



**TECHNICAL SOLUTIONS  
NORTH AMERICA**

June 27, 2016

Mr. Bheem Kothur  
Hazardous Waste Permits Section  
Florida Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399

RE: Veolia ES Technical Solutions, L.L.C.  
342 Marpan Lane  
Tallahassee, FL 32305  
EPA ID# FL0000207449  
Permit Number: 00714455-HO-011

Dear Mr. Kothur:

This letter and the enclosed documents are being submitted in response to the department's April 29, 2016, Request for Additional Information letter. This response is structured to first restate the comments, as contained in the List of Requested Information, in italics followed by Veolia's response to each comment.

In addition to responding to each individual comment an updated Cover Page, Table of Contents and Record of Revisions is being included to reflect the updates included with this submittal.

Response to Comments

*General Comments*

1. *Editorial Note: the Permit Renewal Application contains numerous spelling and grammatical errors.*

This comment has been acknowledged and efforts will be made to ensure correct spelling and grammar as documents are revised.

2. *Attachments D5 through D8 contain multiple subsections which can be confusing. We recommend adding a Table of Contents to each of these Attachments for ease of referral.*

This comment has been acknowledged and will be considered when preparing any future revisions.



*Part I – General Permit Application*

*A – General Information:*

3. *Page 11, #2: Type of application indicates that this is a modification to the existing permit. The submitted application is a renewal, not a modification. Please note for future submittals that the modification box should not be checked for renewals.*

The application has been updated and a new page 11 is included with this submittal.

4. *Page 11, #3: Revision number left blank. As this submittal was the first application submitted during this renewal, "Revision" number should be "00".*

The application has been updated and a new page 11 is included with this submittal.

5. *Page 12, #12: Facility owner's name is cut off. Please provide the complete name.*

The application is a fillable Acrobat Form with predefined fonts and formats; however, I was able to modify the font used on this and several other fields where the information entered had been cut off. An updated page 12 is included with this submittal.

*B – Site Information:*

6. *Page 14, #3: Please attach a topographic map drawn to scale (1:2000) that shows the required items noted in the permit application instructions.*

Two new figures have been developed and included with this submittal showing the required information listed on page 14 of the application. This information is being shown in two separate figures to more clearly show the required information.

Figure 9 – Topographic Map, is a topographic map that is drawn to a scale of 1 in. equals 2000 ft. (1:24000) and shows:

- a. Map scale and date
- b. 100-year flood plain area
- c. Orientation of the map
- d. Surface water bodies within 1/4 mile of the facility property boundary (e.g., intermittent streams and springs)

Figure 10 – Zoning Map, is a site map that is drawn to a scale of 1 in. equals 2000 ft. (1:24000) and shows:

- a. Map scale and date
- c. Orientation of the map
- e. Surrounding land uses

The items required to be shown in 3. f. are shown on figures 1 through 7. Figures 9 and 10 include an outline of the property; however, the level of detail required under 3. f. cannot be adequately shown on a map with a 1:24000 scale.



Figures 5 and 6 have been updated to include the map scale, date and orientation.

7. *Site Plans Figure 1, 2, 7, and 8 do not indicate the location of the Satellite Accumulation Area for punctured Aerosol can waste that was observed during the recent facility inspection conducted by the FDEP and EPA. Please identify the Satellite Accumulation Area for punctured Aerosol on all site plans.*

Figures 1, 2, 7 and 8 have been updated to include the satellite accumulation area for the punctured aerosol cans.

*Attachment D-5 - Operations Plan:*

8. *Page 15 of 43, 5.4.2.2 Automated Recycling Systems, paragraph 2: Please correct the following incomplete sentence, "Where this activity does not alter the mercury containing portion of the lamp and is done at either the staging point for the in-feed conveyor or adjacent to the HID processing area."*

Section 5.4.2.2 has been updated to more clearly indicate that the removal of lamps from fixtures or the removal of mounting brackets and hardware that does not alter the lamp is not processing and may be performed outside of the negative pressure areas of the facility. Any activity that alters the mercury containing portion of a lamp must be performed within the negative pressure areas or within the equipment that is maintained under a negative pressure.

