

0102Permit2003 - Box No. —

⑤ Alamance County  
2003

01-02

CF  
01-02-I

North Carolina  
Department of Environment and Natural Resources  
Division of Waste Management



Michael F. Easley, Governor  
William G. Ross Jr., Secretary  
Dexter R. Matthews, Director

September 15, 2003

Mr. J.W. Hill  
Stericycle, Inc.  
P. O. Box 310  
Haw River, NC 27258

Re: Modification to Permit No. 01-02-I  
Stericycle, Inc.  
Medical Waste Incinerator  
Alamance County

Dear Mr. Hill:

Enclosed is Permit No. 01-02-I which reflects parent company Stericycle as owner rather than the subsidiary BFI Medical Waste, Inc. The Section also completed a five-year review of the permit, including a review of operations and compliance history for the facility. The next permit review is scheduled prior to September 15, 2008.

If you have any questions regarding the permit or conditions, please contact me at (919) 733-0692, ext. 259.

Sincerely,

Sherri Coghill  
Environmental Engineer  
Solid Waste Section

cc: Brent Rockett  
Hugh Jernigan

1646 Mail Service Center, Raleigh, North Carolina 27699-1646  
Phone: 919-733-0692 \ FAX: 919-733-4810 \ Internet: [www.enr.state.nc.us/](http://www.enr.state.nc.us/)

North Carolina  
Department of Environment and Natural Resources  
Division of Waste Management



Michael F. Easley, Governor  
William G. Ross Jr., Secretary  
Dexter R. Matthews, Director

Solid Waste Permit No. 01-02-1  
Date Issued: September 15, 2003  
Page 1

## SOLID WASTE PERMIT

STERICYCLE, INC.

is hereby issued a permit to operate a  
MEDICAL WASTE TREATMENT FACILITY

located on Porter Avenue, Graham, North Carolina in accordance with Article 9, Chapter 130A, of the General Statutes of North Carolina and all rules promulgated thereunder and subject to the conditions set forth in this permit.

  
James C. Coffey, Chief  
Solid Waste Section

1646 Mail Service Center, Raleigh, North Carolina 27699-1646  
Phone: 919-733-0692 \ FAX: 919-733-4810 \ Internet: [www.enr.state.nc.us/](http://www.enr.state.nc.us/)

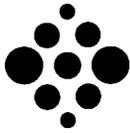
- plan, in accordance with 15A NCAC 13B Section .1207, and as specified herein.
- a. Regulated medical waste shall be subjected to a burn temperature in the primary chamber of not less than 1200 degrees Fahrenheit.
  - b. Gases generated by the combustion shall be subjected to a minimum temperature of 1800 degrees Fahrenheit for a period of not less than one second.
  - c. Automatic auxiliary burners that are capable, excluding the heat content of the wastes, of independently maintaining the secondary chamber temperature at the minimum of 1800 degrees Fahrenheit shall be provided. Interlocks or other process control devices shall be provided to prevent the introduction of waste material to the primary chamber until the secondary chamber achieves operating temperature.
  - d. Continuous monitoring and recording of primary and secondary chamber temperatures shall be performed.
  - e. A maintenance and preventative maintenance program for plant equipment and instrumentation, as described in the approved plan, shall be implemented. Equipment and instrument maintenance, as well as instrument calibration shall be performed as per factory recommendations. Maintenance and calibration logs shall be kept on-site and provided to the Section upon request.
  - f. Emergency response plans and procedures shall be incorporated into the operational plan and implemented.
  - g. All operating personnel shall be trained in the proper procedures for facility operation, maintenance, trouble-shooting and repair, and emergency response. A list of all positions, personnel and qualifications, for each shift, shall be maintained and provided to the Section upon request.
7. The facility Air Permit shall be maintained and all operations conducted in strict adherence to the conditions of the permit.
  8. Any water that comes into contact with solid waste shall be maintained on-site or disposed of in accordance with all pertinent local, state, and/or federal rules and regulations.

#### **COMBUSTION ASH MANAGEMENT**

9. The combustion ash management plan for the facility shall be implemented as specified herein. All pertinent personnel shall be trained in the procedures contained in the plan.
  - a. Appropriate and reasonable measures shall be taken to eliminate fugitive particle emissions within the facility and the combustion ash storage area. All pertinent personnel shall be equipped with appropriate devices designed to provide protection from fugitive dust emissions and trained in the proper use of such protective devices.
  - b. At all times during storage and transportation, combustion ash shall be

facility for a period of three years and shall be made available to the Section upon request.

14. A log shall be kept documenting ash sampling, which shall include the date and time of each sample collected; the date, time, and identification number of each composite sample; and the results of analyses, including laboratory identification.
15. Maintenance and calibration logs for plant equipment and instrumentation shall be maintained on site and made available to the Section upon request.
16. Records of stack testing as prescribed in the Air Quality Permit shall be maintained at the facility and made available to the Section upon request.
17. Records for the amount of waste received at the facility shall be maintained and categorized according to the type of waste, State of origin, and the North Carolina County of origin.
18. On or before August of each year, the permittee shall report the amount of waste (in tons) received at this facility and disposed of in the incinerator to the Solid Waste Section, on forms prescribed by the Section. This report shall include the following information:
  - a. The reporting period shall be for the previous year, beginning July 1 and ending June 30;
  - b. The amount of waste received and incinerated (in tons), compiled on a monthly basis, and categorized as required in Condition No. 17 of this section; and
  - c. Notification that a copy of the report has been forwarded to all counties within the State of North Carolina from which accepted waste originated and to the county in which the facility is located.



