UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

C-14J

November 7, 2011

VIA U.S. EPA POUCH MAIL

Hon. Barbara Gunning
Administrative Law Judge
Office of Administrative Law Judges
U.S. Environmental Protection Agency
Mail Code 1900L
1200 Pennsylvania Avenue N.W.
Washington, D.C. 20460

Re: Mercury Vapor Processing Technologies, Inc. a/k/a River Shannon Recycling and Laurence Kelly
Docket No. RCRA-05-2010-015

Dear Judge Gunning:

Enclosed please find copies of Complainant's "Post-Hearing Brief" and "Proposed Findings of Fact, Conclusions of Law, and Order" that were filed today in the above-referenced matter. Also enclosed please find copies of Complainant's "Post-Hearing Brief" and "Proposed Findings of Fact, Conclusions of Law, and Order" that have been redacted to remove confidential business information and that were also filed today in the above-referenced matter.

Sincerely,

Kasey Barton

Kasey Barton
Assistant Regional Counsel

Enclosure

cc: Mr. Laurence Kelly (w/ enclosure)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE ADMINISTRATOR

In the Matter of:	)	
	)	
MERCURY VAPOR PROCESSING TECHNOLOGIES, INC. a/k/a RIVER SHANNON RECYCLING, and LAURENCE C. KELLY	)	**Docket No. RCRA-05-2010-0015**
	)	
	)	
Respondents.	)	

POST-HEARING BRIEF OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

CONFIDENTIAL BUSINESS INFORMATION REDACTED

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	)	
	)	
Respondents.	)	

Complainant's Post-Hearing Brief

I. INTRODUCTION

The United States Environmental Protection Agency ("EPA" or "Complainant") submits this post-hearing brief ("Brief") pursuant to the Presiding Officer's orders setting the briefing schedule dated August 18 and September 29, 2011, and in accordance with 40 C.F.R. § 22.26 of the *Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties and the Revocation/Termination or Suspension of Permits* ("Consolidated Rules" or "CROP"). As explained in this Brief, the record from the hearing in this matter held on July 25 through July 27, 2011, establishes that Mercury Vapor Processing Technologies, Inc. a/k/a River Shannon Recycling ("MVPT") and Laurence C. Kelly[1] ("Larry Kelly" or "Mr. Kelly") are liable for conducting a hazardous waste storage and treatment operation without a Resource Conservation and Recovery Act (RCRA) permit for the hazardous waste management facility in violation of 35 Illinois Administrative Code (IAC) § 703.121(a)(1), as alleged in EPA's Complaint and Compliance Order ("Complaint") dated January 28, 2011.[2] The record supports the issuance of the Compliance Order and assessment of at least the $120,000 penalty requested by EPA in the

[1] Larry Kelly was the vice president, chief operating officer, health and safety officer, operator and part owner of MVPT. Tr. 88; CEX-6-02047.

[2] Unless otherwise noted, "Complaint" in this Brief refers to Complainant's amended Complaint and Compliance Order filed on January 28, 2011. CEX-30.

Complaint, pursuant to Section 3008 of RCRA, 42 U.S.C. § 6928, and Section 22.37(b) of the Consolidated Rules.

Specifically, the record shows that from 2005 until at least 2007, Respondents stored and treated hundreds of thousands spent mercury-containing lamps ("spent lamps" or "waste lamps") at a facility located at 13605 S. Halsted Street in Riverdale, Illinois (the "Riverdale facility" or "Riverdale") without a RCRA permit. Mr. Kelly continues to engage in the storage and treatment of waste lamps without a RCRA permit at a different location, operating under different corporate entities. The record establishes that a minimum $120,000 penalty is appropriate, and that an Order requiring Respondents to conduct RCRA closure at the Riverdale facility and to cease operating without a permit is necessary to protect human health and the environment.

II. CASE BACKGROUND

On April 23, 2010, EPA filed a Complaint and Compliance Order against MVPT. The April 23, 2010 Complaint alleged that MVPT operated a hazardous waste storage and treatment facility in violation of 35 IAC § 703.121(a)(1), promulgated pursuant to Section 3006(b) of RCRA, 42 U.S.C. § 6926(b). Respondent MVPT, represented by Larry Kelly, appearing *pro se*, filed an Answer on May 20, 2010.

Pursuant to the Presiding Officer's June 15, 2010 Prehearing Order, Complainant and Respondent MVPT filed their initial prehearing exchanges, and Complainant filed a rebuttal prehearing exchange.[3] On December 22, 2010, Complainant filed a Motion for Leave to Amend Complaint and Compliance Order ("Motion to Amend"). In the Motion to Amend, Complainant requested leave to file a proposed amended Complaint which contained revisions to certain

[3] Respondents submitted two motions to supplement their prehearing exchange, which were granted by the Presiding Officer on May 5, 2011 and July 15, 2011. Complainant submitted three motions to supplement its prehearing exchange, which were all granted by the Presiding Officer on July 15, 2011.

citations of the IAC and added Mr. Kelly as a Respondent to this matter. Mr. Kelly submitted a "Memorandum in Support of Complainant's Motion for Leave to Amend the Complaint and Compliance Order" ("Response to Motion to Amend") dated January 4, 2011, which contained, *inter alia,* a proposed Answer to the allegations in Complainant's proposed amended Complaint. CEX-31. On January 19, 2011, the Presiding Officer granted Complainant's Motion to Amend and ordered that Respondents' proposed Answer to the amended Complaint was deemed filed as of the filing date of the amended Complaint.

Complainant filed the proposed amended Complaint on January 28, 2011. CEX-30. The Complaint alleges in two counts that MVPT and Larry Kelly conducted a hazardous waste storage and treatment operation without a RCRA permit for the hazardous waste management facility in violation of 35 IAC § 703.121(a)(1). CEX-30-02602-02607; Tr. 112. Specifically, the Complaint alleges that from at least February 2005 until November 2007, Respondents transported waste lamps from third parties to the Riverdale facility. CEX-30-02596-02607. The Complaint further alleges that Respondents stored waste lamps at the Riverdale facility, crushed the waste lamps using what Respondents call a "mobile treatment unit" at the Riverdale facility, and then disposed of the crushed glass and metal ends at solid waste landfills. *Id.* As relief, Complainant initially requested that Respondents be assessed a $743,293 penalty and issued a Compliance Order. CEX-30-02607-02613. The Compliance Order requires Respondents to conduct RCRA closure at the Riverdale facility in accordance with 35 IAC Part 724, which includes, among other things, submitting a closure plan for approval to the Illinois Environmental Protection Agency (IEPA), executing the approved closure plan, maintaining financial assurance until closure is completed, complying with security, emergency planning, and training requirements, and submitting reports and notifications to EPA relating to closure

requirements. CEX-30-02611-02613; Tr. 113, 384-397. Additionally, the Compliance Order requires Respondents to cease operations at the Riverdale facility and further orders that "Respondents and their successors, doing business under their own or any assumed names, shall not own or operate a hazardous waste treatment, storage or disposal facility without first obtaining a permit to do so from [IEPA] . . . ." *Id.* On July 8, 2011, Complainant submitted a Motion to Amend Proposed Penalty, requesting that the Presiding Officer grant revision of the Complaint by inter-delineation to allow EPA to reduce the proposed penalty amount to $120,000, based on Complainant's review of Respondents' provided financial information. On July 15, 2011, the Presiding Officer granted Complainant's Motion to Amend Proposed Penalty to $120,000. [4]

On May 5, 2011, this Court issued an "Order on Complainant's Motion for Partial Accelerated Decision as to the Applicable Regulations and Liability" holding that, as a matter of law, Respondents' handling of waste lamps at the Riverdale facility was governed by the general hazardous waste regulations adopted by Illinois and approved by EPA, "namely the full Subtitle C regulations," and not Illinois's universal waste rule, which Illinois has not yet been authorized to administer and enforce as part of its hazardous waste program. *In re Mercury Vapor Processing Technologies, Inc. et al.*,Docket No. RCRA-05-2010-0015, 2011 ALJ LEXIS 4, 18 (May 5, 2011). The Presiding Officer denied Complainant's motion for accelerated decision as to liability, finding that genuine issues of material fact existed, although "the arguments and evidence presented by Respondents are barely sufficient to satisfy [the accelerated decision] standard." *Id.* at 20. Specifically, the Presiding Officer found that Respondents "have

[4] As a result, Respondents were not obligated to file a new amended Answer. The Complaint remained in force, with the proposed revised penalty figure substituted for the proposed penalty in the Complaint.

essentially raised the affirmative defense of lack of fair notice" which "Complainant must address at an evidentiary hearing or in post-hearing briefs." *Id.* at 19-20.

On July 14, 2011, the Presiding Officer issued "Orders on Respondents' Motion to Dismiss with Prejudice for Lack of Fair Notice and Convoluted Regulations and Complainant's Motion to Strike," in which this Court deferred ruling as to whether EPA failed to provide fair notice that the full Subtitle C regulations, as opposed to Illinois's unauthorized universal waste rule, applied to Respondents' operations until after an evidentiary hearing was held in this matter. *In re Mercury Vapor Processing Technologies, Inc. et al.,* 2011 EPA ALJ LEXIS 15, 14-15 (July 14, 2011).

An evidentiary hearing was held on July 25, 26, and 27, 2011, in Chicago, Illinois. At hearing, EPA presented testimony from four witnesses. EPA's first witness was Mr. Todd Brown, a credentialed enforcement officer and inspector who investigated the facts of this matter, determined that violations had occurred, and recommended to his management that this action be brought seeking the specified relief. Mr. Brown testified to the facts that establish the violations and the appropriateness of the requested relief. Tr. 35-434; 651-657. EPA then presented the testimony of Mr. William Graham, an environmental consultant employed in the private sector who worked for Mr. Kelly, and for one of Mr. Kelly's earlier businesses engaged in the same activities as the Respondents. Mr. Graham testified about communications and conversations with Mr. Kelly, establishing that Mr. Kelly knew and understood that the activities he was engaged in required a RCRA permit. Tr. 474-481. Mr. Graham stopped working for Mr. Kelly when he realized, *inter alia*, that Mr. Kelly and his business were engaged in the storage and treatment of waste lamps without a permit in violation of RCRA. Tr. 445-484. EPA next presented the testimony of Mr. Leonard Worth, an owner of an Illinois waste lamp recycling

facility with a RCRA permit. Mr. Worth gave testimony regarding the cost his company, Fluorecycle, Inc., incurred in obtaining its RCRA permit, as well as the annual cost of maintaining RCRA compliance. Tr. 499-544. Finally, EPA presented the testimony of a financial expert, Mr. Mark Ewen, who testified about Mr. Kelly's ability to pay the proposed penalty. Mr. Ewen testified that it appeared that Mr. Kelly had presented to EPA, at best, an incomplete picture of his personal finances. Specifically, Mr. Ewen was troubled by the fact that Mr. Kelly and his businesses appeared to have bulk-filed personal and business tax returns for numerous years, and only after EPA requested copies of the returns from Mr. Kelly. Mr. Ewen pointed out numerous discrepancies between the filed returns and other financial information provided by Mr. Kelly that strongly suggested Mr. Kelly was not reporting all of his income. Finally, Mr. Ewen was troubled by the fact that Mr. Kelly produced specific financial information only when it was uncovered and specifically requested by EPA. Tr. 675-756.

Mr. Kelly presented three witnesses on behalf of Respondents. First, Mr. Kelly (a federal felon convicted of mail fraud, tax evasion, and racketeering for bribing a government official) testified on his own behalf and on behalf of MVPT. Tr. 603-603; CEX-18, CEX-19, CEX-20, CEX-21.[5] Boiled down to its essence, Mr. Kelly presented largely irrelevant, self-serving testimony that he believed he was complying with Illinois's universal waste regulations (which, in fact, he was not) and that EPA did not provide fair notice that Illinois had not been authorized by EPA to implement those regulations. He attempted to claim that he did not know that he was subject to the EPA-authorized portions of the Illinois's RCRA program, which required that Respondents have a RCRA permit for the storage and treatment of the hazardous waste that they managed at their facility. Tr. 544-611. Mr. Kelly next called an EPA employee,

[5] The Court can take judicial notice of the content of these federal court records regarding the criminal proceedings against Mr. Kelly. CEX-18-22.

Mr. Gary Westefer, who presented testimony regarding the status of Illinois's authorized RCRA program. Tr. 624-651. Respondents' final witness was Mary Allen, the Recycling and Education Director of the Solid Waste Agency of Northern Cook County. Ms. Allen testified that she visited the Riverdale facility on September 5, 2007. During her testimony, Ms. Allen was asked by Mr. Kelly to look at photographs that were part of the report prepared by EPA from its October 30, 2007 inspection of the Riverdale facility. The substance of Ms. Allen's testimony was that she did not recall or did not remember seeing the facility in the conditions depicted in the photographs contained in the inspection report. Tr. 611-624. Ms. Allen's testimony is of little, or no, probative value. The fact that Ms. Allen does not recall or remember seeing conditions as depicted in photographs on a different day from EPA's inspection, is different from her testifying that the conditions she observed were different from the conditions depicted in EPA's report.

