



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

FEB 02 2015

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Michael Maliska  
Operations Manager  
AERC.com, Inc.  
4317-J Fortune Place  
West Melbourne, Florida 32904

SUBJ: AERC.com, Inc.  
RCRA Compliance Evaluation Inspection Report  
EPA ID Number: FLD984262782

Dear Mr. Maliska:

Enclosed is a copy of the United States Environmental Protection Agency RCRA inspection report for the inspection conducted at AERC.com, Inc. in West Melbourne, Florida, on December 17, 2013. The site inspection revealed violations of RCRA.

Pursuant to the Memorandum of Agreement between the EPA and the State of Florida, the EPA has forwarded a copy of the inspection report to the State. If you should have any questions, please contact Parvez Mallick, of my staff, at (404) 562-8594 or by e-mail at [mallick.parvez@epa.gov](mailto:mallick.parvez@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Larry L. Lamberth".

Larry L. Lamberth, Chief  
Hazardous Waste Enforcement and  
Compliance Section  
Enforcement and Compliance Branch

Enclosure

cc: Glen Perrigan, FDEP



**United States Environmental Protection Agency (USEPA)  
Region 4, Atlanta, Georgia  
Compliance Evaluation Inspection Report**

**1) INSPECTOR AND AUTHOR OF REPORT**

Parvez Mallick, Environmental Engineer  
Hazardous Waste Enforcement and Compliance Section  
Enforcement and Compliance Branch  
Resource Conservation and Restoration Division  
U.S. Environmental Protection Agency  
61 Forsyth Street, S.W.  
Atlanta, Georgia 30303

Phone: (404) 562-8594  
Fax: (404) 562-8566  
E-mail: [mallick.parvez@epa.gov](mailto:mallick.parvez@epa.gov)

**2) FACILITY INFORMATION**

AERC.com, Inc.  
4317-J Fortune Place  
Brevard County  
West Melbourne, FL 32904  
EPA ID No.: FLD984262782  
NAICS No.: 562111

**3) RESPONSIBLE OFFICIAL**

Michael Maliska  
Operations Manager  
AERC.com, Inc.  
(321) 952-1516

**4) INSPECTION PARTICIPANTS**

Parvez Mallick, U.S. Environmental Protection Agency (EPA), Region 4  
John White, Florida Department of Environmental Protection (FDEP)  
Glen Perrigan, FDEP  
Randy Miller, FDEP  
Michael Maliska, AERC.com, Inc.

**5) DATE OF INSPECTION**

December 17, 2013  
9:30 a.m.

**6) APPLICABLE REGULATIONS**

Resource Conservation and Recovery Act (RCRA) Sections 3002, 3005, and 3007 (42 U.S.C. §§ 6922, 6925, and 6927), and the regulations promulgated pursuant thereto at 40 Code of Federal Regulations (C.F.R.) Parts 260-270, 273, 279.

Florida Statutes (F.S.) Chapter 403.702 et seq., and the regulations promulgated pursuant thereto and set forth at the Florida Administrative Code (F.A.C.), Chapters 62-710 and 62-730.

**7) PURPOSE OF COMPLIANCE EVALUATION INSPECTION**

To conduct an unannounced EPA lead Compliance Evaluation Inspection (CEI) to determine the facility's compliance with applicable regulations of RCRA and the corresponding FDEP regulations.

**8) INSPECTION HISTORY**

On January 24, 2013, AERC was inspected by FDEP and was not in compliance at the time of the inspection. Violations cited included; failure to sign a manifest as the designated facility; failure to submit a biennial report in a timely manner; storage of hazardous waste in a supply area; storage of drums three rows high; storage of mercury lamps and glass in open containers; and failure to use an EPA identification number on a hazardous waste manifest. The formal enforcement case was resolved through issuance of a FDEP Consent Order, OGC #13-1248, that included \$9,500 in civil penalties.

On April 20, 2011 AERC was inspected by EPA and FDEP and was not in compliance at the time of the inspection. The facility was cited for failing to keep daily logs and failure to keep universal waste containers closed. The facility came into compliance immediately and no formal enforcement action was taken.

