

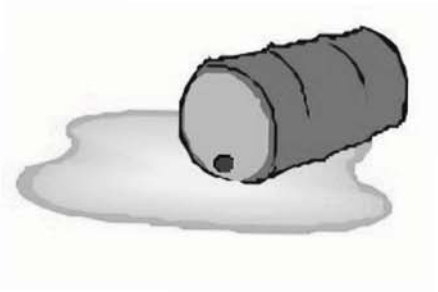
Further, if the facility stores more than 500 litres of waste antifreeze or drains more than 60 wet vehicles in an average 30-day period, you will need to meet Parts 2, 3 and 7 and Division 2 of Part 4 of the HWR.

All vehicle dismantlers that offer to prepare waste antifreeze for transport in quantities greater than five litres are required to:

- Use a transporter that is licensed under Section 45 of the HWR to transport leachable toxic wastes. The transporter must have a valid Hazardous Waste Transport License issued by the Ministry of Environment.
- If the vehicle dismantler does not have a Consignor Identification Number, ensure the transporter puts the multiple load manifest number on the invoice. If the vehicle dismantler has a Consignor Identification Number, ensure the manager retains Copy 2 of the manifest and mails Copy 1 to the Ministry of Environment within three days.
- Store all records related to the transportation of hazardous wastes for a minimum of two years.

All vehicle dismantlers with oil/water separators are required to test the outflow and ensure that the concentration of lead (a contaminant in antifreeze) is less than 0.10 mg/L if they discharge to ditches or storm sewers and 0.30 mg/L if they discharge to sanitary sewers. Note that the municipal standard for lead may be more stringent.

Finally, all vehicle dismantlers are required to report waste antifreeze spills over five litres. Use the Provincial Emergency Program's (PEP) hotline to report all antifreeze spills over five litres (1-800-663-3456).



3.2.2 Operational Checklist

The following questions can be used as a checklist for managing antifreeze.

1. Are all wet vehicles drained of antifreeze before the hulk is stored or crushed?

2. Does the transporter have a current Hazardous Waste Transport License for waste antifreeze issued by the provincial Ministry of Environment?

3. Does the transporter manifest each shipment of antifreeze and put the manifest number on each invoice?

4. Do you keep the transporter's invoices for two or more years?

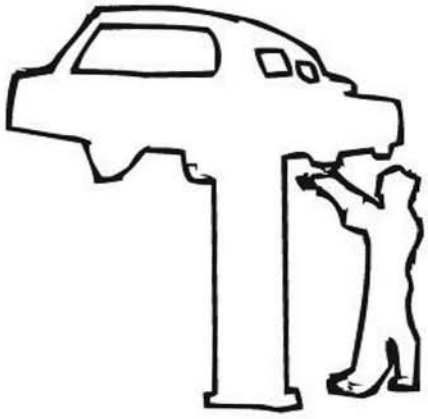
5. Do you know the antifreeze spill thresholds that must be reported to the Provincial Emergency Program?

6. Are spills of antifreeze (large and small) cleaned up immediately?

7. Do you sample your oil/water separator at least once per year (skip this question if you do not have an oil/water separator)?

8. Were the water quality results for lead less than the threshold listed in Table 3 (skip this question if you do not have an oil/water separator)?

If you answered NO to any one of these questions, you should adjust your operations. The Best Management Practices outlined below provide guidance on making operational changes.



3.2.3 Best Management Practices

The following Best Management Practices have been used successfully by vehicle dismantlers to meet the requirements of applicable regulations. If the volume of waste antifreeze exceeds the registration and storage thresholds listed in Table 6, additional Best Management Practices should be implemented.

Dismantling:

- All antifreeze is removed from all wet vehicles in the dismantling area and transferred quickly to the hazardous waste storage area.
- All wet parts that contained antifreeze are removed in the dismantling area.
- The dismantling area is dry, not subject to flooding during normal precipitation events, has an impervious floor and has an appropriate level of secondary containment.
- Dismantling and wet parts storage areas are clean and uncluttered.
- An oil/water separator is not used as part of the spill response strategy for antifreeze. Antifreeze is water-soluble and will pass through an oil/water separator and be discharged to the environment.

Containers:

- Use steel drums to store waste antifreeze. Plastic containers are acceptable, but the plastic deteriorates over time and will eventually fail. Plastic containers are also more susceptible to puncture or vandalism. Remember that spills over five litres must be reported to the Provincial Emergency Program (1-800-663-3456). The clean up of a major spill will be expensive. If the spill migrates off the site into sewers, storm drains or fish bearing waters, charges by the regulatory agencies could occur.
- Keep waste antifreeze containers near the dismantling area to reduce the traveling distance required to reach the disposal container and the likelihood of a spill.

Storage:

- Store waste antifreeze in a marked container with an adequate lid and secondary containment.
- Leave waste antifreeze containers in an area without drains.
- Protect waste antifreeze containers from runoff and precipitation.
- Provide an adequate level of containment and protection from any residual antifreeze leakage from radiators.

Recycling:

- Dispose of waste antifreeze as a hazardous waste.
- Dispose of other antifreeze-contaminated materials as a hazardous waste.
- Keep transportation records and together in an easily accessible location on site.

Spills:

- Quickly clean up small antifreeze spills that occur throughout the yard (e.g., wet vehicle receiving and hulk storage areas).
- Ensure spill kits have materials and equipment to contain spills and absorb antifreeze. Materials and equipment include:
  - shovels and pails to clean up contaminated solids and gravels in the wet vehicle receiving, hulk storage and the crusher areas;
  - adsorbent to clean-up antifreeze in the dismantling and wet parts storage areas; and
  - storage drums to collect contaminated solids and gravels.
- Dispose of antifreeze contaminated solids and materials (e.g., rags) as a hazardous waste.
- Ensure the phone number of the Provincial Emergency Program (1-800-663-3456) is visible on the wall by all employees.
- Ensure staff are trained on how to handle waste antifreeze, in spill prevention and in what to do in the event of a large spill.

Records:

- Ensure a copy of the transporter's current license to transport antifreeze is kept on file.
- Ensure all shipment records have a manifest number.
- Ensure all records are kept for a minimum of two years.

3.3 Windshield Washer Fluid

Windshield washer fluid contains a variety of compounds, is toxic and must be removed from wet vehicles. However, windshield washer fluid can be reused.

3.3.1 Legal Requirements

Windshield washer fluid is a mixture of toxic compounds and must be managed under the VDRIEPR. Windshield washer fluid is normally not considered a hazardous waste under the HWR. Consequently, there are no legal thresholds for the storage or transportation of windshield washer fluid. However, it is still toxic and should be managed appropriately.

In addition, spilling windshield washer fluid on the soil may cause contamination as defined by the Contaminated Sites Regulation. Consequently, some vehicle dismantlers remove the windshield washer fluid and give the product away.

3.3.2 Operational Checklist

The following question can be used as a checklist for managing antifreeze.

1. Is windshield washer fluid removed from wet vehicles?

3.3.3 Best Management Practices

- All windshield washer fluid is removed in the dismantling area.
- All windshield washer fluid is reused.

3.4 Mercury Switches

Mercury switches are common in hoods, trunks, convenience lighting assemblies, and anti-locking brake systems. Each convenience-lighting switch contains just less than one gram of mercury, but cumulatively they amount to nine tonnes of mercury switches in vehicles on the road today. Mercury in automobiles is the single largest source of mercury in use in Canadian products.

Mercury is extremely dangerous in small quantities and the pellets must be removed prior to shredding.
Import automotive manufacturers ceased using mercury switches in the mid-1990s, while in North American it was not until model year 2003 that mercury switches finally stopped being used in new cars.

No attempt is made in this guidebook to list the makes and models of vehicles with mercury switches. Lists of vehicles with mercury switches are available on the internet; however, this may not be a reliable source of information.

A 2002 study in Michigan found that 44% of all vehicles had mercury switches. Consequently, vehicle dismantlers must check the hood and trunk of all vehicles for convenience lights and remove all mercury switches.

3.4.1 Clean Air Foundation's Mercury Switch Out Program

In 2001 the Clean Air Foundation began operating the Mercury Switch Out Program. The program co-ordinates the collection of mercury switches from vehicle dismantlers at no cost to the dismantler. The switches are collected and sent to Fluorescent Lamp Recycling in Ayr, Ontario where they are put into long term storage to ensure the mercury is not released to the environment. Registration for the program can be filled out online at http://www.cleanairfoundation.org/switchout/register_so.asp. The Clean Air

Foundation will send training material, a container for the mercury switch pellets, and a pre-paid courier waybill to send in the container once full. The website also contains an instructional manual on how to remove the mercury switches from trunks, hoods and anti-locking brake systems.

3.4.2 Legal Requirements

Mercury pellets contain about one gram of elemental mercury. Should the metal casing of the pellet be broken, then the mercury would contaminate the wet vehicle and the leachate extraction concentration of 0.1 mg/L of mercury would classify the wet vehicle as a hazardous waste. Steel recyclers that shred hulks are particularly concerned with mercury as the shredding process will release the mercury into the environment and contaminate the fluff.

The legal thresholds of mercury are listed in Table 7.

Table 7: Legal Thresholds for Mercury

Registration	Storage	Manifest	Spill
100 kg	100 kg	5 kg	5 kg

Because the thresholds for mercury are high relative to the weight of mercury in wet vehicles, most vehicle dismantlers will be below the registration and storage thresholds listed above.

All vehicle dismantlers that offer to prepare mercury for transport in quantities greater than five kilograms are required to:

- Use a transporter that is licensed to transport mercury. The transporter must have a valid Hazardous Waste Transport License issued by the Ministry of Environment.
- Ensure the transporter manifests the shipment. The transporter will put a manifest number on the invoice.
- Store records (i.e., invoice with manifest number) for a minimum of two years.

Finally, all vehicle dismantlers are required to report mercury spills over five kilograms. Use the Provincial Emergency Program's (PEP) hotline (1-800-663-3456).

3.4.3 Operational Checklist

The following questions can be used as a checklist for managing mercury.

1. Are all wet vehicles checked for mercury switches?

2. Are all mercury switches removed from wet vehicles prior to crushing?

3. Are mercury pellets stored in plastic containers supplied by the Mercury Switch-Out Program?

4. Are mercury pellets in the switches disposed through the Mercury Switch Out Program?

If you answered NO to any one of these questions, you should adjust your operations. The Best Management Practices outlined below provide guidance on making operational changes.

3.4.4 Best Management Practices

- All hoods, trunks and convenience lights are checked for mercury switches prior to crushing and shredding.

- All mercury switches are removed in the dismantling area.

- Containers used are supplied by the Mercury Switch Out Program. For information about the Mercury Switch Out Program, go to: http://www.cleanairfoundation.org/switchout.

3.5 Fuels

Gasoline, diesel, stale gas, propane and natural gas are the typical fuels encountered by vehicle dismantlers. No attempt is made in this guidebook to manage alternate fuels such as hydrogen.

Fuels on wet vehicles average 20 litres; however, the majority of fuels can be reused and if recycled, they are not considered a hazardous waste, as they are being used for their intended purpose. All efforts should be made to reuse fuels by transferring the product to on site vehicles.

Propane and natural gas are found in vehicles (primarily trucks) and can also be transferred to on site vehicles.

Waste or stale gasoline is simply gasoline that has lost its “high ends” and cannot be used in vehicles. Unused fuels or stale gas must be disposed of as a hazardous waste and are considered hazardous waste if transported off site.

3.5.1 Legal Requirements

The legal thresholds of waste fuel are listed in Table 8.

Table 8: Legal Thresholds for Fuels

Registration	Storage	Manifest	Spill
500 L	500 L	5 L	100 L

If a facility processes more than approximately 25 wet vehicles in an average 30-day period with an average of 20 litres of waste fuel per wet vehicle, (25 x 20 L/car = 500 L), then the facility will need to register and obtain a generator registration number from the Ministry of Environment. See Appendix 5 of the Hazardous Waste Regulation to obtain the registration form for the Consignor Identification Number: http://www.qp.gov.bc.ca/statreg/reg/E/EnvMgmt/EnvMgmt63_88/ 63_88_04.htm).

Further, if a facility stores more than 500 litres of waste fuel or processes more than approximately 25 wet vehicles with waste fuel in an average 30-day period, other requirements of the HWR apply. These additional requirements of the HWR are Parts 2, 3 and 7 and Section 16. Because the guidebook was designed for the "average" vehicle dismantling operation, the additional requirements of the HWR that impact large volume operations are not discussed further.

All vehicle dismantlers with oil/water separators are required to test the outflow and ensure that the concentration of oil is less than 10 mg/L if they discharge to ditches or storm sewers and 60 mg/L if they discharge to sanitary sewers. These standards are listed in Table 3 of this guidebook and take from Schedule 1.2 of the HWR. Note that the municipal standard for oil may be more stringent.

All vehicle dismantlers that offer to prepare fuel for transport in quantities greater than five litres are required to:

- Use a transporter that is licensed to transport waste fuel. The transporter must have a valid Hazardous Waste Transport License issued by the Ministry of Environment.
- Ensure the transporter manifests the shipment. The transporter will put a manifest number on the invoice.
- Store records (i.e., invoice with manifest number) for a minimum of two years.

All vehicle dismantlers are required to report waste fuel spills over 100 litres. Use the Provincial Emergency Program's (PEP) hotline to report all oil spills over 100 litres (1-800-663-3456).

3.5.2 Operational Checklist

The following questions can be used as a checklist for managing fuel.

1. Does the transporter have a current Hazardous Waste Transport License for waste oil issued by the provincial Ministry of Environment?

2. Does the transporter manifest each shipment and put the manifest number on each invoice?

3. Do you store the transporter's records for two or more years?

4. Do you know the threshold spill quantities that must be reported to the Provincial Emergency Program?

5. Do you and your employees know the Provincial Emergency Program number?

6. Do you sample your oil/water separator at least once per year and test for Suspended Solids, BOD and Oil (skip this question if you do not have an oil/water separator)?

7. Were the water quality results less than the thresholds listed in Table 3(skip this question if you do not have an oil/water separator)?

If you answered NO to any one of these questions, you should adjust your operations. The Best Management Practices outlined below provide guidance on making operational changes.

3.5.3 Best Management Practices

- Use re-usable fuels on site.

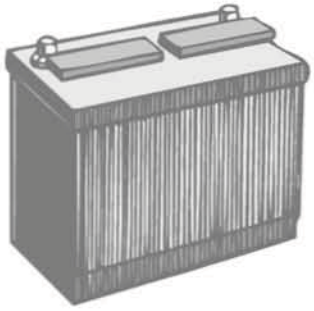
- Remove re-usable gasoline with great care to prevent fire and store it outside the dismantling area.

- Remove gasoline and diesel from the wet vehicle using suction – (puncturing the gas tank and collecting the fuel is risky as spills can occur).

- Propane and natural gas are reused in on site vehicles or transferred to larger cylinders and sold. Gases are not vented to the atmosphere.

- Waste gasoline and diesel are not mixed with waste oil.

3.6 Lead



Lead in wet vehicles is found in tire weights and lead-acid batteries. For the purpose of calculations in this guidebook, the average wet vehicle is expected to contain 20 kg of lead.

3.6.1 Legal Requirements

Lead and lead-acid batteries are considered a hazardous waste and must be managed appropriately. The legal thresholds of lead are listed in Table 9 below.

Table 9: Legal Thresholds for Lead-Acid Batteries

Registration	Storage	Manifest	Spill
2,000 kg	2,000 kg	1,000 kg	200 kg

Assuming the average wet vehicle contains 20 kg lead, if the site processes more than 100 wet vehicles in an average 30-day period (i.e., 2,000 kg) or stores more than 2,000 kg of lead (approximately 100 lead-acid batteries), the dismantler will be required to register with the Ministry of Environment and obtain a Consignor Identification Number. See Appendix 5 of the Hazardous Waste Regulation to obtain the registration form for the Consignor Identification Number: http://www.qp.gov.bc.ca/statreg/reg/E/EnvMgmt/EnvMgmt63_88/63_88_04.htm.

Further, if the site stores more than 2,000 kg of lead or the site processes more than 100 wet vehicles in an average 30-day period, the dismantler will need to meet additional Parts and Sections of the HWR. These additional requirements of the HWR are Parts 2, 3 and 7 and Section 16. Because the guidebook was designed for the "average" vehicle dismantler, the additional requirements of the HWR that impacts large volume operations are not discussed in this guidebook.

As of June, 1991 the ministry has managed the BC Lead-Acid Battery Collection Program. Originally the only initiative of its type in Canada, striving to meet a recovery rate of at least 98% of all end-of-life batteries generated annually in B.C. The program helps to ensure that all used batteries are economically transported to a processor, and it is estimated that virtually 100% are recovered given the right market conditions. The lead-acid battery program provides Transportation Incentive Programs (TIPS) as a form of funding assistance for safe collection and transportation of end-of-life batteries from generators to an approved broker or processing facility. Please see the following web site for further information: http://www.env.gov.bc.ca/epd/recycling/batt/index.htm or visit the Recycling Council of British Columbia's (RCBC) web site: http://www.rcbc.bc.ca or call the RCBC Toll-Free Hotline at 1-800-667-4321.

All vehicle dismantlers with oil/water separators are required to test the outflow and ensure that the concentration of dissolved lead is less than 0.1 mg/L if they discharge to

ditches or storm sewers and 0.3 mg/L if they discharge to sanitary sewers. Effluent standards are listed in Schedule 1.2 HWR and summarized in Table 3. Note that the municipal standard for lead may be more stringent.

All vehicle dismantlers that offer to prepare lead for transport in quantities greater than 1,000 kg (approximately 50 lead-acid batteries) are required to:

- Use a transporter that is licensed to transport lead-acid batteries. The transporter must have a valid Hazardous Waste Transport License issued by the Ministry of Environment.
- Ensure the transporter manifests the shipment. The transporter will put a manifest number on your invoice.
- Store records (i.e., invoice with manifest number) for a minimum of two years.

3.6.2 Operational Checklist

The following questions can be used as a checklist for managing lead.

1. Are all lead-acid batteries and tire weights removed in the dismantling area?

2. Are the lead-acid batteries and tire weights stored in a dry location?

3. Are there provisions to neutralize the spilled acid from lead-acid batteries with lime or bicarbonate of soda?

4. Does the transporter have a current Hazardous Waste Transport License for lead issued by the provincial Ministry of Environment?

5. Does the transporter manifest each shipment over 1,000 kg and put the manifest number on each invoice?

6. Do you store the transporter's records for two or more years?

7. Do you know the threshold spill quantities that must be reported to the Provincial Emergency Program?

8. Do you and your employees know the Provincial Emergency Program number?

9. Do you sample your oil/water separator at least once per year and test for lead (skip this question if you do not have an oil/water separator)?

If you answered NO to any one of these questions, you should adjust your operations. The Best Management Practices outlined below provide guidance on making operational changes.

3.6.3 Best Management Practices

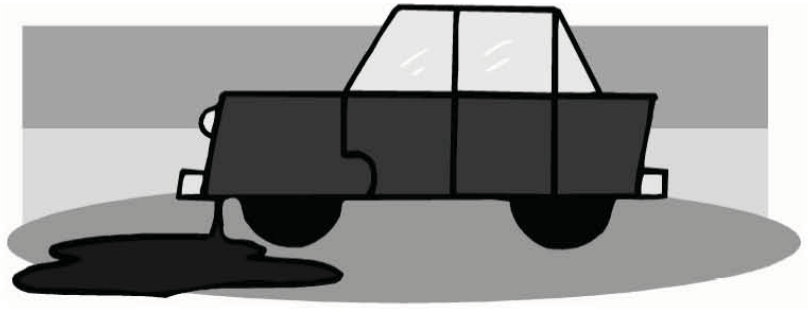
- Tire weights are removed in the dismantling area.
- Tire weights are stored in a strong container and given or sold to metal recyclers.
- Lead-acid batteries are placed in a plastic, leak-proof container.
- The leak-proof container has a tight fitting lid or is in a covered area to keep out rain or snow.
- Lime or bicarbonate of soda are used to neutralize spilled battery acid.
- Eye protection and emergency eye-wash products are located adjacent to the battery container to neutralize any battery acid that gets in an employee's eyes.
- Spilled battery acid is cleaned up with absorbent and then disposed of as a hazardous waste.

3.7 Soils (Leachable Toxic Wastes)

Any spill onto the surface of the ground has the potential to contaminate the soil. Depending on the substance spilled and the quantity, the soil may be classified as a hazardous waste. In order to determine if the soil is a hazardous waste the soil must first be tested. The Hazardous Waste Regulation, Schedule 4, Part 2 describes the testing method for leachable toxic waste and Table 1 lists the Leachate Quality Standards. If the contaminant concentration exceeds the standards listed in Table 1 the soil is classified as a hazardous waste and must be handled accordingly.

Contamination is preventable and vehicle dismantlers should look at the practices that cause contamination on their property. The most common sources of spills are:

- failure to use drip pans in the receiving area;
- storage of wet parts without any sort of containment;
- storing of wet vehicles in hulk storage area;
- failure to crimp and plug lines on hulks and wet parts;
- removing of wet parts outside of dismantling area;
- leaking equipment (e.g., forklifts); and
- crushers.



3.7.1 Legal Requirements

Leachable toxic waste is considered a hazardous waste and must be managed appropriately. The legal thresholds for registration, storage, and transporting leachable toxic waste are listed in Table 10 below.

Table 10: Legal Thresholds for Leachable Toxic Waste

Registration	Storage	Manifest	Spill
500 kg/L	500 kg/L	5 kg/L	*

* Refer to the Spill Reporting Regulation for substance specific spill reporting thresholds.

All vehicle dismantlers that offer to prepare leachable toxic waste for transport in quantities greater than the thresholds listed in the HWR are required to:

- Use a transporter that is licensed to transport contaminated solids. The transporter must have a valid Hazardous Waste Transport License issued by the Ministry of Environment.
- Ensure the transporter manifests the shipment. The transporter will put a manifest number on your invoice.

Store records (i.e., invoice with manifest number) for a minimum of two years.

3.7.2 Operational Checklist

The following questions can be used as a checklist for managing soils.

1. Are leachable toxic wastes stored in a drum as a hazardous waste?
2. Are your storage quantities always under the applicable threshold?
3. Are transporters licensed to transport hazardous leachable toxic waste?
4. Do licensed transporters manifest all shipments over the particular threshold?

If you answered NO to any one of these questions, you should adjust your operations. The Best Management Practices outlined below provide guidance on making operational changes.

3.7.3 Best Management Practices

- Steel drums are used to store solids. Steel drums provide the necessary strength to store contaminated solids.
- Drums are stored on an impermeable surface so that any spilled soils can be easily cleaned up.
- Drums are stored in a covered area to keep rain water and snow off the hazardous waste.
- Drums have proper lids.
- Spills in the hulk storage and receiving areas are cleaned up immediately.

3.8 Tires

Storage of tires is considered to be an environmental risk due to the impact on the environment in the unlikely event that they catch on fire.

There are no legal thresholds for the storage of tires, although it is recommended that no more than 1,000 tires are located on a site at any one time.

Waste tires are managed in British Columbia by Tire Stewardship BC Tire Stewardship BC is a not for profit organization formed to manage the scrap tire recycling program on behalf of tire retailers in the province.

Tire Stewardship BC will pick up used tires at no cost if they have been removed from the rim. For more information about Tire Stewardship BC, go to: http://www.tirestewardshipbc.ca/generator.htm.

Section 4: Refrigerants

Refrigerants from wet vehicles are highly regulated and require careful management because they may be ozone depleting substances and/or have a high global warming potential. The average vehicle with air conditioning will contain approximately 2 kg of refrigerant. If 2 kg of CFC-12 (R12) is vented to the atmosphere, this would have the same impact as 21.2 tonnes of $CO_{2(eq)}$ vented to the atmosphere. If 2 kg of HFC 134a is released to the atmosphere, this is equivalent to the release of 2.6 tonnes of $CO_{2\,(eq)}$.

4.1 Legal Requirements

Ozone Depleting Substances and other Halocarbons (ODS), commonly used as refrigerants in air conditioning units, have a great number of specific rules regarding their handling. R12 or HFC 134a are the most common refrigerants used in motor vehicle air conditioners however reference to these refrigerants in this section is also intended to include alternatives. The requirements for the removal of refrigerants are summarized below.

- A vehicle dismantler must not allow the release of Ozone Depleting Substances or other Halocarbons as listed under Class I, II and III of the British Columbia Ozone Depleting Substances and Other Halocarbons Regulation from:
  - an air conditioner in a wet vehicle;
  - a container, device or equipment used in the evacuation or storage; and
  - the disposal or destruction of R12 or HFC134.

- Only an approved person can evacuate R12 or HFC134 from wet vehicles.

- A vehicle dismantler must ensure the approved person uses a device for the evacuation of R12 or HFC134 that meets or exceeds the performance standards SAE Standard J1990, J2209, or J2210.
- A vehicle dismantler must not dispose of an air conditioner unit or a wet vehicle unless the R12 or HFC134 has been evacuated using a prescribed device.
- A vehicle dismantler must store the evacuated R12 or HFC134 in an appropriate container that is refillable.

- The vehicle dismantler must maintain and make available for inspection during normal business hours at the business premises a record of each employee or contractor who is an approved person. Records must specify the employee's/contractor's name, registration number and date the employee/contractor successfully completed the Environmental Awareness course and the motor vehicle air conditioning course that are required to become an approved person.
- An approved person must record in a service log:
  - the amount of R12 or HFC134 evacuated;
  - the date the R12 or HFC134 was evacuated; and
  - the name and registration number of the approved person who performed the evacuation and, if that person performed the

evacuation as an employee or agent of a business, the name of that business.

- The service log must be maintained and available for inspection at the approved person's normal place of business.
- The approved person must affix a durable label or tag on the wet vehicle after the R12 or HFC134 has been evacuated to clearly indicate that the R12 or HFC134 has been evacuated.
- Containers storing evacuated R12 or HFC134 should be properly labeled, including ASHRAE refrigerant number and be hydrostatically tested and/or replaced every 5 years.
- A vehicle dismantler must keep records of the volumes of all R12 or HFC134 removed by the approved person.

