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

DEC 21 2017

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Jason Muhlenkamp
Regional Sales and Operations Manager
Lighting Resources, LLC
1007 SW 16th Ln
Ocala, Florida 34471

SUBJ: Resource Conservation and Recovery Act (RCRA) Compliance Evaluation Inspection (CEI)
Lighting Resources, LLC
EPA ID Number: FLR000070565

Dear Mr. Muhlenkamp:

On March 23, 2017, the U.S. Environmental Protection Agency and Florida Department of Environmental Protection (FDEP) conducted a Resource Conservation Recovery Act (RCRA) compliance evaluation inspection (CEI) at the Lighting Resources, LLC located at Ocala, Florida. The purpose of the inspection was to evaluate the Facility's compliance with applicable RCRA regulations.

The observations made during the inspection are summarized in the attached RCRA CEI report. A copy of this report has been forwarded to FDEP for follow-up. If you have any questions regarding this matter, please contact Parvez Mallick, of my staff, by phone at (404) 562-8594 or by email at mallick.parvez@epa.gov.

Sincerely,

Alan A. Annicella

Alan A. Annicella
Chief, Hazardous Waste Enforcement
and Compliance Section
Enforcement and Compliance Branch

Enclosure

cc: Glen Perrigan, FDEP HQ, Tallahassee
John White, FDEP Central District, Orlando
Buff Fritz, Lighting Resources, LLC

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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DEC 21 2017

Glen Perrigan
Environmental Manager
Waste Compliance Assistance Program
Florida Department of Environmental Protection
2600 Blair Stone Road, MS4560
Tallahassee, Florida 32399-2400

SUBJ: RCRA Compliance Evaluation Inspection
Lighting Resources, LLC
EPA ID Number: FLR000070565

Dear Mr. Perrigan:

On March 23, 2017, a compliance evaluation inspection (CEI) was conducted by the U.S. Environmental Protection Agency and the Florida Department of Environmental Protection (FDEP) at Lighting Resources, LLC located at Ocala, Florida, to determine the facility's compliance status with the Resource Conservation and Recovery Act (RCRA).

Enclosed is the EPA RCRA inspection report, which indicates that potential violations of RCRA were discovered during the inspection. Please follow-up with Lighting Resources, LLC to ensure potential violations have been addressed and pursue enforcement as appropriate pursuant to the Hazardous Waste Civil Enforcement Response Policy.

If you have any questions regarding this matter, please contact Parvez Mallick, of my staff, by telephone at (404) 562-8594 or by email at mallick.parvez@epa.gov.

Sincerely,

Alan A. Annicella
Chief, Hazardous Waste Enforcement
and Compliance Section
Enforcement and Compliance Branch

Enclosures

cc: John White, FDEP Central District

United States Environmental Protection Agency
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 (RCRD)
U.S. Environmental Protection Agency – Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

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

2) FACILITY INFORMATION

Lighting Resources, LLC
1007 SW 16th Ln
Ocala, Florida 34471
Miami Dade County

Latitude / Longitude: Lat 29° 10' 20.7785" / Long 82° 8' 49.0004"
Phone number: (352) 509-3001
EPA ID Number: FLR000070565
SIC Code: 4212 - Transportation & Utilities – local trucking, without storage
NAICS Number: 562111 & 562112 – Solid and hazardous waste collection
Website: https://www.lightingresourcesinc.com

3) RESPONSIBLE OFFICIALS

Buff Fritz, Branch Manager, Lighting Resources, LLC

4) INSPECTION PARTICIPANTS

Buff Fritz, Branch Manager, Lighting Resources, LLC
John White, Florida Department of Environmental Protection
Daniel Hall, Florida Department of Environmental Protection
Parvez Mallick, U.S. EPA Region 4

5) DATE OF INSPECTION

March 23, 2017, 10:30 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 and 279.

Florida Department of Environmental Protection RCRA permit number 0309339-HO-003 and 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, 62-730 and 62-750.

