ENVIRONMENTAL ASSESSMENT REGISTRATION

STERICYCLE WASTE TRANSFER FACILITY

SUBMITTED TO:
MINISTER OF ENVIRONMENT AND CONSERVATION
DIRECTOR OF ENVIRONMENTAL ASSESSMENT
PO Box 8700
St. John's NL
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PREPARED BY:
STERICYCLE, ULC
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FEBRUARY 2014

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STERICYCLE WASTE TRANSFER FACILITY

2.0 PROPONENT:

(i) Name of Corporate Body: STERICYCLE, ULC

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(iii) Chief Executive Officer: ROBERT JACOME
Vice-President and General Manager
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(iv) Principal Contact Person for purposes of environmental assessment:
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3.0 THE UNDERTAKING:

3.1 Need for the Undertaking:

The purpose of the proposed project is to establish a biomedical waste transfer facility to better service the Newfoundland hospitals and other healthcare providers in the Province. Stericycle currently collects and transports the biomedical waste generated by the hospitals directly to its Moncton, NB and Dartmouth, NS facilities for treatment and disposal. The nature of the project is to establish a base in Newfoundland from where the company would collect, receive and consolidate the waste before shipping it to its treatment and disposal facilities outside the Province. This will provide for a more efficient and environmentally friendly process by significantly reducing the number of vehicle movements and ferry crossings. It will also have a positive impact on the healthcare establishments as it will give the company greater flexibility and capability in servicing these establishments even in times of bad weather or ferry service interruptions. The timely collection of these wastes from the establishments is very important to ensure their proper management.

3.2 Nature of the Undertaking:

The project is to establish a waste transfer facility in Mount Pearl. The facility will serve as the company base in Newfoundland. As such, the vehicles (approximately 2-3) used to collect waste in Newfoundland will be based at the facility. On a daily basis, vehicles will be dispatched to service customers on the island. At the end of their routes, they will come back to the facility where the waste will be off-loaded directly inside the building where it will be consolidated and then temporarily stored until it is ready to be shipped to the company disposal sites outside of the Province. The facility will not in any way process or treat the waste collected.

The facility will collect and transfer biomedical waste generated by the Newfoundland hospitals as well as other healthcare providers (doctor offices, dental offices, etc…).

Biomedical waste consists of:

- Human or Animal Anatomical Waste

  This consists of human tissues, organs and body parts, but does not include teeth, hair and nails, or specified risk materials as regulated by the Canadian Food Inspection Agency.
- Microbiology Laboratory Waste

  This consists of laboratory cultures, stocks or specimens of microorganisms, live or attenuated vaccines, human or animal cell cultures used in research and laboratory material that has come in contact with any of these.
- Blood and Body Fluid Waste

  This consists of fluid blood and blood products, items saturated or dripping with blood, body fluids contaminated with blood, and body fluids removed for diagnosis during surgery, treatment or autopsy. This does not include urine or feces.
- Waste Sharps

  Waste sharps are clinical and laboratory materials consisting of needles, syringes, blades, or laboratory glass capable of causing punctures or cuts. (CCME – Guidelines for the Management of Biomedical Waste in Canada)

Biomedical waste also includes:

- Cytotoxic Waste

  Cytotoxic waste is the by-product of cytotoxic drug therapy administered to patients (such as chemotherapy). Cytotoxic waste typically includes all drug administrative equipment (i.e. needles, syringes, dripset etc.) as well as all

gown and body fluids/waste from patients undergoing such treatment and leftover chemotherapy drugs.

- Pharmaceutical Waste

  Pharmaceutical waste includes unused or outdated medications.

These waste as generated by the healthcare establishments are segregated from the general waste streams and packaged in small, sealed, rigid and leak proof containers. The containers consists of lined plastic or cardboard containers or rigid leak proof and puncture resistant containers (for waste sharps), all fully compliant with the applicable regulations (Federal Transport of Dangerous Goods Regulations, CCME Guidelines) and standards (Canada General Standard Board – CGSB 453-125, Canadian Standard Association CSA Z317.10 and CSA Z316.6).

It is important to note that the Stericycle drivers are fully trained and will not collect any waste from the healthcare establishments if it is not properly packaged and identified.

Additional information and pictures regarding the biomedical waste segregation and packaging is provided in Section 4.4.

Upon receipt at the facility, the biomedical waste will be offloaded directly inside the building where it will be inspected and weighed. The reusable plastic containers will then be mechanically transferred into transport containers more suitable for marine transportation. The transport containers will be closed and sealed and then put into temporary refrigerated storage. Current regulations require that biomedical waste be stored at $4^{o}C$ or less. The plastic reusable containers will then be cleaned and disinfected and then stored in the building until they are sent back to the healthcare establishments.

The facility will receive approximately 2,000 kg of biomedical waste per day (or 60,000 kg per month) and will keep it in storage for approximately one week. However, the site will have sufficient storage to store waste for longer periods should there be problems with the marine transportation service preventing it from shipping the waste to its processing facilities in New Brunswick or Nova Scotia.

The facility will also collects and receives small quantities of waste products from retail stores, distributors or healthcare providers. This consists mainly of consumer packaged products that are damaged or otherwise not sellable. Examples of products would include bleach, spray paint cans, corrosive cleaners, etc… Prior to collection, these products will be segregated and packaged in small containers (mostly cardboard boxes and plastic pails) in full compliance with the Transport of Dangerous Goods Regulations. Upon receipt at the facility, these containers will be stored inside the building in a dedicated area, away from the biomedical waste, for a period not to exceed 90 days. No more than 5,000 kg of such waste per month will be received and stored at the site. This represents approximately 5% of the waste to be handled by the facility.

Additional information is provided in Section 4.4.

3.3 Proponent's Experience:

Stericycle, ULC is a Canadian company with its corporate office in Brampton, ON. It is wholly owned by Stericycle, Inc. a public company based in Chicago, IL and traded on the NASDAQ (SRCL). The company has revenues in excess of $2 billion and employees more than 12,000 people worldwide.

The company specializes in the management of biomedical waste. It has been in business since 1989. In Canada, the company operates 2 incineration facilities, 4 sterilization facilities, 5 waste transfer facilities and runs a fleet of more than 150 vehicles located at 17 different locations across the country. Stericycle services customers in all 10 Canadian provinces. We are the leader in managing biomedical waste in Canada.

The waste transfer facility to be established in Mount Pearl will be very similar to five of our facilities. We have more than 20 years of experience running biomedical waste transfer facilities. We understand how to manage them in a safe, compliant and effective manner. Our staff is fully trained, knowledgeable and experienced with all the processes and procedures that are required to ensure the proper management and risk mitigation of those facilities.

The company employs a team of Environmental, Health and Safety professionals that are responsible for ensuring that our operations are in full compliance with all our operating approvals and all applicable rules and regulations at all times. These professionals do not report into the site management but directly to the company Vice-President and General Manager and therefore have the required level of independence to enforce the company policies that are implemented to achieve this level of safety and compliance.

There will be an Environmental, Health and Safety professional assigned to the Mount Pearl facility.

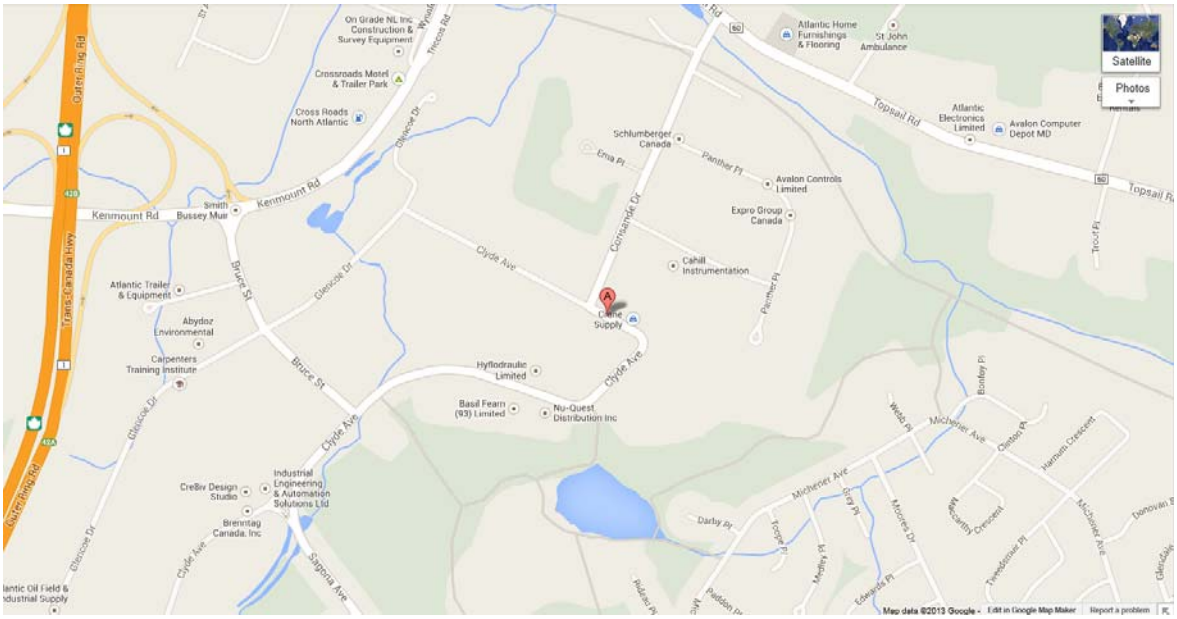
Note that Stericycle currently holds a Certificate of Approval issued by the Government of Newfoundland and Labrador Department of Environment and Conservation for the transportation of biomedical and other waste (WMS-10-10-019, included in Appendix A). Once released from Environmental Registration,

the Company will seek the Certificate of Approval required to operate the waste transfer facility.

4.0 DESCRIPTION OF THE UNDERTAKING:

4.1 Geographical Location:

The proposed undertaking will be located at 27 Clyde Avenue, Donovans Industrial Park, Mount Pearl, NF as shown below.



A copy of the legal survey is attached in Appendix B

The site is located in the Donovans Industrial Park. It is easily accessible through Highway 1 and Topsail Road.

Adjacent properties are occupied by various industrial tenants who distribute commercial and industrial components, service the oil and gas industries or manufacture paper products.

4.2 Physical Features:

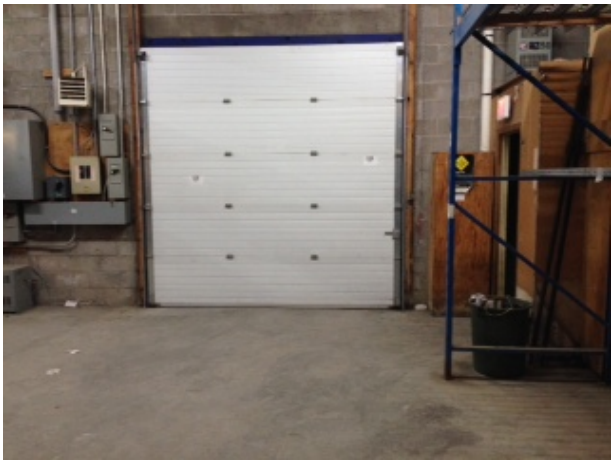
The site is 1.895 acres in area and includes a 10,600 sq ft building of which 2,700 sq ft is office space and 7,900 sq. ft. is warehouse space. Approximately half of the office space is currently occupied by a security system company and 2,000 sq. ft by the property owner. The remainder of the office space and the warehouse (5,850 sq. ft) are currently unoccupied. There is no access door between the space that Stericycle will occupy and the other tenants.

There is a large lot (approximately 38,850 sq.ft) at the back of the building that is gravel covered and fully fenced. The building will also be protected by a fire and intrusion alarm system including smoke detectors, motion detectors and door contacts. The security system will be monitored on a 24-hour per day and 7-day per week basis by a third party.

There will be signs at both the front door and the loading dock doors indicating that the site is a waste transfer site. An emergency phone number will be provided. Waste storage areas will be identified appropriately for the waste to be stored (biohazard sign for biomedical waste storage trailer). All waste storage areas will be locked except during loading and unloading.

Pictures of the front, back and inside of the building are shown below.






Stericycle will use the unoccupied section of the warehouse and part of the backyard for its operations. All waste management activities will be conducted inside the building. Truck loading and unloading activities will be performed directly from the loading docks to the building. There will never be any waste outside the building or a company vehicle. A site plan is included in Appendix C.

The waste handling and storage areas will consist of the inside of the warehouse (for waste other than biomedical waste) as well as refrigerated 53 ft trailer parked at the loading dock (for biomedical waste). The trailer will be equipped

with an electric and diesel powered reefer. Either unit will have insulated walls and a compressor capable of maintaining the stored waste at 4 ^{o}C or less at all times. The compressors do not use any CFCs (they use a Zero Ozone Depletion Potential (ODP) refrigerant – R404A) and their service will comply with the Newfoundland and Labrador Regulation 41/05 Halocarbon Regulations under the Environmental Protection Act. The loading dock area will be paved.

