ATTACHMENT D-5

5.0 Operations Plan

5.1 Introduction

Veolia ES Technical Solutions, L.L.C. (Veolia) is currently permitted as a Mercury Recovery and Reclamation Facility under the provisions of Permit Number 71455-HO-007 issued by the Florida Department of Environmental Protection (Department). Veolia is renewing the permit and this operations plan is intended to describe the current mercury recovery and reclamation activities at the facility as well as proposed modifications. This plan addresses the following topics:

General Facility Information
Incoming Material Acceptance Procedures
Outgoing Material Shipments and Documentation
Material Processing Descriptions
Air Pollution Control Technology
Container Storage Areas
Recovered Material Quality Control
Operating Records
Hazard Prevention
Facility Inspection Procedures
Maintenance Procedures
Personnel Training

5.2 General Facility Information:

A general description of the Veolia ES Technical Solutions, LLC (Veolia) facility, as required by 40 CFR 270.14(b) (1), follows:

Company Name:	Veolia ES Technical Solutions, LLC.
Corporate Address:	4760 World Houston Parkway, Suite 100 Houston, TX 77032
Facility Address:	342 Marpan Lane Tallahassee, FL. 32305
Telephone Number:	850-877-8299
Facsimile Number:	850-878-3349
EPA Identification Number:	FL0000207449
Facility Contact:	Matthew Melott, Operations Manager

Veolia operates a mercury recovery and reclamation facility that provides full-service recycling for articles containing mercury. For the purpose of this plan, mercury-containing manufactured articles (MCMA) includes but is not limited to fluorescent lamps, high intensity discharge lamps, devices containing elemental mercury, dental

amalgam and clean up articles from the clean-up of releases of or components of mercury-containing manufactured articles. Based on the volumes of wastes received and the methods of recycling, fluorescent and HID lamps will be addressed as a category of waste separate from the other types of MCMA. The remaining waste types will be referred to generically as MCMA throughout the plan.

In addition to the mercury recovery and reclamation operations, Veolia also conducts the following operations under the management and direction of the facility:

- On-site Universal Waste Battery accumulation and storage
- On-site Lamp ballast accumulation and storage
- On-site Electronic Waste accumulation, sorting and disassembly
- On-site Hazardous Waste Transfer
- Off-site Universal Waste Transport and Transfer
- Off-site Hazardous Waste Transport
- Off-site PCB Transport and transfer

5.2.1 Company Chronology

July 1, 2006 to present FL0000207449	Veolia ES Technical Solutions, L.L.C. 342 Marpan Lane, Tallahassee, FL 32305
January 2005 to July 1, 2006 FL0000207449	Onyx Environmental Services, LLC 342 Marpan Lane, Tallahassee, FL 32305
January 2003 to December 2004 FL0000207449	Onyx Special Services, Inc. 342 Marpan Lane, Tallahassee, FL 32305
January 2000 to January 2003 FL0000207449	Superior Special Services, Inc. 342 Marpan Lane, Tallahassee, FL 32305
August 1996 to January 2000 FL0000207449	Recyclights, Inc. 4972 Woodville Hwy, Tallahassee, FL 32305

5.2.2 Compliance History of Facility

Inspection dates and any alleged violations and associated Notices of Violation (NOVs) are summarized in this section as reference to the compliance history at the facility.

Table 5.1 Compliance History

Date	Agency	Program	Description of Violation(s)	Penalty Assessed
12/18/96	FL DEP	RCRA	No violations	None
9/5/1997	FL DEP	RCRA	No violations	None
3/19/98	FL DEP	RCRA	No violations	None
9/17/99	FL DEP	RCRA	No violations	None

12/2/99	FL DEP	RCRA	No violations	None
3/6/00	FL DEP	Solid Waste	No violations	None
11/16/00	FL DEP	Solid Waste	No violations	None
1/17/01	FL DEP	RCRA	Notice of Violation-exceeding Permitted capacity, achieving <99 percent recovery, and not submitting samples in a timely manner	$6,600.00 (**1**)
3/9/01	FL DEP	Solid Waste	No violations	None
8/30/01	FL DEP	Air	No violations	None
2/13/02	FL DEP	Solid Waste	No violations	None
5/22/02	FL DEP & US EPA	RCRA	Improperly sealed container, inadequate aisle space	$1,234 fine and a Pollution Prevention Project of $2,275.00 **(2)**
2/3/03	FL DEP	RCRA	No violations	None
2/28/03	FL DEP	Air	No violations	None
5/15/03	FL DEP	Air	No violations	None
6/3/03	FL DEP	RCRA	No violations	None
7/14/04	FL DEP	RCRA	No violations	None
8/11/04	City of Tallahassee	Water	No violations	None
12/29/04	FL DEP	Air	No violations	None
4/1/05	FL DEP	NPDES	No violations	None
4/20/05	FL DEP	RCRA	No violations	None
9/20/05	FL DEP	RCRA	Self Report to FLDEP of improper storage of material offsite	$42,450.00 **(3)**
10/17/05	FL Dept of Health	Precription Drug Inspection	No violations	None
1/30/06	FL DEP	Air	No violations	None
5/4/06	FL DEP	RCRA	Storage of material in excess of 10 days on trailers in transfer lot	2,750.00 (**4**)
7/18/06	FL DEP	RCRA	No violations	None
11/15/06	FL DEP	Air	No violations	None
5/16/07	FL DEP	RCRA	Residual contaminant level in aluminum in excess of permit limit	$4,300.00 **(5)**
5/29/07	City of Tallahassee	Wastewater	No violations	None
4/2/08	FL DEP	Air	Only monitoring discharge from HID machine after second carbon filter and not prior to second carbon filter	$2,500.00 **(6)**

8/28/08	FL DEP	RCRA	Non-compliance letter regarding glass in north lot. Response submitted and no violations cited.	None
3/16/09	FL DEP & US EPA	RCRA	No violations	None
4/22/09	FL DEP	Air	No violations	None
1/27/10	FL DEP	RCRA	No violations	None
4/8/10	FL DEP	Air	Processing lamps outside a negative pressure area (preparing CFLs for recycling)	$800.00 **(7)**
6/8/10	FL DEP	Air	No violations	None
12/7/10	FL DEP & US EPA	RCRA	Warning letter issued NOV - temporary placement of containers outside of processing building, container missing accumulation start date, failure to implement contingency plan for small spill of glass on soil.	$18,600.00 with $6,100.00 offset by P2 project **(8)**
8/1/2011	FLDEP	Air Resources	Possible issue with two sample points	No further action
8/1/2011	USEPA	PCB's	No violations noted	
9/12/2011	FL DEP	Air Resources	NOV - Exceeding permitted limit between carbon filters on retort equipment	$1,300.00 **(9)**
6/11/2012	FL DEP	RCRA	No violations noted - report pending	
8-20-12	FL DEP	Air	No Violations	None
10-16-12	US EPA & FL DEP	RCRA	No Violations	None
11-6-12	City of Tallahassee/ Leon Cnty	Water	No Violations	None
12-11-13	FL DEP	Air	No Violations	None
1-7-14	FL DEP	RCRA	No Violations	None
9-3-14	FL DEP	Water	No Violations	None
6/2/2015	FL DEP	RCRA	No violations noted	None

12/17/2015	FL DEP and US EPA	RCRA	Report pending	

Footnote 1- Superior Special Services was inspected by Florida Department of Environmental Protection (FLDEP) on January 17, 2001. The inspection revealed violations for exceedance of storage capacity, not submitting samples for analytical testing in a timely manner, and not able to demonstrate 99 percent recovery of mercury in material processed at the facility. A warning letter was issued by FLDEP on February 26, 2001. A consent order was issued by FLDEP on April 26, 2001 with penalties of $6,100.00 for violations and $500.00 to reimburse the department for a total of $6,600.00. Superior made payment of the violation on May 22, 2001.

Footnote 2- Veolia Special Services, Inc was inspected on May 22, 2002 by FLDEP and US EPA in a cross media inspection for RCRA compliance. The inspection revealed violation for employee training, insufficient aisle space, and containers not secured. The inspection also revealed evidence of glass in an unpaved area north of the facility which may have caused cross contamination to that area of the facility. A warning letter was issued by FLDEP on July 29, 2002. A consent order was issued on November 14, 2002 with penalties of $2,937.00 for violations and $500.00 to reimburse the department for a total of $3,437.00. FLDEP offered Veolia the option of doing a pollution prevention program that would offset up to 75 percent of the monetary penalty. Veolia conducted a site soil investigation of the unpaved area and had a third party consultant prepare a report detailing no environmental impact to the area. The cost of this assessment was $2,275.00 and Veolia paid FLDEP a total of $1,234.00 to finalize the consent order. A letter was received from FLDEP on June 1, 2004 closing the consent order.

Footnote 3- Veolia Environmental Services, LLC (Veolia) became aware of potential violations involving storing material on trailers offsite at a transfer lot. Veolia conducted a full site investigation and after the findings were complete, Veolia self reported the violations to the Florida Department of Environmental Protection (FLDEP) on September 9, 2005. The department issued a warning letter on October 13, 2005 for unpermitted operations, contingency plan, operating records, and maximum quantity stored. As part of the warning letter from FLDEP an investigation of the transfer lot was order to determine if any of the improperly stored material resulted in environmental impact to the yard area. Veolia hired Environmental Consulting and Technologies (ECT) to conduct soil sampling of the transfer yard. Veolia met with FLDEP on December 14, 2005 to come to an amicable resolution of the matters as outlined in the warning letter. Veolia submitted a report titled Soil Sampling and Analysis for Mercury to FLDEP on February 15, 2006. FLDEP issued a Site Rehabilitation Completion order on June 8, 2006 closing the transfer yard investigation. On June 27, 2006 a Consent Order OGC #06-1307-37HW was issued to Veolia with a proposed fine of $40,950.00 with $1,500.00 to reimburse Department costs for a total of $42,450.00. Veolia made payment of the penalty on August 22, 2006.