III. RELEVANT STATUTORY AND REGULATORY BACKGROUND

A. RCRA Subtitle C and its implementing regulations

RCRA is a comprehensive environmental statute that authorizes EPA to regulate hazardous wastes from cradle to grave, in accordance with the safeguards and waste management procedures of Subtitle C, 42 U.S.C. §§ 6921-6939. *See, e.g., Chicago v. Envtl. Defense Fund,* 511 U.S. 328, 331 (1994); *In re Mercury Vapor Processing Technologies, Inc. et al.,* Docket No. RCRA-05-2010-0015, 2011 EPA ALJ LEXIS 4 at 7-8 (May 5, 2011); Tr. 16-19. The standards established by EPA to regulate hazardous wastes are found at 40 C.F.R. Parts 260 through 279, and contain requirements for the generation, storage, treatment, transportation, and disposal of hazardous wastes. Section 3005(a) of RCRA, 42 U.S.C. § 6925(a), and its implementing regulations at 40 C.F.R. Part 270, require each person owning or operating a facility for the

treatment, storage, or disposal of hazardous waste to obtain a RCRA permit for its operation.[6] Tr. 51. Section 3008(a) of RCRA, 42 U.S.C. § 6928(a), authorizes EPA to assess a civil penalty

[6] An exception to the general rule that each person owning or operating a facility for the treatment, storage or disposal of hazardous waste must have a RCRA permit is codified at 40 C.F.R. Part 273. Part 273 codifies the federal universal waste rule and contains streamlined hazardous waste management requirements for collecting and managing certain widely generated hazardous wastes, known as "universal wastes." The following were initially designated as universal wastes under the rule: hazardous waste batteries; hazardous waste pesticides that are either recalled or collected in waste pesticide collection programs; and hazardous waste thermostats. 60 Fed. Reg. 25492, 25503 (May 11, 1995). Effective on January 6, 2000, hazardous waste lamps were added to the federal universal waste rule. 64 Fed. Reg. 36466 (January 6, 2000). Effective on August 5, 2005, the category of universal wastes consisting of hazardous waste thermostats was expanded to include other types of spent mercury-containing equipment. 70 Fed. Reg. 45508 (Aug. 5, 2005). The federal universal waste rule was promulgated to encourage resource conservation while ensuring adequate protection of human health and the environment, to improve implementation of the Subtitle C regulatory program, and to provide incentives for individuals and organizations to collect the unregulated portions of these universal waste streams and manage them using the same systems developed for the regulated portion, thus removing them from the municipal waste stream. 60 Fed. Reg. 25492, 25501 (May 11, 1995); Tr. 213-214; *See also,* CEX-44-03102; Tr. 219 (discussing EPA training module, "Introduction to Universal Waste," summarizing the goals of the universal waste rule).

The universal waste rule imposes less stringent standards than those governing the management of other types of hazardous waste under the full Subtitle C regulations, and applies only to "transporters" and "handlers" of universal waste. 64 Fed. Reg. 36466, 36468 (January 6, 2000); *See In re Mercury Vapor Processing Technologies, Inc. et al.*, 2011 ALJ LEXIS 4, 8-10 (May 5, 2011). A universal waste handler is defined as:

> (1) A generator . . . of universal waste; or
> (2) The owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal handler, to a destination facility, or to a foreign destination.

40 C.F.R. § 273.9. The definition goes on to state that a universal waste handler does *not* mean "a person who treats . . . disposes of, or recycles universal waste." *Id.* A generator is defined as "any person, by site, whose act or process produces hazardous waste . . . or whose act first causes a hazardous waste to become subject to regulation." *Id.* A destination facility is "a facility that treats, disposes of, or recycles a particular category of universal waste . . ." and also lists certain exceptions. *Id.* Destination facilities are subject to the full requirements of RCRA Subtitle C, including the requirement to obtain a RCRA Subtitle C permit for treatment, storage, and disposal activities. 40 C.F.R. § 273.60.

Universal waste handlers who generate or temporarily hold items designated as universal waste are exempt from RCRA permitting and certain requirements that would otherwise apply to hazardous waste management, and instead are subject to the requirements of 40 C.F.R. Part 273, which include, among other things, streamlined standards for storing universal waste, labeling and marking waste or containers, preparing and sending shipments of universal wastes off-site, employee training, and response to releases. 64 Fed. Reg. at 36468.

In the final rule adding hazardous waste lamps to the universal waste rule, EPA cautioned that universal waste handlers should not treat universal waste because handlers are not subject to the full Subtitle C management standards. 64 Fed. Reg. at 36477. EPA emphasized its concern with the treatment of mercury-containing lamps by crushing, stating that:

> The prohibition against treatment includes a prohibition of crushing of lamps. EPA is particularly concerned that uncontrolled crushing of universal waste lamps in containers meeting only the general performance standards of the universal waste rule would not sufficiently protect human health and the environment. As stated earlier, the prevention of mercury emissions during

and issue orders requiring compliance immediately or within a specified time period for violations of any requirement of RCRA Subtitle C and its implementing regulations.

B. Applicability of federal RCRA regulations in authorized states

RCRA allows a state to apply for EPA authorization of the state's hazardous waste program, and for revisions to the program. 42 U.S.C. § 6926(b). A state authorized hazardous waste program consists of state statutes or regulations authorized by EPA. Following its authorization of a state's regulatory program, EPA enforces the authorized state regulations in lieu of the federal regulations within that state. *See* 42 U.S.C. § 6926(a); Tr. 50-51. Among other things, to become authorized, a state hazardous waste program must be as stringent as the federal Subtitle C program established by EPA, must be consistent with the federal and state programs applicable in other states, and must provide for adequate enforcement of compliance with the requirements of RCRA. *Id.*; *See, e.g., Florida Power & Light Co. v. EPA*, 145 F.3d 1414, 1416-17 (D.C. Cir. 1998). Under RCRA, states must seek authorization of programs and program revisions in accordance with the procedures outlined in 40 C.F.R. Part 271. When EPA authorizes a state program or program revision, such authorization is published in the Federal Register and is codified at 40 C.F.R. Part 272. A state program and program revisions become effective when final approval is published in the Federal Register. 40 C.F.R. § 272.21(b)(4)(iii);

> collection and transport is one of the principal reasons that the Agency selected the universal waste approach. Allowing uncontrolled crushing would be inconsistent with this goal.

Id. EPA also stated its concern with respect to mercury from lamps in solid waste landfills:

> Studies reveal that significant threats of mercury releases from managing spent lamps result from incineration and from breakage during storage and transport. In addition, data available to the Agency show that mercury can be found in municipal landfill leachate, and EPA remains concerned that landfill releases may pose threats over the long term. For these reasons, the Agency has concluded that some management controls are essential for these wastes.

64 Fed. Reg. at 36470; Tr. 216-217.

Tr. 538. "Thus, a prerequisite for EPA's authority to enforce state hazardous waste regulations is its approval of those regulations, at which time the regulations become the operative requirements of those aspects of RCRA for which the state program is authorized and EPA may enforce the state regulations as requirements of RCRA pursuant to Section 3008(a), 42 U.S.C. § 6928(a)." *Mercury Vapor Processing Technologies, Inc. et al.*, Docket No. RCRA-05-2010-0015, 2011 EPA ALJ LEXIS 4, 18 (May 5, 2011).

The Hazardous and Solid Waste Amendments of 1984 (HSWA) made changes to the applicability of certain federally promulgated regulations in authorized states. *See* Hazardous Waste Management System; Final Codification Rule, 50 Fed. Reg. 28702, 28729 (July 15, 1985). The preamble to the universal waste rule compares the differences in applicability of federal requirements promulgated pursuant to HSWA to those promulgated under pre-HSWA RCRA statutory authorities. *See* 60 Fed. Reg. 25492, 25536 (May 11, 1995).

Prior to the enactment of HSWA, a state with final RCRA authorization administered its hazardous waste program in lieu of the federal program in that state. EPA retained authority to enforce the authorized state regulations under RCRA Section 3008, 42 U.S.C. § 6928. New federal RCRA requirements did not take effect in an authorized state, *i.e.*, were not enforceable by EPA within the state, until the state adopted the equivalent requirements under state law and was authorized by EPA for the new requirements. In contrast, under RCRA Section 3006(g), 42 U.S.C. § 6926(g), which was added by HSWA, new requirements and prohibitions imposed under HSWA authority take effect as part of the RCRA program in authorized states, and are enforceable by EPA as soon they become federal law. While the states must still adopt HSWA-related provisions as state law to retain final authorization, EPA implements the HSWA provisions in authorized states until the states do so. Federal RCRA regulations that are

promulgated after HSWA's passage, but which are promulgated pursuant to pre-HSWA RCRA authorities, do not take effect as part of the Subtitle C program in authorized states until the state adopts and becomes authorized by EPA for the state counterpart to such regulations.[7] Authorized states are required to modify their programs only when the new requirements and prohibitions promulgated by EPA are more stringent or broader than existing federal standards. 60 Fed. Reg. at 25536; *See In re Mercury Vapor Processing Technologies, Inc. et al.*, 2011 ALJ LEXIS 4, 10 (May 5, 2011).

C. Illinois's authorized Subtitle C hazardous waste program

EPA granted Illinois final authorization to administer a Subtitle C program effective January 31, 1986. 51 Fed. Reg. 3778 (Jan. 31, 1986); 40 C.F.R. § 272.701. EPA authorized revisions to the originally approved program effective March 5, 1988, 53 Fed. Reg. 126 (January 5, 1998); April 30, 1990, 55 Fed. Reg. 7320 (March 1, 1990); June 3, 1991, 56 Fed. Reg. 13595 (April 3, 1991); August 15, 1994, 59 Fed. Reg. 30525 (June 14, 1994); May 14, 1996, 61 Fed. Reg. 10684 (March 15, 1996); and on October 4, 1996, 61 Fed. Reg. 40520 (August 5, 1996).[8] The last final authorization of *any* revisions to the Illinois Subtitle C program became effective on October 4, 1996. 61 Fed. Reg. 40520 (August 5, 1996); Tr. 539. Subsequent to the final authorization for revisions effective on October 4, 1996, there has been no federal authorization of any Illinois hazardous waste program provisions except for a bulk interim authorization of

[7] The federal universal waste rule was not promulgated pursuant to HSWA. 60 Fed. Reg. 25492 at 25536; Tr. 49-50. Thus, the universal waste rule does not take effect in an authorized state until the state adopts equivalent requirements and is authorized by EPA for those requirements. *Id.* Also, because the universal waste rule is less stringent than the existing RCRA Subtitle C requirements, authorized states are not required to adopt the requirements of the universal waste rule. *Id.;* Tr. 50.

[8] 40 C.F.R. § 272.701 has not yet been amended to list the authorized revisions to Illinois's program published in the following Federal Register notices effective on: August 15, 1994, 59 Fed. Reg. 30525 (June 14, 1994); May 14, 1996, 61 Fed. Reg. 10684 (March 15, 1996); and on October 4, 1996, 61 Fed. Reg. 40520 (August 5, 1996).

twenty-five states' (including Illinois) Corrective Action Management Unit (CAMU) regulations.[9] 67 Fed. Reg. 38418 (June 4, 2002); Tr. 539. The authorized Illinois hazardous waste program provides that no person may conduct any hazardous waste storage, treatment, or disposal operations without a RCRA permit for the hazardous waste management facility.[10] 35 IAC § 703.121(a)(1); Tr. 61.

The Presiding Officer has previously ruled that the full RCRA Subtitle C hazardous waste regulations adopted by Illinois and authorized by EPA, and not the unauthorized Illinois universal waste rule, apply in this matter. *See In re Mercury Vapor Processing Technologies, Inc. et al.*, 2011 ALJ LEXIS 4, 18 (May 5, 2011); Tr. 29, 51. However, the Presiding Officer inquired as to whether certain provisions of the IAC, which purport to exempt universal wastes from full Subtitle C requirements, have been authorized by EPA as part of the Illinois base Subtitle C hazardous waste program. Tr. 30-31. The answer is that Illinois has not been authorized for the universal waste rule or any of its implementing regulations. Illinois did not amend its hazardous waste program to add waste lamps as a category of universal waste until 2000, which is well after the last listed update to Illinois's authorized program at 40 C.F.R. Part 272.700, and after the last EPA final authorization of any program revisions to the RCRA

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[9] EPA has not authorized any Illinois hazardous waste program revisions since 1996 due to concerns about Illinois's program, such as audit laws, a proportionate share liability rule, and other general provisions of Illinois law. Tr. 634-636.