9. *Figure 5.5: The descriptive text for Storage Area #4 on page 29 of 43 was changed in this renewal to state that the northern two rows of pallets store only four pallets instead of five. Figure 5.5 does not show this recent change in the number of pallets stored in the northern two rows of Storage Area #4. Please update Figure 5.5 to reflect changes in the text.*

Figure 5.5 has been updated to correctly reflect that the two northern rows within Storage Area #4 will contain four pallet spaces.

10. *Page 16 of 43, 5.4.3.1. Manual Processing: The abbreviation CFL is not explained in the text. The location of the CFL Processing Area is also not identified on a figure. Please clarify in the text what this abbreviation means and illustrate on a figure the location of the CFL Processing Area.*

Section 5.4.3.1 has been updated to remove the abbreviation CFL and remove the reference to CFL Processing Area.

11. *Page 25 of 43, 5.5.5. Internal Mercury Vapor Monitoring: A sample Mercury Vapor Monitoring Form was to be included in Appendix D-5-II. The form is missing. Please include the form.*

A Mercury Vapor Monitoring Form is included with this submittal.

12. *Page 28-30, 5.6.1 through 5.6.5 Storage Areas: The descriptions and provided calculations for the Storage Areas are confusing. The descriptions discuss total number of pallets; however, the calculations use pallet spaces which include two pallets per space. The calculations do not indicate that pallet spaces are being used. Please identify in the calculations that you are using pallet spaces in the last line, not pallets.*



This section has been rewritten to clarify that the storage area volumes are based on pallet spaces.

*Attachment D-6 – Contingency Plan:*

13. *Page 2 of 19, 6.5.3 Reporting Procedures Emergency for Personal: In section 3, Mercury Reclamation/Recovery & Storage Areas, why is the break room, office, and locker room/shower listed under this section? It is not clear if you are listing all the areas within your facility or only certain areas. Please clarify.*

The contingency plan includes the response to medical emergencies as well as responses to fire or releases. As such, these areas were included as personnel will often retreat to an office or break area when experiencing a medical emergency.

14. *Page 9 of 19, 6.8 Emergency Equipment: According to Figure 6.3, there are no fire extinguishers in the South Building. In the previous application for this facility, fire extinguishers were identified in this building. Per 40 CFR 264.52(e), the location of emergency equipment, such as fire extinguishers, should be identified. Please clearly show the locations of all fire extinguishers in the South Building.*

Figure 6.3 has been updated to include the locations of the fire extinguishers.

*Attachment D-8 – Quality Control Plan:*

15. *Page 1 of 15, 8.1 Introduction, paragraph 2: The Air Monitoring Plan is not contained in Section 4. Perhaps, you meant Attachment D-5, Operations Plan. Please review and revise as appropriate.*

Section 8.1 has been updated to correctly refer to Attachment D-5, Operations Plan.

16. *Pages 1-8, 8.2 Incoming Waste Analysis Plan: Large portions of this section of Attachment D-8 contains the same information as found in Attachment D-5, Operations Plan, page 6 through 12. Although the language between these two sections is very similar, there are some discrepancies. For example, MC-LABPACK is listed as a code in Attachment D-5, but crossed through in Attachment D-8. Also, "Date(s) accumulation began" is listed in Attachment D-5, but crossed through in Attachment D-8. Further, Rejection Procedures for incoming waste are included in Attachment D-5 but not provided in Attachment D-8. Please review these two sections so that the application clearly reflects accurate information.*

The Incoming Waste Analysis Plan contained in both Attachment D-5 Operations Plan and Attachment D-8 have been reviewed and updated to ensure consistency between the two plans.

