Permit No.	Scan Date	DIN
0102	**March 7, 2012**	**16259**

APPROVED DOCUMENT
Division of Waste Management
Solid Waste Section
Date **May 4, 2012** By **LY Frost**

RECEIVED
February 29, 2012
Solid Waste Section
Asheville Regional Office

Stericycle®
Protecting People. Reducing Risk.™

1168 Porter Avenue
Haw River, NC 27258
336-578-8904

INCINERATOR OPERATING PLAN

Revised: FEBRUARY 2012

1.0 INTRODUCTION

Stericycle, Inc. operates a regulated medical waste treatment and transfer facility located at 1168 Porter Avenue in Haw River, North Carolina. The facility consists of two (2) incineration units that are permitted to treat regulated medical waste and United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) regulated garbage. Compliance Agreement number NC-RDU-2011-01 included as Appendix A.

The facility is currently operating under North Carolina Department of Environment and Natural Resources (NCDENR) Solid Waste Permit No. 01-02-I.

This Operating Plan has been prepared in accordance with the applicable requirements set forth in North Carolina General Statute 130A-294, Solid Waste Management Program and North Carolina Administrative Code 15A NCAC 13B.

Facility Information:	Stericycle, Inc. 1168 Porter Avenue Haw River, Alamance County, NC 27258 Phone: 336-578-8904 Fax: 336-578-8903
Applicant Information:	Don Nuss Stericycle, Inc. Regional Environmental Manager 1168 Porter Avenue. Haw River, NC 27258 Phone: 513-543-7073 dnuss@stericycle.com
Landowner Information:	Stericycle, Inc. 1168 Porter Avenue Haw River, NC 27258 Phone: 336-578-8904 askrzypczak@stericycle.com
Permit and Annual Fees Contact Information:	Dale Rich Stericycle, Inc. District Operations Manager 4403 Republic Court Concord, NC 28027 Phone: 704-795-1125 ext. 222 drich@stericycle.com

2.0 OPERATIONAL PROCEDURES

Operations at the Haw River facility include:

- Regulated medical waste transfer, storage and treatment via incineration
- Reusable containers are washed, disinfected and returned to the customer. Disinfection procedures included as Appendix B-1. Wastewater Permit included as Appendix B-2.
- Product treatment via Incineration of Regulated Medical Waste, land-filling of residual ash (Ash Disposal Facility information included as Appendix C), and Incineration of special wastes such as:
    - non-hazardous pharmaceuticals,
    - treatment of unused sharps containers, syringes, or other materials that a customer may want treated prior to land filling to prevent scavenging at the landfill or reentering the marketplace in any way.
- USDA (APHIS) waste treatment via incineration
    - APHIS regulated garbage, as defined under 7 CFR 330.400 and 9 CFR 94.5, is also transported to the Haw River facility for treatment under USDA Compliance Agreement No. NC-RDU-2011-01. APHIS regulated garbage is transported, handled and disposed of per the facility's permits and North Carolina Solid Waste Rules. Stericycle's APHIS Operating Procedures are included as Appendix D .

2.1 Waste Receipt and Transportation

Regulated medical waste is picked up from generators on a scheduled or on-call basis. It is the responsibility of the waste generator to properly package their medical waste in accordance with all state and federal guidelines. Stericycle does not transport, or accept for transport, waste that is improperly packaged or classified in accordance with 15A NCAC 13B .1204.

Stericycle reserves the right to reject waste for pick-up or treatment if the package is:

- leaking,
- packaged incorrectly,
- not labeled or labeled incorrectly,
- structurally compromised,
- contains non-conforming waste

Prevention programs require proper notification and training about wastes not acceptable for treatment via autoclaving and/or incineration. Stericycle's Waste Acceptance Protocol is included as Appendix E.

Stericycle transports regulated medical waste under the following policies in accordance with 15A NCAC 13B .1205:

- Transporters shall not accept waste that is improperly packaged.
- Regulated medical waste shall be transported in a manner that prevents leakage of the contents of the package.
- The integrity of the package shall be maintained at all times.
- The labeling and marking of the package shall be maintained at all times.
- All loads containing regulated medical waste shall be covered during transportation.
- Regulated medical waste shall be stored prior to treatment for no more than seven calendar days after receipt.
- Refrigeration at an ambient temperature between 35 and 45 degrees Fahrenheit shall be maintained for regulated medical waste that will not be treated within seven calendar days after shipment.
- A contingency plan shall be prepared and maintained in each vehicle used in the transporting of regulated medical waste. The operator of each vehicle shall be knowledgeable of the plan.
- Vehicles used for the transportation of regulated medical shall be thoroughly cleaned and disinfected with a mycobacteriocidal disinfectant before being used for any other purpose and in the event of leakage from packages. Vehicle Decontamination Procedure attached as Appendix F.
- While transporting regulated medical waste, vehicles are prohibited from transporting any material other than solid waste and supplies related to the handling of medical waste.

Stericycle's BioTrack system tracks the medical waste containers from the point of generation, through transportation, to treatment at the processing facility.

2.2 Container Unloading and Handling

The waste is handled in the following steps once it arrives at the Haw River treatment facility:

1. Containers are removed from the route truck or long-haul trailer and transported to the powered conveyor via two-wheeled dolly

2. Each container is weighed and its individual bar code with customer information is scanned. The lids from reusable containers are removed at this time.

3. If a collection vehicle requires fast unloading so that it may return to its collection route, its waste may be unloaded and stacked on the processing floor near the scale for later processing that day.

4. Waste that requires transfer for steam sterilization (autoclaving) is separated, scanned and loaded onto a trailer.

5. Waste proceeds up the belt conveyor to the incinerator loading area and placed in the incinerator dumper to be dumped into the incinerator hopper. Reusable containers are placed in the dumper and dumped into the hopper. This process is repeated until the incinerator has obtained the proper weight allowable per hour, which is a maximum of 1911 pounds per unit per hour.

6. Empty reusable containers are placed in a holding area where they are cleaned with a high- pressure spray that is mixed with the appropriate contact disinfectant.

7. Washed containers are staged to air dry, then are either moved to a storage area, or loaded onto trucks/trailers for delivery to a generating facility for the collection of waste.

Employees handling waste are involved in:

- Unloading trucks or trailers
- Scanning and weighing containers
- Loading waste into the treatment bins
- Washing reusable containers.

2.3 Unacceptable Waste

Waste not accepted for treatment at the Haw River facility includes:

- Radioactive waste
- Hazardous waste as defined by the US EPA
- Explosive materials, including aerosol cans.
- Mercury or amalgam containing waste.

2.4 Dental and Mercury Containing Waste

Waste that is received at the facility but cannot be processed by incineration, such as Dental and Mercury Containing, is packaged by the generator as Dental/Mercury waste. Dental/Mercury waste accepted by the Stericycle Haw River facility will be transported to an autoclave, primarily:

Stericycle - Concord, NC
Autoclave
4403 Republic Court
Concord, NC 28027
(704) 723-4957

2.5 Storage

Regulated medical waste is stored in a manner that prevents leakage and maintains the integrity of the packaging at all times. Waste will be stored in accordance with 15A NCAC 13B .1206.

Waste that is collected for treatment in Haw River or transferred for treatment at another facility is transported in closed, secured trucks/trailers. The doors to the storage area of each collection truck/trailer are locked during all times that a Stericycle employee is not in attendance with the vehicle or the vehicle is being unloaded for treatment or transfer. All facility entrances and trucks are labeled to alert the public regarding the type of waste being transported or handled. No waste is stored within the main building.

The maximum amount of time that waste can be stored from the date it is received at the plant is seven (7) calendar days unless the waste is refrigerated at an ambient temperature between 35 and 45 degrees Fahrenheit.

Vector Control

The Haw River facility is maintained and cleaned to minimize odors and vectors, and to provide a safe working environment and protect the safety and health of the public. The systematic waste treatment process, which includes packaging, storage, and handling specifications and policies, inhibits vector exposure to the waste materials. Stericycle, Inc in Haw River, NC has contracted Orkin Commercial Services to supply Vector Control. Service occurs once monthly. Service Reports are maintained on site.