Should a refrigeration unit be used, it will be installed directly on the building concrete floor. There will be no floor drain in the refrigeration unit. If a trailer is used, the trailer will be equipped with a sealed aluminum floor and liquid retaining tank. This will ensure that in the unforeseen event of a spill inside the storage unit, the material will be contained in the unit and therefore easily cleaned. The site will be equipped with complete spill kits including absorbent materials, socks, disinfecting solutions and packaging equipment.

A separate area inside the warehouse will be used to store the other (other than biomedical) waste received. The storage area is identified on the Site Plan in Appendix C.
Note that the warehouse floor will be coated with an impervious material.

The office area will be used for administrative work as well as for a change room and separate eating area for the employees (see Appendix C).

Given the nature of the activities that will occur at the site (waste receiving, storage and shipping), the location of the site (in an industrial park, inside a building), physical and biological environments will not be affected by this undertaking.

4.3 Construction:

The site will only require minor modifications such as the addition of 2 loading dock doors (see attached site plan in Appendix C), and some asphalt pavement by the truck doors.

A Development Permit (DP13-086 – attached in Appendix D) has been obtained from the City of Mount Pearl on December 19, 2013. The permit allows Stericycle to occupy the site for the desired use (biomedical waste/temporary storage and transfer facility) once the approval from the Newfoundland and Labrador Department of Environment has been obtained. Stericycle will also develop the site in full compliance with the conditions of the permit.

No more than 30 days would be required to complete these modifications, which will begin as soon as the required approvals are obtained.

The site will also be equipped with a pressure washer to wash and disinfect the empty reusable containers, a cart lifter and some racking. Additional information is provided in the next section. Again, this equipment will be installed once all approvals have been obtained.

There will be no airborne emissions or liquid effluents during the construction/set up period. Only limited quantities of construction debris will be generated from the installation of the 2 doors.

4.4 Operation:

The site will operate as a transportation terminal and waste transfer site. As such, the vehicles (approximately 2-3) used to collect waste in Newfoundland will be based at the site. Every day, they will be dispatched to service customers on the island. At the end of their route, they will come back to the site (or in some cases go directly to the ferry to travel to Nova Scotia) where their waste will be off-loaded and stored until it is shipped to Nova Scotia for processing.

Below are all the details regarding the site operations:

Waste received:

The site will receive the following waste:

- Biomedical (as defined by the CCME Guidelines on the management of biomedical waste in Canada) from hospitals, other healthcare providers, pharmacies operating a sharps return program (diabetics), retail stores that provide sharps containers in their washrooms. This waste will either be non-regulated by the Transport of Dangerous Goods Regulations (TDGR), or classified as UN3373 or UN3291, class 6.2.
- Pharmaceutical – waste medicines from hospitals or other healthcare providers as well as pharmacies operating a medicine return program (stewardship programs). This waste will either be non-regulated by TDGR or classified as UN3249, class 6.1 or other based on their characteristics.

Approximately 2,000 kg per day of biomedical and pharmaceutical waste will be received at the site. Over the life of the facility, it is anticipated that the facility will not received more than 100,000 kg of such waste per month.

- Other waste dangerous goods of class 2, 3, 4, 5, 6, 8 or 9 of the TDGR or non-hazardous goods such as damaged/unsellable consumer products (cleaners, cometics, spray cans, etc..) from retail stores, distributors or healthcare providers. The site will not receive any industrial hazardous waste or hazardous waste in bulk.

  These waste dangerous goods will be overpacked, at the customer locations, in small means of containment in full compliance with the TDGR packaging requirements. There will be no bulking of this waste at the site.

No more than 5,000 kg per month of such waste will be received at the site.

All waste received at the site will originate from generators in Newfoundland.

Waste Packaging

Stericycle provides compliant waste containers to all its customers as well as waste packaging and segregation procedures and posters to ensure that all waste collected is properly packaged and safe to transport and receive at its facility. The containers used are all compliant with the applicable regulations and standards (Transport of Dangerous Goods, Canada General Standard Board Packaging standard 43-125, CCME Guidelines for the Management of Biomedical

Waste in Canada). They are sealed and leak proof and lined cardboard boxes, plastic pails or plastic reusable containers. In the case of sharps biomedical waste, puncture resistant containers are used. Waste is never transported in bulk or compressed. Rigid, sealed and leak proof containers are always used. The waste is always packaged in a combination package consisting of a plastic liner or plastic pail that is then put into a cardboard box or reusable plastic container that is then securely closed.

The high strength and integrity of this packaging prevents greatly reduces the risk of spills or incidents.

The pictures below represent typical biomedical waste containers used:

Maximum quantity stored and duration

- On average, the quantity of biomedical and pharmaceutical waste on site should be less than 15,000kg. The maximum quantity of biomedical and

pharmaceutical waste in storage on site should be 60,000 kg. All the biomedical waste on site will be stored at 4^{o}C or less in sealed, locked refrigeration units/trailers at all times. This complies with the requirements of the CCME Guidelines for the Management of Biomedical waste in Canada as well as the CSA Standard Z317.1 for the management of healthcare waste.

The average storage time should be approximately one week but will not exceed 15 days. Only in the event of ferry and/or weather issues would the waste be stored for longer period.

- The maximum quantity of other waste in storage should be 5,000 kg for no more than 90 days

Waste Collection and Receiving

Vehicles (approximately 2-3) authorized under Certificate of Approval No. WMS10-10-019 will be based at the site. At the end of their route, they will return to the site. Please refer to the Site Plan in Appendix C.

Upon arrival, the trucks will be managed as follows:

- They will be parked on site, either in the yard or at the loading dock. The waste compartments will be locked, until the site is ready to transfer the waste.

- Once the site is ready to offload a truck, it will be moved to the loading dock, if not already there. Note that incoming trucks parked in the yard

(not at a loading dock), will be emptied and have their waste transferred to the trailer or building within the same day of arrival at the site.

- The waste will be transferred directly from the truck to the building:
  - As the waste is offloaded from the trucks, it will be inspected and weighted prior to being stored in the trailer or in the building.
  - The inspection will consist of a visual inspection of the packaging to verify its integrity and proper labeling and to confirm that it is of an acceptable waste type. The Stericycle drivers are fully trained on the applicable regulations and waste acceptance protocols and will not accept to collect any waste container that is not in good condition or not properly labeled. Such containers would stay at the healthcare establishment.
  - The waste containers will also be weighted and have their barcode labels scanned. The barcode labels used are part of our proprietary tracking system (SteriWorks). With this system, each individual waste container has a unique barcode label which identifies the waste generator and the nature of the waste. The barcode is scanned at the time of collection at the generator's site, upon receipt at the Stericycle transfer facility (Stericycle Mount Pearl facility) and again at the final disposal site (Stericycle Dartmouth or Moncton facilities). This enables a complete tracking of the waste from the time of collection until final disposal.
  - Shipping documents (manifests, bill of lading) are then verified and signed. Note that a TDGR compliant shipping document will be used to document all the waste collected and received at the Mount Pearl facility while a federal manifest, compliant with the Interprovincial Movement of Hazardous Waste Regulation will be used for all

shipments from the Mount Pearl facility to the company disposal sites in Nova Scotia or New Brunswick.

- Biomedical waste will be consolidated prior to transfer/storage

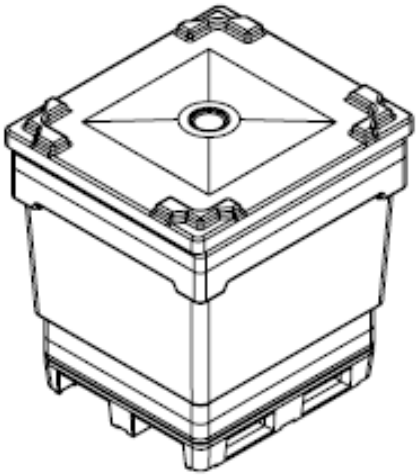
- Other non-biomedical waste (waste dangerous goods as described above) will be stored inside the building in the dedicated area (See Appendix C), away from the biomedical waste. There will be no contact between the two different types of waste. The waste will be stored by waste class, away from high traffic area and within containment areas (spill pallets) to ensure that any potential spill is contained. The storage areas will be in full compliance with the Building Code and the Fire Code.

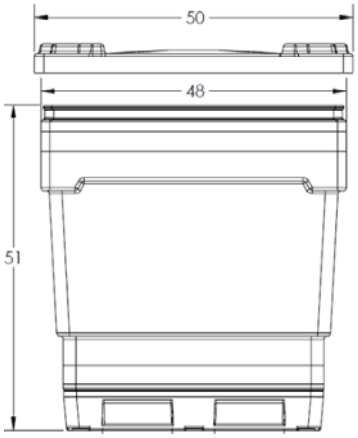
Biomedical Waste Consolidation and Transfer

The waste collected from the hospitals is packaged in sealed plastic bags, sharps containers or plastic pails. Those primary containers are then deposited, at the hospital, into carts for ease of movement through the hospitals and as secondary containment. However, although the carts are very safe and provide excellent containment, they are not very efficient for transportation purposes. They have wheels which make them hard to stack and do not cube well into the transport trailer. For short distances on land, this is acceptable, but given that all the waste needs to be transported to Nova Scotia or New Brunswick using marine transport, a more suitable container is required.

Upon receipt at the site, the biomedical waste carts will be mechanically transferred, using an electrically powered cart dumper, into high integrity plastic reusable bins more suitable for marine transport (see picture below). These bins

are leak proof and comply with all applicable regulations and standards as stated above.





The area where the containers will be transferred will not have any floor drains and will be equipped with a spill kit.

Once full, the transport bins will be stored refrigerated in the trailer located at the loading dock. When the trailer is full, it will be shipped to the company site in Nova Scotia for processing. An empty trailer will then be moved to the loading dock. The company has many refrigerated trailers in its fleet to ensure that one will always be available. Should there be a problem with the availability of the trailers, Stericycle will stop receiving waste at the facility and send it directly to its processing sites in Nova Scotia or New Brunswick.

The empty reusable containers will then be washed and stored in the building, as indicated on the site plan, to be returned to the hospitals.

Reusable Container Washing Process

Empty carts and transport bins will be washed using hot water and a chlorine based soap (Zep FS ZChlor or equivalent – See Appendix E for specifications and M.S.D.S.). The soap is specifically designed to remove any protein, blood or stains. The high pressure water spray also contributes in removing any soil and dust that could have been accumulated during transportation. The site will have a separate section (see site plan) where the washing will occur. This section will have adequate separations to prevent any water from splashing to the other areas of the building as well as a trench drain connected to the City sanitary sewer line. A standard power washer unit will be used to wash and disinfect both the inside and outside of the containers. As the containers were used to transport waste that was already packaged in sealed bags, boxes or pails, they are then quite clean after each use. They are washed and disinfected only as an added precaution as these containers are used in a hospital environment. The discharge will be in full compliance with City requirements and the Provincial Environmental Control Water and Sewage Regulations.

MONITORING AND CONTROL PROGRAM

The site will be operated to minimize any risk or impact to the environment or the public. The following measures will be in place:

- Waste packaging: as described before, Stericycle provides its customers with waste packaging materials (bags, pails, boxes, plastic reusable containers) that are sealed, leak proof and of sufficient strength to ensure they will not break, crack, tear or otherwise permit the release of waste during transportation and at the site. The packaging material is designed and fully complies with all the requirements of the Transport of Dangerous Goods Regulations as well as all other applicable standards. Stericycle drivers and employees are trained on the proper packaging and labeling procedures and will not accept delivery of any containers that does not fully comply.

  This is a very important and ensures that the potential of any spills or mishaps is very low.

- Site floor and containment areas: The site floor is all concrete and there is only one floor drain (trench drain). The warehouse floor will be coated with an impervious material. The drain is located in the container washing area which is isolated from the waste handling area. Should there be any spills or incident while handling the waste, the spilled material would be contained inside the building and therefore easily cleaned with no impact on the natural environment or the public.