[10] Illinois adopted a version of the universal waste rule at 35 IAC Part 733 and, similar to the federal universal waste rule, its purpose is to serve as an exception to Illinois' general rule that each person owning or operating a facility for the treatment, storage or disposal of hazardous waste must have a RCRA permit. The Illinois universal waste regulations are similar to the federal universal waste rule in many respects, except significantly, the Illinois regulations allow the crushing of mercury-containing lamps by handlers and transporters at the site of generation under certain conditions. 35 IAC §§ 733.133(d)(3) and 733.151(b) ; Tr. 242-243.

Subtitle C program. EPA has never published a final rule authorizing Illinois for provisions relating to managing hazardous waste as universal waste in the Federal Register. Tr. 538-539.

The Presiding Officer asked whether 35 IAC §§ 721.109 and 703.123(h) have been authorized by EPA. These provisions exempt universal waste handlers and transporters from the RCRA permit requirements under 35 IAC Part 703, and instead subject them to regulation under 35 IAC Part 733.[11] Because the universal waste rule is promulgated pursuant to pre-HSWA statutory authorities and is less stringent than the base Subtitle C program, Illinois must become authorized by EPA for any regulations relating to managing hazardous waste as universal waste, in accordance with the procedures for revision of state programs at 40 C.F.R. Part 271 and Section 3009 of RCRA, 42 U.S.C. § 6929. Revision of a state program includes, *inter alia*, substantive standards (including consistency with federal rules), memoranda of agreements, authorization of enforcement, and public comment periods. *See* 40 C.F.R. § 271.21. Program revisions become effective when final notice is published in the Federal Register. 40 C.F.R. § 272.21(b)(4)(iii); Tr. 538. The authorized Illinois program and revisions are then codified at 40 C.F.R. § 272.700; however, 40 C.F.R. § 272.700(1)(a)(1)(i) has not been updated since 1988, and provides, in pertinent part:

> (1) The following Illinois regulations and statutes are incorporated by reference with the approval of the Director of the Federal Register . . . as part of the hazardous waste management program under Subtitle C of RCRA . . .
> (i) . . . Part 703, Section 703.100-703.126 . . .Part 709, Sections 709.102-105, 709.201 . . . Part 721, Sections 721.101-721.133. . . Illinois Administrative Code, January 1, 1985, amended January 1, 1986, January 1, 1987, and January 1, 1988.

40 C.F.R. § 272.70(1)(a)(1)(i). The authorized Illinois program provisions were codified at 40 C.F.R. § 272.701(a)(1)(i) as of the dates that are referenced at the end of the section, which is January 1, 1985, amended January 1, 1986, January 1, 1987 and January 1, 1988, which is before

[11] 35 IAC §§ 701.109 and 703.123(h) are equivalent in all material respects to 40 C.F.R. § 261.9 and 40 C.F.R. § 270.1(c)(2)(D), respectively.

35 IAC §§ 721.109 and 703.123(h) were adopted in their current form by Illinois, as explained below. The published range at 40 C.F.R. § 272.701(a)(1)(i) only includes those regulations which were authorized as of January 1, 1988.

35 IAC § 721.109 has never been authorized by EPA in the Federal Register. In fact, 35 IAC § 721.109 was first adopted by Illinois on August 16, 1996, which is *after* the most recent EPA authorization of Illinois program revisions published on August 5, 1996 and after January 1, 1988, which is the most recent date listed at the end 40 C.F.R. § 272.701(a)(1)(i). *See* 20 Ill. Reg. 10963 (Aug. 16, 1996). 35 IAC § 721.109 is not listed in the August 5, 1996 Federal Register notice, even though other sections of 35 IAC Part 721 were specifically authorized in that notice. *See* 61 Fed. Reg. 40510 (August 5, 1996). Additionally, Illinois amended the unauthorized Section 721.109 to include universal waste lamps as a category of waste subject to regulation under the Illinois universal waste regulations at Part 733 on July 7, 2000. 24 Ill. Reg. 9481. EPA has never authorized 35 IAC § 721.109 as part of the hazardous waste program in Illinois and, therefore, it does not apply to Respondents in this matter.

35 IAC § 703.123 was authorized as part of the initial authorization of Illinois's base Subtitle C program at 51 Fed. Reg. 3778 (Jan. 31, 1986). Illinois adopted the exemption for universal waste handlers and transporters from permitting requirements in Section 703.123(h) in 2000. 24 Ill. Reg. 9765 (Jul. 7, 2000); Tr. 539. Section 703.123(h) has never been authorized by EPA, because the most recent EPA final authorization of any Illinois provision occurred in 1996 at 61 Fed. Reg. 40510 (August 5, 1996). Tr. 539-540; Tr. 73. If states such as Illinois could simply insert all program revisions in between previously authorized provisions listed at Section 272.701(a)(1)(i) or as amendments to already authorized regulatory provisions, e.g., adding 35 IAC § 721.123(h) to 35 IAC § 721.123, it would functionally void the authorization process

required by Section 3009 of RCRA, 42 U.S.C. § 6929, and 40 C.F.R. Part 271, including the public comment period and other crucial steps that protect the integrity of the RCRA program. Thus, Section 703.123(h) has not been authorized by EPA, and it does not apply to Respondents in this matter.[12]

IV. STANDARD OF REVIEW AND BURDENS OF PROOF

In an administrative action initiated under the Consolidated Rules, the standard of proof is the "preponderance of the evidence." 40 C.F.R. § 22.24(b). Under 40 C.F.R. § 22.24(a), the complainant bears "the burdens of presentation and persuasion that the violation[s] occurred as set forth in the complaint and that the relief sought is appropriate." As the Environmental Appeals Board ("EAB" or "the Board") has observed, the complainant has the burden of going forward with and providing evidence that the violation occurred. *In re Sandoz, Inc.*, Docket No. RCRA-84-54-R, Appeal No. 85-7; 2 E.A.D. 324, 1987 EPA App. LEXIS 7, 6-7 (Final Decision, February 27, 1987). Following EPA's presentation of its prima facie case, Respondents have the burden of presenting and proving any defenses to the allegations set forth in the Complaint and any response or evidence with respect to the appropriate relief, and have the burdens of presentation and persuasion for any affirmative defenses. 40 C.F.R. § 22.24.

The issues, therefore, are whether the violations alleged by EPA occurred and are supported by a preponderance of the evidence, and whether the penalty and compliance order requested by EPA are supported by a preponderance of the evidence or whether some other relief is warranted. As one court explained:

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[12] This discussion confirms that Illinois is not authorized for any regulations relating to the universal waste rule. As discussed in the affirmative defenses section of this Brief, *infra*, there are no contradictions among the different sets of regulations with respect to Respondents' operations at the Riverdale facility. Under the federal universal waste regulations, Illinois's unauthorized universal waste regulations, and Illinois's authorized Subtitle C program, Respondents are required to have a RCRA permit for the off-site storage and treatment of the waste lamps they transported to the Riverdale facility.

> "Preponderance of evidence" is the degree of relevant evidence which a reasonable mind, considering the record as a whole, might accept as sufficient to support a conclusion that the matter asserted is more likely to be true than not true.

In re Harmon Electronics, Inc., Docket No. RCRA-VII-91-H-0037, at 4-5 (Dec. 12, 1994), *reversed on other grounds, Harmon Industries, Inc. v. Carol M. Browner, et al.*, 19 F. Supp. 2d 988 (1998). It is well settled that "[t]o establish a fact by a preponderance of the evidence means to prove that the fact is more likely true than not true." *Fischi v. Armitage*, 128 F.3d 50, 55 (2d Cir. 1997); *accord, In re Morton L. Friedman & Schmitt Construction Co.*, 11 E.A.D. 302, 314 (EAB 2004).

Thus, EPA has the burdens of presentation and persuasion establishing that Respondents conducted a hazardous waste storage and treatment operation without a RCRA permit for the facility, and that the penalty of $120,000 and the issuance of the Compliance Order are appropriate. 40 C.F.R. § 22.24; *In Re New Waterbury, Ltd.*, Docket No. TSCA-I-88-1069, TSCA Appeal No. 93-2, EAB slip op. (October 20, 1994). For EPA, the burden of presentation and persuasion for the penalty and Compliance Order are identical to that for establishing liability. 40 C.F.R. § 22.24(a). With respect to the proposed penalty, "an 'appropriate' penalty is one which reflects a consideration of each factor the governing statute requires to be considered, and which is supported by an analysis of those factors." *In re B.J. Carney Industries, Inc.*, 7 E.A.D. 171, 217 (EAB 1997) (citations omitted*), appeal dismissed as moot*, 200 F.3d 1222 (9th Cir. 2000). The complainant does not bear the "burden of proof with respect to any individual factor; rather the burden of proof goes to the [complainant's] consideration of all the factors." *In re FRM Chem, Inc.*, FIFRA Appeal No. 05-01, slip op. at 17 (EAB, June 13, 2006), 12 E.A.D. ____ (quoting *In re New Waterbury, Ltd.*, 5 E.A.D. 529, 539 (EAB 1994)); *accord, In re CDT Landfill Corp.*, 11 E.A.D. 88, 123, n. 66 (EAB 2003). Once the complainant

establishes a prima facie case of the appropriateness of the relief sought, "respondent shall have the burden of presenting any . . . response or evidence with respect to the appropriate relief." 40 C.F.R. § 22.24(a). *See In re New Waterbury, Ltd.*, 5 E.A.D. 529, 538 (EAB 1994) (extensively discussing burdens of complaint and respondent with regard to the penalty sought).

The record establishes that EPA has met its burdens of proving the violations alleged in the Complaint, and proves that assessment of a penalty of $120,000 against Respondents and that issuance of the Compliance Order to Respondents are appropriate. Moreover, the record demonstrates that Respondents have not proved any defenses or affirmative defenses, and no evidence presented by Respondents supports a reduction in the penalty amount or a change in the Compliance Order requested by EPA. Accordingly, this Court should hold Respondents liable for operating a hazardous storage and treatment facility without a RCRA permit in violation of 35 IAC § 703.121(a)(1), and should assess a civil penalty in the amount of $120,000 against, and issue a Compliance Order to, Respondents as requested by EPA.

V. ARGUMENT

A. Liability

The record confirms the following facts. Respondents collected waste lamps from third parties, and transported the waste lamps to the Riverdale facility. Respondents then stored and crushed the waste lamps at Riverdale without a RCRA permit, and arranged for the disposal of the crushed glass and metal as solid waste to landfills. Respondents' storage and treatment of the waste lamps at Riverdale without a RCRA permit is a violation of 35 IAC § 703.121(a)(1), which provides that no person may conduct any hazardous waste storage, treatment, or disposal operation without a RCRA permit for the hazard waste management facility.

Mr. Todd Brown testified for EPA in support of its prima facie liability case.[13] Mr. Brown testified that EPA became aware of Respondents' operations when EPA received a notice of intent to sue ("Notice") from the Village of Riverdale, Illinois, stating that it intended to file a citizens suit against MVPT, among others, for operating as "an unlicensed universal waste storage and disposal facility." CEX-29-02567; Tr. 74. Attached to the Notice were pictures of the Riverdale facility, taken by inspectors of the Village of Riverdale on September 10, 2007 and October 4, 2007. CEX-29-02576-02592. The photographs show piles of broken waste lamps, a large roll-off dumpster filled with broken lamps, and waste lamp fragments strewn throughout the building. *Id.* Mr. Brown also testified that an important part of EPA's case was MVPT's responses to three information requests that EPA issued pursuant to Section 3007 of RCRA, 42 U.S.C. § 6927, on the following dates: November 5, 2007 (CEX-3), May 20, 2008 (CEX-5), and October 3, 2008 (CEX-7). Tr. 78-82. MVPT sent responses to the information requests that were dated as follows: November 26, 2007 ("First Response") (CEX-4), June 3, 2008 ("Second Response") (CEX-6), and October 20, 2008 ("Third Response") (CEX-8). *Id.*

The following discussion shows that EPA has proven every element of its prima facie case establishing that Respondents conducted a hazardous waste storage and treatment operation without a RCRA permit for the Riverdale hazardous waste management facility.