On December 16, 2009, AERC was inspected by FDEP and found to be in compliance.

On September 11, 2008, AERC was inspected by FDEP and was not in compliance at the time of the inspection. The facility was cited for: failure to provide adequate aisle space; failure to dispose of waste within 90-days; failure to have accumulation start date on containers per permit. The case was resolved by amending an existing FDEP Consent Order, OGC #07-2193, from the 2007 inspection. The amended Consent Order included an additional \$26,692.00 in civil penalties. The amended Consent Order allowed an \$18,956.00 increase in the amount for the Supplemental Environmental Project and required payment of \$7,736.00 in civil penalties.

On May 24, 2007, AERC was inspected by EPA and FDEP. AERC was not in compliance at the time of the inspection. The facility was cited for: failure to obtain original manifests; failure to document daily container count log; failure to provide annual training to staff; failure to provide adequate aisle space; failure to update contingency plan; failure to process crushed bulbs within the one year time frame as per permit. The case was resolved by execution of a FDEP Consent Order, which included a Supplemental Environmental Project and a civil penalty of \$25,397.00.

9) **FACILITY DESCRIPTION**

Prior to the entry briefing, the EPA inspector presented enforcement credentials to Michael Maliska. AERC.com, Inc. (AERC; the facility) was originally named Mercury Technologies International but changed its name to Advanced Environmental Recycling Company (AERC) in 2001. AERC receives spent mercury containing bulbs and devices which are crushed or dismantled to produce recyclable components such as glass, scrap metal and mercury containing powder (phosphor powder). A lamp recycler separates the end caps, glass, shatter shields and filaments from the phosphor powder. The metal and phosphor powder are sent to the AERC Pennsylvania (PA) treatment, storage and disposal (TSD) facility for thermal retort. The facility cannot process lamps or devices containing liquid mercury. Lamps or devices containing liquid mercury are consolidated and sent to the Pennsylvania facility. High Intensity Discharge (HID) lamps are dismantled in order to remove mercury containing ampoules from the bases. The consolidated ampoules are sent to the Pennsylvania facility.

AERC also receives all types of batteries which are sorted and consolidated into 55-gallon containers or onto pallets. The batteries are shipped off-site for reclamation. AERC accepts PCB and non-PCB lighting ballasts for sorting and shipment to other recycling facilities. Electronic scrap for de-manufacturing or re-manufacturing is also accepted. Most electronics are managed at AERC's facility located at 4301 Woodland Park Drive, Suite 105, in West Melbourne, Florida.

AERC is located within a small business park and consists of a front office area connected to a warehouse. The warehouse area includes: a lamp and drum storage area; lamp processing area; shipping/receiving staging area; cardboard baler; lamp ballast staging area; universal waste battery (including lithium batteries) storage area; battery processing area; satellite accumulation areas (two); and a hazardous waste storage area. A roll-off container for the storage of clean crushed glass from the lamp recycling machine is located behind the warehouse near the shipping/receiving dock. AERC has been in operation at this location for approximately 16 years and had 15 employees at the time of the inspection. AERC has other facilities located in California, Virginia and Pennsylvania. AERC is in operation Monday through Friday from 7 a.m. to 11:30 p.m. AERC is on West Melbourne City water and sewer. The property is owned by Fortune Cookie Park Inc.

AERC is a Large Quantity Generator (LQG) of hazardous waste; a Treatment, Storage, and Disposal (TSD) facility (storage prior to recycling is regulated and requires a permit/mercury recovery facility); a hazardous waste transporter; a universal waste handler and a universal waste destination facility (recycling of universal waste lamps). AERC also operates a 10-day transfer facility for hazardous waste destined for the AERC Pennsylvania TSD facility. A LQG of hazardous waste is a generator of greater than or equal to 1000 kilograms of hazardous waste per month, with no on-site accumulation quantity limit. A LQG can accumulate hazardous waste for 90 days or less. The owner or operator of a destination facility is subject to all applicable requirements of 40 C.F.R. Parts 264, 265, 266, 268, 270 and 124, and the notification requirement under Section 3010 of RCRA.

