Eckoff, Michael

From: Jason Muhlenkamp <jason.muhlenkamp@lightingresourcesinc.com>
Sent: Friday, August 21, 2015 10:04 AM
To: Mallick, Parvez
Cc: Perrigan, Glen; Eckoff, Michael; Stewart, Robert
Subject: RE: Lighting Resources LLC - RCRA Inspection - July 30, 2015
Attachments: _doc_20150821094521.pdf; _doc_20150821094554.pdf; _doc_20150821094652.pdf; _doc_20150821094908.pdf

Good morning Parvez,

I have attached the documents that you requested. I am working on getting everything that Michael requested. Please let me know if you need anything else. Thanks

Jason Muhlenkamp
Branch Manager
Lighting Resources
1007 SW 16th Lane
Ocala, FL 34471
o-352-509-3001
f-352-509-3012
www.lightingresourcesinc.com

From: Mallick, Parvez [mailto:Mallick.Parvez@epa.gov]
Sent: Friday, August 21, 2015 9:32 AM
To: Jason Muhlenkamp
Cc: Perrigan, Glen; Eckoff, Michael; Mallick, Parvez; Stewart, Robert
Subject: RE: Lighting Resources LLC - RCRA Inspection - July 30, 2015

Mr. Muhlenkamp:

Thank you for your assistance during EPA/FDEP inspection on July 30, 2015. Please e-mail the following documents in "pdf's" for Financial Records Review:

1) Closure plan
2) Closure plan cost estimate
3) Trust fund agreement (FA mechanism) w/JPMorgan Chase and most recent TF balance bank statement (currently approx.. $85K)
4) Most recent third-party liability insurance certificate (not policy – just certificate) issued by Westchester Ins. Co.

If you have any questions regarding financial records, please contact Bob Stewart at 404-562-8886 or e-mail @ stewart.robertg@epa.gov.
Thank you.

Parvez Mallick
Environmental Engineer
United States Environmental Protection Agency – Region 4

Resource Conservation & Restoration Division (RCRD)
RCRD Enforcement & Compliance Branch
Hazardous Waste Enforcement & Compliance Section
Sam Nunn Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303
Phone: 404-562-8594
Fax: 404-562-8566
mallick.parvez@epa.gov

From: Eckoff, Michael [mailto:Michael.Eckoff@dep.state.fl.us]
Sent: Tuesday, August 18, 2015 11:16 AM
To: jason.muhlenkamp@lightingresourcesinc.com
Cc: Mallick, Parvez; Perrigan, Glen; Hess, Nathan
Subject: Lighting Resources LLC - RCRA Inspection - July 30, 2015

Hello Mr. Muhlenkamp,

Thank you for your time during the inspection of your facility. Below is a list of preliminary potential issues noted during the inspection and requests for further information.

1. Please provide the following information regarding the two 5-gallon containers with unknown contents found in your supply trailer.
    a. The contents of the containers and how the contents were determined, i.e., sampling results.
    b. The disposition of the containers. If disposed off-site, please provide a copy of the disposal receipt, i.e., manifest.
    c. If known, the date the containers arrived on-site, and the name and contact information of the generator and/or transporter.
    d. What operational changes have been implemented in identifying and handling unacceptable material to prevent similar issues in the future?
2. Written job descriptions were not available for review. Please provide a copy of the written job description for each position including the name of the employee filling each position, requisite skill, education, or other qualifications, and duties assigned to each position.
3. Please provide information regarding the content of a typical monthly safety meeting.
4. In the lamp container and crushed lamps storage areas, rows 1through 10, the following was noted.
    a. One drum of crushed lamps was covered with a piece of plywood that was secured to the drum with duct tape.
    b. Not all drums of crushed lamps and lamp containers, staged on pallets, were secured with shrink-wrap, bands, or other binding after counting and labeling.
    c. Not all lamp containers were stored in a manner that prevents breakage, i.e., containers were noted buckling or crushed, some resulting in breakage of lamps.
    d. Not all lamp containers were labeled. In addition, not all labels on the drums of crushed mercury lamps were visible for inspection.
    e. Not all lamp containers and crushed lamp drums were marked with a received date.
    f. Not all lamp containers were closed.
5. An alternate emergency coordinator was listed in the contingency plan that no longer works at the facility.
6. Aisle space was not provided between the e-waste storage and the crushed lamp drums in row 10.
7. Not all universal waste batteries containers were labeled.
8. In the shatter shield processing area, lamp breakage occasionally occurs during the process. Clean up material is placed in a 35-gallon poly-drum. The drum was not labeled.
9. In the lamp receiving area, lamps are counted and sorted by type, lamp breakage occasionally occurs during this process. Clean up material is placed in a 35-gallon ploy drum. The cover on the drum was not appropriately sized rendering the drum open.
10. In the solid waste dumpster outside near the loading dock was end caps, glass, and CFL bases, the material appeared to be floor sweepings. The dumpster bottom had rusted through.