**Stericycle®**

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1168 Porter Ave.  
PO Box 310  
Haw River, NC 27258

September 4, 2003

Ms. Sherri Coghill  
NC Division of Waste Management  
401 Oberlin Rd. Suite 150  
Raleigh, NC 27605



Dear Ms. Coghill:

Thank you for discussing with me today the re-issuance of Permit # 01-02-I from BFI to Stericycle, Inc.

As you know from a previous letter written to you from Rachelle Maxheimer of EMCON/OWT, and our phone conversation Stericycle, Inc. purchased all of the stock of BFI Medical Waste, Inc. on November 12, 1999 making BFI Medical Waste, Inc. a wholly owned subsidiary of Stericycle, Inc.

According to an audit by Mr. Hugh Jernigan on 06-10-03 Permit # 01-02-I will expire on December 09, 2003.

At this time we request that the permit be reissued to Stericycle, Inc.

Any changes made to the Facility Operations Plan (three copies) are also included with this submittal for your approval.

Thank you again and if I can be of any assistance please contact me at (800) 234-4785 ext. 23 or [jhill@stericycle.com](mailto:jhill@stericycle.com).

Sincerely,

*J. W. Hill*  
J.W. Hill

Area Manager Environmental, Safety & Health

**APPROVED**  
DIVISION OF WASTE MANAGEMENT  
SOLID WASTE SECTION  
DATE 9/15/03 BY JLC

A. FACILITY

- (1) SOLID WASTE PERMIT # 01-02-I  
AIR QUALITY PERMIT # 5896T14  
WASTEWATER PERMIT #0030

- (2) NAME

STERICYCLE, INC.

- (3) TYPE OF SERVICE

THIS LOCATION IS ENGAGED IN THE ACCEPTANCE,  
ARRANGEMENTS FOR TRANSPORTATION, AND DESTRUCTION OF  
MEDICAL, PHARMACEUTICAL, AND USDA REGULATED WASTE  
VIA INCINERATION.

- (4) MAILING ADDRESS

P.O.BOX 310  
HAW RIVER, N.C. 27258

- (5) LOCATION

1168 PORTER AVE.  
HAW RIVER N.C. 27258

- (6) HOURS OF OPERATION

24 HOURS PER DAY  
7 DAYS PER WEEK

- (7) TELEPHONE

(336) 578-8900 (LOCAL)  
(800) 234-0051 (TRANSPORTATION EMERGENCY)

- (8) SIC CODE 4953

4953 REFUSE SYSTEMS  
GARBAGE COLLECTION, DESTRUCTION, PROCESSING  
DEAD ANIMAL DISPOSAL  
COLLECTION AND DISPOSAL OF ASHES

## B. CONTACT PERSON

- (1) Dale Rich  
Facilities Manager of the Carolinas  
1168 Porter Ave  
Haw River, NC 27258
- (2) Alan Skrzypczak  
Facility Manager  
1168 Porter Ave  
Haw River, NC 27258
- (3) J.W. Hill  
Area Manager Environmental, Safety & Health  
1168 Porter Ave.  
Haw River, NC 27258

## C. CHARACTERISTICS OF SPECIAL WASTE HANDLED AT THE FACILITY

- (1) Waste Code

No waste code is available for infectious waste in Title 40 Code of Federal Regulations

- (2) TYPE BY NAME

### INFECTIOUS WASTES ARE DEFINED AS FOLLOWS

Those wastes that potentially contain pathogenic agents that, because of their concentration and quantity, may create a danger to the health of the person exposed to the waste. The U.S. EPA recommends that 13 types of waste be designated infectious waste:

- ISOLATION WASTE
- CULTURES AND STOCKS OF ETIOLOGIC AGENTS
- BLOOD AND BLOOD PRODUCTS
- PATHOLOGICAL WASTES
- OTHER WASTE FROM SURGERY AND AUTOPSY
- CONTAMINATED LABORATORY WASTES
- SHARPS

- DIAGNOSIS UNIT WASTE
- ANIMAL CARCASSES AND BODY PARTS
- ANIMAL BEDDING AND OTHER WASTE FROM ANIMAL ROOMS
- DISCARDED BIOLOGICALS
- CONTAMINATED FOOD PRODUCTS
- CONTAMINATED EQUIPMENT

There are no known compatibility problems associated with the transportation of this class of wastes.

#### D. ESTIMATED CAPACITY

- (1) 2,780,276 pounds per month
- (2) 33,363,307 pounds per year

#### E. WASTE TREATED AT THIS FACILITY IS GENERATED AT:

- Acute Care Hospitals
- Acute Psychiatric Hospitals
- Skilled Nursing Facilities
- Intermediate Care Facilities
- Veterinary Clinics
- Physician Clinics
- Employee Clinics
- Dialysis Clinics and Labs
- Rehabilitation Clinics
- Pharmaceutical Companies and Suppliers
- USDA Regulated Facilities

F. The purpose of the company is to assist the above locations in environmentally sound management of their potential infectious wastes, spent or off spec pharmaceuticals and USDA regulated wastes.

#### G. METHODS FOR IDENTIFICATION OF WASTES

- (1) Potentially infectious waste is identified by the generator through the use of red plastic bags. These bags are then placed in boxes or reusable containers marked with the Universal Biohazard Symbol and the words Regulated Medical Waste.
- (2) Each container is labeled with a barcode which enables Stericycle to identify the generator and track the waste from the generator to incineration.

## H. WASTE ANALYSIS PLAN

- (1) The waste is not screened pre-treatment, other than for radioactivity. Generators are provided in service training and designate and package the waste prior to pick up. That waste designated as potentially infectious is treated as such.