Footnote 4- Veolia was inspected by FLDEP at our transfer location located at 4972 Woodville Highway, Tallahassee, FL. The inspection revealed several trailers in the transfer yard that were stored in excess of the allotted ten day storage requirement as allowed by rule. The FLDEP subsequently issued a letter on August 2, 2006 to Veolia which included a copy of the inspection report detailing the storage violations, a warning letter for exceeding storage times, and a consent order OGC #06-1373-37HW with a proposed fine amount of $2,750.00. Veolia made payment of the penalty on August 22, 2006.

Footnote 5- Veolia was inspected by the FLDEP on May 16, 2007 and during that inspection it was found that the sampling result for one of the weekly samples for aluminum had been entered into the facility records as 1.4 mg/kg whereas the final retest result for this sample was actually 14 mg/kg. The FLDEP subsequently issued a warning letter August 6, 2007 for failure to comply with the residual

mercury standards. A short form consent order was entered into and a penalty of $4,600 was paid by Veolia.

Footnote 6- Veolia was inspected by the FLDEP on April 2, 2008 and during that inspection it was found that the exhaust monitoring for the automated HID system was occurring following the final carbon canister. The FLDEP subsequently issued a warning letter May 19, 2008 identifying the monitoring of the exhaust discharge after the final carbon, as opposed to between the primary and final carbon absorbers, and failing to record the results of the monitoring on the retort room air handling system as a potential violations. At no time did the actual discharge of mercury exceed any regulatory limit. A short form consent order was entered into and a penalty of $2,250 was paid by Veolia.

Footnote 7- Veolia was inspected by the FLDEP on April 8, 2010 and during that the preparation of compact fluorescent lamps for recycling was occurring outside of a negative pressure area. The FLDEP subsequently issued a warning letter May 18, 2010 citing the processing of compact fluorescent lamps outside a negative pressure area as a potential violation. A short form consent order was entered into and a penalty of $800 was paid by Veolia.

Footnote 8- Veolia was inspected by the FLDEP on December 7, 2010. As a result of that inspection the FLDEP has issued a warning letter alleging six violations of the hazardous waste and mercury recovery facility regulations. Veolia has submitted a response to the warning letter. A short form consent order was entered into and a penalty of $18,600 was assessed with an offset of $6,100 for the implementation of a pollution prevention program. The penalty amount of $12,500 was paid by Veolia and the pollution prevention project was completed in November 2011.

Footnote 9- Veolia was inspected by the FLDEP on August 10, 2011 and during that inspection it was found that the exhaust monitoring data recorded for the retort system exceeded the authorized permit limit on June 24 and August 1-5, 2011. The FLDEP subsequently issued a warning letter September 12, 2008 alleging a violation of the pollution control permit requirements. A short form consent order was entered into and a penalty of $1,300 was paid by Veolia.

5.3 Incoming Material Acceptance Procedures:

All waste materials brought into or through the facility must be profiled and entered into the waste tracking system. Profiles are completed by the generator or completed by Veolia based upon information provided by the generator of the waste prior to receipt and are kept on file at the facility. Veolia uses three different types of profiles for the materials received.

Prior to receipt of a waste at the Veolia facility, specific waste evaluation and acceptance procedures are employed to qualify a generator's waste materials for acceptance and to ascertain RCRA status, chemical and physical characteristics, and compatibility with the on-site recycling operations or availability of off-site outlets for the material. Veolia has developed a tiered process to acquire the necessary data and conduct this evaluation. There are three categories of approvals under this program:

- Standard Approvals, this category applies to universal wastes. Standard material profiles have been developed for these wastes and are maintained on file at the facility.

- Generic Approvals, this category applies to materials that are not federal universal wastes~~; however, there is little variation~~, may vary slightly between generators ~~yet the materials may be~~and are subject to varying degrees of regulation, requiring additional review and evaluation.
- Case-by-case Approvals, this category applies to waste that may vary between generators and requires a detailed review of the physical and chemical properties of the material prior to approval.

The written generator notification as required under 40 CFR 264.12(b) may vary from generator to generator depending on the type of material that the generator is shipping to Veolia and the type of contract/arrangements that the generator has in place. This notification may take the form of an Approval Letter, be contained in a Quotation, printed directly on packaging materials provided to generators by Veolia, or some other form of written communication as deemed appropriate at the discretion of the facility. An example of an Approval Letter is included in Appendix D-5-I to this Attachment.

Since the facility only accepts mercury containing manufactured articles and clean up articles and PPE from handling of manufactured articles, generator knowledge will typically be sufficient to properly characterize the waste. If at any point during the approvals process, analytical testing is needed to provide additional information, generators will be required to submit analytical data obtained using methods specified by the US EPA or FLDEP as applicable.

5.3.1 Standard Approvals

Once Veolia has been notified by a generator that they wish to ship materials subject to the standard approvals process, the generator's information will be recorded and the generator will be notified in writing that Veolia has the appropriate licenses and processing capabilities to accept their material for recycling. Since these wastes are universally generated and will not vary from generator to generator, the generators of these types of materials will not be required to submit a site specific ~~waste material profile~~ Wastestream Information Profile sheet for waste contained in this category.

5.3.2 Generic Approvals

Generators wishing to ship materials contained in the generic approvals category will be required to submit a site specific ~~waste material profile~~Wastestream Information Profile sheet. The ~~waste material profile~~Wastestream Information Profile sheet must contain specific information regarding the identity of the waste, physical and chemical properties of the waste, and the regulatory status of the waste. This information will then be reviewed by the Operations Manager or his/her designee to ensure that the material can be received at the facility. Once the material has been approved the generator will be notified in writing that the facility has the appropriate licenses and the processing capabilities to accept the waste. A sample ~~waste material~~

profileWastestream Information Profile sheet is included asin Appendix D-5-I to this Attachment.

5.3.3 Case-by-case Approvals

Generators wishing to ship materials contained in the case-by-case approvals category will be required to submit a site specific waste material profileWastestream Information Profile sheet. The waste material profileWastestream Information Profile sheet must contain specific information regarding the identity of the waste, physical and chemical properties of the waste, and the regulatory status of the waste. This information will then be reviewed by the Operations Manager or his/her designee and by corporate approvals staff to ensure that the material can be received at the facility. Once the material has been approved the generator will be notified in writing that the facility has the appropriate licenses and the processing capabilities to accept the waste. A sample waste material profileWastestream Information Profile sheet is included as Appendix D-5-I to this Attachment.

As part of the above referenced procedures, Veolia staff will assign a product code to each profile. The product code is an internally assigned code designating the type of material, and the type of process to be used for the management of the material and links the material to pricing categories.. A list containing common product codes, material description and approval category used by the facility is included below along with a reference to the applicable product codes and approvals category. Product codes . An additional suffix may be added or may include a suffix that may be added to oneto the product code to further differentiate materials at the discretion of the codes listed below which further identifies the materialfacility.

5.3.4 Common Product Codes and Waste Descriptions

5.3.4.1 Lamps

Product Code	Description	Approval Category
LP-F	Fluorescent Lamps	Standard
LP-FCIRC	Circular Fluorescent Lamps	Standard
LP-FCMP	Compact Fluorescent Lamps	Standard
LP-FDM	Crushed Lamps	Standard
LP-FSS	Shielded Fluorescent Lamps	Standard
LP-FUT	U-Tube Lamps	Standard
LP-FUV	UV Fluorescent Lamps	Standard
LP-H	HID Lamps	Standard
LP-MH01	Metal Halide Lamps	Standard
LP-MISC	Miscellaneous Specialty Lamps	StandardGeneric
LP-MV01	Mercury Vapor Lamps	Standard
LP-NEON	Neon Lamps	Standard
LP-SHP	High Pressure Sodium Lamps	Standard

5.3.4.2 Mercury

Product Code	Description	Approval Category
MC-BATT	Mercury Batteries	Standard
MC-AMALG	Dental Amalgam	Generic
MC-DE	Mercury Contaminated Clean-up Articles and PPE	Generic
MC-HG	Mercury	Generic
MC-HGREG	Mercury Containing Gas Regulators	Generic
~~MC-LABPACK~~	~~Mercury Containing Lab packs, used for packages contained mixed types of acceptable wastes~~	~~Case-bycase~~
MC-MA	Mercury Containing Articles	Standard
MC-PD	Phosphor Powder	Generic

Product codes are internally generated codes which may be periodically updated or revised. However, these revisions will not alter the types of materials being received by Veolia.

5.3.5 Scheduling Material Into the Facility

There are four methods by which materials may be transported to the facility:

- Generator self-~~-~~transport
- Common carrier transport
- Generator arranged transport, and
- Veolia arranged transport.

5.3.5.1 Generator self-~~-~~transport and common carrier transport

In order to promote the recycling of fluorescent lamps from small businesses, Veolia has developed and marketed a line of packaging which includes the prepayment for the transport and recycling of the materials. Under this program, a generator purchases the container, fills the container with the designated universal waste, calls a phone number that is preprinted on the packaging to schedule the ~~pick up~~pickup of the package by a common carrier, such as FedEx Ground, and the container is transported to Veolia's facility. The delivery of these containers and generator self-~~-~~transported universal waste will arrive at the facility without prior notice to the facility. ~~FedEx Ground makes their deliveries at approximately the same time each day and accommodations are made at the facility~~ Due to ~~accept the delivery of these shipments. With respect to other self-transported materials, the deliveries are of a~~the small volume and the nature of the material, only universal wastes, ~~allow~~ the facility has the capacity to ~~accept~~manage these materials as they arrive. (See Section 5.3.6)

5.3.5.2 Generator arranged transport

In the case where a generator arranges ~~for~~ the transportation of ~~materials~~their shipments to the facility, the generator will contact the facility and request a permission to deliver the material on a particular date. If the delivery does not

conflict with other deliveries already scheduled the generator will be given an appointment. If there is a conflict an alternate date for the delivery of the material will be proposed. Under this scenario, the generator, or his agent is responsible for ensuring that the materials are accompanied by the appropriate shipping papers. If the material is subject to the hazardous waste manifesting requirements, the procedures outlined below will be used by the facility for the completion and distribution of the manifest.