4.2 Operational Checklist

The following questions can be used as a checklist for managing ODS.

1. Does the approved person inspect and check every wet vehicle with air conditioning to determine if refrigerants are present?
2. Does the approved person remove the refrigerants from the wet vehicle?
3. Does the approved person tag each wet vehicle that is checked and evacuated?
4. Does the approved person tag and cross reference to his/her log book each wet vehicle that has had refrigerants removed?
5. Does the approved person have a valid Interprovincial Number?
6. Does the approved person use equipment that is SAE J1990, J2209, or J2210 standard?

If you answered NO to any one of these questions, you should adjust your operations. The Best Management Practices outlined below provide guidance on making operational changes.

4.3 Best Management Practices

- Refrigerants are checked and removed in the receiving area by a mobile recovery unit before the wet vehicle is dismantled. Removing the refrigerants before work starts on the wet vehicle avoids the accidental release of refrigerants.

- A company with a mobile recovery unit and an approved person are hired to check all wet vehicles with air conditioning units and to remove the refrigerants.

- Wet vehicles are tagged with a marker pen to show that they have been checked for refrigerants and any residual refrigerants have been removed. The tag should include the approved person's Interprovincial number and a cross-reference to the log book or record retained by the vehicle dismantler.

- The vehicle dismantler has a copy of the approved person's HRAI certificate and a description of the equipment used on file.

- The vehicle dismantler has a record of each wet vehicle checked and evacuated by the approved person.

Section 5: Practices for the Work Area

The following the best management practices will assist vehicle dismantlers in having a safe and clean facility that does not have contaminated soils.

The best management practices listed below are divided into four sections. Section 5.1 outlines the activities in the different work areas. Section 5.2 discusses the different types of equipment and infrastructure that vehicle dismantlers use. Section 5.3 outlines the site management procedures and Section 5.4 outlines emergency and spill procedures.

5.1 Work Areas

5.1.1 Office Area

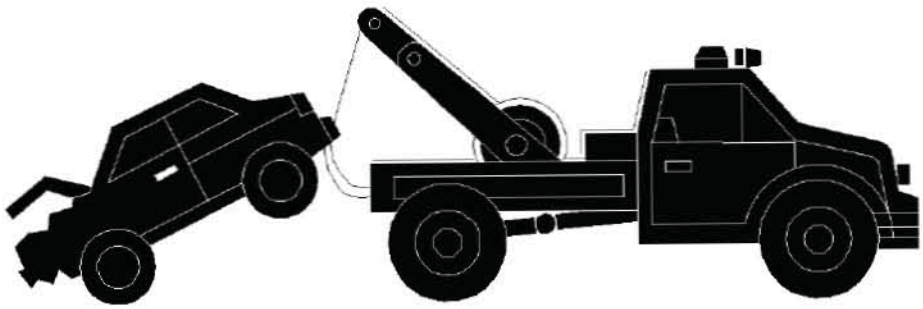
- Records from transporters licensed to transport hazardous waste put manifest numbers on invoices and invoices are kept in a central file for a minimum of two years.
- A copy of the transporter's current license to transport hazardous waste is kept on file.
- Standard Operating Procedures are summarized in writing and placed in a binder that is accessible to all employees (note that Best Management Practices could serve as Standard Operating Procedures if applicable).
- Employees are briefed regularly on safety and environmental policies and procedures.
- Spill procedures are summarized on signs for easy access.
- Local and Provincial Emergency Program phone numbers (1-800-663-3456) are posted in an obvious location.

- Detailed spill procedures are summarized in a binder and are accessible to all employees.
- Environmental Management Plans and audit reports required by the VDRIEPR are kept in a central file on site.

5.1.2 Receiving Area

This is the area where an incoming wet vehicle is temporarily stored prior to being moved to the dismantling area. The best management practices in this area are:

- Ensure drip pans are in receiving areas to catch leaks from recently dropped wet vehicles.
- Small drips and leaks are cleaned up immediately.
- Contaminated solids and adsorbent used to clean up spills are stored in barrels and disposed of in the same manner as used oil and antifreeze.
- Wet vehicles that are leaking are moved immediately to the dismantling area and processed.
- An approved person with a mobile evacuation unit checks and removes refrigerants and then tags each processed vehicle.



5.1.3 Dismantling Area

This is the main work area where wastes, wet parts and other parts are removed. When all wastes are removed, the wet vehicle is now considered a hulk. The best management practices in this area are:

Structures

- Adequate secondary containment is installed so any spilled wastes from the wet vehicle being processed cannot drain to the outside environment.
- Storm water does not drain into the dismantling area.
- Dismantling area does not have drains to sewers, storm drains or to the environment.

- If large quantities of hazardous liquids are stored in the dismantling area, then additional secondary containment for the hazardous liquids is required.

Activities

- Remove all wastes and all valuable wet parts in the dismantling area.
- Remove all wet parts including power steering racks before storage – if left on the hulk, they will eventually leak and cause a spill.
- Use air pump equipment to remove liquids quickly and efficiently.
- Drain differentials before storage.
- Do not drain fuels in the dismantling area. To avoid the possibility of fire, fuels should be drained outside in a covered location with an impermeable surface.
- Crimp and plug lines that contained wastes.

5.1.4 Waste Storage Area

This is the area where wastes are stored prior to transportation to recycling facilities. The best management practices in this area are:

- Keep the containers under cover to avoid precipitation from getting into the containers. (If water gets into the containers, oil will float and spill out of the container and antifreeze will mix with the water and overflow).
- Ensure drains in the storage area are sealed to prevent spilled wastes from getting into drainage pipes.
- Ensure the area does not flood during rain or snowmelt events.
- Avoid the use of underground storage tanks – they may leak.
- Ensure the building or shed has an adequate roof, an impervious floor and adequate secondary containment.
- Ensure fuels are stored in a separate, well-ventilated area.

5.1.5 Wet Parts Storage Area

This is the area where the wet parts (parts containing or having contained wastes) are stored prior to shipping. The best management practices in this area are:

- Store engines, cores, and other drained wet parts in a building or shed that has an adequate roof, floor and secondary containment.

5.1.6 Hulk Storage Area

This is the area where hulks are stored prior to being shipped off site for recycling. The best management practices in this area are:

- All wastes and wet parts are removed from hulk prior to storage.
- All spills and leaks are cleaned up quickly.
- All hulks stored in this area with air conditioning systems have been evacuated and tagged by the approved person.

5.1.7 Parts Cleaning Areas

These are the areas where parts are cleaned either by solvents or by pressure washing. The best management practices in these areas are:

- Ensure secondary containment of wastes including solvents.
- Ensure over-spray from power washers is contained and does not contaminate surrounding soils.
- Do not discharge water from power washer to an oil/water separator, storm drain or sewer – ensure it is a closed-looped system.

5.1.8 Crusher Area

This is the area where hulks are crushed prior to shipping to steel recyclers. If hulks are not crushed on site, this section does not apply. The best management practices in this area are:

- Only hulks are crushed on site.
- All water from hulks is collected and filtered through oil absorbent filters.
- Spills are cleaned up after the crusher leaves the site.

5.2 Environmental Equipment and Infrastructure

5.2.1 Secondary Containment

- Ensure that the liquid wastes have adequate containment to ensure that any spills are contained. Good secondary containment is defined as 110% of the largest container or 25% of the total volume of containers.
- Store containers in an area with impermeable floors and adequate roof structures.

5.2.2 Containers

- Keep used wastes containers close to the dismantling area so that your employees do not need to transport hazardous liquids over long distances.
- Ensure containers have tight fitting lids.
- Ensure a large funnel is available for employees to pour oil into the storage container.
- Ensure containers are clearly labeled to prevent cross contamination of wastes.
- Use steel drums to store wastes. Plastic containers are OK, but the plastic deteriorates over time and will eventually fail. Plastic containers are also more susceptible to puncture or vandalism causing a major spill.
-

5.2.3 Oil/Water Separators

- Ensure oil/water separators are cleaned out on a regular basis – every six months.
- Do not use your oil/water separator as part of your spill control strategy. Oil/water separators can be easily overloaded by a large spill of used oil resulting in a discharge of oil to the environment and potential charges from regulatory authorities.

- Take at least one water sample at the outlet every year and compare the results to the discharge standards (Table 3).

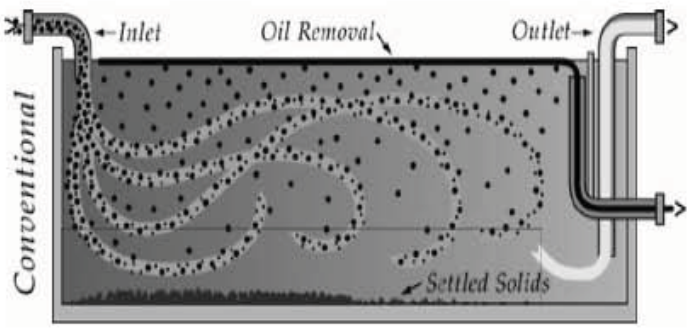


Diagram 1: Cross Section of Conventional Oil/Water Separator

5.2.4 Buildings

- Ensure roofs are able to keep rain and snow away from containers and wet parts containing wastes.
- Ensure floors are made of impervious materials – cracks in floor have been filled.
- Ensure areas are sufficiently high to avoid flooding during normal precipitation events.
- Ensure storm runoff and snowmelt is diverted away from buildings storing wastes.
- Keep work areas clean and uncluttered, preventing spills.
- Block drains to prevent spills from leaving the property.
- Store fuels are in well-ventilated areas to prevent fire.

5.2.5 Spill Kit and Clean-up

Emergency and spill response equipment must be adequate for the quantity of wastes processed and stored on site. The VDRIEPR also requires each vehicle dismantler to have a contingency plan documenting procedures to be followed during an emergency.

Spill kits should include the following:

- safety equipment for employees, including gloves and safety glasses;
- absorbent material for soaking up oils and solvents (e.g., rags, towels, pads, sawdust);
- material to neutralize battery acid (e.g., lime); and
- shovels or scoops to clean up spills.

Spills can be a safety and an environmental hazard. Make sure the work areas are clean and safe.

5.3 Site Management

5.3.1 Inspections

- The owner or general manager should inspect the yard for small spills on a weekly basis.
- Have your yard inspected on an annual basis.
- Record the results of weekly and annual inspections and keep records.

5.3.2 Training

- Train your staff on how to handle used-oil, on spill prevention and on spill control and what to do in the event of a large spill.
- Keep a written record of the discussions you have with staff regarding operating procedures, spill prevention and spill control.
- Record the nature of the discussions with employees using a diary or a "Note to File". Note which employees were involved with the discussion.

5.4 Spills and Emergencies

5.4.1 Drips and Leaks

- Ensure drip pans are in receiving areas to catch leaks from recently purchased wet vehicles.
- Ensure spills, large and small, are cleaned up immediately.
- Ensure equipment is available to clean up oil spills, including:

- Shovels and pails to clean up contaminated solids and gravels in the receiving, hulk storage and the crusher areas.
- Adsorbent to clean-up used oil in the dismantling and wet parts storage areas.
- Storage drums to collect contaminated solids.

5.4.2 Large Spills

- Ensure employees are trained in what to do in the event of a large spill (remember that spills above the thresholds in Section 2.2.4 will necessitate an immediate call to the Provincial Emergency Program to report a spill. If the spill migrates off your yard into sewers, storm drains or fish bearing waters, charges by the regulatory agencies could occur).
- Ensure Provincial Emergency Program's (1-800-663-3456) number is posted near the hazardous waste storage areas.
- Ensure spill kits and equipment are adequate to deal with a large spill.

5.4.3 Fire

- Ensure the Fire Marshal has inspected the site and is familiar with the location of wastes in the event of a fire.
- Ensure quantities of flammable wastes are kept to a minimum to ensure they do not accelerate a small fire.

  - Ensure piles of tires are kept to a minimum and stored away from buildings – preferably less than 100 tires per pile.
  - Ensure gasoline is drained from wet vehicles in a well-ventilated area prior to the use of any cutting torches.
- Ensure gasoline is stored in a separate well-ventilated shed.

Section 6: Other Resources

The following environmental programs for vehicle dismantlers are detailed below:

- Automotive Recycler's Environmental Association (BC)
- United States Automotive Recyclers Association's Environmental Compliance for Automotive Recyclers
- State of California Auto Dismantlers Association
- New Hampshire Green Yards Program
- European Group of Automotive Recycling Associations

6. 1 Automotive Recycler's Environmental Association (BC)

The Automotive Recycler's Environmental Association (AREA) provides environmental management plans for the VDRIEPR for association members. See their web site for more information: http://www.area-bc.ca/.

6.2 United States Automotive Recyclers Association's Environmental Compliance for Automotive Recyclers

The Automotive Recyclers Association in the United States (ARA-US) has developed a comprehensive Environmental Compliance website for vehicle dismantlers to determine the legislative requirements for their state, some hints for best management practices and an environmental checklist for vehicle dismantlers to determine compliance. Go to: www.ecarcenter.org for a review of the materials.

6.3 State of California Auto Dismantlers Association

The State of California Auto Dismantlers Association (SCADA) has the largest industry-operated environmental program in North America. SCADA was recently recognized for their environmental leadership and was recognized by the Governor's Environmental and Economic Leadership Award.

At the heart of SCADA's program is its *Partnership in the Solution* manual (see http://www.scada1.com/documents/partners-manual.pdf). The manual is a well laid out summary of the requirements, best management practices and suggestions for vehicle dismantlers.

6.4 New Hampshire Green Yards Program

The New Hampshire Green Yards Program is similar to the State of California; however, it is a government program that promotes Pollution Prevention.

The Environmental Compliance Manual and Self-Audit Checklist form the basis of the program (http://www.des.nh.gov/SW/Greenyards/GYComplianceManual.pdf). The manual is well laid out, simple and has many photographs that provide useful guidance for recyclers.

6.5 The European Group of Automotive Recycling Associations

The European Group of Automotive Recycling Association (EGARA) was formed in 1991 and has 12 national organizations. One of the purposes of the EGARA and its

mission is to develop environmentally justified recycling methods for vehicle dismantlers. Because of language barriers, only the vehicle dismantling program for the United Kingdom was researched.

The Motor Vehicle Dismantling Association (MVDA) is the trade association representing the interests of vehicle dismantlers and their customers in the United Kingdom (http://www.mvda.org.uk/). One of the objectives of the MVDA is to maintain and improve best practice through the Association's Code of Conduct and Practice.

In 2000, the European Union (EU) passed a Directive (2000/53/EC) that required member states to ensure the collection, treatment and recovery of end-of-life vehicles. The Directive included the requirement that the last owner of a vehicle could drop off the end-of-life vehicle at an authorized treatment facility and that the producers of the vehicles would cover all or a significant portion of the cost of the program.

Appendix 1:

Vehicle Dismantling and Recycling Industry Environmental Planning Regulation

Definitions

1 In this regulation:

"Act" means the *Environmental Management Act*;

"association" means an association of two or more facilities, which association includes in its purposes

(a) preparing a plan for the purposes of this regulation, and

(b) monitoring and reporting on compliance with the plan;

"facility" means an establishment that is engaged in the vehicle dismantling and recycling industry;

"motor vehicle" has the same meaning as in the *Motor Vehicle Act*:

"plan" means an environmental management plan required under section 2 (1);

"qualified professional", in relation to a duty or function under this regulation, means an applied scientist or technologist specializing in an applied science or technology applicable to the duty or function, including, if applicable and without limiting this, agrology, biology, chemistry, engineering, geology or hydrogeology and who

(a) is registered in British Columbia with the appropriate professional organization, is acting under that organization's code of ethics and is subject to disciplinary action by that organization, and

(b) through suitable education, experience, accreditation and knowledge, may be reasonably relied on to provide advice within their area of expertise;

"vehicle dismantling and recycling industry" has the same meaning as in Schedule 2 of the Waste Discharge Regulation;

"wet vehicle" means a motor vehicle that

(a) is no longer used for transportation purposes, and

(b) has not been reduced to a steel hulk or to a steel hulk with only the plastic, fabric or foam components still attached.

Requirement for an environmental management plan

2 (1) A person that operates or plans to operate a facility that dismantles more than 5 wet vehicles in a calendar year must

(a) either

(i) have an environmental management plan for waste management, reduction or prevention, or

(ii) be a member of an association that has an environmental management plan for waste management, reduction or prevention, and

(b) register with a director under section 3.

(2) A person must comply with subsection (1),

(a) if operating the facility on or before September 1, 2008, on or before that date, and

(b) otherwise, before beginning to operate the facility.

(3) A plan for the purposes of this section must

(a) be approved by a qualified professional,

(b) describe how each of the following wastes will be removed from wet vehicles at facilities to which the plan applies:

(i) ozone depleting substances and other halocarbons;

(ii) oils, brake fluids, solvents, fuels and other hydrocarbons;

(iii) antifreeze;

(iv) lead and lead-acid batteries;

(v) tires;

(vi) mercury switches;

(vii) windshield washer fluid,

(c) describe how each waste referred to in paragraph (b) will be stored, treated, recycled or disposed of in compliance with the Act and applicable regulations, and

(d) set out

(i) management processes for minimizing or eliminating the discharge of wastes to the environment, and

(ii) a contingency plan documenting procedures to be followed during an emergency.

(4) Within 3 months after each 5th anniversary of the date their registration is effective under section 3 (2), a person operating a facility for which there is a plan specific to the facility must

(a) review the plan,

(b) amend or replace the plan if necessary to ensure that that person has a plan that complies with subsection (3), and

(c) have the reviewed, amended or replacement plan approved by a qualified professional.

(5) Within 3 months after September 1, 2013 and within 3 months of each fifth anniversary of that date, an association that has a plan for 2 or more facilities must

(a) review the plan,

(b) amend or replace the plan if necessary to ensure that the association has a plan that complies with subsection (3), and

(c) have the reviewed, amended or replacement plan approved by a qualified professional.

Registration

3 (1) A person described in section 2 (1) must register by providing all the following information to a director in a form approved by the director:

(a) the full legal name of the individual, partnership, corporation or other entity operating or planning to operate the facility;

(b) the name, address and telephone number of an individual who is located at or near the facility and is the local contact for the facility;

(c) the address of the facility and the legal description of the land on which the facility is located;

(d) the address at which the plan that applies to the facility may be viewed or copied;

(e) confirmation that the facility has a plan that complies with section 3, or is a member of an association that has a plan that complies with section 3 and the name, address and telephone number of that association;

(f) any other relevant information the discharger wishes to provide.

(2) Registration under this section takes effect on the date a complete registration is received by a director.

(3) A person registered under this section must provide a director with written notice within 30 days after

(a) a change in information provided in the person's registration, or

(b) ceasing to

(i) operate the facility, or

(ii) dismantle more than 5 wet vehicles in a calendar year.

Reporting by facility

4 (1) A person operating a facility that is not a member of an association must have a report prepared by a qualified professional on the matters described in subsection (2) (b)

(a) for the period up to the date that is 2 years after the date of registration under this regulation, and

(b) for each 2-year period after that date.

(2) A report under subsection (1) must

(a) be in writing,

(b) describe

(i) how the wastes described in the plan for the facility were managed,

(ii) whether the management of those wastes was in accordance with the plan, and

(iii) the effectiveness of the management processes used for minimizing or eliminating the discharge of wastes to the environment, and

(c) be completed within 3 months after the end of each 2-year period described in subsection (1).

Reporting by association

5 (1) An association that has prepared a plan for more than one facility must have a report prepared by a qualified professional on the matters described in subsection (2) (b)

(a) for the period up to September 1, 2010, and

(b) for each 2-year period after that date.

(2) A report under subsection (1) must

(a) be in writing,

(b) provide the name and address of each facility to which the plan applies,

(c) specify how many members of the association were audited for compliance with the plan and the identity of each of those members, and

(d) describe

(i) how the wastes described in the plan were managed by each facility audited,

(ii) whether the management of those wastes was in accordance with the plan, and

(iii) the effectiveness of the management processes used for minimizing or eliminating the discharge of wastes to the environment, and

(e) be completed within 3 months after the end of each period described in subsection (1).

(3) An association that has at least 3 members must audit

(a) one third of its members for a report under this section, and

(b) each of its members at least once in the course of completing 3 consecutive reports under this section.

(4) An association that has 2 members must audit

(a) one member for a report under this section, and

(b) each of its members at least once in the course of completing 2 consecutive reports under this section.

Maintaining a plan

6 At all times, a person operating a facility that has its own plan, and an association that has a plan for 2 or more facilities, must maintain the plan, and amend it as necessary, so that if a person complies with the plan, the person also complies with the requirements of the Act and applicable regulations.

Records

7 (1) A person described in section 2 (1) must keep, at the address required under section 3 (1) (d) for the person's registration form, an up-to-date copy of the plan that applies to the facility, and the report prepared under section 4 or 5, as applicable, in relation to the plan.

(2) On request of a director or officer, a person described in subsection (1) must produce the plan or report to the director or officer for inspection or copying.

Offences and penalty

8 (1) A person described in section 2 (1) who is not a member of an association commits an offence and is liable on conviction to a fine of not more $200 000 if the person does any of the following:

(a) fails to have a plan when required under section 2 (2);

(b) fails to register with a director when required under section 2 (2);

(c) has a plan that contains false or misleading information;

(d) provides false or misleading information in a registration form;

(e) fails to have a reviewed, amended or replacement plan approved by a qualified professional within the period established by section 2 (4);

(f) fails to have a report prepared when required under section 4 (1);

(g) has a report prepared that

(i) does not comply with section 4 (2), or

(ii) contains false or misleading information;

(h) fails to maintain the plan as required under section 6.

(2) An incorporated association, or each member of an unincorporated association, that does any of the following commits an offence and is liable on conviction to a fine of not more than $200 000:

(a) fails to have a plan prepared when the facilities to which the plan relates are required under section 2 (2) to have a plan;

(b) has a plan that contains false or misleading information;

(c) fails to have a reviewed, amended or replacement plan approved by a qualified professional within the period established by section 2 (5);

(d) fails to have a report prepared when required under section 5;

(e) has a report prepared that

(i) does not comply with section 5 (2), and with section 5 (3) or (4) as applicable, or

(ii) contains false or misleading information;

(f) fails to maintain the plan as required under section 6.

(3) A member of an association commits an offence and is liable on conviction to a fine of not more $200 000

(a) whether or not the association is incorporated, if the person

(i) does not have a plan,

(ii) fails to register with a director when required under section 2 (2),

(iii) has a plan that includes false or misleading information, or

(iv) provides false or misleading information in a registration form, and

(b) if the association is incorporated and the association

(i) fails to have a plan reviewed, amended or replaced when required under section 2 (5),

(ii) fails to have a report prepared when required to do so under section 5,

(iii) has a report prepared that

(A) does not comply with section 5 (2), and with section 5 (3) or (4) as applicable, or

(B) contains false or misleading information, or

(iv) fails to maintain the plan as required under section 6.

(4) Subsection (3) (b) does not apply to a member if the member,

(a) in relation to subsection (3) (b) (i), has a reviewed, amended or replacement version of the association's plan approved by a qualified professional when the association is required to do so under section 2 (5),

(b) in relation to subsection (3) (b) (ii), has a report on the association's plan prepared under section 4 when the association is required to do so under section 5,

(c) in relation to subsection (3) (b) (iii), when the association is required to have a report prepared that complies with section 5 (2), and with section 5 (3) or (4) as applicable, has a report prepared that

(i) complies with section 4 (2), and

(ii) does not contain false or misleading information, and

(d) in relation to subsection (3) (b) (iv), maintains the association's plan as required under section 6.

Appendix 3

City of Richmond
Pollution Prevention & Clean-up Bylaw 8475
(2009)

CITY OF RICHMOND

POLLUTION PREVENTION AND CLEAN-UP BYLAW NO. 8475

EFFECTIVE DATE – October 13, 2009

Prepared for publication: November 2, 2009

2746053

CITY OF RICHMOND

POLLUTION PREVENTION AND CLEAN-UP BYLAW NO. 8475

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City of Richmond **Bylaw 8475**

POLLUTION PREVENTION AND CLEAN-UP BYLAW NO. 8475

WHEREAS the City of Richmond has committed to environmental stewardship and the protection of its **watercourses** and **drainage systems**;

AND WHEREAS pursuant to subsection 8(3)(j) of the *Community Charter* SBC 2003 Chapter 26, a municipality may by bylaw regulate, prohibit and impose requirements in relation to the protection of the natural environment;

AND WHEREAS pursuant to subsections 9(1)(b) and 9(3) of the *Community Charter* SBC 2003 Chapter 26, the Province of British Columbia has concurrent authority with municipalities in connection with protection of the natural environment, a Council may not adopt a bylaw relating to the protection of the natural environment unless one of the conditions of subsection 9(3) has been met (one of which is that the bylaw is in accordance with a regulation enacted pursuant to subsection 9(4)); and

AND WHEREAS the Province of British Columbia has enacted B.C. Reg 144/2004 entitled "Spheres of Concurrent Jurisdiction – Environment and Wildlife Regulation" which provides in section 2(1)(a) that for the purposes of section 9(4)(a)(i) of the *Community Charter*, a municipality may, under section 8(3)(j) of the *Community Charter*, regulate, prohibit and impose requirements in relation to polluting or obstructing, or impeding the flow of, a stream, creek, waterway, watercourse, waterworks, ditch, drain or sewer, whether or not it is located on private property.

Accordingly, the Council of the City of Richmond enacts as follows:

PART ONE: INTERPRETATION

1.1 Definitions

1.1.1 In this bylaw, unless the context otherwise requires:

AGREEMENT	means the agreement referred to in section 6.1.1.(b) of this bylaw.
APPLICATION	means the application to the **City** for an **agreement**.
CITY	means the City of Richmond as a corporate entity.
CITY OF RICHMOND	means the City of Richmond as a geographic area.