### 3. OPERATIONS AND CONTINGENCY PLAN

#### A. PLANT OPERATIONS

- (1) The waste is received at this facility 24 hours per day, seven days per week. The waste is stored in refrigerated trailers until it is ready to be processed. When it is time to process the waste, it is removed from the trailer and staged by the conveyer or scale. The boxes and/or reusable bins are loaded onto the conveyer where they are screened for radiation as they move to the scale. Each box/reusable bin has a customer barcode affixed, which is scanned and weighed for billing and tracking purposes. In the case of reusable carts, the carts are placed on the floor scale, screened for radiation, weighed and the customer barcode scanned, the lids opened, and then secured on the cart/waste dumper in preparation for lifting and charging the incinerator.
- (2) When the incinerator is ready to load, the hopper lid opens automatically after the previous load is pushed into the incinerator by ram function. The boxes and bins of waste are placed in the automatic dumper averaging about 4 to 10 per load depending on weight. The operator steps to the control panel clear of the dumper and presses the start button to begin the loading process. After the load is dumped, the operator presses another button to close the lid on the ram loader. The cart/waste dumper is returned to the original position. The operator has controlled all of these functions with complete visual contact of the area for safety.
- (3) The waste is now confined in the loader hopper away from all personnel. When the incinerator is at the proper temperature for loading and the preset load interval time has elapsed, the hydraulic system will power the loader through its automatic cycle. The refractory lined guillotine door will rise, opening the primary chamber to the loader. The ram will move forward pushing the waste into the chamber. The ram then retracts clear of the guillotine door. Should there be any sign of fire in the loader as the door opens the operators are trained to extinguish it immediately with the hose at the loader platform. The loader is now ready to accept the next load.
- (3) The primary chamber is designed with 3 levels. When the waste is pushed in by the ram it is exposed to the heat of the chamber and the volatile materials, primarily plastics and binders, start to vaporize as the mass of the waste rise in temperature, other hydrocarbon materials start to pyrolyse in the oxygen lean atmosphere. Each succeeding load pushes the mass of burning waste through the primary chamber. As the load increases the waste is pushed from the initial hearth over a step down to a lower hearth.

Low velocity air is forced through the burning bed of carbon and other waste residuals releasing heat and burning to inert ash. Control of all airflow in this chamber is critical to proper pyrolytic combustion.

The primary gases of partially burned smoke and hydrocarbons flow into the hot secondary chamber. A combination of tangential and radial air injection assures complete mixing and combustion. A pilot flame assures immediate ignition of the exhaust gases thus assuring full chamber utilization for retention time. Proper combustion air, turbulence, temperature, and retention time result in a minimum emission.

## OPERATIONS AND CONTINGENCY PLAN (continued)

The clear, hot gases leave the secondary chamber and pass out through the refractory lined stack to the packed tower gaseous absorber and associated quench column venturi scrubber equipped with a mist eliminator system.

Exhaust gas from the secondary chamber of the incinerator is quenched in two stages; a pre-quench and a final quench tower. The saturated and quenched flue gas enters the condensing absorber where it is directly contacted with cooled recirculated scrubber liquid. The cooling process causes water vapor present in the flue gas to condense into fine particles in the gas, and those droplets are removed in the venturi scrubber downstream of the condensing absorber. As a result of the contact with recirculated scrubber liquor, acid gases are also effectively removed from the flue gas. The exhaust gas then enters the venturi scrubber and mist eliminator prior to venting to the atmosphere.

Stericycle utilizes two Delta Premier Induced Draft Cooling Towers with a 55,200 gallon per hour water recirculation rate. Each air pollution control system has a dedicated cooling tower train to ensure maximum plant integrity. Two plate and frame heat exchangers are utilized for each air pollution control system. These exchangers provide indirect cooling of the recirculated scrubber liquor via cooling tower water.

The recirculated water PH is maintained at the rate specified by the Performance Specification promulgated in 40 CFR Part 60, Appendix B.

Back in the primary chamber, the waste continues to feed and pyrolyse. On an automatic time basis the ash plow will extend out from under the hearth step moving the burned ash out towards the ash drop at the end of the chamber. As the ash drops down the ash chute, it enters the water filled quench tank. This water quenches the ash and seals the air out of the primary chamber. The ash removal system named ash dragon, extends down into the ash quench tank to drag the ash up a dewatering ramp and drops it into a 2 yd. ash dumpster. When the 2 yd. dumpster is full it is then transferred to a 20 yd. ash container.

The resulting ash continuously extracted from the incinerators is transported to an approved Sub-Title D landfill for disposal. Representative samples of the ash are analyzed twice each year to track the make up of the ash and allow for analysis of customer waste for monitoring and waste stream analysis.

Other operations such as preventative maintenance, housekeeping, recordkeeping, etc. are described in later sections.

**B: EQUIPMENT LIST**

- (1) TWO PACKED TOWER GASEOUS ABSORBERS AND ASSOCIATED QUENCH COLUMNS IN SERIES WITH VENTURI SCRUBBERS EQUIPPED WITH MIST ELIMINATORS**
- (2) SCALE / PRINTER COMPUTER SYSTEM**
- (3) STEAM CLEANER**
- (4) RELATED OFFICE EQUIPMENT**
- (5) RELATED SHOP MAINTENANCE EQUIPMENT**
- (6) FOUR (4) 20 YARD ASH CONTAINERS**
- (7) TWO ASH BINS**
- (8) TWO (2) FORKLIFTS**
- (9) TWO CONVEYER SYSTEMS**
- (10) TUBWASH UNIT( FUTURE)**
- (11) DMP-WATER TREATMENT SYSTEM**
- (12) EMERGENCY DIESEL BACK-UP GENERATOR**
- (13) REFRIGERATED TRAILERS FOR TRANSPORT AND STORAGE OF MEDICAL WASTE**
- (14) BIG JOE LIFT (CART STACKER)**
- (15) YARD TRACTOR (TRAILER JOCKEY)**
- (16) 2 JOY ENERGY SYSTEM 2500 TES 1911 LB/HOUR INCINERATORS**
- (17) WASHDOWN SPRAY WASHER**
- (18) ONE CLARKE TECNOLOGY FLOOR SCRUBBER**
- (19) TWO CART/WASTE DUMPERS**

