Florida Department of Environmental Protection

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Ryan E. Matthews
Interim Secretary

June 7, 2017

Buff Fritz, Operations Manager
Lighting Resources, LLC
1007 SW 16th Lane
Ocala, Florida 34471
Buff.fritz@lightingresourcesinc.com

Re: Lighting Resources, LLC
HW Facility ID # FLR000070565
Marion County

Dear Mr. Fritz:

Department personnel conducted an inspection of Lighting Resources, LLC on March 23, 2017. A copy of the inspection report is attached for your records. Non-compliance items identified at the time of the inspection have been corrected.

The Department appreciates your efforts to maintain this facility in compliance with state and federal rules. Should you have any questions or comments, please contact John White at 407-897-4305 or via e-mail at John.White@dep.state.fl.us.

Sincerely,

Christine Daniel

Christine Daniel, Manager
Central District
Florida Department of Environmental Protection

Enclosures: Inspection Report

cc: Susan Richard, Chief Compliance Officer, Susan.Richard@lightingresourcesinc.com

Florida Department of

Environmental Protection

Hazardous Waste Inspection Report

FACILITY INFORMATION:

Facility Name: Lighting Resources LLC

On-Site Inspection Start Date: 03/23/2017 **On-Site Inspection End Date:** 03/23/2017

ME ID#: 40403 **EPA ID#:** FLR000070565

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

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

County Name: MARION

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: Parvez Mallick, Inspector; Daniel Hall, Inspector; Buff Fritz, Operations Manager

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

SIC CODE: 4212 - Trans. & utilities - local trucking, without storage

TYPE OF OWNERSHIP: Private

Introduction:

On March 23, 2017, John White and Daniel Hall, Florida Department of Environmental Protection, and Parvez Mallick, U.S. Environmental Protection Agency - Region IV, accompanied by Buff Fritz, Lighting Resources Branch Manager, inspected Lighting Resources, LLC for compliance with RCRA permit 0309339-HO-002 and federal and state hazardous waste regulations. The permit was issued on March 4, 2014 and expires on July 6, 2017.

The facility most recently notified the Department 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, and 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 Saturday, 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.

The Universal Waste Lamp and Device Transporter and Transfer Facility Information Checklist documenting compliance with Chapter 62-737.400(1)(b), F.A.C. was received by the Department on February 28, 2017. The document indicates an estimated seven million fluorescent lamps and two-thousand mercury containing devices were recycled in 2016.

INSPECTION HISTORY
Lighting Resources was last inspected on July 30, 2015, by the Department and the U.S. Environmental Protection Agency - Region IV for compliance 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 was inspected in March 2014 by the Department in response to a complaint. No violations were cited at that time.

The facility was inspected in April 2013 by the Department and the U.S. Environmental Protection Agency - Region IV for compliance with its RCRA permit and federal and state hazardous waste regulations. This was an EPA lead inspection. The facility was out of compliance due to failure to properly notify the state and federal governments prior to receipt of hazardous waste from a foreign source, failure to train facility personnel annually, failure to maintain position descriptions, mercury containing lamps were being broken by employees in the storage area in uncontrolled conditions, failure to keep emergency coordinator information up to date, failure to properly label universal waste lamps and batteries, exceeding the permitted storage limit of phosphor powder, and weekly inspection documents were found to have been completed for future dates.

The facility was inspected in August 2012 by the Department for compliance with its RCRA permit and federal and state hazardous waste regulations. The facility was out of compliance due to failure to maintain a log documenting the 12-week rolling average, failure to provide proper signage at the facility, and failure to document weekly container inspections. The facility was advised to ensure employees had the proper training and that hazardous waste from outside entities could not be stored on site for more than 24 hours. The facility provided the corrective actions and no further action was taken.

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 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 sixty 55-gallon drums. Maximum storage capacity of phosphor powder should be 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. 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.

Incoming materials arrive in the staging area of the warehouse. Approximately 90% of the material received is transported by Lighting Resources, LLC's trucks. 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 (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 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. 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.

The inspection began in the loading dock area. 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 (Figure 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 drumwas shipped by CSX Transportation and arrived at the facility labeled “Universal Waste Magnetic Ballast.” Upon review of the contents upon receipt, 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 material 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. The rejected waste will be returned to PSC Allworth.

In the counting area, where containers are weighed and components counted, were three boxes of materials waiting to be processed.

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.

Row 10 contained twelve 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 and managed.