7) PURPOSE OF COMPLIANCE EVALUATION INSPECTION

March 23, 2017, the U.S. Environmental Protection Agency, Region 4 inspector, Parvez Mallick, accompanied by Florida Department of Environmental Protection (FDEP) inspectors, John White and Daniel Hall, arrived at Lighting Resources, LLC (hereinafter, "LR" or the "facility") to inspect the facility to determine its compliance status with RCRA permit 0309339-HO-003 and federal and state hazardous waste regulations. This was an EPA lead compliance evaluation inspection (CEI). LR was represented by Mr. Buff Fritz, Lighting Resources Branch Manager. Upon entering the facility, the inspectors introduced themselves, showed their credentials and explained the purpose of the visit and a description of the facility's process was discussed.

8) FACILITY DESCRIPTION

The facility most recently notified FDEP on February 28, 2017, 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. The facility originally received EPA ID FLR000070565 on February 17, 2011. The facility began lamp processing operations at this location on July 11, 2012. The RCRA permit was issued on March 4, 2014, to operate a mercury containing lamp and device storage and recovery facility. The current permit expires on July 6, 2022. LR employs 23 people with operating hours from 8 a.m. to 5 p.m., Monday to Friday, for office personnel and in two shifts from 6 a.m. to 11 p.m., Monday to Saturday, for processing personnel. LR has three drivers and operates one semi and two straight trucks. The trucks are leased from Penske. Penske provides maintenance services for the trucks. LR is connected to the municipal wastewater collection and potable water systems. LR's February 28, 2017, Universal Waste Lamp and Device Transporter and Transfer Facility Information Checklist documented that an estimated 7,000,000 fluorescent lamps and 2,000 mercury containing devices were recycled in 2016.

9) PROCESS DESCRIPTION

LR 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 should be a maximum volume of four 20-yard roll-off containers, or 120,000 pounds (lbs.), of separated glass. Total storage of processed metals should be a maximum of 45,000 lbs. or 60 55-gallon drums. Maximum storage capacity of phosphor powder should be 24,000 lbs. or 32 55-gallon drums.

LR 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. From there, the waste is moved to one of ten rows along the west wall of the warehouse. Universal waste batteries are stored along the north wall of the warehouse.

The incoming materials arrive in the staging area of the warehouse. Approximately 90 percent of the material received is transported by LR's trucks. Trucks are off-loaded in one of two loading docks and containers are counted or weighed to verify the shipping papers. Once verified, intact lamps are moved to Rows 1 through 9 in the warehouse, crushed lamps are moved to Row 10, and other materials (e.g., electronics for recycling) are placed in open rows 1 through 9, as space is available. 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.

Located in the east side of the warehouse, 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 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.

10) INSPECTON FINDINGS

The inspection began in the loading dock area of the warehouse. The inspectors observed a box truck from Heritage-Crystal Clean, Atlanta, Georgia, had just arrived and was to be off-loaded. Several unsecured tube boxes of fluorescent lamps were observed in the truck. Broken lamp glass was visible on the floor of the truck (Picture 1). Based on the shipping paper, document number A12114011, the truck contained 243 4-foot lamps, 144 8-foot lamps, and one 75-pound unit of scrap electronics (television set).

Near the loading dock, was one 55-gallon drum labeled "Caution Contains PCBs". The drum was shipped by CSX Transportation and arrived at the facility labeled "Universal Waste Magnetic Ballast". Upon review of the contents, the drum was provided with the PCB label. Also in the area was one Gaylord box, approximately 1.5 cubic yard capacity, containing rejected materials received from PSC Allworth. The waste stored in the box was consolidated from several boxes received on 3/20/2017 and consisted of hygiene materials, liquids, and pharmaceuticals not accepted by Lighting Resources. According to the facility representative, the rejected waste will be returned to PSC Allworth (Picture 2).