2.6 Treatment Process

The Stericycle Haw River facility utilizes two (2) Incinerator units for treatment. The Incinerators are Joy 2500 Dual Chamber with wet scrubbers and wastewater pretreatment system. The incinerators operate on controlled air principle using best available technologies to ensure Environmental Compliance will all local, state, and federal regulations. Each Incinerator has a 1911 pound per hour capacity. Incinerator Information attached as Appendix G.

2.7 Treated Waste

Treated Waste is by process turned to ash and loaded into roll-off containers and covered for transport to a permitted sanitary landfill for final disposal. Landfill information included as Appendix C. Sampling of the ash occurs once every three months and is sent to Pace Labs for testing, the result is then returned to the facility and a copy sent to DENHR. Ash Sampling Protocol is attached as Appendix H.

2.8 Record Keeping

All containers must be labeled at the generating location before being accepted for transportation. Bio Track optical scanners record when a container is picked up. Each container is scanned again at the processing facility prior to treatment.

The incinerator recording charts on the control panels automatically record time, temperature and pressure for each treatment cycle and are maintained on site for a period of no less than 3 years.

Records of waste are maintained for each shipment of and include the following:

- Name and address of generator,
- Date received,
- Amount of waste received by container number from each generator,
- Date treated,
- Name and address of ultimate disposal facility.

The Haw River facility submits an annual report, due by August 1st of each year, to the NC DENR Solid Waste Division as required by 15A NCAC 13B .1207 (1) (j).

3.0 HOURS OF OPERATION

The Stericycle Haw River processing facility operates 24 hours a day, 7 days a week for treatment processing. Office hours are Monday through Friday from 8:00 a.m. to 5:00 p.m.

3.1 EMERGENCY CONTACT INFORMATION

In the event of 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)	800-769-3766
(Water)	336-228-8362
(Gas)	336-563-3521

*Corporate Office	866-783-7422
*NCDENR Winston Salem	336-771-4608
*National Emergency Response	800-424-8802
*City of Graham (Spills)	336-570-6721

*These locations will be notified only by the primary coordinator or with his permission. It is further procedure that should the facility close for reasons other than normal business hours or operating, the coordinator will notify NCDENR prior to closing and prior to re-opening.

4.0 ACCESS CONTROL

A chain link fence and secured access gates to these areas will control access to loading and unloading areas to the facility. All gates will remain locked during off-hours when no receiving or shipping of waste will occur. All doors to the facility will be locked prohibiting unauthorized entrance from the outside and secured during off-hours. The main entrance to the facility and office areas will be open during normal business hours only, Monday through Friday from 8:00 a.m. until 5:00 p.m. After hours, all doors to the facility will remain closed and locked prohibiting unauthorized outside entry with the exception of bay doors being utilized for operations. The facility entrance is controlled by electronic gate and keypad.

All visitors to the facility are required to sign the visitor's log located in the front lobby. Under no circumstances will Stericycle allow an unescorted visitor to enter the facilities treatment area. Map of facility and surrounding area attached as Appendix I.

5.0 TREATMENT, STORAGE AND CAPACITY LIMITS

Stericycle is permitted to operate the treatment facility at 1168 Porter Avenue, Haw River, NC. Permitted capacity is based on the maximum waste treatment capacities of the processing equipment. Stericycle will operate the Haw River, NC facility with the currently permitted Incineration units not to exceed 1,911 pounds per hour each in capacity. The permitted maximum processing capacity shall not exceed 91,728 pounds per day of waste treatment utilizing all equipment installed. The actual treatment capacity of each piece of equipment will vary based on the waste type, density, liquid weight, handling procedures, operator interface, and efficiency protocols.

All untreated waste is stored in enclosed, locked transport vehicles located within the secure area of the premises pending processing or transfer. Storage of untreated and treated waste at the facility will be based in accordance with 15A NCAC 13B Sections .1206 and .1207(1), based on the seven (7) day or refrigerated time status. Treated waste storage is maintained on the premises in a secure area awaiting transport for final disposal.

6.0 BYPASS AND RESIDUAL PLAN

The facilities listed below act as backup treatment facilities in the event the Haw River facility is down for periods that extend beyond the maximum waste storage time listed in this Operating Plan and 15A NCAC 13B.

Apopka, FL - Incinerator
254 West Keene Road
Apopka, FL 32703
(407) 889-2800

Concord, NC - Autoclave
4403 Republic Court
Concord, NC 28027
(704) 723-4957

Baltimore, MD - Autoclave
5901 Chemical Road
Baltimore, MD 21226
(800) 633-9278

7.0 EMPLOYEE TRAINING PROGRAM

Employees receive the following training upon hire and annually:

- OSHA Bloodborne Pathogens (29 CFR 1910.1030)
- Hepatitis B Vaccination Program
- Exposure Protocol
- Personal Protective Equipment
- Hazard Communication (29 CFR 1910.1200)
- Lock-Out/Tag Out Policy & Procedures
- Handling APHIS Waste
- Emergency Response Procedures
- Fire Safety
- Spill Response
- Driver training programs, including DOT Hazardous Materials Training and other DOT required training
- Waste Acceptance Protocol
- Additional function-specific training (Welding Safety, Forklift Safety, Wastewater Treatment, etc.) is completed as required.
- All equipment operators will receive training and will become knowledgeable of the procedures, equipment and sterilization process. Training programs are oriented towards maintenance and safe operation of the facility.

Appendix

A

FORM APPROVED
OMB NUMBER 0579-0054

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE

COMPLIANCE AGREEMENT

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0054. The time required to complete this information collection is estimated to average 1.25 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

1. NAME AND MAILING ADDRESS OF PERSON OR FIRM

Stericycle, Inc.
P.O. Box 310
Haw River, North Carolina 27258

2. LOCATION

Haw River Incinerator
1168 Porter Avenue
Haw River, North Carolina 27258
Contact: Craig Edwards @ (704) 723-4957 ext. 223

3. REGULATED ARTICLE(S)

Regulated Garbage

4. APPLICABLE FEDERAL QUARANTINE(S) OR REGULATIONS

7 CFR 330.400, 9 CFR 94.5, 7 USC 7701 and 7 USC 8301

5. *I/We agree to the following:*

See Processing Establishment Attachment and Addendum:

6. SIGNATURE: Cl. Allen [signature]

7. TITLE: Plant Mgr

8. DATE SIGNED: 10-27-11

9. AGREEMENT NO.: NC-RDU-2011-01

10. DATE OF AGREEMENT: 9/28/2011

The affixing of the signatures below will validate this agreement which shall remain in effect until canceled, but may be revised as necessary or revoked for noncompliance.

11. PPQ OFFICIAL *(Name and Title)*

Deborah Stewart, State Plant Health Director

12. ADDRESS

USDA APHIS PPQ
930 Mail Campus Drive, Suite 200
Raleigh, North Carolina 27606

13. SIGNATURE

14. STATE AGENCY OFFICIAL *(Name and Title)*

Dan Wall, Plant Protection Field Supervisor

15. ADDRESS

NCDA&CS
Plant Protection Section
1060 Mail Service Center
Raleigh, North Carolina 27699-1060

16. SIGNATURE

PPQ FORM 519
(FEB 2002)

Processing Establishment Attachment to PPQ Form 519, Compliance Agreement

This Compliance Agreement may be immediately canceled or revoked for noncompliance. This Compliance Agreement is non-transferable.

Any person who knowingly violates the Plant Protection Act (PPA) (7 U.S.C. 7701 et. seq.) and/or the Animal Health Protection Act (AHPA) (7 U.S.C. 8301 et. seq.) may be criminally prosecuted and found guilty of a misdemeanor which can result in penalties, a one-year prison term, or both. Additionally, any person violating the PPA and/or the AHPA may be assessed civil penalties of up to $250,000 per violation or twice the gross gain or gross loss for any violation that results in the person deriving pecuniary gain or causing pecuniary loss to another, whichever is greater.