5.3.5.3 Veolia arranged transport

Generators will contact Veolia to request the ~~pick up~~pickup of approved materials. Customer Services Representatives will then enter all of the pertinent customer information into our waste tracking system. The system tracks the customer's location of pickup, billing address, pickup contacts, phone numbers, and what material is scheduled to be picked up. Once this information is entered into the waste tracking system it creates an open sales order which transportation can then put onto the schedule for pickup. Customers are then notified ~~by phone~~ of the ~~day~~date and approximate time that the material will be picked up. Veolia will normally assist the customer is preparation of the shipping documents for the pickup.

5.3.5.4 Completion of the Uniform Hazardous Waste Manifest

~~Before collection~~All shipments of hazardous waste subject to the manifesting requirements of 40 CFR 262 will be accompanied by a properly completed Uniform Hazardous Waste Manifest. The manifest will be prepared by the generator of the waste prior to pick up or ~~delivery occurs~~with the assistance of Veolia. When assisting a generator with the completion of the manifest, the customer will provide ~~the~~ Veolia with the following information:

- Type and quantity of containers
- Material classification(s)
- Scaled or estimated weight(s) and/or lamp counts
- ~~Date(s) accumulation began~~
- Labels, placards and markings on containers
- Generator's USEPA ID number
- Generator's State ID number (if applicable)
- State hazardous waste permit number (if applicable)
- Transporter ID numbers, dates, and times

~~Based on the above information, the appropriate federal or state manifest, non-hazardous waste manifest, or bill of lading will be completed to the extent possible and either mailed to the customer prior to scheduled shipment or accompany the transport vehicle. Upon arrival at the generator's facility, any necessary changes are made to the manifest, such as entering the actual quantity of material to be transported, and it is subsequently~~At the time of pickup the manifest will be signed and dated by the generator and transporter according to

procedures under 40 CFR 262.20-23. Upon receipt of material by Veolia, the manifest is signed and dated by the receiving agent and significant discrepancies are noted, pursuant to 40 CFR 264.70-72.

Shipments of waste that are not subject to hazardous waste manifesting requirements will be accompanied by shipping paper that documents the transfer of the waste from the generator to Veolia.

5.3.6 Receipt of Material Into the Facility

Upon arrival of a shipment at the Veolia facility, the following sequence of events occurs:

a. The driver presents the paperwork for the load to the shipping and receiving coordinator or designated representative trained to receive material into the facility.

1. Driver will bring Shipping documents to the office where it is reviewed to ensure that there is no unscheduled manifested waste on the trailer. If there is manifested hazardous waste destined for Tallahassee facility the trailer will be backed into the loading dock for unloading. The manifested waste will be removed before it can go to the transfer yard.
2. For trailers that are delivered to the transfer yard the receiving clerk will enter trailer information onto a log that is maintained electronically. The following entries will be made on every trailer.

- Trailer Number
- Arrival Date
- Generator Name
- Shipping Paper Number

3. Unload Deadline. This will be 10 days from the date the trailer is placed in transfer yard.
4. Transfer Yard will be checked daily to ensure Log matches physical inventory in Transfer Yard. Trailers should be checked to ensure that they are secure while in the yard. Any discrepancies should be immediately reported to the Operations Manager.
5. The receiving clerk will update the log each time a change is made to the inventory of material in transfer, additions or removals. Entries will be made in a timely manner and without delay.
6. The Operations Supervisor or designee will review the log on a daily basis. This review will be completed to ensure the log is current and for use in planning the production schedule for the day.

If any of the personnel listed above are absent from the facility there will be a trained designated employee to oversee the 10 Day log and ensure timely entries are made to the log.

b. When the trailer is moved from the transfer lot to the loading dock Veolia personnel will compare shipping documents and material description against the material profiles, and the material actually received.

~~c. If the shipping documents conform to the material profile, the truck will be unloaded by personnel qualified to operate a forklift or pallet jack and staged in the loading dock area or on the paved area immediately north of the facility for inspection.~~

~~d.~~c. ~~The~~All containers are visually inspected to verify that the shipment contains only the waste material as described in the material profile and shipping document.

~~e. Upon verification~~If the shipment conforms to the material profile, the shipping ~~documents are~~document is signed ~~acknowledging receipt~~and the truck unloaded by trained personnel. A copy of the ~~material at the facility and copies of the~~signed shipping document/hazardous waste manifest ~~are~~is then ~~forwarded~~sent to the generator (and customer if they are not the same) within 30 days.

~~f.~~d. Should Veolia deny acceptance of the delivery, the shipment will be returned to the generator or shipped to an alternate facility selected by the generator.

~~g.~~ Upon off-loading, each container is logged into the waste tracking system and placed into ~~an appropriate~~the storage area or transferred directly to a processing area.

~~h.~~e. A Veolia receiving record is executed to record all pertinent information. Sample Receiving Reports are included in Appendix D-5-I to this Attachment.

5.3.6.1 Waste Rejection

Wastes will be rejected for the following reasons:

- Waste does not conform to the material profile and the waste contains materials that the facility is not permitted to accept.
- Other wastes that cannot be accepted by Veolia are included in the shipment.
- Unscheduled load that would cause Veolia to exceed permitted storage limit.

~~5.3.6.1.2~~ Rejection Procedures

Upon discovery of the material that cannot be accepted at the facility, a generator will be contacted and notified of the unacceptable material. The facility will request direction from the generator as to whether the material is to be forwarded to an alternate facility or returned to the generator. Based on the instructions from the generator the following procedures will be used to document the rejected shipment.

For materials shipped to the facility on a uniform hazardous waste manifest, the facility will follow the procedure contained in 40 CFR 264.72 for the manifesting of rejected shipments. Any material designated to be rejected that cannot immediately be reloaded for off-site shipment will be marked with a

label noting the material as non-conforming and will be placed into one of the container storage areas. If the material is a liquid it will be placed on a spill containment pallet for storage. Once a material is designated for rejection the facility will have 60 days to arrange for the transport of the material to an alternate facility or back to the generator.

If a non-conforming material is discovered after the material has been accepted by the facility, the generator will be notified and the material will be rejected in accordance with the above rejection procedures.

For materials that are not subject to uniform hazardous waste manifesting, the facility will note that the material is being rejected on the original bill-of-lading and complete a new bill-of-lading for use in shipping the material back to the generator or to an alternate facility.

5.3.6.2 Manifest Discrepancies

Upon receipt of materials at the Veolia facility, shipments are checked for significant discrepancies, according to 40 CFR 264.72. Discrepancies are noted on the manifest by the receiving personnel. Discrepancies in quantity or type of hazardous waste are reconciled with the generator through telephone calls by Veolia personnel within 15 days following receipt at the Veolia facility. If a significant discrepancy cannot be resolved within 15 days after receipt of the waste, Veolia shall immediately submit a letter report, including a copy of the manifest to the Department.

5.3.6.3 Un-manifested Waste Report

If Veolia ~~receives~~were to receive an un-manifested shipment of hazardous waste not specifically authorized by the regulations, Veolia ~~will~~would prepare and submit an un-manifested waste report to the Department within 15 days of receipt of the un-manifested waste.

5.4 Process Information

To more accurately reflect the nature of the processes that occur on-site, the processes will be addressed in five general categories, material handling, fluorescent lamp processing, HID lamp processing, mercury retort processing, and management of site generated wastes. Below is a listing of some of the materials recycled and generated by the facility.

- Fluorescent Lamp Process
  - Straight lamps,
  - Circular lamps,
  - U-tube lamps, and
  - Compact fluorescent lamps
- High Intensity Discharge Lamp Process

    - Mercury vapor lamps,
    - High pressure sodium lamps, and
    - Metal halide lamps.
- Mercury Retort Process
    - Phosphor powder derived from the recycling of fluorescent lamps,
    - Crushed arc tubes from HID lamps,
    - Devices containing elemental mercury, such as thermometers, thermostats, pressure regulators and switches,
    - Dental amalgam and dental traps and filters, and
    - Clean-up articles (debris) from the clean up of releases of mercury containing manufactured articles,
- Site Generated Wastes
    - Personal Protective Equipment used when handling mercury containing manufactured articles.
    - Spent filter material from lamp processing equipment,
    - Spent carbon from emission control devices, and
    - Waste water from facility cleaning operations and condensate water from retort operations.
    - Other wastes to be evaluated on a case by case basis

5.4.1 Material Handling

For the purpose of this permit, material handling activities as defined below are performed within the internal confines of the building(s):

- movement of containers within the facility,
- staging lamps for recycling,
- staging universal waste batteries, electronic waste or other non-hazardous materials prior to moving them to their designated storage area,
- unpacking and sorting of various lamp types,
- separating lamps and other devices from any packing materials that may be present in the packages, including removing tape from lamps that have been taped together prior to shipment,
- disassembly of lighting fixtures and other electronic equipment, and
- removing lamps from protective plastic tubes or removing plastic coatings from lamps

These activities do not alter the portion of the device that contains the mercury or release elemental mercury. As such these activities may be performed throughout the facility. These activities may periodically be performed within the universal waste storage area.

5.4.2 Fluorescent Lamp Processing

5.4.2.1 Manual Preparation of Lamps for Recycling

A number of lamp types require some type of processing prior to placement into the automated recycling equipment. The purpose of this step is to remove non-recyclable components or to remove components that will cause the failure of the automated recycling equipment. This process includes removing the bases from compact fluorescent lamps and opening and separating the components of broken shattershield lamps.

The manual processing will take place in the space immediately behind lamp line 2 and will be contained within a vinyl curtained area and under negative pressure. This area makes use of the same air handling system as the retort room to supply the negative pressure to the space. The system is comprised of a blower rated for 1500 cubic feet of air per minute and discharged through a series of two carbon filter systems. The exhaust from the carbon filters is them discharge through an exhaust vent located along the west wall just south of the centerline of the building. The exhaust gases are monitored on a daily basis for mercury. When mercury readings approach a regulatory limit the carbon is removed from the system, and shipped off-site for recycling. In addition to the air handling system that provides negative pressure to this area, the use of a downdraft table may also be used in this area for improved work safety.