In the counting area, where containers are weighed and components counted, were three boxes of materials waiting to be processed. The wastes are stored along the west wall of the warehouse. Located on the southwest side of the warehouse is the supply storage area, consisting of empty tube containers. Adjacent to the empty tube containers were three rows of boxes. Each row contained 18 Gaylord boxes stacked three high. Each box was labeled "Non-Hazardous Waste". The shipping paper indicated the boxes contained "Non Regulated Material" shipped by Allworth LLC, Birmingham, Alabama (Picture 3).

The inspectors observed the following materials in row 1-10 (Pictures 4 and 5):

- Row 10 contained 12 55-gallon drums of crushed lamp glass. The drums were all dated between 1/25/2017 and 1/27/2017. The drums were properly labeled "Universal Waste" and managed.
- Row 9 contained 21 boxes of recyclable materials generated initially by CVS and Walgreens stores.
- Row 8 contained six boxes of recyclable materials.
- Row 7 contained 21 boxes of consolidated materials. These are the recyclable materials that have been sorted and processed and are awaiting shipment off-site to a processing facility.
- Row 6 contained seven pallets of electronic wastes.
- Row 5 contained three boxes of retail returns that still needed to be sorted.
- Row 4 contained four boxes of retail returns that still needed to be sorted.
- Row 3 contained one pallet of mercury lamps for recycling. The lamps were received 3/22/2017.
- Row 2 contained three boxes of alkaline batteries and one 55-gallon drum of lead acid batteries dated 3/7/2017. The batteries were properly marked "Universal Waste – Batteries" and managed.
- Row 1 contained ten boxes of plastic shatter shields removed from tube lamps.

Along the north wall of the warehouse area were four containers of mercury containing devices. One 55-gallon container, two 30-gallon containers, and one 15-gallon container.

The inspectors observed seven 55-gallon drums of batteries staged on secondary containment pallets in the universal waste battery accumulation area (Picture 6). Two drums of lead acid batteries, dated 3/23/2017 and 3/7/2017, one drum of alkaline batteries, one drum of lithium metal batteries, dated 12/6/2016, one drum of lithium ion batteries, dated 3/8/2017, one drum of nickel cadmium batteries, dated 3/7/2017, and one drum of nickel metal batteries, dated 8/11/2016. The universal waste battery drums were all properly labeled, dated, and managed. In a corner near the bay door was one 55-gallon drum of mercury containing debris, dated 3/15/2017. The drum, containing floor sweepings, was properly labeled, closed, and managed.

Located in the processing room were 25 55-gallon drums of crushed glass, one box of lamps, one 30-gallon drum of lamps, and one pallet of 8-foot and 4-foot lamps staged for processing. Employees were manually removing shatter shields from lamps and sorting lamps into tube boxes prior to feeding them into the processing machine. The processing machine is currently running every day. Materials dropping from the machine are caught in plastic drop-trays located beneath the equipment. Phosphor powder generated by the machine accumulates in two stations. Each station has a 55-gallon drum labeled "Hazardous Waste" accumulating the Powder (Pictures 7 and 8). The start date is placed on the label when the drum is placed. The drums were dated 3/20/2017 and 3/22/2017. It takes less than two days to fill each drum. A fiber drum was accumulating glass fines caught by the drop plates and shakers. The fines are returned to the equipment and are caught in the hazardous waste drums.

Processed glass produced by the Balcan MP8000 machine accumulates in an open top container and metal end caps are captured in a Gaylord box (Picture 9). Processed glass is recycled by being used in the manufacture of cement. The inspectors observed a 55-gallon drum of floor sweepings located in one corner. The drum is managed as a satellite accumulation area container.

The drum was closed and labeled "Hazardous Waste". Along the south wall is the hazardous waste accumulation area. In the area were eight 55-gallon drums of floor sweepings (Picture 10). Six of the drums had accumulation start dates between 1/3/2017 and 2/13/2017. One drum had a damaged start date of January 2017 and one drum did not have a start date [40 C.F.R. 262.34(a)(2)]. Also in the accumulation area was a group of six 55-gallon drums of floor sweepings and 13 55-gallon drums of phosphor powder. The drums were marked with accumulation start dates between 2/5/2017 and 3/23/2017. All of the drums were closed, marked "Hazardous Waste" and properly managed.