The establishment under this Compliance Agreement shall immediately notify the local APHIS/DHS, CBP office at (919) 855-7600) and (919) 467-3487 of any management changes which may void this Compliance Agreement.

By signing this agreement, the signer certifies that his/her facility has met or will meet the requirements of all applicable environmental authorities prior to handling garbage regulated by the Department of Homeland Security, Customs and Border Protection under the authority of the Animal and Plant Health Inspection Service.

The company, its employees and subcontractors, and procedures covered by this compliance agreement are subject to unannounced inspections by CBP or APHIS personnel.

All records required by this agreement must be made available to CBP/APHIS officials upon request.

Any plastic bags used in the transportation or storage of regulated garbage must be at least four (4) millimeters thick.

1. Definitions

   A. **Regulated garbage** — As defined under 7 CFR 330.400 and 9 CFR 94.5, garbage includes all waste material derived in whole or in part from fruits, vegetables, meats, or other plant or animal (including poultry) material, and other refuse of any character whatsoever that has been associated with any material. For the purpose of this compliance agreement, "regulated garbage" is garbage that was on, generated on board, or removed from any means of conveyance during international or interstate movements, and includes food scraps, table refuse, galley refuse, food wrappers or packaging materials and other waste material from stores, food preparation areas, passengers' or crews' quarters, dining rooms or any other areas on means of conveyance. Regulated garbage also means meals and other foods that were available for consumption by passengers or crew on an aircraft but were not consumed. Garbage that is commingled with regulated garbage becomes regulated garbage. For the purpose of this document regulated garbage will be known hereafter as garbage.

Company Representative Initials AT

B. **Trash** — Refuse that neither contains nor is visually contaminated with food waste. Trash is **unrestricted**. For example, trash that solely contains empty beverage cans would be unrestricted. Newspapers and magazines in the passenger cabin would also be unrestricted. An empty cardboard milk carton, sandwich, or fruit found in the passenger cabin, however, would be considered as garbage as opposed to trash and would be restricted.

C. **DHS, USCBP** — Department of Homeland Security, United States Customs and Border Protection, known hereafter as CBP.

D. **USDA, APHIS, PPQ** — United States Department of Agriculture, Animal and Plant Health Inspection Service, which provides oversight for agricultural issues, known hereafter as APHIS. Veterinary Regulatory Support (VRS) is the section of PPQ charged with oversight of regulated garbage.

2. Regulated Garbage Handling Procedures

A. Regulated garbage is processed by: *(check appropriate box)*

☐ Sterilizer located at:

_____

(Name, Address, Phone Number)

☐ Non-pressurized water cooker located at:

_____

(Name, Address, Phone Number)

☐ If sterilized or cooked, location of landfill:

_____

(Name, Address, Phone)

X Incinerator located at:

Stericycle, Inc.
1168 Porter Avenue
Haw River, North Carolina 27258
(336) 578-8900

B. Status of Garbage:

☐ Regulated garbage will be separated from domestic garbage by (circle one)

1) Location (clearly designated by signs)

2) Labeled container (marked per C. below)

X All garbage in facility will be handled as regulated garbage.

Company Representative Initials AD

C. The establishment must use rigid leak-proof containers with tightly-fitting covers if not separating garbage by location. The containers shall be lettered with the words "REGULATED GARBAGE" or a similar acceptable phrase in English and any appropriate foreign language. Lettering shall be at least two (2) inches high on indoor containers and at least four (4) inches high on outdoor containers. Containers used for regulated garbage shall **not** be used for domestic garbage, nor shall containers used for domestic garbage be used for regulated garbage.

The container to be used for a purpose **other than** hauling foreign garbage must have markings obliterated and must be disinfected with APHIS-approved disinfectant under APHIS/CBP supervision prior to such use.

Scraped residue and runoff may be ground into an approved sewage system as defined in 7CFR 330.400 or 9CFR 94.5 or be collected and treated as regulated garbage. All materials associated or in contact with regulated garbage must be treated as regulated garbage.

D. The dock area and the area around garbage sterilizers, cookers, incinerators, compactors, and/or dumpsters shall be kept clean and free of loose garbage at all times. Compactor and dumpster leakage shall be contained in a manner acceptable to CBP/APHIS as indicated here: See Addendum to Compliance Agreement, Cleaning and Disinfection.

E. The company is responsible for all regulated garbage including food waste, loose trays of food, and unused meals, and will **not** allow its unauthorized diversion, removal, use, or consumption.

F. Spills and Routine Disinfection

APHIS/CBP will be notified of any spillage outside of the facility at (919) 855-7600 / (919) 467-3487. Cleaning and disinfecting will be accomplished immediately. APHIS-approved disinfectant must be kept at the processing facility for garbage spills and routine surface disinfections including areas around the sterilizers, incinerators dumpsters and compactors and must be used after thorough pickup and cleaning. The caterer must provide trained personnel and equipment for immediate clean up (see Addendum to Compliance Agreements).

A log or record book containing information on the amounts and concentrations of disinfectants used will be kept in order to fulfill EPA reporting requirements.

Reporting requirements include:

i. The number of disinfection treatments performed (including by designation – routine surface disinfections and cleaning of spills);

ii. If applicable, the number of pounds of sodium carbonate used (with or without sodium silicate);

iii. If applicable, the concentration of bleach (stated as a percentage) and the number of gallons of each concentration of bleach used;

Company Representative Initials AD

iv. If applicable, the number of pounds of 2% sodium hydroxide used;

v. Location of spills.

The record or log book must be kept indefinitely. Information on the amounts and concentrations of disinfectants used during a specified reporting period must be provided to CBP/APHIS upon request.

APHIS-approved disinfectant is **not** to be used in enclosed food handling areas. Only EPA-approved sanitizers should be used in food handling areas. Records of these instances will also be maintained.

3. Equipment

Equipment for steam sterilization or non-pressurized water cooking is used. For a water cooker, the water level must reach within three (3) inches of the garbage level.

A. If a sterilizer or non-pressurized water cooker is used, it will be as follows:

i. Must be capable of heating regulated garbage to a minimum **internal** temperature of 212°F and maintaining it at that temperature for 30 minutes. To achieve this, the sterilizer will be calibrated for the following time/temperature setting.

Temperature setting ____N/A_____ PSI_____N/A_____

Minimum cooking cycle _____N/A_____

A maximum load of __N/A_____ units (bags, carts, etc) of garbage per cooking cycle is allowed. Routine loads must not exceed this maximum load.

ii. A thermocouple probe will be used initially and twice each year to re-calibrate the temperature recording device and to adjust the sterilization cycle to assure that the garbage is heated to a minimum internal temperature of 212°F for at least 30 minutes. The test load shall be at the maximum capacity of the sterilizer and of typical composition for the location. Tests will be monitored by an employee of CBP/APHIS. The facility will supply additional calibration equipment needed to perform the re-calibrations. The adjusted sterilization cycle will be included in an addendum to this compliance agreement and will be followed.

iii. The time and temperature record of each batch of foreign garbage shall be dated and initialed by the sterilizer operator and signed by the supervisor. The records must be retained for a minimum of one (1) year from the end of the month in which the processing occurred.

Company Representative Initials AS

iv. The bottom rear drain of the sterilizer unit will be cleared as needed to assure proper steam circulation and drainage.