CITY CLERK	means the Municipal Officer appointed by **Council** and assigned responsibility for corporate administration for the **City** under section 148 of the *Community Charter*.
COUNCIL	means the Council of the **City**.
DANGEROUS GOODS	means dangerous goods as defined in the *Transportation of Dangerous Goods Act* 1992, S.C. 1992, c. 34.
DEWATERING	means the extraction of groundwater from temporary excavations and/or during construction activities.
DISCHARGE	means either, according to the context in which such word is used in this bylaw: (a) as a verb, the **release** of a substance into any **drainage system** and/or **watercourse** or onto or into any soil; or, (b) as a noun, a substance which is **released.**
DRAINAGE SYSTEM	means all storm sewer works and appurtenances owned, controlled, maintained and operated by the **City**, including storm sewers, **watercourses**, storm service connections, ditches, channels, sloughs, detention facilities, pumping stations and outfalls laid within any highway, **City** right-of-way or easement or **City**-owned property.
ENVIRONMENT	means air, land, water and all other external conditions or influences under which humans, animals and plants live or are developed.
ENVIRONMENTAL LAWS	means all applicable federal, provincial, and **City** laws, statutes, ordinances, by-laws, codes, regulations, and all policies, guidelines, standards, protocols, orders, directives and decisions rendered or promulgated by any ministry, department or judicial, administrative or regulatory agency or body whatsoever relating to fisheries, public health and safety, occupational health and safety, the protection or preservation of the **environment** or the manufacture, operation, processing, distribution, use, treatment, storage, disposal, **release**, transport, handling or remediation of contaminants, including without limiting the generality of the foregoing, the *Environmental Management Act,* S.B.C. 2003, c. 53, the *Canadian Environmental Protection Act,*

	1999, S.C. 1999, c. 33 and the *Fisheries Act,* R.S.C. 1985, c. F-14, and the principles of common law and equity and whether any of the foregoing comes into force before or after the date of this bylaw.
GENERAL MANAGER	means the person appointed by **Council** to the position of General Manager, Engineering & Public Works or the person appointed by **Council** to the position of General Manager, Law & Community Safety.
INDUSTRIAL PROCESS WATER	means water from any source that is used in, or produced as a waste product of, industrial processes or other industrial activities.
MONITOR/MONITORING	means to observe, record, or detect.
NON-STORMWATER DISCHARGE	means any substance that is **discharged** to the City's **drainage system** and/or any **watercourse** that has not originated from naturally occurring precipitation flowing over the land surface and includes any **discharge** from **dewatering** activities and **industrial process water**.
ORDER TO COMPLY	means an order referred to in Part 7 of this bylaw.
OWNER	means a **person** who is the registered owner of an estate in fee simple.
PARCEL	means a lot, block, or other area in which land is held, or into which land is legally subdivided.
PERSON	includes the **City**, a government body, an individual, corporation, partnership or other party, and the personal or other legal representatives of a person to whom the context can apply according to law.
POLLUTING SUBSTANCE	means any substance, whether liquid or solid, that damages or is capable of damaging the **environment** and includes **dangerous goods** and includes any substance that does not conform to the British Columbia Water Quality Guidelines for the Protection of Aquatic Life and/or the Canadian Council of Ministers of the Environment - Canadian Water Quality Guidelines for the Protection of Aquatic Life.

PROFESSIONAL ENGINEER means a **person** who is registered or licensed as a professional engineer pursuant to the *Engineers and Geoscientists Act,* R.S.B.C. 1996, c. 116.

PROPERLY STORE/STORED means stored and identified so as to prevent the overflow, **release**, or leakage of a **polluting substance** into a **drainage system**, a **watercourse** and/or the **environment**.

QUALIFIED ENVIRONMENTAL PROFESSIONAL means an applied scientist or technologist registered and in good standing in British Columbia with an appropriate professional organization acting under that association's code of ethics and subject to disciplinary action by that association.

RELEASE means **spill**, **discharge**, leak, pump, pour, emit, empty, inject, migrate, escape, leach, dispose, dump, deposit, spray, bury, abandon, incinerate, seep, place, or any other similar action.

REPONSIBLE PERSON means the **person** who had possession, charge or control of a **polluting substance** at the time a **spill** occurs.

SPILL means the introduction of a **polluting substance** into the **environment**, either intentionally or unintentionally, other than as authorized under the *Environmental Management Act.*

WATERCOURSE means a channel through which water flows at any time of the year and includes a brook, river, stream, creek, lake, pond and any other body of water running through or situated partially or fully within the **City of Richmond**.

WATER QUALITY MONITORING AND RESPONSE PLAN means a written plan prepared by a **Qualified Environmental Professional** that includes:

(a) an outline of the steps to be taken to ensure that the proposed **discharge** complies at all times with this bylaw, other **City** requirements and all **environmental laws**; and

(b) details the mitigation, remediation, and communication responses to be undertaken

by the **owner** if there is noncompliance with this bylaw.

PART TWO: BYLAW EFFECT

2.1 Bylaw Effect

2.1.1 This bylaw applies to any **polluting substance:**

(a) being handled or stored within the **City of Richmond**; or

(b) **released** onto soil or into any **drainage system** and/or **watercourse** within the **City of Richmond**.

2.1.2 This bylaw applies to all **persons** except that subsection 6.1.1 of this bylaw does not apply to the **City**.

2.1.3 Part 6 of this bylaw does not apply to agricultural activities.

PART THREE: PROHIBITION AGAINST RELEASE OF POLLUTING SUBSTANCE

3.1 Prohibition Against Release of Polluting Substance

3.1.1 No **person** shall **release** or allow to be **released** a **polluting substance** into any **drainage system**, **watercourse** or onto or into the soil, other than as authorized by all applicable **environmental laws**.

PART FOUR: OBLIGATIONS REGARDING THE STORAGE AND HANDLING OF A POLLUTING SUBSTANCE AND OF DANGEROUS GOODS

4.1 Obligations Regarding the Storage and Handling of a Polluting Substance

4.1.1 Every **person** storing or handling any **polluting substance** must ensure that such **polluting substance** is **properly stored.**

4.2 Obligations Regarding the Storage and Handling of Dangerous Goods

4.2.1 In addition to complying with the provisions of section 4.1, any **person** storing or handling **dangerous goods** must ensure that such **dangerous goods** are **properly stored** in an impervious containment system which is of sufficient capacity to hold the larger of:

(a) 110% of the largest volume of free liquid **dangerous goods** in any given container or tank, or

(b) 25% of the total volume of free liquid **dangerous goods** in storage.

PART FIVE: SPILL RESPONSE AND CLEAN-UP REQUIREMENTS

5.1 Obligation to Clean-Up Spill

5.1.1 Where a **spill** has occurred, the **responsible person** shall in accordance with all **environmental laws**:

(a) immediately contain such **spill** and clean-up:

(i) any residue of the **polluting substance;**

(ii) any absorbent materials which have come into contact with, and have, in the opinion of the **City**, become contaminated by such **polluting substance**; and

(iii) any areas impacted by the **spill,** including without limitation, the **drainage system**, any **watercourse** and any soil, to the satisfaction of the **City**; and

(b) if required by the **General Manager**, complete any necessary remediation to the satisfaction of the **City** or to the applicable standards set out in the **environmental laws**.

PART SIX: NON-STORMWATER DISCHARGE MANAGEMENT

6.1 Provisions for Dewatering

6.1.1 Application and Agreement

No **person** shall allow any **discharge** from **dewatering** to enter any **drainage system** or any **watercourse** unless such **person** has complied with the following requirements:

(a) the **owner** of the source **parcel** submits an **application** to the **General Manager** as set out in subsection 6.1.2**;** and

(b) the **owner** of the source **parcel** enters into an **agreement** with the **City** regarding the proposed **discharge** as set out in subsection 6.1.3.

6.1.2 Application Requirements

6.1.2.1 The **application** referred to in subsection 6.1.1.(a) shall include:

(a) either of the following:

i. written confirmation satisfactory to the **City** from a **Qualified Environmental Professional** that the quality of the proposed **discharge** from the **dewatering** complies with the British Columbia

Water Quality Guidelines for the Protection of Aquatic Life and/or the Canadian Council of Ministers of the Environment - Canadian Water Quality Guidelines for the Protection of Aquatic Life; or

ii. a copy of the written approval of the proposed **discharge** from the applicable federal or provincial regulatory authority as required by the applicable **environmental laws**; and

(b) if required by the **City**, a **water quality monitoring and response plan** satisfactory to the **City**; and

(c) a capacity analysis of the **drainage system** and, based on the capacity analysis, a letter signed and sealed by a **Professional Engineer** confirming that the **drainage system** has capacity to accommodate the flow rate of the proposed **discharge**; and

(d) if required by the **City**, evidence satisfactory to the **City** that the **owner** has been denied a permit to **discharge** the substance resulting from the **dewatering** into the sanitary waste disposal system servicing the **parcel**, if any; and

(e) any supporting documentation requested by the **City** relevant to the matters referred to in subsections (a), (b), (c) and/or (d) above.

6.1.3 Agreement Requirements

6.1.3.1 The **agreement** shall be in the **City's** prescribed form. It must be an **agreement** between the **owner** and the **City** and must include, without limitation, provisions that the **owner** shall, on terms and conditions satisfactory to the **General Manager**:

(a) indemnify and release the **City** from any loss or damage caused directly or indirectly by:

(i) contravention of the **agreement**; and/or

(ii) any **discharge**;

(b) maintain adequate insurance coverage for that indemnity, include the **City** as an additional insured, contain a waiver of subrogation, and require that at least 30 days' notice be given to the **City** prior to cancellation or expiry;

(c) conduct **water quantity monitoring** to confirm that the **discharge** does not exceed the allowable flow rate set out in

the capacity analysis referred to in subsection 6.1.2.1.(c) of this bylaw, and, if requested by the **City**, provide a copy of the monitoring results signed and sealed by a **Professional Engineer** to the **City**;

(d) comply with the **water quality monitoring and response plan** and, if requested by the **City** provide a copy of the **monitoring** results to the **City;** and

(e) comply with all **environmental laws** and, without limitation, ensure that the **discharge** does not exceed the British Columbia Water Quality Guidelines for the Protection of Aquatic Life and/or the Canadian Council of Ministers of the Environment - Canadian Water Quality Guidelines for the Protection of Aquatic Life.

6.1.4 Authority to Execute Agreements

6.1.4.1 The **General Manager** is authorized to execute **agreements** on behalf of the **City** if the **General Manager** is satisfied that the requirements of subsections 6.1.1, 6.1.2, and 6.1.3 of this bylaw have been met and that no reason exists why the **City** should not enter into an **agreement**.

6.1.5 Term of Agreements

6.1.5.1 Every **agreement** shall expire twenty-four (24) months from the date of execution by the **City** or upon such earlier date as may be specified in the **agreement**.

6.2 Industrial Process Water Restrictions

6.2.1. No **person** shall **release industrial process water** into any **drainage system** and/or **watercourse** unless in accordance with all applicable **environmental laws**.

PART SEVEN: ORDER TO COMPLY

7.1 Order to Comply

7.1.1 If a **person** fails to comply with any provision of this bylaw and/or any **agreement**, the **General Manager** may order pursuant to an **Order to Comply** served on such **person**, the cessation and remedy of any action which contravenes this bylaw and/or any **agreement**, within such period of time as the **General Manager** stipulates in the **Order to Comply**. The **General Manager** may, when the remedy ordered has been completed, authorize continuation of any action which was ceased or ordered remedied.

7.2 Appeal Against an Order to Comply

7.2.1 A **person** upon whom an **Order to Comply** has been served may appeal to **Council** against such **Order to Comply** by giving notice in writing to the **City Clerk** at least 72 hours prior to the expiration of the time given in the **Order to Comply.**

7.2.2 Upon hearing the appeal against an **Order to Comply**, **Council** must either uphold, amend, or cancel the **Order to Comply**.

PART EIGHT: EMERGENCY SITUATIONS

8.1 Emergency Situations

8.1.1 Where the **City** has determined that there has been a possible contravention of this bylaw which poses a possible threat to the **environment** or the health or safety of individuals, and immediate action is required to remedy the situation, the **City** may immediately take whatever action the **City** considers necessary to remedy the situation without the necessity of full compliance with the provisions of this bylaw at the time it is undertaken.

PART NINE: AUDIT

9.1 Audit

9.1.1 The **City** may, in its sole discretion, conduct an audit of the compliance with the obligations contained in the **agreement** and this bylaw. The **City** shall conduct the audit on the basis that it is for the **City's** own information and the **City** shall not be obliged to share the results of the audit with the **owner** or any other **person**. The **City** shall not be responsible to the **owner** or any other **person** in any way if the audit is inadequate or otherwise wrongly performed.

PART TEN: OFFENCES AND PENALTIES

10.1 Offences and Penalties

10.1.1 Any **person** who:

(a) violates or who causes or allows any of the provisions of this bylaw to be violated;

(b) fails to comply with any of the provisions of this bylaw;

(c) neglects or refrains from doing anything required under the provisions of this bylaw; or

(d) makes any false or misleading statement in connection with this bylaw,

is deemed to have committed an infraction of, or an offence against, this bylaw, and is liable on summary conviction to a penalty of not more that $10,000.00 in addition to the costs of the prosecution, and each day that such violation is caused or allowed to continue constitutes a separate offence.

PART ELEVEN: PREVIOUS BYLAW REPEAL

11.1 Previous Bylaw Repeal

11.1.1 Pollution Prevention and Clean-up Regulation Bylaw 7435 (adopted February 10th, 2003) is repealed.

PART TWELVE: SEVERABILITY AND CITATION

12.1 Severability

12.1.1 If any part, section, sub-section, clause, or sub-clause of this bylaw is, for any reason, held to be invalid by the decision of a Court of competent jurisdiction, such decision does not affect the validity of the remaining portions of this bylaw.

12.2 Citation

12.2.1 This bylaw is cited as **"Pollution Prevention and Cleanup Bylaw No. 8475"**.

FIRST READING _____

SECOND READING _____

THIRD READING _____

ADOPTED _____

CITY OF RICHMOND
APPROVED for content by originating dept.
APPROVED for legality by Solicitor

_____ MAYOR

_____ CITY CLERK

Appendix 4

VDRIEPR Registration Form and Certificate of Registration

Recordkeeping Note

The facility has submitted a Registration Form for the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation for the purpose of applying for coverage under the stipulations of the Environmental Management Act (EMA). A copy of the Registration Form is included in this Appendix. Upon review of the Registration Form, the Ministry of Environment (MOE) will mail the facility a Registration Certificate, which also should be inserted into this Appendix.

Appendix 5

Environmental Management Act (EMA)
Ozone Depleting Substances and Other Halocarbons Regulation;
Spill Reporting Regulation

B.C. Reg. 387/99 Deposited November 22, 1999

O.C. 1594/99

Environmental Management Act

OZONE DEPLETING SUBSTANCES AND OTHER HALOCARBONS REGULATION

[includes amendments up to B.C. Reg. 4/2010, January 14, 2010]

Contents

Part 1 — General

1 Definitions and interpretation

(1) In this regulation:

"air conditioning or refrigeration equipment" means a heat pump or air conditioning or refrigeration equipment, other than a motor vehicle air conditioner, that contains or is intended to contain an ozone depleting substance or other halocarbon;

"approved person" means a person who

(a) holds appropriate trade credentials or is an indentured trainee or apprentice in compliance with the *Industry Training Authority Act* or, if that Act is not applicable, is qualified in the appropriate trade sector by

(i) having successfully completed a recognized trade school program, or

(ii) having at least one year of supervised practical service experience,

(b) has successfully completed an environmental awareness course approved by Environment Canada and the minister's ministry, and

(c) has, if servicing motor vehicle air conditioning systems on or after October 1, 1997, successfully completed a motor vehicle air conditioning course approved by the minister's ministry unless the approval is cancelled or suspended under section 18 of the *Environmental Management Act*;

"chiller" means an air-conditioning system or refrigeration system that has a compressor, an evaporator and a secondary refrigerant;

"Class I substance" means a substance listed under Class I in Schedule A;

"Class II substance" means a substance listed under Class II in Schedule A;

"Class III substance" means a substance listed under Class III in Schedule A;

"Code of Practice" means the Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air Conditioning Systems, as amended from time to time, published by Environment Canada;

"dispose" means to dismantle, break up or abandon;

"fixed fire extinguishing equipment" means a total flooding fire extinguishing system, a local application fire extinguishing system or a hand hose line fire extinguishing system if that system contains an ozone depleting substance;

"halon" means a substance listed under the heading "Halons" in Class I, item 2, of Schedule A;

"Halon Code of Practice" means the Code of Practice on Halons, as amended from time to time, published by Environment Canada;

"manufacturer" means

(a) a person who manufactures an ozone depleting substance in British Columbia, or

(b) an agent in British Columbia of a person who manufactures an ozone depleting substance outside British Columbia;

"mobile refrigeration system" means a refrigeration system that is installed in or normally operates in or in conjunction with or is attached to a mode of transportation such as a freight truck, rail car or ferry;

"motor vehicle air conditioner" means an air conditioning unit or system of a motor powered vehicle, whether or not it is a vehicle under the *Motor Vehicle Act*, if that unit or system is driven by an engine and is a mechanical vapour compression refrigerant system that provides cooling for the passenger compartment of the vehicle and contains or is intended to contain an ozone depleting substance or other halocarbon;

"other halocarbon" means a substance listed in Class III of Schedule A;

"ozone depleting substance" means a substance listed in Class I or Class II of Schedule A;

"portable fire extinguisher" means a hand-held or wheeled fire extinguisher containing an ozone depleting substance;

"recover" means to collect an ozone depleting substance or other halocarbon after it has been used, or to collect it from machinery, equipment or a container before disposal of the machinery, equipment or container;

"recycle" means to clean a recovered ozone depleting substance or other halocarbon by filtration, dehydration, distillation or other means to make it pure to a level that meets industry requirements for re-use;

"registration number" means the number issued with the approval of the minister's ministry to an approved person;

"release" means the emission of a substance into the environment but does not include emissions that occur as the direct result of an approved person connecting or disconnecting hoses or gauges to or from air conditioning or refrigeration equipment or a motor vehicle air conditioner to measure pressure or to add refrigerant to or recover refrigerant;

"seller" means a person who sells an ozone depleting substance and includes, without limitation, a retailer, a supplier and a manufacturer;

"service" includes construction, installation, testing, maintenance, charging, recharging, decommissioning, removal or disposal;

"supplier" means a person or agent who brings into British Columbia an ozone depleting substance for wholesale or other distribution in British Columbia.

(2) The requirements established by this regulation are in addition to those requirements established under other municipal, Provincial or federal enactments. [am. B.C. Regs. 109/2002, s. 1; 268/2004, s. 1; 321/2004, s. 20 (a); 4/2010, s. 3.]

2 Exemption

(1) This regulation does not apply to a person operating an enterprise that is certified by a director to conform to a code of practice for the dismantling or recycling of motor vehicles provided the enterprise continues to comply to the code of practice.

(2) A director must not certify under subsection (1) unless satisfied that the enterprise, by conforming to the code of practice, will substantially comply with the requirements established by this regulation. [am. B.C. Reg. 321/2004, s. 20 (b) and (c).]

3 Control of hydrofluorocarbons and other halocarbons

Sections 4 to 8, 10, 11 (2), 12 to 18, 21 and 22 apply to a container, air conditioning and refrigeration equipment, a motor vehicle air conditioner, and fire extinguishing equipment that contains or is intended to contain other halocarbons.

4 Release of ozone depleting substances prohibited

(1) A person must not release or allow or cause the release of an ozone depleting substance or other halocarbon from

(a) air conditioning or refrigeration equipment,

(b) a motor vehicle air conditioner,

(c) fire extinguishing equipment except to fight a fire that is not a fire caused for training purposes, or

(d) a container, device or equipment used in the re-use, recycling, reclaiming or storage of an ozone depleting substance unless expressly permitted to do so by this regulation, the Code of Practice, the Halon Code of Practice or as required by other municipal, federal or Provincial enactments.

(2) Subsection (1) does not apply to air purge systems on air conditioning or refrigeration equipment

(a) before January 1, 2001, or

(b) after January 1, 2001, if high efficiency purge devices or other controls are installed and in proper operation.

(3) A person must not add an ozone depleting substance to equipment, devices or containers which are leaking.

(4) A person must not store, dispose of or destroy an ozone depleting substance in a manner which allows it to enter the environment.

5 Containers

Effective April 1, 2000, a person must not manufacture, bring into the Province, sell or offer for sale a container for ozone depleting substances unless it is an appropriate container that is refillable with those substances.

6 Purchase or possession of ozone depleting substances for servicing air conditioning or refrigeration equipment

(1) Subject to section 19 and subsection (2) of this section, only an approved person may purchase or possess an ozone depleting substance for the purpose of servicing air conditioning or refrigeration equipment or a motor vehicle air conditioner.

(2) Subject to section 19, a person may purchase an ozone depleting substance for the purpose of servicing air conditioning or refrigeration equipment or a motor vehicle air conditioner only if the person provides to the seller prior to the purchase of the ozone depleting substance

(a) satisfactory proof that the person or a person employed by a business is an approved person, and

(b) the type, model and year of manufacture of the recovery or recovery and recycling device used by the person.

(3) Subject to section 19, a person must not sell an ozone depleting substance to a person purchasing the ozone depleting substance for use in servicing air

conditioning or refrigeration equipment or a motor vehicle air conditioner unless the purchaser has complied with subsection (2) of this section.

7 Servicing air conditioning or refrigeration equipment or motor vehicle air conditioners

(1) Only an approved person may service air conditioning or refrigeration equipment or a motor vehicle air conditioner.

(2) Subsection (1) does not apply to any of the following:

(a) a person decommissioning equipment that has been tagged as evacuated in accordance with section 10 (2) immediately prior to being decommissioned;

(b) a person servicing a motor vehicle air conditioner that does not contain an ozone depleting substance, if the person has met the requirements of paragraphs (a) and (b) of the definition of "approved person" in section 1 (1);

(c) a trainee or student while being supervised by an approved person.

(3) An owner of air conditioning or refrigeration equipment or a motor vehicle air conditioner must not knowingly cause the air conditioning or refrigeration equipment or a motor vehicle air conditioner to be serviced by anyone who is not an approved person.

8 Record of approved persons

The owner of a business that services air conditioning or refrigeration equipment or motor vehicle air conditioners must

(a) except as set out in subsection 7 (2), ensure that each person employed in or by the business who services air conditioning or refrigeration equipment or motor vehicle air conditioners is an approved person, and

(b) maintain and make available for inspection by an officer during normal business hours at the business premises a record of each employee who is an approved person, specifying the employee's name, registration number and date the employee successfully completed the course to become an approved person.

9 Record of sales

(1) If a purchaser purchases an ozone depleting substance other than as a component of another product, the seller of the ozone depleting substance must ensure that the purchaser provides a signed acknowledgment of receipt of the ozone depleting substance and must record in a sales log

(a) the type and amount of ozone depleting substance sold,

(b) the date of the sale,

(c) the name of the person who purchased the ozone depleting substance and, if the purchase was made on behalf of another person, the name of that other person, and

(d) if the purchaser purchased the substance to service air conditioning or refrigeration equipment, the registration number indicating that the purchaser, or if a business, an employee of the purchaser, is an approved person.

(2) The sales information referred to in subsection (1) must be retained by the seller for at least 36 months and be available for inspection on request by an officer at the seller's normal place of business.

10 Labelling and recordkeeping

(1) A person must not manufacture, bring into the Province, sell, offer for sale or install new air conditioning or refrigeration equipment, a new motor vehicle air conditioner or fixed fire extinguishing equipment that is not labelled with a permanently affixed and legible label or tag stating the quantity and type of substance contained in the equipment.

(2) A person who evacuates an ozone depleting substance from, or charges or recharges with an ozone depleting substance, air conditioning or refrigeration equipment or fixed fire extinguishing equipment must record on a permanently affixed and legible label or tag and in a service log

(a) the results of any leak tests,

(b) the type and amount of ozone depleting substance added or evacuated,

(c) that the equipment or vehicle does not contain an ozone depleting substance if evacuated,

(d) the date the substance was added or evacuated, and

(e) the name and registration number of the person who performed the charging, recharging or evacuation and, if that person performed the charging, recharging or evacuation as an employee or agent of a business, the name of that business.

(3) The service log referred to in subsection (2) must

(a) chronologically record, over the preceding 36 months, service calls during which equipment was charged or recharged and incidents of leaks detected, and

(b) be maintained and available for inspection on request by an officer at the service person's normal place of business.

11 Ozone depleting substances may not be added for leak testing

(1) Despite section 4 or the Code of Practice, a person must not add an ozone depleting substance to any equipment, device or container for the purpose of leak testing it.

(2) A person must not charge or recharge any equipment or device with an ozone depleting substance unless it has first been leak tested.

(3) A person must not charge or recharge any refillable container with an ozone depleting substance unless containers of that type have been regularly spot-checked for leaks.

12 Seller take-back of ozone depleting substances

(1) If a person who purchased an ozone depleting substance returns the ozone depleting substance during normal business hours

(a) to the seller from which it was purchased,

(b) at the seller's normal place of business, and

(c) in a container designed to contain that substance, the seller must accept the substance and store it until the seller can deliver it to a person who manufactures, recycles, converts or destroys the ozone depleting substance.

(2) Subsection (1) does not apply to a Class I, II or III substance that has been mixed with one or more other substances so that the mixture is a hazardous waste.

(3) A seller must

(a) prepare and retain at the seller's normal place of business a plan for accepting an ozone depleting substance returned for recycling, conversion or destruction, or

(b) participate in a stewardship program.