5.4.2.2 Automated Recycling Systems

The facility is equipped with two processing lines for the recycling of fluorescent lamps. Both lines use the same technology for the separation of the various lamp components.

The fluorescent lamp recycling systems are dry separation processes utilizing both manual and automated systems. The processing equipment is contained within a separate room with an area of approximately 500 square feet located in the northwest corner of the building. This equipment has a maximum design capacity of approximately 52,000 4-foot lamp equivalents per 8-hour shift with an asset recovery rate of approximately 100%. Of total bulb weight, roughly 96% is recovered as glass, 2% as aluminum, less than 2% as phosphor powder and less than 1% as mercury for refining. The equipment is able to process a variety of lamp types and sizes with great efficiency. Routine monitoring of mercury values in all recovered materials, through total mercury testing and TCLP mercury testing when applicable, is standard operating procedure.

Lamps are brought into the mercury recycling area on pallets containing lamps within cardboard boxes or ~~-~~fiber drums. The lamps are brought to the lamp feed staging area where they enter the recycling process. In-feed to the

process consists of pallets moved from storage to a staging area where the shipping containers are opened and the lamps are manually inserted into the system for initial crushing.

The lamps are removed from the boxes, bins or drums and placed onto an in-feed conveyor. ~~In the case of~~Some lamps, such as circular, U-tube and certain compact fluorescent lamps, ~~excess plastics and metals~~may arrive in plastic or metal fixtures or may have plastic or metal brackets or other mounting hardware that must be removed prior to recycling. When contained in fixtures the lamps are manually removed ~~prior to placement~~from the fixtures before being placed onto the in-feed container. ~~When~~If the removal of ~~these items meets the definition of processing~~plastic or metal brackets alters the mercury containing portion of a lamp, such as separating the base from a compact fluorescent lamp, this activity will be conducted as described above~~. Where this activity~~ in Section 5.4.2.1 Manual Processing of Lamps for Recycling. If the removal of the plastic and metal brackets does not alter the mercury containing portion of the lamp ~~and~~, this activity is done at either the staging point for the in-feed conveyor or adjacent to the HID processing area.

The lamps ~~then~~move along the in-feed conveyor and enter a pre-breaker. From the pre-breaker, the lamps are transported to a sizing crusher. The sizing crusher, a dual drum crusher, sizes the material for transfer to the separation equipment. The separation step agitates the lamp components and separates the crushed lamps into glass, aluminum end caps and phosphor powder. The mercury-bearing phosphor powder is collected by a bag tower which consists of filters which trap the powder and purges into a 55 gallon drum for further processing. Recovered glass (cullet) is transferred to a roll-off container for transport off-site for beneficial reuse or recycling. Aluminum end caps are discharged from the separation process to a transfer belt which conveys the aluminum to a secondary crusher. The discharge from this crusher passes through a magnetic separator prior to being discharged to a hopper for accumulation and off-site recycling. The magnetic components separated from the end caps are accumulated and further processed in the retort on-site or transported off-site for mercury reclamation. Cardboard containers are baled and accumulated for recycling. Plastic lamp components and non-recyclable packaging materials are accumulated for off-site recycling or off-site disposal. All byproducts are analyzed for total mercury in accordance with the facility's waste analysis plan contained in Section 8 and shipped to appropriate recyclers.

A fluorescent lamp process flow diagram is included as Figure 5.1. Figure 5.6, Lamp Room Floor Plan, shows the general configuration of the fluorescent lamp processing equipment. Figure 5.7, Side View – Aluminum Management System, shows the configuration of the mechanism to convey the aluminum end caps to the crusher. Figure 5.8, Top View – Aluminum Management

System shows the configuration of the aluminum management system separate from the existing lamp processing equipment.

The powder recovery system imparts a negative pressure to the processing equipment and processing room. This system ensures that mercury emissions are controlled and that particulates containing mercury and mercury vapors are collected in the emissions control equipment. The air stream from the equipment is directed first through a bag tower that filters out particulate matter, phosphor powder and glass fines from the lamps. The bag tower consists of 20 bags that are 95 inches long. The powder collects on the bags causing the pressure drop across the filter to increase. When that pressure drop reaches a set point, below the maximum operating range of the filter, the bags are purged using compressed air. This liberates the powder from the filter media allowing the powder to drop into a collection container. When the exhaust air leaves the bag tower it is then directed through a HEPA filter system to capture any particulates which may pass through the bag tower. Once the air exits the HEPA filter any residual mercury vapor is collected by a series of eight carbon canisters that are connected to the HEPA filter system. The carbon is impregnated with sulfur, which facilitates the adsorption of mercury vapors from the exhaust air. Each canister contains approximately 130 pounds of sulfur impregnated carbon. The exhaust from the carbon filters is then discharged through a stack located at the northwest corner of the building. The exhaust gases are monitored on a daily basis for mercury. When mercury readings approach a regulatory limit the carbon is removed from the system, and shipped off-site for recycling. In addition to the mercury monitoring conducted on the exhaust gases, each emission control device is equipped with a ~~magnahelic~~magnehelic that is checked daily to ensure that the system is operating properly. The HEPA filter and carbon canister system have a combined efficiency rating of greater than 99 percent for the capture of mercury emissions from the system.

Veolia is proposing to replace or reconfigure the existing mercury canisters to facilitate the installation of additional handling equipment. See Section 5.5 for a detailed discussion of the emission control equipment.

5.4.3 HID Lamp Processing

5.4.3.1 Manual Processing

HID lamps that cannot be processed by the automated HID process are manually processed to separate the various components of the lamps. This processing occurs in one of two locations within the facility, at the feed station to the HID automated process equipment or in the ~~CFL processing~~ area described in Section 5.4.2.1 Manual Processing of Lamps for Recycling immediately behind lamp line 2. Manual processing begins with the sorting and removal of any packaging material (the corrugated cardboard sleeves or

wrap) used to prevent breakage during transport. This removal of packaging material from the HID lamps is considered material handling and not processing. The next step involved in manually processing HIDs is the removal of the outer globe glass. The remaining base, harness and arc tube are then manually separated. The ceramic or metal base of the lamp is placed into a container for recycling. The arc tube which contains mercury is separated and containerized for further processing. The remaining metal from the HID lamp is containerized for recycling. If necessary to meet recycler specifications, the HID outer glass is run through the lamp processing equipment to properly size the material for off-site shipment. Cardboard containers are combined with the cardboard from the lamp recycling operation and baled for recycling. Non-recyclable packaging material is placed into the roll-off with the non-recyclable materials from the lamp processing operation for off-site disposal. All byproducts are analyzed for total mercury in accordance with the facility's Quality Control Plan contained in Section 8 and shipped to appropriate recyclers.

The HID arc tubes are further processed by placing the tube into a crusher which breaks the arc tube and sizes it for placement into the retort oven. The crushed arc tubes are collected and consolidated into 55 gallon drums. Full 55 gallon drums are placed into the retort oven for processing. The retorted arc tubes are consolidated and shipped off-site for disposal.

5.4.3.2 Automated HID Process

Veolia uses a custom built HID lamp machine to process various types of HID lamps. The system is comprised of conveyor belts, crushers, and air pollution control equipment to control fugitive mercury emissions.

The HID lamp process is a dry separation process that uses mechanical equipment to separate the components of the HID lamp. The lamps are initially placed onto an incline belt that feeds the automated process. The lamps are then transferred to a conveyor belt which moves the lamp to a squeeze point which breaks the outer glass from the lamp. The outer glass drops into a collection drum and is then transferred to the fluorescent lamp processing equipment for further sizing or is sampled and accumulated for off-site beneficial reuse or recycling. From there the glass goes into a roll-off container for off-site beneficial reuse or recycling. After the outer glass is broken, the remaining components of the lamp are dropped into a roller crusher which breaks the arc tube separating it from the base and metal wire which holds the arc tube in place. The arc tubes are discharged from the crusher into a drum and are collected for retorting. The brass end caps and metal are picked up by a magnet separator and conveyed into another collection drum for recycling. The recovered metals are accumulated and shipped off-site for recycling. The crushed arc tubes are retorted to remove the mercury. The retorted arc tubes are then consolidated and shipped off-site

for disposal. Cardboard containers are combined with the cardboard from the lamp recycling operation and baled for recycling. Non-recyclable packaging material is placed into the roll-off with the non-recyclable materials from the fluorescent lamp processing operation for off-site disposal. All byproducts are analyzed for total mercury in accordance with the facility's waste analysis plan contained in Section 8 and shipped to appropriate recyclers.

The process is under negative pressure to the outside and the entire machine is enclosed. The air stream from the equipment is directed first through a bag tower that filters out particulate matter and glass fines from the lamps. The bag tower consists of 20 bags that are 95 inches long. The particulate matter collects on the bags and at a predetermined interval the bags are purged using compressed air which forces the material into a collection container. When the exhaust air leaves the bag tower it is then directed through a HEPA filter system to capture any particulates which may pass through the bag tower. Once the air exits the HEPA filter any residual mercury vapor is collected by a series of six carbon canisters that are connected to the HEPA filter system. The carbon is impregnated with sulfur, which facilitates the adsorption of mercury vapors from the exhaust air. Each canister contains approximately 150 pounds of sulfur impregnated carbon. The exhaust from the carbon filters is then discharged through a stack. The exhaust gases are monitored on a daily basis for mercury. When mercury readings approach a regulatory limit the carbon is removed from the system, and shipped off-site for recycling.

An HID Automated Processing flow diagram is attached as Figure 5.2.

5.4.4 Mercury Retort Processing

As part of the mercury recycling process, the mercury retort operation consists of a completely enclosed room located within the same building as the lamp recycling operation and immediately to the south of the lamp feed station. Initially, mercury-containing devices are disassembled using pneumatic or manual equipment within the prep area of the retort room. Clean metals, glass and plastics removed from intact devices are segregated for recycling or disposal. Once the metals, glass, and plastics have been recovered from the device, where possible, the elemental mercury is drained from the device into a mercury flask. The remaining components are consolidated into a drum for placement into the retort oven. During consolidation, the drum is kept within the prep room. In addition to processing mercury containing devices the retorts are used to recover elemental mercury from drums of mercury containing phosphor powder and crushed arc tubes generated in the lamp recycling operation.