- Biomedical waste transfer/storage trailers: The trailers used have sealed aluminum floors, insulated walls and refrigeration units that are both electric and diesel powered. The sealed floor would contain any spills and the refrigeration unit will keep the waste cool and therefore prevent any degradation. The refrigeration unit can function either on electric power or diesel. Therefore, they can continue to operate even during power failures. See picture of inside of trailer below:

- Spill kits and contingency and emergency response plan

  The site will be equipped with a complete spill kit including absorbent material, socks and disinfecting solutions to properly contain and clean any spills, should there be any. A contingency and emergency response plan, to be approved by the Department of Environment, will also be available and all employees working on site will be fully trained on the requirements of the plan, including how to prevent spills as well as to how to properly contain and clean them should they ever occur. The plan will also describe the procedures to follow and the reporting requirements in the event of any other emergency at the site such as fire, power failures, etc…

- Monitoring and Inspection

  The company will conduct daily inspection of the site to ensure that the waste received is properly packaged, that the storage areas and trailers are in good condition and that all other equipment, such as the washer and cart dumper. The purpose of the inspection will be to ensure the site is operated and maintained such that it does not create any nuisance and that it is in full compliance with all its operating permits, rules and regulations. The inspection will be documented and kept on file.

ENVIRONMENTAL IMPACTS

As described in this document, the site is to be used as a waste transfer station only with no waste processing of any kind. The incoming waste will be packaged in sealed containers and simply transferred in larger secondary containers for ease of transportation outside of the Province. Plastic reusable container will be washed with hot water and a chlorine-based soap. The wash water will be send to sanitary sewer.

Sources of pollutants: These activities will not generate any airborne emissions (no processing, waste in sealed containers) and liquid effluents will be limited to the water generated from the reusable container washing process. This water will not be released to the environment but will be directed to the sanitary sewer. There will be no solid waste materials generated from the operation.

Noise: The site is not processing any waste and does not have any noise generating equipment, except for the power washer (standard commercial unit). The site is located in an industrial compound with the other tenants having similar activities. The truck traffic generated by the site (approximately 3 truck movements per day) as well as the operation of a refrigerated trailer does not generate significant amounts of noise in comparison with the surrounding tenants' activities. Most of them have a much large fleet and one of them also operates refrigerated trailers and/or waste compactors. There is no residential area or any other susceptible receptors at proximity of the site.

Odour: The site will not generate any odours. All waste collected and stored/transferred at the site is properly packaged in sealed containers. There is no processing activity of any kind. Biomedical waste is stored refrigerated and

all activities are held inside the building. At no time will there be any waste or activities outside of the building or the vehicles parked at the loading docks.

Potential causes of resources conflicts: Given the relatively small size (only 2-3 trucks) of the operation and the fact that all activities are done indoors and within an industrial park, there will not be any resource conflict. The facility will not have any negative impact on the surrounding area.

4.5 Occupations:

Stericycle has a comprehensive employment equity policy and program that addresses employment equity relative to but not limited to age and gender. The Company hiring and employment practices comply with this policy.

During the set up phase of the project (i.e. addition of the 2 loading dock doors, installation of the washer and cart dumper), external contractors will be used. These contractors will work under the authority of the property owner (Stericycle leases the property).

During normal operations, the site will employee approximately 3-4 full time employees. There will be one warehouse/office employee as well as truck drivers. The National Occupational Classification Code for these occupations are as follows:

- Truck driver: 7511 (transport truck driver)
- Warehouse/Office worker: 7452 (materials handler) and 1411 (general office support worker)

The truck drivers will collect the packaged waste from the customers and transport them to the site. The warehouse employee will be in charge of transferring the waste, washing the reusable containers and handling all paperwork associated with the operations, including manifests, reports, inspections, etc…

All new staff undergoes an extensive screening process which includes drug use screening, criminal background verification and a medical fitness test including Hepatitis B vaccination. Once hired the staff members go through a comprehensive class room and practical training program. The training program includes the following:

Health and Safety

- Health and Safety Rules and Regulations
- Company Health and Safety Policy and Programs
    - Including bloodborne pathogens training
    - Extreme weather training
    - Safe work procedures
    - Proper lifting techniques and slip/trip/fall prevention
    - Etc..
- Workplace hazardous Materials Information System (WHMIS)
- Substance Abuse Training
- Accident and Injury Reporting Procedure

Regulatory

- Environmental Regulations, Guidelines and Standards
- Environmental Permits (Certificate of Approval conditions)
- Waste Acceptance Protocol
- Transportation of Dangerous Goods (TDG)

Emergency management

- Spill Prevention and Response
- Contingency and Emergency Response Plan

Operations

- Standard Operating Procedures and Standard Work Instructions Review and Training
- Equipment Operating Procedures Review and Training
- Vehicle Loading and Unloading Procedures
- Load Securement Training
- Hours of Service and Log Book Training
- Vehicle Inspection Requirements and Reporting
- Defensive Driving Techniques, including driving in adverse conditions

During the first week the new staff member will work alongside an experience staff member to complete his or her training. During this time the new staff member will learn and put into application under the direct supervision of the experienced staff member all the concepts covered during the in- class training. At the end of the orientation period the new staff member will be evaluated by the Director of Operations and the staff members' supervisor.

The training program is repeated yearly for all staff members.

4.6 Project Related Documents:

Stericycle has obtained from the City of Mount Pearl a Development Permit for the establishment of the facility at 27 Clyde Avenue. The following steps were completed to obtain this permit:

- Submission of the Application Form on October 23, 2013
- Publication of a Public Notice in The Telegram on Nov. 9, 2013 for use of premises by Stericycle. Businesses and residents had 14 days to give written notice.
- The Public Notice was also sent out by mail on November 7, 2013 to all businesses within 150 meters of the site.
- A Briefing Session for all concerned was scheduled for Nov.28, 2013.
- Only one comment was received by the City. The comment originated from a neigbouring property owner. The Briefing session was cancelled and, instead, a meeting was organized with the City and the neighbour for December 11, 2013 at the Mount Pearl City Hall.
- Following the meeting, the City Development department prepared its positive recommendation to the City Council.
- Approval of permit was granted by the City of Mount Pearl Council at the session held on December 17, 2013.
- The permit has been issued on December 19, 2013 and is conditional to Stericycle obtaining the required Certificate of Approval from the Department of Environment.

A copy of the permit as well as the documents presented to the City and the neigbour are included in Appendix D.

5.0 APPROVAL OF THE UNDERTAKING:

Stericycle requires a Certificate of Approval from the NL Department of Environment and Conservation in order to begin operations at the site. A Building Permit and an Occupancy Permit from the City of Mount Pearl are also required.

Once the project will be released from the assessment process, the approval process will be immediately initiated.

6.0 SCHEDULE:

Stericycle desires to begin operations at Clyde Avenue as soon as the Certificate of Approval from the Department of Environment is obtained. The earliest date when site setup could begin is in March 2014 with the beginning of operations approximately 30 days after (assuming all required approvals have been obtained).

This time frame is selected based upon the time required to complete the Assessment Process.

7.0 FUNDING

Stericycle will fund the project on its own. No grant or public funding is involved with this project.

Total capital cost for this project is evaluated at less than $250,000.

February 10, 2014

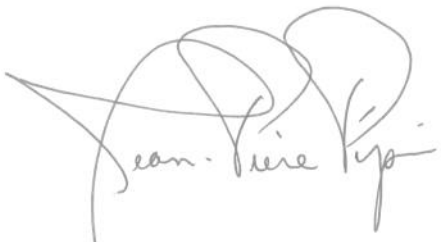
Robert Jacome,

Vice-President and General Manager

8.0 CONCLUSION

Stericycle is very committed to this project. It will set it up in the most professional and state-of-the art manner with all the required safeguards and mitigation measures to ensure the protection of the environment and of the public health. It will operate it in full compliance with all its operating approvals and applicable rules and regulations and with great concern for the health and safety of its employees. It will always act in such a way as to have a positive impact in the community.

Sincerely,



Jean-Pierre Pepin, Eng, MBA

Director, Environment, Safety and Health

Stericycle, ULC.

Appendix A

WMS10-10-019 Certificate of Approval

Government of Newfoundland and Labrador
Department of Environment and Conservation

CERTIFICATE OF APPROVAL

Pursuant to the *Environmental Protection Act, SNL 2002, Sections 16, 78 and 83.*

Date: September 13, 2013

Approval No. WMS10-10-019
Renewal

Expiry: September 13, 2017

File #: 830.000.002

Holder: Stericycle ULC
20 Galloway Street
Moncton, NB E1H 2J4

Attention: **Jean-Pierre Pépin**
Tele - 819-246-4516
e-mail - jppepin@stericycle.com

Re: ***Transportation of Hazardous Waste Dangerous Goods: Province-wide***

Approval is hereby given for the **OPERATION** of a waste management system including the handling, temporary storage (less than 96 hours) and transportation of **hazardous waste dangerous goods within the Province of Newfoundland and Labrador** in accordance with your email received August 8, 2013.

This certificate of approval does not release the holder from the obligation to obtain appropriate approvals from other concerned provincial, federal and municipal agencies. Approval from the Department of Environment and Conservation (the Department) shall be obtained prior to any significant change in the operation of the system, including any future expansion of the waste management system. This approval shall not be sold, assigned, transferred, leased, mortgaged, sublet or otherwise alienated by the holder without obtaining prior written approval from the Minister.

This approval is subject to the terms and conditions as contained in Appendix 'A' attached hereto, as may be revised from time to time by the Department. Appendix 'A' forms part and parcel of this certificate of approval. Failure to comply with any of the terms and conditions may render this certificate of approval null and void, may require the holder to cease all activities associated with this approval, may place the holder and its agent(s) in violation of the *Environmental Protection Act, SNL 2002* and will make the holder responsible for taking such remedial measures as may be prescribed by the Department. The Department reserves the right to make an amendment, addition or deletion to this approval or cancel or suspend it in accordance with the *Environmental Protection Act.*

MINISTER

1.0 GENERAL

1.1 The operation of this waste management system is limited to all equipment and operations for the collection, handling and transportation of ***hazardous waste /waste dangerous goods (refer to section 8.0 for a definition)*** but does not include the **storage** of any of these wastes on or in properties owned, leased and/or operated by the Certificate Holder.

1.2 For inquiries, notifications, and report submissions associated with this approval, contact shall be made with the
Department of Environment and Conservation, **Pollution Prevention Division:**

Telephone:(709) 729-6483/1771
Fax:(709) 729-6969

1.3 This approval shall only remain in effect while Environmental Liability Impairment Insurance in the amount of at least one million dollars is carried.

1.4 The activities associated with this operation may involve, but is not necessarily limited to, the following Acts and Regulations;

Provincial Legislation
Environmental Protection Act SNL 2002 E.14.2
Air Pollution Control Regulations, 2003
Ozone Depleting Substance Regulations (Halocarbon), 2003
Storage and Handling of Gasoline and Associated Products Regulations NLR, 2003
Used Oil Control Regulations, 2002
Waste Management Regulations, 2003
Storage and Handling of Gasoline and Associated Products Regulations, 2003
Pesticides Control Regulations, 2003
Storage of PCB Waste Regulations, 2003

Occupational Health and Safety Act and Regulations

Water Resources Act SNL 2002 W- 4.01
Environmental Control Water and Sewage Regulations, 2003

Federal Legislation
Transportation of Dangerous Goods Act and Regulations as amended
Canadian Environmental Protection Act and Regulations (CEPA)

Other Legislation
Highways Traffic Act
National Fire Code
Fisheries Act
Newfoundland Fire Prevention Act and Regulations

1.5 This approval shall apply to the holder, their employees, contractors, subcontractors and associates engaged in activity described in the application and this approval.

1.6 The Minister may, at any time, require that the holder investigate or conduct studies pursuant to

Sections 99 & 102 of the Act.

1.7 All responsible personnel who are directly involved with operation of this waste management system shall be provided copies of this approval.

1.8 Should the holder wish to continue to operate beyond this expiry date, a written request shall be submitted to the Department for the renewal of this approval. Such a request shall be made prior to **August 10,2017.** Renewal is at the discretion of the Department.

1.9 This approval has been prepared based on the information provided in the documentation listed below. The list below shall be referred to herein as *"the application"*:

- Copy of an Emergency Response Plan on file (August 2013)
- Copy Surety Bond(M216947- August 29, 2013) and insurance (June 1,2013 to June 1, 2014)) documents on file-

2.0 General Requirements

2.1 The characteristics of the waste product being collected will determine whether or not provisions of provincial and/or federal dangerous goods regulations apply. Safety standards, placards, labels, tanker truck inspections, etc. under the provisions of the ***Transportation of Dangerous Goods Act and Regulations*** **and CCME Guidelines for the Management of Biomedical Waste in Canada** shall apply to all transport of waste and hazardous waste dangerous goods of waste and hazardous waste dangerous goods.