(4) A plan under subsection (3) (a) and a stewardship program under subsection (3) (b) must do all the following:

(a) demonstrate how ozone depleting substances will be effectively collected and stored;

(b) demonstrate how the returned ozone depleting substances will be disposed of in an environmentally responsible manner;

(c) provide for keeping records relating to returned substances. [en. B.C. Reg. 268/2004, s. 2; am. B.C. Reg. 321/2004, s. 20 (d).]

Part 2 — Refrigeration or Air-Conditioning Equipment

13 Service persons must have proper devices

A person must not service air conditioning or refrigeration equipment unless that person uses a device for the recovery or recovery and recycling of the ozone depleting substance which meets or exceeds the performance standards set out in Schedule B to prevent the release of the ozone depleting substance into the environment.

14 Equipment to be serviced in accordance with the Code of Practice

Any person who services air conditioning or refrigeration equipment must do so in accordance with the Code of Practice.

15 Disposal of air conditioning or refrigeration equipment

Unless the ozone depleting substances in air conditioning or refrigeration equipment or a container are recovered using devices or methods that meet the performance

standards set out in Schedule B, a person must not dispose of the air conditioning, refrigeration equipment or container except by delivery of the air conditioning, refrigeration equipment or container to a site or facility pursuant to the terms of any applicable federal, Provincial or municipal program for the removal of ozone depleting substances from such equipment or container.

Part 3 — Motor Vehicle Air Conditioners

16 Standards for servicing motor vehicle air conditioners

A person must not service a motor vehicle air conditioner except in the manner set out in

(a) the Code of Practice, and

(b) the Society of Automotive Engineers (SAE) Standard J1989 or J2211, as amended from time to time. [am. B.C. Reg. 268/2004, s. 3.]

17 Motor vehicle air conditioner service persons must have proper devices

A person must not service a motor vehicle air conditioner unless the person uses a device to prevent the release of the ozone depleting substance that meets or exceeds Society of Automotive Engineers (SAE) Standard J1990, J2209, or J2210, as amended from time to time, or is certified to perform similarly by an independent professional engineer registered to practise in British Columbia. [am. B.C. Reg. 268/2004, s. 4.]

18 Ozone depleting substances must be recovered prior to disposal of equipment

A person must not dispose of a motor vehicle air conditioner or a motor vehicle containing a motor vehicle air conditioner unless the ozone depleting substance in the air conditioner is recovered using a device described in section 17.

19 Motor vehicle air conditioners not to be charged or recharged with an ozone depleting substance

A person must not charge or recharge a motor vehicle air conditioner with an ozone depleting substance.

20 Manufacturing, bringing into the Province or selling prohibited

A person must not manufacture, bring into the Province or sell a motor vehicle of model year 1995 or newer which has an air conditioning unit that contains an ozone depleting substance as a refrigerant.

Part 4 — Fire Extinguishing Equipment

21 Equipment to be serviced in accordance with the Halon Code of Practice

Any person who services fire extinguishing equipment containing or intended to contain an ozone depleting substance must do so in accordance with the Halon Code of Practice, and for this purpose other halocarbons are deemed to be halons.

22 Disposal of fire extinguishing equipment

A person must not dispose of fixed fire extinguishing equipment or a portable fire extinguisher unless the ozone depleting substance is recovered using devices or methods that meet the performance standards set out in Schedule B.

23 Repealed

Repealed. [B.C. Reg. 268/2004, s. 2.]

24 Portable fire extinguishers

Except for use in aircraft and military equipment, a person must not manufacture, recharge, bring into the Province, sell, offer for sale or supply a portable fire extinguisher containing an ozone depleting substance.

25 Servicing equipment containing Halon 1211 and 1301

A person must not service fire extinguishing equipment containing Halon 1211 or Halon 1301 unless the person uses a device for the recovery or recovery and recycling of Halon 1211 or Halon 1301 which meets or exceeds the latest edition of Underwriters Laboratory of Canada Standard ULC/ORD-C1058.5, or which is certified to perform similarly by an independent professional engineer registered to practise in British Columbia.

Part 5 — Miscellaneous

26 Sterilants and diluents

A person must not use a Class I substance to dissolve other substances for the purposes of cleaning or as a diluent for a sterilant.

27 Phase out of ozone depleting substances

(1) Effective 6 months after the date this section comes into force, a person must not charge, or permit the charging of, a mobile refrigeration system with any Class I substance.

(2) A person must not charge, or permit the charging, with any Class I substance, of the following systems:

(a) effective January 1, 2006, a refrigeration system with a capacity of 4 KW or less;

(b) effective January 1, 2007, a refrigeration system with a capacity greater than 4 KW and less than 22 KW;

(c) effective January 1, 2008, a refrigeration system with a capacity of 22 KW or more;

(d) effective January 1, 2006, all air conditioning systems.

(3) Subsection (2) does not apply to a chiller, a household refrigerator, a household freezer or a water cooler.

(4) Effective January 1, 2005, a person must not charge or permit the charging of a chiller with any Class I substance if the chiller has undergone an overhaul that includes the following procedure or repair:

(a) the replacement or modification of an internal sealing device;

(b) the replacement or modification of an internal mechanical part other than

(i) an oil heater,

(ii) an oil pump,

(iii) a float assembly, or

(iv) a vane assembly in the case of a chiller with a single-stage compressor;

(c) any procedure or repair that resulted from the failure of an evaporator or a condenser heat-exchange tube.

(5) Despite subsection (4), during the period January 1, 2005 to December 31, 2014, a person may charge or permit the charging of a chiller with a Class I substance, but the person must not operate that chiller later than one year after the charging unless it no longer contains a Class I substance.

(6) The owner of a chiller referred to in subsection (5) must provide written notice to a director within 30 days after the chiller is charged.

(7) On and after January 1, 2015, a person must not charge or permit the charging of a chiller with any Class I substance.

(8) During the period January 1, 2005 to December 31, 2009, a person may charge or permit the charging of fixed fire extinguishing equipment with a Class I substance subject to the following restrictions:

(a) the fixed fire extinguishing equipment may be charged with a Class I substance one time only;

(b) within one year after the charging described in paragraph (a),

(i) the fixed fire extinguishing equipment must be replaced with equipment that does not require the use of a Class I substance, or

(ii) the fixed fire extinguishing equipment must be recharged with a substance that is not a Class I substance.

(9) A person is exempt from the restrictions in subsection (8) (a) and (b) if the charging is necessary to prevent an immediate danger to human life or health.

(10) Effective January 1, 2010, a person must not charge or permit the charging of fixed fire extinguishing equipment with any Class I substance. [en. B.C. Reg. 268/2004, s. 2; am. B.C. Regs. 321/2004, s. 20 (b); 220/2006, Sch. s. 2.]

28 Release reporting

A person must report a release of an ozone depleting substance, other halocarbon or any mixtures of ozone depleting substances or other halocarbons in excess of 10 kilograms except

(a) carbon tetrachloride or dibromodifluoromethane in excess of one kilogram, or

(b) trichloroethane in excess of 5 kg, in accordance with the notification procedures set out in the Spill Reporting Regulation.

29 Enforcement

(1) A person who contravenes section 5, 8, 9 or 10 of this regulation is liable to a fine not exceeding $50,000.

(2) A person who contravenes any section of this regulation not listed in subsection (1) is liable to a fine not exceeding $200,000.

Schedule A

Class I

1 CFC, Halon and Chlorocarbon Compounds

CFCs (chlorofluorocarbons)

(a) current commercially used CFCs

CFC-11, trichlorofluoromethane, R-11

CFC-12, dichlorodifluoromethane, R-12

CFC-13, chlorotrifluoromethane, R-13

CFC-111, pentachlorofluoroethane, R-111

CFC-112, tetrachlorodifluoroethane, R-112

CFC-113, trichlorotrifluoroethane, R-113

CFC-114, dichlorotetrafluoroethane, R-114

CFC-115, chloropentafluoroethane, R-115

(b) all other CFCs, and

(c) all isomers and mixtures containing any of the above.

2 Halons

(a) Halon-1211, also known as bromochlorodifluoromethane,
Halon-1301, also known as bromotrifluoromethane,
Halon-2402, also known as dibromotetrafluoroethane,

(b) all other bromofluorocarbons and bromochlorofluorocarbons, and

(c) all isomers and mixtures containing any of the above.

3 Chlorocarbons

(a) trichloroethane also known as methylchloroform, R-140
tetrachloromethane also known as carbon tetrachloride, R-10, and

(b) all isomers and mixtures containing any of the above.

Class II

1 Hydrochlorofluorocarbons

HCFC-21, dichlorofluoromethane, R-21

HCFC-22, chlorodifluoromethane, R-22

HCFC-31, chlorofluoromethane, R-31

HCFC-121, tetrachlorofluoroethane, R-121

HCFC-122, trichlorodifluoroethane, R-122

HCFC-123, dichlorotrifluoroethane, R-123

HCFC-124, chlorotetrafluoroethane, R-124

HCFC-131, trichlorofluoroethane, R-131

HCFC-132, dichlorodifluoroethane, R-132

HCFC-133, chlorotrifluoroethane, R-133

HCFC-141, dichlorofluoroethane, R-141

HCFC-142, chlorodifluoroethane, R-142

HCFC-151, chlorofluoroethane, R-151

HCFC-221, hexachlorofluoropropane, R-221

HCFC-222, pentachlorodifluoropropane, R-222

HCFC-223, tetrachlorotrifluoropropane, R-223

HCFC-224, trichlorotetrafluoropropane, R-224

HCFC-225, dichloropentafluoropropane, R-225

HCFC-226, chlorohexafluoropropane, R-226

HCFC-231, pentachlorofluoropropane, R-231

HCFC-232, tetrachlorodifluoropropane, R-232

HCFC-233, trichlorotrifluoropropane, R-233

HCFC-234, dichlorotetrafluoropropane, R-234

HCFC-235, chloropentafluoropropane, R-235

HCFC-241, tetrachlorofluoropropane, R-241

HCFC-242, trichlorodifluoropropane, R-242

HCFC-243, dichlorotrifluoropropane, R-243

HCFC-244, chlorotetrafluoropropane, R-244

HCFC-251, trichlorofluoropropane, R-251

HCFC-252, dichlorodifluoropropane, R-252

HCFC-253, chlorotrifluoropropane, R-253

HCFC-261, dichlorofluoropropane, R-261

HCFC-262, chlorodifluoropropane, R-262

HCFC-271, chlorofluoropropane, R-271.

2 **All other hydrochlorofluorocarbons not specifically listed.**

3 **All mixtures containing any of the above.**

Class III
Other Halocarbons

1 **Hydrofluorocarbons**

HFC-23, trifluoromethane, R-23

HFC-32, difluoromethane, R-32

HFC-125, pentafluoroethane, R-125

HFC-134, tetrafluoroethane, R-134

HFC-143, trifluoroethane, R-143

HFC-152, difluoroethane, R-152

HFC-161, monofluoroethane, R-161

HFC-281, fluoropropane, R-281

HFC-272, difluoropropane, R-272

HFC-263, trifluoropropane, R-263

HFC-254, tetrafluoropropane, R-254

HFC-245, pentafluoropropane, R-245

HFC-236, hexafluoropropane, R-236

HFC-227, heptafluoropropane, R-227.

2 **Perfluorocarbons**

FC-14, tetrafluoromethane

FC-116, hexafluoroethane

FC-218, octafluoropropane

FC-3-1-10, decafluorobutane

FC-4-1-12, dodecafluoropentane

FC-5-1-14, tetradecafluorohexane.

3 **All other hydrofluorocarbons and perfluorocarbons not specifically listed.**

4 **All mixtures containing any of the above.**

Schedule B

Performance Standards for Air Conditioning or Refrigeration Equipment and Fire Extinguishing Equipment

1 Recycling or Recovery and Recycling Devices

Devices for the recovery or recovery and recycling of an ozone depleting substance or other halocarbon designed to be used with the type of air conditioning or refrigeration equipment or fire extinguishing equipment listed in Column 1 of Table 1 must be capable of ensuring removal of the ozone depleting substance or other halocarbon from the equipment being serviced by reducing the system pressure, below atmosphere, to the level listed in Column 2 of Table 1 opposite the type of equipment if the device was purchased before January 1, 1994 or to the level listed in Column 3 if the device was purchased on or after January 1, 1994.

Table 1

Column 1	**Column 2** (devices purchased before January 1, 1994)		**Column 3** (devices purchased after January 1, 1994)	
	inches of mercury (vacuum)	micrometers of mercury (absolute pressure)	inches of mercury (vacuum)	micrometers of mercury (absolute pressure)
Very High Pressure Equipment[1] and HCFC-22 appliances with a charge of less than 23 kilograms	0	760 000	0	760 000
High Pressure Equipment with a charge of less than 23 kilograms[2]	4	658 000	10	506 000
High Pressure Equipment with a charge of more than 23 kilograms[3]	4	658 000	15	379 000
Low pressure equipment[4]	25	125 000	29	23 000

2 Devices for recovery or recovery and recycling intended for use with small appliances that contain an ozone depleting substance in their cooling systems such as household refrigerators, household freezers and water coolers, must recover a minimum of 90% of the refrigerant in the cooling system of the appliance or remove the refrigerant to a pressure of 506 000 micrometers of mercury (10 inches of mercury vacuum). Devices for recovery and recycling intended for use with small appliances that do not have an operational compressor must recover a minimum of 80% of the refrigerant in the cooling system of the appliance or remove the refrigerant to a pressure of 506 000 micrometers of mercury (10 inches of mercury vacuum).

1. *examples are CFC-13, 402, 407, 502, Halon 1211 and 1301;*
2. *examples are CFC-12, 114, 401A, 500, HFC-134a;*
3. *examples are CFC-12, 114, 401A, 500, HCFC-22;*
4. *examples are CFC-11, HCFC 123.*

Note: *this regulation replaces B.C. Reg. 53/93.*

B.C. Reg. 263/90
O.C. 1223/90

Deposited August 10, 1990

Environmental Management Act

SPILL REPORTING REGULATION

[includes amendments up to B.C. Reg. 376/2008, December 9, 2008]

Contents

1 Interpretation

In this regulation:

"Act" means the *Environmental Management Act*;

"PEP" means the Provincial Emergency Program continued under the *Emergency Program Act*;

"spill" means a release or discharge into the environment, not authorized under the Act, of a substance in an amount equal to or greater than the amount listed in Column 2 of the Schedule opposite that substance in Column 1;

"substance" means a substance, product, material or other thing listed in Column 1 of the Schedule to this regulation. [am. B.C. Regs. 321/2004, s. 28 (a) and (b); 220/2006, Sch. s. 3.]

2 Report

(1) For the purposes of section 79 (5) of the Act, a person who had possession, charge or control of a substance immediately before its spill shall immediately report the spill to PEP by telephoning 1-800-663-3456.

(2) Where it appears to a person observing a spill that a report under subsection (1) has not been made, he or she shall make the report referred to in this section.

(3) A report under this section shall include, to the extent practical,

(a) the reporting person's name and telephone number,

(b) the name and telephone number of the person who caused the spill,

(c) the location and time of the spill,

(d) the type and quantity of the substance spilled,

(e) the cause and effect of the spill,

(f) details of action taken or proposed to comply with section 3,

(g) a description of the spill location and of the area surrounding the spill,

(h) the details of further action contemplated or required,

(i) the names of agencies on the scene, and

(j) the names of other persons or agencies advised concerning the spill. [am. B.C. Reg. 220/2006, Sch. s. 4.]

3 Further action

Where a spill occurs, the person who immediately before the spill had possession, charge or control of the spilled substance shall take all reasonable and practical action, having due regard for the safety of the public and of himself or herself, to stop, contain and minimize the effects of the spill.

Schedule

[en. B.C. Reg.376/2008.]

1 Reportable Levels for Certain Substances

In this Schedule:

"Federal Regulations" means the Transportation of Dangerous Goods Regulations made under the *Transportation of Dangerous Goods Act* (Canada);

"Hazardous Waste Regulation" means B.C. Reg. 63/88.

Item	Column 1 Substance spilled	Column 2 Specified amount
1	Class 1, Explosives as defined in section 2.9 of the Federal Regulations	Any quantity that could pose a danger to public safety or 50 kg
2	Class 2.1, Flammable Gases, other than natural gas, as defined in section 2.14 (a) of the Federal Regulations	10 kg
3	Class 2.2 Non-Flammable and Non-Toxic Gases as defined in section 2.14 (b) of the Federal Regulations	10 kg
4	Class 2.3, Toxic Gases as defined in section 2.14 (c) of the Federal Regulations	5 kg
5	Class 3, Flammable Liquids as defined in section 2.18 of the Federal Regulations	100 L
6	Class 4, Flammable Solids as defined in section 2.20 of the Federal Regulations	25 kg
7	Class 5.1, Oxidizing Substances as defined in section 2.24 (a) of the Federal Regulations	50 kg or 50 L
8	Class 5.2, Organic Peroxides as defined in section 2.24 (b) of	1 kg or 1 L

	the Federal Regulations	
9	Class 6.1, Toxic Substances as defined in section 2.27 (a) of the Federal Regulations	5 kg or 5 L
10	Class 6.2, Infectious Substances as defined in section 2.27 (b) of the Federal Regulations	1 kg or 1 L, or less if the waste poses a danger to public safety or the environment
11	Class 7, Radioactive Materials as defined in section 2.37 of the Federal Regulations	Any quantity that could pose a danger to public safety and an emission level greater than the emission level established in section 20 of the "Packaging and Transport of Nuclear Substances Regulations"
12	Class 8, Corrosives as defined in section 2.40 of the Federal Regulations	5 kg or 5 L
13	Class 9, Miscellaneous Products, Substances or Organisms as defined in section 2.43 of the Federal Regulations	25 kg or 25 L
14	waste containing dioxin as defined in section 1 of the Hazardous Waste Regulation	1 kg or 1 L, or less if the waste poses a danger to public safety or the environment
15	leachable toxic waste as defined in section 1 of the Hazardous Waste Regulation	25 kg or 25 L
16	waste containing polycyclic aromatic hydrocarbons as defined in section 1 of the hazardous Waste Regulation	5 kg or 5 L
17	waste asbestos as defined in section 1 of the Hazardous Waste Regulation	50 kg
18	waste oil as defined in section 1 of the Hazardous Waste Regulation	100 L

19	waste containing a pest control product as defined in section 1 of the Hazardous Waste Regulation	5 kg or 5 L
20	PCB Wastes as defined in section 1 of the Hazardous Waste Regulation	25 kg or 25 L
21	waste containing tetrachloroethylene as defined in section 1 of the Hazardous Waste Regulation	50 kg or 50 L
22	biomedical waste as defined in section 1 of the Hazardous Waste Regulation	1 kg or 1 L, or less if the waste poses a danger to public safety or the environment
23	A hazardous waste as defined in section 1 of the Hazardous Waste Regulation and not covered under items 1 – 22	25 kg or 25 L
24	A substance, not covered by items 1 to 23, that can cause pollution	200 kg or 200 L
25	Natural gas	10 kg, if there is a breakage in a pipeline or fitting operated above 100 psi that results in a sudden and uncontrolled release of natural gas

[Provisions of the *Environmental Management Act*, S.B.C. 2003, c. 53, relevant to the enactment of this regulation: sections 53, 79 (5) and 92]

Appendix 6

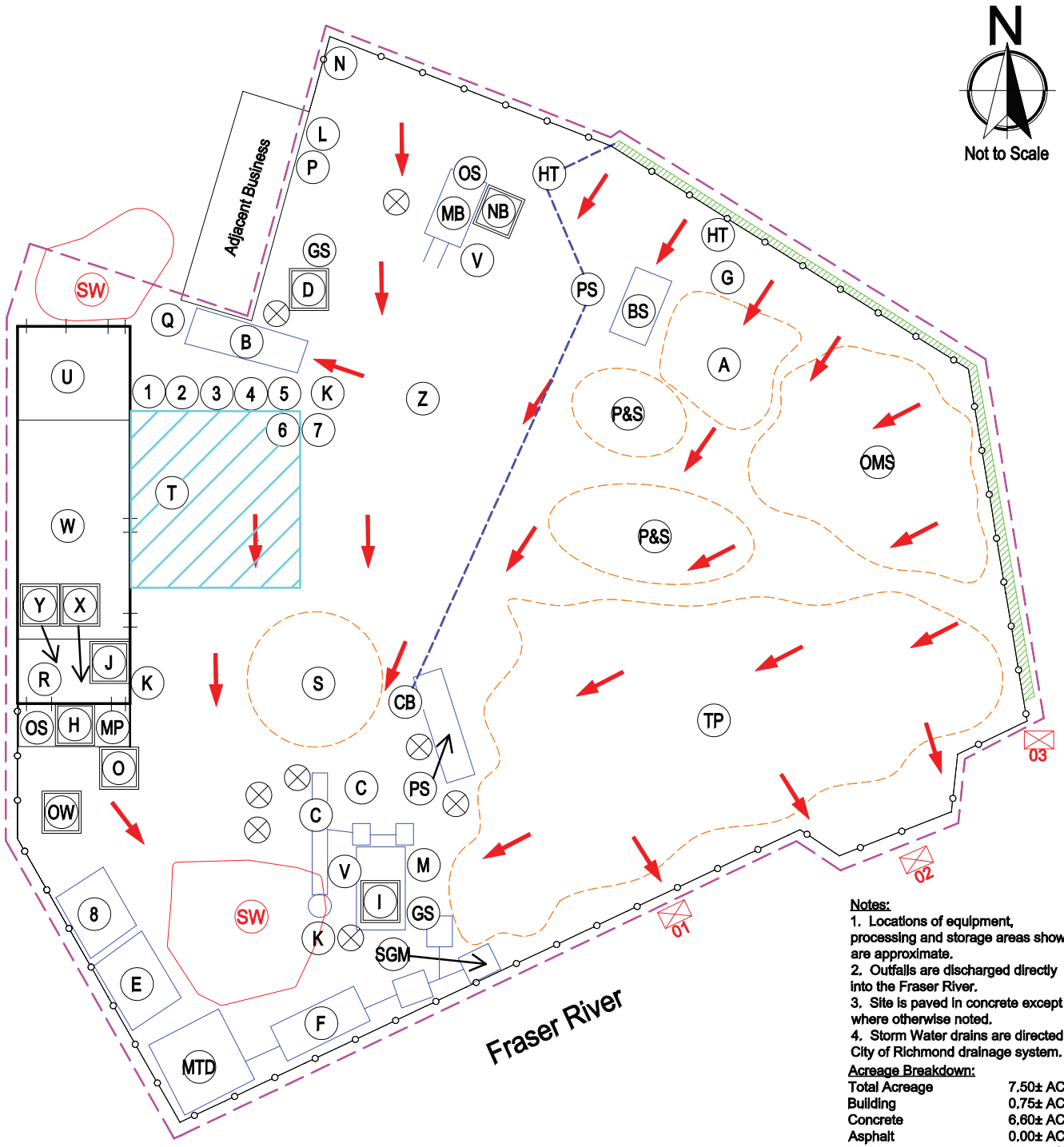
Approved Person Certifications for Refrigerant Removal

Appendix 7

Refrigerant Removal Records

Appendix 8

Facility Site Map



Key

- A Torch Area
- B Scale House & Scale
- C Cyclone
- D 2,402-Gallon Diesel Tank
- E Electrical Substation
- F Stadler
- G Gas Manifold
- H 1,000-Gallon Used Oil Tank
- I Shredder Storage (Three 300-Gallon Hydraulic Oil Reservoirs)
- J 500-Gallon Gear Oil Tank
- K Oils/Fluids Loading/Unloading Area
- L 1,500-Gallon Liquid Oxygen AST
- M Motor Room
- N Non-Ferrous Processing
- O 1,000-Gallon Transformer
- P 500-Gallon Propane Tank
- Q Radiation Detector Tank
- R Shop (55-Gallon Oil Drum Storage)
- S ASR Storage
- T SEDA System
- U Non-Ferrous Warehouse
- V Oil Transfer
- W Office
- X 500-Gallon Motor Oil AST
- Y 500-Gallon Hydraulic Oil AST
- Z Truck Staging Area
- 1 565-Gallon Clean Gasoline AST
- 2 328-Gallon Stale Gasoline AST
- 3 328-Gallon Used Oil AST
- 4 600-Liter Used Antifreeze AST
- 5 600-Liter Winshield Washer Fluid AST
- 6 Battery Storage Totes
- 7 Tire Storage Area
- 8 Switchgear Station
- BS Burner Shack
- CB Catch Basin (Waste Water)
- GS Gas Storage
- OS Oxygen Storage
- PS Pump Station (Waste Water)
- HT Holding Tank (Waste Water)
- MP Mechanic Pad
- NB 750-Gallon Non-Ferrous Bailer Hydraulic Oil Reservoir
- OW 2,500-Gallon Oil/Water Separator
- TP Tin Pile
- MTD Stainless/Aluminum Recovery
- OMS Oversize Material Storage
- P&S Prepared Plate & Structural
- SGM ECS & ISS
- Awning Over Concrete
- Approximate Equipment Boundary
- Secondary Containment
- Block Wall
- Approximate Site Boundary
- Approximate Area Boundary
- Underground Piping
- Marsh
- Storm Drain
- Outfall
- Predicted Storm Water Flow
- SW Storm Water Puddling Area

envirosure SOLUTIONS, LLC.
1979 E. Broadway Rd.
Tempe, Arizona 85282
480.784.4621
www.envirosure.com

Facility Layout

Company - Richmond Steel Recycling, Ltd.	
Address - 11760 Mitchell Road	
City -Richmond	Province - British Columbia
Country - Canada	Date - 7/20/2011
Drawn By - BAS	Approved By - GWS
Project No - R016-11-14	

Appendix 9

Recyclers Source Fluid Evacuation Station Brochures

Easy Drain System

The SEDA Easy Drain is likely the most innovative and versatile fluid evacuation system available on the market. Individual pumps paired with easy to administer, specialized drainage tools remove virtually all liquids in a safe and efficient manor within 6-8 minutes.

As the world's first fully integrated fluid evacuation system, the Easy Drain was especially developed to satisfy the demands of low and high volume ELV processers. With its versatility and true high volume processing capability the Easy Drain system became an immediate success.