17. *Page 9 of 15, 8.3.3. Testing Frequency – Mercury Recover Operations: The average total mercury concentration for materials generated at this facility is less than 4mg/kg. Per Rule 62-737.840(3)(a), F.A.C., a facility shall ensure that processed materials have less than 3 parts per million (ppm or mg/kg) of "average mercury" during each consecutive 12 week time period of operations, and less than 5 ppm of total mercury as reported in the "weekly composite sample of process operations." Please explain if the average total mercury concentration reported is an "average mercury" or "weekly composite sample".*



That paragraph regarding the testing frequency was intended to address the characterization of the residual from the recycling process with respect to the toxicity characteristic leaching procedure. The concentration of 4 mg/kg was referenced because it is 20 times the TCLP limit of 0.2 mg/l. Since the weekly average is required to be less than 3 mg/kg under our alternate management plan, the average will be less than 4 mg/kg. If the concentration is less than 4 mg/kg the TCLP will automatically be less than 0.2 mg/l.

*18. Page 9 of 15, 8.3.3. Testing Frequency – Mercury Recover Operations: Please explain how you arrived at a TCLP for mercury of 0.2 mg/L.*

The criteria for being less than 0.2 mg/l TCLP was derived as the threshold at which any residual from the recycling process would be characterized as a hazardous waste. This testing for TCLP mercury is testing that is done in addition to the testing that is performed to demonstrate compliance with the permit conditions.

*19. Page 9 of 15, 8.3.3 Testing Frequency – Mercury Recover Operations, Table: In Table 8.1, Plastics is footnoted for total mercury testing but is not footnoted for TCLP testing. Please explain.*

The weekly composite sample for plastic was footnoted as the facility does not typically process coated lamps and as such does not typically generate plastics that have come into direct contact with mercury or mercury containing phosphor powder. As such, there typically will not be a weekly composite sample. However, other plastics that may be generated on-site are tested annually for the purpose of performing a proper waste characterization.

*20. Page 14 of 15, 8.6 Sampling Equipment Decontamination (Cleaning): Cleaning procedures listed in this section are missing several steps, including nitric acid solution rinse and deionized water rinse. Please refer to page 11 of the "Standard Operating Procedures for Sampling at Facilities Permitted Under Chapter 62-737, F.A.C., November 14, 1997 Revision" found in Appendix D-8-II of the application. Please review the referenced document and revise this section to include the missing steps.*

The nitric acid rinse followed by deionized water rinse was not included as it was determined that these procedures unnecessarily introduced additional hazardous chemicals into the workplace without a demonstrated need. The sampling that is performed by the facility is conducted on waste material typically having a concentration of mercury in the low mg/kg range. The use of a nitric acid wash between samples is appropriate when sampling environmental media with concentration at or below the detection limit. We believe that the use of a mild detergent and warm water will adequately clean the sampling equipment to prevent any cross contamination that could materially impact sample results.

*Attachment D-9 – Closure Plan:*

*21. Table 9.3, Closure Cost Estimates: Closure cost estimates decreased from "\$298,696.86" in the current permit to "\$261,820.80" in this renewal application. Details that were provided showed increases or decreases in the Maximum Inventory for several items. Please explain why these inventory changes occurred. Additionally, in Decontamination Activities - Phase III, air sampling for mercury decreased from a total cost of \$9,012 to a total cost of \$325. Please explain the reduction in this cost.*



The increases and decreases in the maximum inventory were based on several factors.

1. The quantity of lamps included in the maximum inventory was significantly increased due to the reconfiguration of the storage areas to include the space previously designated as the maintenance area and to include the areas currently occupied by the cardboard balers.
2. A shift in the volume of material processed by the facility has also impacted the volume of material included in the maximum inventory. Over the past several years the amount of HID lamps has increased while the amount of mercury containing devices has decreased. As such the facility is processed more drums of crushed glass and arc tubes from the HID lamp process than drums of phosphor powder from the fluorescent lamp line.
3. A change in the method of shipping non-hazardous waste to the landfill has allowed the facility to reduce the amount of non-hazardous process residues on-site. This shift combined with the reduced amount of mercury containing devices received has resulted in a shift of 2 pallet spaces from the storage of drums to the storage of lamps.