B. Non-pressurized cooking equipment shall have a time/temperature recording device and be held to the same standards as the sterilizer with the exception of the PSI (water cooker probe must be below surface of water) in that it is capable of heating garbage to a minimum internal temperature of 212°F and maintaining it at that temperature for at least 30 minutes. To achieve this, the non-pressurized cooking equipment will be calibrated for the following time/temperature setting:

Temperature setting _____N/A_____

Minimum cooking cycle _____N/A_____

A maximum load of __N/A_____ units (bags, carts, containers etc.) of garbage per cooking cycle is allowed.

i. A thermocouple probe will be used initially and twice each year to re-calibrate the temperature recording device and to adjust the cooking cycle to assure that the garbage is heated to a minimum internal temperature of 212°F for at least 30 minutes. The test load shall be at the maximum capacity of the cooker and of typical composition for the location. Tests will be monitored by an employee of Department of Homeland Security, CBP/APHIS personnel. The adjusted cooking cycle will be included in an addendum to this compliance agreement and will be followed.

ii. The time and temperature record of each batch of foreign garbage shall be dated and initialed by the cooker operator and signed by the supervisor. The records must be retained at the establishment for a minimum of one (1) year from the end of the month in which the processing occurred.

C. If the sterilizer, the cooker, or associated equipment (such as the time and temperature recorder) malfunctions, then immediately report the malfunction to the local CBP office at _____N/A_____. The equipment shall be properly maintained to ensure that each load of regulated garbage is processed at an internal temperature of 212°F for a minimum of 30 minutes.

D. If an incinerator is used, it must reduce incinerated materials to an ash. Glass and metal shall be the only residue in the ash. The establishment will maintain records which will include the name of the approved cartage firm, date, time, number of units (bags, bins, containers) and quantity of garbage (weight) incinerated. The records must be retained for a minimum of one (1) year from the end of the month in which the incineration occurred.

E. The sterilizer or non-pressurized cooking equipment must be re-calibrated after major repairs or malfunction. The incinerator must be observed after major repairs or malfunction to ensure that regulated garbage is properly incinerated to ash.

Company Representative Initials AP

F. In order to store regulated garbage, the following conditions must be met:

i. Material to be stored must be adequately containerized and marked (per Section 2. B.). Location of storage facility if not in the same building/area as the processing equipment:
N/A

ii. Storage of regulated garbage in plastic bags must be inside a closed building; if outside storage, garbage must be in sealed, plastic bags in a rigid leak-proof container with a tight-fitting lid. The container, room, or other confined area where the regulated material is to be stored must be leak-proof and capable of being locked. The material must be inaccessible to birds, rodents, and other vermin. Storage of regulated garbage must not exceed 48 hours without prior approval from PPQ VRS or its designee.

iii. The processing firm must maintain logs or records of regulated garbage that is stored. This information must be kept for one (1) year from the end of the month the storage was initiated.

G. The company must conspicuously post regulated garbage-handling procedures in the work area. The procedures must be in English and other appropriate languages.

4. Backup System

In the event the primary garbage disposal system is inoperable, the local APHIS/CBP office will be notified immediately at (919) 855-7600 and (919) 467-3487 and will be advised, in advance, as to the use of the following prearranged approved backup system: *(check one)*

X Sterilizer located at:
Stericycle, Inc.
4403 Republic Court
Concord, NC 28027
(704) 723-4957

Or

X Incinerator located at:
Stericycle, Inc.
254 West Keene Road
Apopka, FL 32703
(407) 889-2800

☐ Non-pressurized water cooker located at:

(Name, Address, Phone Number)

Company Representative Initials

5. Training

   A. The company shall present a training program to employees before they are permitted to handle or supervise the handling of regulated garbage. This training program should be of sufficient duration to adequately provide the required information. All previously trained employees shall be provided review training annually (this training may be given in more than one session).

   B. The training package must be approved by the local APHIS/CBP Port Director or his/her designee, and may include both formal classroom training and on-the-job training, as follows:

      i. Definition of regulated garbage;

      ii. Explanation and purpose of the regulations;

      iii. Inclusion of film, slides, or other training aids on foreign animal and plant diseases and pests;

      iv. Specific outline — by demonstration, illustration, or picture — of proper regulated garbage handling procedures for the facility and step–by–step procedures from stripping of aircraft to disposal. A written, step-by-step protocol for reporting and handling emergency spills, maintaining control of regulated materials, and the cleaning and disinfecting of affected areas and equipment must be available for CBP/APHIS review;

      v. This compliance agreement;

      vi. Presentation in English and other appropriate languages.

   C. The records must be retained for a minimum of one (1) year from the end of the month in which the training occurred.

Company Representative Initials _____

Addendum to Compliance Agreement

Cleaning and Disinfection

1. Articles Requiring Cleaning and Disinfection

   Any article, means of conveyance, or other surface contaminated with animal origin material or spillage from USDA regulated garbage must be cleaned and disinfected with one of the USDA APHIS-approved disinfectants listed below.

   Contaminated carts, pallets, machinery, handling containers, trucks, or railroad cars used for transporting USDA regulated garbage and any dock or warehouse surfaces contaminated with leakage from such garbage must be cleaned and disinfected before the items are reused. Cleaning of portable items shall be accomplished over a drain leading to an approved sewage system.

2. Materials and Equipment

   When a spill occurs, the following items must be immediately available to workers tasked with cleaning up the spill:

   A. APHIS-approved disinfectant

      i. Virkon® S (either in bulk or pre-measured for mixing or a premixed solution for immediate use); or

      ii. Household bleach (sodium hypochlorite) in either full strength for mixing or premixed for immediate use

   B. A gallon container filled with clean water

   C. A detergent solution (facility choice)

   D. Spray bottle to apply disinfectant

   E. Whisk broom and dust pan or shovel

   F. Paper towels or other absorbent material

   G. Plastic leak-proof bags to hold collected material

   It is suggested that a disinfection kit, incorporating the above required items as well as the equipment listed below, be available at the work site, and if applicable, on each conveyance transporting regulated garbage. This allows for immediate cleaning and disinfection of any spillage of regulated garbage.

Company Representative Initials AD

The additional items recommended for inclusion in the disinfection kit are:

H. A scrub brush and scraping tool

I. Disposable plastic shoe covers

J. A box for holding the equipment which can be labeled "Disinfection Kit" (it is recommended that the disinfection procedures are affixed to the inside of the box)

K. Appropriate personal protective equipment such as rubber or latex gloves and safety goggles and/or other equipment as required by the facility

Disinfectant Information

1. Virkon® S is available through many Internet sources. Follow the directions on the label. Premixed Virkon® S is effective for seven (7) days from the date of mixing. Write the date the solution was mixed on the container holding the solution.

2. Household bleach (chemical name: sodium hypochlorite). Off-the-shelf bleach is 5.25% or 6% sodium hypochlorite.

   The minimum effective dilution for a garbage spill is 3% sodium hypochlorite.

   Directions for use:

   - With 5.25% sodium hypochlorite, mix the solution of 1.5 cups of bleach to 1 cup of water to make a 3% solution.

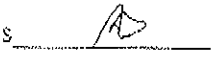
   - When larger quantities are needed, mix at a ratio of 3 parts bleach to 2 parts water, such as 3 gallons of bleach to 2 gallons of water to make a 3% solution.

   - With 6% sodium hypochlorite, mix at a ratio of 1 part bleach to 1 part water, such as 1 cup of bleach with 1 cup of water or 1 gallon of bleach to 1 gallon of water to make a 3% solution.

   A premixed solution of bleach and water is only effective for a 24-hour period post mixing. A date and time should be applied to the bulk container holding the solution.

Disinfectant Procedures

1. Sweep up or scrape off as much of the contaminant as possible. Apply absorbent material if needed. Place the sweepings, scrapings, and absorbent material in a leak-proof plastic bag for incineration or sterilization. Free surfaces of grease or dirt when applicable.

Company Representative Initials 

2. Scrub the contaminated area or areas where the spill occurred. Use a good detergent solution of the facility's choice. **Note:** if the area is not effectively scrubbed first, remaining debris will protect viruses embedded below the surface, where they will remain untouched by the disinfectant.

3. Flush the scrubbed surfaces with clean water. Flushing is important because the detergent may react with the disinfectant and reduce the disinfectant's activity.

4. If using a premixed solution of disinfectant, then agitate the solution thoroughly. If the temperature is below freezing, delay the application of the disinfectant until the temperature is above freezing. Apply the disinfectant generously, covering the entire area.