Matching to your individual requirements and needs a wide variety of options are available to ensure its best utility for your particular demands.

SEDA ORDER DETAILS:

- **51028 Easy Drain Basic**
- **51031 Easy Drain Compact**

- **Fully Air Operated**
- **Compact design**
- **Recycler's favourite**
- **Quick installation**
- **Indoor or outdoor use**
- **Hi-efficiency suction**
- **6-8 minute drainage time**
- **No liquid double handling**
- **Capacity: up to 50 cars/ day**

info@recyclerssource.com
www.recyclerssource.com

1109 Hall Mines Road
Nelson, BC V1L 1G5

phone: 877.505.5275
fax: 877.484.0116

Canada's one-stop ELV equipment supplier for... SAFETY. ENVIRONMENT. PROFIT.

Easy Drain System

Delivering unmatched performance in efficiency, safety and environmental stewardship this evacuation system fits every recycler's available space – indoors and outdoors. With only compressed air powering its UL and ATEX certified components, the Easy Drain provides peace of mind for operators and owners alike.

SEDA customers process anywhere from 3 *up to 50 cars per day* with the Easy Drain. The patented SEDA technology *removes up to 98% of all fluids* without spilling a drop.

The Easy Drain can ideally be paired with the SEDA tilting rack or the CHE single post hoist. Further flexibility is provided with the possible use of extended swing arms, oversized oil funnels or the integration of the gearbox drill to facilitate and accelerate the evacuation of rear differential, engine and transmission oils.

Optional Items:

N - 518063 Oversized waste oil funnel
S – 52100 Gearbox drill
N – 527366 SEDA Drainage rack
N – 527169 Pneumatic tilting unit
N – 527213 Floor Catchment Panels
N – 527222 Drainage platform

Technical details:

Dimensions:	**6.7 m x 3.8 m x 4 m**
	22 ft x 12.5 ft x 13 ft.
Weight:	**350 kg / 770 lbs**
Peak air requirements	**45 – 55 cfm @ 116 psi**
Drainage Time:	**6-8 minutes**
Fuel Evacuation	**Gas Tank Drill – Swing Arm**
Swing Arm Length:	**2.3 m / 7.54 ft.**
Oil Evacuation	**Oil Swing Arm – dual funnel and/ or Gearbox Drill**

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Canada's one-stop ELV equipment supplier for... SAFETY. ENVIRONMENT. PROFIT.

RECYCLERS SOURCE

Fluid Evacuation Station

The SEDA single station is hands down the most advanced and efficient end of life vehicle drainage system on the market !

A modern drainage system must satisfy individual demands and fit in seamless with existing processes and automations. The SEDA single station is a fully integrated system with

Some or the countless advantages derive from the use of powerful suction pumps in combination with the certified SEDA gas tank defueler. Once operational, customers immediately appreciate a wide range of leading performance characteristics such as *processing efficiency, short drainage time, industry leading extraction rate, unobstructed area of operation, prompt customer service and technical support, system reliability* or the incredible *range of accessories* allowing countless variation possibilities.

- **Fully Air Operated**
- **Plug & Play Concept**
- **Industry best extraction rate**
- **Fire & explosion certified**
- **Indoor or outdoor use**
- **Hi-efficiency suction**
- **6-8 minute drainage time**
- **No liquid double handling**
- **Capacity: up to 50 cars/day**

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www.recyclerssource.com

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Nelson, BC V1L 1G5

phone: 877.505.5275
fax: 877.484.0116

Canada's one-stop ELV equipment supplier for... **SAFETY. ENVIRONMENT. PROFIT.**

Fluid Evacuation Station

Developed as a plug and play concept the SEDA single station can be tailored to everyone's individual needs and requirements.

❖ ***FLUID EVACUATION:*** *Easy Drain System*

The work horse of drainage systems, Easy Drain processes up to 50 vehicles per day with ease and achieves an extraction rate of 98%*.

❖ ***RACK:*** *Hydraulic Tilting Vehicle Rack*

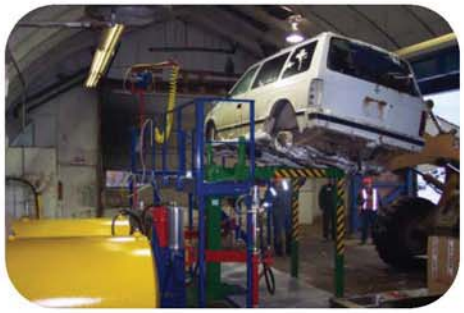
The 3 ton vehicle ramp can be tilted vertically to access the lowest point of the gas tank. Tilting allows an extra 0.5-0.75 gallons of fuel to be removed. The fork distance is adjustable enabling easy fit for varying vehicle makes and models.

❖ ***WORK PLATFORM:*** *Moveable Staircase*

Provides easy access to liquids contained in engine compartment as well as freon. Allows ***simultaneous draining*** of liquids from below and the top of the car. The moveable staircase enables any length of vehicle to be processed.

❖ ***FLOOR CATCHMENT:*** *Containment & Anti-slip Grid*

Certified sealed catchment tubs satisfy codes for secondary containment should a rare spill occur and storm water regulations. The anti-slip grid next to eliminates lost time accidents from slips and falls on otherwise commonly dangerous slippery concrete surfaces.



❖ ***GEARBOX DRILLING MACHINE:*** *Added Efficiency*

Accelerated extraction, added versatility and eliminating exposure to waste oil altogether are the core benefits of adding the unique gearbox drill. The gear box drill makes light work of thick cast iron, steel or aluminum engine blocks, transmissions, torque converters and differentials.

Optional Items:

A31150 Fuel manager
A527109 Mobile air compressor
A518063 Oversized waste oil funnel
Various Extended gas and waste oil swing arms
Various Catalytic converter cutters
Various Freon removal units

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www.recyclerssource.com

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Nelson, BC V1L 1G5

phone: 877.505.5275
fax: 877.484.0116

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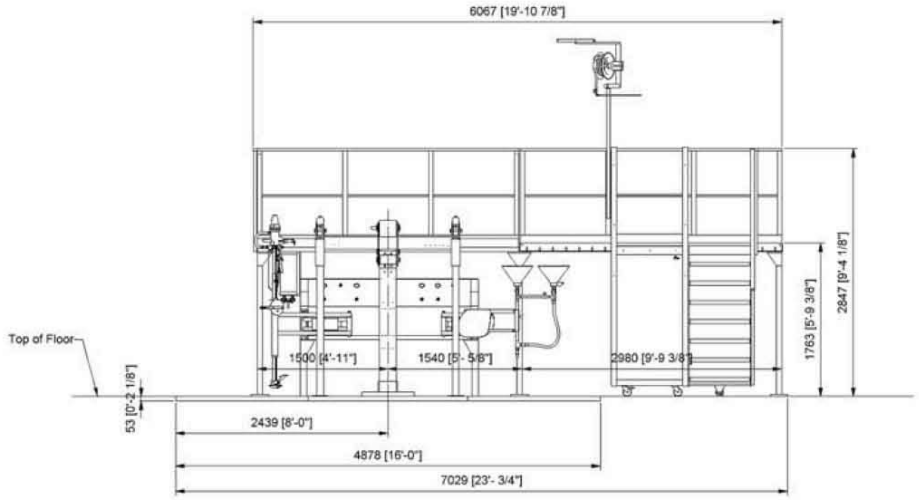

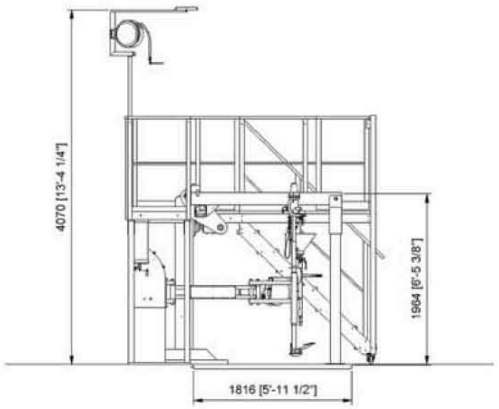

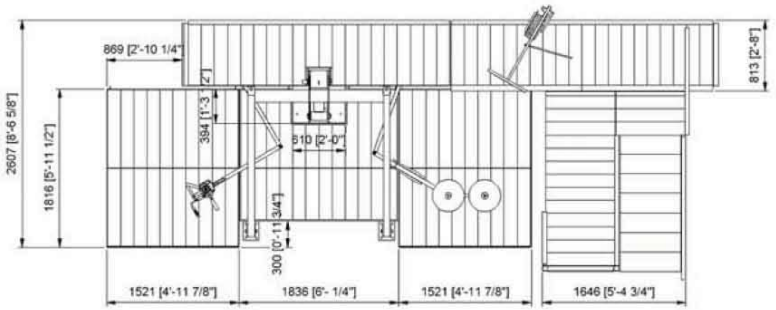

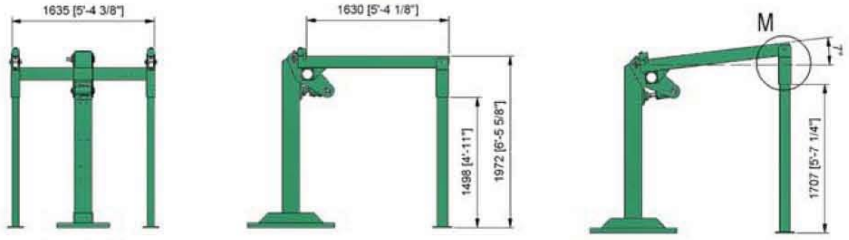

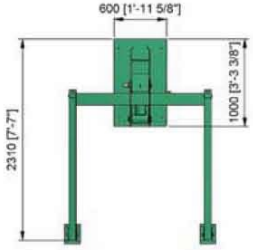

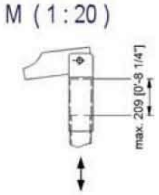

Änd.	a 19. 07. 2006	Änd.	e	Konstruiert:	18.07.2006	AG	Massstab 1:40
	b		f	Kontrolliert:			
	c		g	Genehmigt:			Blatt-Nr. 1
	d		h	Freigegeben:			
SEDA UMWELTTECHNIK GMBH		Allgemeintoleranzen ISO 2768 - m		Format A2	Ersatz für:		Anzahl Bl. 1

A-8345 KÖSSEN, SCHWENDTER STR. 10
Tel. +43 5370 6918, Fax +43 5370 6918-9
Email: seda.austria@aon.at
WWW: www.seda.at

Water Seperator

Technical Information:

Length: 16.4 ft / 500 mm
Width: 16.4 ft / 500 mm
Height: 51.2 in. / 1300 mm
Weight (empty): 220 lbs / 110 kg

Nearly always recyclers encounter water trapped in gas tanks. This water mixes with the fuel during the drainage-process with the mixture draining into the gas storage tank resulting in fuel with limited quality and capable of damaging your vehicle's gas pumps and engines.

The new **GreenPoint Fuel Separator** automatically segregates the water from the fuel without the need of additional labour, energy or time consuming processing.

Simply integrated in the drainage-process, it drastically increases the quality of your fuel for an optimized value for your organization.

Order Details:

- **31150 GreenPoint Fuel Separator**

- **Patents pending**
- **high-quality product**
- **easy to handle**
- **includes all accessories**
- **different connections**
- **integrated filter units**
- **energy-saving**
- **flexible use with any system**
- **large capacity throughput**

info@recyclerssource.com
www.recyclerssource.com
1109 Hall Mines Road
Nelson, BC V1L 1G5
phone: 877.505.5275
fax: 877.484.0116

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Appendix 10

Employee SEDA Fluid Removal Operation Certifications

Appendix 11

Hazardous Waste Oils Manifests

Appendix 12

Hazardous Waste Fuel Manifests

Appendix 13

Hazardous Waste Antifreeze Manifests

Appendix 14

Lead-Acid Battery Waybills

Appendix 15

Mercury Switch Out Program Waybills

Appendix 16

Miscellaneous Waybills/Manifests
(Windshield Washer Fluid, Tires, Leachable Toxic Waste)

Appendix 17

Employee Environmental Management Plan Training Log

Environmental Management Plan Training Documentation Form

Date	
Instructor Name and Title	
Summary of Subject Matter	Specific components and goals of this Environmental Management Plan, including removal, storage, handling and disposal of hazardous materials, spill contingency plans, and BMP implementation and maintenance,

Employee Name (Print)	Title	Signature

Store completed forms in Appendix 17.

BRITISH COLUMBIA
The Best Place on Earth

October 4, 2011

Tracking Number: 219116
Authorization Number: 105725

Richmond Steel Recycling Limited
Suite 2300, Bentall 5
550 Burrard St, Box 30
Vancouver BC V6C 2B5

Dear Registrant,

Re: Registration for the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation under the *Environmental Management Act*

This letter acknowledges receipt of the registration information submitted by Richmond Steel Recycling Ltd. dated September 13, 2011 dated for the facility listed below. This registration under the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation becomes effective September 13, 2011.

The following registration number has been assigned to this site. Please refer to the registration number in all future correspondence.

Facility Name: Richmond Steel Recycling Ltd.
Facility Location: 11760 Mitchell Road, Mitchell Island, Richmond BC V6V 1V8
Registration Number: 105725

Your attention is respectfully directed to the terms and conditions specified in the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation. Contravention of any of the conditions may be a violation of the *Environmental Management Act* and may result in prosecution.

This acknowledgement of your registration should not be construed as a representation that the works are adequately designed or will satisfy the regulatory requirements. It is the responsibility of the operator to ensure that the facility is adequately designed, constructed and operated to ensure compliance.

Registration under the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation is without prejudice to any additional requirements that may be specified by the Director. The Director may also issue Orders under the *Environmental Management Act*.

Ministry of Environment
Environmental Protection Division 2nd Floor, 10470 - 152 Street
Surrey, BC V3R 0Y3
South Coast Region
Telephone: (604) 582-5200
Facsimile: (604) 584-9751

Registration under the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works. The responsibility for obtaining such authority rests with the operator. It is also the responsibility of the operator to ensure that all activities conducted under this regulation are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force. The operator must also obtain any necessary authorizations from other agencies.

There are no fees associated with the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation.

Under section 3 (3) of the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation, the registration holder must provide a director with written notice within 30 days of (a) a change in information provided in the person's registration, or (b) ceasing to operate the facility or ceasing to dismantle more than 5 wet vehicles in a calendar year. Forms are available from regional offices or electronically on the Ministry of Environment's web site at http://www.env.gov.bc.ca/epd/industrial /regs/vehicle/index.htm.

If you have any questions regarding the registration process under the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation, the contact for this registration is Ministry of Environment 10470 152nd St, Surrey BC V3R 0Y3, Tel: (604) 582-5200, Fax: 604-930-7119.

Yours truly,

S. McCullough

Sarah McCullough
Environmental Protection Officer
South Coast

CC: Environment Canada

Insurance Corporation of British Columbia

Richmond Steel Recycling Ltd. 11760 Mitchell Road, Mitchell Island, Richmond, BC V6V 1V8

Auth. 105725 Track 219116

BRITISH COLUMBIA
The Best Place on Earth

Environmental Management Branch
PO Box 9377 Stn Prov Govt
Victoria, BC V8W 9M1
Fax: (250) 356-0299

Courier delivery address: 3rd Floor, 2975 Jutland Rd., Victoria BC V8T 5J9

Registration Form for the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation

This registration form may be submitted to the Ministry of Environment (MOE) by e-mail, fax, registered mail or courier.

Report Type - Indicate one choice (a, b or c)

To update information from a previous registration, a person must re-submit a registration form with all information within 30 days of the changes to the previous registration information. See (b) below.
To cancel a registration, a person must notify a director in writing within 30 days of ceasing operations. See (c) below.
To cancel an existing authorization (e.g., permit), please contact MOE Regional Office.

(a) ☒ Initial registration

Please list any other authorizations (e.g., permit, approval, etc.) that you currently hold for this facility.

Authorization Number	Authorizing Ministry	Description (what for)
4659903	BC Safety Authority	Electrical Operation Permit
GVA0003	Metro Vancouver	Air Permit
BCG-04183	BC Ministry of Environment	Consignor Identification Number

(b) ☐ Update registration — Registration #:

(c) ☐ De-register — Registration #:

Applicant Information

Company Legal Name **OR** First and Last Name	Richmond Steel Recycling Ltd
Doing Business As (if applicable)	

Contact Numbers [e.g., (999) 999-9999]	Phone:	Cell:	Fax:
	(604) 324-4656		(604) 324-8617

E-mail Address	james.botelho@simsmm.com
Legal Address *(as registered with B.C. Registrar of Companies)*	11760 Mitchell Road, Mitchell Island, Richmond, BC V6V 1V8
Mailing Address *(if different from above)*	
Billing Address *(if different from above)*	
Nearest Municipality to the Facility/Site	Richmond, BC

Applicant Contact Information *(name of contact person for ministry staff)*

Contact First and Last Name	James Botelho

Contact Numbers [e.g., (999) 999-9999]	Phone:	Cell:	Fax:
	(604) 324-4656 x7262	s.22	(604) 324-8617

Authorized Agent Information *(to be completed only if representing the applicant)*

Agent's Company Legal Name	
Doing Business As (if applicable)	
Agent's First and Last Name	
Contact Numbers [e.g., (999) 999-9999]	Phone: / Cell: / Fax:
E-mail address	

Applicant's Authorization for Agent

I / we *(applicant)* hereby authorize _____ *(Agent)*

to deal with the Ministry directly on all aspects of this application.

Print name of applicant _____

_____ Date (mmm.dd.yyyy)

Signature of applicant (not agent or representative)

You will need to sign this only if you are authorizing an agent or representative to deal directly with the Ministry on your behalf.

Facility Location and Information

Type of Facility (describe the primary activity of the facility)	Vehicles, Ferrous and Non-ferrous Metals Recycling

Discharge Location: Latitude 49.2009 Longitude 123.0856 Source of Data GPS ☐ or Survey ☐

(Must be in decimal degrees format) Other ☒ Google Earth (Please list)

Please fill in:

Legal Land Description (Lot/Block/Plan)	Lot 8/District Lot 459/NWD Plan 47113
PID/PIN/Crown File No.	PID 003-456-811
Facility Address (civic address)	11760 Mitchell Road, Mitchell Island, Richmond, BC V6V 1V8
Is Applicant Legal Land Owner	☐ Yes ☒ No *(If NO, please provide details below)*
Legal Land Owner Name	Broadway Properties
Contact Numbers [e.g., (999) 999-9999]	Phone: (604) 876-1188 / Cell: / Fax: (604) 874-5001
E-mail address	info@broadwayproperties.com

Facility Operator (if different than Applicant Contact Information)

Operator First and Last Name			
Contact Numbers (e.g., (999) 999-9999	Phone:	Cell:	Fax:
E-mail Address			

Regulation Specific Requirements

Check **one** of the following three boxes:

☐ I am a member of an association that has an Environmental Management Plan for my facility.

Name of Association:			
Address:			
Contact Numbers [e.g., (999) 999-9999]	Phone:	Cell:	Fax:

☒ I have an Environmental Management Plan prepared by a qualified professional for my facility.

Address at which the plan can be viewed and copied	11760 Mitchell Road, Mitchell Island, Richmond, BC V6V 1V8

☐ I do not have an Environmental Management Plan.

Comments:

Print Form

**Note: By submitting this form, you are certifying that the information provided within is true and accurate to the best of your knowledge.

BRITISH COLUMBIA
The Best Place on Earth

Registration Form for the Vehicle Dismantling and Recycling Industry
Environmental Planning Regulation

Ministry of Environment
Environmental Management Branch
PO Box 9377 Stn Prov Govt
Victoria, BC V8W 9M1
Fax: (250) 387-0299

Or **DELIVER** by courier to:
3rd Floor, 2975 Jutland Road, Victoria, BC V8T 5J9

This registration form is to be filed with the Ministry of Environment, at the above address. Additional information as per Section 4(2) (l) of the Waste Discharge Regulation may be required by the director in the region where the discharge occurs before the registration is effective and authorization to discharge is allowed.

1. **Report Type - Indicate one choice (a, b or c)**
To update a registration, a person must re-submit a registration form with all the information within 30 days of the changes in registration information. See (b) below.
To cancel a registration, a person must notify a director in writing within 30 days of ceasing the discharge. See (c) below.

(a) ☒ Initial registration

Please list all previous permits or approvals issued under the *Environmental Management Act* for this site. Authorization#:

Please list all previous registrations under this regulation for this site Registration#:

Do you currently hold any other registrations for discharges at this facility under the *Environmental Management Act*? (i.e., sewage) Registration#:

(b) ☐ Updated registration Date of last report (mmm.dd.yyyy):

Registration #: RE -

(c) ☐ Withdraw registration Registration #: RE -

Without registration, there is **no authorization** to discharge waste associated with this regulation for this site.

Note the authorization to discharge does not become effective until 45 days after the director receives both a completed registration form and full payment of fees. Where additional information has been requested by a director the registration date may be altered. Authorization to discharge is contingent on full compliance with the Waste Discharge Regulation and Codes of Practice.

If you are an agent, fill out the following section,
if you are a facility, complete the Operator Information section on the following page.

Agent Information

Company Legal Name	Envirochem Services Inc.		
Doing Business As	Envirochem Services Inc.		
Last Name	Finnbogason		
First Name	Thomas		
Phone Number (e.g., (604) 111-2222)	(604) 986-0233 x 104	Cell Number (e.g., (604) 111-2222)	s.22
Email	thomas@envirochem.com		

Agent Authorization Declaration with Operator's Signature

I / we hereby authorize Envirochem Services Inc.

to deal with the Ministry directly on all aspects of this application.

Print name of applicant representative Brian Ross, HSE Coordinator, Amix Salvage and Sales Ltd.

Signature of applicant (not representative) _____ Date (mmm.dd.yyyy) February 26, 2008

Document does not need to be signed unless it is mailed or faxed.

If you are an operator, fill out the following section.

Operator Information

(for more than one operator attach additional operator information page with additional Operator Contact Information.)

Company Legal Name	Amix Salvage and Sales Ltd.		
Doing Business As	Amix Salvage and Sales Ltd.		
Last Name (if operating as an individual)			
First Name			
Phone Number (e.g., (604) 111-2222)	(604) 580-0251	Cell Number (e.g., (604) 111-2222)	
Email	brianr@amix.ca		
Legal Address (as registered with BC Registrar of Companies)	Bernard and Partners Suite 1500 570 Granville Street Vancouver, BC		
Mailing Address	12301 Musqueam Drive, Surrey, BC, V3V 3T2		
Billing Address	12301 Musqueam Drive, Surrey, BC, V3V 3T2		

Operator Contact Information

Must be the name of the person seeking authorization, not the agent.

Contact Last Name	Ross
Contact First Name	Brian
Contact Phone Number (e.g., (604) 111-2222)	(604) 313-3526

Facility Location and Information

Type of Facility (describe the primary activity of the facility)	Salvage / recycling of ferrous and non-ferrous metals from sources that include end-of-life vehicles.

Latitude 49o12'40.16N Longitude 122o52'57.64W

(Must be in decimal degrees format)

Source of Data ☒ GPS ☐ Survey

Either:

Legal Land Description (Lot/Block/Plan)	Parcel "A" Reference Plan 1741, Parcel "K" Reference Plan 5344 and Parcel "J" Reference Plan 5343 all of Section 7, Block 5 North, Range 2 West. New Westminster District.

or:

PID/PIN/Crown File No.	
Facility Address (civic address)	
Facility Type (e.g., steal recyclers)	

Is Operator Legal Land Owner ☐ Yes ☒ No

If NO, please provide legal land owner details below

Legal Land Owner	Vancouver Port Authority	
Owner's Phone (e.g., (604) 111-2222)	(604) 665-9511	
Owner's Email	nures.kara@vfpa.ca (representative)	
Name of Facility Operator	Willie Jacksion (owner / operator)	
Facility Operator Phone (e.g., (604) 111-2222)	(604) 580-0251 (main)	
Facility Operator's Email	admin@amix.ca	

Regulation Specific Requirements

Do you have an Environmental Management Plan?

☒ Yes ☐ No

PHOENIX
ENVIRONMENTAL SERVICES LTD. 103 - 1600 West 6th Ave. Vancouver, B.C. V6J 1R3 tel. 604-689-3888 fax. 689-3880

October 3, 2011

Mark J. Guatney, PE, CHMM
Director of Environmental Services
envirosure SOLUTIONS, LLC
1979 E Broadway Rd, Tempe, AZ 85282

Dear Mr. Guatney:

Re: Qualified Environmental Professional Review of EMP for Richmond Steel Recycling
11760 Mitchell Road, Mitchell Island, Richmond, BC V6V 1V8

Phoenix Environmental Services Ltd. (Phoenix) has completed our review of the Environmental Management Plan (Auto Hulk De-Pollution Plan) completed by Envirosure Solutions, LLC dated August 2011. It is our assessment that the EMP adequately addresses the environmental concerns related to the automobile recycling process at the site. The EMP also meets the requirements of the Environmental Management Act and the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation.

Ken Lambertsen is a Registered Professional Biologist and a Qualified Environmental Professional in British Columbia. Mr. Lambertsen has over 30 years of extensive environmental expertise and has been the primary investigator for many environmental site investigations, including contamination delineation, remediation planning, and environmental protection planning.

Please contact me at 604-689-3888 if you require any clarification or additional information concerning this EMP.

Sincerely,
Phoenix Environmental Services Ltd.

Ken G. Lambertsen, B.Sc., R.P.Bio.,
Principal (604) 689-3888

BRITISH COLUMBIA
The Best Place on Earth

File: 301

April 15, 2008

Amix Salvage & Sales Ltd.
Bernard and Partners
Suite 1500
570 Granville Street
Vancouver BC V6C 3P1

Dear Brian Ross:

Re: Registration of a Waste Discharge under the Vehicle Dismantling and Recycling Industry Code of Practice under the *Environmental Management Act*

This letter acknowledges receipt of the registration information submitted by Amix Salvage & Sales Ltd. dated February 26, 2008 for the facility listed below.