## **H. EMPLOYEE TRAINING PROGRAM**

**(1) Stericycle will train and/or instruct all personnel in the following areas:**

- (a) Operation of plant equipment**
- (b) General maintenance of all equipment**
- (c) Inspection and reporting procedures**
- (d) Knowledge of spill control practices**
- (e) Knowledge of materials transported**
- (f) Handling of all materials transported**
- (g) Health effects of material transported**
- (h) Basic respiratory training and fit testing**
- (i) Basic housekeeping procedures**
- (j) Contingency plan implementation**
- (k) Response to emergencies**
- (l) Hearing Conservation**
- (m) Hazard Communication/Right to Know**
- (n) Compliance with applicable laws and regulations as required**

**(2) Stericycle holds a safety meeting at least once a month or more frequently as needed for general employees, equipment operators, and drivers. The purpose for the meeting is to provide, updated information on new and changing safety procedures.**

**(3) A refresher course will be given annually to all personnel to ensure that they will be able to respond effectively in an emergency. The refresher training will include a review of emergency procedures, equipment, phone numbers to be called, and proper response times.**

**(B). OTHER EQUIPMENT READILY AVAILABLE**

- Through arrangements with Rental Center, there are back hoes and other equipment available on short notice for liquid containment to prevent any potential liquid spills from leaving the site.
- The abundance of rental companies in the immediate area makes it easy to obtain various pieces of equipment as deemed necessary in an emergency.

**(7) EVACUATION PLAN**

(A.) In the event of an evacuation, an announcement will be made over the inter-com system and the employees should immediately evacuate through the nearest unobstructed exit and meet at the Muster Point which is the main entrance/exit gate in front of the office building.

(B.) Office personnel should exit the nearest unobstructed exit and meet at the Muster Point which is the main entrance/exit gate in front of the office building.

**(8) EMERGENCY COORDINATORS**

(A.) The nature of the operations enables a shift supervisor or coordinator to be on location at all times. These individuals have access to a telephone and are in charge of emergency situations.

(B.) The primary individuals responsible for the coordination and evaluation of an emergency situation are:

J. W. Hill  
(336) 578-8900 ext. 23 Office  
(336) 269-2150 Cell  
(336) 421-0505 Home

Alan Skrzypczak  
(336) 578-8900 ext. 24  
(336) 449-4611 Home  
(336) 269-2140 Cell

**(9.) RESPONSIBILITIES OF THE EMERGENCY COORDINATOR**

- (A.) ONE OF THE EMERGENCY COORDINATORS WILL BE AVAILABLE AT ALL TIMES, EITHER AT THE FACILITY OR ON CALL.**
- (B.) UPON NOTIFICATION OR DISCOVERY OF AN EMERGENCY CONDITION THE COORDINATOR WILL EVALUATE THE SITUATION AND NOTIFY THE APPROPRIATE AGENCIES TO MINIMIZE THE INCIDENT.**
- (C.) IN ORDER TO PROPERLY NOTIFY THE AGENCIES, REGIONAL STAFF, AND CORPORATE STAFF, THE COORDINATOR SHOULD GATHER THE FOLLOWING INFORMATION (AFTER THE IMMEDIATE HAZARD HAS BEEN BROUGHT UNDER CONTROL.)**
- \* NAME AND PHONE NUMBER OF THE COORDINATOR**
  - \* NAME AND ADDRESS OF THE FACILITY**
  - \* DATE AND TIME OF THE ACCIDENT**
  - \* TYPE OF ACCIDENT**
  - \* EXTENT OF INJURIES IF ANY**
  - \* POSSIBLE HAZARDS TO HEALTH AND ENVIRONMENT IF ANY**
  - \* POSSIBLE HAZARDS TO HEALTH OR ENVIRONMENT OUTSIDE THE FACILITY**
  - \* AGENCIES AND NAMES OF INDIVIDUALS CONTACTED.**
- (D.) AFTER THE EMERGENCY CONDITION HAS BEEN CONTROLLED THE COORDINATORS ARE RESPONSIBLE FOR INVESTIGATING THE INCIDENT TO ASSESS THE DAMAGES, DETERMINE CAUSE, AND WHAT STEPS NEED TO BE TAKEN TO PREVENT A REOCCURRENCE OF THE INCIDENT.**

## **J. Decontamination Procedures**

### **(1) Employees**

- (a) Prior to taking breaks, employees shall remove and discard disposable items, and thoroughly wash their hands with soap.**
- (b) Each employee is responsible for cleaning and disinfecting equipment used during the shift.**
- (c) At the end of each work shift employees shall place worn clothing in containers provided.**
- (d) Each employee is required to shower and change into street clothes at the end of each shift.**
- (e) Employees are required to wear uniforms provided. Should the uniforms become soiled as a result of a leak or spill, the employee must change immediately. If the employee came in contact with the liquid, he must shower immediately.**
- (f) Office personnel entering the plant must wear eye protection.**
- (g) After returning from the plant, all employees who cross the red line must wash their hands immediately.**

### **(2) Visitors**

- (a) All visitors who enter the plant active area must wear eye protection. Tyvek suits and tyvek shoe covers are available. Prior to entering the office, these must be removed and left outside.**
- (b) After returning from the plant, all visitors and office personnel who cross the red line must wash their hands immediately.**

## Agencies To Be Notified

In the event of an emergency such as fire, large spills, sudden release of contaminated materials, or explosion, the following will be notified immediately:

Fire Department	911
Police Department	911
(Electric)	(336) 229-9000
(Water)	(336) 228-8362
(Gas)	(336) 563-3521
*Corporate Office	(800) 355-8773
*NCDENR Winston Salem	(336) 771-4608
*National Emergency Response	1-800-424-8802
*City of Graham (Spills)	(336) 570-6721

\*These locations will be notified only by the primary coordinator or with his permission.