5. Incinerate or sterilize all refuse, sweepings, and scrapings that are in the plastic bag.

WARNING: Do not use sodium carbonate, sodium silicate, or Virkon® S around food, in areas where food is handled, prepared, or transported such as inside a catering kitchen, galley areas aboard aircraft, or in trucks used to transport food and supplies to an aircraft. When disinfecting in these areas, allow the use of a sanitizer/disinfectant approved by the Environmental Protection Agency (EPA) for use around food or on food contact surfaces.

Do not use sodium hypochlorite (household bleach) on passenger areas or cargo areas of aircraft as it can corrode sensitive aircraft or electronic parts. Virkon® S should not be used in passenger areas, to include galley or food preparation areas, as it is not approved by the Environmental Protection Agency (EPA) for use around food or on food contact surfaces. Virkon® S may damage carpets or seat covers in passenger areas of aircraft.

Contact the local CBP Agriculture Specialist at (919) 467-3487 when a spill occurs inside an aircraft.

Company Representative Initials _____

Appendix

B-1

Reusable Container Decontamination:

1. An assigned employee insures a 55 gallon drum is prepared with Quaternary Amine disinfectant solution.
2. The drum is placed in the wash area with a nozzle inserted in drum to allow application into containers.
3. Tubs are emptied and placed in the wash area and sprayed with the disinfectant solution.
4. Tubs are staged in a holding area to dry and store.

Appendix

B-2

City of Graham
Control Authority and/or Municipality

PERMIT

Industrial User Pretreatment Permit (IUP)
To Discharge Wastewater Under the
Industrial Pretreatment Program

0030	NA
IUP Number	40 CFR Category (if Applicable)

In compliance with the provisions of North Carolina General Statute 143-215.1, any applicable federal categorical pretreatment regulations, all other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Control Authority and/or Municipality Sewer Use Ordinance. The following Industry, hereafter referred to by name or as the permittee:

Industry name, permittee:
Stericycle , Inc.
Facility Located at Street Address
1168 Porter Ave., Haw River, NC 27258

is hereby authorized to discharge wastewater from the facility located at the above listed address into the sanitary sewer collection system and the wastewater treatment facility of the Control Authority and/or Municipality listed below:

IUP Control Authority and/or Municipality WWTP name:
City of Graham
NPDES Number:
NC0021211
WWTP Address:
P.O. Drawer 357
City, State, Zip
Graham, NC 27253

in accordance with effluent limitations, monitoring requirements, and all other conditions set forth in Parts I, II, and III of this Industrial User Pretreatment Permit (IUP).

Effective date, this permit and the authorization to discharge shall become effective at midnight on this date:.
July 1, 2011
Expiration date, this permit and the authorization to discharge shall expire at midnight on this date:.
June 30, 2016

5/26/11
Date signed

Victor R. Rusk
POTW Director

Appendix C

Ash Disposal Information:

Landfill

Upper Piedmont Environmental
9650 Oxford Road
Rougemont, NC 27572
Tel: 336-364-3699
Permit Number: 73-04

Hauler

Republic Services
2875 Lowery Street
Winston Salem, NC 27101
Telephone: 336-724-0842
Customer Number: 574

Appendix

D

Standard Operating Procedure for Transporting Regulated Garbage and Non-Regulated Garbage in the Same Vehicle

1.0 Purpose

To establish a written procedure for the segregation of Regulated Garbage containers and Regulated Medical Waste (RMW) containers during transportation and storage. By ensuring the complete physical separation of Regulated Garbage and RMW waste containers, Stericycle is seeking exemption from the requirement to treat all materials transported on the same vehicle under the Regulated Garbage treatment parameters.

2.0 Scope

This procedure applies to all Stericycle transportation locations that hold cartage compliance agreements issued by Customs and Border Protection (CBP) to transport and/or temporarily store Regulated Garbage or Prohibited Products (Rejected Cargo).

3.0 References

CBP Storage Establishment Attachment to PPQ Form 519
USDA Manual for Agricultural Clearance (rev 4/2010)
Attached Photos of typical RMW and Regulated Garbage containers.

4.0 Definitions

CBP – U.S. Customs and Border Protection
APHIS – Animal and Plant Health Inspections Service
PPQ – Plant Protection and Quarantine
DHS – Department of Homeland Security
Rejected Cargo – Cargo that has been quarantined by DHS, CBP, USDA or APHIS and required to be treated as APHIS waste per the regulatory agency's discretion.
Compliance Agreement – Signed agreement between Stericycle and DHS, CBP, PPQ or USDA, outlining procedures to manage APHIS waste.
RMW – Regulated Medical Waste

5.0 Equipment Material

- APHIS Spill Kit – As mandated by the compliance agreement.
- 4-mil bags
- Handling Containers (Regulated Garbage and RMW as described below)

Regulated Medical Waste Containers

All Regulated Medical Waste containers have the biohazard symbol, US DOT proper shipping description and orientation arrows, which differentiate them from any other type of waste container.

RMW containers may be small, corrugated cardboard boxes lined with a red plastic bag that contain the medical waste or rigid plastic containers of various volumes containing medical waste in red bags.

Standard Operating Procedure for Transporting Regulated Garbage and Non-Regulated Garbage in the Same Vehicle

Regulated Garbage Handling Containers
Regulated Garbage handling containers may be either fiber drums or rigid plastic containers of various volumes. All regulated garbage handling containers are labeled with the words "Regulated Garbage" or "Foreign Garbage". The labels are white with black lettering.

6.0 Safety Equipment

Safety Glasses, Rubber or Latex Gloves, Boot Covers

7.0 Procedure

Physical separation of regulated garbage and other non- regulated garbage during transportation and temporary storage is based solely on containerization and labeling/marking protocols.

Failure to follow the segregation policy for containers or Regulated Garbage and Non-Regulated Garbage will require Stericycle to treat all materials transported in the same vehicle under the APHIS protocol for the treatment facility (typically a higher temperature and/or longer soak time).

8.0 Spill Procedures

Stericycle follows universal precautions when managing spills of regulated medical waste in transit or while in temporary storage. Stericycle trains on a second protocol for managing Regulated Garbage spills and cleanup procedures.

If a spill occurs during transit or storage and Stericycle is able to determine exactly which container is causing the leak, the appropriate protocol for notifications and cleanup will be followed.

If a spill occurs during transit or storage and Stericycle is unable to determine which container is causing the leak, the Regulated Garbage spill response protocol will be implemented. If the spill causes contamination of non-regulated garbage or containers, all of the contaminated material will be labeled as Regulated Garbage and the applicable treatment/disinfection protocol utilized.

9.0 Exceptions to Policy

Any deviation from this procedure must have prior approval from CBP in writing. The Regional Environmental Manager will obtain the approval.

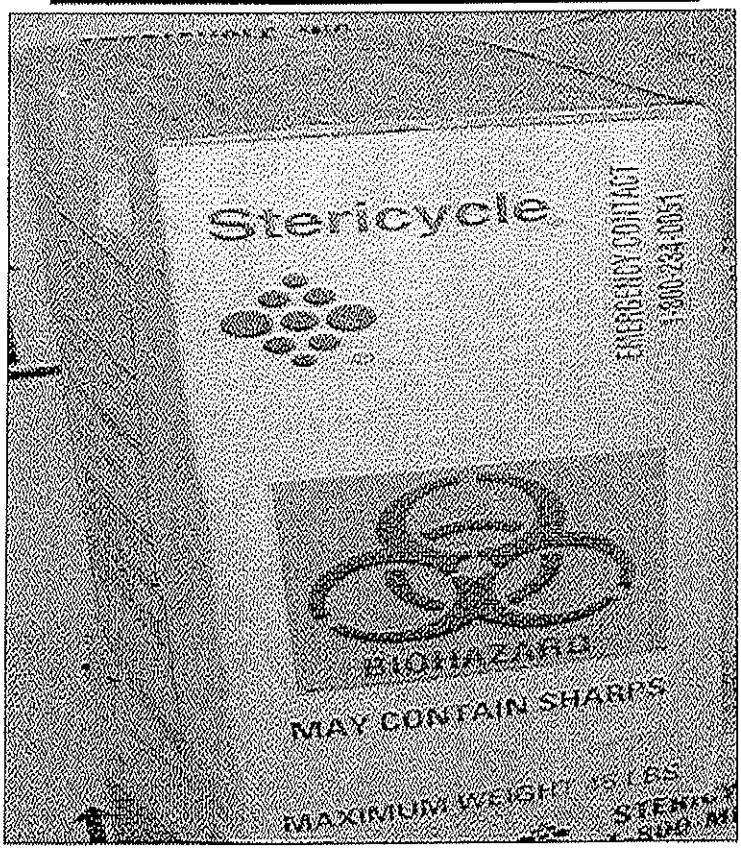
Attachments (1)