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.34(a)(3)], a generator of 1,000 kilograms or greater of hazardous waste in a calendar month is a large quantity generator (LQG) and may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by Section 403.722 of the Florida Statutes, Fla. Stat. § 403.722 [Section 3005 of RCRA, 42 U.S.C. § 6925], provided that the generator complies with the conditions listed in Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.34 (a)(1)-(4)] (hereinafter referred to as the "LQG Permit Exemption").

Pursuant to Fla. Admin. Code Ann. r. 62-730.160(1) [40 C.F.R. § 262.34(a)(2)], which is a condition of the LQG Permit Exemption, a generator is required to ensure that the date upon which each period of accumulation begins is clearly marked and visible on each container.

LR must ensure all containers are properly marked with the accumulation start date. In a response dated April 5, 2017, the facility provided a photograph of a hazardous waste label with an accumulation start date.

Warehouse Area C is where processed glass is staged. In this area were four 20-cubic yard roll-off containers. Two were empty and two contained processed glass (Picture 11). Also in this area were 31 Gaylord boxes of processed lamp end caps and one box of electric cords removed from electronic devices (Picture 12). Great Lakes Recycling, Casselberry, Florida accepts the end caps for recycling.

There were three trailers located outside. One trailer contained laptops for recycling, one contained supplies, and one contained wooden pallets for recycling. A table found on the loading dock is used for sorting of retail return products. The table can be moved inside the warehouse or wherever it is needed to aid in processing.

Records Review

The inspectors found no issues with the review of inspections of emergency and safety equipment and weekly container inspection logs. The contingency plan was reviewed as part of the permit application renewal process in January 2017 and was not reviewed again as part of this inspection. Job titles and job descriptions for staff are also included in the permit application.

Review of the weekly sample composite required for recovered mercury containing materials (phosphor powder, glass, metal end caps) per permit conditions, Part II Subpart B – Specific Operating Conditions, Specific Condition 8, noted two samples exceeded 3 parts per million (ppm) mercury during a weekly composite. The samples, one on 7/5/2016 and one on 7/27/2016, were resampled in accordance with Part II Subpart B – Specific Operating Conditions, Specific

Condition 11.a. and were determined to contain less than 3.0 ppm mercury. Based on information provided by LR in the April 5, 2017, FDEP information request response, the 12-week rolling average required by Part II Subpart B – Specific Operating Conditions, Specific Condition 10, has not exceeded the 1.0 ppm mercury limit set by the permit.

Review of training requirements as compared to what is identified in the facility's operation plan included in the permit application found Raenell Norris requires D.O.T. training since she is signing hazardous waste manifests (Permit Part II Subpart A – General Operating Conditions, Condition 3).

> **Pursuant to the RCRA Hazardous Waste Permit number 0309339-HO-002, Part II Subpart A – General Operating Conditions, Condition 3, required training identified in the facility's Engineering Report, dated November 25, 2013, included with the permit application was not provided to staff.**

LR must ensure the facility conducts operations in the manner outlined in the facility's permit and permit application. Based on information provided in the April 5, 2017, facility response, training is now being provided as required.

Review of incoming shipments of waste noted several shipments that declared the waste to include elemental mercury. In the facility response dated April 5, 2017, LR has found that naming conventions on shipping papers has, in some cases, identified material as liquid mercury when the material was mercury containing devices. With regards to actual shipments received that contained liquid mercury, LR has provided a reference to an EPA memo dated January 21, 1986, and asserts the company manages elemental mercury as a scrap metal. Please be aware, as noted in 50 FR 624, January 4, 1985, the term "scrap metal" does not include liquid metal wastes (i.e., liquid mercury). While the mercury may not constitute a scrap metal, there are two documents that may apply to this situation. As noted in 50 FR 634, January 4, 1985, "reclaimed metals that are suitable for direct use, or that only have to be refined to be usable are products not wastes." As noted in the same Federal Register this principle does not apply to wastes that have been processed minimally, or to materials that have been partially reclaimed but must be reclaimed further before recovery is complete. Also, please refer to the May 30, 1986, EPA memo (RO 11159) which notes mercury that is at least 99 percent free-flowing mercury is not subject to hazardous waste regulations. A copy of the Federal Register pages and memos referenced above are attached to the report (Appendix A).