The initial permit to operate a mercury containing lamp and device storage and recovery facility, was issued on December 30, 1996. The current permit, Permit/Certification Number: 0072959-HO-004, was issued on July 6, 2012, and will expire on December 30, 2016. The storage of

mercury containing lamp and devices is limited to 223,200 lamps or 968 drums. Total storage of non-hazardous material located outside in covered containers (roll-off) should be a maximum volume of 22 tons of clean glass. The permit requires AERC to sample recovered materials (i.e., glass, metal) daily and analyze a composite sample weekly to determine the total mercury content. These analyses must show less than 1 part per million (ppm) mercury "average" during the 12 week time period and less than 3 ppm for any "weekly" composite (or AERC must propose alternate procedures to be approved by FDEP). The results of the sampling must be recorded and maintained in a log book and AERC is required by the permit to maintain a rolling 12 week average of the mercury contained in the recovered glass and metal end caps. The rolling 12 week average results must also be maintained on a form per the permit. The permit also requires compliance with the air requirements specified in Rules 62-210.300 and 62-296.417, F.A.C.

Part I, General and Standard Conditions, paragraph 14(e), of the permit requires the facility to keep a written operating record at the facility, which includes: results of any waste analysis; copies of manifests for three years; results of inspections; closure plan; inspections of emergency and safety equipment; biennial reports; personnel training records; the Waste Minimization Program Plan (62-730.160(I), F.A.C.); biennial certification of waste minimization; the description and quantity of each hazardous waste (received/generated); the location of each hazardous waste within the facility and the quantity at each location; a log of dates of operations and unusual events; and a summary report and details of incidents that require implementation of the contingency plan. Part 1, General and Standard Conditions, paragraph 26 (d), requires the facility to maintain arrangements with State and local authorities per 40 C.F.R. § 264.37. Paragraph 26(e) requires the facility to maintain aisle space as required by 40 C.F.R. § 264.35. Part 1, General and Standard Conditions, paragraph 34, requires the facility to maintain compliance with 40 C.F.R. Part 264, Subpart H – Financial Requirements and Rule 62-730.180(6), F.A.C.

Part II, Operating Conditions, Subpart A, of the permit, includes: paragraph 3, the requirement to maintain training records at the facility (training received annually, maintain updated list of personnel handling hazardous waste and their job titles per 40 C.F.R. § 264.16); paragraph 6, the requirement to amend the contingency plan if any condition in 40 C.F.R. § 264.54 is met (amendment must be approved in writing by FDEP); and paragraph 8, the requirement to certify annually that the facility has a program in place to reduce the volume and toxicity of hazardous waste and maintain the certification in the operating record. Part II, Operating Conditions, Subpart B, paragraph 8, the requirement to sample glass and metal end caps daily and composite samples weekly; paragraph 9, the requirement to maintain sample results in a log; and, paragraph 10, the requirement to maintain the rolling 12 week average; and paragraph 12, requires the facility to keep a written operating record at the facility, which includes: waste profile sheet; incoming authorization log; mercury reclamation log; a summary report and details of incidents that require implementation of the contingency plan; manifests; and results of inspections.

## 10) INSPECTON FINDINGS

### Shipping and Receiving Area

The inspectors started the facility inspection in the Receiving and Shipping area. The area is used for unloading of lamps, batteries, and electronic waste for processing. The facility's first shift sorts the lamps and the second shift processes the lamps. This area is also used for storage/sorting of electronic waste. During the inspection, twenty-three pallets of electronic waste were stored in the area. According to Mr. Maliska, the electronic waste are stored in this area for 2-3 days before transferred to AERC's electronics recycling operation located on an adjacent property.