Standard Operating Procedure for Transporting Regulated Garbage and Non-Regulated Garbage in the Same Vehicle

Container Attachment – Addendum II

Standard Operating Procedure for Transporting Regulated Garbage and Non-Regulated Garbage in the Same Vehicle

Container Attachment – Addendum II



Appendix

E

Stericycle®
Protecting People. Reducing Risk.™

REGULATED MEDICAL WASTE ACCEPTANCE POLICY

Stericycle policy requires compliance with all applicable regulations regarding the collection, transportation and treatment of regulated medical waste. Federal Department of Transportation (DOT) Regulations require the generator of regulated medical waste to certify that the packaging and documentation of transported regulated medical waste complies with DOT regulations regarding waste classification, packaging, labeling and shipping documentation. To ensure that neither Stericycle nor the generator of regulated medical waste violates applicable regulations, it is imperative that all parties understand the rules regarding proper identification, classification, segregation and packaging of regulated medical waste. The purpose of this policy is to summarize the minimum requirements for preparing your medical waste for collection, transportation and treatment. Additional facility or state-specific waste acceptance policies may apply based on permit specifications. Please contact your local representative for further information. You may also call (866) 783-7422.

REGULATED MEDICAL WASTE

Stericycle accepts medical waste generated in a broad range of medical, diagnostic, therapeutic and research activities. The term "medical waste" includes biohazardous, biomedical, infectious or regulated medical waste as defined under federal, state or local laws, rules, regulations and guidelines. Except as defined by specific state regulations, this **excludes** RCRA hazardous waste pharmaceuticals, all DEA scheduled drugs including *controlled substances, bulk chemotherapy, waste containing mercury or other heavy metals, batteries of any type, cauterizers, non-infectious dental waste, chemicals such as solvents, reagents, corrosives or ignitable materials classified as hazardous waste under Federal and State EPA Regulations. In addition, Stericycle **cannot accept** bulk liquids, radioactive materials, or complete human remains (including heads, full torsos and fetuses). Stericycle **cannot accept** these excluded materials packaged as regulated medical waste. All lab wastes or materials which contain or have the potential to contain infectious substances arising from those agents listed under 42 CFR 72.3 are strictly prohibited from medical waste by federal law and must be pretreated prior to disposal. Separate protocol and packaging requirements apply for the disposal of non-hazardous pharmaceuticals. Hazardous waste transportation services may be offered in certain geographical locations, under separate contract. Please contact your local representative for details and packaging specifications.

*Un-dispensed from DEA Registrant

WASTE SEGREGATION AND PACKAGING

The generator is solely responsible for properly segregating, packaging and labeling of regulated medical waste. Proper segregation and packaging reduces the potential for accidental release of the contents and exposure to employees and the general public. DOT regulations require (49 CFR 173.197) that all packages of regulated medical waste be prepared for transport in containers meeting the following requirements: 1) rigid; 2) leak resistant; 3) impervious to moisture; 4) of sufficient strength to prevent tearing or bursting under normal conditions of use and handling; 5) sealed to prevent leakage during transport; and 6) puncture resistant for sharps. All regulated medical waste must be accompanied by a properly completed shipping document (See 49 CFR 172.202).

MANAGEMENT OF NON-CONFORMING WASTE

As required by regulation and company policy, Stericycle employees may refuse containers that are non-conforming because of their contents or are improperly packaged, leaking, damaged or likely to create a risk of exposure to employees or the general public. Any non-conforming waste identified in route to or at a Stericycle location may be returned to the generator for proper packaging or disposal. Proper segregation and packaging is essential to ensure compliant and safe handling, collection, transportation and treatment of regulated medical waste.

STERICYCLE REGULATED MEDICAL WASTE ACCEPTANCE POLICY CHECKLIST

ACCEPTED REGULATED MEDICAL WASTE

- Sharps - Means any object contaminated with a pathogen or that may become contaminated with a pathogen through handling or during transportation and also capable of cutting or penetrating skin or a packaging material. Sharps includes needles, syringes, scalpels, broken glass, culture slides, culture dishes, broken capillary tubes, broken rigid plastic, and exposed ends of dental wires.
- Regulated Medical Waste or Clinical Waste or (Bio) Medical Waste - Means a waste or reusable material derived from the medical treatment of an animal or human, which includes diagnosis and immunization, or from biomedical research, which includes the production and testing of biological products.

ACCEPTED REGULATED MEDICAL WASTE WHICH MUST BE IDENTIFIED AND SEGREGATED FOR INCINERATION

- Trace Chemotherapy Contaminated Waste - RCRA Empty drug vials, syringes and needles, spill kits, IV tubing and bags, contaminated gloves and gowns, and related materials as defined in applicable laws, rules, regulations or guidelines
- Pathological Waste - Human or animal body parts, organs, tissues and surgical specimen (decanted of formaldehyde, formalin or other preservatives as required per hazardous waste rules).
- Non-RCRA Pharmaceuticals - Must be characterized and certified as non-RCRA hazardous material by the generator. **Excludes** all DEA scheduled drugs, including controlled substances*
- **California Only** - Solidified Suction Canisters - Suction canisters that have been injected with solidifier materials to control liquids or suction canisters made of high heat resistant plastics such as polysulfone

REGULATED MEDICAL WASTE **NOT** ACCEPTED BY STERICYCLE

- Untreated Category A Infectious Substances
- RCRA Hazardous Pharmaceutical Waste and all DEA controlled drugs, including controlled substances*
- Chemicals - Formaldehyde, formalin, acids, alcohol, waste oil, solvents, reagents, fixer developer
- Hazardous Waste - Drums or other containers with a hazard warning symbol, batteries and other heavy metals
- Radioactive Waste - Any container with a radioactivity level that exceeds regulatory or permitted limits; lead-containing materials
- Complete Human Remains (including heads, full torsos, and fetuses)
- Bulk Chemotherapy Waste
- Compressed Gas Cylinders, Canisters, Inhalers and Aerosol Cans
- Any Mercury Containing Material or Devices - Any mercury thermometers, Sphygmomanometers, lab or medical devices
- Mercury-Containing Dental Waste - Non-contact and contact amalgam and products, chairside traps, amalgam sludge or vacuum pump filters, extracted teeth with mercury fillings and empty amalgam capsules

**Consult Stericycle Representative for specific requirements*

Additional waste acceptance policies may apply based on state or permit specific requirements. Hazardous waste transportation services may be offered in certain geographical locations, under separate contract. Please refer to your local Stericycle Representative for additional information and options for possible hazardous waste handling. For additional information on container and labeling requirements contact our Stericycle Customer Service Department at (866) 783-7422.

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Appendix

F

Vehicle Decontamination Procedures

1. After the vehicle has been unloaded, all paper, trash, or other debris is collected and placed into the incinerator.
2. The vehicle is then staged over a wash pit, allowing drainage to city waste water (Waste Water permit supplied as Appendix B-2).
3. The vehicle is then sprayed with a mycobacteriocidal solution composed of bleach, water and disinfecting solution.
4. After the solution is applied, the vehicle is then sprayed with water to eliminate residue.
5. Vehicle is then moved to allow drying.