11. The following was noted outside in the compressor area.
    a. One 35-gallon drum was staged on the asphalt exposed to the weather. A faded label on the drum indicates non-PCBs may be in the drum. Please confirm.
    b. Four 5-gallon containers of used oil were located under cover next to the compressor. The containers were not labeled or provided secondary containment. In addition, one 5-gallon container of used oil was located in a fire cabinet next to the compressor. The container was not labeled.
12. After conferring with permitting staff in Tallahassee, sampling and analysis of separated metals and lamp glass must be conducted per the permit. For instance, weekly composite sampling shall be conducted, not composite sampling when a dumpster is full. In addition, at least 50 grams of each sample must be collected daily in order to fulfill the 150 grams weekly sample composite requirement.
13. In the less than 90-day storage area, a label on one of the hazardous waste drums was not visible for inspection.
14. A portable vacuum in the lamp processing room was not labeled identifying its contents or labeled hazardous waste.
15. The mercon spill kit was not located on the south wall of Area B (processing room) as required in the operations plan.
16. Facility inspections, as required in the operations plan, should have identified unlabeled and undated containers, containers in poor condition, open containers, and aisle spacing, to name a few. What operational changes have been implemented to address this issue?
17. Please provide a copy of each manifest, while Lighting Resources LLC was acting as a hazardous waste transporter, for the last twelve months.

There are a few more observations we need to discuss internally but I wanted to get you something. If you have any questions please contact me or Mr. Mallick.

Thank you,

Michael Eckoff
Environmental Specialist
Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803
michael.eckoff@dep.state.fl.us
(407) 897-4308

TABLE 7-3
LIGHTING RESOURCES, LLC - OCALA, FL
MERCURY RECOVERY FACILITY DEP PERMIT APPLICATION _ REVISION NO. [1]
CLOSURE COST ESTIMATE (APRIL 2012)

Line Item #	Description		Service Provider / RS Means: Name	Service Provider / RS Means: Location	Units	Quantity	Unit Cost	Total Cost	Notes
REMOVAL OF WASTE & RECYCLABLE MATERIAL INVENTORY: *(assume worst cast scenario (i.e., maximum inventory))*									
Mercury-Containing Lamps (MCLs):									
1	**Unprocessed MCLs**	**Transport** by Hauler (unlicensed) to DEP permitted mercury recovery / reclamation facility	HUB	Chicago, IL	semi-trailer	6	$525.00	$3,150	Conservatively assumed 140**,000 T-12 / 4-ft lamps** — however, the calculation of storage capacity yielded 139,104 lamps, and to be conservative in this cost estimate it was assumed that 140,000 lamps would need handling/ removal from site. HUB contracts locally with a transporter in Jacksonville, FL; 2.8 semi-trailer trucks needed based on calculation of 48 pallets per truck, 8 lamp boxes per pallet, 69 lamps per box, 552 lamps per pallet (69 x 8), 26,496 lamps per trailer -truck (552 lamps x 48 pallets); therefore the 6th truck will have space for 33 addtl pallets. Contact- Evan Singley (with HUB) 630.437.6053
		Processing by DEP permitted mercury recovery / reclamation facility (cost is all incl.)	AERC Recycling Solutions	West Melbourne, FL	linear foot	560,000	$0.035	$19,600	140**,000 T-12 / 4-ft lamps** = (140,000 x 4 ft) = 560,000 linear feet
2	**Unprocessed: Crushed / Unintentially Broken MCLs**	**Transport** by hazardous waste licensed hauler to an authorized, state permitted mercury recovery / reclamation facility	Freehold Cartage / RS Means	Bartow, FL	**see note**	**see note**	$2,586.53	$2,587	**Fifty-six (56) 55-gallon drums** will have to be transported. Freehold Cartage will most likely be used, however to be conservative the pricing for transportation was obtained from **RS Means Environmental Remediation Cost Data (2006)**. The Means pricing was adjusted from 2006 dollars to 2012 dollars using DEP inflation factors (refer to DEP website). Assumed travel distance of 500 miles from Ocala, FL to Williamston, SC. The RS Means minimum shipping charge of $2,587 (incl. inflation) - RS Means Cost Code #33-19-0202 was greater than the per mile charge of $1,255 ($2.47 per mile @ 500 miles, incl. inflation) - RS Means Cost Code #33-19-0213; therefore, the cost of $2,587 was used. Refer to Excel File (for RS Means costs) saved on disk contained in Appendix F within the Engineering Report.
		Processing by an authorized, state permitted mercury recovery / reclamation facility (cost is all incl.)	Waste Management Lamp Tracker Inc.	Williamston, SC	lbs	28,000	$1.05	$29,400	Assume **500 lbs** per 55-gal drum x 56 **drums** = 28**,000 lbs.**
3	**Phosphor Powder**	**Transport** by hazardous waste licensed hauler to DEP permitted mercury recovery / reclamation facility	Freehold Cartage	Bartow, FL	55-gal. drum	32	$52.00	$1,664	Minimum 9-drums per transport at $50 per drum plus 4% surcharge fee (equals a total of $52 per drum). Each drum assumed to weigh 750-lbs each. Freehold contact - Andrew / Mike Avery, 863.287.1830
		Processing by DEP permitted mercury recovery / reclamation facility (cost is all incl.)	Veolia Environmental Services	Tallahassee, FL	55-gallon drum	32	$254.25	$8,136	$225 per drum plus 13% surcharge (equals a total of $254.25 per drum)
4	**Separated Glass Cullet** (i.e., passes TCLP for Mercury)	**Test** material to confirm it passes TCLP for Mercury	Columbia Analytical Services	Jacksonville, FL	1-test per sample	4	$40.00	$160	EPA Method 7470; Columbia Analytical Services contacted for pricing at 1-800-695-7222
		Transport by Hauler to Marion County Baseline Landfill for disposal	Florida Express Environmental	Ocala, FL	Rolloff	4	$150.00	$600	Florida Express Env. Contact - John Paglia at 352.369.5411 ext 205.
		Landfill Disposal at Marion County - Baseline Landfill	Baseline Landfill	Marion County, FL	ton	60	$42.00	$2,520	Marion County - Baseline Landfill charges a fee of $42/ton. Based on published data, the unit weight of crushed cullet glass <= to 30,000 lbs per rolloff; therefore to be conservative a rolloff container was assumed to weigh 30,000-lbs. The total weight is therefore equal to: (4 rolloffs **x 30,000-lbs/rollfoff) = 120,000-lbs** or **60-tons**.