In addition, the inspectors observed the following in the Shipping and Receiving area:

- One box of used electronics identifies the generator as MS Noordam, a Holland America cruise ship. The box was labeled as "Hazardous Waste" and as "Universal Waste."
- A black 55-gallon metal drum with a green lid was stored in a corner of the area. The drum was 2/3 full of what appeared to be metal slag with copper. A label on the drum says "WT 1533" which may be the weight of the container. AERC was informed by the inspectors that slag waste must be properly managed as either scrap metal or tested and disposed of properly.
- A Gaylord box in the area contained HID lamp bases. The lamp bases will be recycled as scrap metal.

A hopper contained glass and bases from incandescent bulbs. This material was mixed with the glass generated by processing of fluorescent lamps after the processing glass has been sampled and determined to be clean. The waste glass is shipped to a Subtitle D landfill.

- A 10-gallon container stored in the area contained floor sweepings. According to the facility personnel floor sweepings/dust is handled as hazardous waste. The satellite accumulation container was not marked "Hazardous Waste" or with other words that identify the contents of the container. **Therefore, AERC appears to have failed to adhere to a condition for exemption from Section 403.722 of the Florida Statutes, F.S. § 403.722 (Section 3005 of RCRA, 42 U.S.C. § 6925), given in F.A.C. Chapter 62-730.160(1) (40 C.F.R. § 262.32(c)(1)(ii)), which states that a generator may accumulate as much as 55 gallons of hazardous waste in containers at or near the point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or interim status and without complying with paragraph (a) of 40 C.F.R. § 262.34, provided that he marks his containers with the words "Hazardous Waste" or with other words that identify the contents of the containers.**

### Lamp Recycling Machine

The lamp recycling machine (LSS-1) was not in operation at the time of the inspection (Photograph 1). Phosphor powder generated from lamp crushing in the LSS-1 is collected in a satellite accumulation container marked "Hazardous Waste" prior to transport to the 90-day



hazardous waste storage area. Glass, end caps, and HID bases (not ampoules) are sampled daily and sent to an outside laboratory for mercury analysis (5 day composite is analyzed). Lamp end caps generated from LSS-1 are sent to metal recyclers, Fortune Metals & Plastic Inc., located in Tampa, Florida. The glass is put through LSS-1 machine twice and then collected in a bin by LSS-1 prior to going to the roll-off container by the shipping/receiving dock area. The roll-off glass container is sent off to the Brevard County landfill. Phosphor powder is transported as hazardous waste to the AERC facility in Pennsylvania. Several boxes of lamps awaiting processing were stored against a wall in the processing area.

An air filtering unit is used to filter the air from LSS-1. The air filtering unit consists of pre-filters, HEPA filters, and carbon filters. The pre-filters are changed as needed. The HEPA filters are changed approximately every eight months. Carbon filters are changed annually. The air handling unit has 14 HEPA filters and three trays of carbon filters. Air monitoring is conducted daily (approximately every two hours) to ensure the filters are working as designed. The bank of pre-filters have been tested and determined to be non-hazardous. The HEPA filters and carbon filters are disposed of as hazardous waste.

The inspectors observed approximately 200 lamps coated with a plastic shatter shield were stored in two open tube boxes near the LSS-1 processing area (Photograph 2). Employees remove the shatter shield prior to processing the lamps. **AERC appears to be in violation of F.A.C. Chapter 62-737.800(9), Permit Application Requirements and General Permitting Standards for Mercury Recovery and Mercury Reclamation Facilities, which states that owners and operators shall store processed and unprocessed materials in closed containers; and for broken or damaged unprocessed lamps and devices, and residuals, store these in closed, covered and sealed containers or in enclosed areas of the facility conforming to paragraph 62-296.417(1), F.A.C., to prevent mercury emissions. AERC appears to be in violation of F.A.C. Chapter 62-730.185(1) (40 C.F.R. § 273.33(d)(1)), which states that containers or packages of lamps must remain closed. The inspectors informed AERC to keep all boxes/containers closed prior to processing.**

#### **High Intensity Discharge (HID) Lamp Base Removal Area**

HID lamp base removal area is located in a corner of the warehouse. HID lamps are broken in a covered rectangular shape shaker (Photograph 3). Mercury contained ampoules are removed from the HID lamp bases and placed in a 55-gallon satellite accumulation container. A 30-gallon container held HID lamps waiting to be processed. The inspectors observed a 55-gallon container of ampoules closed and labeled "Hazardous Waste." The mercury ampoules are shipped off-site for reclamation.