Appendix

G

INCINERATOR

F

PLEASE TYPE OR PRINT. ATTACH TO THE GENERAL INFORMATION FORM "A", IF APPLICABLE, ATTACH AIR POLLUTION CONTROL DEVICE FORM "C".

1. Emission Source and ID NO. (FROM GENERAL INFORMATION FORM "A", ITEM 6):
Incinerator A, B

2. Incinerator Description:
Dual Chamber Controlled Air

Manufacturer: Joy Energy Systems, Inc. | Model Name: T-Series | Model Number: 2500 TES

3. Permit Application is made for (CHECK ONE ONLY):
(X) New Source ( ) Existing Source ( ) Modification – Last Permit No. ____
Commence Construction Date July 15, 19 89 Operation Date December 1, 1989

4. Maximum Source Operation: 24 Hours/Day 7 Days/Week 50 Weeks/Year

Type of Waste Burned: (See codes on next page)	Maximum Charging Rate (lb/hr) Design	Maximum Charging Rate (lb/hr) Actual	Tons/Year Burned	Total Waste Generated (lb/day)
0, 4	1911	1911	8000	3,440 (ash)

Combustible 75 % Noncombustible 15% Moisture 10 % Heat Value 8500 (BTU/lb)

Primary Chamber:	Secondary Chamber:	Secondary Chamber Retention Time:	Type of Feed
Volume 925 cu. ft.	Volume 970 cu. ft.	Seconds 2.28@2000° F	( ) Manual
Temperature 1450 °F	Temperature 1800 °F	2.02 @1800° F	(X) Automatic

Burner Data:

	BURNER RATING (BTU/HR) Primary	BURNER RATING (BTU/HR) Secondary	AIR FLOW (CFM) Overfire	AIR FLOW (CFM) Underfire	Excess Air (%)
	2,300,000	5,300,000	4340	1080	141

Is there a preheat timer? ( ) No (X) Yes, Preheating Time 90 Min.

Auxiliary Fuel Data: Primary Fuel Type(s) Natural Gas
Secondary Fuel Type(s) ____

FUEL TYPE	FUEL USAGE Max. Design	FUEL USAGE Max. Actual	FUEL USAGE Annual	Max. % Sulfur	Max. % Ash	BTU Value
Natural Gas	(SCF) 7600	(SCF) 7600	(SCF/yr) 6,000,000	Neg.	Neg.	(BTU/SCF) 1000
#2 Fuel Oil	(gal/hr)	(gal/hr)	(gal/yr)			(BTU/gal)
Other						

Air Contaminants Emitted:	Maximum Actual Emissions Before Control (lbs/hr)	Maximum Actual Emissions After Control (lbs/hr)	Emission Estimate Method*	Control Device**	Control Efficiency %
Particulates	10.59	1.05	2	Scrubber	90
Sulfur Dioxide	1.49				
Nitrogen Dioxide	9.56				
Carbon Monoxide	Neg.		5		
Hydrocarbons (VOC)	Neg.				
Lead					
Other (HCl)	30	0.6	2	Scrubber	98
Other ( )					

*REFER TO BACK OF GENERAL INFORMATION FORM "A" FOR EMISSION ESTIMATION CODE
**ATTACH APPROPRIATE AIR CONTROL DEVICE FORM "C"

INCINERATOR -- *continued*

F

Describe any liquid or solid wastes generated and method of disposal:
Ashes to Landfill

13. Stack or Emission Point Data:

Height Above Ground (ft.)	Inside Area (sq. ft.)	Gas Temperature (Deg. F)	Direction of Exit (up, down, or horizontal)
40 Ft.	12.56	1800°F	Up
Volumetric Flow Rate (ACFM)	**Velocity (ft./sec.)**	**Are sampling ports available?**	**Is rain cap or other obstruction over stack?**
28,837 ACFM@1800°F	37.3	( ) No (X) Yes	( ) No (X) Yes, (specify) Spark Arrestor

14. Is a RCRA permit required by the N. C. Department of Human Resources? (X) No ( ) Yes
If yes, has a RCRA permit application been submitted? _____ Date _____, 19____

15. List ALL incinerated HAZARDOUS WASTE specified in the RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) (40 CFR 261) in the comments section below:

16. Comments:

*** TYPE OF WASTE BURNED CODE TABLE ***

ODE	Principal components, usual source, and typical moisture content
0	Highly combustible waste, paper, wood, cardboard cartons, (including up to 10% treated papers, plastic or rubber scraps); from commercial and industrial sources; 10% moisture.
1	Combustible waste, paper, cartons, rags, wood scraps, combustible floor sweepings; from domestic, commercial, and industrial sources; 25% moisture.
2	Rubbish and garbage; from residential sources; 50% moisture.
3	Predominantly animal and vegetable waste; from restaurants, hotels, markets, institutional, commercial and club sources; 70% moisture.
4	Carcasses, organs, solid organic wastes; from hospitals, laboratories, slaughterhouses, animal pounds, and similar sources; 85% moisture.
6	Gaseous and semi-liquid industrial process waste; variable moisture. Describe in detail under comments.
	Solid and semi-solid by-product waste, such as rubber, plastics, wood waste, etc., from industrial operations; variable moisture. Describe in detail under comments.

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.

(4) 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 volitile 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 exhanst gas then enters the venturi scrubber and mist eliminator prior to venting to the atmosphere.

Stericycle utilizes two Delta Premier Induced Draft 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 utilizes 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.

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.

Appendix

H

Received NOV 1997 Solid Waste Section

ASH SAMPLING AND ANALYSIS PLAN

A. Introduction:

The purpose of this document is to provide a standard protocol for the sampling and analysis of incinerator ash at the BFI Medical Waste Haw River facility. The sampling protocol contained within will provide an easy and effective method for obtaining a representative composite sample of incinerator ash. Since all the ash from the incinerator is collected in a twenty yard roll-off container, the sample will be taken from a full container before it leaves the facility.

B. Scope:

The collection of a composite sample representative of the entire load will be accomplished by secitioning off the roll-off container into eight equal grids, and, utilizing a thief sampler, removing a core sample from each grid. Cores from each grid will be representative of the respective grid from top to bottom. All eight core samples will be combined to form the final composite sample, representative of the entire load.

The composite sample will be properly labeled and containerized, and with accompanying chain of custody and sample analysis request, forwarded to a analytical laboratory for analysis.

APPROVED
DIVISION OF SOLID WASTE MANAGEMENT
DATE 12/19/98 BY

C. Equipment:

(1) Sampling thief- a five foot (5) long, two (2) to two and one half (2 1/2) inch diameter pvc tube.

(2) Mixing bucket- a five (5) gallon plastic pail with lid.

(3) Personal protective equipment- rubber gloves, safety glasses/shields, disposable coveralls, and respirators as needed.

(4) Sufficient sample containers to collect and transport the samples to the analytical laboratory.

D. Preparation:

Prior to sampling, the roll-off container will be divided into a grid of eight equal sections. for example, a typical roll-off container with the inside dimensions of 19 1/2 feet by 7 feet will be divided into 8 equal sections 58 1/2 inches by 42 inches as shown in figure 1- this section.

To prevent contamination of the sample, all equipment used to collect the sample, such as the sampling thief and equipment will be washed with hot tap water and detergent, rinsed with copious amounts of hot tap water, and then rinsed with a deionized water. The equipment will be allowed to air dry, and stored in clean kraft paper and stored in an area to avoid contamination with dirt or dust. All sample containers are to be provided by the laboratory contracted to do the analysis, and shall be pre-cleaned.

E. Sampling:

A TCLP sample for toxic metals will be taken twice per year using the following process:

(1) Notify the analytical laboratory of the scheduled sampling date to allow a reasonable length of time for the receipt of the sample containers at the facility.

(2) Divide the full roll-off container into its eight equal grid sections as specified above.

(3) Use the sampling thief and collect a core sample from each grid section.

(4) Remove the sample from the thief and place it into the pre-cleaned mixing bucket.

(5) Proceed as above and collect one sample from each of the remaining sections.