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CLOSURE COST ESTIMATE (APRIL 2012)

Line Item #	Description		Service Provider / RS Means		Units	Quantity	Unit Cost	Total Cost	Notes
			Name	Location					
5	**Separated Metal End Caps / Metal Comp.** (i.e., passes TCLP for Mercury)	**Test** material to confirm it passes TCLP for Mercury	Columbia Analytical Services	Jacksonville, FL	1-test per sample	4	$40.00	$160	TOTALL Metal Recycling provides free hauling of metal end caps and pays Lighting Resources a fixed dollar amount based on a buy-back agreement (ranges from $5,800 to $12,000 - - depending upon volume. Each drum assumed to weigh 750-lbs. **PLEASE refer to Appendix F** contained within the Engineering Report for a copy of a letter from TOTALL Metal Recycling to Lighting Resources, LLC , stating that in the event of Facility closure (LRL - Ocala, FL), TOTALL Metal Recycling will continue to take the materials (i.e., metal end caps, non-pcb ballasts, e-waste, dry-cell batteries and lead acid batteries) from Lighting Resources in Ocala, Florida at no cost. Contact - Matt VanDorn, phone number 618-877-0585.
		Transport by Hauler to an authorized metals reclaimer	TOTALL Metal Recycling	Granite City, IL	55-gallon drum	60	**no charge**	**see note**	
		Metals Recycling by authorized recycler / reclaimer	TOTALL Metal Recycling	Granite City, IL	55-gallon drum	60	**no charge**	**see note**	
Mercury-Containing Devices (MCDs):									
6	**MCDs: Thermometers, Thermostats, Switches, Relays and Manometers**	**Transport** by Hauler (unlicensed) to DEP permitted mercury recovery / reclamation facility	Veolia Environmental Services	Tallahassee, FL	55-gallon drum *	4	$56.50	$226	* $50 per drum plus 13% energy and security surcharge (equals a total of $56.50 per drum). Each drum assumed to weigh 750-lbs.
		Processing by DEP permitted mercury recovery / reclamation facility (cost is all incl.)	Veolia Environmental Services	Tallahassee, FL	55-gallon drum *	4	$242.95	$972	* $215 per drum plus 13% energy and security surcharge (equals a total of $242.95 per drum). Each drum assumed to weight 750-lbs.
Lead Acid Batteries:									
7	**Small / Other Type Batteries: Alkaline, Gel Cells, Lead Acid, Lithium-Ion, Magnesium, Mercury, Ni-Cad, Ni-MH, and Silver Oxide and Automotive & Large Equipment Lead Acid Batteries**	**Transport** by a licensed hazardous waste hauler to a facility permitted and authorized to receive and process such battery type materials	Freehold Cartage / RS Means	Bartow, FL	**see note**	**see note**	$2,587.00	$2,587	**Twenty-Four (24) 55-gallon drums** will have to be transported. Freehold Cartage will most likely be used, however to be conservative the pricing for transportation was obtained from RS Means Environmental Remediation Cost Data (2006). The Means pricing was adjusted from 2006 dollars to 2012 dollars using DEP inflation factors (refer to DEP website and Excel File saved on disk in **Appendix F** in the Engineering Report). Assumed travel distance of 1,000 miles from Ocala, FL to Granite City, IL. The RS Means minimum shipping charge of $2,587 (incl. inflation) - Cost Code #33-19-0202 was greater than the per mile charge of $2,470 ($2.47 per mile @ 1,000 miles, incl. inflation) - RS Means Cost Code #33-19-0238; therefore, the cost of $2,587 was used. Refer to Excel File (for RS Means costs) saved on disk contained in **Appendix F** within the Engineering Report.
		Metals Reclaimer by a facility permitted and authorized to receive and process such battery type materials	TOTALL Metal Recycling	Granite City, IL	lbs	18,000	**no charge**	**see note**	**Twenty-Four (24) drums**, each drum assumed weight of 750 lbs = (12 x 750 lbs) = 9,000 lbs. T **PLEASE refer to Appendix F** contained within the Engineering Report for a copy of a letter from TOTALL Metal Recycling to Lighting Resources, LLC , stating that in the event of Facility closure (LRL - Ocala, FL), TOTALL Metal Recycling will continue to take the materials (i.e., metal end caps, non-pcb ballasts, e-waste, dry-cell batteries and lead acid batteries) from Lighting Resources in Ocala, Florida at no cost. TOTALL Metal Recycling Contact - Matt VanDorn, phone number 618-877-0585.
Light Ballasts:									