## **5. ASH DISPOSAL PROCEDURES**

**OPERATING AT FULL CAPACITY, THIS FACILITY WILL GENERATE APPROXIMATELY 75 TONS OF ASH PER WEEK. HISTORICAL DATA HAS SHOWN THAT THIS ASH IS NON-HAZARDOUS. WE HAVE BEEN TESTING AT OTHER FACILITIES USING THE EPA TOXICITY CHARACTERISTIC LEACHATE PROCEDURE .**

**WE ARE TESTING IN ACCORDANCE WITH THE ASH SAMPLING AND ANALYSIS PLAN DATED NOVEMBER 7, 1997.**

**THE ASH IS COLLECTED IN 20 YARD CONTAINERS SPECIALLY DESIGNED FOR SLUDGES. THE CONTAINERS WILL BE ELEVATED AT THE FRONT TO ALLOW FOR THE DRAINAGE OF WATER PRIOR TO TRANSPORT AND DISPOSAL. THE ASH, DUE TO THE WET NATURE, WILL NOT RELEASE FUGITIVE DUST INTO THE WORK ENVIRONMENT DURING OPERATIONS OR TRANSPORT. TRANSPORTATION OF THE ASH WILL BE ALLOWED ONLY AFTER THE CONTAINER HAS BEEN DRAINED AND COVERED WITH A TARP.**

**THE ULTIMATE DISPOSAL OF THE ASH/SLUDGE IS AT THE UPPER PIEDMONT ENVIRONMENTAL LANDFILL LOCATED AT 9650 OXFORD RD. ROUGEMONT, NC 27527.**

**CHARLOTTE MOTOR SPEEDWAY LANDFILL LOCATED AT 5105 MOREHEAD RD. HARRISBURG, NC IS THE EMERGENCY BACK-UP FOR THE ASH/SLUDGE DISPOSAL IN THE EVENT THAT UPPER PIEDMONT ENVIRONMENTAL SHOULD BE UNABLE TO TAKE IT.**

**ALL LEACHATE WATER FROM THE ASH DRAIN WILL BE DISPOSED OF THROUGH THE CITY SEWER SYSTEM IN COMPLIANCE WITH CITY OF GRAHAM PERMIT # 0030.**

**APPENDIX G: EQUIPMENT LIST**

- (1) TWO PACKED TOWER GASEOUS ABSORBERS AND ASSOCIATED QUENCH COLUMNS IN SERIES WITH VENTURI SCRUBBERS EQUIPPED WITH MIST ELIMINATORS**
- (2) SCALE / PRINTER COMPUTER SYSTEM**
- (3) STEAM CLEANER**
- (4) RELATED OFFICE EQUIPMENT**
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- (19) TWO CART/WASTE DUMPERS**

**REVISED SEPTEMBER 4, 2003**

## **H. STAFFING CHART**

- (1) Facilities Manager Of The Carolinas**
- (2) Facility Manager**
- (3) Manager Environmental, Safety & Health**
- (4) Receptionist/Manifest Controller**
- (5) One Accounts Payable**
- (6) One Transportation Manager**
- (7) Two Dispatchers**
- (8) One Bio track/Billing Coordinator**
- (9) One Compliance Account Representative**
- (10) Four Supervisors**
- (11) Twenty Operators**
- (12) One Support Operator**
- (13) One Maintenance Supervisor**
- (14) Two Maintenance Mechanics**
- (15) Two Warehouse Workers**
- (16) Two Long Haul Drivers**
- (17) Eight Route Drivers**

**REVISED SEPTEMBER 4, 2003**

## 6. SCRUBBER OPERATIONS

Each incinerator is equipped with its own scrubber with one packed tower gaseous absorber and associated quench column in series with a venturi scrubber and mist eliminator. The stacks are a minimum elevation of 82.4 feet. The quench and absorber liquors are neutralized with sodium hydroxide.

Sodium Hydroxide is stored onsite in two steel tanks with a total capacity of 5300 gallons. The tanks are inside a concrete berm for secondary containment.

Each scrubber produces blowdown that is pretreated and discharged to the City of Graham POTW. The pretreatment generates a filter cake that is disposed of with the incinerator ash. Operation and maintenance of the pretreatment unit are regulated by the City of Graham.

Operation and maintenance of the scrubbers are per manufacturer recommendations and are regulated by NCDENR Department of Air Quality.

0 SOLID WASTE SECTION PERMIT APPLICANT COMPLIANCE REVIEW 0

3

Instructions: Complete upper portion and submit this form to the Field Operations Branch Compliance Officer.

Review Requested by: J. Coyle Date Requested: 8/20/03

Type of Permit: Med Waste Incinerator Check One: New Permit  Renewal

Applicant Contact and Business Name: Stericycle

Parent Company/Known Subsidiaries/Other known names business has operated under:

BFI (previous owner)

Known Counties of Operation: Alamance, Cabarrus

Does the applicant have a past or current solid waste permit? Yes  No

If yes, write facility type: INCIN-M1, and permit #: 01-02  
TP 13-05

To be completed by Compliance Officer and returned to Permitting or Composting & Land Application Branch staff.

