

**VOLUME REDUCTION, MERCURY RECOVERY OR MERCURY RECLAMATION
AIR GENERAL PERMIT REGISTRATION FORM**

Part II. Notification to Permitting Office

(Detach and submit to appropriate permitting office; keep copy onsite)

Instructions: To give notice to the Department of an eligible facility's intent to use this air general permit, the owner or operator of the facility must detach and complete this part of the Air General Permit Registration Form and submit it to the appropriate Department of Environmental Protection or local air pollution control program office which has permitting authority. Please type or print clearly all information, and enclose the appropriate air general permit registration processing fee pursuant to Rule 62-4.050, F.A.C. (\$250.00 as of the effective date of this form)

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AUG 03 2012

Registration Type

0730094-008

DIVISION OF AIR
RESOURCE MANAGEMENT

Check one:

INITIAL REGISTRATION - Notification of intent to:

- Construct and operate a proposed new facility.
- Operate an existing facility not currently using an air general permit (e.g., a facility proposing to go from an air operation permit to an air general permit).

RE-REGISTRATION (for facilities currently using an air general permit) - Notification of intent to:

- Continue operating the facility after expiration of the current term of air general permit use.
- Continue operating the facility after a change of ownership.
- Make an equipment change requiring re-registration pursuant to Rule 62-210.310(2)(e), F.A.C., or any other change not considered an administrative correction under Rule 62-210.310(2)(d), F.A.C.

Surrender of Existing Air Operation Permit(s) - For Initial Registrations Only

If the facility currently holds one or more air operation permits, such permit(s) must be surrendered by the owner or operator upon the effective date of this air general permit. In such case, check the first box, and indicate the operation permits being surrendered. If no air operation permits are held by the facility, check the second box.

- All existing air operation permits for this facility are hereby surrendered upon the effective date of this air general permit; specifically permit number(s):
- No air operation permits currently exist for this facility.

General Facility Information

Facility Owner/Company Name (Name of corporation, agency, or individual owner who or which owns, leases, operates, controls, or supervises the facility.)
Veolia ES Technical Solutions, L.L.C.

Site Name (Name, if any, of the facility site; e.g., Plant A, Metropolis Plant, etc. If more than one facility is owned, a registration form must be completed for each.)
Veolia ES Technical Solutions, L.L.C.

Facility Location (Provide the physical location of the facility, not necessarily the mailing address.)

Street Address: 342 Marppan Lane

City: Tallahassee

County: Leon

Zip Code: FL

32305-0904

2012 AUG -2 AM 10:13
DIVISION OF AIR RESOURCE MANAGEMENT

Facility Start-Up Date (Estimated start-up date of proposed **new** facility.)(N/A for existing facility)
N/A

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ENHANCED AIR QUALITY
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Owner/Authorized Representative

Name and Position Title (Person who, by signing this form below, certifies that the facility is eligible to use this air general permit.)

Print Name and Title: John P. McShane Branch Manager

Owner/Authorized Representative Mailing Address

Organization/Firm: Veolia ES Technical Solutions, L.L.C.

Street Address: 1275 Mineral Springs Drive

City: Port Washington, WI

County:

Zip Code: 53075

Owner/Authorized Representative Telephone Numbers

Telephone: 262-243-8921

Fax: 262-284-3775

Cell phone (optional):

Facility Contact (If different from Owner/Authorized Representative)

Name and Position Title (Plant manager or person to be contacted regarding day-to-day operations at the facility.)

Print Name and Title: Linda Dunwoody Operations Manager

Facility Contact Mailing Address

Organization/Firm: Veolia ES Technical Solutions, L.L.C.

Street Address: 342 Marpan Lane

City: Tallahassee

County: Leon

Zip Code: 32305

Facility Contact Telephone Numbers

Telephone: 850-877-8299 ext. 25

Fax: 850-878-3349

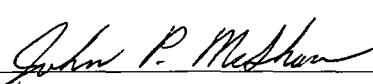
Cell phone (optional): 850-251-4924

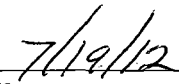
Owner/Authorized Representative Statement

This statement must be signed and dated by the person named above as owner or authorized representative

I, the undersigned, am the owner or authorized representative of the owner or operator of the facility addressed in this Air General Permit Registration Form. I hereby certify, based on information and belief formed after reasonable inquiry, that the facility addressed in this registration form is eligible for use of this air general permit and that the statements made in this registration form are true, accurate and complete. Further, I agree to operate and maintain the facility described in this registration form so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof.