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Line Item #	Description		Service Provider / RS Means: Name	Service Provider / RS Means: Location	Units	Quantity	Unit Cost	Total Cost	Notes
8	**Unprocessed PCB Light Ballasts**	**Transport** by a licensed hazardous waste hauler to a facility permitted and authorized to receive / process PCB Ballasts	Freehold Cartage / RS Means	Chicago, IL	**see note**	**see note**	$3,211.00	$3,211	**Ten (10) 55-gallon drums** will have to be transported. Freehold Cartage will most likely be used, however to be conservative the pricing for transportation was obtained from RS Means Environmental Remediation Cost Data (2006). The Means pricing was adjusted from 2006 dollars to 2012 dollars using DEP inflation factors (refer to DEP website and Excel File saved on disk in **Appendix F** of the Engineering Report). Assumed travel distance of 1,300 miles from Ocala, FL to TOTALL Metal Recycling in Granite City, IL (first stop, see below Non-PCB Ballasts, Line Item # 10) and to Wisconsin Ballast in Muskego, WI (second stop, PCB Ballasts Line Item #9). The RS Means per mile charge of $3,211 - Cost Code #33-19-0240 ($2.47 per mile @ 1,300 miles, incl. inflation) was greater than the minimum shipping charge of $2,910 - Cost Code #33-19-0203 (see Excel File on disk for RS Means Costs located in **Appendix F** in the Engineering Report); therefore, the cost of $3,211 was used.
		Processing by a facility permitted and authorized to receive / process PCB Ballasts	Wisconsin Ballast	Muskego, WI	lbs	7,500	$0.36	$2,700	**Ten (10) 55-gal drums**; assumed one (1) 55-gallon drum of ballast material weighs **750 lbs.**; total weight = (10 x 750) = 7,500 lbs. Unit cost assumes incineration.
9	**Unprocessed Non-PCB Light Ballasts**	**Transport** by a licensed hazardous waste hauler to a facility permitted and authorized to receive / process Non-PCB Ballasts	Freehold Cartage / RS Means	Chicago, IL	55-gallon drum	30	**no charge**	**see note**	Thirty (30) 55-gal drums; assumed one (1) 55-gallon drum of ballast material weighs 750 lbs.; total weight = (30 x 750) =22,500 lbs. Transport of the Unprocessed Non-PCB Light Ballasts will be combined in the same trailer truck with the transport of Unprocessed PCB Light Ballasts (Line Item # 9) since Granite City, IL is en route to the Wisconsin Ballast facility located in Muskego, WI.
		Processing by a facility permitted and authorized to receive / process Non-PCB Ballasts	TOTALL Metal Recycling	Granite City, IL	lbs	22,500	**no charge**	**see note**	**Thirty (30) 55-gal drums**; assumed one (1) 55-gallon drum of ballast material weighs **750 lbs.**; total weight = (30 x 750) = 22,500 lbs. PLEASE refer to Appendix F contained within the Engineering Report for a copy of a letter from TOTALL Metal Recycling to Lighting Resources, LLC , stating that in the event of Facility closure (LRL - Ocala, FL), TOTALL Metal Recycling will continue to take the materials (i.e., metal end caps, non-PCB ballasts, e-waste, dry-cell batteries and lead acid batteries) from Lighting Resources in Ocala, Florida at no cost, and provide free pickup of the metal end caps and non-PCB ballasts. TOTALL Metal Recycling Contact - Matt VanDorn, phone number 618-877-0585.
							Subtotal:	**$77,672**	
FACILITY DECOMMISSIONING & DECONTAMINATION:									
Dis-Assembly & Salvage of BALCAN MP8000 Process Equipment: *(list below)*									
10	→ Dis-Assembly	Labor to **dis-assemble and pack** for later removal by metal reclaimer	Shaw Environmental	Winter Garden, FL	hours	160	$65.00	$10,400	2-man crew for 10-days; OSHA Level C PPE; decontamination labor and costs are below.
	→ Haul for Salvage	**Transport and Reclamation** by Metal Reclaimer	TOTALL Metal Recycling	Granite City, IL	**see note**	**see note**	**no charge**	**see note**	TOTALL Metal Recycling provides free hauling and pays Lighting Resources a fixed dollar amount based on buy-back agreement for all metal end cap materials and will pickup, transport, and recycle at no cost all equipment / metals.
Removal & Decontamination of Any Hazardous Residue: *(list below)*									