1. The applicant's compliance history for the past three years was reviewed on 8/20/03.

2. The applicant has an outstanding compliance order with administrative penalty.

Yes  If yes, describe unresolved issue(s): \_\_\_\_\_

No

3. The applicant has been issued two or more compliance orders in the past three years.

Yes  If yes, describe nature of the violation(s): \_\_\_\_\_

No

4. Permit denial based on the applicant's compliance history is recommended.

Yes  Remarks: \_\_\_\_\_

No

8/20/03  
Date

[Signature]  
Compliance Officer

WMS	ECH	Permit	Facility Name	City	State	Unit	Type	INS.	INS.
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	INCIN	INCIN	5/28/98	Yes
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	INCIN	INCIN	12/3/98	Yes
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	INCIN	INCIN	6/16/99	Yes
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	INCIN	INCIN	12/8/99	Yes
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	INCIN	INCIN	7/27/00	Yes
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	INCIN	INCIN	10/5/00	Yes
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	INCIN	INCIN	8/29/01	Yes
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	MWP	MWP	8/29/01	Yes
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	INCIN	INCIN	3/28/02	Yes
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	INCIN	INCIN	5/21/02	Yes
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	INCIN	INCIN	11/20/02	Yes
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	INCIN	INCIN	2/27/03	Yes
Hugh Jernigan	0102	STERICYCLE, INC.	ALAMANCE	ALAMANCE	ALAMANCE	INCIN	INCIN	6/10/03	Yes



1168 Porter Ave.  
PO Box 310  
Haw River, NC 27268

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N.C. Dept. of Environment & Natural Resources

JUL 29 2003

Winston-Salem  
Regional Office

*Reviewed  
Huf  
8/3/03*

July 25, 2003

Mr. Hugh W. Jemigan Jr.  
Waste Management Specialist  
Solid Waste Section  
NC Department of Environment  
And Natural Resources  
Division of Solid Waste Management  
585 Waughtown St.  
Winston-Salem, NC 27107-2241

Dear Mr. Jemigan,

Please find enclosed the results of our ash/sludge sampling that was collected June 19th, 2003.

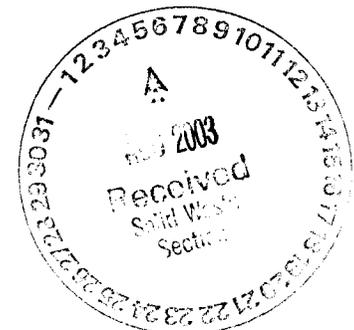
The next sampling is scheduled for December, 2003.

If I can be of any assistance, please contact me at (336) 578-8900 ext. 23.

Sincerely,

A handwritten signature in cursive script that reads "J. W. Hill".

J. W. HILL  
Area Manager Environmental, Safety & Health



[REDACTED]

INTERNATIONAL

(OK)

Date: 26-Jun-03

<b>CLIENT:</b> Stericycle, Inc.	<b>Client Sample ID:</b> Ash/Sludge
<b>Lab Order:</b> B03060481	<b>Tag Number:</b>
<b>Project:</b>	<b>Collection Begin Date:</b>
<b>Lab ID:</b> B03060481-01A	<b>Collection End Date:</b> 6/19/2003 8:30:00 AM
	<b>Matrix:</b> SLUDGE

Analyses	Result	Limit	Units	Date Prepared	Date Analyzed
<b>MERCURY, TCLP LEACHED</b>		<b>SW7470A</b>		<b>Analyst: AD</b>	
Mercury	< 0.0010	0.0010	mg/L	6/23/2003 9:14:00 AM	6/23/2003 3:48:30 PM
<b>TCLP METALS BY ICP</b>		<b>SW1311/6010B</b>		<b>Analyst: AD</b>	
Arsenic	< 0.20	0.20	mg/L	6/23/2003 9:06:00 AM	6/24/2003 3:10:00 PM
Barium	2.9	0.50	mg/L	6/23/2003 9:06:00 AM	6/25/2003 2:21:00 PM
Barium	2.7	0.50	mg/L	6/23/2003 9:06:00 AM	6/24/2003 3:10:00 PM
Cadmium	0.014	0.010	mg/L	6/23/2003 9:06:00 AM	6/24/2003 4:45:00 PM
Chromium	< 0.050	0.050	mg/L	6/23/2003 9:06:00 AM	6/24/2003 3:10:00 PM
Copper	1.7	0.010	mg/L	6/23/2003 9:06:00 AM	6/24/2003 3:10:00 PM
Lead	1.9	0.050	mg/L	6/23/2003 9:06:00 AM	6/25/2003 2:21:00 PM
Lead	1.7	0.050	mg/L	6/23/2003 9:06:00 AM	6/24/2003 3:10:00 PM
Manganese	0.73	0.010	mg/L	6/23/2003 9:06:00 AM	6/24/2003 4:45:00 PM
Nickel	0.33	0.020	mg/L	6/23/2003 9:06:00 AM	6/24/2003 3:10:00 PM
Selenium	< 0.20	0.20	mg/L	6/23/2003 9:06:00 AM	6/25/2003 2:21:00 PM
Silver	< 0.010	0.010	mg/L	6/23/2003 9:06:00 AM	6/24/2003 3:10:00 PM
Zinc	13	0.50	mg/L	6/23/2003 9:06:00 AM	6/24/2003 3:10:00 PM
<b>PAINT FILTER</b>		<b>SW9095</b>		<b>Analyst: AD</b>	
Paint Filter	PASS	Pass/Fail	✓	6/25/2003 9:45:00 PM	
<b>CORROSIVITY BY PH</b>		<b>SW9045B</b>		<b>Analyst: AD</b>	
pH	7.31	0.0200	pH Units	6/24/2003 4:45:00 PM	