The registration of the wastes from the facility listed below as they pertain to the Vehicle Dismantling and Recycling Industry becomes effective September 1, 2008. From the time of registration, Amix Salvage & Sales Ltd. is entitled to exemption from section 6(2) and 6(3) of the *Environmental Management Act* for the discharge of waste to the environment from this facility provided *all* conditions and requirements of the Waste Discharge Regulation and applicable code(s) are met.

The following temporary registration number has been assigned to this site. This will be replaced with a permanent registration number once the ministry registration system is updated to accept this Code's registrations. Please refer to the registration number in all future correspondence.

Facility Name	Facility Location	Temporary Registration Number
Amix Salvage & Sales Ltd.	Parcel "A" Reference Plan 1741, Parcel "K" Reference Plan 5344 and Parcel "J" Reference Plan 5343 all of Section 7, Block 5 North, Range 2 West. New Westminster District.	301

Registrant's Responsibility

Your attention is respectfully directed to the terms and conditions specified in the Waste Discharge Regulation and Vehicle Dismantling and Recycling Industry Code of Practice. Contravention of any of the conditions may be a violation of the *Environmental Management Act* and may result in prosecution.

This acknowledgement of your registration should not be construed as a representation that the works are adequately designed or will satisfy the regulatory requirements. It is the responsibility of the discharger to ensure that the facility is adequately designed, constructed and operated to ensure compliance.

Ministry of Environment
Environmental Management
Environmental Protection Division
Mailing Address:
PO Box 9377 Stn Prov Govt
Victoria BC V8W 9M1
Telephone: 250 387-3205
Facsimile: 250 356-0299
Website: www.gov.bc.ca/env

Registration under the Waste Discharge Regulation and Vehicle Dismantling and Recycling Industry Code of Practice is without prejudice to any additional requirements that may be specified by the Director. The Director may also issue Orders under the *Environmental Management Act.*

Registration under the Waste Discharge Regulation and Vehicle Dismantling and Recycling Industry Code of Practice does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works. The responsibility for obtaining such authority shall rest with the operator. It is also the responsibility of the operator to ensure that all activities conducted under this regulation are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force. The operator must also obtain any necessary authorizations from other agencies.

Registration Updates

Under section 4(5)(b) of the Waste Discharge Regulation, the registration holder must provide a director with written notice within 30 days of a change in information provided in the person's registration. Registration forms are available from regional offices or electronically on the Ministry of Environment's web site at: http://www.env.gov.bc.ca/epd/industrial/regs/vehicle/index.htm

Additional Information

Under section 4(2)(l) of the Waste Discharge Regulation, a director can request additional information on the facility and/or discharge. Any request for additional information will be made within 45 days from when a registration form was originally received by the director. This request may change the effective registration date.

Yours truly,

Sara Bacic

Sara Bacic
Waste Discharge Authorization Administrator

CC: Kevin Larsen, Lower Mainland Region, Environmental Management Section Head
Environment Canada

June 15, 2011

Tracking Number: 209874
Authorization Number: 100413

Schnitzer Steel BC, Inc. dba Amix Recycling
2800 Park Place
666 Burrard Street
Vancouver BC V6C 2Z7

Dear Registrant,

Re: Registration for the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation under the *Environmental Management Act*

This letter acknowledges receipt of the registration information submitted by Schnitzer Steel BC, Inc. dated 13 June 2011 for the facility listed below. This registration under the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation becomes effective 13 June 2011.

The following registration number has been assigned to this site. Please refer to the registration number in all future correspondence.

Facility Name: Schnitzer Steel BC, Inc. doing business as Amix Recycling
Facility Location: 12301 Musqueam Drive, Surrey BC V3V 3T2
Registration Number: 100413
Environmental Management Plan Expiry Date*: December 1, 2013

Please note the registration for this facility under the name Amix Salvage & Sales Ltd. is considered cancelled.

*The environmental management plan expiry date is the date by which Schnitzer Steel must have their plan reviewed, amended or replaced, and have the plan approved by a qualified professional, pursuant to section 2(4) of the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation. The expiry date resets every 5 years; the subsequent expiry date being December 1, 2018.

Registrant's Responsibility
Your attention is respectfully directed to the terms and conditions specified in the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation. Contravention of any of the conditions may be a violation of the *Environmental Management Act* and may result in prosecution.

This acknowledgement of your registration should not be construed as a representation that the works are adequately designed or will satisfy the regulatory requirements. It is the responsibility of the operator to ensure that the facility is adequately designed,

constructed and operated to ensure compliance.

Registration under the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation is without prejudice to any additional requirements that may be specified by the Director. The Director may also issue Orders under the *Environmental Management Act*.

Registration under the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works. The responsibility for obtaining such authority rests with the operator. It is also the responsibility of the operator to ensure that all activities conducted under this regulation are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force. The operator must also obtain any necessary authorizations from other agencies.

Fees
There are no fees associated with the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation.

Registration Updates
Under section 3 (3) of the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation, the registration holder must provide a director with written notice within 30 days of (a) a change in information provided in the person's registration, or (b) ceasing to operate the facility or ceasing to dismantle more than 5 wet vehicles in a calendar year. Forms are available from regional offices or electronically on the Ministry of Environment's web site at http://www.env.gov.bc.ca/epd/industrial /regs/vehicle/index.htm.

Contacts
If you have any questions regarding the registration process under the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation, please contact the Ministry of Environment South Coast Regional Office, located at 2nd Floor 10470 152nd Street, Surrey BC with phone number 604-582-5200.

Yours truly,

Shelley Metcalfe

Shelley Metcalfe
Environmental Protection Officer
Business and Standards Unit

CC: Environment Canada

Insurance Corporation of British Columbia

Mr. Nures Kara, Amix Salvage & Sales Ltd.

12301 Musqueam Drive, Surrey BC V3V 3T2

Amix Salvage and Sales Ltd.

Prepared by:

Andrew MacKay, M.E.S., EMS (LA)
Envirochem Services Inc,
North Vancouver, B.C.

Version Date: January 20, 2010

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EMS Purpose and Scope

Amix Salvage and Sales (Amix) has developed an Environmental Management System (EMS) to prevent and minimize environmental impacts from operations. At the same time, the EMS is designed to provide other benefits such as:

- Establishing a reliable framework to demonstrate due diligence by tracking and implementing regulatory requirements (e.g., BC Vehicle Dismantling and Recycling Industry Environmental Planning Regulation)
- Maintaining existing clients while securing new ones;
- Achieving process efficiencies including money savings where possible;
- Helping keep a positive image that will help secure public support for continued operation as a responsible business.

The EMS applies exclusively to the Amix operation, located in Surrey, BC. The business involves sorting, storing and re-selling ferrous and non-ferrous metals, including end-of-life vehicles. Located on the Fraser River on land leased from the Fraser Port Authority, the Amix operation consists of:

- Maintenance shop
- Weigh Scale and offices
- Covered storage
- Warehouse (processing and storage of non-ferrous metals)
- Vehicle crusher
- mobile shop
- Assorted cutting and salvage operations
- Barge ramp and loading

Off-site operations including the wholly-owned CanAm recycling located in Nanaimo, BC are not covered by this EMS.

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EMS Documentation

EMS documentation consists of the Environmental Policy, procedures, forms and an EMS Matrix.

Environmental Policy

The Amix environmental policy provides the context and commitments that the EMS is designed to implement.

Procedures

The EMS consists of two kinds of procedures:

1. Management System Procedures – define how the EMS works; and

2. Standard Operating Procedures – practical workplace procedures to prevent pollution and reduce environmental risk

Each procedure will contain the following:

- Purpose
- Logically sequenced steps for carrying out the procedure, including frequency where applicable
- Summary of relevant reference information (e.g., reports, records, etc.)
- Personnel participating in the procedure and personnel responsible for maintaining the procedure

Forms

Forms are provided in this manual to guide and or record outcomes of applicable procedures (e.g., management review).

Environmental Risk Matrix

The Environmental Risk Matrix lists prioritized environmental risks on site. An associated procedure provides details on recording and updating risks on a regular basis.

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AMIX SALVAGE AND SALES LTD. ENVIRONMENTAL POLICY

Amix recognizes that protecting the environment is an important part of doing good business. Central to our process for recovering assorted metals for re-use is an ongoing commitment to minimizing our impact on the environment. That includes:

- Using procedures and engineered controls to prevent pollution
- Continually improving our environmental performance by evaluating operations and setting long-term objectives and programmes
- Operating in compliance with applicable environmental laws and other applicable requirements identified by management;
- Providing resources for effective personnel training and process controls, and
- Communicating our environmental performance within the operation and to the general public.

Management welcomes suggestions to help improve our environmental performance.

Approved,

_____

Brian Ross
Environmental Health and Safety Officer

_____

Willie Jackson
Owner Operator

EMS Roles and Responsibilities

The responsibility for implementing the Amix EMS resides with every employee. EMS management representative, coordinator, and committee with the following responsibilities:

- ***Management Representative:*** The EMS management representative provides senior oversight to ensure the EMS is adequately funded and working as intended. This includes participating in funding projects and reviewing EMS performance annually.

- ***EMS Coordinator****:* The EMS coordinator's responsibility is to secure resources (financial, people, etc.) to fully implement the EMS. The coordinator works closely with the management representative and with the EMS Committee. The EMS coordinator is also responsible for maintaining this EMS Manual and tracking all related documentation and records.

- ***EMS Committee****:* The committee is responsible for ensuring that EMS activities in their areas are carried out and helping assess and improve the EMS as a whole. Key activities include:

    - endorsing the environment policy (and revisions)
    - supporting the development and implementation of objectives and programs
    - assessing environmental performance on a timely basis including outcomes of compliance audits, incident response, monitoring data
    - participating in the annual EMS review

- ***Employees*** who may cause an environmental impact have the vital role to make the EMS happen on a daily basis. This means they are expected to follow EMS requirements (procedures) related to their jobs and to provide suggestions on how to improve environmental protection on site.

Summary of Senior EMS Roles

EMS Function	Name	Regular Position
Management Representative	Willie Jackson	Owner Operator
Committee Member	Shaun Ritchie	Production Manager
EMS Coordinator	Brian Ross	EH&S Officer, Operations
Committee Member	Norm Amero	Car Pad Supervisor
EMS Committee Members at Large		

Records

None

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Environmental Policy Maintenance and Communication

Purpose

To maintain and communicate the Amix environmental policy to the general public, employees and scrap dealers.

Procedure

1. The EMS Coordinator will prepare the company environmental policy.
2. The EMS Committee will endorse the policy.
3. The management representative and EMS Coordinator will sign the policy (and all subsequent versions)
4. The EMS Coordinator will publish the Environmental Policy on the company internet and in hard copy for distribution as follows:
   - Office entrance
   - Lunchrooms
   - To inquiring public
5. The scale attendant will handout copies of the environmental policy to scrap dealers as needed to improve their awareness of the Amix EMS program.
6. The EMS Committee will review the adequacy of the environmental policy annually during the management review process.

Records

Signed Environmental Policy
Management Review Record(s)
Electronic version of policy (website)

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Identification of Significant Environmental Risks

Purpose

Amix focuses its management efforts on the most significant of its environmental risks. Amix systematically evaluates its environmental impacts and risks using environmental and business criteria, and input from the EMS Committee, annual review and internally generated recommendations.

Procedure

1. The EMS coordinator compiles a master list of environmental risks (see the *Environmental Risk Matrix*).

2. A "Total Ranking" will be calculated using frequency, severity and control factors selected from respective tables below. *Note*: Control factors are included as a line item in the severity table.

3. Consideration will be given to each possible source of environmental risk including but not limited to these variables:

   - ❒ Modified production / projects
   - ❒ Installation of new controls
   - ❒ New or modified regulations or permit amendments
   - ❒ Environmental incidents
   - ❒ Recommendations from employees or the public
   - ❒ Applicable risks identified by other divisions

4. Total ranking for each risk will be calculated by multiplying frequency of a risk occurring times the severity of the risk times the presence and effectiveness of a control. The following values : Low = 1; Medium-Low = 2, Medium = 3, Medium-High = 4; High = 5, except for Cost Considerations a high cost is a low ranking.

5. The committee then makes a final determination as to which risks are significant. As a general guide, the three highest ranked risks (e.g., the highest number if points) are considered "significant". Additionally, an environmental risk can be ranked "significant" if supported by over 50% by the EMS Committee.

6. Typically, objectives, targets and environmental programmes will be developed for all significant risks. However, programmes may also be developed for other risks as needed to ensure optimal environmental performance that makes good business sense.

7. The significant environmental risks (*Environmental Risk Matrix)* will be reviewed as needed and, as a minimum, annually by the EMS Committee.

Frequency Factors

Rank	Rating	Description
1	High	Continuous to daily environmental impact (e.g., leaks from ELVs to ground)
2	Medium - High	Recurrent environmental impact – monthly to annually (e.g., ODS from charged ELV a/c systems)
3	Medium	Occasional environmental impact, every 1-5 years (e.g. cyclone failure, equipment leaks)
4	Medium-Low	Sporadic environmental impact, every 5–50 years (e.g., major fire)
5	Low	Very unlikely environmental impact (e.g., catastrophic-earthquake, structural failure, 100-year flood); frequency > 50 years

Severity and Control Factors

Rank	Rating	Risk Area	Description
1	High	Environmental	Extensive and immediate damage to a large receiving environment area; urgent and immediate remedial action is required
		Legal	Major non-compliance; possible fines exceeding $100,000; criminal liability; litigation
		Business	Immediate / pending site closure
		Public	Complete opposition, locally and /or regionally
		Controls	Absent and / or completely ineffective
2	Medium-High	Environmental	Significant damage to local receiving environment; chronic nuisance to neighbours / agencies
		Legal	Non-compliance with possible Pollution Abatement Order issued; fines between $10,000-$100,000
		Business	Clean-up costs between $25,000–$50,000; possible reduction in sales due to public scrutiny
		Public	Mostly opposed, locally and /or regionally
		Controls	In place but mostly ineffective
3	Medium	Environmental	Recoverable, small volume, low toxicity excursion to the receiving environment; no long-term or pervasive damage

Rank	Rating	Risk Area	Description
		Legal	Administrative non-compliance with regulations, warning letter issued; (manifests, unpermitted compressor cooling water discharges, late or incomplete emissions reports, permit amendment required)
		Business	Clean-up costs <$25,000; no residual effect on property value or sales
		Public	Moderate oppostion, predominantly local
		Controls	In place and working sporadically
4	Medium - Low	Environmental	Small interaction with receiving environment; likely contained to site; likely no effect
		Legal	Minor violation; inspection non-compliance; not a reportable incident
		Business	Low corrective action cost
		Public	Few people opposed, local
		Controls	Mostly working as intended but some adjustments may be necessary including training
5	Low	Environmental	No release to environment
		Legal	Not reportable; no enforcement
		Business	No corrective action cost
		Public	No known opposotion / supportive of operation
		Controls	Working well, no modifications required now

Frequency

This procedure is repeated as needed and at least on an annual basis.

Records

Environmental Risk Matrix

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Tracking Legal and Other Requirements

Purpose

On a continual basis, management needs to stay aware of applicable regulations, permits, local by-laws and other requirements that the company supports. These requirements must be understood and implemented on site. Demonstrating due diligence is a key component of maintaining a high level of environmental performance.

Procedure

1. The EMS Coordinator will keep the Legal Register up to date and implement changes to operations (e.g., procedures and Emergency Response Plan) on a timely basis to ensure compliance. The register includes regulations, permits and other obligations the company supports

Frequency

Regulatory requirements will be revised on a continual basis (e.g., e-mail notification) and annual basis (part of management review).

Records

Management Review Meeting Minutes
Permits

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Legal Register

Requirement Type and Name	Summary of Legal and Other Requirements
PROVINCIAL ACTS AND REGULATIONS	
Environmental Management Act (EMA)	• Basic framework for environmental protection and regulation in BC. The Act prohibits against the introduction of waste into the environment.
BC Waste Discharge Regulation	• Under the EMA, a Code of Practice for Vehicle Dismantlers will provide enforceable instructions for managing environmental issues at the site. This will include the requirements for a functioning Environmental Management System (EMS).
BC Vehicle Dismantling and Recycling Environmental Planning Regulation	• Requires submission and maintenance of an Environmental Plan to prevent pollution and manage wastes listed in the regulation. Amix companies must submit a registration stating an Environmental Plan is in place by September 1, 2008.
B.C. Hazardous Waste Regulation	• Requirements for proper storage and disposal of aerosol cans; absorbent materials, waste batteries and waste oil. • Waste oil in mobile shop furnace must be sampled to ensure compliance with waste fuel burning limits. Note sample was analyzed in 2007 and met limits. • Ensure only TDG trained personnel sign manifests and bills of lading
B.C. Contaminated Sites Regulation	• Outlines requirements for disposal of contaminated soils off-site (industrial limits will apply for contaminants such as petroleum-based residues and selected metals); limits are also referenced to gauge groundwater quality
B.C. Spill Reporting Regulation	• Outlines limits for agency reportable spills (e.g., 100 litres of fuel or oil to uncontained, pervious surfaces or the river) • Contact the Provincial Emergency Program if limits exceeded • The Regulation specifies reportable levels of certain substances, including waste oil, oil; pesticides and flammable liquids (fuel)
B.C. Ozone Depleting Substances Regulation	• Release of ozone depleting substance (R22, 134a) is prohibited • R22, the coolant used on site, is categorized under Class II, a low reactivity product

Requirement Type and Name	Summary of Legal and Other Requirements
	scheduled for phase-out by 2010 • Regulation specifies credentials for approved contractors (including apprenticeship and applicable courses by the BC Ministry of Environment)
FEDERAL ACTS AND REGULATOINS	
Canada Marine Act (a VFPA requirement)	• As a "tenant", Amix must inform the Vancouver Fraser Port Authority of any planned projects for the site including but not limited to new or modified structures, change of property use and demolition. Depending on the significance of the project, an Environmental Assessment or Planning Review will occur. A project permit will be issued at the end of a successful plan review.
Canadian Environmental Protection Act	• Broad legislation outlining federal powers for environmental enforcement and pollution prevention (e.g., from protection of marine environments to disposal at sea) • Nicola Valley must provide reporting to Environment Canada under the National Pollutant Release Inventory (NPRI)
Canadian Fisheries Act, Migratory Birds Act	• Do not put "deleterious" (harmful) materials or substances in creeks (e.g., oil, solvent or chemicals) • Act can be rigorously enforced by conservation officers in the event of an incident or spill, with fines up to $1M dollars
PERMITS & LEASES	
Permits	• Amix is located on Federal land: there are no provincial permits
Leases	• Lease agreement outlines requirements to meet federal and provincial regulations

Requirement Type and Name	Summary of Legal and Other Requirements
MUNICIPAL / REGIONAL	
Surrey Noise By-Law #7044	No noise from the site should disturb the peace and enjoyment of local citizens; there are no applicable numeric limits are included in the by-law. For reference purposes, the site will strive to meet noise limits from industrial operations similar to the City of Vancouver: • 75 dB during day hours for continuous / non-continuous noise • 70 dB during evening hours for non-continuous noise • 65 dB during evening hours for continuous noise
OTHER AMIX REQUIREMENTS	
Kidney Car Program	• Accommodate inspections and respond to action items on a timely basis
Scrap It	• Accommodate inspections and respond to action items on a timely basis
EC Switch Out	• Environment Canada sponsored program to remove mercury switches from end-of life vehicles

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Objectives, Targets, and Environmental Programmes

Purpose

Objectives and programmes are set for improving environmental performance. These objectives are linked to significant (and lower priority) environmental risks in order to address environmental issues in a rational and priority sequence.

Procedure

1. The EMS Coordinator set environmental objectives for the Amix site. The environmental objectives are recorded using the *Environmental Objectives* form.

2. The EMS coordinator is responsible for developing and recommending potential new environmental objectives to the EMS committee. In identifying potential new objectives, the coordinator considers the following:

    - Environmental policy
    - Applicable laws and regulations and potential future laws and regulations
    - Practical business criteria, such as the potential costs and benefits of pursuing a particular environmental objective
    - The views of employees and other interested parties (where relevant)
    - Status of existing objectives and programmes

2. Once environmental objectives are established by the EMS committee, the EMS coordinator assigns responsibility (to the manager of the operations in question, where appropriate) for developing targets and action plans to realize the objectives.

Frequency

As a minimum, environmental objectives and programmes will be reviewed and set annually by the EMS Committee at the same time as routine budgets are prepared. Programmes are also reviewed for progress on an interim basis (e.g., at project conclusion, every six months) or as deemed necessary by the EMS Committee.

Records

Completed Environmental Objectives and Programmes Forms

Targets and Action Plan (1)

Objective	**Improve Stormwater Control**
Target # 1	Plan to collect, treat and discharge haul road surface water within relevant regulatory requirement (to river or ground)
Action Plan	• Develop and finance preliminary plans (CitiWest consultation) • Confirm river discharge plans with Fraser Port before proceeding(if applicable)
Person(s) responsible:	Brian Ross
Budget	
Scheduled Completion Date	July 31, 2008
Status Update	Envirochem sourcing separators – May 2007; Brian to contact Citiwest for site meeting (May 2008)
Target # 2	Maintain discharge quality within typical permit criteria
Action Plan	Continue annual stormwater sampling
Person(s) responsible	Brian Ross
Budget	
Schedule	Annual sampling
Status Update	• Sampling indicated south ditch separators undersized • See target #3
Target # 3	Plan drainage improvements for new car pad area (SEDA)
Action Plan	• Confirm process area configuration and catchment area • Select new separators if needed including option of sump and pump to East ditch
Person(s) responsible	Brian Ross, Envirochem
Budget	
Schedule	September 2009
Status Update	Follow-up on VFPA authorization for BC Hydro power improvements – May 28, 2008
Target # 4	Control and treat run-off from new warehouse parking and storage pad
Action Plan	• Confirm drainage and discharge area including flood prevention
Person(s) responsible	Brian Ross, Envirochem
Budget	
Schedule	September / October 2007
Status Update	Reviewing drawings, conceiving initial drainage and treatment options (separator to infiltration trenches) – done, no overflows or flooding during rainy season 2007/8 – closed (May 2008)

Target # 5	Collect and treat surface water along CN Rail tracks
Action Plan	• Send approval request letter to CN engineer (John Campbell) • Review drainage preliminary options with Citiwest • Set budget and get money for job
Person(s) responsible	• Andrew / Brian • Brian • Brian, Shaun
Budget	Up to $50,000
Schedule	Implementation by September 30, 2008
Status Update	

Targets and Action Plan (2)

Objective	**Reduce and Prevent Groundwater Contamination**
Target # 1	Maintain groundwater monitoring network integrity
Action Plan	• Re-install and protect damaged monitoring wells
Person(s) responsible:	Brian Ross, Envirochem / Piteau Associates
Budget	
Scheduled Completion Date	May 31, 2007
Status Update	Done
Target # 2	
Action Plan	Monitor groundwater discharge quality
Person(s) responsible	Brian Ross, Envirochem / Piteau Associates
Budget	
Schedule	Monitoring completed for 2007; repeat annually each Summer
Status Update	Wells tested and report issued May 2007
Target # 3	Prevent contamination sources (metals, hydrocarbons)
Action Plan	• Relocate non-ferrous metals to covered storage • Store hulks and unprocessed vehicles on impervious surfaces (see Objective #1 – SEDA installation)
Person(s) responsible	Brian Ross, Shaun Ritchie
Budget	
Schedule	November 2007
Status Update	• Non-ferrous metals warehouse under construction • Initial car pad extension cancelled; review requirements as not vehicles are stored on concrete pad with drainage controls and separators • May 2008- non ferrous warehouse complete and operating for eight months

Targets and Action Plan (3)

Objective	**Reduce Mobile Fleet Air Emissions**
Target # 1	Reduce NOx and particulate by 50% from heavy haul trucks
Action Plan	• Apply for grants for catalytic conversion kits • Review alternative fuels and fuel additives (bio diesel) • Contact VFPA to discuss options for diesel emission reduction
Person(s) responsible:	Brian Ross
Budget	
Schedule	February 2008; rescheduled for June 2008
Status Update	• 2007 application denied; will re-apply for 2008 • biodiesel supplier sourced; investigating blend options

Operational Controls

Purpose

Operational control procedures are implemented by employees to prevent and /or minimize environmental impacts.

Procedure

1. The EMS committee, with additional input from other employees as needed, carries out an analysis of each Significant Environmental Impact to determine the underlying cause(s) of the environmental impact. As part of the analysis, the committee will determine the need for (and adequacy of, if already existing) operational control procedures.

2. Where there is a need to create or modify an operational control procedure, the EMS committee assigns a member of the committee to draft an operational control procedure, based on consultation with the employees who undertake that procedure. In many cases, a separate operational control procedure may not be required, rather the integration of environmental control procedures into an existing work procedure. The operational control procedure should take the form of a “work Instruction,” namely a summary list of required steps or measures. In addition to describing the steps necessary to carry out the particular activity in an environmentally sound manner, the work instruction should also include steps to conduct monitoring, where applicable.

3. The procedure itself is referenced in the Environmental Risk Matrix and / or entered into the relevant operator’s handbooks. and/or is posted at the site of the activity in question.

Frequency

As new environmental risks are identified (e.g., process modification, incidents, new regulations). Operational control procedures are reviewed annually and as needed on an interim basis.

Records

See Environmental Risk Matrix

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Environmental Training

Purpose

To ensure that employees carry out their duties in an environmentally responsible manner. Amix provides all employees with environmental awareness training on environmental issues and provides task-specific training to those employees whose jobs are associated with environmental risks.

Procedure

Awareness Training

1. All new employees receive an introduction to the Amix EMS, specifically its environmental policy, significant environmental risks, and environmental objectives. Records of employees who have received this introduction are maintained by the HR Department.