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Line Item #	Description		Service Provider / RS Means		Units	Quantity	Unit Cost	Total Cost	Notes
			Name	Location					
11	→ Containers	**Surface Wipe** sampling to det w/ rinsate	Shaw Environmental	Winter Garden, FL	hours	16	$80.00	$1,280	2-man crew for 1-day; OSHA Level C PPE.
		Decontaminate w/ rinsate	Shaw Environmental	Winter Garden, FL	hours	20	$80.00	$1,600	2-man crew for 1-day; OSHA Level C PPE.
		Sample rinsate	Shaw Environmental	Winter Garden, FL	hours	2.5	$80.00	$200	20 samples by 2-man crew
		Test rinsate (lab cost)	Columbia Analytical Services	Jacksonville, FL	1-test per sample	20	$40.00	$800	EPA Method 7470; Columbia Analytical Services contacted for pricing at 1-800-695-7222
		Transport contaminated rinsate (leachate) by a licensed hazardous waste hauler to a Chemical Waste Landfill for disposal	Waste Management	Bartow, FL	55-gal. drum ($65 /drum + $150 pickup fee)	10	$65.00	$800	**Ten (10) 55-gallon drums** will have to be transported. Unit pricing of $65 per 55-gallon drum plus **ADDED** a $150 stop fee per pickup.
		Landfill Disposal of any contaminated rinsate (leachate) and other matls (e.g., rags, wipes, PPE, etc.).	Waste Management - Emelle Landfill	Emelle, AL	55-gallon drum ($248 /drum + $220 profile fees)	10	$248.00	$2,700	**Ten (10) 55-gallon drums** will have to be disposed of. Unit pricing of $248 per 55-gallon drum (assumes half liquid + half rags) plus **ADDED** ADEM and WM Profile Fees of $170 and $50, respectively.
12	→ Equipment	**Decontaminate** w/ rinsate	Shaw Environmental	Winter Garden, FL	hours	20	$80.00	$1,600	2-man crew for 1-day; OSHA Level C PPE.
		Sample rinsate	Shaw Environmental	Winter Garden, FL	hours	2.5	$80.00	$200	20 samples by 2-man crew
		Test rinsate (lab cost)	Columbia Analytical Services	Jacksonville, FL	1-test per sample	20	$40.00	$800	EPA Method 7470; Columbia Analytical Services contacted for pricing at 1-800-695-7222
		Transport contaminated rinsate (leachate) by a licensed hazardous waste hauler to a Chemical Waste Landfill for disposal	Waste Management	Emelle, AL	55-gal. drum ($65 /drum + $150 pickup fee)	10	$65.00	$800	**Ten (10) 55-gallon drums** will have to be transported. Unit pricing of $65 per 55-gallon drum plus **ADDED** a $150 stop fee per pickup.
		Landfill Disposal of any contaminated rinsate (leachate) and other matls (e.g., rags, wipes, PPE, etc.).	Waste Management - Emelle Landfill	Emelle, AL	55-gallon drum ($248 /drum + $220 profile fees)	10	$248.00	$2,700	**Ten (10) 55-gallon drums** will have to be disposed of. Unit pricing of $248 per 55-gallon drum (assumes half liquid + half rags) plus **ADDED** ADEM and WM Profile Fees of $170 and $50, respectively.
13	→ Walls, Ceiling, & Floor	**Decontaminate** w/ rinsate	Shaw Environmental	Winter Garden, FL	hours	32	$80.00	$2,560	2-man crew for 2-days; OSHA Level C PPE. Main area to be decontaminated and tested is the Processing Area (70.6' x 51.6')
		Sample rinsate	Shaw Environmental	Winter Garden, FL	hours	6	$80.00	$480	48 samples by 2-man crew
		Test rinsate (lab cost)	Columbia Analytical Services	Jacksonville, FL	1-test per sample	48	$40.00	$1,920	EPA Method 7470; Columbia Analytical Services contacted for pricing at 1-800-695-7222
		Transport contaminated rinsate (leachate) by a licensed hazardous waste hauler to a Chemical Waste Landfill for disposal	Waste Management	Emelle, AL	55-gal. drum ($65 /drum + $150 pickup fee)	34	$65.00	$2,360	**Twenty-Four (24) 55-gallon drums** will have to be transported. Unit pricing of $65 per 55-gallon drum plus **ADDED** a $150 stop fee per pickup.

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Line Item #	Description		Service Provider / RS Means: Name	Service Provider / RS Means: Location	Units	Quantity	Unit Cost	Total Cost	Notes
		Landfill Disposal of any contaminated rinsate (leachate) and other matls (e.g., rags, wipes, PPE, debris, insulation / batting - from walls and ceiling, etc.).	Waste Management - Emelle Landfill	Emelle, AL	55-gallon drum ($248 /drum + $220 profile fees)	34	$248.00	$8,652	**Twenty-Four (24) 55-gallon drums** will have to be disposed of. Unit pricing of $248 per 55-gallon drum (assumes half liquid + half rags) plus **ADDED** Alabama-DEM and WM Profile Fees of $170 and $50, respectively.
14	→ Soils	**Sample** soil	Shaw Environmental	Winter Garden, FL	hours	10	$80.00	$800	1-person OSHA Level C PPE
		Test soil (lab cost)	Columbia Analytical Services	Jacksonville, FL	1-test per sample	6	$40.00	$240	EPA Method 7471; Columbia Analytical Services contacted for pricing at 1-800-695-7222
Preparation and Travel Time for Field Work (decontamination work)			Shaw Environmental	Winter Garden, FL	hours	16	$80.00	$1,280	2-man crew (includes developing a Health & Safety Plan and Work Plan for decontamination activities)
Field Supplies, Materials, Equipment (absorbent booms,Level C PPE HEPA vacuum, mercury vapor monitor, mercury vapor analyzer, power washer, etc.), and other Direct Expenses for decon. work			Shaw Environmental	Winter Garden, FL	lump sum	1	$3,500.00	$3,500	Wash the affected area with a mercury vapor suppression solution, such as HgX®
Removal of Decontaminated Containers & Equipment by Metal Reclaimer:									
Transport and Reclamation by Metal Reclaimer			TOTALL Metal Recycling	Granite City, IL	*semi-trailers*	3	**no charge**	**see note**	TOTALL Metal Recycling provides free hauling and pays Lighting Resources a fixed dollar amount based on buy-back agreement for metal end caps. TOTALL Metal Recycling provides trailer / containers on Site (i.e, at the Lighting Resources Ocala, FL Facility).
							Subtotal:	**$45,672**	
PREPARE CLOSURE CERTIFICATION REPORT:									
Prepare draft and final report			Shaw Environmental	Winter Garden, FL	hours	40	$140	**$5,600**	Assume final site inspection, write-up of field notes/reports, prepare two review drafts and one final draft for submission to DEP.
							Subtotal:	**$128,944**	Closure Funding Schedule Calculations
							ADD 10% Contingency:	**$12,894**	108240 / 5 = 21,648 43296 to 6/13
							TOTAL COSTS:	**$141,839**	Increase $33,599/5 - $6,720 year 1 to 12/2013

