



**Florida Department of  
Environmental Protection  
Hazardous Waste Inspection Report**

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**FACILITY INFORMATION:**

**Facility Name:** Lighting Resources LLC

**On-Site Inspection Start Date:** 01/25/2019

**On-Site Inspection End Date:** 01/25/2019

**ME ID#:** 40403

**EPA ID#:** FLR000070565

**Facility Street Address:** 1007 SW 16th Ln, Ocala, FL 34471

**Contact Mailing Address:** 1007 SW 16th Lane, Ocala, FL 34471

**County Name:** Marion

**Contact Phone:** (352) 509-3001

**NOTIFIED AS:**

LQG (>1000 kg/month)

TSD Facility

Transporter

**INSPECTION TYPE:**

Routine Inspection for TSD Facility facility

**INSPECTION PARTICIPANTS:**

Principal Inspector: John E. White, Inspector

Other Participants: Miranda Rothenberger, Inspector; Buff Fritz, Branch Manager

**LATITUDE / LONGITUDE:** Lat 29° 10' 20.7785" / Long 82° 8' 49.0004"

**NAIC** 562111 - Solid Waste Collection

**TYPE OF OWNERSHIP:** Private

**Introduction:**

On January 25, 2019, John White and Miranda Rothenberger, Florida Department of Environmental Protection, accompanied by Buff Fritz, Lighting Resources Branch Manager, inspected Lighting Resources, LLC for compliance with RCRA permit 0309339-003-HO and federal and state hazardous waste regulations. The permit was issued on May 24, 2017 and expires on July 6, 2022.

The facility most recently notified the Department on November 14, 2018 as a large quantity generator of hazardous waste, an operating commercial treatment, storage, and disposal facility, a large quantity handler of universal waste, a destination facility for universal waste, a transporter of universal waste, a mercury recovery and/or reclamation facility, and a transporter of hazardous waste. Lighting Resources originally received EPA ID FLR000070565 on February 17, 2011. The facility began lamp processing operations at this location on July 11, 2012.

Lighting Resources employs 23 people with operating hours from 8 AM to 5 PM, Monday to Friday, for office personnel and in two shifts from 6 AM to 11 PM, Monday to Friday, for processing personnel. Lighting Resources has three drivers and operates one semi and two straight trucks. The trucks are leased from Penske and Penske provides maintenance services. Lighting Resources is connected to the municipal wastewater collection and potable water systems.

**INSPECTION HISTORY (Past 5 Years):**

Lighting Resources was last inspected on March 23, 2017, by the Department and the U.S. Environmental Protection Agency Region IV and was not in compliance at that time. This was an EPA lead inspection. The following violations were cited: One 55-gallon drum of debris in the processing area was not marked with an accumulation start date and training was not conducted in accordance with the training plan outlined in the permit application. The facility returned to compliance and the case was closed without formal enforcement.

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Lighting Resources was inspected on July 30, 2015, by the Department and the U.S. Environmental Protection Agency - Region IV and was not in compliance at that time. This was an EPA lead inspection. The following violations were cited: The facility failed to maintain position descriptions for personnel involved in hazardous waste management; broken glass, metal end caps, CFL bases, personal protective equipment, and used rags were disposed of in the trash; the contingency plan was not updated to reflect a change in emergency coordinators; the facility failed to transfer waste from failed containers to containers in good condition; the facility failed to keep containers closed; containers of used oil were not provided with secondary containment; and, the facility failed to document operating conditions in the weekly inspection log. The facility returned to compliance and the case was closed without formal enforcement.

### **Process Description:**

Lighting Resources, LLC is permitted to operate a mercury containing lamp and device storage and recovery facility. The storage of mercury containing lamps are limited to 139,104 T-12 lamps or 45 tons (90,000 pounds). Total storage of processed glass is limited to a maximum volume of four 20-yard roll-off containers, or 120,000 pounds (lbs.), of separated glass. Total storage of processed metals is limited to a maximum of 45,000 lbs. or sixty 55-gallon drums. Maximum storage capacity of phosphor powder is limited to 24,000 lbs. or thirty-two 55-gallon drums.

Lighting Resources, LLC is a hazardous waste transporter, a universal waste transporter and handler, and a processor of mercury containing lamps. Universal waste coming into the facility is unloaded and placed inside the warehouse in the counting area where the number of containers described on the shipping paper is verified with the number of containers delivered by the trucking company. Trucks are off-loaded in one of two loading docks and containers are counted or weighed to verify the shipping paper(s). Once verified, intact lamps are moved to Rows 1 through 9 in the warehouse, crushed lamps are moved to Row 10, and other materials are placed in open rows 1 through 9, as space is available. Electronics for recycling are stored on the loading dock. A written log is maintained by personnel identifying the shipping paper number, the generator of the waste, the date the waste arrived on-site, and the date the waste was verified. Universal waste batteries are stored along the north wall of the warehouse.