(6) After all the core samples are collected and deposited into the mixing bucket, thoroughly mix the sample to composite the subsamples into a final homogeneous composite sample.

(7) Once mixing is complete, fill the sample containers and label as follows:

(a) Name of sampler
(b) Name of facility
(c) Name of sample point
(d) Date/time of sampling
(e) Preservative (if any)
(f) Constituents to be analyzed

(8) After the sample has been collected, prepare it for shipment to the laboratory as described in the instructions provided by the laboratory. Complete copies of the attached chain of custody and sample analysis request forms and submit with the samples.

(9) Upon receipt of the results, carefully review the results noting any abnormalities. File the results and maintain for a period of 3 years.

F. Analysis:

The combustion ash sample shall be analyzed for the following:

(1) Free liquids by paint filter analysis.

(2) PH

(3) The sample will be analyzed for toxicity characteristics metals in accordance with the attached referenced methodoligies:

REFERENCED METHODOLOGIES

Preparation/Method Name	*Section/Method Number (References)*
Sample Prepartion:	
Toxicity Characteristic Leaching Procedure	*(2)*
Microwave Acid Digestion of Aqueous Samples and Extracts for Total Metals Analysis by AAS or ICP	*3015(1)*

TOP VIEW

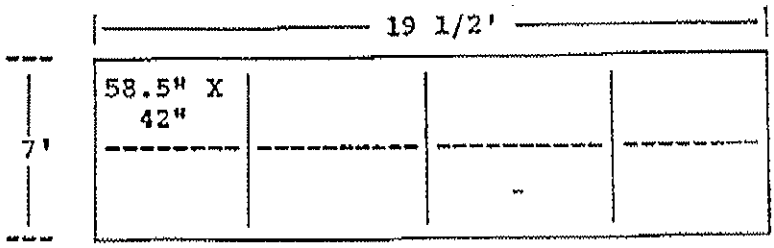

Figure 1. Typical Twenty (20) Yard Roll-off Container

CHAIN-OF-CUSTODY

Shuttle Number: _____ Seal No. _____ Prepared/ Sealed By: _____ (print name)

Laboratory: _____ (signature) _____ (date)

SHIP TO
Company: _____ Attn: _____

Address: _____ Phone: _____

SAMPLE IDENTIFICATION
Facility/Site: _____

SHUTTLE CONTENTS:

LAB I.D.	Site Sample Source I.D.	# of Bottles	Size	P* G*	Preser-vative	Parameter(s)

Container type: P* = Plastic, G* = Glass

	Date	Time	
(1) Shuttle opened by: _____ (print name)			Seal Intact Yes No No. _____ _____ (signature)
(2) Shuttle prepared for shipment by: _____ (print name)			New Seal Installed Yes No No. _____ _____ (signature)
(3) Shuttle received at Lab by: _____ (print name) SSK Temp. rec'd: _____deg. C			Seal Intact Yes No No. _____ Lab's Name: _____ _____ (signature)

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Fill in all applicable areas on both the paperwork and bottle labels. Make sure little or no headspace in the bottles exists. Cool samples to approx. 4 deg. C (in wet ice) and replace wet ice with frozen ice packs prior to shipment. Ship overnight air to contracted laboratory. Call in advance to notify laboratory when to expect shipment.

Appendix

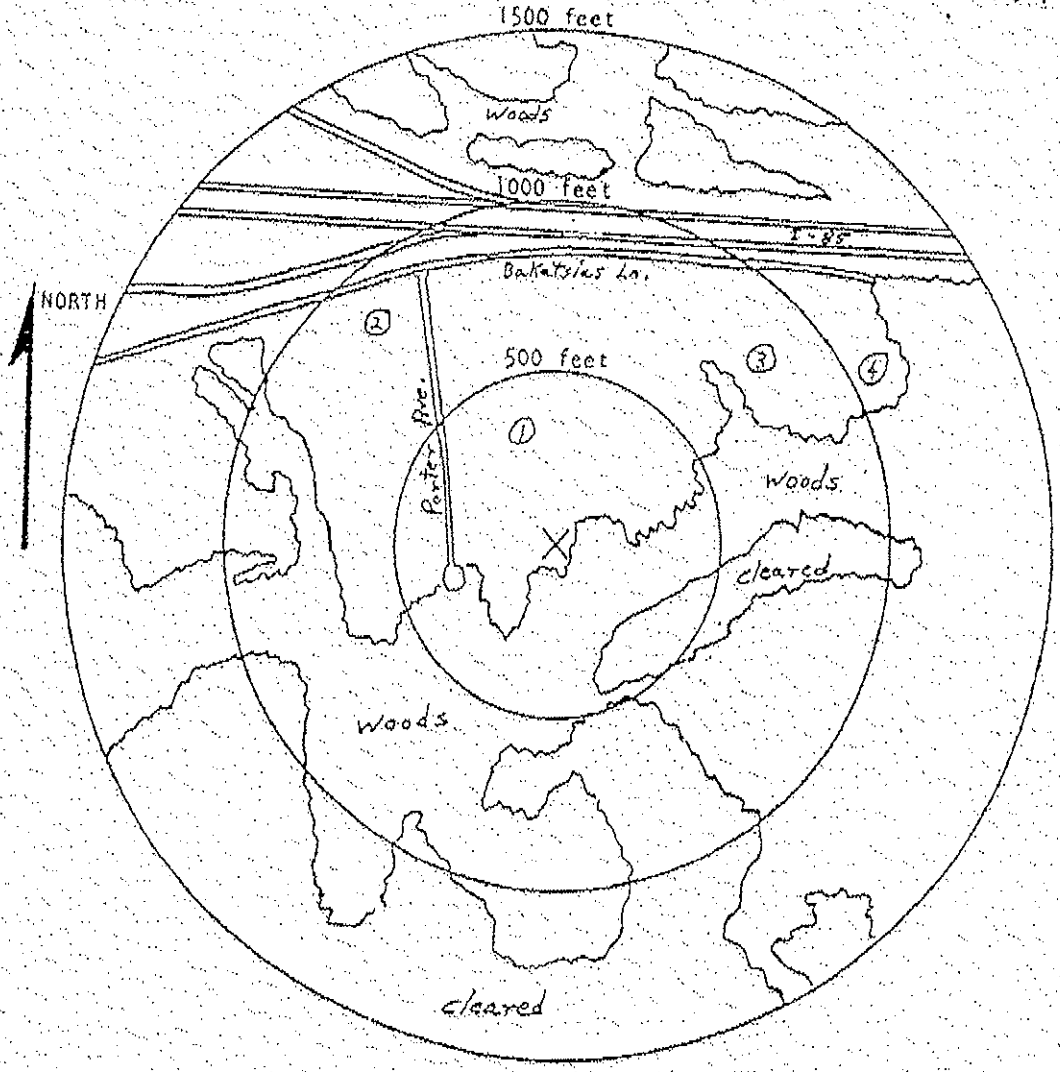
I

D

AREA DIAGRAM

page 1 of

Show all surrounding buildings and roads within 1500 feet of the equipment covered by this application. Attach a site diagram identifying each emission source location(s), property boundaries and building (structure) dimensions (height, width, and length).



INSTRUCTIONS

1. Indicate location and type of building by the use of small numbered circles with the decription below.
2. Show roads as lines representing the road edges. Indicate street names and highway numbers.
3. Show wooded or cleared area by approximate boundary lines and the words "woods", "cleared", "cornfield", etc.

CODE	DESCRIPTION
(1)	Irradiation Service Company
(2)	Manufacturing Company
(3)	Fabricating Company
(4)	Restaurant
(5)	
(6)	
(7)	
(8)	
(9)	
(10)	

Example:

(1) Church
(2) Residence

7. ZONING

The land on which this facility is located is in an industrial park on Porter Avenue, Graham, N.C. It is zoned I-1, Light Industrial District. Road access to this facility does not pass through any residentially zoned land. This facility is less than 1/4 mile from I-85. The following page and Appendix A will provide further information on the zoning.