The closure cost estimate has been reviewed and all disposal cost estimates have been verified. Additionally, an analysis of the cost estimate in comparison to prior estimates has been completed. Below is a summary of the findings of that analysis.

#### Disposal Costs

1. The per unit disposal costs for fluorescent and HID lamps has remained static or decreased over the past five years due to market pressure. As such the cost estimate from the most recent state contract was used. The overall cost for the disposal of lamps included in the inventory has increased by \$14,576.00 due to the increase in volume.
2. The quantity of prep room debris was increased from 4 drums to 4 cubic yard boxes. This was a result of debris from maintenance activities being combined with this waste stream for off-site treatment and the logistical requirements of shipping this material to a hazardous waste facility. Although this increased the maximum inventory for this waste stream the per year generation rate for waste stream the per yard pricing for the larger packages resulted in a reduction in the closure cost estimate.
3. The current closure cost estimate includes a cost for treating the crushed arc tubes from HID lamps as low mercury subcategory waste. The HID lamps as received meet the definition of low mercury waste. The pre-retort testing of the crushed arc tubes shows an average mercury concentration in the range of 40 mg/kg with a maximum concentration of 200 mg/kg. As a low mercury waste the cost for treatment and disposal was significantly reduced. This change has resulted in a net decrease in the closure cost estimate of \$30,125 versus the prior cost estimate.
4. The cost for the recycling of universal waste batteries had previously been calculated based on the assumption that 50% would be mixed battery chemistries and 50% lead acid batteries. The new closure cost estimate maintains the ratio of universal waste batteries and lead acid batteries; however the cost for the remainder of the batteries is not based on the separate chemistries of the batteries. This change has resulted in a net decrease in the cost estimate of \$24,072 versus the prior closure cost estimate.
5. The cost estimate for elemental mercury has increased from being a zero dollar entry to a per pound cost of \$12.00 per pound. Also because of the lower amounts of elemental mercury recovered, the facility has switched to using 76 pound flasks for the storage of mercury. This change in storage resulted in the lowering of the total amount of elemental mercury on-site from 2800 pounds to 500 pounds. Although there was a significant decrease in quantity the cost estimate increased by \$7,000.



The reductions in the cost estimate for the batteries and the crushed arc tubes from HID lamps has effectively offset the increase in disposal cost associated with any price increases or the increase in the volume of lamps included in the maximum inventory.

With respect to the air monitoring, this cost was adjusted following a review of the closure plan with the Professional Engineer. Veolia initially did not include any wipe sampling in the closure cost estimate and there was no wipe sampling included in the 2011 estimate. However, it was recommended that wipe sampling be included and that the cost for air monitoring be reduced. This change resulted in a neutral impact on the cost estimate; however because the additional cost for wipe sampling was included in Phase II of the Decontamination Activities as opposed to Phase III, it appears to be a significant reduction in analytical costs.

*Attachment D-12-Inspection Plans*

*22. The Weekly Inspection Checklist for the Storage areas does not have a space for the number of containers in storage. Please add this to the checklist.*

The Weekly Inspection Checklist has been updated to include a space for the number of pallet spaces occupied in each storage area.

If you have any questions please call me at (262) 243-8908 or Matthew Melott at (850) 877-8299.

Sincerely,

Phillip Ditter, CHMM  
EHS Manager

Enclosure:

Cc: Aaron Mitchell, FL DEP Pensacola, FL  
Matthew Melott, Veolia Tallahassee, FL  
Wayne Bulsiewicz, Veolia Phoenix, WI