Task-Specific Training

2. The EMS Coordinator identifies what training employees performing each of these job functions should receive in order to control environmental impacts.

3. The Environmental Coordinator will ensure training is delivered as indicated in the Training Matrix below.

Topics	**Frequency**	**Personnel**		
		Yard Crews	Purchaser / Shipper	EMS Coordinator
EMS Awareness	Annual	✓		
Transportation of Dangerous Goods	Every 3 years per certificate*		✓	✓
Spill Training	Every 3 years	✓		✓
Task Specific	By position	✓		

Frequency

Awareness training is given to new employees during their first week at Amix. Task-specific training is given to relevant employees as they take on a new function that is associated with a Significant Environmental Risk. Task-specific training is updated, as necessary.

Records

Records of the awareness and task-specific training received by each employee are kept by the HR manager.

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Emergency Preparedness

Purpose

As part of its EMS, Amix strives to ensure that the environmental impacts associated with any emergency situations are minimized to the greatest extent possible.

Procedure

The EMS Coordinator will ensure that all personnel are updated on current emergency preparedness procedures.

Frequency

The Emergency Response Plan and relevant procedures will be reviewed as part of bi-annual spill training. New hires will be introduced to the Emergency Response plan as part of the indoctrination process.

Records

Spill Training
Emergency Response Plan
Site Map (Environmental)

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Control of Documents & Records

Purpose

To ensure all employees are referring to current information, electronic and hard copy documentation is kept up-to-date. Key documents that the operation can control include:

- EMS Manual and related outcomes (see below)
- Operating procedures
- Environmental Risk Matrix; and the
- Emergency Response Plan

Control of Documents

1. The EMS coordinator documents the procedures that define Nicola Valley's Operation's EMS in this manual. **Only the EMS Coordinator has edit privileges**.

2. The EMS committee formally reviews the manual for deficiencies on an annual basis. Edits may be made on an interim basis.

3. The EMS coordinator, with support from Supervisors, ensures that no employees or managers use outdated information. This means removing hard copy and electronic versions from circulation and archiving as deemed necessary.

4. All EMS core documents that the operations has control of will have a footer indicating the version date.

Control of Records

1. Records related to environmental performance and will be maintained as indicated in the Records Register.
2. Records will be sent to archives on an as needed basis. The EMS Coordinator will maintain a list of records sent to archives.

Frequency

Annual review of controlled documents

Records

See Records Register

Records Register

Record Name	Record Keeper	Location
Audit Reports	EMS Coordinator	EMS File Cabinet
Complaints, Inquiries and follow-up	EMS Coordinator	
Government inspections and correspondence (e.g., Ministry of Environment, Environment Canada)	EMS Coordinator	
Incidents (spills)	EMS Coordinator	
Management Reviews	EMS Coordinator	
Monitoring Data - groundwater	EMS Coordinator	
Monitoring Data – all other media (air, noise, soil)	EMS Coordinator	
Objectives, targets, and action plans	EMS Coordinator	EMS Manual (server)
Training Records	Admin Assistant	HR Department
TDG Manifests	Admin Assistant	Admin Files

* Note: This site does not have any permits as it is resides on Federal Property

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Internal EMS and Compliance Assessment

Purpose

Internal audits will be used as appropriate to assess whether the EMS has been properly implemented and is effective at meeting legislated requirements.

Procedure

1. The audit scope will cover:

    - Regulatory Compliance with permits, regulations, local by-laws and other applicable requirements that the division and Amix subscribes to
    - Selected elements of EMS implementation (e.g., aspect identification, procedures, management review)

2. The auditor(s) will collect objective evidence through document and record reviews, interviews with key employees, and observations. No media sampling (air, soil, water) will be done.

3. The audit process follows the approved protocols from ISO (19011) and CECAB (Environmental Auditing Code of Ethics). Core activities and responsibilities are defined in the table below:

Responsibility	Tasks	Records
Audit Team	Conduct the audit in order to fulfill the objectives of the audit.	Audit Plan, Audit Report
EMS Coordinator	Schedule audit; provide audit information and site escort; review audit report; develop and implement corrective actions; report on status to EMS Committee	Audit Report
Management Representative	Attends closing meeting and verifies action items	

4. Additional responsibilities of the audit team leader include:

    - Preparing and audit plan including process confirmation and information transfer prior to on-site activities
    - On-site visit including an opening meeting to review the audit scope and process; and data collection through visual inspections, interviews and document / record reviews
    - Documentation of audit findings and recommendation into a draft audit report
    - Exit meeting to review the draft audit report
    - Preparation and submission of a final audit report and other related information as identified in the audit plan

5. As a minimum, the audit report will include the following sections:

- Audit method and scope
- Summary of good practices
- Summary of principle findings
- Audit findings and recommended corrective actions

5. Corrective Actions will be documented electronically (e.g., .pdf file) and in hard copy

Frequency

Annual audit
Periodic and annual update on outstanding (incomplete) corrective actions

Records

Audit reports and related information will be kept by the EMS Coordinator. These include:

- EMS / Compliance Assessment Reports
- Management Review Meeting Minutes

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Corrective and Preventive Action

Purpose

Corrective action tracking and implementation is required to ensure that deficiencies (compliance issues and EMS non-conformities) are addressed quickly and effectively.

Incident Reporting Procedure

1. All incidents are to be reported to the supervisor on site, who will advise the EMS Coordinator.
2. The EMS Coordinator will notify applicable government agencies for any reportable spills (see Emergency Response manual for limits).
3. The EMS Coordinator will track all incidents and report causes and status of corrective actions as needed and during management review.

Corrective Action Procedure

4. With input from the EMS Committee as needed, the EMS Coordinator assigns responsibility for taking action to correct non-conformities which may arise from:

    - EMS weaknesses (e.g., operational controls not working, followed)
    - Corrective actions from audits
    - Incident follow-up
    - Management review

5. The person responsible then undertakes the corrective action required, calling upon the EMS committee, and others for assistance as necessary.

Frequency

As management system or compliance issues (incidents) arise.

Records

Incident Reports
Corrective Action Reports

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Corrective Action Form

Statement of the Problem
Date
Description of non-conformity or actual or potential compliance issue
Description of potential solution
Person responsible for corrective action
Deadline for completion of corrective action
Completion of Corrective Action
Actions taken
Results
Date

Signed: _____ _____
Management Representative Person Responsible

Communication

Purpose

To ensure that interested external stakeholders receive appropriate information about the company's environmental activities.

Procedure

External Communication

1. All incoming phone, in person and written inquiries are directed to the EMS Coordinator.
2. Records of environmental communications from stakeholders and divisional responses are kept by the EMS Coordinator and are tracked using the form Stakeholder Communication Form.
3. Disclosure of selected environmental performance information on the website.

Internal Communication

1. Environmental performance status will be communicated periodically and as needed through crew meetings and on an ongoing basis.

Frequency

As needed

Records

Stakeholders forms

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Stakeholder Communication Record

Date Communication Received	
Type of Communication	
Received From	
Address/Telephone Number/ E-Mail	
Content of Communication (attach copy if possible)	
Will Amix Respond?	YES NO
Date of Response	
Person Responding	
Position	
Nature of Response (attach copy if possible)	
Are Internal Actions Necessary? (If Yes, fill out a Corrective Action Form.)	

Contact Person: Date Completed:

Monitoring

Purpose

To assess air (and noise), water and soil conditions as needed to ensure compliance with relevant requirements, prevent potential contamination and / or best practices.

Procedure

1. The EMS Coordinator will ensure routine sampling requirements are taken, analyzed and results reported to presiding authorities on a timely basis. This applies to groundwater monitoring associated with the landfill permit.

2. The EMS Coordinator will assess other sampling opportunities on an as needed basis for due diligence purposes, such as confirming:

    - run-off discharge quality (annual)
    - groundwater quality (annual)
    - soil quality prior to excavating / construction on aspects of the site that were previously operational or decommissioned
    - soil analysis prior to disposal
    - noise surveys (complaints)

Frequency

Samples will be taken as indicated above

Records

See record register for location of:

- Surface water sample reports
- Groundwater monitoring reports
- Soil samples (disposal)
- Miscellaneous monitoring reports
    - Waste oil (mobile shop furnace as per Hazardous Waste Regulation)

Management Review

Purpose

To assess opportunities for improvement and possible need for changes to policy or other elements of the EMS

Procedure

1. The EMS and related information will be reviewed periodically as follows:

    - Semi-annual reviews
    - Annual EMS Review

2. Semi-annual reviews will be held to examine the status of action items, incidents and objectives and programs.

3. Annual EMS reviews will be held to assess the entire program for effectiveness and status of overall continual improvement. The EMS Coordinator will assemble an information package to cover the following agenda items:

    - Policy and program awareness
    - Status of environmental risks
    - Legal development summary
    - Objectives and Targets status and plans for the next operating year
    - Training plans
    - External communications summary (complaints)
    - Monitoring results summary
    - Incident summaries
    - Action item status (including follow-up from previous management reviews)
    - Recommendations for improvement

4. The EMS Coordinator will record and follow-up on meeting minutes.

5. Divisional EMS reporting will support corporate EMS management review as follows:

Frequency

Semi Annual, Annual

Records

Management Review Meeting Minutes
Annual Management Review Info Package

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Management Review Record

Date of review meeting	
Persons present at meeting	
Name	**Position**
Areas For Improvement	
EMS Section	**Actions / Assigned Person(s) / Due Date**
Environmental Policy • Applicable • Well communicated to staff, new hires, clients and scrappers	
Aspects Identification & Management • List accurate? • New aspects managed?	
Legal Register and Tracking • Regulatory requirements current? • Action plans in place?	
Objectives and Programmes • Reviewed as scheduled • Status • New programmes	
Resources and Roles	
• Positions well defined • Status of financial resources • Enough staff to run program	
Competence, Training and Awareness	

• Are personnel competent to prevent pollution • Is training adequate to prevent pollution and achieve objectives	
Communication	
• Are internal and external inquiries handled effectively • Are environmental objectives adequately communicated to all stakeholders (personnel, scrappers)	
Document Control	
• Is the EMS documented adequately • Are documents kept current	
Operational Control	
• Are SOPs in place and used to manage environmental risks	
Emergency Preparedness & Response	
• Is the plan reviewed annually • Are personnel aware of their roles • Have elements been tested and improved where needed	
Monitoring and Measurement	
• Have all monitoring activities occurred as planned (e.g., stormwater and groundwater sampling, etc.) • What do trends indicate (additional controls?)	
EMS and Compliance Audit	
• Was it completed? • Discuss key action items • Overall compliance status / areas of improvement planned	
Non-Conformance and Corrective Action	
• Are environmental incidents followed-up • Explain incident records / trends	
Control of Records	

• Are key records easily found and protected from damage (e.g., sample and project data, manifests)	
• Management Review	
• Done as scheduled • Improvement Actions supported by management and owners	

Use additional sheets as needed

Signed: _____ _____
Management Representative EMS Coordinator

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Standard Operating Procedure Index

BARGE LOADING

Purpose

The procedure provides instruction to effectively load barges. This includes preventing the loss of material or fluids to river or marine environments.

Scope

All barges (side and bow loaders)

Roles

This operating procedure applies to all barge crew members; the Barge Loader Man; and the EMS Coordinator.

Procedures

General

1. Before starting work, identify and contact the Barge Loader Man, who has overall responsibility for barge loading operations. The Barge Loader Man will:
   - Ensure secure barge tie-up;
   - Ensure safe working conditions;
   - Coordinate checking and removal of fluids from vessels, containers and vehicles before loading.
   - Monitor the assembly of a balanced and secure load;
   - Ensure spill response supplies are available for deployment
   - Watch for material or fluid losses to the river during transfer;
   - Organize prompt recovery of any material losses to the river;
2. Crews will plan and assemble secure loads by:
   - Building a crib

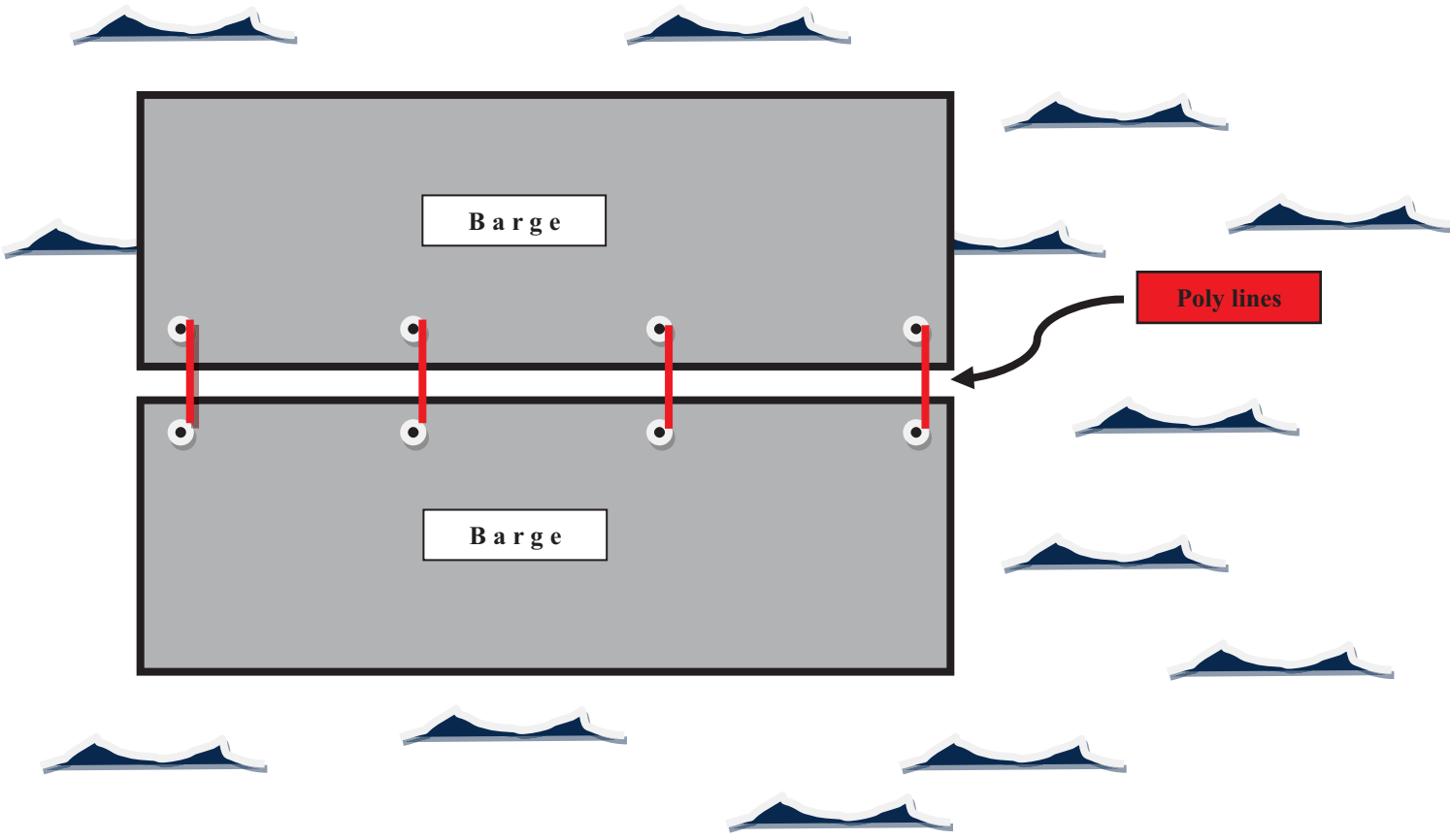
- Interlocking vehicles
- Stacking tin, and
- Loading steel and heavy salvage last to balance the load.

3. Travel planning will include an assessment of marine and wind conditions that may cause the load to destabilize. Load elevation will be adjusted accordingly.

4. Any losses to river or marine environments must be immediately removed.

Barge to Barge Tie-Up

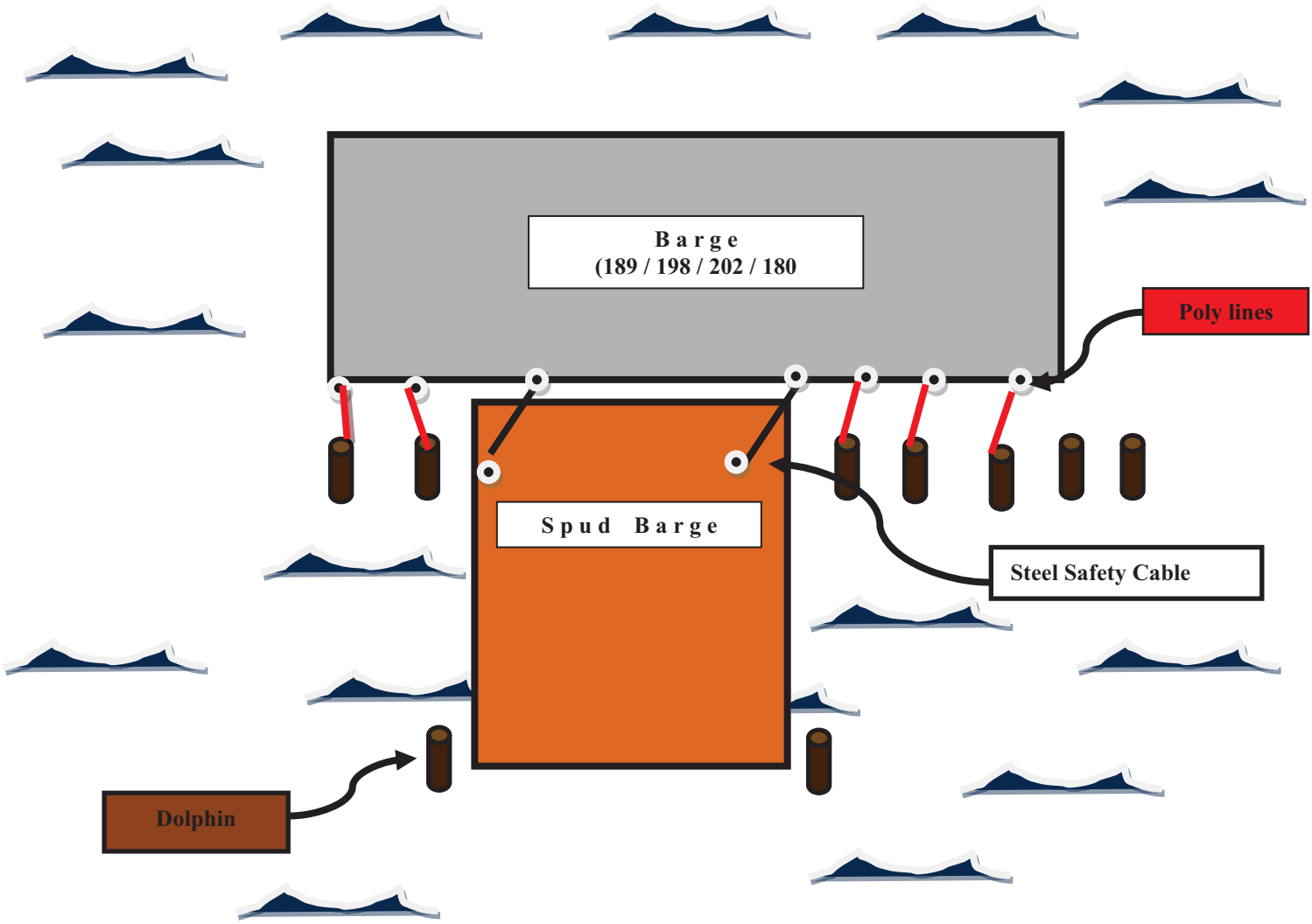
1. Use a minimum of four (4) poly ropes for barge to barge unloading.
2. Ensure ropes are in good condition. (replace as needed).
3. Barge to barge transfer must first be approved by a Supervisor.
4. Ropes must be continuously monitored during transfer.



Barge Tie-Up at Berth

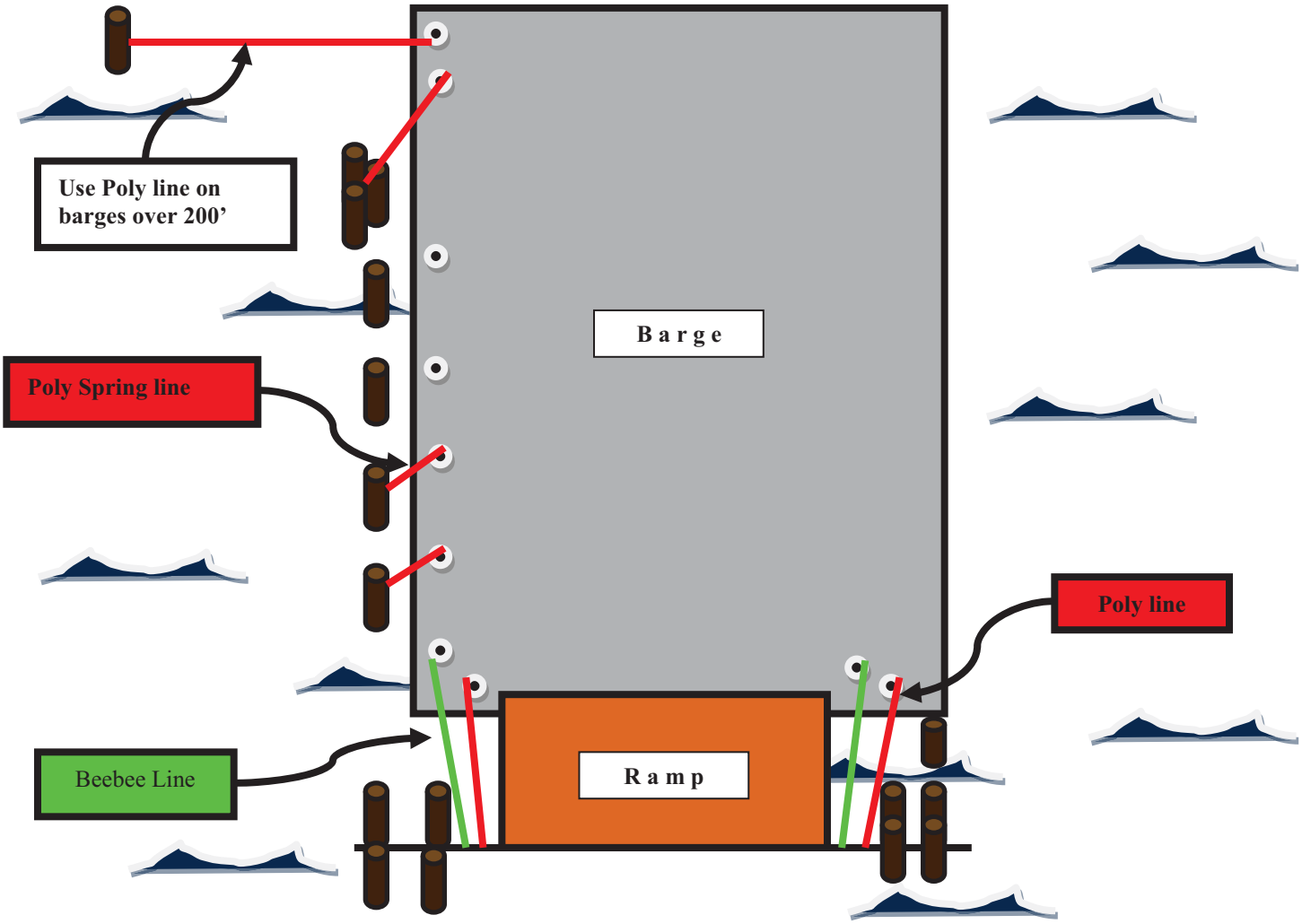
Minimum tie-up requirements to secure transfers between a barge and the spud barge:

1. Three (3) poly ropes **upstream** of spud barge (from spud barge to dolphin)
2. Two (2) poly ropes **downstream** of spud barge (from spud barge to dolphin)
3. At least one (1) steel safety cable from barge to spud barge
4. Bigger barges require additional ropes, at least one per dolphin
5. All ropes must be in good condition and replaced as needed
6. Ropes must be monitored continuously



Barge Tie-Up at Ramp

1. Minimum tie-up requirements to secure transfers between a barge and ramp:
   - two (2) beebee lines from ramp to barge (mandatory)
   - two (2) poly ropes from ramp to barge (mandatory)
   - two (2) spring lines (poly) to dolphins (mandatory minimum)
2. All ropes must be inspected and in good condition
3. Ropes must be monitored continuously.



Documentation and References

Amix Salvage Emergency Response Plan

Records

Barge Loading Forms
Incident Reports

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PCB MANAGEMENT

Purpose

This procedure is designed to help personnel comply with regulations and prevent site contaminated from handling equipment containing polychlorinated biphenyls (PCBs).

Scope

Salvage of electrical equipment dated before 1982, including:

- Transformers
- Capacitors
- Electrical Cable associated with transformers and capacitors (including marine cable)
- Lighting Ballasts

Roles

1. This procedure applies to Buyers, Field Supervisors, Dispatchers, Scale Operators, HSE Coordinator, Yard Supervisors.
2. All Buyers, Field Supervisors, Dispatchers, Scale Operators and Yard Supervisors will report to the HSE Coordinator for direction on managing PCBs. Drivers will report to Dispatchers. Reporting lines are shown below.

HSE Coordinator

Buyers | Field Supervisor | Dispatchers | Scale Operators | Yard Supervisors

Drivers

Procedures

Acceptance Requirement

1. Buyers and Yard Coordinators will only accept fluid-cooled electrical equipment (transformers), power factor correction capacitors and / or electrical cable with lab records indicating PCB content is below current regulatory limits (contact HSE Coordinator for current limits).
2. Ensure there is a lab record for each piece of equipment or wire bundle accepted on site.
3. Buyers will ensure that all fluid containing equipment (e.g.,transformers) is drained before transportation to Amix properties.
4. Buyers will not purchase fluorescent lighting system salvage with connected ballasts unless they are clearly stamped as PCB-free or dated prior to 1982 (see details below).