2.2 Hazardous Waste/Waste Dangerous Goods other than biomedical waste may only be transported pursuant to this Certificate in accordance with the following:
(a) the waste shall be physically separated from all biomedical waste in the vehicle during collection and transportation; and
(b) where a spill of biomedical waste occurs in the vehicle, all waste in the vehicle shall be managed, treated and disposed of as biomedical waste

2.3 The waste manifesting provisions of the ***Canadian Environmental Protection Act***, ***Inter-provincial Movement of Hazardous Waste Regulations***, are the responsibility of the Waste Management Section, of the Department. ***Waste manifest forms may be obtained from the Department (Tele - 709-729- 1771).*** Completed hazardous waste transport manifests shall be remitted to the Department either prior to shipment or immediately following each export shipment.

2.4 Hazardous waste transported to "Receivers" for treatment prior to disposal both within Newfoundland & Labrador and Canada must be licensed by the Province having jurisdiction. A copy of the license must be submitted to the Department showing that the Receiver is in good standing with the Province of jurisdiction.

2.5 All motor vehicles used in this operation must be inspected and certified as road worthy by the Motor Registration Division of Service NL.

2.6 The ***Dangerous Goods Transportation Act and Regulations*** require that all personnel involved in the handling, offering for transport, and transport of dangerous goods participate in a training program

which includes the essential training components as outlined in the federal ***Transportation of Dangerous Goods Act and Regulations***. In addition to these essential components, the training program shall also include relevant waste management legislation, regulations, and guidelines and the major environmental and health and safety concerns for the wastes to be handled, offered for transport, or transported. This training is a requirement of the Certificate-of-Approval.

2.7 Municipal and industrial landfills in this province ***are not permitted to accept hazardous waste*** materials. Non-hazardous wastes may be disposed of to a landfill with the approval of the GSC and landfill owner/operator.

2.8 All hazardous waste/waste dangerous goods shall be contained in labelled containers or drums.

2.9 All handling and transport operations shall be conducted in a manner that prevents the release of contaminants into the environment. Measures shall be taken to prevent leakage and spillage of hazardous waste/waste dangerous goods.

2.10 Waste importation is restricted.

2.11 Liquid waste shall be transported in a secure vehicle to prevent any loss during transportation. Care shall be taken during tank pump out procedures to ensure no spillage takes place.

2.12 All non-hazardous waste material shall be disposed of in accordance with the ***Environmental Protection Act, SNL 2002*** and the use of approved waste disposal sites in the Province is dependent on the proponent obtaining the permission of the respective owner/operator of each site.

2.13 The company name, address, and telephone number shall be clearly displayed on every waste collection vehicle. Lettering should be at least 5 centimetres in size.

2.14 Every vehicle used for the hauling, collection and transportation of hazardous waste/waste dangerous goods shall be operated and marked/placarded in accordance with Federal ***Transportation of Dangerous Goods Regulations***.

2.15 Prior to any expansion or modification, a letter of application and description shall be forwarded to the Department requesting an amendment to this approval.

2.16 Personnel handling hazardous materials should be trained in the use of personal protective equipment, clean-up equipment and all applicable safety procedures. In addition, sufficient equipment including sorbents, and related clean-up materials shall be kept on hand in the event of a leak or a spill during storage, handling, or transportation

3.0 USED OIL/WASTE OIL

3.1 The Holder shall fully comply with the ***Used Oil Control Regulations*** under the ***Environmental Protection Act, SNL 2002.***

3.2 Disposal of waste hydrocarbons shall be through a licensed used oil treatment / recycling facility.

3.3 Stericycle ULC shall analyse all waste oil for PCB, Total Organic Halogens as Chlorine, Arsenic, Cadmium, Chromium, and Lead. A certified copy from the laboratory of the analysis shall be submitted to the Department before interprovincial transportation can commence.

4.0 POLYCHLORINATED BIPHENYLS (PCBs)

4.1 Transportation of PCB materials must fully comply with the ***Transportation of Dangerous Goods Act*** and the ***Interprovincial Movement of Hazardous Waste Regulations*** and ***PCB Regulations*** under the ***Canadian Environmental Protection Act***.

4.2 PCB fluids, flushing solvents, mineral oil and other liquids contaminated greater than 50 ppm PCB must be placed in 16 gauge steel drums with bungs caulked with a PCB-resistant material. Ten centimetres must be left at the top for expansion due to temperature changes.

4.3 PCB-contaminated soil, small capacitors, and other solids must be contained within bins or closed steel drums with gaskets made of a PCB-resistant material such as nitrile rubber or cork. Capacitors and any similar heavy equipment must also be inside a heavy polyethylene bag or sheeting packed and then packed in sawdust or other sorbent in the shipping container or drum.

4.4 Transformers and capacitors must continue to display their existing serialized PCB warning labels and barrels must have a non-serialized label affixed.

4.5 Movement of PCB waste to the secure site must take place immediately after a cleanup or after equipment is taken out of service. Storage of more than one drum on a separate site for longer than two months is not permitted unless a separate Certificate of Approval is obtained.

4.6 Large volumes (greater than 1000 litres) of fluids from non-PCB transformers must be analysed for PCB content and must meet the requirements of this Department before disposal.

4.7 Stericycle shall accept the return from provincial laboratories for storage, liquid and solid samples submitted for analysis and any PCB wastes resulting from the analyses if the PCB content is determined to be greater than 50 ppm.

4.8 Drums of PCB liquids are not to be stacked.

4.9 Drums of PCB solids are not to be stacked more than two tier high.

4.10 There must be a minimum distance of 500 millimetres between the rows of palletized drums.

4.11 A proposal to decontaminate a transformer and fill with an alternative fluid (a retro-filling proposal) with a view to returning to service, shall be approved by this Department.

4.12 The Holder shall fully comply with the ***Storage of PCB Wastes Regulations*** under the ***Environmental Protection Act, SNL 2002***.

5.0 EMERGENCY RESPONSE

5.1 In the event of an **emergencies and/or spill**, the operator of the vehicle shall notify the Department immediately by calling:

772-2083 or **1-800-563- 9089** (on a 24 hour basis).

5.2 In an emergency, CANUTEC may be called at ***613-996-6666*** (24 hours) or **** 666*** cellular (press **** 666***, Canada only). In a non emergency situation call the information line @ *613-992-4624* (24 hours).

5.3 The Proponent shall maintain an Emergency Response Contingency Plan, specific to operations in Newfoundland and Labrador, and submit an updated copy of this plan to the Department annually.

54 A copy of the holder's current contingency plan, shall be kept in each vehicle used in the operation of this waste management system. Personnel shall be briefed on the contents of the plan and any associated emergency response equipment.

6.0 SAMPLING AND ANALYSIS

6.1 Laboratory analysis shall be conducted in accordance with the Departmental Policy PPD 2001-01

6.2 Quality Assurance / Quality Control (QA/QC) results shall accompany all laboratory test reports submitted to the Department.

7.0 RECORD KEEPING

7.1 All hazardous waste for transport must be manifested and/or carry shipping documents as per Federal legislation requirements.

7.2 Records of laboratory testing and manifesting records shall be maintained for a period of at least years and shall be made available to the Department upon request.

8.0 DEFINITIONS

Hazardous Waste/ Waste Dangerous Goods means: a product, substance or organism that is
(a) included in any of Classes 2 to 6 and class 8 of the ***Transportation of Dangerous Goods Regulations,*** or in Class 9 of those Regulations and destined for disposal;
(b) hazardous and intended for disposal
(c) listed in the ***Schedules (3- 7 and 10)*** *EXPORT AND IMPORT OF HAZARDOUS WASTE AND HAZARDOUS RECYCLABLE MATERIAL REGULATIONS (EIHWHRM)* under the ***Canadian Environmental Protection Act (CEPA)***
(*d*) according to information that Canada has received from the United States or in accordance with the Convention, is considered or defined as hazardous under the legislation of the country receiving it and is prohibited by that country from being imported or conveyed in transit.

Leachable Toxic Waste (LTW) means: waste material which, upon laboratory analysis, is shown to contain levels of contaminants that exceed parameters listed in the Canadian Council of Ministers of the Environment (CCME) Canadian Soil Quality Guidelines (CSQG); and/or the leachate from the material exceeds criteria limits when the material is subjected to the leachate (TCLP) test.

Leachate Test - The U.S. EPA Toxicity Characteristic Leaching Procedure (TCLP), Test Method 1311 (asamended) is to be used to determine the leachate toxicity hazard.

The TCLP Canadian Equivalent is a standard designed to determine the mobility of both organic and inorganic analytes present in liquid, solid and multi-phase wastes. If a total analysis of the waste demonstrates that individual analytes are not present in the waste or that they are present but at such low concentrations that the appropriate regulatory levels could not possibly be exceeded, the test need not be run. This test does not apply to metals in non-dispersible form, which are bits and pieces of metal parts, bars, rods, sheets, wires, cables, bales, scrap automobiles (crushed, baled, shredded or otherwise), railroad box cars, used beverage cans, whole television sets and white goods.

*"***PCB's"** means the chlorobiphenyls that have the molecular formula $C_{12}H_{10-n}Cl_n$ in which "n" is greater than 2;

"PCB liquid" means a liquid containing more than 50 parts per million by weight of chlorobiphenyls;

"PCB solid" means a material or substance other than PCB liquid that contains chlorobiphenyls at a concentration greater than 50 parts per million by weight and includes contaminated materials and solids;

"PCB wastes" include PCB liquids, PCB solid and PCB equipment that have been taken out of service for the purpose of disposal; and

Used oil: means a used lubricating oil or waste oil;

Waste oil: means an oil that as a result of contamination by any means or by its use, is altered so that it is no longer suitable for its intended purpose.

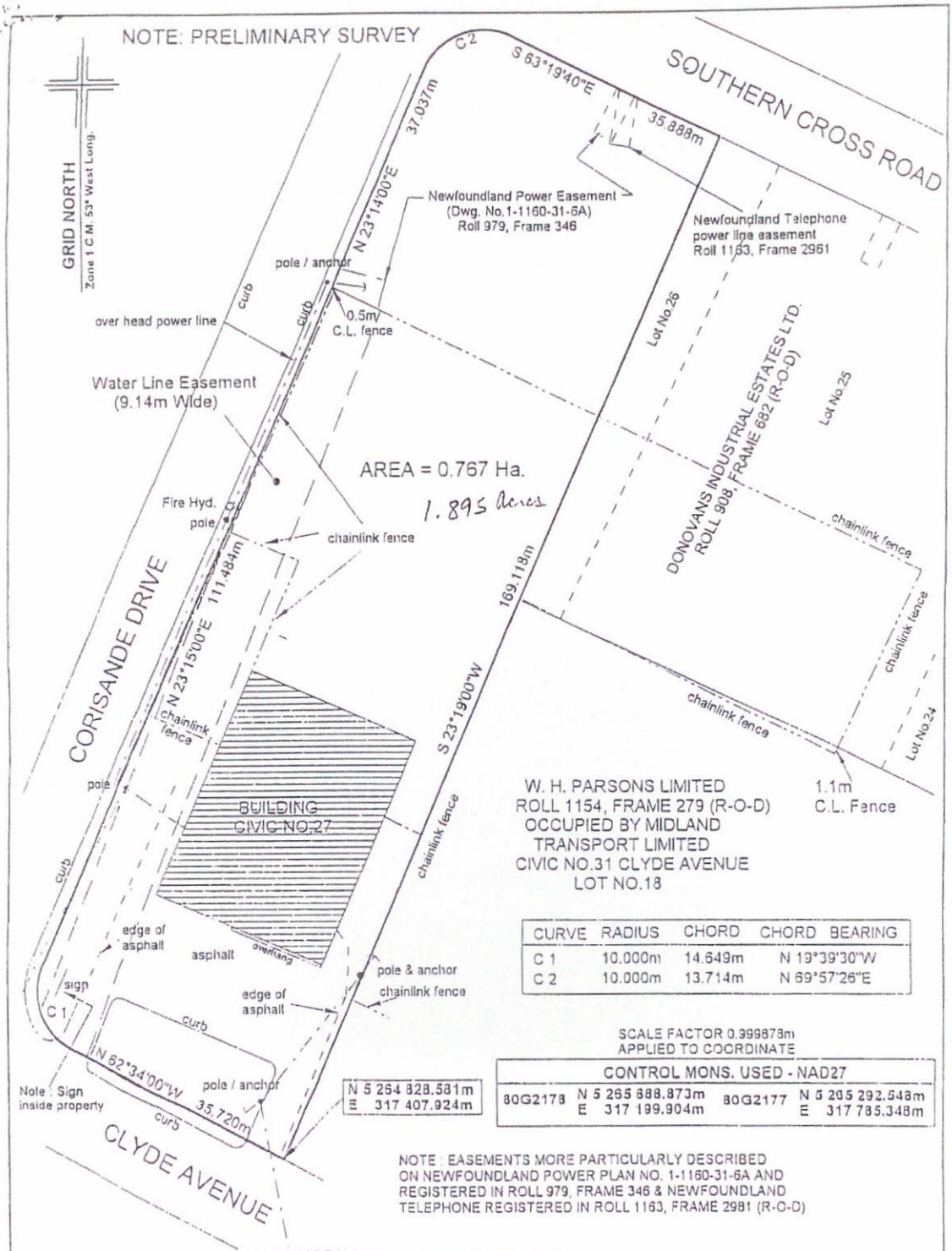
/attachments *Leachate Toxic Waste, Guidance Document*
Accredited & Certified Laboratories, Policy

copied to...