I will promptly notify the Department of any changes to the information contained in this registration form.


Signature


Date

2012 AUG -2 AM 10:14
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AIR QUALITY CONTROL DIVISION

Type of Process

Check all that apply:

- Volume Reduction
- Mercury Recovery
- Mercury Reclamation

Description of Facility (Dual Air Handling Systems)

The following information is requested only for facilities with dual air handling systems pursuant to Rule 62-96.417(1)(c), F.A.C. Provide a brief description of the operations at the facility. Describe the air pollution-control equipment on the primary and secondary air handling systems (i.e., number, type and capacity of filters). List the make and model numbers of the air pollution control equipment on the primary and secondary air handling systems. Also, list the type of adsorbent used, the number and location of filters, and the filter capacity and replacement frequency. Attach additional pages if necessary.

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DEP
AIR POLLUTION CONTROL DIVISION

Description of Facility (Single Air Handling System)

The following information is requested only for facilities with a single air handling system with redundant mercury controls pursuant to Rule 62-296.417(1)(d), F.A.C. Provide a brief description of the operations at the facility. Describe the redundant air pollution control equipment (i.e., number, type and capacity of filters). List the make and model numbers of the air pollution control equipment. Also, list the type of adsorbent used, the number and location of filters, and the filter capacity and replacement frequency. Attach additional pages if necessary.

Description of Facility Operations

The objective of Veolia ES Technical Solutions, L.L.C. is to cost-effectively process used fluorescent and high intensity discharge lamps, as well as other mercury-containing devices, in an environmentally responsible manner. The Tallahassee site opened for business in July 1994.

Veolia ES Technical Solutions, L.L.C.'s lamp recycling process is comprised of an automated system that physically separates the various components of the lamps. The fluorescent lamps are placed on a conveyor that feeds the lamps into a crushing unit. From the crushing unit the materials flow into a separator where the broken glass and metal end caps are air-stripped of powder and mercury. As the materials pass through the separator the remaining glass and metal are separated from one another. This entire process is conducted under a negative pressure.

The recovered powder is discharged into a 55-gallon drum. The drums are then moved into the retort unit. The mercury is separated from the powder by heating the powder in a vacuum chamber which causes the mercury to vaporize. The vaporized mercury condenses and is collected in stainless steel cooling traps. The recovered liquid mercury is over 99% pure and the remaining powder is classified as a non-hazardous material.

Veolia ES Technical Solutions, L.L.C.'s HID lamp recycling process is comprised of an automated system that physically separates the various components of the lamps. The HID lamps are placed on a conveyor that feeds the lamps into a crushing unit. Within the crushing unit the lamp components are sorted. The outer globe glass and metal end caps are separated from the arc tubes which contain the mercury. As the arc tubes pass through the system they are crushed and accumulated in steel drums. This entire process is conducted under a negative pressure.

The crushed arc tubes are discharged into 55-gallon drums. The drums are then moved into the retort unit. The mercury is separated from the arc tubes by heating the material in a vacuum chamber which causes the mercury to vaporize. The vaporized mercury condenses and is collected in stainless steel cooling traps. The recovered liquid mercury is over 99% pure and the remaining powder is classified as a non-hazardous material.

The entire retorting process (heating, vaporization and cooling) requires 8 to 24-hours depending on the type of material to be distilled. In addition to processing powder, the distiller can also be used to process mercury containing items such as: batteries, dental amalgam, HID capsules and neon glass.

Air Pollution Control Equipment

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Retort Units

The retort equipment is housed in a separate room isolating it from the rest of the plant. The retort unit was custom fabricated for Veolia ES Technical Solutions, L.L.C. by an American company. This unit has two external cylindrical metal carbon filters in series. The first serves as the primary while the second functions as a secondary filter. Each filter uses approximately 200-pounds of sulfur impregnated activated carbon for the adsorption media. Veolia ES Technical Solutions, L.L.C. has not assigned any make or model number to these filters.