In order to declare liquid mercury a product not subject to hazardous waste regulations LR, in the future, must provide information on the nature of the liquid mercury received documenting the liquid mercury is at least 99 percent free flowing mercury and not a chemical waste. The documentation may be in the form of a waste profile.

After the document review process, an exit interview was held with Buff Fritz, Raenell Norris, and Jason Muhlenkamp (by telephone). Lighting Resources, LLC was inspected as a mercury processor, a large quantity generator of hazardous waste, and a universal and hazardous waste transporter and appeared to not be in compliance with some RCRA regulations at the time of inspection. Based on information contained in the April 5, 2017, response to FDEP's e-mail of March 24, 2017, requesting additional information, Lighting Resources has corrected the deficiencies identified in this report.

11) SIGNED

Parvez Mallick — 12/21/17
Inspector and Author of Report — Date
Hazardous Waste Enforcement and Compliance Section

12) CONCURRENCE AND APPROVAL

Alan Annicella — 12/21/17
Chief, Hazardous Waste Enforcement and Compliance Section — Date
Enforcement and Compliance Branch

Inspection Pictures

Picture 1- Broken lamp glass on the truck.

Picture 2 – Rejected pharmaceutical waste.

Picture 3 – 18 Gaylord boxes of Non-hazardous waste.

Picture 4 – Recyclables and UW (rows 10 - 7).

Picture 5 – Recyclables and UW (rows 6 - 1).

Picture 6 – Containers of batteries (UW).

Inspection Pictures

Picture 7 – Phosphor powder accumulating in a 55-gallon drum.

Picture 8 – Phosphor powder collecting system.

Picture 9 – End caps in Gaylord box and processed glass.

Picture 10 – Eight 55-gallon drums of floor sweepings.

Inspection Pictures

Picture 11 – 20-cubic yard roll-off container of processed glass.

Picture 12 – Gaylord boxes of processed lamps end caps.

Appendix A

Part II: Secondary Materials That Are Subtitle C Solid and Hazardous Wastes When Recycled

I. Definitions of Particular Terms Used in the Amended Definition of Solid Waste

A. Spent Materials/Sludges/By-Products/Scrap Metal

The final definition classifies the universe of secondary materials that are wastes when recycled as either sludges, spent materials, by-products, or scrap metal.[8] With the exception of scrap metal, this is the same classification scheme as in the proposed rule. See 48 FR 14476/2. We have not changed the proposed definition of "sludge," but are clarifying what we mean by spent materials and by-products. We also are explaining the new definition of scrap metal.

1. *Spent Materials.* We are continuing to define spent materials as those which have been used and are no longer fit for use without being regenerated, reclaimed, or otherwise re-processed. In response to comments, however, we have altered the wording of the definition of spent material to express this concept more clearly. As the proposal was worded, a spent material was one that had been used and no longer could serve its original purpose. The Agency's reference to original purpose was ambiguous when applied to situations where a material can be used further without being reclaimed, but the further use is not identical to the initial use. An example of this is where solvents used to clean circuit boards are not longer pure enough for that continued use, but are still pure enough for use as metal degreasers. These solvents are not spent materials when used for metal degreasing. The practice is simply continued use of a solvent. (This is analogous to using/reusing a secondary material as an effective substitute for commercial products.) The reworded regulation clarifies this by stating that spent materials are those that have been used, and as a result of that use become contaminated by physical or chemcial impurities, and can no longer serve the *purpose* for which they were produced. (This reworded definition appropriately parallels the definition of "used oil"—a type of spent material—in RCRA section 1004(36).)