Mr. Robert Locke (email) Manager of EP, SNL	Fire Commissioner Pleasantville Fire Station P.O. Box 8700 St. John's, NL A1B 4J6

Appendix B

27 Clyde Ave – Legal Survey Document



CURVE	RADIUS	CHORD	CHORD BEARING
C 1	10.000m	14.649m	N 19°39'30"W
C 2	10.000m	13.714m	N 69°57'26"E

SCALE FACTOR 0.999878m
APPLIED TO COORDINATE

CONTROL MONS. USED - NAD27			
80G2178	N 5 265 688.873m E 317 199.904m	80G2177	N 5 265 292.548m E 317 785.348m

NOTE : EASEMENTS MORE PARTICULARLY DESCRIBED ON NEWFOUNDLAND POWER PLAN NO. 1-1160-31-6A AND REGISTERED IN ROLL 979, FRAME 346 & NEWFOUNDLAND TELEPHONE REGISTERED IN ROLL 1163, FRAME 2981 (R-O-D)

All distances are Metric Horizontal Ground Distances. This plan and the accompanying Discription of Alan Carew Surveys Ltd. form an integal part of the whole and are not separable.

LEGAL SURVEY

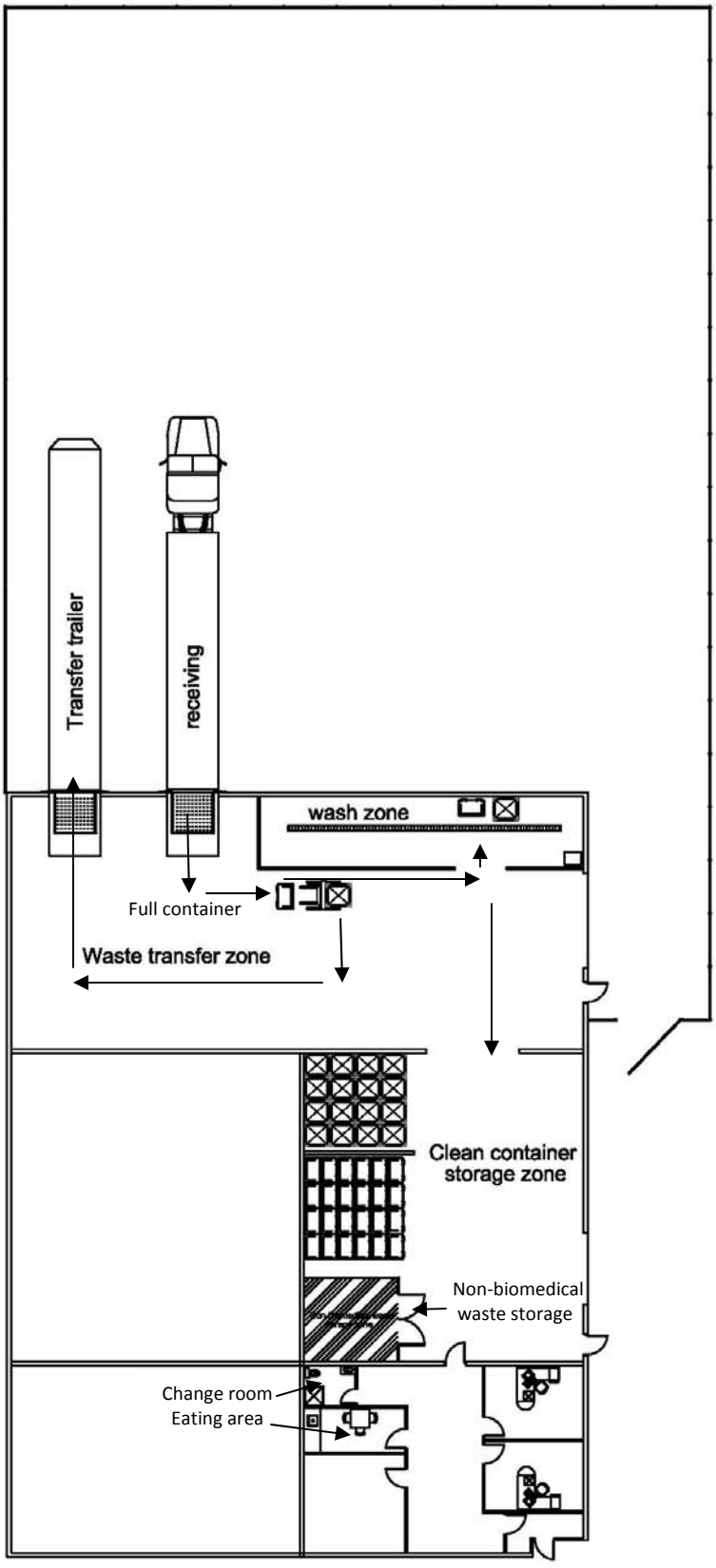
FOR BAINE JOHNSTON PROPERTIES LTD. - CIVIC NO.27 CLYDE AVENUE (OCCUPIED BY CANRON LTD.)
DONOVANS INDUSTRIAL PARK, MOUNT PEARL, NF.

ALAN CAREW SURVEYS Ltd.
Newfoundland Land Surveyors
Tel : (709) - 745-1424
Fax : (709) - 745-1424

SCALE : 1 : 750 SURVEY : A.C.	DATE : OCTOBER 14th., 1998
JOB NO. 6605-98 BOOK NO.149	DISK NO. 74 / Canr-new

Appendix C

Site Plan


Transfer trailer
receiving
wash zone
Full container
Waste transfer zone
Clean container
storage zone
Non-biomedical
waste storage
Change room
Eating area

Appendix D

City of Mount Pearl Development Permit and related documents

CITY OF
Mount Pearl

December 19, 2013

DA13-878
130-1-3

Ms. Johanne Reney
Vice-President, Quebec and Eastern Canada
Stericycle ULC
19 Armthorpe Road
Brampton, Ontario L6T 5M4

Dear Ms. Reney:

DEVELOPMENT PERMIT
RENOVATIONS AND CHANGE OF USE
BIOMEDICAL WASTE/TEMPORARY STORAGE & TRANSFER FACILITY
27 CLYDE AVENUE

I am pleased to provide you with your Development Permit to renovate, change the use and occupy a portion of an existing building for a biomedical waste/temporary storage and transfer facility at 27 Clyde Avenue. This permit does not constitute approval or permit to use the building until such time as an occupancy permit is issued.

You are now required to contact Mike Follett (748-1020), City Inspector, to set up a meeting to review the conditions of the Development Permit and to advise you of the next steps of the process.

I wish you every success in this venture.

Yours very truly,

Julia Schwarz, for

Stephen B. Jewczyk, F.C.I.P.
Director of Planning and Development

SBJ/km
Attachments: Development Permit DP13-086

Copy: Mona Lewis, Deputy City Clerk
Jason Silver, Director of Corporate Services
Bronda Aylward, Manager of Economic Development and Business Liaison
Julia Schwarz, Manager of Planning and Inspection Services
Catherine Howell, Planning Technician
Mike Follett, City Inspector
Government Services Centre
Bas Cleary, Director, Environmental Assessment Division, Department of Environment and Conservation
Paul Rogers, Bowring Properties Inc., P.O. Box 5367, 410 East White Hills Road, St. John's A1C 5W2
John Morgan, Service NL, OH&S Branch
Robert Locke, Service NL, Operations and Environment Protection

December 19, 2013

CITY OF Mount Pearl

DA13-878
130-1-3

Ms. Johanne Reney
Vice-President, Quebec and Eastern Canada
Stericycle ULC
19 Armthorpe Road
Brampton, Ontario L6T 5M4

Dear Ms. Reney:

DEVELOPMENT PERMIT
MOUNT PEARL DEVELOPMENT REGULATIONS 2010

PERMIT NO: DP13-086

Your development application received October 25, 2013 to renovate, change the use and occupy a portion of a building at 27 Clyde Avenue for a biomedical waste/temporary storage and transfer facility was considered by Council at its meeting of December 17, 2013 and was conditionally approved is conditionally approved.

A DEVELOPMENT PERMIT is hereby granted subject to the following conditions:

1. A site plan is required to be prepared by a professional engineer licensed to practice in Newfoundland and Labrador illustrating the site improvements that are required to accommodate the use on the property. These site improvements include paved and curbed rear yard access, parking and loading areas and associated drainage works.

2. The use is defined as an undertaking requiring environmental review pursuant to the provincial Environmental Protection Act. You are required to register the project with the Department of Environment and Conservation. A copy of the report and the subsequent Minister's release are required prior to the issuance of a municipal building permit and subsequent occupancy permit for the use.

3. A Certificate of Approval from the Department (Pollution Prevention - Waste Management Section) will be required prior to operation.

4. The proposal shall meet the following conditions of Service NL:

   4.1 The applicant must obtain a valid Waste Management Certificate of Approval issued by Service NL and comply with all conditions of that approval.

   4.2 Confirmation that federal biosafety guidelines as well as CSAZ317 stipulations are adhered to. Please contact John Morgan, OHS Offices III for Heath Care, OH& S Branch at 729-5769 for details.

4.3 All fuel storage tank systems, other than those connected to a heating appliance of capacity of 2,500 litres or less, and any proposed fuel cache will require registration prior to installation.

4.4 All fuel storage tank systems connected to a heating appliance of a capacity of 2,500 litres or less must comply with the *Heating Oil Storage Tank System Regulations*.

4.5 If at any time this operation is deemed to be creating environmental problems, corrective action will have to be taken by the owner/operator, as directed by Service NL and/or the Department of Environment and Conservation.

4.6 Electrical plans must be submitted to the Government Service Centre for review and approval.

4.7 An electrical permit is required for each meter. The applicable permit fees will apply.

4.8 The facility is not to be occupied until such time as it is connected to the City's water supply and sewage disposal system.

4.9 Should future development require the construction of on-site service buildings, application must be made for Fire/Life Safety (request for approval of plans form) and Building Accessibility (application for building accessibility registration form) review/approvals.

4.10 All propane system installations exceeding 211,000 kilojoules (200,000 BTU) are subject to the *Boiler, Pressure Vessel and Compressed Gas Regulations* under the *Public Safety Act* and will require approval prior to installation.

4.11 The proposal will be required to register the undertaking with the Environmental Assessment Division, Department of Environment and Conservation.

4.12 It is advised that prior to the start of any development, the proponent contact the Regional Office of the Government Service Centre, 5 Mews Place, P.O. Box 8700, St. John's, NL, A1B 4J6, Telephone (709) 729-3699, Fax (709) 729-7253 to discuss any relevant permits and or approvals that may be required.

5. The development shall meet the conditions and requirements of the St. John's Regional Fire Department.

6. The access and parking areas shall be paved to the rear wall of the extension and such work shall be constructed in accordance with the specifications and requirements of the Mount Pearl Planning and Development Department.

7. The on-site services (water, sanitary and storm) are to be designed and constructed in accordance with the requirements and standards of the Planning and Development Department.

8. The proposal is required to meet the conditions of the Engineering Services Division. Final approval from Engineering Services Division required prior to the issuance of any Building Permits.

9. Any floor drain assemblies shall be connected to the sanitary sewer system.

10. The site shall be developed and graded in such a manner that storm run-off is contained on the site.

11. Renovations to the space to accommodate the use shall be designed and constructed in accordance with the National Building Code 2010 Edition, the Mount Pearl Building Regulations, and the requirements and standards of the Planning and Development Department.

12. A Building Permit is to be obtained from the Planning and Development Department prior to any work or construction commencing on the building.

13. The following information is to be received by and meet the approval of the City prior to the issuance of a Building Permit:

    13.1 Three complete sets (two (2) hard copy and one (1) electronic) of site, services and grading plan and building plans including architectural, structural, mechanical, electrical and plumbing plans, prepared and stamped by a professional engineer or architect, licensed to practice in Newfoundland and Labrador are to be submitted to the City for review and approval.

    13.2 A copy of the environmental assessment report and the subsequent Minister's release.

    13.3 A copy of this development permit along with the approved floor plan and the completed National Building Code and Fire Commissioner Forms shall be submitted to the Government Services Centre for approval and copies of the GSC approval returned to the Mount Pearl Planning and Development Department.