Located in a separate room with an air filtering system and self-contained, negative pressure process, is a Balcan MP8000. The Balcan MP8000 lamp processor separates the glass, end caps and phosphor powder from mercury containing lamps. The equipment can operate all day during each business day. Lamps are fed into the processor on a conveyor belt and pass through crushers. Phosphor powder is continuously pulled out of the system by air handlers. Glass and metal end caps are separated and fall out into separate containers. Lamps are processed by type with one machine handling long tubes and a second, multi-purpose machine handling crushed lamps, HID lamps, and CFLs.

Inspection of the warehouse found approximately 24 pallets of mixed-batteries for recycling stored in the center of the warehouse floor. The batteries were properly labeled and managed.

Located off to one side were ten 5-gallon containers and two 55-gallon drums of PCB ballasts. PCB wastes just pass through the facility and are shipped to a Lighting Resources facility in Phoenix, Arizona.

Adjacent to the bay doors were three fiberboard containers of lamp shatter-shields received from Stericycle and one drum from Wal-Mart in Puerto Rico containing non-hazardous liquid wastes. The containers had been rejected by Lighting Resources and were to be returned to the shipper.

Electronics/Retail Returns for recycling are now stored on the loading dock, freeing up space in the warehouse for other waste streams. On a work table, staff separate packaging, remove power cords, and remove batteries from retail return items. No issues were noted in this area.

On November 20, 2018, an environmental sample was taken from the storm drain at the loading dock. The sample result, 0.19 micrograms per liter mercury, indicates that, while mercury is present outside the facility, it was present at a level below the groundwater limit of 0.2 micrograms per liter in the area of the loading dock, on the east side of the building.

Located in the ten permitted storage rows were the following:

- Row 1 – Shattershields
- Row 2 – Batteries

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Row 3 – Batteries  
Row 4- Ink and Toner  
Row 5 – Lamps, Batteries, and Electronics  
Row 6 – Scrap Metals and Shredder Materials  
Row 7 – Batteries  
Row 8 – Batteries and Lamps  
Row 9 – Batteries  
Row 10 – Batteries

Located in the supply storage space along the southwest wall were containers of lamps. The facility was told to move the lamps into the permitted rows.

Volumes of waste stored on site do not exceed the limits set by the permit. It was noted that the facility's operations have changed since the permit was obtained. The volume of batteries stored on-site exceeds what was described in the operating plan provided in the permit application. It is recommended the facility review the operating plan and the permit and determine if a permit modification is required to address changes in operation that will affect waste storage areas.

In the Balcan lamp processing area were two drums for phosphor powder, dated 1/9/2019 and 1/14/2019, that were properly labeled hazardous waste. Also in the area were two 55-gallon drums of Floor Sweepings, dated 1/23/2019 and 1/24/2019, one drum of spent filters, dated 1/23/2019, and eight drums of phosphor powder, with the earliest accumulation start date of 1/10/2019. All of the drums were properly labeled and managed.

The facility needs to ensure hazardous waste containers, including satellite accumulation containers, are marked with the words "Hazardous Waste" and an indication of the hazard of the contents, in this case "toxic" to meet the requirements of the generator improvement rule adopted by Florida in June 2018.

#### Records Review:

A copy of the permit and application is maintained on site. Review of inspections of emergency and safety equipment and weekly container inspection logs found no issues. The Contingency Plan was reviewed, and no issues were noted. Job titles and job descriptions for staff are included in the permit application and are kept on file at the facility.

Separated glass is shipped to Argos Cement Newberry Plant located in Newberry, Florida. The glass is mixed with aggregate to make asphalt. Calcium phosphate powder is shipped to a Lighting Resources facility in Phoenix, Arizona. No issues were noted with shipment of wastes off-site.

Review of the weekly sample composite required for recovered mercury containing materials (phosphor powder, glass, metal end caps) per permit condition, Part II Subpart B – Specific Operating Conditions, Specific Condition 3, and rule 62-737.840(3)(d), F.A.C., found one sample of phosphor powder on 7/17/2017 contained 5.3 mg/kg mercury. The sample was retested in accordance with the requirements of Part II Subpart A – General Operating Conditions, Specific Condition 21, and found to contain 5.0 mg/kg mercury, exceeding the weekly composite maximum limit of 3.0 mg/kg. It was also noted that, beginning 4/20/2018, the facility was taking two composite samples of each waste stream per week due to the volume of material being processed. These values are being averaged to obtain the 12-week rolling average required by regulation and the permit. On 4/20/2018 one of the composite samples for phosphor powder contained 3.2 mg/kg mercury, again exceeding the regulatory and permit limit of 3.0 mg/kg. It is not noted if the facility retested the material, reprocessed the material, or shipped it off-site for mercury recovery as required.

Permit condition, Part II Subpart B – Specific Operating Conditions, Specific Condition 5 requires Lighting Resources to maintain a rolling 12-week average of mercury contained in the process wastes. During the inspection, it was found the rolling average was not being maintained. Following the inspection, a 12-week rolling average was completed and provided to DEP. Updates to the spreadsheet documenting the rolling average also indicate when the facility was conducting maintenance and not processing at least 3 days a week, limiting sampling efforts.