#### **Bulb and Battery Storage/Staging Areas**

The Bulb and Battery Staging area takes up the majority of the warehouse area and consisted of ten rows of waste and recyclable materials (Photographs 4-5). During the inspection, Row 1 consisted of HID lamps, compact bulbs, and water meters; Row 2 consisted of batteries and lamps; Rows 3-8 consisted of different types of batteries, Row 9 consisted of non-PCB ballasts, capacitors, and batteries; and Row 10 consisted of PCB ballasts, non-PCB ballasts, capacitors, and transformers.



## Battery Processing Area

Located on the east side of the warehouse, between the battery processing area and universal waste battery storage area, is the wet battery processing area (Photograph 6). AERC accepts lead-acid, lithium ion, nickel metal hydride, nickel cadmium, and alkaline batteries for recycling. Currently, alkaline batteries are shipped to Metal Conversion Technology, Georgia.

The inspectors observed nine 55-gallon drums containing batteries stored along a wall. Four of the 55-gallon drums contained alkaline batteries, one drum contained lithium ion batteries, three drums contained nickel metal hydride batteries, and one drum contained nickel cadmium batteries. The oldest container in the area was dated 5 May 2013. Three additional drums of spent alkaline batteries were also stored in this area. A 30-gallon container labeled "Used Oil" was noted in the area.

The inspectors observed accumulation containers for acids and bases removed from wet batteries. There were two containers marked "Waste Sulfuric Acid Solution." The facility representative indicated that one drum, two-thirds full and dated "7 Jan 13, was for accumulation of waste acid and the other, full drum, dated "13 Sept 13", was for accumulation of alkaline, sodium hydroxide waste and was two-thirds full. An additional 55-gallon drum, containing about five gallons of waste, was labeled "Waste Sodium Hydroxide" and was dated "4 Feb 13." A 5-gallon pail labeled "Waste Sodium Hydroxide" contained about one gallon of waste. It was determined the 5-gallon pail is a transfer bucket and should be labeled with the words "Hazardous Waste" or with other words that identify the contents of the container to prevent mixing of incompatible wastes. Also, waste should be immediately transferred from batteries to the waste accumulation container and not stored in the bucket. There should be a second, properly labeled, transfer bucket for acid waste to prevent mixing of incompatible acids and bases. **Due to the volume of hazardous waste sodium hydroxide stored in the satellite accumulation area, the new 55-gallon drum storing waste sodium hydroxide in excess of the 55 gallon limit, should have been labeled "Hazardous Waste" and marked with the date upon which the first drop of waste was placed in the container. Therefore, AERC appears to have failed to adhere to conditions for exemption from Section 403.722 of the Florida Statutes, F.S. § 403.722 (Section 3005 of RCRA, 42 U.S.C. § 6925)) given in F.A.C. Chapter 62-730.160(1) (40 C.F.R. § 262.34(a)(2) and (a)(3)), which states that a generator may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, provided that while being accumulated on-site, each container is labeled or marked clearly with the words "Hazardous Waste," and the date upon which each period of accumulation begins is clearly marked and visible for inspection on each container.**

## 90-Day Storage Area

According to AERC, materials in the 90-day hazardous waste storage area goes to the AERC Pennsylvania facility for disposal and/or to be disassembled and treated by thermal retort. The following containers in the 90-day hazardous waste storage area (Photograph #7) were marked "Hazardous Waste" or Universal Waste" and had accumulation start date:

- 3-55 gallon containers of mercury containing devices/debris (D009 hazardous waste);
- One 55-gallon container of sulfuric acid (D008 hazardous waste);
- One 55-gallon container of sodium hydroxide (D006 hazardous waste);

- Two 5-ft long paper fiber drum contained ARC lamps (universal waste);
- One 8-ft long paper fiber drum contained lamps (universal waste);
- One 55-gallon drum contained low pressure sodium lamps (universal waste).