13.4 Government Services Centre approval for Building Accessibility, Fire and Life Safety.

13.5 Building Permit Fee. The cost of the building permit is based on $9.00 per $1000 of estimated construction cost up to $100,000 and $7.20 per $1000.00 over $100,000.

14. Electrical work will require an Electrical Permit will be required from the Government Service Centre.

15. Plumbing work will require a Plumbing Permit from the City's Engineering Department.

16. Any signs to be constructed or placed on the site or building must be in accordance with the Development Regulations and requires a separate permit. A sign application is to be submitted to the Planning and Development Department for review and approval.

17. The site is limited to one free standing.

18. An Occupancy Permit shall be required to be obtained by the occupant prior to occupying and using the space.

19. Prior to the issuance of an Occupancy Permit to permit the occupancy of the building, the following is required:

19.1 A copy of this development permit along with the approved floor plan and the completed National Building Code and Fire Commissioner Forms shall be submitted to the Government Services Centre (GSC) for approval and copies of the GSC approval returned to the Mount Pearl Planning and Development Department.

19.2 Government Services Centre approvals with respect to building accessibility.

19.3 A site inspection is required prior to the issuance of an Occupancy Permit. Contact the City Inspector at 748-1020 for this inspection.

19.4 Occupancy application and occupancy permit fee of $100.00.

20. This DEVELOPMENT PERMIT is valid for a period of two years commencing on December 19, 2013. This Development Permit expires on December 19, 2015. If a building permit has not been obtained for this proposal and construction commenced by December 19, 2015, a new development application will be required to be submitted for the review and approval of the City.

You have the right to appeal the Council's decision. The appeal and a fee of $100.00 plus HST ($113.00 total) must be submitted to Council within 30 days of the date of the decision appealed. Council will forward the appeal and fee to the Secretary Appeal Board at the Department of Municipal Affairs, P.O. Box 8700, St. John's, NL, A1B 4J6 for registration and processing. Appeals not accompanied by the fee cannot be registered. You should note that any interested person also has the right to appeal the decision regarding your application within the 14 day appeal period. The Development Regulations provide that where an appeal is filed, the development shall not proceed pending a decision of the appeal and the subsequent issuance of all permits.

This letter does not relieve the applicant from obtaining the necessary permits or approvals under any other regulation or statute prior to commencing the development.

Yours very truly,

Julia Schwarz, for

Stephen B. Jewczyk, F.C.I.P.
Director of Planning and Development

SBJ/km

Copy: Mona Lewis, Deputy City Clerk
Jason Silver, Director of Corporate Services
Bronda Aylward, Manager of Economic Development and Business Liaison
Julia Schwarz, Manager of Planning and Inspection Services
Catherine Howell, Planning Technician
Mike Follett, City Inspector
Government Services Centre
Bas Cleary, Director, Environment Assessment Division, Department of Conservation and Environment,
Paul Rogers, Bowring Properties Inc., P.O. Box 5367, 410 East White Hills Road, St. John's A1C 5W2

Revised: June 2012

CITY OF Mount Pearl

Planning and Development Department

City of Mount Pearl
3 Centennial Street
Mount Pearl, NL
A1N 1G4

Telephone: (709) 748-1017/1022
Fax: (709) 748-1111
E-mail: planning@mountpearl.ca
Website: www.mountpearl.ca

PERMIT APPLICATION

CONTACT INFORMATION (To be completed by the applicant): (Please Print)

Applicant Name:	Stericycle ULC	Property Owner:	Bowring Properties Inc.
As: ☐ Contractor ☐ Consultant ☐ Property Owner		(Complete below if different from Applicant)	
Mailing Address:	19 Armthorpe Rd. Brampton, ON	Mailing Address:	P.O. Box 5367 410 East White Hills Rd.
Postal Code:	L6T 5M4	Postal Code:	St. John's, NL A1C 5W2
Telephone:	1-866-783-7422	Telephone:	709-576-1293
Fax:		Fax:	
Cellular:		Cellular:	
Email:		Email:	progers@bowringproperties.com

NOTE: Applications will not be processed until such time as form is fully completed and all information is received.

PROJECT DETAILS: (Please Print)

Location of Property: 27 Clyde Ave., Mt. Pearl, NL

Description of Work/Use: To Occupy as a biomedical waste Transfer Site.

Type of Construction/Use: ☒ Commercial ☐ Residential ☐ Institutional

☐ To Construct	☐ To Extend	☐ To Demolish	☐ To Repair	☐ To Replace	☐ To Occupy
Width:	Length:		Footprint Area:		Finished Floor Area:
Chimney: ☐ Yes ☐ No ☐ N/A	Fireplace: ☐ Yes ☐ No ☐ N/A		Heating Source:		
Estimated Cost of Construction:	Commencement Date:		Completion Date:		

DECLARATION: I hereby submit this application and confirm that the information supplied is correct and complete to the best of my knowledge. I agree to comply with all Municipal Regulations, the National Building Code 2010 Edition and ancillary codes, agree to build in accordance with the plans approved by the City of Mount Pearl, and not to commence building without applicable written approval and permits from the City of Mount Pearl.

NOTE: Where the Applicant and the Property Owner are not the same, the signature of the Property Owner is required before the application can be accepted for processing.

Applicant: X Johanne Reney Stericycle ULC

Date: Oct 23, 2013

Property Owner: _____

Date: _____

Please note:

- The required Permit Fee (see City's Schedule of Rates and Fees) is to accompany the application form.
- Prior to formally submitting an application form, it is advisable that the applicant set up an appointment to review the application with the Planning and Development Department to ensure that all required information has been supplied and to facilitate application processing.

• • • • STAFF USE ONLY • • •

Date Fee(s) Received:

Received By:

Receipt #:

FOR APPROVAL (OFFICE USE ONLY)

Building Permit #: File #:

Occupancy Permit Required ☐ Yes ☐ No | Drawings Supplied ☐ Yes ☐ No | Referred to Council ☐ Yes ☐ No

Fees/Deposits:

Building Permit _____ Occupancy Permit _____ Service Connection _____

Refundable Deposits _____

Landscaping Deposit _____ Security Deposit _____ Other _____

TOTAL DUE _____ APPROVED _____ DATE _____

Revised June 2012

CITY OF Mount Pearl

Planning and Development Department

City of Mount Pearl
3 Centennial Street
Mount Pearl, NL
A1N 1G4

Telephone: (709) 748-1017/1022
Fax: (709) 748-1111
E-mail: planning@mountpearl.ca
Website: www.mountpearl.ca

OCCUPANCY PERMIT

CONTACT INFORMATION (To be completed by the applicant): (Please Print)

Applicant:	Stericycle ULC	Property Owner(s):	Bowring Properties Inc.
Mailing Address:	19 Armthorpe Rd. Brampton, ON L6T 5H4	Mailing Address:	P.O. Box 5367 410 East White Hills Rd. St. John's, NL A1C 5W2
Postal Code:		Postal Code:	
Telephone: Home:		Telephone: Home:	
Work:	1-866-783-7422	Work:	709-576-1293
Cell:		Cell:	
Fax:		Fax:	
E-mail:		E-mail:	progers@bowringproperties.com

PROPOSED OCCUPANCY:

RESIDENTIAL	COMMERCIAL	INSTITUTIONAL
☐ Home-Based Business		
☐ Single Dwelling	☐ Office	☐ Public Building
☐ Single Dwelling & Subsidiary Apartment	☐ Retail	☐ Church
☐ Subsidiary Apartment	☐ Clinic	☐ Other _____
☐ Double Dwelling	☐ Restaurant/Take-out	
☐ New Dwelling	☐ Warehouse	OTHER
☐ Apartment Building	☐ Manufacturing	
☐ Other _____	☐ Workshop	☐ Other _____
	X Other - Biomedical Transfer Site - See attached.	

Company Name: Stericycle ULC

Location of Property: 27 Clyde Ave, Mt. Pearl, NL (Civic Address)

Date: October 23, 2013 Applicant's Signature: X Johanne Penney

(Note: Landlords and/or Tenants are required by Building Regulations to obtain Occupancy Permits)

FOR APPROVAL (OFFICE USE ONLY)

Building Permit #:		File #:	
Assessment Address:		Space Occupied (sq. ft):	
		Date Occupied (mm/dd/yy):	
Water Meter Required:	Yes ____ No ____ Notes:		
Seasonal Deficiencies:	Yes ____ No ____ Notes:		
Other:	Yes ____ No ____ Notes:		

This is to certify that the above building has been examined by the City of Mount Pearl Planning and Development Department and conforms with all applicable Municipal Regulations. Its use and occupancy is hereby authorized.

Date _____ Inspector's Signature _____

CITY OF
Mount Pearl

DEVELOPMENT NOTICE
DISCRETIONARY USE

27 Clyde Avenue – Stericycle Inc.
Temporary Internal Storage and Warehousing of Biomedical Waste

Briefing Session – 7:00 pm – Thursday, November 28, 2013
Mount Pearl City Hall

The City is in receipt of a development application by Stericycle Inc., proposing to occupy a portion of the existing building at 27 Clyde Avenue as a biomedical waste transfer facility. The occupancy will involve the temporary internal storage and warehousing of biomedical waste generated by hospitals and other local health care providers. No processing of waste will occur on site.

The subject property is located within the Industrial - Light (IL) Use Zone. The proposed General Industry Use is listed as a Discretionary Use in the IL Use Zone.

Prior to deciding on this Discretionary Use application, Council requests that any person wishing to comment on the application do so in writing. Comments must be received by the City no later than 12:00 noon, Monday, November 25, 2013. Should no submissions be received by the deadline, the City will cancel the briefing session.

A response to this public notice shall form part of the public record. If you do not wish your name attributed to your comment, please advise the City.

Further information may be obtained from Catherine Howell, by phone 748-1023, email chowell@mountpearl.ca, fax 748-1111, or mail to the address below. The application may be viewed at the Planning & Development Department Office during regular office hours.

Stephen B. Jewczyk, FCIP
Director of Planning & Development
Planning & Development Department
City of Mount Pearl
3 Centennial Street
Mount Pearl, Newfoundland
A1N 1G4

Stericycle®

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Stericycle Mount Pearl Transfer Station Project

PROTECTING PEOPLE. REDUCING RISK.™

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STERICYCLE CORPORATE

Facts

- Established in 1989
- > $1.9 Billion – Annual Revenue
- Expertise in managing highly regulated waste streams
  (more than 75% of our revenues are from managing biomedical waste
- National Network of Transportation and Treatment Facilities
- Global Presence (Canada, US, Mexico, Argentina, Chili, UK, Spain
  Portugal, Romania, Japan)

Vision

Leaders in Protecting People & Reducing Risk

Headquarters

Brampton, Ontario (Canada)
Chicago, USA

Customer 1st

Public company

Stock symbol: SRCL

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Protecting People. Reducing Risk.™

STERICYCLE PROFESSIONAL SERVICES

Stericycle provides services to a wide range of industries including healthcare, dental, and medical services, pharmaceutical manufacturing, consumer products manufacturing, retail and financial services. No matter what your business, our customers all have one thing in common: They rely on us for protection and risk minimization.