The permit, and rule 62-737.840(3)(d), F.A.C., require the rolling average to be less than 1.0 parts per million (or mg/kg). The limit of 1.0 mg/kg was exceeded seven times: on 2/22/2018 (1.06167 mg/kg), 4/20/2018 (1.07500 mg/kg), 5/4/2018 (1.18333 mg/kg), 5/16/2018 (1.19208 mg/kg), 5/25/2018 (1.10308 mg/kg), 6/5/2018 (1.02283 mg/kg) and 6/14/2018 (1.00283 mg/kg).

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On January 25, 2018, the Balcan processing unit was taken out of service for repairs. When the unit restarted, sampling of processed wastes found the mercury content of the powder continued to rise, resulting in the rolling 12-week average to increase. On May 4, 2018, the carbon pellets in the Balkan processing unit were replaced, correcting the mercury content issue in the phosphor powder. During this period, DEP was not contacted and informed of the issue with the processing equipment and violations of the rolling 12-week average as required by Part 1 – General and Standard Conditions, Specific Condition 12.

**New Potential Violations and Areas of Concern:****Violations**

Type:	Violation
Rule:	403.727(1)(c)
Explanation:	<p>Lighting Resources failed to comply with the requirements of the storage and mercury processing permit.</p> <p>Part II Subpart B – Specific Operating Conditions, Specific Condition 3 of the permit, and rule 62-737.840(3)(d), F.A.C. require the facility sample recovered materials daily and analyze a composite sample weekly to determine the total mercury content. The analyses must show less than 1 part per million (ppm) mercury "average" during the 12-week period and less than 3 ppm for any "weekly" composite. The facility exceeded the 1 ppm 12-week average on seven occasions in 2018 and the 3 ppm weekly composite limit twice between 2017 and 2018.</p> <p>Part II Subpart B – Specific Operating Conditions, Specific Condition 3 of the permit, and rule 62-737.840(3)(a), F.A.C. require the facility maintain a 12-week rolling average of the mercury contained in the processed materials. At the time of inspection, Lighting Resources was not maintaining the 12-week rolling average.</p> <p>Part 1 – General and Standard Conditions, Specific Condition 12 of the permit requires the facility notify DEP immediately of an inability to comply with any condition or limitation specified in the permit. The facility failed to notify DEP of mercury limit violations and issues with processing equipment.</p>
Corrective Action:	Lighting Resources must ensure the conditions of the permit agreed to by the facility are met. The facility must notify the Department of any violation of the permit.

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**Conclusion:**

Lighting Resources was inspected as a RCRA permitted mercury containing lamp and device storage and recovery facility and was not in compliance at the time of this inspection. The facility failed to comply with the requirements of RCRA Operating Permit 0309339-003-HO.

It is recommended the facility review the operations plan(s) submitted with the permit application and determine if changes are required due to changes in types and volumes of waste/recyclable materials accepted for processing.

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**1.0 - Pre-Inspection Checklist**

## Requirements:

The requirements listed in this section provide an opportunity for the Department's inspector to indicate the conditions found at the time of the inspection. A "Not Ok" response to a requirement indicates either a potential violation of the corresponding rule or an area of concern that requires more attention. Both potential violations and areas of concern are discussed further at the end of this inspection report.

**Note: Checklist items with shaded boxes are for informational purposes only.**

Item No.	Pre-Inspection Review	Yes	No	N/A
1.1	Has the facility notified with correct status? 262.18(a)	✓		
1.2	Has the facility notified of change of status? 62-730.150(2)(b)			✓
1.3	Did the facility conduct a waste determination on all wastes generated? 262.11	✓		

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**Signed:**

A hazardous waste compliance inspection was conducted on this date, to determine your facility's compliance with applicable portions of Chapters 403 & 376, F.S., and Chapters 62-710, 62-730, 62-737, & 62 -740 Florida Administrative Code (F.A.C.). Portions of the United States Environmental Protection Agency's Title 40 Code of Federal Regulations (C.F.R.) 260 - 279 have been adopted by reference in the state rules under Chapters 62-730 and 62-710, F.A.C.

John E. White

**Principal Inspector Name**

Inspector

**Principal Inspector Title**

JW

**Principal Inspector Signature**

DEP

**Organization**

03/27/2019

**Date**

Miranda Rothenberger

**Inspector Name**

Inspector

**Inspector Title**

FDEP

**Organization**

Buff Fritz

**Representative Name**

Branch Manager

**Representative Title**

Lighting Resources

**Organization**

NOTE: By signing this document, the Site Representative only acknowledges receipt of this Inspection Report and is not admitting to the accuracy of any of the items identified by the Department as "Potential Violations" or areas of concern.

**Report Approvers:****Approver:** Enrique AcostaGonzalez**Inspection Approval Date:** 03/27/2019