Additionally, four 55-gallon drums of waste phosphor powder (processed from the LSS-1 machine) were stored in the 90-day storage area. The four drums were marked "Hazardous Waste" and two drums were not marked with accumulation start date. The facility representative marked two drums with accumulation start date of "12/17/13" during the inspection. **Therefore, AERC appears to have failed to adhere to condition for exemption from Section 403.722 of the Florida Statutes, F.S. § 403.722 (Section 3005 of RCRA, 42 U.S.C. § 6925), given in F.A.C. Chapter 62-730.160(1) (40 C.F.R. § 262.34(a)(2)), which allows a generator to accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, provided that the date upon which each period of accumulation begins is clearly marked and visible for inspection on each container. AERC failed to mark the beginning date of accumulation on two 55-gallon drums of hazardous waste (D009) located in the 90-Day Hazardous Waste Accumulation Area.**

#### **10-Day Storage Area:**

No hazardous waste was stored in the 10-day area at the time of this inspection.

#### **Records Review**

Large quantity generator records (contingency plan and emergency procedures, personnel training, biennial report, manifests, and weekly inspections) were reviewed following the facility inspection. Records required by the permit were also reviewed.

A review of the facility's contingency plan found emergency coordinators identified on pages 4 and 8 of the plan were not correct. The employees identified were no longer employed by AERC. **Therefore, AERC appears to have failed to adhere to a condition for exemption from Section 403.722 of the Florida Statutes, F.S. § 403.722 (Section 3005 of RCRA, 42 U.S.C. § 6925), given F.A.C. Chapter 62-730.160(1), which incorporates F.A.C. Chapter 62-730.180(2) (40 C.F.R. § 262.34(a)(4), which incorporates 40 C.F.R. § 265.54(d)). This regulation requires that a facility's Contingency Plan must be reviewed and immediately amended, if necessary, whenever: The list of emergency coordinators changes. Specifically, employees identified in the contingency plan as the emergency coordinator and alternates were no longer employed by the company.**

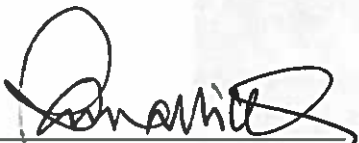
A review of the weekly and twelve week running average for mercury content is required by the facility's permit 0072959-HO-004, Part II, Item B. 10. A sample of weekly composites and twelve week running averages, provided on February 6, 2014, included the time period for week 2 of July 2013 to week 3 of November 2013, a period of twenty weeks.

A review of the sampling data provided found no weekly composite for the time period reviewed exceeded 3 ppm mercury. The review also found the facility is not maintaining a twelve week running average as required. The data provided indicated the twelve week running average for the twenty week period was consistently 1.112 ppm. An average of the data for the twenty week

period provided found the average for the last twelve weeks was actually 0.881167 ppm. **Therefore, AERC is in apparent violation of their permit, Part II, Operating Conditions, item B. 10. Of Permit Number 0072959-HO-004, which states that the Permittee shall maintain a twelve week running average of mercury concentrations in glass waste.**

Mercury containing wastes generated by the facility are shipped to AERC.COM located in Allentown, Pennsylvania, EPA identification number PAD987387216. The hazardous waste transporter used by the facility is Freehold Cartage, EPA identification number NJD054126164.

11) **SIGNATURE**



Parvez Mallick  
Environmental Engineer

1/27/15  
Date

12) **CONCURRENCE AND APPROVAL**



Larry L. Lamberth, Chief  
Hazardous Waste Enforcement and Compliance Section  
RCRD Enforcement and Compliance Branch

2/2/15  
Date



Photograph 1 – Lamp recycling machine (LSS-1).



Photograph 2 – Open containers of lamps.





Photograph 3 – HID Lamp Shaker.



Photograph 4 – Bulb and battery staging area.



Photograph 5 – Bulb and battery staging area.



Photograph 6 – Wet battery processing area.



Photograph 7 – 90-Day hazardous waste storage area.