- **Biomedical Waste Management**
- **Compliance Training**
- **Pharmaceutical Returns and Management**
- **Recall and Retrieval/QA**
- **Sustainability**
- **Hazardous Waste Management**
- **Patient Communication Services**
- **Containers & Other Products**

Stericycle® Bio Systems℠

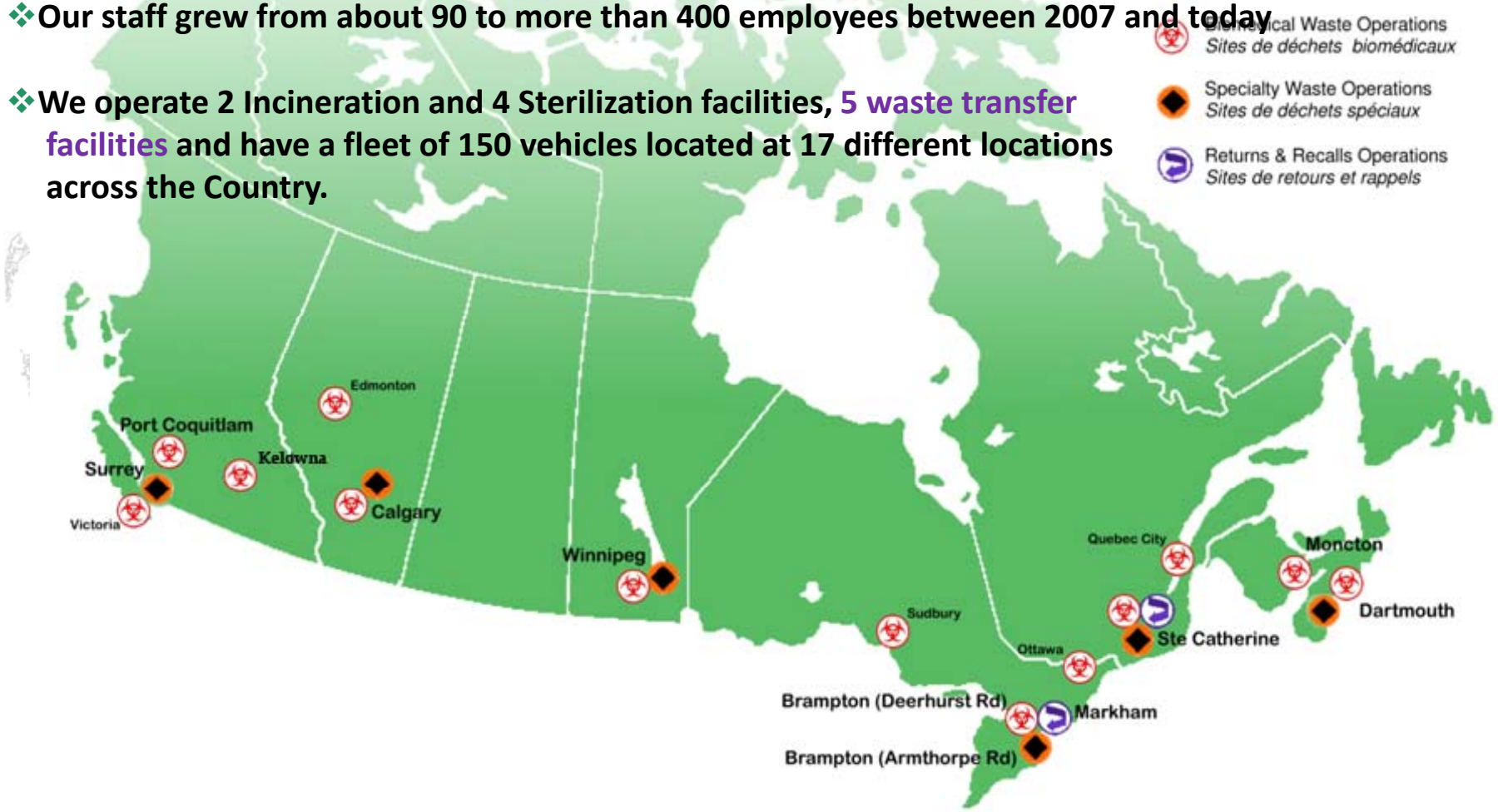
Stericycle® Clinical Services

Stericycle® ExpertRETURN

Stericycle®
Protecting People. Reducing Risk.™

STERICYCLE CANADA

- Stericycle has been the premier National Biomedical, Special Waste Disposal, and returns management service provider in Canada since 1989.
- Our staff grew from about 90 to more than 400 employees between 2007 and today.
- We operate 2 Incineration and 4 Sterilization facilities, 5 waste transfer facilities and have a fleet of 150 vehicles located at 17 different locations across the Country.



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PROJECT DESCRIPTION

Proposed Site

27 Clyde Ave, Mount Pearl

Receipt, consolidation, shipping of biomedical waste and small amounts of pharmaceutical waste and other waste such as damaged consumer products

No processing, only short term storage

Biomedical Waste from Eastern Health Hospitals and other healthcare providers, retail stores and pharmacies (existing contracts)

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BIOMEDICAL WASTE

From healthcare establishments such as hospitals and clinics

Waste that has come in contact with blood or body fluids – like syringes and needles, bandages, diagnostic specimens

Represents less than 10% of waste generated by healthcare establishments

Highly regulated: segregation, packaging, storage, transportation, processing. Never transported or stored in bulk – always in SEALED, leakproof containers

Approvals from the NL Department of the Environment is required for the transportation and storage of such waste. Stericycle already has a Transportation approval. Site will need to go through Environmental Assessment by the Department before approval is granted

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BIOMEDICAL WASTE PACKAGING

❖All packaging is compliant with applicable regulations (Transport of Dangerous Goods, Canada General Standard Board, Canadian Standards Association) – sealed, rigid, leakproof

❖Small containers in the carts – no loose waste in the cart
❖Cart is leakproof, lid tied down with zip tie
❖Bags are sealed and designed for this purpose
❖No free liquid
❖Sharps are all in sharps containers (puncture proof)

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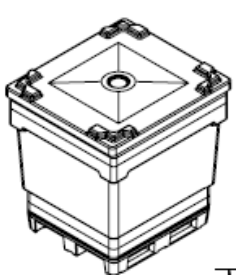
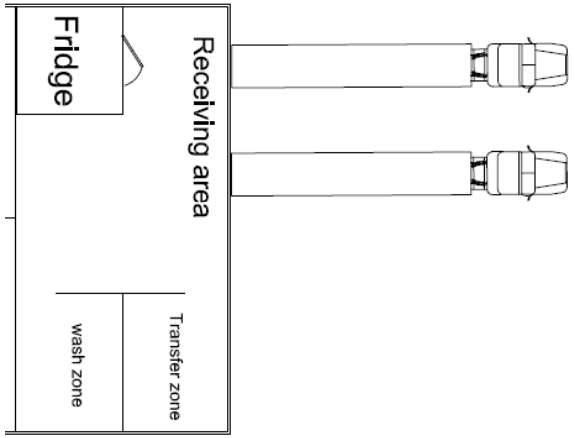
SITE OPERATION

- Upon arrival at site, truck (1 truck per day) will be parked at the dock
- Waste offloaded directly in the building
- Reusable containers are transferred into transport containers more suitable for marine transportation (no wheels) to Halifax



- Transport containers are stored in the refrigerated storage
  (either refrigerated trailer parked at the dock or refrigerated unit inside the building)
- Volume: approximately 25 carts (2000 kg) per day
- Storage for about 3-4 days
- Stericycle operates very similar transfer sites in Quebec City, QC, Ottawa, ON, Winnipeg, MB, Calgary, AB and Kelowna, BC



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SITE OPERATION

❖Although there will be no “loose” waste in the reusable containers (all the waste is first packaged into a sealed bag or plastic pail), empty reusable plastic containers will be cleaned before returning them to the hospitals

❖They will be cleaned using a standard pressure washer with hot water and a chlorine based soap (FS Z-Chor).

❖Approximately 150 to 200 Litres of wash water used per day (very low quantity)

FS Z-CHLOR PROD. #2443

Heavy-Duty Chlorinated Detergent

FEATURES	BENEFITS
Heavy-duty cleaner	Removes heavy accumulations of grease, protein, blood and stains, and also deodorizes.
Chlorinated	To aid in the removal of protein, blood, and stains, as well as deodorizing.
Hard-water tolerant	Performance and rinsability are unaffected by water hardness. Rinses freely and leaves no scum or film on surfaces.
Compatible with foamers	Designed for use with Zep Foam-Sta or comparable foam boosters to generate a thick, stable, highly-active, long-lasting foam that cleans with a minimum of scrubbing.
Non-foaming	Generates no foam of its own, so it is ideal for CIP and circulation cleaning, spray cleaning of tanks, machine washing, and other procedures requiring foam-free detergents.
Colour-coded	Product and labeling are colour-coded yellow (chlorinated cleaner) for easy use with other colour-coded Zep food systems products.

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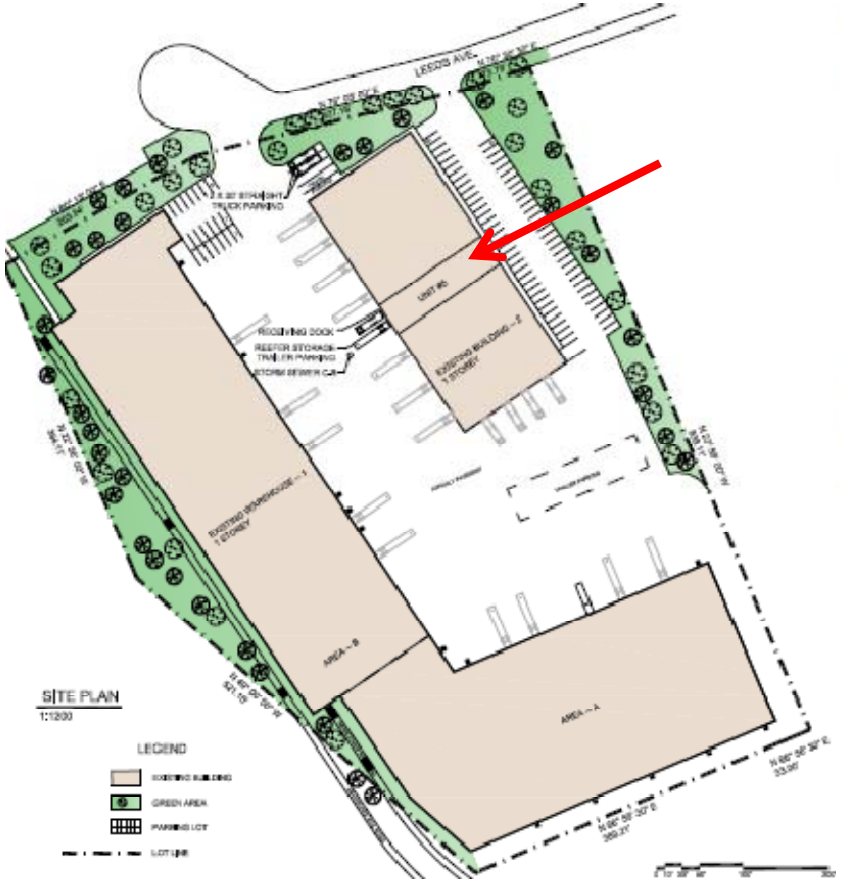
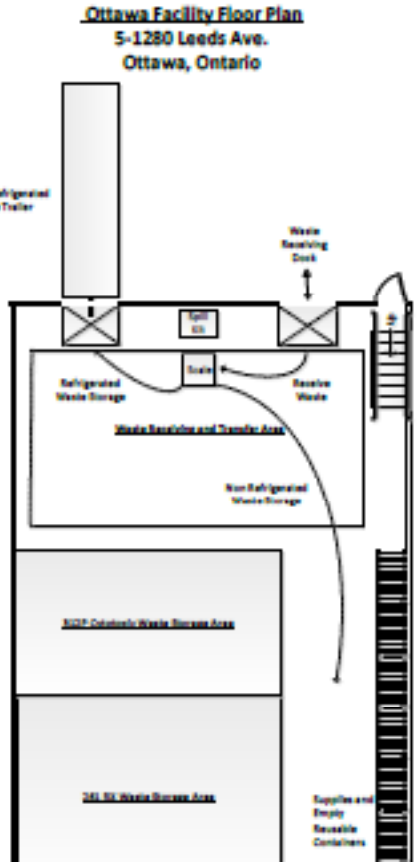
SIMILAR SITE



Ottawa



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STORAGE OF BIOMEDICAL WASTE

- Health Canada: Infection Control Guidelines: December 1998

A. Public Health Risk

Waste generated in health care settings is no more hazardous than household waste. Data demonstrate that household waste contains 100 times more pathogenic organisms than medical waste(213).

There is no evidence that any member of the public has acquired disease from infectious waste(114,208-209, 214).

- CSA Standard Z310.7 – 09

Handling of waste materials in healthcare facilities and veterinary healthcare facilities

5.3 Storage and handling

5.3.1 General

The storage of biomedical waste shall meet the following requirements:

(a) Anatomic biomedical waste shall be stored at 4 °C or lower unless contained in formaldehyde.
(b) Biomedical waste other than sharps shall be stored at 4 °C or lower if stored for more than 4 d.
(c) All biomedical waste shall be stored in a secure storage facility or domestic refrigeration unit that is dedicated to the accumulation of waste for disposal.
(d) Biomedical waste storage facilities shall be clearly marked with a sign that displays the biohazard symbol (see Annex E).

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STORAGE OF BIOMEDICAL WASTE

- CCME Guidelines for the Management of Biomedical waste in Canada - 1992

3.7 Storage

After biomedical waste has been collected and moved from its point of generation, it may be held in storage areas to await disposal. These storage areas must be totally enclosed, and separate from supply rooms or food preparation areas. They must be lockable and access must be restricted to authorized personnel. Storage areas must be identified as containing biomedical waste, with the biohazard symbol clearly displayed. It is unacceptable for materials other than waste to be placed in the same storage area as biomedical waste.

Floors, walls, and ceilings of storage areas must be thoroughly cleaned in accordance with the facility's established procedures. These procedures should be prepared in consultation with the facility's infection control committee, biosafety officer, or other appointed person(s).