1. Respondents MVPT and Laurence Kelly are each a "person" under the EPA-authorized Illinois Subtitle C program

Respondents MVPT and Laurence Kelly are each a "person" under the EPA-authorized Illinois Subtitle C program. Under 35 IAC § 702.110, "person" means "any individual,

[13] Mr. Brown has worked for eight years as an environmental scientist and credentialed enforcement officer for the Land and Chemicals Division, RCRA Branch, Compliance Section at EPA Region 5. Tr. 36, 39. As a credentialed enforcement officer and environmental scientist, Mr. Brown conducts inspections and develops enforcement actions in response to violations that are discovered during inspections. Tr. 39. Mr. Brown developed the case against Respondents. Tr. 74. Mr. Brown testified as to his inspection of the Riverdale facility, general development of the case through the issuance of information requests, his re-inspection of the Riverdale facility, the calculation of the proposed penalty, and why issuance of a Compliance Order is appropriate in this matter.

partnership . . . firm, company, corporation . . . or any other legal entity, or their legal representative, agency or assigns." Respondents admit that they are each a "person" as defined by 35 IAC § 702.110. CEX-31-02623, ¶¶ 15-16. Mr. Kelly stipulated that he is a person residing in Illinois and that MVPT was a corporation organized under the laws of Illinois in the Joint Stipulated Facts and Exhibits filed in this matter on June 28, 2011 ("Joint Stipulations"). MVPT was incorporated on October 16, 2003 and was dissolved under involuntary dissolution by Illinois on March 12, 2010. CEX-22-02540-02541. As a corporation, MVPT meets the definition of "person" under 35 IAC § 702.110. Larry Kelly is an individual residing in Illinois and therefore is also a "person" under 35 IAC § 702.110.

2. Respondents did not have a RCRA permit to conduct a hazardous waste storage and treatment operation at the Riverdale facility

Respondents admit that they did not apply for a permit, and that they did not have a permit to store or treat hazardous waste at the Riverdale facility. CEX-30-02600-02601, CEX-31-02631-02636, ¶¶ 52-63; Tr. 133. Respondents also admit that they have not applied for interim status, and that they do not have interim status to store or treat hazardous waste at the Riverdale facility.[14] *Id.* Additionally, Todd Brown testified as to his investigation into whether Respondents had a RCRA permit:

> A: Well, I began by searching EPA's database RCRA info., which is an internal database that is the National Database for the RCRA Program. I searched using the EPA ID number that had previously been assigned to the facility in Riverdale, and found that no permit had been issued or applied for. During the inspection I asked - - briefly asked Mr. Kelly about why he didn't think he needed a permit. At the time, he didn't want to discuss it. In the First Information Request we asked Mercury Vapor Processing Technologies, in question two in one of the sub-questions when we asked who own [sic] the mobile treatment unit, to provide any permits for its operation. I've also read the Answer, the Amended Answer to the Complaint, a Stipulation document from the Respondents, in which they admit to

[14] Interim status applies to facilities that were in existence before RCRA was enacted. Tr. 133-134.

> not having applied for or obtained a permit for either storage or treatment of hazardous waste, and that they did not have interim status either.

Tr. 130. EPA does not have a RCRA permit on file for the Riverdale facility. Tr. 131. EPA also requested that Respondents provide any RCRA permits that they received, and they provided none. CEX-3-00272, CEX-4-00312; Tr. 132.

Instead of a RCRA permit, Respondents provided correspondence between Mr. Kelly and the IEPA, which Respondents have referred throughout this matter as their "authorization" and "approval" to operate their "mobile volume reduction equipment."[15] *See, e.g.*, CEX-31-02618-02652. Specifically, Respondents provided a letter dated April 9, 1997 to Mr. Kelly, as President of a company called S.L.R. Technologies, Inc., from the Division of Air Pollution Control of the IEPA. CEX-4-00312; Tr. 132. This letter is not a permit. Rather, the letter addresses whether, under a specific understanding of hypothetical circumstances, the "mobile volume reduction unit" required a Clean Air Act construction permit. This letter is not relevant to whether Respondents were subject to RCRA regulations and needed a RCRA permit.[16]

Respondents also provided, as part of their prehearing exchange, a letter dated October 16, 2000, from IEPA's Manager of the Permit Section for the Bureau of Land (CEX-72-04216) as support for their position that IEPA authorized their actions. The opposite is true. First, this letter is not a permit. Second, and more telling, the letter states that a facility that collects and crushes lamps from off-site generators at a location other than the site of generation would be

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[15] It should be noted that what Respondents currently call the "mobile volume reduction unit" has also been called the "mobile processing unit" and "mobile recycling unit" at different stages of EPA's investigation, in an apparent attempt to appear in compliance with regulations. As discussed *infra*, the name of the unit is irrelevant, because its process for crushing lamps meets the definition of treatment under 35 IAC § 702.110.

[16] In the letter, IEPA states that "[i]t is our understanding that the equipment is truck mounted and the truck will go from one place to another to crush the light bulbs and you may be at one location for about half a day to one day before going to the next location." *Id.* While this may have been Mr. Kelly's practice in 1997, it is not what Respondents were doing in this matter, as discussed *infra*.

fully regulated.[17] Tr. 349-352. Finally, the letter is addressed to Spent Lamp Recycling Technologies,[18] and is premised on, among other things, IEPA's belief that components of crushed lamps were actually sent to recyclers or used as production feedstock.[19] Contrary to IEPA's instruction, MVPT was collecting lamps from third-party generators and transporting them to the Riverdale facility for crushing, and therefore was not crushing at the "site of generation." [20] Mr. Kelly admitted crushing lamps at the Riverdale facility to EPA during the October 2007 inspection, and MVPT admits this in its First Response. CEX-1-00004; 4-00314.

In short, the record shows that Respondents did not have a RCRA permit for storage and treatment of waste lamps at Riverdale. The record also establishes that IEPA notified Mr. Kelly, and one of his earlier businesses, that a RCRA permit was required for the activities that Respondents undertook at Riverdale.

3. Respondents treated waste lamps at the Riverdale facility

The trial record established that Respondents "treated" waste lamps at the Riverdale facility. Under 35 IAC § 702.110, "treatment" means

> any method, technique, process, including neutralization, designed to change the physical, chemical, or biological character or composition of any "hazardous waste" so as to neutralize such wastes, or so as to recover energy or material resources from the waste, or so as to render such wastes non-hazardous or less

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[17] The letter expressly states:

> Please note that the Universal Waste Rule requires that lamps must be crushed at the site of generation. Therefore, a facility that was collecting and crushing lamps from off-site generators would be fully regulated as indicated in the April 18, 2000 letter. Also note that the destination facility, where component separation occurs, is also fully regulated.

CEX-72-04216.

[18] Respondents admit that "Spent Lamp Recycling Technologies" is a separate entity, and was dissolved prior to MVPT's incorporation. CEX-6-02049.

[19] This is not the type of operation that Respondents were actually conducting. To the contrary, it is undisputed that Respondents sent tons of crushed glass and metal caps to solid waste landfills. CEX-4-00286.

[20] The meaning of "site of generation" is explained in detail below.

hazardous; safer to transport, store or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

Respondents have admitted throughout EPA's investigation of this matter that they crushed lamps at the Riverdale facility. Although they have attempted to use different terms to describe their crushing operations, it makes no difference because under every scenario, Respondents' activities at the Riverdale facility meet the regulatory definition of treatment under Illinois's authorized hazardous waste program, as explained below.

i. Treatment operations conducted at the Riverdale facility

The record is replete with evidence establishing that "treatment", as defined at 35 IAC § 702.110, was taking place at the Riverdale facility. On October 30, 2007, Mr. Brown conducted an inspection of the Riverdale facility. CEX-1-00001-00053; Tr. 78. The Riverdale facility consists of an outside area and a single story building. CEX-1-00002-00004. Inside the building at the Riverdale facility, Mr. Brown observed at least 33 open containers of waste lamps. CEX-1-00003. Numerous additional closed containers of waste lamps were also present. CEX-1-00013; 00014; 00015; 00022; 00024; 00026. Some of the containers were unlabeled, and some were marked "Regulated Universal Waste Destined for Recycling." CEX-1-00026-00027. There were containers with broken waste lamps inside the building at the facility. CEX-1-00013-00025; Tr. 140. There were three semi-trailers containing intact waste lamps parked in the outside area of the facility. CEX-1-00011-12, 00043-50; Tr. 140. Two uncovered roll-off boxes containing crushed glass and metal ends from broken waste lamps were also located outside the building. CEX-1-0007-00010, 00040-00042. Mr. Kelly told Mr. Brown that Respondents used equipment to crush the waste lamps they picked up from customers. CEX-1-00004. Mr. Kelly further explained that some waste lamps were stored at the Riverdale facility prior to being treated at the facility. *Id.* In MVPT's First Response, it stated that it planned to

"immediately process" the intact waste lamps that Mr. Brown saw at the facility during his inspection. CEX-4-00494.

Mr. Brown testified about notes he took during his inspection of the Riverdale facility:

> Q: What would you like to talk about in this document with respect to the need for a permit for the Riverdale facility?
>
> A: Well, on page 4, 0004, is where I write up my interview with Mr. Kelly during the inspection. And he explains how the mobile treatment unit works, and how its [sic] used to remove the mercury from lamps, and how it does so by crushing the glass in the unit and absorbing the mercury in the carbon filters. It states that lamps - - I recorded how he explains that lamps were stored on site for a maximum of ten days prior to being treated in the unit.

Tr. 139-140; CEX-1-00004. MVPT's First Response described its "processing" of waste lamps accumulated at the Riverdale facility as follows: waste lamps are loaded into the processing unit, the "mercury vapor processing unit is fed by hydraulic elevators that introduces [sic] and crushes [sic] spent lamps," and a series of active carbon filters capture the mercury vapor in the form of mercuric sulfide. CEX-4-00285; Tr. 145. Once the process has taken place and "the extraction of mercury vapor has been completed, the now non-hazardous re-usable glass and aluminum by-products are automatically moved to a 6 yard on-board storage area (6,000 lamps)" and are stored for reuse or disposal "depending on the markets." *Id.* MVPT goes on to state that "full roll-offs are then transported under Bill of Lading by Land of Lakes equipment to their special permitted waste landfill. . . ." *Id.* The bills of lading that MVPT provided show that during the time it operated at the Riverdale facility, MVPT processed hundreds of thousands of waste lamps at the Riverdale facility that it picked up from third-party locations. CEX-4-640-02039. Additionally, MVPT also provided shipping records for crushed glass and aluminum ends sent to solid waste landfills. CEX-4-00317-327; Tr. 146. As for the spent carbon that MVPT allegedly recovered from processing waste lamps, it stated that "although permitted into Land of Lakes

[landfill] for the disposal of the non-hazardous spent carbon, we have yet to move the accumulated 200 lbs. to the landfill for disposal." CEX-4-00318; Tr. 146.

As explained below, both MVPT and Larry Kelly treated waste lamps at the Riverdale facility. Throughout the investigation of this matter, Respondents presented EPA with smoke and mirrors, in the form of information and arguments about assumed business names and different related entities in an attempt to avoid liability. The smoke and mirrors have been cleared away, and the record establishes that both Respondents are liable for the hazardous waste storage and treatment operations at Riverdale.

ii. MVPT treated waste lamps at the Riverdale facility

MVPT treated waste lamps at the Riverdale facility. In its First Response, MVPT states that it was the lessee of the Riverdale facility, based on "oral agreements with written contracts to follow." CEX-4-00637. MVPT also stated that it owned the "mobile processing unit" that it used to process waste lamps accumulated at the Riverdale facility. CEX-4-00311; Tr. 146-147. In its Second Response, when directly asked to "describe the relationship between River Shannon Recycling and Mercury Vapor Processing Technologies, Inc.," MVPT responded:

> River Shannon Recycling is a registered assumed name of Mercury Vapor Processing Technologies with the State of Illinois. (Please see attached) River Shannon Recycling *manages the collection and consolidation* of Universal Waste consisting of Lamps Batteries and Ballast under Mercury Vapor Processing Technologies, Inc. In addition, River Shannon Recycling *manages the re-packaging and subsequent delivery* of ballasts, batteries and processed universal waste lamps to our end users.[21]

Emphasis added. CEX-6-02047; Tr. 155. When asked to "describe the relationship between Shannon Lamp Recycling and Mercury Vapor Processing Technologies, Inc.," MVPT responded:

[21] It is important to note that "end users" actually means solid waste landfills. All of the waste lamps that MVPT and/or Larry Kelly picked up from third parties and processed at the Riverdale facility were sent to solid waste landfills, or left on-site at the Riverdale facility. CEX-4-00318; 4-00601.

> Shannon Lamp Recycling (SLR) is a registered assumed name of Mercury Vapor Processing Technologies, Inc. with the State of Illinois. SLR *manages the mobile processing* of Universal Waste destined for recycling.

Emphasis added. CEX-6-02048; Tr. 155-156. Attached to MVPT's Second Response was a "corporation file detail report" from the Illinois Secretary of State website for MVPT dated June 3, 2008. CEX-6-02050. There were three assumed names listed for MVPT as "active": "MercPak," "River Shannon Recycling Technologies," and "S.L.R. Technologies." CEX-6-02050.