Client#: 125807 40LIGHTINGRE

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 9/29/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
J. Smith Lanier & Co Knoxville
413 Northshore Drive, SW
Knoxville, TN 37919
865 588-7200

CONTACT NAME:
PHONE (A/C, No, Ext): 865 588-7200 FAX (A/C, No): 865 588-7224
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Westchester Surplus Lines Ins.	10172
INSURER B : Cypress Insurance Company	10855
INSURER C : Berkshire Hathaway Homestate Co	20044
INSURER D : ACE American Insurance Company	22667
INSURER E :	
INSURER F :	

INSURED
Lighting Resources, LLC
1919 Williams St, #350
Simi Valley, CA 93065

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY			G23832161008	10/01/2014	10/01/2015	EACH OCCURRENCE	$1,000,000
	X COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$100,000
	CLAIMS-MADE X OCCUR						MED EXP (Any one person)	$25,000
	X BI/PD Ded:5,000						PERSONAL & ADV INJURY	$1,000,000
	X Professional Liab			$1,000,000 Limit			GENERAL AGGREGATE	$5,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:			$5,000,000 Agg			PRODUCTS - COMP/OP AGG	$5,000,000
	X POLICY PRO-JECT LOC			$10,000 Ded				$
D	AUTOMOBILE LIABILITY			HO8416266008	10/01/2014	10/01/2015	COMBINED SINGLE LIMIT (Ea accident)	$1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	ALL OWNED AUTOS / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS / X NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
A	UMBRELLA LIAB X OCCUR			G23832173008	10/01/2014	10/01/2015	EACH OCCURRENCE	$5,000,000
	X EXCESS LIAB CLAIMS-MADE						AGGREGATE	$5,000,000
	DED RETENTION $							$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			3300065647131	10/01/2014	10/01/2015	X WC STATU-TORY LIMITS / OTH-ER	
C	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		AZW001430	10/01/2014	10/01/2015	E.L. EACH ACCIDENT	$1,000,000
							E.L. DISEASE - EA EMPLOYEE	$1,000,000
							E.L. DISEASE - POLICY LIMIT	$1,000,000
A	Pollution Legal Liability			G23832161008	10/01/2014	10/01/2015	$1,000,000/$5,000,000 $10,000 Deductible	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Umbrella Liability Extends to Pollution Coverage

CERTIFICATE HOLDER

Lighting Resources, LLC
Attn: Bonnie Bishop
1007 SW 16th Lane
Ocala, FL 34471

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Florida Department of Environmental Protection

Bob Martínez Building
2600 Blair Stone Road / MS 4548
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos López-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

Sent Via E-Mail August 15, 2015
Jason.Muhlenkamp@LightingResourcesInc.com

Mr. Jason Muhlenkamp
Lighting Resources, LLC
1007 Southwest 16th Lane
Ocala, Florida 34471

Re: FLR 000 070 565
Lighting Resources, LLC
1007 Southwest 16th Lane
Ocala, Florida 34471

Subject: **Financial Responsibility Compliance for 2015**

Dear Mr. Muhlenkamp:

The Department has received the documentation submitted to demonstrate financial responsibility for the above referenced facility. The First Interstate Bank trust fund account number 32659560 established on April 16, 2012 currently indicates an amount of **$112,722** (4/5 of the total of $138,956) to cover the closure cost. In addition, a Westchester Surplus Lines Insurance Company certificate of liability insurance effective October 1, 2014 demonstrates the required coverage for general liability (policy number G23832161008) and pollution liability (policy number G23832161008).

Therefore, Lighting Resources is in compliance with the hazardous waste facility financial responsibility requirements of 40 CFR Part 264 Subpart H as adopted by reference in Rule 62-737.800 of the Florida Administrative Code.

If you have any questions, please contact me at 850-245-8793.

Sincerely,

Edgar Echevarría

Edgar Echevarría
Permitting & Compliance Assistance Program
Division of Waste Management

EE

Copy: Stewart.RobertG@EPAmail.EPA.gov
Tom.Lubozynski@DEP.State.Fl.US
FDEP File

7.0 CLOSURE PLAN

This Closure Plan has been prepared to meet the closure requirements of 62-737 F.A.C. A closure date for the Lighting Resources Facility has not been established and it is anticipated that the Facility will remain open and operate indefinitely. For purposes of this closure plan, a nominal date of twenty years from issuance of this permit has been chosen; therefore, the date for which closure activities would begin was assumed to be January 2032. It is recognized, however, that the term of permits issued by the DEP is five (5) years and will require periodic renewal.