The retort operation is comprised of an oven which is used to heat the mercury containing waste, liberating mercury vapors. The mercury vapors are drawn off the oven using a vacuum pump and are pulled through a series of heat exchangers. Within the heat exchangers the mercury is condensed back into a

liquid form. The liquid mercury is then decanted from the collection point on the heat exchangers and consolidated into a mercury flask. Once the mercury flask is filled, the mercury is sold to other companies for repackaging and sale or additional refining In accordance with the Boiler and Industrial Furnace (BIF) regulations contained in 40 CFR 266.100, only inorganic materials or specific organic materials contained in Appendix 13 of 40 CFR 261 may be processed in the retort oven. Furthermore any materials processed in the retort must contain recoverable levels of mercury. As such, all retort materials will be visually inspected prior to retort processing. Any organic materials, such as rubber gloves, tyvek suits and plastic sheeting that appear to be uncontaminated will be segregated from the retort material and accumulated for off-site disposal.

5.4.5 Site Generated Wastes

As part of the mercury recycling processes, Veolia generates the below listed waste streams for which there are currently no viable markets for recycling or beneficial reuse of the materials.

5.4.5.1 PPE from Lamp Processing

In order to protect employee health, Veolia has conducted a thorough review of the lamp recycling operation and determined what personal protective equipment (PPE) is necessary for employees to wear while working in this area. The PPE required for use in this area is defined in the Employee Health and Safety Plan included in Attachment 7. Spent PPE is accumulated in cubic yard boxes and is stored in the area adjacent to staging area. Based on past analytical testing, this material does not fail the TCLP for mercury and is managed as a non-hazardous waste. This material will be periodically retested in accordance with the quality control procedures contained in Attachment 8.

5.4.5.2 PPE and debris from retort operations

In order to protect employee health, Veolia has conducted a thorough review of the retort operation and determined what personal protective equipment (PPE) is necessary for employees to wear while working in this area. The PPE required for use in this area is defined in the Employee Health and Safety Plan included in Attachment 7. In addition to spent PPE this waste stream also includes non-recyclable non-contact materials removed from mercury containing manufactured articles. This waste stream is accumulated in 55 gallon drums or cubic yard boxes and when full is stored in one of the storage areas within the facility. This material has a high degree of variability and levels of contamination can vary significantly. As such, this material will be assumed to be a hazardous waste and will be managed in accordance with the land disposal restriction standards for hazardous debris. Although this waste has the potential for high levels of contamination, work practices have been established to minimize this potential and to meet treatment facility

acceptance requirements. . This material will be periodically tested in accordance with the quality control procedures contained in Attachment 8.

5.4.5.3 Retort Residues (excluding retorted phosphor powder)

As part of the retort operation Veolia will generate residues from the retorting of mercury containing articles that is a mixture of metals, glass and other inorganic residues. Because of the nature of the material, viable recycling markets are not currently available. This material is accumulated in 55 gallon drums or cubic yard boxes and stored in one of the storage areas within the facility. Once a sufficient quantity of the material is accumulated, the material will be sampled in accordance with the quality control procedures contained in Attachment 8 and shipped off-site for disposal. In the event that the material does not meet the quality control standards required of this material, it will be re-sampled or reprocessed in the retort.

5.4.5.4 Condensate Water

As part of retort operation, water contained in wastes and humidity from the ambient air that is drawn into the oven is condensed in the heat exchangers. Additionally, water from the ambient air in the room will condense on the exterior of the heat exchangers. The water is collected and placed into 55 gallon drums. Once a drum is filled the drum is moved to one of the storage areas to await shipment off-site for recycling or disposal. In addition to condensate water, the facility will occasionally generate mop/decon water. This material is collected and combined with the condensate water for off-site management as hazardous waste or is tested and disposed in accordance with the results of the analysis.

5.4.5.5 Spent Carbon

The air emission control devices use a sulfur impregnated activated carbon for the control of mercury vapors. As air emissions approach an emission limit, the carbon is removed and replaced with new carbon. The spent carbon is accumulated in 55 gallon drums and stored in one of the drum storage areas to await shipment off-site for recycling or disposal.

5.5 Air Pollution Control Systems

All mercury recycling processes located at the Veolia facility are equipped with emission control devices in accordance with Rule 62-296.417 F.A.C.

5.5.1 Fluorescent Lamp Processing Equipment

The emission controls systems on the fluorescent lamp processing equipment currently consists of one bag tower followed by a secondary panel filter for the

control of particulate matter and a series of carbon filters for the control of mercury vapors. As part of this renewal, Veolia is proposing to add a second air emission control system to increase the air flow through the processing equipment and provide greater control of fugitive emissions.

5.5.1.1 Air Flow Rates

Maximum flow rate	1500 ACFM
Average flow rate	1200 ACFM

5.5.1.2 Bag Tower Specification

The bag tower currently in use on the fluorescent lamp processing line is a SLY, Inc. SBR-45-8 bag tower. This tower is equipped with 20 cloth bag filters with a surface area of 12 ft^2 per bag for a total surface area of 240 ft^2. At the maximum flow rate this will result in a 5:1 air to cloth ratio. Based on manufacturer data this ratio of air to cloth will provide for a maximum emission of 0.02 gr./CF (0.458 g/m^3). A copy of a letter from the manufacturer is included in Appendix D-5-II to this Attachment.

Veolia is proposing to add a second bag tower to the lamp processing operation. The second bag tower will be designed and constructed to provide the same capture efficiency as described for the SLY bag tower currently is use at the facility.

5.5.1.3 Secondary Pleated Filter

The air handling system for the fluorescent lamp processing equipment is designed to use a commercially available standard size pleated air filter (24" x 24" x 11 ½"). As such, a number of manufacturers offer stock filters that can be used in this application. The filters are at least 95% efficient to a particle size of 0.3 microns. The filters are constructed of a microfiber paper or glass microfiber material supported by corrugated metal separators between the pleats of the filter. Technical specifications for two commercially available filters are included Appendix D-5-II to this Attachment.

Veolia is proposing to add a second pleated air filter associated with the second bag tower proposed for installation. This filter will utilize the same size and style of filter currently in use and provide the same capture efficiency as described above.

5.5.1.4 Carbon Filtration

The carbon filtration system on the fluorescent lamp processing equipment is currently comprised of eight carbon canisters configured to have four canisters serving as the primary carbon filters, two canisters as secondary filters and

two carbon canisters as a tertiary filter. Figure 5.6 shows a graphic representation of the configuration. The carbon canisters are cylindrical with overall dimensions of 16 inches in diameter and 48 inches tall. Each canister is capable of holding 130 pounds of activated carbon. This configuration provides for a residence time of 0.4 seconds in the primary filter and an overall residence time of greater than 0.8 seconds of residence time within the carbon bed. The system uses a sulfur impregnated activated carbon for the removal of mercury vapors. Technical specifications for the activated carbon are included in Appendix D-5-II to this Attachment.

Veolia is proposing to replace the current carbon canister train with two dual filter carbon filter systems. These filter systems will be comprised of commercially available carbon canisters design for vapor capture. The canisters will be configured in series providing a redundant filter system as required by the air pollution control general permit for mercury recovery facilities. These carbon canisters will provide for a residence time of equal to or greater than 0.3 seconds per filter. These filters will utilize the same carbon as is currently used by the facility.

5.5.2 HID Lamp Processing Equipment

The emission controls systems on the automated HID lamp processing equipment consist of a bag tower followed by a secondary panel filter for the control of particulate matter and a series of carbon filters for the control of mercury vapors. The bag tower and panel filter used on the HID lamp processing equipment is the same as that used on the fluorescent lamp processing equipment. The carbon filters are configured in the same pattern as that of the fluorescent lamp equipment but the dimension of the canisters is slightly different.

5.5.2.1 Air Flow Rates

Maximum flow rate	1500 ACFM
Average flow rate	1200 ACFM

5.5.2.2 Bag Tower Specification

The bag tower in use on the HID lamp processing equipment was manufactured by SLY, Inc. This tower is equipped with 20 cloth bag filters with a surface area of 12 ft^2 per bag for a total surface area of 240 ft^2. At the maximum flow rate this will result in a 5:1 air to cloth ratio. Based on manufacturer data this ratio of air to cloth will provide for a maximum emission of 0.02 gr./CF (0.458 g/m^3). A copy of a letter from the manufacturer is included Appendix D-5-II to this Attachment.

5.5.2.3 Secondary Pleated Filter

The air handling system for the HID lamp processing equipment is designed to use a commercially available standard size pleated air filter (24" x 24" x 11 ½"). As such, a number of manufacturers offer stock filters that can be used in this application. The filters are at least 95% efficient to a particle size of 0.3 microns. The filters are constructed of a microfiber paper or glass microfiber material supported by corrugated metal separators between the pleats of the filter. Technical specifications for two commercially available filters are included in Appendix D-5-II to this Attachment.

5.5.2.4 Carbon Filtration

The carbon filtration system on the HID lamp processing equipment is comprised of six carbon canisters configured to have four canisters serving as the primary carbon filters and two canisters as secondary filters. Figure 5.9 in shows a graphic representation of the configuration. The carbon canisters are cylindrical with overall dimensions of 25 inches in diameter and 38 inches tall. Each canister is capable of holding 175 pounds of activated carbon. The system uses a sulfur impregnated activated carbon for the removal of mercury vapors. Technical specifications for the activated carbon are included in Appendix D-5-II to this Attachment.

5.5.3 Retort Equipment

The emission controls systems on the retort equipment consist of a series of two carbon filters for the control of mercury vapors. The carbon filters are configured in series to provide primary and secondary filtering of exhaust gases. This system discharges to the air handling system that provides negative pressure to the retort and preparation rooms. The air flow rates for this system will range from 30 to 90 CFM.