In its Third Response, when asked to provide information on if and how the waste lamps that were present during EPA's October 30, 2007 inspection were treated and disposed of, MVPT stated that it "commissioned Shannon Lamp Recycling (SLR)," which it had identified in its Second Response as one of its assumed names, to "perform recycling services using the SLR mobile recycling unit. . . ." CEX-8-02061. MVPT stated that the waste lamps present during EPA's inspection were transported to a "temporary yard space" at "1750 75th Place" and processed using "SLR's personnel and mobile unit to process the Universal Waste," with the glass and metal then being sent to a solid waste landfill. *Id.*; CEX- CEX-8-02062.

Although MVPT claims to operate under various assumed names, MVPT assumes the liability for each business name that it uses to conduct business. Creating an assumed name under which to conduct business, even if properly registered with the state, does not create a new legal entity.[22] Section 4.15 of the Illinois Business Corporation Act, 85 ILCS 4.15, sets forth the requirements for adopting an assumed corporate name and requires a corporation to file with the Secretary of State the true corporate name and the assumed corporate name which it intends to use, among other things. MVPT is the true corporate name and the corporation that was

[22] Although MVPT has not presented evidence showing that it was legally authorized to use all of its various assumed names, it is not relevant to its liability.

organized under Illinois law, and thus is the legal entity with the power to be sued and to incur liabilities. 80 ILCS 3.10(b).

When filing its prehearing exchange, MVPT changed its story regarding its treatment of waste lamps. MVPT included with its prehearing exchange a "Statement Regarding Compliance and Penalty" ("Prehearing Statement"). CEX-63-04107; Tr. 157. In its Prehearing Statement, MVPT claimed that it was only responsible for picking up waste lamps, transporting them to the Riverdale facility, and arranging for the wastes' disposal. *Id.* MVPT stated that it "operated on verbal contract" with Shannon Lamp Recycling, a company previously identified as an assumed name of MVPT, to "volume-reduce" waste lamps:

> MVP/RSR supplied covered containers to our small quantity generator client base for staging their spent lamps. From time to time MVP/RSR upon request would pick-up those containers that were full and drop fresh containers at that location. MVP/RSR would transport those lamps to an accumulation point located in Riverdale, Illinois. MVPT/RSR would contact Shannon Lamp Recycling (SLR) to bring its state authorized mobile volume reduction unit to Riverdale property and volume reduce anywhere between 8,000 and 15,000 lamps. The patented equipment . . . was specifically owned by Laurence C. Kelly who was also a principal of MVP/RSR. Acting as sole proprietor of SLR, Mr. Kelly would safely conduct the volume reduction activities for MVP/RSR.

CEX-63-04107; Tr. 158.[23] Respondents seem to be arguing that MVPT is not liable for treating waste lamps because it "contracted out" those responsibilities to a sole proprietorship that it had previously identified as one of its assumed names. As Mr. Brown testified at hearing:

> A: It appears that at first it was explained to us that Shannon Lamp Recycling was an assumed name of the corporation Mercury Vapor Processing Technologies, and at some point, Mr. Kelly began telling us that Shannon Lamp Recycling was a sole proprietorship.

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[23] Notably, Respondents used yet another term to describe the processing of waste lamps, stating that Respondent Kelly "volume reduced" lamps using "volume reduction" equipment. The term "volume reduce" may be an attempt by the Respondents to claim that they are in compliance with the unauthorized Illinois universal waste regulations at 35 IAC § 733.133(d)(3), which allows large quantity handlers of universal waste lamps to volume reduce lamps *at the site of generation only*, with certain procedures and controls in place. Respondents, however, have admittedly brought waste lamps to the Riverdale facility and "volume reduced" them at that location and, therefore, are not in compliance with the unauthorized Illinois rule.

Tr. 162-163.[24]

While this new position sheds light on Respondents' credibility, it is not relevant as to MVPT's liability with respect to treating waste lamps at the Riverdale facility. Even assuming Respondents' new assertions are true, this scenario is merely a contractual arrangement whereby the facility operator engaged an individual to enter the premises and perform part of the operator's work. MVPT still had control of the premises as lessee, control of the treatment being performed, and authority to decide whether and when to contact Respondent Kelly to perform the crushing activities.[25]

iii. Larry Kelly treated waste lamps at the Riverdale facility

Mr. Kelly is liable for treating wastes at the Riverdale facility both as an operator of MVPT and as an individual who crushed waste lamps at the Riverdale facility. An individual cannot shield himself from liability for operating a hazardous waste facility merely by being an officer or shareholder of a corporation that also operates the facility. *Browning-Ferris Indus., Inc., et al. v. Richard Ter Maat et al.,* 195 F.3d 953, 955 (7th Cir. 1999). "The EAB has affirmed an ALJ's holding that "a corporate officer may be held liable in civil as well as criminal actions, for wrongful acts of the corporation in which he participated." *In re Roger Antikiewicz & Pest Elimination Prods. of Am.,* 8 E.A.D. 218, 230 (EAB 1999); *see also U.S. v. NE Pharma. & Chem. Co., Inc.* 810 F.2d 726 (8th Cir. 1986) (holding that a corporate officer can be individually

[24] "Shannon Lamp Recycling" also refers to a separate corporate entity owned and operated by Mr. Kelly. On November 24, 2010, EPA sent Shannon Lamp Recycling an information request pursuant to RCRA § 3007, and requested that Mr. Kelly provide more information on the company background of Shannon Lamp Recycling and the various names that Mr. Kelly uses to describe the company, such as "SLRT," "SLR," "Shannon Lamps," "Shannon Lamp," and "SLR Technologies, Inc." CEX-40-03012. On December 9, 2010, Mr. Kelly, on behalf of Shannon Lamp Recycling, responded "the names 'SLRT,' 'Shannon Lamp Recycling,' 'SLR,' 'Shannon Lamps,' 'Shannon Lamp,' and 'SLR Technologies, Inc.' all refer, from time to time, to the same entity legally known as S.L.R. Technologies, Inc. with a legal assumed name of Shannon Lamp Recycling." CEX-41-03020.

[25] For a detailed explanation of why both Respondents are liable because they had control over the Riverdale facility, see the section of this Brief discussing why the Riverdale property is a "facility."

liable if s/he was "personally involved in or directly responsible for corporate acts in violation of RCRA"). Mr. Kelly admits he made all of the decisions regarding the handling, transporting, storage, treatment and disposal of the waste lamps taken to and crushed at the Riverdale facility and is, therefore, liable as an operator of MVPT. In MVPT's Second Response, MVPT stated that Mr. Kelly was its vice president, chief operating officer, and health and safety officer, and that Mr. Kelly

> is responsible for training employees in accordance with Mercury Vapor Processing Technologies, Inc.'s Health and Safety program and manual. Mr. Kelly manages the day to day marketing, sales and client relations. Mr. Kelly conducts processing, and manages the care, custody and control of the facility and inventory.

CEX-6-02047; Tr. 155. MVPT also stated that "Laurence C. Kelly established the protocols and managed the day to day activities relating to the recycling of Universal Waste Lamps" and "Laurence Kelly . . . manage[s] the mobile recycling of Universal Waste Lamps destined for recycling." *Id.;* Tr. 156. In the Joint Stipulations, Respondents stipulated that "Mr. Laurence Kelly had day-to-day responsibility for managing spent fluorescent lamps at the property at 13605 S. Halsted St., Riverdale, Illinois." Joint Stipulations ¶ 4. As the person making the decision to process waste lamps, processing the lamps, and generally making all of the day to day decisions regarding the handling, transporting, storage, treatment and disposal of the waste lamps taken to and crushed at the Riverdale facility, Mr. Kelly is liable as an operator of MVPT for treating waste lamps at the Riverdale facility.

Assuming as true Mr. Kelly's claim to be a sole proprietor operating on verbal contract with MVPT to "volume reduce" waste lamps, Mr. Kelly remains individually liable. A sole proprietorship has no legal identity apart from the person who owns it. *Moriarty v. Svec,* 164 F.3d 323, 335 (7th Cir. 1998). An individual operating a sole proprietorship is personally

responsible for the debts of the proprietorship. *Packard Bell Elec. Corp. v. Ets-Hokin,* 509 F.2d 634, 637 (7th Cir. 1975). In addition to Mr. Kelly's admissions that he volume-reduced waste lamps as a sole proprietorship in the Prehearing Statement, Respondents also included statements relating to Mr. Kelly's alleged operation of a sole proprietorship in their Answer. CEX-31-02627; Tr. 158-159. Included as part of Respondents' denial to an allegation in the Complaint, was this response:

> MVP/RSR denies crushing lamps at the Riverdale property. RSR employed a company known as SLR Technologies[26] to volume reduce the spent lamps. Please see Exhibit 7. SLR is and was solely owned by one of MVP/RSR's principals known as Larry Kelly.

CEX-31-02627; Tr. 158-159 (discussing the same response in Respondents' original Answer at CEX-63-04113). Attached to the Respondents' prehearing exchange as Exhibit 7 was a diagram depicting the alleged relationship between MVPT and SLR Technologies. CEX-70-04210; Tr. 159. The diagram explained that MVPT "schedules volume reduction activities" with "SLR" using "SLR's mobile volume reduction unit," and then SLR "conducts volume reduction" at the Riverdale facility. CEX-70-04210; Tr. 160.

Additionally, in Respondents' response to Complainant's Motion to Amend the Complaint, Respondents stated that:

> Laurence C. Kelly, acting as sole proprietor of SLR, operated on verbal contract to volume reduce MVP/RSR's Universal Waste, utilizing his patented technology and authorization to operate issued by the Illinois EPA. Upon request, he would transport the mobile unit from its staging location in Morton Grove, IL to the Riverdale property, mobilize the equipment and proceed to safely volume reduce spent Universal Waste Lamps. Upon completion of that task the equipment

[26] SLR Technologies is not the same name as the sole proprietorship identified in Respondents' Prehearing Statement. In the Prehearing Statement, Respondents identified a company by the name "Shannon Lamp Recycling" which it had also identified as one of MVPT's assumed names, as the sole proprietorship that came to the Riverdale facility to volume reduce lamps. Respondents began referring to the alleged sole proprietorship operated by Mr. Kelly as "SLR Technologies" or "SLR" after filing its prehearing exchange. Notably, Respondents refer to both "SLR Technologies" and "Shannon Lamp Recycling" as "SLR" throughout its various responses to information requests, motions and pleadings in this case.

would be de-mobilized and transported back to its staging location in Morton Grove, Illinois.

CEX-31-02619; Tr. 163. In Respondents' Answer, they admit to the allegations in paragraphs 96-98 of the Complaint, CEX-30-02606, which state the following:

96. By crushing waste lamps at the Riverdale facility, Mr. Larry Kelly changed the waste lamps' physical characteristics so as to reduce their volume.
97. According to MVPT/RSR, Mr. Larry Kelly's crushing process rendered the waste lamps non-hazardous.
98. According to MVPT/RSR, Mr. Larry Kelly's crushing process rendered the waste lamps safer to dispose of.

CEX-30-02606; 31-02645. Respondents include a paragraph after admitting each allegation, which states the following (or something very similar):

> Laurence C. Kelly performed volume reduction of Universal Waste at the Riverdale property, utilizing mobile equipment approved by the Illinois EPA, and in accordance with regulations set forth in 35 IAC 733. TCLP testing of the volume reduced lamps consistently indicated the lamps were not hazardous . . . Laurence C. Kelly denies the Riverdale property was a "facility."

CEX-31-02645; Tr. 164. In the Joint Stipulations, Respondents stipulated to the following:

> From time to time SLR Technologies' equipment, managed by Laurence Kelly, arrived at the Riverdale property at 13605 S. Halsted St. in Riverdale, Illinois, mobilized and engaged in volume reduction of spent fluorescent lamps.

Thus, regardless of whether Mr. Kelly was acting as a sole proprietor or as the operator of MVPT, he is liable for the treatment operations conducted at the Riverdale facility.

iv. Conclusion regarding Respondents' treatment operations

Respondents used processes designed to change the physical and chemical character of the waste lamps so as to neutralize, or recover energy or material resources, or so as to render such wastes non-hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. Over the course of this matter, Respondents have changed the name of their equipment, and what they call the activity that they perform. While

that affects their credibility, it does not change the fact that the equipment's purpose and alleged operation meets the definition of "treatment" under Illinois's hazardous waste program. Respondents admit that they "crushed, "processed," and "volume reduced" waste lamps, all of which are "treatment" under 35 IAC § 702.110. Additionally, Respondents have claimed that their process for "volume reduction" rendered the lamps nonhazardous and safer to dispose of by removing the mercury from the lamps and breaking the lamps down into their component parts.[27] CEX-4-00285; Tr. 176. This is the very definition of "treatment" under 35 IAC § 702.110. No matter how Respondents attempt to slant the facts, they remain liable, because their various descriptions of waste lamp processing at the Riverdale facility are all considered "treatment" under 35 IAC § 702.110.