In response to comment, we also note that leftover, unreacted raw materials from a process are not spent materials, since they never have been used. Unreacted raw materials thus are not subject to RCRA jurisdiction unless they are discarded by being abandoned.

2. *Scrap Metal*—a. *Classification.* We have added a new definition of scrap metal to the final regulations. At proposal, scrap metal that was generated as a result of use by consumers (copper wire scrap, for example) was defined as a spent material. (This type of scrap is usually referred to as "obsolete scrap".) Scrap from metal processing, on the other hand (such as turnings from machining operations) was defined as a by-product. (It is usually called "prompt scrap".) Yet the scrap metal in both cases is physically identical (*i.e.*, the composition and hazard of both by-product and spent scrap is essentially the same) and, when recycled, is recycled in the same way—by being utilized for metal recovery (generally in a secondary smelting operation).

In light of the physical similarity and identical means of recycling of prompt scrap and obsolete scrap, the Agency has determined that all scrap metal should be classified the same way for regulatory purposes. Rather than squeeze scrap metal into either the spent material or by-product category, we have placed it in its own category.

b. *Recycled Hazardous Scrap Metal is a Solid Waste.* We have further determined that for purposes of the regulations implementing Subtitle C of RCRA, all scrap metal that would be hazardous[9] is a solid waste when disposed of or when recycled (although, as explained in more detail below, it is exempt from Subtitle C regulation at this time when recycled). Scrap metal is waste-like in that it is a used material that is no longer fit for use and must be reclaimed before it can be used again, or is a process residue that must be recovered in a different operation from the one in which it was generated.

We also believe that scrap metal comes within the series of statutory definitions which state generally that materials from which resources are recovered are solid wastes. See RCRA sections 1004 (19), (30), (22), (7), (18), (23), and (24); see also 48 FR at 14502/1-2. Based on these provisions, the Agency has stated that most reclamation operations involve waste management, and *all* reclamation operations utilizing materials that have been used and that must be re-processed before they can be reused constitute waste management. We believe that scrap metal that is being reclaimed fits within these provisions.

c. *Definition of Scrap Metal and Regulatory Distinctions Between Scrap Metal and Other Metal-Containing Wastes That Are Recycled.* Although we are defining hazardous scrap metal as a Subtitle C waste when recycled, we are exempting such metal from regulation for the time being. We need to study types of scrap metal and types of management practices further before deciding on an appropriate regulatory regime (if any). It thus is important to distinguish scrap metal from other metal-containing wastes that are subject to Subtitle C regulations when recycled. See Section II.H.4. of Part III of the Preamble.

Scrap metal, as defined in this rule, means bits and pieces of metal parts (*e.g.*, bars, turnings, rods, sheets, wire), or metal pieces that are combined together with bolts or soldering (*e.g.*, radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled. Put another way, scrap metal is defined as products made of metal that become worn out (or are off-specification) and are recycled to recover their metal content, or metal pieces that are generated from machining operations (*i.e.*, turnings, stampings, etc.) which are recycled to recover metal. Materials not covered by this term include residues generated from smelting and refining operations (*i.e.*, drosses, slags, and sludges), liquid wastes containing metals (*i.e.*, spent acids, spent caustics, or other liquid wastes with metals in solution), liquid metal wastes (*i.e.*, liquid mercury), or metal-containing wastes with a significant liquid component, such as spent batteries.

We have defined scrap metal in this way based on our general understanding of the way industry uses this term. As noted, this definition does not include liquid spent materials that contain metals. Liquids are different from metal pieces in content, physical form, and manageability. Members of both the National Association of Recycling Industries (NARI) and the Institute for Scrap Iron and Steel (ISIS) also generally agree that liquid wastes are not commonly referred to as scrap metal. Although these metal-bearing liquids and scrap metal are both classified as solid wastes under this rule (if hazardous), the regulatory significance of not including these liquids as scrap metal is that the liquids are subject to immediate regulation when they are reclaimed (assuming they are hazardous spent materials, listed sludges, or listed by-products) whereas

[8] Commercial chemical products listed in § 261.33 also are wastes when recycled to the land or burned as fuels, when this is not their normal manner of use.