7.1 Closure Procedures

It is anticipated that the Facility will remain open and operate indefinitely. However, for purposes of this Closure Plan the procedures for final closure of the Facility are the following:

- Notification of intent to close will be provided by Lighting Resources to DEP and to current clients at a minimum of 30 days prior to initiating any closure activities.
- Cease acceptance of universal wastes and lamp materials. Advance notice to clients will be provided so that they can redirect their materials to other authorized / permitted facilities.
- Complete the processing of existing inventory of lamps (MCLs); the sorting/segregation and containerization of other materials for loadout (batteries, ballasts, mercury containing devices, lamp glass, lamp metals, and phosphor powder, etc.).
- Transport inventory of remaining waste materials not processed by Facility, co-products and recovered materials to appropriate outlets, customers and authorized off-site treatment, recycling, or disposal sites.
- Visually inspect containment systems, floors, walls, ceilings, and equipment surfaces inside the Facility building for evidence of contamination. If visual contamination is suspected then sampling, analytical testing, and decontamination procedures will be followed in accordance with procedures outlined in **Section. 7.3** and **Appendix E** of this Report.
- If no visual contamination is evident, the hazardous materials containment systems will be steam washed. The resulting wash water from this activity will be sampled, analyzed, and disposed of in accordance with applicable regulations.
- Lighting Resources will submit appropriate certification of closure to DEP.

7.2 Maximum Inventory Estimate

With the exception of the unprocessed MCLs (whole lamps) and lamp glass cullet, the maximum inventory to be stored at the Facility was estimated in drum equivalents and by weight. Drum equivalents and estimated weights (shown in parenthesis) were used in order to prepare the closure cost estimate. Most of the service vendors had provided pricing based on number of drums or poundage. The maximum storage limits based on physical space limitations were used to estimate the volumes presented in **Table 7-1** on the following page.

1Table 7-1 Lighting Resources, LLC – Mercury Recovery Facility, Ocala, FL Maximum Material Inventory at Closure		
Material	**Volume Estimate**	**Assumptions**
Mercury Containing Devices (MCDs)	Four (4) 55-gallon drums (3,000 lbs)	Assumed volume based on maximum available on-site storage for MCDs (refer to **Table 3-2** in Section 3 of this Report for full description of assumptions)
Mercury Containing Lamps (MCLs):		
Unprocessed MCLs	140,000 type T-12, 4-ft fluorescent lamps (90,000-lbs)	Volume was intentionally assumed higher (140,000 MCLs) than the maximum on-site storage of 139,104 lamps in order to provide a conservative closure cost estimate (refer to **Table 3-2** in Section 3 of this Report for full description of assumptions)
Processed / Crushed MCLs	Fifty-Six (56) 55-gallon drums (28,000-lbs)	Assumed volumes based on maximum available on-site storage (refer to **Table 3-2** in Section 3 of this Report for full description of assumptions)
Phosphor Powder (containing mercury)	Thirty-two (32) 55-gallon drums (24,000-lbs)	
Separated Lamp Glass (cullet)	Four (4) Rolloffs (<30,000 x 4 = 120,000 lbs)	
Separated Lamp Metals	Sixty (60) 55-gallon drums (45,000-lbs)	
Lamp Ballasts:		
Non-PCB Lamp Ballasts	Thirty (30) 55-gallon drums (22,500-lbs)	Assumed volumes based on maximum available on-site storage (refer to **Table 3-2** in Section 3 of this Report for full description of assumptions)
PCB Lamp Ballasts	Ten (10) 55-gallon drums (7,500-lbs)	
Batteries:		
Large and small type batteries	Twenty-four (24) 55-gallon drum (750 lbs each for 18,000 lbs)	Assumed volumes based on maximum available on-site storage (refer to **Table 3-2** in Section 3 of this Report for full description of assumptions)

7.3 Decontamination Procedures

A detailed discussion of decontamination procedures is provided in **Appendix E** of this Report. A summary of the decontamination procedures is outlined below:

- Facility Equipment: If contamination is visually observed or suspected on equipment, the following steps will be taken to decontaminate the affected equipment:
  - Disassemble equipment if possible.
  - Wash thoroughly with ES7X® laboratory detergent (or approved equivalent) and hot tap water using a brush to remove particulate matter or surface film.
  - Rinse thoroughly with deionized water and allow to air dry.
  - Using wipe samples confirm equipment is completely decontaminated.

- If laboratory results of wipe samples confirm equipment is clean, then proceed to next step. If results indicate equipment is still contaminated, repeat above steps as necessary until a clean confirmation is obtained.
- Wrap equipment completely with plastic ("shrink") wrap or containerize to prevent contamination during staging and transport.

- Area B Lamp Processing Room Equipment: The lamp process equipment and associated components in the Lamp Processing Room (Area B) will be disassembled, cleaned, using the methods described above, and either sold to third parties for reuse, or as recycled scrap materials.