The room housing the retort is operated under negative pressure via carbon filter equipped air handling unit. The air handling unit uses 6 parallel carbon filters comprised of three individual carbon filter trays in series. Each filter tray will hold approximately 50 pounds of sulfur impregnated activated carbon for the adsorption media.

The service life for a carbon filter depends on the weight and the adsorptive capacity of the carbon. When the activated carbon becomes saturated with mercury, it can no longer effectively adsorb or capture mercury vapor. Saturation will likely occur when the carbon contains 15-20%, by weight, of mercury (Source: Calgon Carbon Corp.) Veolia ES Technical Solutions, L.L.C. monitors mercury vapor concentration after each primary carbon filter when operating. That value provides us with an up to date indicator regarding potential breakthrough. It is difficult to accurately predict via calculations when carbon will be changed out. It essentially depends on the number and concentration of mercury in a lamp or a device. We believe that it is more reliable to monitor the concentration of mercury in the air stream.

Fluorescent Lamp Processing Equipment

The air handling system for the fluorescent lamp processing equipment consists of the following dedicated equipment filters: a baghouse filter, a HEPA filter and six carbon filters.

Mercury vapor is controlled by a two stage system consisting of six carbon filters; four primary filters in parallel followed by two secondary filters. Each secondary filter filters the air stream from two primary filters. The processing room housing the equipment is operated under negative pressure via one room carbon filter. During processing, the exhaust blower of the crushing unit is drawing air from the room which also contributes to negative pressure. Activated carbon (sulfur impregnated) is used for the adsorption media. The quantity of carbon per filter (130 lbs) is the same for the room and equipment filters. The room and equipment carbon filters were designed by Veolia ES Technical Solutions, L.L.C. and fabricated by a contractor. Consequently, Veolia ES Technical Solutions, L.L.C. did not assign a make or model number to the room or equipment carbon filters.

The service life for a carbon filter depends on the weight and the adsorptive capacity of the carbon. When the activated carbon becomes saturated with mercury, it can no longer effectively adsorb or capture mercury vapor. Saturation will likely occur when the carbon contains 15-20%, by weight, of mercury (Source: Calgon Carbon Corp.).

Veolia ES Technical Solutions, L.L.C. monitors mercury vapor concentration after each primary carbon filter when operating. That value provides us with an up to date indicator regarding potential breakthrough. It is difficult to accurately predict via calculations when carbon will be

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changed out. As such, monitoring data is used to determine when the carbon needs to be removed and replaced with new carbon.

The Donaldson Company manufactured our high efficiency particulate air (HEPA) filter. The filter is constructed with standard woodboard frames, glass fiber filter medium, shallow corrugated aluminum separators, and epoxy adhesive neoprene gaskets up and downstream. The manufacturer refers to it by Part No. P19-6096. The operational efficiency of the unit is rated at 99.97% at 0.3 micrometers. A mounted differential pressure gauge is used to monitor the pressure difference between the inlet and outlet side of the HEPA filter. Differential pressure is recorded daily. The manufacturer does not have a written filter replacement schedule.

The baghouse was manufactured by Sly, Inc.; the model number is S.A. SBR-45-8 Tubejet Dust Collector. The manufacturer states that the filter media is 99.9% efficient for particles greater than 1 micron. The filter material is an 18 ounce polyester MPS code 9 bag. MPS refers to micro-pore-size which is the preferred filter media for collecting fine particles. Code 9 is a surface treatment which promotes release of the dust cake from the bag.

According to the manufacturer, the life expectancy of the filter depends on many variables. A representative from the manufacturer stated that the filter should last a minimum of two years. A magnahelic gauge which is mounted to the baghouse filter is used to monitor the differential pressure across the filters as a group. The filter is designed to pulse automatically to remove collected dust from the outside of the filters.

HID Lamp Processing Equipment

The air handling system for the HID lamp processing equipment consists of the following dedicated equipment filters: a baghouse filter, a HEPA filter and six carbon filters.