[9] For clarification of this point, see the discussion of § 261.1(b), Section II.A. of this part of the preamble.

subsequently used as feedstock. This situation is a subset of the one just described, so that these materials are wastes until reclaimed. Their later use as feedstock does not alter this result. The Agency acknowledges, however, that its discussion of the recycling of spent sulfuric acid in the proposal preamble (footnote 30) created some confusion. The Agency still does not think this process involves reclamation. To eliminate any uncertainty, however, we are amending § 261.4(a) of the regulations to state that spent sulfuric acid that is recycled to produce virgin sulfuric acid is not considered to be a solid waste. (See Section I. below.)

2. *The Status of Reclaimed Products.* The Agency proposed a clarifying amendment to § 261.3(c)(2) (the "derived from" rule) to indicate that commercial products reclaimed from hazardous wastes are products, not wastes, and so are not subject to the RCRA Subtitle C regulations. See 48 FR 11489. Thus, regenerated solvents are not wastes. Similarly, reclaimed metals that are suitable for direct use, or that only have to be refined to be usable are products, not wastes. This amendment states a fairly evident principle, and was not challenged by any commenter.

We caution, though, as we did in the proposal, that this principle does not apply to reclaimed materials that are not ordinarily considered to be commercial products, such as waste-waters or stabilized wastes. The provision also does not apply when the output of the reclamation process is burned for energy recovery or placed on the land. These activities are controlled by the provisions of the definition dealing with using hazardous wastes as ingredients in fuels or land-applied products. For instance, if a spent solvent is treated and blended with oil to sell as a fuel, that waste-derived fuel is still subject to RCRA jurisdiction.

The principle also does not apply to wastes that have been processed minimally, or to materials that have been partially reclaimed but must be reclaimed further before recovery is completed. (See 48 FR at 14499 n. 57.) For this last situation—where materials are partially reclaimed but must be reclaimed further until recovery is completed—we are providing a variance procedure for situations in which the initially reclaimed material is commodity-like in spite of the need for additional processing before it is finally reclaimed. This variance is explained fully in Section J.2. of Part 3 of the preamble below.[21]

F. Section 261.2(c)(4): Wastes That Are Accumulated Speculatively

1. *Grouping of Speculative Accumulation and Overaccumulation Provisions.* EPA proposed that any secondary material (*i.e.*, spent materials, sludges, or by-products) being accumulated speculatively were solid wastes. We said these materials are "accumulated speculatively" when they are being stored with a legitimate expectation of eventual recycling but have never been recycled, or cannot feasibly be recycled. See 48 FR 14489.

The Agency further proposed that secondary materials that accumulate at a site for over a year without 75 percent being recycled are solid wastes. 48 FR 14490. The sense of this provision was that all secondary materials that overaccumulate before being recycled are solid wastes, even if they are going to be recycled in ways that ordinarily do not constitute waste management.

We have combined these concepts in a single provision in the final definition. We have drafted the provision so that secondary materials are considered to be solid wastes if they are accumulating before being recycled. However, the materials will not be considered solid wastes (under this provision of the definition) if the person accumulating can show, on request, that: a) the materials have known recycling potential and can feasibly be recycled, and b) during a one-year calendar period that the amount of material recycled, or transferred to a different site for recycling, is at least 75 percent of the amount accumulated at the beginning of the year.[22]