Identification / Training

1. Responsible personnel (see Roles) will receive adequate training to identify equipment that is potentially contaminated with PCBs. This will be provided by external qualified sources.

EQUIPMENT	**LOOK FOR:**

Pad Mounted Transformers 	Nameplate Information:
	- **Type**
	  ○ LNAN or LNS contain PCBs
	  ○ Type ONAN / ONS contain mineral oil, but may contain PCB contamination at concentrations exceeding 50 ppm
	- **Date**
	  ○ Dated before 1982
	- **Coolant / Fluid (most common)**
	  ○ Askarel
	  ○ Arachlor
	  ○ Inerteen
	  ○ Pyranol

Pole Mounted Transformers 	

Electrical Cable

Determine age (i.e., is it before 1982?) and associated equipment

Sample internal cable wrapping.

Fluorescent Lighting

- Presence of ballast
- Date before 1982
- Stamp or decal indicating PCB-free

Management of Contaminated Equipment

1. All suspected or known PCB contaminated equipment will be stored in the designated (temporary) Hazardous Materials Holding area. Confirm location with HSE Coordinator.
2. Suspected material including electrical cable will be sampled for PCB content. Depending on the results, the equipment can be salvaged or must be disposed as a Hazardous Waste.
3. For disposal, use only authorized haulers and waste management companies.

Documentation and References

- Canadian Environmental Protection Act
    - Federal PCB Regulations
    - Storage of PCB Regulations
    - Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations
- BC Hazardous Waste Regulation
- Environment Canada website:
  http://www.ec.gc.ca/wmd-dgd/default.asp?lang=En&n=E245C68E-1

Records

Records will be kept by the HSE Coordinator. Required records include:

- PCB Analyses (CEAEL certified labs)
- Hazardous Waste Storage Area Inventory

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Contaminated Soil Management

Purpose

The objective of this procedure is to ensure potentially contaminated soil is properly handled and / or disposed from the site in accordance with applicable regulations.

Scope

Soil at the Surrey site from all sources including ditches and barge clean-up residuals.

Roles

HSE Coordinator, Yard Supervisor

Procedures

General

1. The HSE Coordinator will ensure that all soils are sampled and analyzed prior to leaving the property. Follow the BC Technical Guidance on Contaminated Sites "*Site Characterization and ConfirmationTesting"* (Ex Situ) guidance document to ensure reliable sampling technique.

Handling

2. Collect and place contaminated soils from spills and ditches (from excavating) in sealed drums and / or containers (e.g., 30 yard bins).
3. Cover piles and bines fully with tarps or plastic sheets as needed to prevent leaching by rainfall.
4. Determine volume of soil to be disposed and prepare a documented sampling plan. Depending on the origin of the soil, the plan shall consider potential contaminants including but not limited to:
    - Benzene, toluene, ethylbenzene, and xylene (BTEX)
    - Total extractable hydrocarbons (TEH)
    - Mineral oil and grease (MO&G)
    - Metals
    - Others as required.

3. Dispose of soil according to analytical results (CSR , Hazardous Waste, etc.). Depending on the soil destination, a "Soil Relocation Agreement" may be required.
4. Use authorized transportation and disposal company only.
5. Only personnel with valid TDG certificate will sign the waste manifest.

Documentation and References

BC Contaminated Sites Regulation

BC Technical Guidance on Contaminated Sites "*Site Characterization and Confirmation Testing"*

BC Hazardous Waste Regulation

Records

Laboratory Sampling Results and reports

Waste Manifests

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Hazardous Waste & Materials Management

Purpose

The objective of this procedure is to ensure hazardous wastes are managed to prevent losses to the environment and meet applicable regulatory requirements.

Scope

Solid and liquid hazardous wastes at the Surrey site.

Roles

HSE Coordinator, Shop mechanics, Yard Personnel, Accounting

Procedures

Administration

1. Only personnel with valid TDG certificates will sign Hazardous Waste manifests and Bills of Lading. These records will be kept by accounting with a copy to the HSE Coordinator.
2. The HSE Coordinator will update the Waste Generator Registration as applicable waste inventories change for waste oil, waste fuel and lead acid batteries. Registration records will be kept by the HSE Coordinator.
3. Waste oil used in the shop furnace will be tested as needed (e.g., every three to five years) to ensure compliance with the BC Hazardous Waste Regulation. Sample test results will be kept by the HSE Coordinator.

Handling and Disposal

Waste Material	Storage and Disposal
Absorbents	Store used absorbents in a sealed and labeled container. Arrange for disposal of sorbent pads, booms, rags or by the authorized waste management firm.

Waste Material	Storage and Disposal
Batteries	Keep batteries in a secure dry location. Provide spill and drip containment and protect the batteries from impact and tipping. Store batteries recovered from ELVs in the adjacent covered storage container. Esnure lime or caustic is available in the immediate area where batteries are stored. Apply as needed to neutralize spills. Arrange for frequent pick-up to keep accumulation below regulated limit (2000kg.)
Mercury Switches	Inspect all front and tail light indicators and remove mercury switches where found. Collect in plastic container and give to EHS Coordinator. EHS Coordinator will send the a sealed container via courier to the Switch Out Program. Note: this section will be update to indicate the three safety scenarios where switches are NOT removed: crushed hulks received on site; vehciles with hypodermic needles; vehciles loaded with scrap.
Waste Tires	All tires are removed from ELVs in the first stage of dismantling adjacent to the SEDA area. Tires are graded, sorted and then, depending on their condition, are resold or returned to customers. Otherwise scrap tires are de-rimmed then disposed to a local contractor (e.g., Western Rubber). Keep scrap tire inventory below 1000 tires.
Used Oil Filters-Shop	Drain and dispose oil from filters into the waste oil tank. Store drained filters in labeled containers. Use authorized waste contractor for disposal.
Waste Antifreeze	Store all waste antifreeze in the shop in designated, labeled containers in an area with appropriate secondary containment and free of potential collision. Antifreeze from ELVs (fffrom radiators and windshield fluid containers) is recovered by an air vacuum in the SEDA area. The antifreeze is conveyed by hose to a labelled double walled waste antifreeze tank in the SEDA tank farm. Use only authorized firm(s) to transport and dispose / recycle waste antifreeze (e.g., M&R). In the event of a spill, prevent antifreeze from entering storm drains. Uncontained spills in excess of 4 litres must be reported to the Provincial Emergency Response Program.
Waste Oil and Lubricant	From Car Crusher Segregate the waste oil from other wastes such as antifreeze and solvents. Dispose of waste oil in the designated waste oil tank.

Waste Material	Storage and Disposal
	To prevent overflow , monitor the volumes of waste oil and contact the waste oil recycler well in advance for pick up. Ensure the waste oil containers are clearly labeled indicating the contents. Ensure that the transporter / recycler has all necessary licenses and approvals. From Shop Collect waste oil from equipment and dispose into labelled drums for diposal by authorized waste management firm. Waste oil and lubricants from operating equipment only can be poured directly into the waste furnace tank for use as a heating oil. Lubricants from salvage, solvents or other flammables **cannot** be added to the waste oil furnace tank.
Waste Fuel	Waste fuel will be collected in a pod after the tank is pierced on the spike. The pod will be drained directly into the waste fuel tank located beside the crusher. The tank will be inspected and drained on a regular basis to prevent overflow. Note: this section will be updated in version 3 to explain current SEDA car processing area.
Waste Solvents	If possible, use suppliers who provide clean solvents and remove the waste solvent for recycling (e.g., Sumas). Parts washing should be done at the parts washer to ensure that waste solvent is collected in the parts washer container. Avoid mixing waste solvents with waste oil. The transporter / recycler must have all necessary licenses and approvals. If recycling of waste solvent is not possible, manage it as a Special Waste and transport to a licensed waste management facility.

Documentation and References

BC Hazardous Waste Regulation
BC Vehicle Dismantling and Recycling Industry Environmental Planning Regulation
BCAR

Records

Manifests
Bills of Lading
BC Hazardous Waste Generator Registration Form (Schedule 5, Form 1)
Switch Out Log

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Ozone Depleting Substances Management

Purpose

The objective of this procedure is to prevent the release of Ozone Depleting Substances (ODS) to the atmosphere from all sources.

Scope

Operating air conditioners in offices and shop; scrap white metals; end of life vehicles (ELVs)

Roles

Scale Operators, HSE Coordinator, Car Pad Supervisor, Car Pad Technicians

Procedures

For Offices

1. Refrigeration or air conditioning equipment which contains an ozone depleting substance (e.g., R22) will be serviced by authorized contracted technicians only.

For Salvage White Metals (freezers, refrigerators, air conditioners)

1. Municipal sources of white metals (e.g., transfer stations) are required to remove ODS before this scrap arrives on site. Scale operators and yard personnel will check for labels that indicate ODS have been removed.
2. The HSE Coordinator retains all records of previously ODS-containing white metals from transfer stations.

For Vehicles

1. Selected car pad personnel will obtain training for Environmental Awareness and ODS Management certificates.
2. The Car Pad Supervisor keeps records of technician certificates and a running log of vehicles where ODS is removed.
3. Prior to crushing ELVs, trained personnel inspect all vehicles for charged air conditioning systems at the car pad.
4. Car pad technicians label (e.g., spray paint) vehicles that have charged a/c systems in the first stage of the dismantling process adjacent to the covered SEDA area.
5. Car pad technicians use the approved ODS analyzing and evacuating systems after ELVs have been processed in the SEDA area.

6. ODS is collected in approved and labeled 50-75 pound cylinders.
7. Amix personnel transport the cylinders to an approved facility (e.g., Anglo Canadian) for disposal / recycling.

For All Scrappers (Environmental Awareness)

1. The HSE Coordinator will maintain signage at the site entrance that indicates ODS must be removed prior to arrival on the property.

Documentation and References

BC Ozone Depleting Substances and Other Halocarbons Regulation

Records

Technician Certificates (or equivalent)

Training records / certificates for Environmental Awareness and ODS Management

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Steel Cutting

Purpose

The objective of this procedure is to prevent soil and / or water contamination from steel cutting.

Scope

Fluid containing steel scrap (cylinders) and barges

Roles

Cutters

Procedures

For Scrap

1. Cutters will check and remove fluids prior to cutting.
2. When cutting cylinders which likely contain encased hydraulic fluid or other lubricants, cutters will:
3. Place and cut the cylinder within the containment vessel
4. Discharge the contents of the container into the waste oil tank on an as needed basis to prevent overflow and ensure ease of transfer.

For Barges

1. Scrap marine vessels including barges cannot be processed in the foreshore.
2. Marine scrap vessels will receive initial breakdown at a drydock or land-based facility before being transferred to Amix for further processing.

Documentation and References

Records

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Decommissioning Transformers (With Less Than 50 µg/g PCB Contamination)

Purpose & Background

Chemical and mechanical methods can be used to decontaminate non-porous surfaces which have come into contact with PCB contaminated mineral oil such as transformer cores, coils, casing and other electrical equipment such as switch gear. Methods that include “chopping, distilling, filtering, oil/water separation, spraying, soaking, wiping, stripping of insulation, scraping, scarification or the use of abrasives or solvents may be used to remove or separate PCBs”[1] from nonporous surfaces, as applicable. The method that is most appropriate depends on the location of the PCB-affected surface (i.e., interior or exterior) and whether the affected media is painted or covered with another sort of coating.

Scope

Cleaning Procedure for Transformers Containing Mineral Oil With Less Than 50 µg/g PCB.

Procedures

General

For the cleaning of non-porous surfaces associated with electrical transformers and switch gear the most effective method is based upon US EPA 40 CFR 761 Subpart S, *Double Wash/Rinse Method for Decontaminating Non-Porous Surfaces.* “The double wash/rinse procedure is used to quickly and effectively remove PCBs on surfaces.”[2]

Transformer Transfer

1) Amix will only accept transformers which have been drained, tested and verified to have come into contact with PCB contaminated mineral oil containing less than 50 µg/g
2) All equipment will have appropriate documentation including inventory control documentation and analytical data
3) Equipment is transported directly to the Amix facility in Surrey where it is unloaded, checked against the inventory list , and stored in the specially designed facility until it is to be recycled.

Transformer Dismantling

1) When ready to be recycled, the equipment is placed onto the dismantling conveyor.

2) The equipment is cut open using torches or shears to expose the contaminated surfaces and eliminating any confined spaces.

3) Tops are removed; bushings, retaining bolts, and switches are all removed for recycling at a later time.
4) The core and coils are lifted from the casing and placed in a drip pan, located over a large draining tank in the event there is residual oil still present.
5) The casing may also be placed onto this tank upside down and allowed to drain.
6) The core and coils are moved to another areas where they are further dismantled
7) The casing is wiped dry to remove any residual oil.
8) All paper and non-metal materials removed from the transformer as well as all contaminated absorbents used in the process will be collected and placed in UN rated containers for disposal at a licenced facility.
9) All mineral collected will be collected in UN rated containers for disposal at a licenced facility.

Transformer Decontamination

Contaminated surfaces will be solvent washed with an appropriate solvent to remove PCB adsorbed to the nonporous surface. Appropriate solvents will include kerosene, diesel fuel, or terpenes.

1) First Wash

- Cover the entire surface with organic solvent in which PCBs are soluble to at least 5 percent by weight.
- Contain and collect any runoff solvent for disposal
- For rough surfaces, scrub surface with a scrub brush or other abrasive material.
- For smooth surfaces, wipe smooth surfaces with a solvent-soaked, disposable absorbent pad
- Wipe, mop, and/or sorb the solvent onto absorbent material until no visible traces of the solvent remain

2) First Rinse

- Wet the surface with clean rinse solvent such that the entire surface is very wet for 1 minute.
- Drain and contain the solvent from the surface.
- Wipe the residual solvent off the drained surface using a clean, disposable absorbent pad until no liquid is visible on the surface.

3) Second Wash

- Repeat the procedure in Part A.). The rinse solvent from Part B.) may be used.

4) Second Rinse

- Repeat the procedure in Part B.).
- All contaminated rinsate will be collected in UN rated containers for disposal at a licenced facility.

Sampling Procedures

1) A representative sample of the *Second Rinse* will be collected and placed in a 125mL glass jar fitted with a Teflon lid and sent to a CAEAL accredited lab for analysis for PCB.
2) A Standard Wipe Test will be conducted on exposed surfaces at a frequency of 1 sample per 1 m^2,
3) At such time as correlations between initial PCB concentration in the mineral oil responsible for the contamination and Standard Wipe Test results can be established, sample frequency could decrease.
4) Standard QA/QC procedures, as outlined in British Columbia Field Sampling Manual, 2003 Part D, Section 3, pp 191 - 193, requires the collection and testing of field blanks and replicates. One blank and one replicate will be submitted per 10 samples. A replicate sample will be considered a wipe test directly adjacent to the original wipe test sample.

Sample Results Interpretation

1) A sample result, expressed in µg/g or ml, showing PCB concentration less than the laboratory Method Detection Limit will indicate that the surface from which the sample was taken is deemed PCB free.
2) A wipe test result expressed in µg/ 100cm^2, showing PCB concentration less than the Method Detection Limit will indicate that the surface from which the sample was taken is deemed PCB free.

Standard wipe test: A standard-size template (10 centimeters (cm) x 10 cm) will be used to delineate the area; the wiping medium will be a gauze pad or glass wool of known size which has been saturated with hexane. It is important that the wipe be performed very quickly after the hexane is exposed to air. Wipe Test jars will be prepared with hexane in a CAEAL accredited laboratory and that the wiping medium will be stored in sealed glass jars with Teflon lids until it is used for the wipe test.

Limitations

All workers conducting decontamination activities shall take necessary measures to protect against direct release of PCBs to the environment from the decontamination area.

All workers participating in decontamination activities shall wear or use protective clothing or equipment to protect against dermal contact or inhalation of PCBs or materials containing PCBs.

References

British Columbia Ministry of Environment, *British Columbia Field Sampling Manual, 2003*

Protocol for Management of PCB Transformers, Procedure Manual Volume 8, Section 7, Subsection 05.05 July 30, 1996, British Columbia Ministry of Environment,
PCB Regulations, SOR/2008-273, Environment Canada.

United States Environmental Protection Agency (USEPA), 1998. *PCB Disposal Amendments, Title 40, Subpart 761, Code of Federal Regulations* as published in the 28 June 1999 Federal Register.

Woodyard, J.P., Linz, D.G., and Kan, A.T, 1995. *Solvent Selection for PCB Decontamination of Equipment Surfaces.*

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[1] Title 40, Part 761.79(6)(b) of the Code of Federal Regulations (40 CFR 761)
[2] Title 40, Part 761.360 of the Code of Federal Regulations (40 CFR 761)

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Decommissioning PCB Contaminated Non-Porous Surfaces (Less than 50 µg/g)

Purpose and Background

Chemical and mechanical methods can be used to decontaminate non-porous surfaces which have come into contact with PCB contaminated mineral oil such as transformer cores, coils, casing and other electrical equipment such as switch gear. Methods that include “chopping, distilling, filtering, oil/water separation, spraying, soaking, wiping, stripping of insulation, scraping, scarification or the use of abrasives or solvents may be used to remove or separate PCBs”[1] from nonporous surfaces, as applicable. The method that is most appropriate depends on the location of the PCB-affected surface (i.e., interior or exterior) and whether the affected media is painted or covered with another sort of coating.

Scope

Cleaning Procedure for Non-Porous Surfaces in Contact with Mineral Oil Containing Less Than 50 µg/g PCB.

Procedures

General

For the cleaning of non-porous surfaces associated with electrical transformers and switch gear the most effective method is based upon US EPA 40 CFR 761 Subpart S, *Double Wash/Rinse Method for Decontaminating Non-Porous Surfaces.* “The double wash/rinse procedure is used to quickly and effectively remove PCBs on surfaces.”[2]

Equipment Transfer

1) Amix will only accept equipment which has been drained, tested and verified to have come into contact with PCB contaminated mineral oil containing less than 50 µg/g.
2) All equipment will have appropriate documentation including inventory control documentation and analytical data
3) Equipment is transported directly to the Amix facility in Surrey where it is unloaded, checked against the inventory list, and stored in the specially designed facility until it is to be recycled.

Equipment Dismantling

1) When ready to be recycled, the equipment is placed onto the dismantling conveyor.
2) For equipment excluding transformers, the equipment is cut open using torches or shears to expose the contaminated surfaces and eliminate any confined spaces.

Equipment Decontamination

Contaminated surfaces will be solvent washed with an appropriate solvent to remove PCB adsorbed to the nonporous surface. Appropriate solvents will include kerosene, diesel fuel, or terpenes.

1) First Wash

- Cover the entire surface with organic solvent in which PCBs are soluble to at least 5 percent by weight.
- Contain and collect any runoff solvent for disposal
- For rough surfaces, scrub surface with a scrub brush or other abrasive material.
- For smooth surfaces, wipe smooth surfaces with a solvent-soaked, disposable absorbent pad
- Wipe, mop, and/or sorb the solvent onto absorbent material until no visible traces of the solvent remain.

2) First Rinse

- Wet the surface with clean rinse solvent such that the entire surface is very wet for 1 minute.
- Drain and contain the solvent from the surface.
- Wipe the residual solvent off the drained surface using a clean, disposable absorbent pad until no liquid is visible on the surface.

3) Second Wash

- Repeat the procedure in Part A.). The rinse solvent from Part B.) may be used.

4) Second Rinse

- Repeat the procedure in Part B.).
- All contaminated rinsate will be collected in UN rated steel tight-head drums for disposal at a licenced facility.

Sampling Procedures

1) A representative sample of the *Second Rinse* will be collected and placed in a 125mL glass jar fitted with a Teflon lid and sent to a CAEAL accredited lab for analysis for PCB.
2) A Standard Wipe Test will be conducted on exposed surfaces at a frequency of 1 sample per 1 m^2,
3) At such time as correlations between initial PCB concentration in the mineral oil responsible for the contamination and Standard Wipe Test results can be established, sample frequency could decrease.
4) Standard QA/QC procedures, as outlined in British Columbia Field Sampling Manual, 2003 Part D, Section 3, pp 191 - 193, requires the collection and testing of field blanks and replicates. One blank and one replicate sample will be submitted per 10 samples. A replicate sample will be considered a wipe test directly adjacent to the original wipe test sample.

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Limitations

All workers conducting decontamination activities shall take necessary measures to protect against direct release of PCBs to the environment from the decontamination area.

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[2] Title 40, Part 761.360 of the Code of Federal Regulations (40 CFR 761)

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Action Item #	Description	Deliverables	Comments
1	Plans	- Signed drawings of facility layout - Plan view - Design of storm water management and treatment - Ground water monitoring well locations - Design of environmental protection measures such as paved receiving, handling and storage areas with protective liners or epoxy coated concrete with spill containment - Design of leak detection systems - Other environmental controls	
2	Waste Information	- Demonstrate reasonable steps to identify all hazards of wastes before receiving. - Waste Approvals and copies of lab reports used to identify incoming waste - Log book or electronic records documenting the volume/weight of inbound waste, date received, generation location and shipping document number - Waste acceptance procedures including unacceptable waste procedures - Documented shipment discrepancies and any mitigating actions taken - Facility quarterly and/or annual reporting of materials received	
3	Waste Record	- Inventory of all transformers currently on site - Site map showing the location of each storage area in the facility and transformers currently stored there - Record of all transformers dismantled - Record of disposal/recycling of all dismantling residuals such as rinse solvents, absorbents, oily rags, contaminated PPE etc. - Record will include location of disposal/recycling facility, volume/weight shipped, shipping document reference number, date shipped, and transporter.	
4	Weather Protection	- Transformer storage and dismantling areas are protected from the weather	
5	Access Security	- Controlled entry - Perimeter fencing - Appropriate signage & clearly visible	
6	Prevention of Fire, Explosion and Accidental Reactions	- Waste protected from open flames or sparks - Appropriate signage & clearly visible from 10 m	

7	Spill Protection & Reporting	- Details of spill containment system - Inspection records of containment system - Inspection records show any irregularities identified at facility and date identified, corrective actions taken - Inspection records maintained on site	
8	Contingency Plan	- Contingency Plan will include response to releases of PCB contaminated materials to the environment, fire, flood, earthquake, etc. - Include emergency contact lists, lists of response contractors, reporting requirements to Federal and Provincial agencies	
9	Emergency Systems Testing	- Monthly Facility Inspection logs - Contingency Plan tested yearly or more frequent - Contingency Plan testing documented and filed.	
10	Personnel Training	- Training records of employees working at the facility - Annual review of required training	
11	Closure	- Documented closure plan - Include procedures for dismantling facility and any environmental assessments that may be required under the CSR or HWR.	
12	Operational Requirements for a Dismantling Facility	- Secondary containment for bulk liquid storage - Overflow protection - Secondary containment for any hoses & connections - Review weekly inspections of liners & leak detection systems - Review of groundwater monitoring system and results - Documentation of any breeches of liners or non-compliant monitoring results and mitigating actions	
13	Performance Standards for a Dismantling Facility	- Review laboratory reports for discharged storm water quality & compare against HWR Schedule 1.2 - Laboratory reports for dismantling residuals such as wash solvents, absorbents, rags, used PPE	
14	Mixing & Dilution	- Wastes must not be mixed or diluted to avoid the Hazardous Waste Regulation	
15	Prohibition	- No hazardous waste will discharged to a municipality or public authority unless authorized by a permit, approval, order, regulation or approved waste management plan	
16	Registration of Hazardous Waste Gen'd	- Site has a BCG number which is current to wastes shipped - Form 1 completed for the Facility as a generator	

Surface and Groundwater Monitoring

Purpose

The procedure provides instruction to ensure procedural consistency for sampling surface and groundwater from Amix Surrey. Analytical results will provide the basis to assess compliance with relevant regulations and standards and, where indicated, modify controls and procedures as needed to maintain compliance.

Scope

- Physical: Surrey, BC site
- Regulatory Stormwater:
  - BC Hazardous Waste Regulation, Schedule 1.2
  - BC Vehicle Dismantling and Recycling Industry Environmental Planning Regulation
  - BC Contaminated Sites Regulation
- Groundwater
  - BC Contaminated Sites Regulation

Roles

- EMS Coordinator, environmental service contractors

Procedures

Surface Water

1. Samples will be taken semi-annually (every six months) from the 3rd chamber of each oil / water separator on site. There are four separators (from west to east):
   - Non-ferrous
   - Maintenance Shop
   - Turnaround
   - Car Pad
2. Samples will be taken by the EHS Coordinator using standard sampling techniques and equipment (e.g., wattera tube or bailor).

3. Samples will be promptly submitted to accredited laboratories for analysis (e.g., ALS, Maxxam / Cantest).

4. Sample parameters will cover applicable regulatory criteria:

    - Total metals including Mercury
    - Dissolved metals
    - Total PCB
    - Mineral, Oil and Grease
    - BTEX?? Dropped in previous years

5. Analytical results will be stored in electronic form at Amix (see eDICTS monitoring data).
6. Depending on data trends and on-site activities that could affect discharge quality, parameters tested may be adjusted.

Groundwater

1. Annual groundwater sampling plans will be generated by a competent technical services firm specializing in groundwater /hydrogeology.
2. Upland wells and, where applicable, foreshore shallow point wells will be sampled twice per year unless otherwise recommended by the technical specialist in groundwater and / or by authorities (e.g., Port Metro Vancouver).
3. Samples and reporting will be done externally by the approved groundwater specialist firm.
4. As of 2010, there were eight upland wells. Wells will be protected from salvage storage and processing activities. Damaged or inaccessible wells must be replaced prior to subsequent sampling episodes.
5. Parameters tested will vary according to analytical results and data trends. As of 2010, parameters will include:

    - Dissolved metals
    - LEPH/HEPH, PAH
    - BTEX / VPH

6. Reports will be stored electronically at Amix and Envirochem Services. Hard copies will reside at Amix.

Documentation and References

Records

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