4. Respondents stored waste lamps at the Riverdale facility

Respondents stored hazardous waste at the Riverdale facility. 35 IAC § 702.110 defines "storage" as "the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere." Mr. Brown observed during his October 30, 2007 inspection that both intact and broken lamps were inside containers, and many were open. Tr. 141; CEX-1-00003-00004. Some of the containers were "not in great shape" and some lamps were not in containers at all. *Id.* Mr. Kelly admitted that waste lamps were stored at the Riverdale facility during the inspection. *Id.*

Additionally, in MVPT's First Response, when asked to "state the length of the period waste lamps are accumulated at the facility prior to being treated in the mobile treatment unit,

[27] Initially, MVPT stated that it had a "mobile processing unit" that "crushed" waste lamps. Then, MVPT "processed" waste lamps at a "destination facility," which was the "mobile processing unit" CEX-6-02049. Then MVPT "performed recycling services" using the "mobile recycling unit." CEX-8-02061. Then MVPT changed its story yet again, claiming that Mr. Kelly, using one of MVPT's assumed names, operated a sole proprietorship that volume-reduced waste lamps and MVPT picked up waste lamps, accumulated them at the Riverdale facility and sought unsuccessfully for purchasers before arranging for disposal. *See, e.g.,* CEX-63-04107.

and provide true and accurate copies of documentation showing the manner in which River Shannon tracks the accumulation period" CEX-3-00273; Tr. 142, MVPT responded:

> Our protocols regarding processing at the facility is as follows:
> Consolidated spent lamps collected from generators are staged inside the Riverdale facility, placarded and processed periodically depending on volumes [].

CEX-4-00314, 00506, 00596; Tr. 143. MVPT made similar statements in response to EPA's requests to "provide a detailed description of how River Shannon tracks the amount of time that universal waste lamps and universal waste batteries are accumulated or stored at its facility in Riverdale Illinois, from the time these items are received at the facility" and "describe how River Shannon measures or tracks the amount of universal waste at any given time." CEX-3-00275; Tr. 143-145.

The bills of lading that MVPT submitted with its First Response, along with the statement above, confirms that hundreds of thousands of waste lamps were picked up at the site of third party generators, taken to the Riverdale facility and then temporarily held pending treatment there. With regard to Respondents' business practice of picking up waste lamps from the site of customers, they state that "from time-to-time, MVP/RSR upon request, would pick up those containers [of lamps], if they were full, and drop fresh containers at that location." CEX-63-04107; Tr. 158. At the time of Mr. Brown's inspection, in MVPT's Responses, and in Respondents' prehearing exchange, Respondents admit that they took waste lamps from customers and kept them at the Riverdale facility before the waste lamps were treated there. Since waste lamps were temporarily held at the Riverdale facility pending treatment, they were stored within the regulatory definition's meaning. Thus, MVPT is liable for storing wastes at the Riverdale facility.

Similarly, Mr. Kelly is personally liable for storing hazardous waste at the Riverdale facility without a RCRA permit. Even assuming Mr. Kelly did operate a sole proprietorship that came to the Riverdale facility to "volume reduce" lamps, Mr. Kelly cannot "contract out" his liability for storing lamps at Riverdale. As the person who oversaw and made the decisions regarding the transporting of waste lamps from customers and storing them at the Riverdale facility pending treatment, Mr. Kelly is personally liable as an operator of MVPT for storing waste lamps at the Riverdale facility.

5. The waste lamps that Respondents stored and treated at the Riverdale facility were "hazardous wastes" under the EPA-authorized Illinois Subtitle C program

i. The waste lamps meet the definition of "solid waste" under 35 IAC § 721.102

The waste lamps stored and treated by the Respondents at Riverdale meet the definitions of "solid waste" and "hazardous waste." Under 35 IAC § 702.110, "hazardous waste" means "a hazardous waste as defined in 35 Ill. Adm. Code 721.103." 35 IAC § 721.103(a) provides, in part, that a "solid waste," as defined in 35 IAC § 721.102, is a "hazardous waste" ". . . if [i]t exhibits any of the characteristics of hazardous waste as identified in Subpart C of this Part . . ." Thus, to be a "hazardous waste" under the Illinois hazardous waste program, a material must first be a "solid waste." *Id.* Tr. 171.

35 IAC § 721.102(a)(1) defines "solid waste", in part, as any discarded material that is not excluded by regulation. 35 IAC § 721.102(a)(2) provides, in part, that discarded material "is any material that is described as . . . [a]bandoned, as explained in subsection (b) of this Section . . ." 35 IAC § 721.102(b) provides that a material is a solid waste if it is abandoned in one of the following ways:

1) It is disposed of;
2) It is burned or incinerated; or
3) It is accumulated, stored or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated.

Tr. 174-75. The waste lamps at the Riverdale facility were solid wastes, because they were "accumulated, stored, or treated" before they were "abandoned by being disposed of" at solid waste landfills.

The record establishes that the waste lamps stored and treated at the Riverdale facility were solid wastes, because they were stored and treated prior to being abandoned by being disposed of.[28] In its First Response, MVPT explained its process for treating waste lamps, which is described in detail above. CEX-4-00285; Tr. 174. Respondents' operations meet the regulatory definitions of "storage" and "treatment" under Illinois's authorized hazardous waste program, as discussed above. Respondents also arranged for the disposal of the waste lamps after storing and treating them. In its First Response, MVPT was asked to "describe how River Shannon manages all of the waste materials (e.g. crushed lamps) generated from the mobile treatment process. Include a description of how the waste materials are treated, stored and/or disposed of." CEX-3-00272. With respect to "processed lamps," MVPT stated that

> After the process has taken place and the extraction of mercury vapor has been completed, the now non-hazardous re-usable glass and aluminum by-products are automatically moved to a 6 yard on-board storage area (6,000) lamps. When the unit is full it is downloaded into a lined and covered roll-off and stored for re-use or disposal depending on the markets. The roll-off can store up to 40,000 nonhazardous processed Universal Waste lamps before removal of material is needed. Full Roll-offs are then transported under Bill of Lading by Land of Lakes equipment to their permitted special waste landfill in Dolton, Illinois . . . .

[28] The lamps were generated as solid wastes when they were taken out of service by third parties, which was the "point of generation" for the waste lamps. A detailed discussion of this issue follows below.

CEX-4-00286; Tr. 177. With respect to the "activated carbon media" generated from the process, MVPT stated that

> [D]uring the adsorption process, mercury is attracted to the activated carbon surface where it is adsorbed in the form of mercuric sulfide. The sulfide is then retained in the pores of the carbon granule. This process precludes that ability to retort the carbon for the purpose of extraction, however, the residual spent carbon qualifies for and can be safely land-filled as a non-hazardous industrial waste. The landfill this material is currently permitted to go to is Land of Lakes (same as above). To date we have staged only 200 lbs. of non hazardous spent carbon at our facility.

CEX-4-00286; Tr. 177-78. MVPT was asked to "provide the names and addresses of all facilities and establishments to which River Shannon sends wastes and recovered mercury generated from the mobile treatment process." CEX-3-00273; Tr. 178. With regard to the resulting crushed glass and metal ends from the mobile treatment process, MVPT provided the names and addresses of two solid waste landfills, "Land of Lakes" and "CID" landfills. CEX-4-00286. With regard to the "spent activated carbon filtering media" generated from the treatment process, MVPT stated that "the spent carbon is currently permitted for disposal as non-hazardous at Land and Lakes facility." *Id.* MVPT also included in its First Response documents that appeared to originate from Land and Lakes and CID landfill, summarizing the amount of waste materials that MVPT disposed of at those landfills. CEX-4-00319-00327; Tr. 179. MVPT did not provide any documentation relating to facilities that receive the carbon generated from its waste lamp process. Tr. 185. MVPT was also asked to "provide true and accurate copies of all shipping records . . . for all shipments of wastes and recovered mercury generated from the mobile treatment process for the three-year period immediately preceding your receipt of this Request for Information." CEX-3-00273; Tr. 182. In response to this, MVPT stated

> We have attached both TCLP results of the spent carbon along with MSDS from the manufacturers that depicts the material to be innocuous both in its fresh and spent stage. This allows the spent material to be disposed of as non-hazardous

special waste . . . . We currently have approximately 200 lbs of non-hazardous spent carbon on hand. It should be noted that 100 lbs. of activated media would adsorb enough mercury to process over 800,000 lamps without experiencing a breakthrough. However it is our protocol to change out the activated media at or around 600,000 processed lamps.

CEX-4-00287. Mr. Brown explained that the waste lamps were "solid wastes" based on his analysis of the information Respondents provided, because

> from the time [the waste lamps] were taken from the location where they were collected, all that happened to them was that they were transported to the Riverdale facility, stored at the Riverdale facility, treated at the Riverdale facility, and then the glass was sent for disposal, glass and aluminum for disposal at landfills, and the mercury was being stored in lieu of disposal, and it had been prepared for disposal. It was in the carbon filters. And the Respondents had taken measures to get them approved for disposal at the Land and Lakes Landfill. So they therefore, fell under the definition of a solid waste.

Tr. 179-180. Mr. Brown elaborated further on this point:

> Q: So your ultimate conclusion was again what?
>
> A: The lamps were generated at outside locations, transported to the Riverdale facility and were solid wastes from their point of generation to the point they were ultimately disposed of.

Tr. 185. Thus, the waste lamps that Respondents brought to the Riverdale facility for storage and treatment were "solid wastes" under 35 IAC § 721.102(a)(1) because Respondents stored and treated the waste lamps before or in lieu of abandoning the waste lamps by disposing of them at solid waste landfills.

ii. <u>The waste lamps meet the definition of "hazardous waste" under 35 IAC § 721.103</u>

The record establishes that the waste lamps at Riverdale are hazardous wastes. 35 IAC § 721.103(a) provides, in part, that a solid waste, as defined in 35 IAC § 721.102, is a hazardous waste ". . . if [i]t exhibits any of the characteristics of hazardous waste identified in Subpart C of

this Part . . ." 35 IAC § 721.124 provides in part that a solid waste exhibits the characteristic of toxicity:

> [I]f, using Method 1311 (Toxicity Characteristic Leaching Procedure (TCLP)), in 'Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA Publication EPA 530-SW 846, as incorporated by reference in [35 IAC § 720.111(a)], the extract from a representative sample of the waste contains any of the contaminants listed in the table in subsection (b) of this Section at the concentration equal to or greater than the respective value given in that table . . . .

The table in 35 IAC § 721.124(b) establishes a maximum concentration of mercury, for purposes of the toxicity characteristic, of 0.2 mg/L.

In his investigation of whether the waste lamps at the Riverdale facility were hazardous wastes, Mr. Brown testified that he used two methods:

> A: Two methods. One we collected samples of whole intact lamps, twelve samples in total that were at the Riverdale facility, and we had them subjected to the Toxicity Characteristic Leaching procedure to determine whether or not they possessed a characteristic of a hazardous waste due to their mercury content. I also reviewed information publicly available from lamp manufacturers including General Electric, Sylvania and Phillips.

Tr. 187-188. On November 14, 2007, EPA collected twelve samples of intact waste lamps that MVPT was storing at the Riverdale facility in order to determine whether any of the lamps possessed the toxicity characteristic for mercury. CEX-2-00056-00057; Tr. 188. Using the Toxicity Characteristic Leaching Procedure (TCLP), four of the twelve waste lamp samples yielded mercury concentrations in their TCLP extracts at or above the regulatory limit for mercury (0.2 mg/L). CEX-2-00058; Tr. 189.

The TCLP results are undisputed. In the Joint Stipulations filed in this matter, the parties stipulated as follows:

> Four of the twelve waste samples of fluorescent lamps that EPA took from the property at 13605 S. Halsted St. in Riverdale, Illinois on November 14, 2007, yielded reported mercury concentrations in their Toxicity Characteristic Leaching Procedure (TCLP) extracts of 290 ug/L, 220 ug/L, 200 ug/L, and 250 ug/L (.290

> mg/L, .220 mg.L, .200 mg/L, and .260 mg/L, respectively) which are at or above the regulatory limit for mercury of 0.2 mg/L.[29]

Tr. 190-191.

Mr. Brown also testified that he reviewed Material Safety Data Sheets (MSDS) of different companies that manufacture fluorescent lamps, such as General Electric (GE), Phillips Lighting Company, and Osram Sylvania Products, Inc. CEX-9-02094-02119; Tr. 192-193. The "Lamp Material Information Sheet" for GE states that:

> A Toxicity Characteristic Leaching Procedure (TCLP) conducted on traditional fluorescent lamp designs for mercury would most likely cause the lamps to be classified as a hazardous waste due to the mercury content. . .