We think that drafting the provision in this way most accurately reflects Congressional intent that accumulated hazardous secondary materials are ordinarily to be regarded as solid and hazardous wastes. Congress believed that hazardous wastes are rarely, if ever, recycled or amenable for recycling. H.R. Rep. No. 94-1491, at 4. It mandated a "regulatory framework" to ensure that "hazardous wastes (are not) disposed of in ponds or lagoons or on the ground in a manner that results in substantial and sometimes irreversible pollution of the environment." (*Id.*) This mandated "regulatory approach" would "eliminat(e) the last remaining loophole in environmental law . . ." (*Id.*)

Although accumulating hazardous secondary materials are ordinarily regarded as solid and hazardous wastes, this is not invariably the case. As noted earlier in the preamble (see Section II.B. of Part 1 and Section H of Part 2), these materials would not be wastes if they can be recycled in certain designated ways, and if they are not accumulated speculatively before being recycled. These situations represent exceptions to the general statutory prohibition against unregulated waste management.

The final rule thus states the general principle that hazardous secondary materials accumulating before recycling are wastes unless the person accumulating is able to show on request that he is indeed recycling sufficient volumes of the materials on an annual basis. The provision is not substantively different from the proposed rule on overaccumulation; the drafting indicates explicitly, however, that this is an exception to the general statutory principle. Thus, the burden of showing that sufficient amounts are being recycled is on the person accumulating the material. (See Section J. of this part of the preamble.)

2. *§ 261.2(c)(4)(A): Wastes That Are Accumulating With Expectation of Recycling But Which Have Not Been Recycled.* We are adopting in the final rule the proposed provision that all materials stored with a legitimate expectation of eventually being recycled but for which there is no known recycling market or disposition, or no feasible means of recycling, are wastes. These wastes are subject immediately to all applicable RCRA Subtitle C standards. Ordinarily, these are storage standards for the applicable type of storage facility. (See 48 FR 14499/2.) Materials that are known to be recyclable, such as solvents, scrap metal, used oil, or most smelting drosses, slags, and sludges ordinarily would not be subject to this provision.

A person accumulating hazardous secondary materials would have the burden of proving that there is a feasible means of recycling the material. (See Section J. below.) This ordinarily will require identification of actual recyclers and recycling technology, location of the recycler, and relative costs associated with recycling. For example, if the

[21] One commenter questioned whether recirculated industrial cooling water was considered to be reclaimed. Ordinarily, we consider cooling water (contact or non-contact) to be reused directly when it is recirculated. Cooling water is not ordinarily processed or treated to remove impurities before recirculation, but is routed away from the process (often through a cooling tower) to lose enough heat to be reusable. The Agency does not consider cooling water routed in this way to be reclaimed.

[22] Of course, the materials could still be solid and hazardous wastes depending on how they are recycled. For example, they would be wastes if they are to be recycled by being burned to recover energy.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAY 30 1986

Mr. Bruce J. Lawrence
President
Bethlehem Apparatus Company, Inc.
Hellertown, Pennsylvania 18055

Dear Mr. Lawrence:

This is in response to your February 26, 1986, letter in which you request confirmation that the mercury that is sent to your facility to be triple distilled is not a waste. First, I would like to apologize for taking so long in
responding to your request; I hope this delay has not caused you any problems. With respect to your specific request, I agree with you that mercury (which is at least 99 percent pure) that is received and refined at your facility is not a solid waste.1/ In particular, we have stated that metals that are suitable for direct use, or that only have to be refined to be usable are products, not wastes. See 40 CFR 261.3(c)(2); see also preamble discussion at 50 FR 634, January 4, 1985. Thus, the mercury--that is 99 percent free flowing mercury--that you receive at your facility is not subject to any of the hazardous waste regulations (i.e., the material does not have to be manifested to your facility, you need not comply with the storage requirements, etc.)

Please feel free to give me a call if I can be of any further assistance; my telephone number (202) 475-8551.

Sincerely,

Matthew A. Straus
Chief
Waste identification

1/ It should be noted that this regulatory interpretation reflects the Federal hazardous waste rules. The state of Pennsylvania may take a different interpretation; you, therefore, need to contact the state for further information on the status of this material.

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