Mercury vapor is controlled by a two stage system consisting of six carbon filters; four primary filters in parallel followed by two secondary filters. Each secondary filter filters the air stream from two primary filters. The enclosure housing the equipment is operated under negative pressure via this carbon filter system. Activated carbon (sulfur impregnated) is used for the adsorption media. The quantity of carbon per filter is 130 lbs. The equipment carbon filters were designed by Veolia ES Technical Solutions, L.L.C. and fabricated by a contractor. Consequently, Veolia ES Technical Solutions, L.L.C. did not assign a make or model number to the equipment carbon filters.

The service life for a carbon filter depends on the weight and the adsorptive capacity of the carbon. When the activated carbon becomes saturated with mercury, it can no longer effectively adsorb or capture mercury vapor. Saturation will likely occur when the carbon contains 15-20%, by weight, of mercury (Source: Calgon Carbon Corp.).

Veolia ES Technical Solutions, L.L.C. monitors mercury vapor concentration after each primary carbon filter when operating. That value provides us with an up to date indicator regarding potential breakthrough. It is difficult to accurately predict via calculations when carbon will be changed out. As such, monitoring data is used to determine when the carbon needs to be removed and replaced with new carbon.

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According to the manufacturer, the life expectancy of the filter depends on many variables. A representative from the manufacturer stated that the filter should last a minimum of two years. A magnahelic gauge which is mounted to the baghouse filter is used to monitor the differential pressure across the filters as a group. The filter is designed to pulse automatically to remove collected dust from the outside of the filters.

Manual Processing of Lamps

Due to the variety of lamps in use today, including compact fluorescent lamps, many lamps require some manual processing prior to being placed into the automated lamp recycling equipment. The primary type of manual processing that occurs is the separation of the lamp from the plastic base of compact fluorescent lamps. This activity is performed in the alcove located between the retort room and the lamp processing area and includes the feed belt for the lamp line 2. Whenever manual processing occurs within this area, a curtain is closed, enclosing the work area, and negative pressure is provided by the retort room air handling system and the lamp processing equipment. The negative pressure in this area is visually verified by the curtain being drawn into the process area by the negative pressure. As noted above, each of the air handling systems providing negative pressure to this area are equipped with a redundant carbon filtration system.

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DEP FORM NO. 62-210.920(2)(a)
EFFECTIVE: JANUARY 10, 2007

Professional Engineer's Statement

1. Professional Engineer Name (Print Name): Registration Number: 58064	
2. Professional Engineer Mailing Address (Print Address): Cory A. Houchin Organization/Firm (Print): Environmental Sciences Group, Inc. Street Address: P.O. Box 7495 City: Tampa State: FL Zip Code: 33673-7495	
3. Professional Engineer Telephone Numbers: Telephone: (813) 930-9074 Fax: (813) 935-1167 email: houchinc@environmentalsciencesgroup.com	
4. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Air General Permit Registration form, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and .</i> <i>(2) The engineering features of the air pollution control equipment described in this Air General Permit Registration form have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles and the applicable standards of Rule 62-296.417, F.A.C.</i> Signature: <u><i>Cory A. Houchin</i></u> Date: _____ (seal) <u><i>7/30/2012</i></u>	

* Attach any exception to the statement

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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
TAMPA, FLORIDA



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**TECHNICAL SOLUTIONS
NORTH AMERICA**

Florida Department of Environmental Protection
P.O. Box 3070
Tallahassee, FL 32315-3070

Re: Air General Permit Renewal

To whom it may concern:

Enclosed please find the renewal information for the Air General Permit for Veolia ES Technical Solutions, located at 342 Marpan Lane Tallahassee, FL 32305. The existing permit identification number is 0730094-007-AG. Also enclosed is a check for the required fee of \$100.00 (check number 0000454457),

If you have any questions or comments please don't hesitate to contact me at 850-877-8299 extension 25 or by email at linda.dunwoody@veoliaes.com

Sincerely,

VEOLIA ES TECHNICAL SOLUTIONS, L.L.C.

Linda Dunwoody
Operations Manager

LD/ld

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DIVISION OF AIR
RESOURCE MANAGEMENT

Cc: Phillip Ditter - Veolia EH&S Manager
Wayne Bulsiewicz - Veolia EH&S Manager
John McShane - Veolia Branch Manager
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