CEX-9-02095; Tr. 194. GE also states that it manufactures lamps under a "Exolux" brand name that pass the TCLP test. Phillips's MSDS for lamps states that:

> Phillips low mercury ALTO fluorescent lamps are identifiable by their characteristic green end caps. Phillips ALTO lamps are TCLP compliant and can be managed as non-hazardous waste . . .Philips non-ALTO lamps (with silver end caps) are not TCLP compliant and should be managed as a hazardous waste under the EPA Universal Waste Rules for fluorescent lamps.

CEX-9-02099; Tr. 196. Osram Sylvania's Product Safety Data Sheet for fluorescent lamps states:

> It is the responsibility of the waste generator to ensure proper classification in the disposal of waste product. To that end, TCLP tests should be conducted on all waste products, including this one, to determine the ultimate disposition in accordance with the applicable federal, State and local regulations.

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[29] A point of clarification was made at hearing:

JUDGE GUNNING:	I assume the sentence "Above the regulatory limit," it's above the regulatory limit for toxicity?
THE WITNESS:	[I]t says, "At or above the regulatory limit for mercury at 0.2," they're referring to the limit for toxicity, the toxicity characteristic.

Tr. 191.

CEX-9-02098; Tr. 195. There were many "traditional" or "silver end cap" GE, Phillips, and Osram Sylvania fluorescent lamps at the Riverdale facility during the October 30, 2007 inspection, and when EPA collected twelve waste lamps samples on November 14, 2007. See CEX-1-000117-00019, 00023, 00070-000071, 00074-00075, 00077-00080, 00085-00086.

Thus, the only conclusion to be drawn is that there were hazardous waste lamps among the waste lamps stored and treated at the Riverdale facility.[30] Tr. 198.

6. The Riverdale property is a hazardous waste management facility under the EPA-authorized Illinois hazardous waste program

The record establishes that the Riverdale property is a hazardous waste management facility under the EPA-authorized Illinois hazardous waste program. Under 35 IAC § 702.110, "hazardous waste management (HWM) facility" means "all contiguous land and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (example, one or more landfills, surface impoundments, or combinations of them)."

Clearly, Respondents used the Riverdale property to store and treat waste lamps. In an attempt to confuse matters, Respondents have changed the location(s) where the "mobile treatment unit" was stored. In its First Response, MVPT stated that "it is our protocols to have the unit return to the Riverdale Facility at the end of the working day to be downloaded into the lined roll-off and the unit is then staged for future use." CEX-4-00313. In its prehearing

[30] Respondents (in their Memorandum in Support of Complainant's Motion for Leave to Amend the Complaint) deny that the waste lamps EPA sampled and tested at the Riverdale facility were hazardous. However, Respondents do not point to any failure with EPA's testing methods or inaccuracies with the relevant MSDS for fluorescent lamps found at the Riverdale facility. Respondents argue that "whole lamps will not fail TCLP" and that their "volume reduced" glass and metal are not hazardous. CEX-31-02629-02630. Respondents' first argument is based on the misconception that subjecting a lamp to the TCLP is what makes it a hazardous waste. This argument is misplaced; the TCLP is a procedure that is used to determine if a waste possesses the toxicity characteristic, which is one method of determining whether the material is a hazardous waste. If a lamp "fails" the TCLP (meaning the TCLP extracts contain mercury at or above the regulatory limit for mercury of 0.2 mg/L), then the lamp possesses the toxicity characteristic for mercury and, therefore, the lamp is a hazardous waste.

exchange, Respondents stated that MVPT would contact Shannon Lamp Recycling to come to the Riverdale property and "volume reduce" lamps (CEX-63-04101) and an exhibit attached to the prehearing exchange stated that the "SLR Mobile Volume Reduction Unit Located in Morton Grove, Illinois" would move to the Riverdale facility and conduct volume-reduction of waste lamps there. CEX-70-04210. Respondents have also stated that various companies own and operate the "mobile treatment unit." First, Respondents claimed that MVPT owned the mobile treatment unit (CEX-4-00311), then Shannon Lamp Recycling owned it (CEX-63-04107), then Spent Lamp Recycling Technologies and SLR Technologies, both of which are referred to at various times by Mr. Kelly as "SLR," owned the unit. (*See, e.g.,* CEX-31-02626). The fact that Respondents operated, and Mr. Kelly continues to operate, "mobile" equipment to process waste lamps at Riverdale does not change the fact that the Riverdale property at 13605 S. Halsted, Riverdale, Illinois, is a "facility" as defined in Illinois's authorized hazardous waste program.

Based on EPA's inspection, the Riverdale property consisted of a building and a paved outdoor area. CEX-1-0002. Intact waste lamps and crushed waste lamps were stored in cardboard boxes, drums, roll-off boxes and in semi-trailer trucks at the facility. *Id.* Throughout MVPT's responses to information requests, it identified the Riverdale property as a location to which it brought waste lamps and as the location where either it or Mr. Kelly used equipment to crush or "volume reduce" waste lamps. *See, e.g.,* CEX-4-00314. The courts and administrative tribunals have consistently emphasized control of property and downplayed formal ownership when considering the scope of the definition of "facility" under RCRA. The D.C. Circuit Court has held that "facility" as defined in Section 3004(v) of RCRA is used to describe all of the property under control of the owner or operator. *United Technologies Corp. v. EPA*, 821 F.2d 714, 722-23 (D.C. Cir. 1982). In *In re Navajo Refining Company*, a ditch was deemed

contiguous with the company's facility since it was connected by ponds that were owned by the company, and that "Navajo's use and control of the ditch is integrally related to the overall purpose of its refinery." 2 E.A.D. 835, *3 (EAB 1989). Focusing on the overall purpose of the facility, the Board affirmed EPA's that "Navajo's use and control of the ditch is integrally related to the overall purpose of its refinery." *Id.* at 2. The Board went on to say:

> If, on the other hand, the scope of a "facility" were coterminous with the right to exclude (as Navajo contends), *a permittee could easily circumvent RCRA §3004(u) by deliberately arranging to manage its solid waste on contiguous land owned and shared by others.* This reading would undermine the broad remedial purpose of RCRA § 3004(u), is inconsistent with the expansive meaning of "facility," and is therefore rejected.

Id. (emphasis added). *See also Sharon Steel Corp.*, 1994 EPA RJO LEXIS 16 (Feb. 9, 1994) (holding that a trestle spanning a river was at least as under control as the ditch in *Navajo*).[31] Thus, the "mobile treatment unit" used by Respondents was integrally related to the storage and treatment operations they conducted at the Riverdale facility, and was part of the facility.

Additionally, both Respondents were operators of the Riverdale facility. The Illinois Subtitle C program defines "operator" as "the person responsible for the overall operation of a facility." 35 IAC § 720.110. Any person who operates a storage, treatment, or disposal operation with respect to hazardous waste must acquire a permit. 35 IAC § 703.121(a). Moreover, owners and operators are responsible for obtaining a permit for the active life, including the closure period, of a hazardous waste management facility. 35 IAC § 703.121(b).

Courts have interpreted "operator" to extend to parties that effectively control activities at a facility even if they technically do not own the company that actually conducts the activities that constitute the operation. Indeed, in the highly analogous context of CERCLA, courts have

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[31] Indeed, this approach—turning to the purpose of the facility and incorporating any element that furthers that purpose as part of a facility—follows that of the courts in Clean Air Act cases. *See, e.g., Chevron, U.S.A., Inc. v. NRDC*, 467 U.S. 837, 860 (1984) "The ordinary meaning of the term 'facility' is some collection of integrated elements which has been designed and constructed to achieve some purpose").

strongly resisted efforts to allow parties to "facilely circumvent" the law or to "escape liability by 'contracting away' their responsibility or alleging that the incident was caused by the act or omission of a third party." *United States v. Aceto Agr. Chemicals Corp.*, 872 F.2d 1373, 1381 (8th Cir. 1989). In *JG-24, Inc.*, the court held that a defendant could not shield himself from RCRA liability by setting up an alter-ego corporation that conducted actual operations giving rise to liability. *United States v. JG-24, Inc.*, 331 F. Supp. 2d 14, 74 (D.P.R. 2004) *aff'd,* 478 F.3d 28 (1st Cir. 2007) ("Defendant Jorge Ortiz is also liable as an operator of the Cataño facility because Distribuidora K–Aribe, the main business currently operating at that facility, is yet another proprietorship or alter ego corporation of Jorge Ortiz."). The court instead looked to the fact that the defendant was the "overall manager in control of the operation." *Id.* The Presiding Officer in *In re Zaclon, Inc.*, elaborated on this "overall control" approach:

> Factors that have been considered as to whether a person is an "operator" of a TSD facility are his role in the corporation; percent of ownership of stock in the corporation; authority to hire, fire and control employees; degree of presence at the facility; involvement in the activity at issue; authority in making financial decisions for the facility; involvement and authority in decisionmaking as to the facility's operation and compliance with laws and regulations at issue; authority and control over the facility; authority in making decisions as to consultants; delegation of responsibility to others; documents submitted to EPA identifying the individual as facility operator and not just corporate representative; and personal liability under a lease of the facility.

2006 EPA ALJ LEXIS 19, *18 (Order Denying Complainant's Motion for Leave to File Third Amended Complaint, April 21, 2006) (citing, in part, *U.S. v. Environmental Waste Control, Inc.*, 710 F. Supp. 1172 (N.D. Ind.), *aff'd*, 917 F.2d 327 (7th Cir. 1990).

Accordingly, both MVPT and Larry Kelly stored waste lamps and used equipment to treat those waste lamps on the Riverdale property, thus making it a "facility" under 35 IAC § 702.110. Both MVPT and Larry Kelly exercised control over the Riverdale facility with respect to the hazardous waste storage and treatment operations conducted there, and therefore

they were the operators of the facility. Thus, Respondents were the operators of the hazardous waste storage and treatment operations conducted at the Riverdale facility.

7. Liability conclusion

As explained above, EPA has proved each element of its prima facie case that Respondents conducted a hazardous waste storage and treatment operation without a RCRA permit for the hazardous waste management facility in violation of 35 IAC § 703.121(a)(1).

B. The evidence supports the assessment of the $120,000 penalty and issuance of the Compliance Order

1. The $120,000 penalty is appropriate and should be assessed against Respondents

EPA has the burden of showing that the requested penalty is appropriate. The Consolidated Rules provide that:

> If the Presiding Officer determines that a violation has occurred and the complaint seeks a civil penalty, the Presiding Officer shall determine the amount of the recommended civil penalty based on the evidence in the record and in accordance with any penalty criteria set forth in the Act. The Presiding Officer shall consider any civil penalty guidelines issued under the Act. The Presiding Officer shall explain in detail in the initial decision how the penalty to be assessed corresponds to any penalty criteria set forth in the Act. If the Presiding Officer decides to assess a penalty different in amount from the penalty proposed by complainant, the Presiding Officer shall set forth in the initial decision the specific reasons for the increase or decrease.

40 C.F.R. § 22.27(b). Section 3008 of RCRA, 42 U.S.C. § 6928, invests the Administrator of EPA with authority to assess a civil penalty for violations of RCRA, and to determine the amount of penalty to assess. Section 3008(a)(3) of RCRA, 42 U.S.C. § 6928(a)(3), states "[a]ny penalty assessed in the order shall not exceed $25,000 per day of noncompliance for each violation."[32] Tr. 273-274. In assessing such a penalty, EPA is required to consider "the

[32] This amount has been increased to $37,500 per day of violation for violations that occurred on or before January 12, 2009 pursuant to the Civil Monetary Penalty Inflation Adjustment Rule, 73 Fed. Reg. 75340 effective January 12, 2009. Tr. 273-274.

seriousness of the violation and any good faith efforts to comply with applicable requirements." 42 U.S.C. § 6928(a)(3).

In June 2003, EPA issued the revised "RCRA Penalty Policy" ("the Policy"). CEX-15; Tr. 279. The purpose of the Policy is to

> ensure that RCRA civil penalties are assessed in a fair and consistent manner; that penalties are appropriate for the gravity of the violation committed; that economic incentives for noncompliance with RCRA deter persons from committing RCRA violations; and that compliance is expeditiously achieved and maintained.

CEX-15-02250; Tr. 280. The Policy was created in line with EPA's Policy on Civil Penalties, EPA General Enforcement Policy #GM – 21, which establishes a single set of goals for penalty assessment in EPA administrative and judicial enforcement actions, which are: deterrence, fair and equitable treatment of the regulated community, and swift resolution of environmental problems. CEX-34-02662; Tr. 283.