**Certifications:** Simalabs - Burlington  
 EP Burlington Lab ID: NC01365, Eden Lab ID: NC01364  
 NC Chemistry: #85, Biomonitoring: #002, Drinking Water: #37743, #37738, Radiation License: #001-904-0G  
 SC Laboratory ID: #99042  
 VA SWCB ID: #000061, Drinking Water: #00018

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 Phone (888) 274-5227

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 370 W. Meadow Road • Eden, NC 27288  
 Phone (336) 623-8921 • FAX (336) 623-5878



INTERNATIONAL

Date: 17-Jul-03

CLIENT: Stericycle, Inc.  
Lab Order: B03060679  
Project:  
Lab ID: B03060679-01A

Client Sample ID: Ash  
Tag Number:  
Collection Begin Date:  
Collection End Date: 6/19/2003 8:30:00 AM  
Matrix: SLUDGE

Analyses	Result	Limit	Units	Date Prepared	Date Analyzed
<b>TOTAL METALS BY ICP</b> <i>Info only</i>			<b>SW6010B</b>		Analyst: AD
Arsenic	< 0.99	0.99	mg/Kg	6/27/2003 4:05:00 PM	7/1/2003 8:01:00 PM
Barium	1000	0.099	mg/Kg	6/27/2003 4:05:00 PM	6/30/2003 7:10:00 PM
Cadmium	0.75	0.099	mg/Kg	6/27/2003 4:05:00 PM	6/30/2003 7:10:00 PM
Chromium	8.4	0.15	mg/Kg	6/27/2003 4:05:00 PM	6/30/2003 7:10:00 PM
Copper	140	0.50	mg/Kg	6/27/2003 4:05:00 PM	6/30/2003 7:10:00 PM
Manganese	37	0.099	mg/Kg	6/27/2003 4:05:00 PM	6/30/2003 7:10:00 PM
Nickel	20	0.50	mg/Kg	6/27/2003 4:05:00 PM	7/1/2003 8:01:00 PM
Selenium	< 1.5	1.5	mg/Kg	6/27/2003 4:05:00 PM	7/1/2003 8:01:00 PM
Silver	4.9	0.50	mg/Kg	6/27/2003 4:05:00 PM	7/1/2003 8:01:00 PM
Zinc	1100	0.99	mg/Kg	6/27/2003 4:05:00 PM	6/30/2003 7:10:00 PM
<b>TOTAL MERCURY</b>			<b>SW7471A</b>		Analyst: AD
Mercury	< 0.040	0.040	mg/Kg	6/30/2003 3:15:00 PM	7/1/2003 6:56:24 PM

*TCLP  
is  
Regulatory  
Requirement*

Certifications: Simalabs - Burlington  
EP Burlington Lab ID: NC01365, Eden Lab ID: NC01364  
NC Chemistry: #85, Biomonitoring: #002, Drinking Water: #37743, #37738, Radiation License: #001-904-0G  
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VA SWCB ID: #000061, Drinking Water: #00018

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1168 Porter Ave.  
PO Box 310  
Haw River, NC 27258

5



January 22, 2003

Mr. Hugh W. Jemigan Jr.  
Waste Management Specialist  
Solid Waste Section  
NC Department of Environment  
And Natural Resources  
Division of Solid Waste Management  
585 Waughtown St.  
Winston-Salem, NC 27107-2241

Dear Mr. Jemigan,

Please find enclosed the results of our ash/sludge sampling that was collected December 19th, 2002.

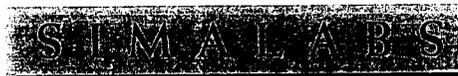
The next sampling is scheduled for June, 2003.

If I can be of any assistance, please contact me at (336) 578-8900 ext. 23.

Sincerely,

A handwritten signature in black ink that reads "J. W. Hill". The signature is written in a cursive, slightly slanted style.

J. W. HILL  
Area Manager Environmental, Safety & Health



## INTERNATIONAL

Date: 15-Jan-03

CLIENT: Stericycle, Inc. Client Sample ID: Ash/Sludge  
 Lab Order: B02120564 Tag Number:  
 Project: Collection Begin Date: 12/19/2002 9:30:00 AM  
 Lab ID: B02120564-01A Collection End Date: 12/19/2002 10:00:00 AM  
 Matrix: ASH/SLUDGE