Anatomical wastes must be stored at 4°C or lower. All biomedical waste must be refrigerated at 4°C or lower if stored for more than four days. Provincial or territorial regulatory authorities should be consulted for specific time requirements, as the recommended four-day limit may vary among jurisdictions. Health care facilities should determine the maximum storage time of refrigerated or frozen biomedical waste based upon its storage capacity, rate of waste generation, and any applicable provincial or territorial regulatory requirements.

Facilities refrigerating or freezing stored waste should use a lockable, closed cold storage facility or a lockable, domestic type freezer unit. Either type must be used only for storing biomedical waste, visibly display the biohazard symbol, and be identified as containing biomedical waste.

It the health care facility generates only waste sharps, waste storage areas need not be refrigerated.

Note: *While both refrigeration and freezing serve to reduce the rate of microbial growth and putrefaction, caution should be exercised when freezing waste containing glass or plastic items that may contain infectious agents, e.g., culture tubes. Such glass or plastic items may fracture at lowered temperatures.*

Contingency plans must be prepared for storing refrigerated biomedical waste if excess waste is produced, or if either refrigeration or disposal facilities or equipment become inoperative.

The compaction of untreated biomedical waste destined for off-site disposal is not permitted.

Note: *The compaction of biomedical waste is potentially hazardous to staff as containers could burst or leak and sharps could protrude through containers. Furthermore, compaction of untreated biomedical waste may also aerosolize infectious agents.*

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CONTINGENCY PLANS

❖ As part of obtaining our approval from the Department of the Environment, we will require a detailed contingency plan and emergency response plan

❖Refrigerated storage: as described before, the site will have a refrigeration unit inside the building that will be electric powered. However, the site will also have refrigerated trailers with diesel powered refrigeration units. This will ensure that refrigerated storage is always available even during power failures. Note that Stericycle owns more than 100 refrigerated trailers.

❖The plan include measures to prevent any spills as well as detailed response procedures in the event that a spill were to occur. The main measures that are put in place to minimize the likelihood of spills include proper segregation and packaging procedures. As stated before, all biomedical waste is packaged in small sealed containers that are specifically designed to transport biomedical waste. They are leak proof, very sturdy and are in compliance with all applicable standards for the transportation and storage of biomedical waste. The Stericycle drivers collecting the waste are fully trained and will not pick up any container that is not to specifications. Upon receipt at the site, the containers will be offloaded into the building and then moved to refrigerated storage. This operation does not create much risks for spills. However, in the event that a spill were to occur, the site will be equipped with complete spill kits and the employees will be trained on how to contain and clean the spill. All spills would also be reported to the Ministry of the Environment. It is important to note that we have not had to report any biomedical waste spills to any Ministry of the Environment, anywhere in Canada, in the last few years. Such spills are extremely rare and are easily contained and cleaned up, with no negative impacts.

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CONTINGENCY PLANS

❖ Odours: as the waste is always packaged in small sealed containers and stored refrigerated (at less than 4 oC), there is never any issues with odours. Moreover, the site will not be processing any waste and will only store waste for short periods of time (typically 3-4 days). The refrigeration prevents any degradation of the waste and eliminates any potential for odours. As stated above, we never had any complains due to odours.

❖Compliance: as shown in the attached lettre from the NS Environment, our site in Dartmouth, which not only stores biomedical waste but also processes it, has always been in full compliance with its operating permit and has not been the object of any complaints since the beginning of its operations in 2005

Re: Compliance History of the Stericycle, ULC Biomedical Waste and International Waste Handling Facility, located at 45 Wright Avenue, Burnside Industrial Park, Dartmouth, Nova Scotia (NSE Approval No. 2005-049184-T03).

As per your request, I have reviewed our files relating to Stericycle, ULC's compliance history with NSE Approval No. 2005-049184-T03, to operate a Biomedical Waste and International Waste Handling Facility at 45 Wright Avenue in Burnside Industrial Park, Dartmouth, Nova Scotia.

Based on a review of our records, the last audit of this facility was conducted in May 2010. The purpose of the audit was to ensure compliance with the terms and conditions of the facilities operating approval. No compliance items were generated as a result of this audit. Stericycle, ULC also appears to be current with all reporting and submission requirements outlined in the terms and conditions of their Approval. In addition to this file review, I also searched our complaint tracking system to determine if there have been any complaints lodged against the facility. No records of complaints lodged against this facility were found.

Based on this file review, Stericycle, ULC is considered to be in compliance with its current operating Approval.

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CONTACT INFORMATION

- Jean-Pierre Pepin, P. Eng, MBA
  Director, Environment, Safety and Health – Canada
  Stericycle, ULC
  jppepin@stericycle.com
  819-743-4772

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BIOMEDICAL WASTE SEGREGATION

Non-Anatomical Biomedical Waste (Sterilization)	Sharps (Sterilization)	Cytotoxic Waste (Incineration)	Anatomical Waste (Incineration)	Pharmaceutical Waste (Incineration)
*Any items **saturated** with, **dripping** with, or **containing** blood or body fluids containing blood.*	*Items capable of **cutting** or **puncturing** the skin **and** that have come into contact with **blood, body fluids** or **microorganisms**.*	*Waste that has come into contact with Cytotoxic agents.*	*Human or animal tissues, organs or other body parts, other than teeth, hair or nails; and animal bedding or animal carcasses.*	*Unused or partially used drugs and medicines that are no longer required, expired, contaminated or stored improperly.*

Appendix E

FS Z-Chlor Specifications and MSDS

PRODUCT SPECIFICATION REPORT

FS Z-CHLOR Heavy-duty, liquid chlorinated detergent. Designed primarily to be used in combination with foam boosters for the foam cleaning of food processing plants. Contains alka builders, water conditioners and sequestering agents, inorganic emulsifiers, and hypochlorite.

FS Z-CHLOR

PROD. #2443

Heavy-Duty Chlorinated Detergent

FEATURES	BENEFITS
Heavy-duty cleaner	Removes heavy accumulations of grease, protein, blood and stains, and also deodorizes.
Chlorinated	To aid in the removal of protein, blood, and stains, as well as deodorizing.
Hard-water tolerant	Performance and rinsability are unaffected by water hardness. Rinses freely and leaves no scum or film on surfaces.
Compatible with foamers	Designed for use with Zep Foam-Sta or comparable foam boosters to generate a thick, stable, highly-active, long-lasting foam that cleans with a minimum of scrubbing.
Non-foaming	Generates no foam of its own, so it is ideal for CIP and circulation cleaning, spray cleaning of tanks, machine washing, and other procedures requiring foam-free detergents.
Colour-coded	Product and labeling are colour-coded yellow (chlorinated cleaner) for easy use with other colour-coded Zep food systems products.

APPLICATIONS & DILUTIONS

Use in all food processing plants and eggwashing facilities for regular washing and CIP cleaning where no foam is required.

Dilution Rates:

CIP and regular cleaning	1:64 to 1:128 parts water
Egg washing	1:64 to 1:128 parts water

For best results water temperature should be 37ºC to 48ºC.

COMPANION PRODUCTS

SPECIFICATIONS

Physical Form	Liquid
Colour	Clear, yellow
Odour	Mild, chlorine
pH (concentrate)	13.5 – 14.0
Specific Gravity	1.250
Shelf Life	6 months
Flash Point	None
WHMIS	Class E, D1A
TDG	Class 8 (9.2)

ZEP Inc.
11627 178th Street
Edmonton, Alberta T5S 1N6
1-877-I-BUY-ZEP (428-9937)
www.zep.com

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product name FS Z-CHLOR

Product use Food Industry - Chlorinated Cleaner

Product code 2443

Date of issue 03/02/12 **Supersedes** 05/28/09

Emergency Telephone Numbers

For MSDS Information:
Technical Services Group
Telephone (780) 453-8100
(Business Hours 8:00am - 5:00pm)

For Medical or Transportation Emergency
CANUTEC (24 Hours)
(613) 996-6666 - Call Collect

Printing date: 02/03/12

Prepared By
Technical Services Group
11627 178th Street
Edmonton, Alberta T5S 1N6

Section 2. Hazards Identification

Emergency overview

WARNING !

HARMFUL IF SWALLOWED.

Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects **Routes of Entry** Dermal contact. Eye contact. Inhalation.

Eyes Severely corrosive to the eyes. Causes severe burns. Eye exposure may cause severe and permanent eye injury (blindness).

Skin Severely corrosive to the skin. Causes severe burns. The amount of tissue damage depends on length of contact.

Inhalation May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Inhalation of the spray or mist may produce severe irritation of respiratory tract, characterized by coughing, choking or shortness of breath.

Ingestion Toxic if swallowed. May cause burns to mouth, throat and stomach.

Chronic effects Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients	CAS number	% by Weight
POTASSIUM HYDROXIDE; caustic potash; lye	1310-58-3	10 - 30
SODIUM HYPOCHLORITE; hypochlorous acid, sodium salt; bleach	7681-52-9	1 - 5

Section 4. First Aid Measures

Eye Contact Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Skin Contact Get medical attention immediately. Flush affected skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention.

Ingestion If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Never give anything by mouth to an unconscious person. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention.

Section 5. Fire Fighting Measures

Flash Point Not available.

Flammable Limits Not available.

Flammability Not available.

Auto-ignition Temperature

Fire-Fighting Procedures Use an extinguishing agent suitable for the surrounding fire. Wear special protective clothing and positive pressure, self-contained breathing apparatus.

Fire hazard In a fire or if heated, a pressure increase will occur and the container may burst.

Products of Combustion carbon oxides (CO, CO_2) Hydrogen chloride (HCl). Chlorine. and Phosgene gas.

Explosion hazard Not available.

Section 6. Accidental Release Measures

Spill Clean up Put on appropriate personal protective equipment (see section 8). Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and Storage

Handling Put on appropriate personal protective equipment (see section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Observe label precautions. Do not reuse container. Wash thoroughly after handling.

Storage Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Store between the following temperatures: 40°F - 120°F (4.4°C - 49°C). Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection

Product name	Exposure limits
Potassium Hydroxide	**ACGIH /OSHA (United States).** CEIL: 2 mg/m^3
Sodium hypochlorite solution Cl active	**ACGIH TLV (United States).** TWA: 0.5 ppm 8 hour(s). Form: As Cl_2 STEL: 1 ppm 15 minute(s). Form: As Cl_2

Personal Protective Equipment (PPE)

Eyes Recommended: Splash goggles. Face shield.

Hands and Body Recommended: Chemical-resistant gloves. Neoprene Nitrile Rubber Chemical-resistant apron. Chemical resistant boots.

Respiratory Recommended: Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Wear appropriate respirator when ventilation is inadequate.

Section 9. Physical and Chemical Properties

Physical State Liquid.

pH 13.5-14.0

Boiling Point 104.44°C (220°F)

Specific Gravity 1.28

Solubility Easily soluble in the following materials: cold water and hot water.

Freezing Point

Color Clear. Light Yellow.

Odor Mild.

Vapor Pressure Not available.

Vapor Density Not available.

Evaporation Rate 1 (Water = 1)

VOC (Consumer) 0 (g/l).

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Incompatibility Reactive or incompatible with the following materials: acids.

Hazardous Polymerization Will not occur.

Hazardous Decomposition Products Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Carcinogenicity Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Potassium Hydroxide	LD50 Oral	Rat	365 mg/kg	-
Sodium hypochlorite solution Cl active	LC50 Inhalation Vapor	Rat	>10.5 mg/L	0.25 hours
	LD50 Dermal	Rabbit	>10000 mg/kg	-
	LD50 Oral	Rat	8910 mg/kg	-

Section 12. Ecological Information

Environmental Effects No known significant effects or critical hazards.

Aquatic Ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Potassium Hydroxide	-	Acute LC50 179 mg/L	Fish	96 hours
Sodium hypochlorite solution Cl active	-	Acute EC50 46000 ug/L Marine water	Algae - Red algae - Gracilaria tenuistipitata	4 days
	-	Acute LC50 56400 ug/L Marine water	Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio	48 hours
	-	Acute LC50 32 ug/L Marine water	Fish - Coho salmon,silver salmon - Oncorhynchus kisutch - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	-	Acute LC50 5.9 mg/L	Fish - Minnows	96 hours

Section 13. Disposal Considerations

Waste Information

Waste must be disposed of in accordance with applicable regulations. Consult your local or regional authorities for additional information.

Waste Stream Code: D002
Classification: - [Hazardous waste.]

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
TDG Classification	1760	Corrosive liquids, n.o.s. (Potassium Hydroxide)	8	II		**Explosive Limit and Limited Quantity Index** 1
IMDG Class	Not available.	Not available.	Not available.	-		-

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment. Limited Quantity: Small quantities of controlled goods are not regulated as Dangerous Goods according to TDG regulations.

PG* : Packing group

Section 15. Regulatory Information

Canada

WHMIS (Canada) Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class E: Corrosive liquid.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.