The carbon filtration system on the retort is comprised of two carbon canisters configured in series. Figure 5.10 shows a graphic representation of the configuration. The carbon canisters are cylindrical with overall dimensions of 16 inches in diameter and 48 inches tall. Each canister is capable of holding 130 pounds of activated carbon. The system uses a sulfur impregnated activated carbon for the removal of mercury vapors. Technical specifications and for the activated carbon are included in Appendix D-5-II to this Attachment.

5.5.4 Fugitive Emission Controls

To prevent fugitive emissions from escaping from the retort room and retort prep room are connected to an air handling system. This system imparts a negative pressure to each of these process areas. The system is comprised of a prefilter, a primary carbon canister, a blower, and secondary carbon filter system.

5.5.4.1 Air Flow Rates

Maximum flow rate	1500 ACFM
Average flow rate	1200 ACFM

5.5.4.2 Primary Carbon Filter

The primary carbon filter is a cylindrical tank with a diameter of 36 inches and an overall height of 90 inches. A total of 1,000 pounds of activated carbon is used in the primary filter. This amount of carbon results in a carbon column of at least 48 inches. With an air flow rate of 1200 CFM, the air stream travels through the filter with a linear velocity of 9.43 ft/sec. At this velocity the air stream has a contact time of 0.42 seconds with the activated carbon.

5.5.4.3 Secondary Carbon Filter

The secondary carbon filter system is comprised of six carbon banks in a parallel configuration. Each bank contains three trays of carbon in series. Each tray is 24 inches wide by 24 inches deep by 3 inches high. Each tray contains one cubic foot of carbon for a total of 18 cubic feet, or 620 pounds of activated carbon.

5.5.5 Internal Mercury Vapor Monitoring

Internal air quality is routinely monitored for mercury vapor in the air. Veolia monitors specific areas of the facility on a daily basis to ensure that the mercury levels are below the OSHA PEL of 0.1 mg/m^3. The areas where monitoring is performed are shown on the Mercury Vapor Monitoring Log. Veolia takes ambient air readings with a Jerome 431 X mercury analyzer or similar instrument. Air readings are taken in an office area, the warehouse area, and the process equipment areas. The mercury monitoring form will list the sampling location and air monitoring readings obtained. Samples are taken at varying times throughout the work day. The log records the date/time of sampling, location, sampler's name, and mercury vapor reading. A sample Mercury Vapor Monitoring form is included in Appendix D-5-II to this Attachment.

Veolia also does routine Industrial Hygiene monitoring to ensure that personnel are working in a safe environment and that the equipment is operating properly. The IH monitoring results are used to evaluate engineering controls and if additional PPE is necessary to work in a particular area of the facility.

5.5.6 Subpart CC Emission Controls

40 CFR 264 Subpart CC was written to control organic air emissions from tanks, surface impoundments, and containers at hazardous waste treatment, storage and disposal facilities and large quantity generator facilities. The Subpart CC rules apply to those materials that:

a. are hazardous wastes, and
b. have a volatile organic (VO) concentration of greater than 500 ppmw.

Veolia does not accept any wastes with a VO concentration in excess of 500 ppmw. This provision is verified through the waste approvals procedures described above and detailed in the Waste Analysis Plan included in Attachment 7.

5.6 Storage Areas and Container Management Practices

As a mercury recovery and reclamation facility, Veolia is required to store all incoming mercury containing universal wastes in designated storage areas. In addition to these requirements, as a large quantity generator of hazardous waste, Veolia may accumulate containers of hazardous waste within designated areas. On-site generated hazardous waste must be stored within the Storage Areas prior to being reclaimed on-site or shipped off-site to another permitted facility. Facility Map, Figure 5.5, shows the location of the each of these storage areas. The storage areas, as shown on Figure 5.5 and as described below define the maximum storage capacity of the facility. However, in order to efficiently operate the facility, other equipment or non-hazardous material may be located within one or more of these storage areas. The placement of this equipment or other non-hazardous material will reduce the actual amount of material authorized to be stored in this areas. However to provide for operational flexibility and to ensure adequate closure funding, each of these areas is being described based on its maximum capacity.

These storage areas will be used primarily for the storage of the following waste types:

- Universal waste lamps that cannot be immediately transferred to the staging area for processing,
- Universal waste mercury containing equipment prior to on-site processing in the retort,
- Mercury containing materials derived from the processing of universal and hazardous waste lamps awaiting on-site processing, and
- Hazardous wastes derived from the recycling of mercury containing universal wastes prior to shipment for recycling or treatment and disposal.

Due to the size and configuration of the facility, it may be necessary to locate a cardboard baler or other non-hazard process equipment and safety equipment within this storage area. When other equipment is located within this storage area, the footprint occupied by the equipment will be deducted from the overall storage capacity. These areas may, on occasion, also be used for the storage of other universal wastes and non-hazardous materials. Due to the limited size of the facility, other universal wastes, such as universal waste batteries, or non-RCRA hazardous materials may be temporarily placed within this area. When other materials are placed into this storage area the overall volume of lamps will be decreased to correspond to the remaining space available.

The storage areas will also be used by employees for the performance of material handling activities including the repackaging of lamps for storage, removing excess packaging materials prior to recycling and removing lamps from protective plastic shields and coatings.

For the purpose of calculating maximum storage volume the term pallet space will be used to define the amount of waste contained within the area. A pallet space is defined as a four foot by four foot floor space with a height of eight feet, excluding the height of the pallet, for the storage of lamps. For the storage of 55 gallon drums, each pallet space will be capable of storing two pallets of drums, double stacked for a total of eight drums, unless otherwise noted. For the storage of cubic yard boxes or supersaks, each pallet space will be capable of storing two cubic yard boxes or supersaks, double stacked. Based on the actual volume contained within the cubic yard boxes this is equivalent to eight 55 gallon drums or the same volume per pallet space as described for 55 gallon drums. The maximum volume of waste will then be calculated in both 4' lamp equivalents and 55 gallon drum equivalents.

5.6.1 Storage Area #1

Storage Area #1 is located in the northeast corner of the facility. The area is approximately 8' deep by 22' wide and has a capacity for the storage of ~~7 double stacked pallets~~ material in 7 full pallet spaces and one ~~single~~4' high pallet ~~for a total of 15 pallets~~space. This storage configuration will provide for a minimum 2 foot aisle space on each side of the ~~pallet~~row allowing access to all containers for inspection and responding to potential emergencies. With this configuration the storage area has a capacity for 60 drums or 960 cubic feet of lamps. This volume of lamps would be equivalent to the storage of 16,320 4-foot lamp equivalents. The lamp equivalents is based on the following calculations and assumptions.

- A 4'x 1'x 1' box will hold 68 T-12 lamps.
- Each pallet will hold 4 boxes per tier.
- Each pallet can be stacked to a height of 8'
- 4 boxes/tier X 8 tiers/pallet X 68 lamps/box = 2,176 lamps/pallet
- 7.5 pallets X 2,176 lamps/pallet = 16,320 lamps

Figure 5.5 shows the location of these storage areas and the configuration of each of these storage areas.

5.6.2 Storage Area #2

Storage Area #2 is located within the northern portion of the warehouse adjacent to the east wall of the lamp processing room. This area has overall dimensions of 8' deep by 28' wide and has a capacity for ~~the accumulation of 10 double stacked pallets for a total of twenty pallets in~~

~~this area.~~10 pallet spaces. This provides an area sufficient to accumulate 80 x 55 gallon drum equivalents. With this configuration the storage area has a capacity for 80 drums or 1280 cubic feet of lamps. This volume of lamps would be equivalent to the storage of 21,760 4-foot lamp equivalents. The lamp equivalents is based on the following calculations and assumptions.

- A 4'x 1'x 1' box will hold 68 T-12 lamps.
- Each pallet will hold 4 boxes per tier.
- Each pallet can be stacked to a height of 8'
- 4 boxes/tier X 8 tiers/pallet X 68 lamps/box = 2,176 lamps/pallet
- 10 pallets X 2,176 lamps/pallet = 21,760 lamps

Figure 5.5 shows the location of these storage areas and the configuration of each of these storage areas.

5.6.3 Storage Area #3

Storage Area #3 is located in the northern half of the facility adjacent to the employee decon room. This area is approximately 16' wide by 8' deep with a capacity of 6 pallet spaces. ~~If each space holds 8 drums on double stacked pallets this~~This equals a total capacity of 48 ~~drums~~x 55 gallon drum equivalents. With this configuration the storage area has a capacity for 48 drums or 768 cubic feet of lamps. This volume of lamps would be equivalent to the storage of 13,056 4-foot lamp equivalents. The lamp equivalents is based on the following calculations and assumptions.

- A 4'x 1'x 1' box will hold 68 T-12 lamps.
- Each pallet will hold 4 boxes per tier.
- Each pallet can be stacked to a height of 8'
- 4 boxes/tier X 8 tiers/pallet X 68 lamps/box = 2,176 lamps/pallet
- 6 pallets X 2,176 lamps/pallet = 13,056 lamps

Figure 5.5 shows the location of these storage areas and the configuration of each of these storage areas.

5.6.4 Storage Area #4

Storage Area #4 is located in the southern portion of the facility. This area is~~-~~ located to the west of the center aisle and is approximately 40' by 20' and has a capacity for the storage of 34 pallet spaces. The total number of pallet spaces is based on 5 ~~pallets~~pallet spaces per row and 7 rows ~~of pallets~~ with a 2 foot aisle space between each row, with the exception of the northernmost two rows which are only able to store 4

palletspallet spaces because the carbon filtration system located along the back wall occupies one of the pallet spaces in each row.

With this configuration the storage area has a capacity for 272 drumsx 55 gallon drum equivalents or 4,352 cubic feet of lamps. This volume of lamps would be equivalent to the storage of 73,984 4-foot lamp equivalents. The lamp equivalents is based on the following calculations and assumptions.

- A 4'x 1'x 1' box will hold 68 T-12 lamps.
- Each pallet will hold 4 boxes per tier.
- Each pallet can be stacked to a height of 8'
- 4 boxes/tier X 8 tiers/pallet X 68 lamps/box = 2,176 lamps/pallet
- 34 pallets X 2,176 lamps/pallet = 73,984 lamps

Figure 5.5 shows the location of these storage areas and the configuration of each of these storage areas.