Analyses	Result	Limit	Units	Date Prepared	Date Analyzed
<b>MERCURY, TCLP LEACHED</b>		<b>SW7470A</b>		Analyst: AD	
Mercury	< 0.0010	0.0010	mg/L	12/28/2002 3:40:00 PM	12/30/2002 10:31:16 AM
<b>TCLP METALS BY ICP</b>		<b>SW1311/6010B</b>		Analyst: AD	
Arsenic	< 0.20	0.20	mg/L	12/28/2002 3:27:00 PM	12/28/2002 8:37:00 PM
Barium	1.4	0.50	mg/L	12/28/2002 3:27:00 PM	12/28/2002 8:37:00 PM
Cadmium	0.059	0.010	mg/L	12/28/2002 3:27:00 PM	12/28/2002 8:37:00 PM
Chromium	< 0.050	0.050	mg/L	12/28/2002 3:27:00 PM	12/28/2002 8:37:00 PM
Lead	1.9	0.050	mg/L	12/28/2002 3:27:00 PM	12/28/2002 8:37:00 PM
Selenium	< 0.20	0.20	mg/L	12/28/2002 3:27:00 PM	12/28/2002 8:37:00 PM
Silver	< 0.010	0.010	mg/L	12/28/2002 3:27:00 PM	12/28/2002 8:37:00 PM
<b>TOTAL METALS BY ICP</b>		<b>SW6010B</b>		Analyst: AD	
Arsenic	< 0.90	0.90	mg/Kg	12/22/2002 12:45:00 P	12/23/2002 7:48:00 PM
Barium	650	0.090	mg/Kg	12/22/2002 12:45:00 P	12/23/2002 7:48:00 PM
Cadmium	3.1	0.090	mg/Kg	12/22/2002 12:45:00 P	12/23/2002 7:48:00 PM
Chromium	29	0.14	mg/Kg	12/22/2002 12:45:00 P	12/23/2002 7:48:00 PM
Copper	150	0.45	mg/Kg	12/22/2002 12:45:00 P	12/23/2002 7:48:00 PM
Manganese	57	0.090	mg/Kg	12/22/2002 12:45:00 P	12/23/2002 7:48:00 PM
Nickel	10	0.45	mg/Kg	12/22/2002 12:45:00 P	12/23/2002 7:48:00 PM
Selenium	2.3	1.4	mg/Kg	12/22/2002 12:45:00 P	12/23/2002 7:48:00 PM
Silver	130	0.45	mg/Kg	12/22/2002 12:45:00 P	12/27/2002 6:30:00 PM
Zinc	1300	0.90	mg/Kg	12/22/2002 12:45:00 P	12/23/2002 7:48:00 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		Analyst: AD	
Mercury	1.3	0.74	mg/Kg	12/22/2002 11:47:00 A	12/23/2002 1:46:42 PM
<b>SEMIVOLATILES, TCLP LEACHED</b>		<b>SW1311/8270C</b>		Analyst: AD	
1,4-Dichlorobenzene	< 0.050	0.050	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM
2,4,5-Trichlorophenol	< 0.050	0.050	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM
2,4,6-Trichlorophenol	< 0.050	0.050	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM
2,4-Dinitrotoluene	< 0.050	0.050	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM
2-Methylphenol	< 0.050	0.050	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM
3/4-Methylphenol	< 0.050	0.050	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM

Certifications: Simalabs - Burlington  
 EP Burlington Lab ID: NC01365, Eden Lab ID: NC01364  
 NC Chemistry: #85, Biomonitoring: #002, Drinking Water: #37743, #37738, Radiation License: #001-904-0G  
 SC Laboratory ID: #99042  
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Eden  
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 Phone (336) 623-8921 • FAX (336) 623-5878



INTERNATIONAL

Date: 15-Jan-03

<b>CLIENT:</b> Stericycle, Inc.	<b>Client Sample ID:</b> Ash/Sludge
<b>Lab Order:</b> B02120564	<b>Tag Number:</b>
<b>Project:</b>	<b>Collection Begin Date:</b> 12/19/2002 9:30:00 AM
<b>Lab ID:</b> B02120564-01A	<b>Collection End Date:</b> 12/19/2002 10:00:00 AM
	<b>Matrix:</b> ASH/SLUDGE

Analyses	Result	Limit	Units	Date Prepared	Date Analyzed
<b>SEMIVOLATILES, TCLP LEACHED</b>		<b>SW1311/8270C</b>		<b>Analyst: AD</b>	
Hexachlorobenzene	< 0.050	0.050	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM
Hexachlorobutadiene	< 0.050	0.050	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM
Hexachloroethane	< 0.050	0.050	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM
Nitrobenzene	< 0.050	0.050	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM
Pentachlorophenol	< 0.25	0.25	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM
Pyridine	< 0.050	0.050	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM
Total Cresol	< 0.050	0.050	mg/L	12/30/2002 7:00:00 PM	12/31/2002 5:16:00 AM
<b>VOLATILES, TCLP LEACHED</b>		<b>SW1311/8260B</b>		<b>Analyst: AD</b>	
Benzene	< 0.050	0.050	mg/L		12/27/2002 7:58:00 PM
2-Butanone	< 0.10	0.10	mg/L		12/27/2002 7:58:00 PM
Carbon tetrachloride	< 0.050	0.050	mg/L		12/27/2002 7:58:00 PM
Chlorobenzene	< 0.050	0.050	mg/L		12/27/2002 7:58:00 PM
Chloroform	< 0.050	0.050	mg/L		12/27/2002 7:58:00 PM
1,1-Dichloroethene	< 0.050	0.050	mg/L		12/27/2002 7:58:00 PM
1,2-Dichloroethane	< 0.050	0.050	mg/L		12/27/2002 7:58:00 PM
1,4-Dichlorobenzene	< 0.050	0.050	mg/L		12/27/2002 7:58:00 PM
Tetrachloroethene	< 0.050	0.050	mg/L		12/27/2002 7:58:00 PM
Trichloroethene	< 0.050	0.050	mg/L		12/27/2002 7:58:00 PM
Vinyl chloride	< 0.050	0.050	mg/L		12/27/2002 7:58:00 PM
<b>PAINT FILTER</b>		<b>SW9095</b>		<b>Analyst: AD</b>	
Paint Filter	PASS		Pass/Fail		12/30/2002 6:35:00 PM
<b>CORROSIVITY BY PH</b>		<b>SW9045B</b>		<b>Analyst: AD</b>	
pH	8.7	0.020	pH Units		12/23/2002 12:50:00 PM

**Certifications:** Simalabs - Burlington  
 EP Burlington Lab ID: NC01365, Eden Lab ID: NC01364  
 NC Chemistry: #85, Biomonitoring: #002, Drinking Water: #37743, #37738, Radiation License: #001-904-0G  
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