The EAB has held that where there is an applicable penalty policy it should be followed, whenever possible, because it ensures that the statutory factors have been taken into consideration and the penalties are assessed in a fair and consistent manner. *In re M.A. Bruder and Sons, Inc., d/b/a MAB Paints*, 10 E.A.D. 598, 609 (EAB 2002). Further, the EAB has stated that where there is an applicable penalty policy an administrative law judge must have compelling reasons for ignoring that penalty policy when calculating the penalty. *In re Carroll Oil Company*, 10 E.A.D. 635 at 662-668 (EAB 2002). The Board will closely scrutinize a penalty decision where the penalty policy has not been followed. *In re Chem Lab Products, Inc.*, 10 E.A.D. 711 (EAB 2002).

i. Structure of the 2003 RCRA penalty policy

The general formula of the Policy consists of:

> (1) determining a gravity-based penalty for a particular violation, from a penalty assessment matrix, (2) adding a "multi-day" component, as appropriate, to account for a violation's duration, (3) adjusting the sum of the gravity-based and multi-day components, up or down, for case specific circumstances, and (4) adding to this amount the appropriate economic benefit gained through non-compliance.

CEX-15-02246; Tr. 285.

a. Gravity-based penalty

The initial gravity-based penalty amount, which is a measurement of the "seriousness of the violation," a statutory penalty criteria under Section 3008(a) of RCRA, is determined by reference to two factors identified on a matrix of the Policy:

(1) "Potential for Harm" (vertical axis); and

(2) "Extent of Deviation from a Statutory or Regulatory Requirement" (horizontal axis).

CEX-15-02263-02264; Tr. 285-286.

The "potential for harm" factor is made up of two sub-factors not shown on the matrix: the risk of exposure of humans or the environment to hazardous waste and the adverse effect of noncompliance on the RCRA program. CEX-15-02257-02261; Tr. 285-286. The matrix provides three levels on which to register the "potential for harm" of a violation: major, moderate and minor. CEX-15-02263; Tr. 286.

The "extent of deviation from a statutory or regulatory requirement" factor accounts for the degree to which the violation renders inoperative the requirement violated. *Id.* The matrix provides three levels on which to register the "extent of deviation requirement" manifested by the violation: major, moderate at minor. *Id.*

b. Continuing violations

Multiple violations and multi-day violations are addressed in the Policy. CEX-15-02265-02272; Tr. 286. The Policy states that "multiple violations of the same statutory or regulatory requirement may begin to closely resemble multi-day violations in their number and similarity to each other." CEX-15-02267-02268. The Policy goes on to state:

> In these circumstances, enforcement personnel have discretion to treat each violation after the first in the series as multi-day violations (assessable at the rates provided in the multi-day matrix) if to do so would produce a more equitable penalty calculation . . .In those cases, where multiple violations are being treated as multi-day violations, each occurrence should be treated as one day for purposes of calculating the multi-day component.

CEX-15-02268; Tr. 286-287. For violations occurring after March 15, 2004, the Administrator may assess a civil penalty of up to $32,500 for each such violation. *See* 40 C.F.R. Part 19; CEX-33; Tr. 287.

c. Economic benefit

The Policy addresses any "economic benefit" realized by certain violators as a consequence of their violations. CEX-15-02273-02278. The "economic benefit" must be considered to eliminate economic incentives for the regulated community to violate the act. An "economic benefit" component should be calculated and added to the gravity-component when a violation results in 'significant' economic benefit to the violator. CEX-15-02273. Two types of "economic benefit" are to be reviewed: first, the benefit to the violator of delaying costs he would have incurred had he been in timely compliance with the requirement; and second, the benefit the violator realized by avoiding costs he otherwise would have incurred had he been in timely compliance.

d. Adjustment factors

Under the Policy, once the above factors are considered and a gravity-economic penalty amount for the violations are determined, "adjustment" criteria are to be considered. CEX-15-02278-002286. The additional adjustment criteria include:

(a) good faith efforts to comply/lack of good faith;
(b) degree of willfulness and/or negligence;
(c) history of noncompliance (upward adjustment only);
(d) ability to pay (downward adjustment only);
(e) environmental projects (downward adjustment only); and
(f) other unique factors.

2. Application of the statute and penalty policy to the violations in this case

Assessment of at least a $120,000 penalty against Respondents for their violations of Illinois's hazardous waste program is supported by the evidence developed at the hearing in this matter. At hearing, Mr. Brown, as the case development officer, testified as to his calculation of both the penalty and the revised penalty in accordance with the Policy and the revised penalty matrices based on Civil Monetary Penalty Inflation Adjustment Rule. Tr. 290; CEX-62; Tr. 289. Further, Mr. Brown, Mr. Worth, Mr. Graham, and Mr. Ewen all presented evidence relevant to this Court's consideration of an appropriate penalty in this case.

i. Potential for harm

a. Risk of exposure

In determining the "gravity" component of RCRA penalty, the "risk of exposure" sub-component is determined by the "probability of exposure" and the "potential seriousness of contamination." CEX-15-02258. For probability of exposure, the Policy provides that "[t]he risk of exposure presented by a given violation depends on both the likelihood that human or

other environmental receptors may be exposed to hazardous waste and/or hazardous constituents" and "the degree of such potential exposure." *Id.* Where actual management of waste is involved, "a penalty should reflect the probability that the violation could have resulted in, or has resulted in a release of hazardous waste or constituents, or hazardous conditions posing a threat of exposure to hazardous waste or waste constituents." *Id.* "In considering risk of exposure, the emphasis is placed on the potential for harm posed by a violation rather than on whether harm actually occurred." CEX-15-02259.

Mr. Brown testified that there was a high risk of exposure at the Riverdale facility based on the amount of broken bulbs he observed during his October 30, 2007 inspection. Tr. 297. During the inspection, he observed large amounts of broken bulbs in two large roll-off containers, in an open drum, as well as waste lamps that were in open containers and no containers at all. Tr. 297-298; CEX-1-00007,00020, 00024,00025, 00039, 00040,00041,00042. The fact that samples taken from the Riverdale facility tested hazardous for mercury confirms that mercury was present in the waste lamps at the Riverdale facility. Tr. 299; CEX-2-00058.

Mr. Brown also considered relevant a report based on an inspection at the Riverdale facility conducted by the Cook County Department of Environmental Control dated July 30, 2007. Tr. 309; CEX-36. The inspection was conducted on July 5, 2007, which is prior to EPA's inspection on October 30. *Id.*; CEX-36-02805. The Cook County inspector discusses his observations at the Riverdale facility and records observations about a "fluorescent bulb crusher" at the facility. CEX-36-02806. The inspector reports that

> Engineer noted crushed mercury filled bulbs . . .in the bottom of the metal dumpster with a Siamese shaped metal container "plunger" structurally supported above. The so-called "plunger" apparently is lowered into the receiving metal dumpster below containing fluorescent bulbs to be crushed by the "plunger." Engineer did not observe any physical evidence of either pollution control devices for containment, other mechanical connectors, metal piping, rubber hoses, or

> electrical power appurtenances. . . . Engineer was in the vicinity of the southeast corner of facility near an open overhead door in the south masonry wall of building when Engineer discovered a massive pile of randomly, broken mercury filled fluorescent bulbs. The pile of fluorescent bulbs did not contain any paper waste. The pile is estimated to measure two feet side, fifteen feet long, and two feet high.

CEX-36-02806; Tr. 311.

On May 26, 2011, Mr. Brown conducted a re-inspection of the Riverdale facility, in order to observe its current condition. CEX-42-03023; Tr. 312-313. Mr. Brown testified that he observed and took pictures of cracks in the floor of the facility, which potentially could allow solid mercury to enter and absorb into the underlying soil. Tr. 313; CEX-42-03030, 03031, 03032,03036, 03037, 03040, 03041, 03042. Mr. Brown also observed two piles of broken fluorescent lamps inside the building, and broken lamp pieces outside of the building. Tr. 313; CEX-42-03043, 03044, 03048. Mr. Brown testified about his re-inspection and the potential for harm:

> A: [B]eginning on page 3048 through 3065, those photographs were collected in the yard on the south side of the building during which in my initial inspection, there had been a roll-out container with broken fluorescent lamps in it. And as you flip though these photographs, you will see remnants of fluorescent lamps littered in certain locations on the ground, again, indicating that releases had occurred. Page 3050, you're seeing the end cap, an aluminum end cap that would be on a fluorescent lamp.
>
> Q: Could you explain a little bit about why that would pose a risk of exposure?
>
> A: Well, it's explaining that broken lamps - - I think it indicates that broken lamps were outside in uncontained systems.
>
> Q: Why should we be concerned about an end cap?
>
> A: Well, it's not the end cap itself, it's the indication that lamps, broken lamp pieces, and releases of lamps, could have occurred outside. And the end caps – end caps have been known, at times, to contain lead, depending on how - - if lead was used as the soldering device on the lamp. But I think it's more pointing to the fact that lamps had been broken in uncontained manners, and that the releases were not

necessarily cleaned up adequately. Because you can still see pieces of the lamp. There are more such photographs on page 3054 . . . .

Tr. 313-315. Mr. Brown's observation of a large amount of broken and intact waste lamps at the Riverdale facility while Respondents were operating there during his initial inspection, and his observation of broken waste lamps still present during a re-inspection on May 26, 2011, indicates that releases of mercury occurred and there was high risk of exposure to mercury while Respondents operated at the Riverdale facility.

In evaluating the potential seriousness of contamination, the Policy provides that the "quantity and toxicity of wastes (potentially) released" is to be considered, as well as the "likelihood or fact of transport by way of environmental media (e.g., air and groundwater)" and the "existence, size, and proximity of receptor populations (e.g., local resident, fish, and wildlife, including threatened or endangered species) and sensitive environmental media (e.g., surface wastes and aquifers)." CEX-15-02258-02259; Tr. 292-293. In this case, Respondents managed hundreds of thousands of waste lamps without a permit. As Mr. Brown testified:

A: Well, under potential seriousness of contamination, two factors considered are the quantity and toxicity of wastes potentially released, and the likelihood or fact of transport by way of environmental media. When you look at the bills of lading that record shipments to the Respondent's facility in Riverdale; when you look at just four-foot lamps, lamps that are under four-foot, or over four-foot, I did a calculation of how many of those lamps were transported in the record, and it – the bills of lading indicated that it was greater than 600,000 lamps. So this is a significant amount of waste that was managed without a permit. . . .

Tr. 292-293; CEX-4-640-2039. While the bills of lading cover the time period from January 2004 to February 2005, Mr. Brown testified that he calculated the number of waste lamps that Respondents picked up starting in 2005, when they allegedly began operations at the Riverdale facility. Tr. 295.

Mercury is a highly toxic substance. The preamble to the final rule adding waste lamps to the universal waste rule states:

> Mercury is easily volatized; it can be dispersed widely through the air and transported thousands of miles. It undergoes complex chemical and physical changes as it cycles among air, land, and water. Humans, plants, and animals may be exposed to mercury and accumulate it during this cycle, potentially resulting in ecological and human health impacts. The primary health effects from mercury are on the neurological development of children exposed through fish consumption and on fetuses exposed through their mother's consumption of fish. . . When spent mercury-containing lamps break, the elemental mercury inside becomes available for evaporation, adsorption, or reaction . . . . Mercury may also be released to the environment as a result of lamp crushing operations. Available studies show that emission percentages from drum top crushing range from 10 to 100 percent of the total elemental mercury in the lamps, depending on the operating conditions and supplemental controls used.

64 Fed. Reg. 36466, 36470-71; CEX-53-03960; Tr. 307-308. The Material Safety Data Sheets for fluorescent lamps contain information on the health hazards of mercury. (*See, e.g.*, "mercury – contact, inhalation, or ingestion may cause one or more of the following symptoms: eye irritation, skin irritation, cough, chest pain, dyspnea, bronchitis, pneumonitis, tremor, insomnia, irritability, indecision, headache, fatigue, weakness, stomatitis, salvation, GI tract disturbance, anorexia, weight loss, and proteinura). CEX-9-02097; Tr. 296. The Chemical Agent Briefing Sheet (Briefing Sheet) for mercury prepared by the Agency for Toxic Substances and Disease Registry (ATSDR) explains the harmful effects of mercury. Tr. 301; CEX-48. In the Briefing Sheet, it provides a table that lists some of the effects of exposure to mercury, which include the following: acrodynia (Pink's disease in children), insomnia, possible respiratory effects, rapidly shifting moods, restlessness and tremors. *Id.*; CEX-48-03162. Mr. Brown presented testimony regarding toxicity information contained in the Toxicological Profile for Mercury, prepared by the U.S. Department of Health and Human Services. Tr. 303. The Profile discuses the effects of inhalation exposure to mercury vapor, and states that "inhalation of sufficient levels of metallic