5.6.5 Storage Area #5

Storage Area #5 is located in the southern portion of the facility. This area is located along the east wall and is approximately 74' by 16' and has a capacity for the storage of 48 pallet spaces. The total number of pallet spaces is based on 4 palletspallet spaces per row and 12 rows of pallets with a 2 foot aisle space between each row.

With this configuration the storage area has a capacity for 384 drumsx 55 gallon drum equivalents or 6,144 cubic feet of lamps. This volume of lamps would be equivalent to the storage of 104,448 4-foot lamp equivalents. The lamp equivalents is based on the following calculations and assumptions.

- A 4'x 1'x 1' box will hold 68 T-12 lamps.
- Each pallet will hold 4 boxes per tier.
- Each pallet can be stacked to a height of 8'
- 4 boxes/tier X 8 tiers/pallet X 68 lamps/box = 2,176 lamps/pallet
- 48 pallets X 2,176 lamps/pallet = 104,448 lamps

Figure 5.5 shows the location of these storage areas and the configuration of each of these storage areas.

5.6.6 Non-hazardous Waste Accumulation Area

The facility has one designated non-hazardous waste accumulation areas. This area are located in the center area of the facility near the loading docks. Non-haz

Acc. Area, located adjacent to the scale at the loading dock, will be used for the accumulation and storage of electronic components removed from lighting fixtures, such as lamp ballasts, small capacitors from HID fixtures and dry transformers removed from HID and neon lamp fixtures. These devices may arrive at the facility separately or within the fixtures.. This area is approximately 9' by 10' including the space for the scale. Within this space is room for 8 drums. Figure 5.5 shows the location of these storage areas and the configuration of each of these storage areas.

5.6.7 Satellite Accumulation Containers

Veolia generates two waste streams on an ongoing basis which are accumulated in containers that meet the definition of "Satellite Accumulation". These waste streams are phosphor powder and flammable liquids from aerosol cans. The containers used to accumulate these hazardous wastes must meet the following requirements.

- Container is stored at or near the place where the waste is generated, and under the control of the operator of the process generating the waste.
- No more than 55 gallons of waste is stored at the point of generation.
- The date the container becomes full is marked on the label.
- The container is moved to the 90 day accumulation area or the hazardous waste storage area within 3 days of becoming full.
- The container is inspected weekly.

5.6.8 South Building

In addition to the operations within the mercury recovery and reclamation facility, Veolia also occupies three areas in the building located immediately to the south. An additional area within this building in not occupied by Veolia. The operations in this building include the following:

- Storage and shipping of packaging materials and supplies,
- Storage of maintenance and safety supplies
- E-waste handler activities,
- Universal waste battery handler activities
- Scrap metal and other non-hazardous material handler.

The packaging material storage and shipping is located in the western end of the building. The e-waste, universal waste battery handler activities, and are conducted within the area located in the center of the building. The storage of maintenance and safety supplies is located within the easternmost portion of the areas occupied by Veolia.

Handler activities include the accumulation and storage of e-waste, universal waste batteries, and other non-hazardous material. The other non-hazardous materials will primarily be comprised of scrap metals and materials that are similar to or derived e-waste and universal waste batteries. This may include

partially disassembled electronic components and appliances. These materials do not meet any of the characteristics of a hazardous waste or are specifically excluded from regulation.

Handler activities also will include the sorting and disassembly of certain items. The most common of these will be the removal of batteries from hand-held tools and appliances. However, this may also include the disassembly of certain electronic items on a less frequent basis.

This area has the capacity to store 72 pallet spaces of material. This will be comprised of a mixture of universal waste batteries, non-hazardous batteries, electronic waste and non-hazardous items.

5.6.9 Hazardous Waste 10-Day in Transit Material

Veolia has registered with the FL DEP as a Hazardous Waste Transfer Facility and can store 100 55-gallon drums or 55 gallon drum equivalents of hazardous waste at the facility in trailers or transport vehicles at any given time for a period to not exceed 10 days. The storage areas are either of the trailer storage areas in the loading docks or within the paved portion of the fenced yard. See Figure 1.

The requirements of 62-730.171 are followed including but not limited to:

- Waste is stored in proper DOT containers and is inspected daily when the facility is in operation and 10-Day in transit material is present.

- A 10–Day log is maintained which notes the manifest number for the shipment or other identifying number for a CESQG, the day the material is received and shipped, generators name and EPA/DEP identification number or name and address for a CESQG, amounts of hazardous waste and waste codes associated for each shipment.

- The waste is stored in containers in trailers or transport vehicles on a manmade surface which is capable of preventing spills or releases to the ground.

5.6.10 North Yard

The area immediately north of the mercury recovery and reclamation building is used for the accumulation of processed glass in roll-of containers, empty poly and steel drums and pails, wooden pallets and baled cardboard generated from on-site activities. In addition this area is used for the storage of reusable poly bins and salvage drums for use within the facility as needed. This area may also be used for the placement of storage trailers for equipment and supplies.

The north yard may also used for the unloading and staging of material delivered to the facility in vehicles that are not dock height trucks. These materials are off-loaded, sorted and palletized on the paved area of the north yard then immediately moved into the facility for processing or storage. A second type of staging activity is the staging of outgoing non-hazardous materials prior to shipping. These materials may be temporarily staged in the north yard in order to make final preparations to the containers for shipment. These preparations may include putting new labels or markings on the containers, inspecting containers in order to ensure they are properly closed and sorting the containers to assure they are loaded in the proper order.

This area is also used as a designated parking area for any trailer that may contain manifested hazardous wastes which are on-site as 10 day in-transit materials.

5.7 Container Marking and Labeling

All material that is in process, storage, or transportation must be clearly marked and labeled to communicate the contents of the materials in each container. Veolia uses a variety of labels to accomplish this, these are listed below:

- Generator applied labels and markings – Containers of lamps staged for processing, without being placed into storage will remain marked with generator applied markings. These markings will typically identify the containers as "Universal Waste Lamps"
- Hazardous Waste Label- Hazardous Waste labels are affixed to RCRA hazardous waste containers that are site generated wastes that are designated for off-site shipment. These labels will go on mercury debris containers, mercury contaminated water and containers of spill clean-up materials that are characteristically hazardous.
- In-process Waste Labels – In-process Waste labels are affixed to mercury containing materials that are derived from the lamp recycling process and designated for on-site mercury recovery. These labels will go on phosphor powder drums and crushed arc tubes from HID lamps.
- Universal Waste Label- Universal Waste labels are affixed to lamp, battery, and mercury containing equipment containers. Crushed fluorescent lamps received from off-site will be labeled as a universal waste; however, if the generator of the lamps has chosen to label them as a hazardous waste, these labels will be maintained.
- Other Waste Labels - Other labels will be affixed to each container of non-hazardous and non-RCRA waste to identify the contents of the container. Examples of these types of materials includes lamp ballasts, electronic waste, non-hazardous waste derived from retort processing (retorted phosphor powder, arc tubes and debris), and non hazardous scrap metal containers.
- Unused chemicals, such as, unused carbon, and unused floor sweeping compound will be marked in a manner appropriate to identify the product, such as an original manufacturers label or other GHS compliant labels that indicate the material is an unused product.

Sample labels are included as Figures 5.11 through 5.14.

5.8 Recovered Material Quality Control

All by-products and wastes generated in the recycling of mercury containing materials will be tested on a periodic basis to establish compliance with the 62-737. FAC**.** Attachment 8, Quality Control Plan, contains a detailed description of the recovered material quality control sampling and testing procedures.

5.9 Outgoing Material Shipments and Documentation

Veolia tracks and maintains accurate records for all off-site shipments to end users. Materials that are shipped off-site from Veolia include: Cullet Crushed Glass, Processed Phosphor Powder, Aluminum End Caps, Retort Residues, and Elemental Mercury. All by-products derived from the recycling of mercury containing lamps will be tested to ensure compliance with Rule 62-737.840(3) F.A.C. In addition to the processed materials Veolia generates additional wastes as part of the facility operations including spent activated carbon and filter material from emission control devices, condensate water from retort operations and used personal protective equipment. Veolia enters all off-site shipments into our waste tracking system which details what type of material is being shipped, container size, weight of shipment, and the destination of the material. If the material must leave the facility on a Hazardous Waste Manifest it is done in accordance with Chapter 62-730, F.A.C. See Quality Control Plan in Attachment 8.

5.10 Operating Record

Veolia maintains written records that document receipt of lamps, MCMA, universal waste batteries, electronic scrap and other non-hazardous wastes associated with batteries and electronics. These records include information on the quantity, source (generator and/or transporter), date received, number of lamps in storage, source of the lamps, amount of other mercury-containing wastes in storage, date shipped to Veolia, products and wastes from recycling, dates products were shipped from the facility, and quantities shipped from the facility. In addition to this information Veolia retains waste analysis results, incident reports, manifests, inspection records (regulatory and facility), closure plan, biennial reports, and employee training records.

5.11 Hazard Prevention

This section contains a discussion of procedures at Veolia to prevent hazards associated with management of universal wastes, mercury containing manufactured articles and the by-products and waste derived from the recycling operations. This section includes a discussion of security measures, inspection protocols, and preparedness and prevention procedures.

5.12 Security

The Veolia facility is located in an industrial park that does not receive a significant volume of traffic from the general public. The west side of the facility is bordered by National Forest and there is no access from the facility yard area. The facility is locked and secured during non business hours and the yard area of the facility is secured by chain link fence. The fence is topped with barbed wires. The exterior of the facility is well-lit at night. Access gates are maintained locked at all times that the facility is not in operation. Access to the building and yard area is only permitted to personnel who have signed into the visitors' log which is maintained in the main office of the facility.

Appropriate warning signs are posted at perimeters and elsewhere in the facility as necessary.

5.12.1 Barrier and Means to Control Entry

During normal business hours access to the facility is controlled. Access to the buildings and the yard areas are available only through the main front building entrances. Personnel outside of the company requiring access to the waste handling portions of the facility must register at the front desk and will be escorted into the facility. Specific personnel, typically the Operations Manager and/or the Operations Supervisor, retain keys to open the gates. In addition to the barriers, internal communication devices are employed, including telephones, and a paging system.