Row 9 contained twenty-one boxes of recyclable materials generated initially by CVS and Walgreens stores.

Row 8 contained six boxes of recyclable materials.

Row 7 contained twenty-one 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 labeled 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.

In the universal waste battery accumulation area were seven 55-gallon drums staged on secondary containment pallets. 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 twenty-five 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 run 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. 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 machine accumulates in an open top container and metal end caps are captured in a Gaylord box. Processed glass is recycled by being used in the manufacture of cement.

Located in one corner was a 55-gallon drum of floor sweepings. The drum is managed in a satellite accumulation area. 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. 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 CFR 262.34(a)(2)]. Also in the accumulation area was a group of six 55-gallon drums of floor sweepings and thirteen 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 and properly managed. As noted in the April 5, 2017 response, Lighting Resources has properly marked the undated container of mercury containing debris with an accumulation start date.

Lighting Resources appears to have failed to adhere to a condition for the exemption from Section 403.722, Florida Statutes (F.S.), which requires that a facility must obtain a permit or interim status prior to treating, storing, or disposing of hazardous waste. Pursuant to Florida Administrative Code (F.A.C.) Chapter 62-730.160(1) [40 C.F.R. 262.34(a)(2)], a condition of the generator permit exemption, a generator may 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.

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

Located outside were three trailers. 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:
A copy of the permit and application is maintained on site. The permit renewal application was received by the Department on January 12, 2017. While the renewal application was due by January 7, 2017, per Part I – General Standards and Conditions, Condition 21, no further action is being required by the Department with regards to the permit renewal application due date.

Review of inspections of emergency and safety equipment and weekly container inspection logs found no issues. 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 Lighting Resources in the April 5, 2017, 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]. Based on information contained in the facility response dated April 5, 2017, training required by the operations plan is now being conducted as required.

Lighting Resources appears to have failed to comply with Section 403.727(1)(c), Florida Statutes and Part II Subpart A – General Operating Conditions, Condition 3 of Permit number 0309339-HO-002. Training identified in the facility's Engineering Report, dated November 25, 2013, included with the permit application was not provided to staff.

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, Lighting Resources 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, Lighting Resources 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.

In order to declare liquid mercury a product not subject to hazardous waste regulations Lighting Resources, 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.

New Potential Violations and Areas of Concern:

Violations

Type:	Violation
Rule:	262.34(a)(2)
Explanation:	The date upon which each period of accumulation begins must clearly marked and visible for inspection on each container. Lighting Resources failed to mark one 55-gallon drum of hazardous waste debris located in the processing area with the accumulation start date.
Corrective Action:	Lighting Resources must ensure all containers are properly marked with the accumulation start date. In a response dated 4-5-2017 the facility provided a photograph of a hazardous waste label with an accumulation start date.

Type:	Violation
Rule:	403.727(1)(c)
Explanation:	Lighting Resources failed to comply with the requirements of Permit number 0309339-HO-002, Part II Subpart A - General Operating Conditions, Condition 3. Training identified in the facility's Engineering Report, dated November 25, 2013, and included with the permit application was not provided to staff.

Corrective Action:	Lighting Resources must ensure the facility conducts operations in the manner outlined in the facility's permit and permit application. Based on information provided in the 4-5-2017 facility response training is now being provided as required.

Conclusion:

Upon completion of the inspection, 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 was not in compliance at the time of inspection. Based on information contained in the April 5, 2017 response to DEP’s e-mail dated March 24, 2017, requesting additional information, Lighting Resources has corrected the issues identified in this report and no further action is required.

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.

Item No.	Pre-Inspection Review	Yes	No	N/A
1.1	Has the facility notified with correct status? 262.12	✔		
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	✔		

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	Inspector
PRINCIPAL INSPECTOR NAME	**PRINCIPAL INSPECTOR TITLE**
JW	DEP / 06/01/2017
PRINCIPAL INSPECTOR SIGNATURE	**ORGANIZATION** / **DATE**

Daniel Hall	Inspector
Inspector NAME	**Inspector TITLE**
	FDEP
	ORGANIZATION

Parvez Mallick	Inspector
Inspector NAME	**Inspector TITLE**
	U.S. EPA Region 4
	ORGANIZATION

Buff Fritz	Operations Manager
Representative NAME	**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: Christine Daniel **Inspection Approval Date:** 06/01/2017

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.

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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.

US EPA ARCHIVE DOCUMENT

HeinOnline -- 50 Fed. Reg. 634 1985

9441.1986(43)

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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