5.12.2 Warning Signs

Appropriate warning signs are posted at the perimeter of the facility and elsewhere in the facility, as needed. These include "No Trespassing" and applicable "Hazardous Materials" signs.

5.12.3 Preparedness and Prevention

The Veolia facility is designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface and ground water that could threaten human health or the environment.

A description of emergency equipment and internal and external communications equipment is provided in the Contingency Plan, contained in Attachment 6.

Veolia's communication, alarm, fire protection, spill control, and decontamination equipment are periodically tested and inspected to ensure proper operation during an emergency. Veolia's Inspection Schedule (Attachment 12) includes the inspection checklists for site safety and emergency equipment.

5.12.4 Preventive Procedures, Structures and Equipment

Veolia strives to prevent hazards to human health or the environment through the preventive procedures, structures, and equipment described in this section.

5.13 Loading/Unloading Operations

The loading and unloading of containers transported in dock height vehicles is conducted within the loading dock area. Loading and unloading of vehicles that are not dock height will be conducted on the paved area north of the facility or at the loading dock.

5.13.1 Unloading at the loading docks

The unloading of containers at the loading dock is done by employees who are trained in waste receiving procedures. The containers are off-loaded and transferred into the building and are placed into the receiving/staging area. Containers are then inspected and logged into the facility's waste tracking system. Once the receiving procedures have been completed, the incoming materials are transferred to either the processing area or a storage area.

5.13.2 Unloading in north lot

Under normal circumstances the unloading of containers in the north lot will only occur when delivery of materials is performed in vehicles where the cargo portion of the vehicle is not at dock height and activities on the loading dock prevent the unloading of the vehicles in that area. This includes pick-up trucks, cargo vans typically used by electrical contractors and panel delivery trucks as used by package delivery services such as FedEx Ground. Containers are manually off-loaded and placed onto pallets. The containers are inspected then moved into the building upon conclusion of the off-loading process. Once moved into the building, the materials are logged into the facility's waste tracking system and transferred to to either the processing area or a storage area.

5.13.3 Managing improperly packaged containers and material spills

In the event that materials arrive in packaging which does not conform to the universal waste standards, provisions will be made for moving that material directly to the processing area or for the repackaging of the material. In most cases the material will be repackaged during off-loading; however there may be occasions where the material is first moved to a storage area and repacked within the storage area. In the event of a release during off-loading, facility personnel will clean up the spill in accordance with the procedure contained in Attachment 6 for routine or non-routine clean-up activities as appropriate to the scenario.

5.14 Environmental Controls

Environmental controls are required because of the toxicity of mercury. It is a contaminant when introduced into the atmosphere, the soil or ground water. The following controls are installed to minimize the hazard associated with handling of the lamps during the process.

- Processing is conducted within areas that are maintained under negative pressure for the control of particulates and mercury vapors.
- A portable Jerome mercury vapor analyzer, or similar analyzer, is used to monitor mercury vapor concentrations in the air throughout the work place, on a daily basis.
- The atmosphere exhausted from the crusher, separator, and dust collector is treated by carbon filters to remove any mercury in the vapor phase.

5.15 Personal Protective Equipment

Veolia provides personal protective equipment (PPE) to every operations and maintenance employee. The PPE is issued for use during routine operations and for emergency situations. A detailed description of the PPE available at Veolia, its locations, and capabilities is provided in the Contingency Plan contained in Attachment 6

5.16 Prevention of Reaction of Ignitable, Reactive or Incompatible Wastes

Veolia does not receive any ignitable or reactive hazardous wastes at the facility with the exception of materials that are handled as 10-day in transit hazardous waste. The only other potentially incompatible materials received are universal waste batteries. Veolia requires the generators of the universal waste batteries to package the batteries in accordance with the US DOT requirements for the shipment of hazardous materials. As such, incompatible batteries should not be received in the same outer shipping container. If during the visual inspection of the incoming materials, it is identified that the batteries are not properly packaged the batteries are immediately repacked by Veolia personnel.

5.17 Contingency Plan

The Contingency Plan for Veolia, required under 40 CFR 270.14(b)(7) and 40 CFR 264, Subpart D, is included in Section 6 herein.

5.18 Inspection Programs

This section presents the inspection schedule as required by 40 CFR 270.14(b)(5). Additionally, Veolia's inspection program also meets the general requirements of 40 CFR 264.15 and the container requirements of 40 CFR 164.174.

As part of its weekly safety inspection and audit program, Veolia inspects facility areas, structures, and equipment to ensure proper condition and operation. The following is a list of the general safety items that are inspected on a weekly basis:

Egress / Housekeeping
Hazard Communication Information
Material Storage / Handling and Process Equipment
Electrical
Fire Prevention

Emergency Response
Contractor Safety

An example of the weekly *Safety Inspection* form is included in our Inspection Program contained in Attachment 12. Veolia conducts daily visual inspections and weekly documented inspections to check for equipment malfunctions, structural deterioration, and any other deficiencies that could threaten human health, safety, or the environment or cause a release of waste materials. Inspections are conducted by assigned qualified individuals. The condition of items being inspected is noted along with corrective actions to be taken, the name of the inspector, and the date of the inspection. When a hazard is imminent or has already occurred, corrective action is taken immediately. The inspection form is reviewed by the Operations Manager to verify the completion of the inspection and that actions were taken, or were scheduled to be taken, to correct deficiencies. Completed inspection forms are maintained in Operations Managers office for review.

The container storage areas and universal waste storage areas are inspected weekly for containers that may be deteriorated (40 CFR 264.174). Loading, unloading, and process areas (or other areas subject to spills) are inspected daily when in use (40 CFR 264.15(b)(4)).

Attachment 12 contains a listing of all regularly scheduled inspections as well as the forms to be used for those inspections.

5.19 Maintenance Programs

Veolia's maintenance program is designed to identify and correct conditions relating to equipment and systems that can cause environmental degradation or endangerment of public health and safety before the equipment or system fails. The preventive maintenance polices and procedures are required to be followed by Veolia personnel at the facility in Tallahassee, Florida.

The preventive maintenance program is facilitated through a number of inspections that take place daily, weekly, quarterly, and annually on the process equipment. Inspection results are communicated to the Operations Manager. The equipment and systems are inspected to ensure that they are operating as per the manufacturer's specifications. A supply of high wear items and replacement parts are maintained in inventory and are available if equipment should breakdown.

5.19.1 Objectives

The objectives of the maintenance program are as follows:

- To ensure that the facility operations are safe
- To determine what maintenance work must be performed
- To document and confirm the actions taken and to measure their effectiveness

5.19.2 Maintenance Notification System

Because Veolia's recycling processes rely heavily on properly functioning equipment and machinery, our employees are trained to quickly identify any malfunctions and subsequently notify the appropriate personnel so that corrective action may be taken. Upon identification of a problem, the employee who discovers the problem immediately notifies the Operation Supervisor. The Operators are responsible for assessing the situation and notifying the Operations Supervisor of the malfunction. Once the Operations Supervisor has dispatched personnel to the work area where the malfunction has occurred, he will work with the Operations Manager to take the necessary corrective actions. Depending on the nature of the problem, corrective actions will vary.

Because Veolia relies on immediate notification of problems in order to maintain operations, problems are identified quickly and resolved in as timely a fashion as possible, depending on the nature of the problem. In order to document significant maintenance activities, Veolia uses a Corrective Action Form or a Maintenance Work Order form, contained in Attachment 12. This form contains information regarding the nature and date of the problem identified a description of the corrective actions taken, and the date the problem was remedied. Each form is signed off by the Operations Manager, who is responsible for reviewing the forms. The Corrective Action Forms are maintained in the Operations Managers office along with the Weekly Inspection Logs.

5.20 Housekeeping Program

The purpose of Veolia's housekeeping / daily visual inspection program is to perform housekeeping practices that will reduce the possibility of accidents, including spills, and safety hazards to facility personnel. It is essential that the facility be operated in a manner providing the greatest degree of safety for employees and visitors. Proper housekeeping assists significantly in providing safe operating conditions. It is the responsibility of each individual to contribute to proper housekeeping by correcting deficiencies where feasible and informing supervisors of housekeeping needs beyond their individual capability. In addition to those items identified on the inspection schedules, housekeeping issues include the following:

OUTSIDE AREA:	
1.	Perimeter fence will be maintained in a good state of repair.
2.	Grass, trees, shrubs will be cut and trimmed.
3.	Outside storage of spare construction materials and equipment are to be positioned neatly for easy retrieval. The materials stored will be periodically reviewed to ensure there is a need for retention.
4.	The bulk trash container areas will be kept neat with all trash in the container. If there are large items to be discarded which cannot be put in the trash container, they will be neatly stacked near the container. Additional trash pick ups will be arranged if required.
5.	Outside lights are to be maintained in good operating order
6.	Roadway and parking areas are to be maintained in good order.

ADMINISTRATIVE AREA
1. The entry/reception area, lavatories, and offices will be kept clean at all times. 2. The administrative area is to be cleaned daily.
FACILITY OPERATIONS AREA
1. Ensure proper and orderly storage of all pallets and containers 2. Provide for proper containment and regular refuse pickup and disposal 3. Maintain all areas in a clean condition 4. Debris from any lamps broken during shipment will be cleaned up and processed or placed into waste accumulation drums for storage prior to processing. 5. Debris from any lamps broken during processing will be cleaned up and processed or placed into waste accumulation drums for storage prior to processing. De minimis amounts of broken glass will be cleaned up periodically throughout the day and at the end of each shift or work period. For example, prior to going on break or lunch. 6. Ensure proper storage of containers, equipment, tools, etc. Ensure that there are no obstructions of walkways, pathways, or roadways. 7. Restrooms, showers, lockers, and lunch areas must be clean and orderly.

Appendix D-5-I

Sample Waste Approval and Receiving Forms

Appendix D-5-II

Emission Control Equipment Information