- Areas A, B, and C Surfaces: Wipe samples of all surfaces (including but not limited to floors, walls, and ceilings) will be collected from all material handling, processing, and staging areas (i.e., Areas A, B, and C) throughout the Facility and will be analyzed for mercury. If there are hazardous levels of mercury, the following steps will be followed to decontaminate:

  For solid surfaces (including floors and half walls):

  - Using a solution of deionized water and mercury cleaning chemicals (e.g., ES7X® or approved equivalent), wipe and mop affected surfaces.
  - Take wipes samples and test subsequent to cleaning / decontamination efforts.
  - If laboratory results of wipe samples confirm surface area is clean, then stop. If results indicate surface is still contaminated, repeat above steps as necessary until a clean confirmation is obtained. This step will be repeated until the areas have been tested clean.

  For areas with batting / insulation (including ceilings and areas above half walls):

  - If batting is intact, vacuum surface using a mercury HEPA / ULPA filtered vacuum (i.e., use only a mercury removal vacuum that has appropriate filters).
  - Take wipe samples of the vacuumed surface to confirm if surface is clean.
  - If laboratory results of wipe samples confirm surface is clean, then stop. If results indicate surface is still contaminated, repeat above steps as necessary until a clean confirmation is obtained.
  - If batting is not intact, completely remove batting and containerize in lined 55-gallon drums. Transport drums using a licensed hazardous waste hauler to a facility authorized and permitted to receive such materials.
  - Vacuum the exposed surface from where the batting was removed using the mercury HEPA / ULPA filtered vacuum that has been exposed from the area where batting was removed using a mercury HEPA / ULPA filtered vacuum (i.e., use only a mercury removal vacuum that has appropriate filters).
  - Take wipe samples of the vacuumed surface in area where batting was removed to confirm if surface is clean.
  - If laboratory results of wipe samples confirm surface is clean, then stop. If results indicate the surface is contaminated, repeat above steps as necessary until a clean confirmation is obtained.

- All Other Areas: If contamination is visually observed or suspected on other areas specifically not listed above, steps will be taken to decontaminate and clean the affected area using the appropriate methods described above (and detailed in **Appendix E**), and repeated as necessary until the affected area tests clean.

If contamination is not observed from sampling and testing activities (as outlined above and in **Appendix E**), the subject area(s) will be cleaned using the best available method for proper decontamination. The lamp processing and storage areas will be cleaned using a combination of wiping with water and vacuuming with a treated carbon system. Walls, floors, and other surfaces (electrical conduits, light switches, outlets, tops of suspended lighting fixtures, etc.) will be wiped, swept, vacuumed, and water or steam washed. If needed, solutions of dilute nitric acid, bleach, or degreasing compound will be used. The rinsate from washing will be collected, sampled, analyzed, and disposed of in accordance with applicable regulations.

Confirmation of Sampling Plan for Structures, Equipment, Buildings and Outdoor Areas

Confirmation sampling and testing will be performed in accordance with the procedures outlined in the *Sampling and Testing Standard Operating Procedures* (see **Appendix E**). To ensure the Facility has been completely decontaminated, a series of wipe samples and tests will be performed. A detailed *Closure Sampling and Testing Plan* that would include the methods, sample location diagrams, and frequency for sampling and testing can be submitted to DEP in advance of beginning closure activities for review and approval.

Confirmation of Soil Sampling

Confirmation sampling and testing of soils will be performed in accordance with the procedures outlined in the *Sampling and Testing Standard Operating Procedures* (see **Appendix E**). Areas determined to be contaminated will be over excavated, containerized, and transported offsite by a licensed hazardous waste hauler to a RCRA Subtitle C landfill facility authorized and permitted to dispose of such materials. A detailed Closure Sampling and Testing Plan that would include the methods, sample location diagrams, and frequency for sampling and testing can be submitted to DEP in advance of beginning closure activities for review and approval.

Analytical Test Methods/Standards

Analytical methods for testing mercury or other contamination are the EPA (RCRA- SW 846) recommended methods. After decontamination, process equipment, vehicles, drums, other containers will be removed from the building, and waste materials, hazardous or non-hazardous will be managed in accordance with applicable regulations.

7.4 Closure Schedule

For purposes of this closure plan, a nominal date of twenty years from issuance of this permit has been chosen; therefore, the date for which closure activities would begin was assumed to be May 2032. Milestones for the completion of closure activities are listed in **Table 7-2** on the following page. The estimated time to complete closure is approximately four months. Therefore, the Facility does not foresee any problems complying with required closure timeframe of 180-days.

Table 7-2 Lighting Resources, LLC – Mercury Recovery Facility, Ocala, FL Closure Schedule		
Activity	**Time to Complete**	**Assumptions**
Notification given to FL-DEP that Facility will be closing	*(advance notice will be given prior to closure)*	*Conservatively* assume a 60-day advance notice
Facility Closure Activities Begin May 1, 2032:		
Final volume of processed materials and universal wastes transported offsite to other facilities for further processing, recycling, and/or disposal	Two weeks (10-days)	
Dismantling / dis-assembly of lamp process equipment	Two weeks (10- days)	Assumes 2-man crew on site
Decontamination of dismantled lamp process equipment, containers, floors, and walls (includes sampling and lab testing of rinsate)	Three weeks (15-days)	Assumes 2-man crew working 5-days on site + total of 10-days for lab testing
Sampling / testing of soils	Six (6) days	Assumes 1-person / 1-day on site to collect samples + total of 5-days for lab testing
Removal / transport of dismantled / decontaminated equipment and containers to a metal recycler	Two weeks (10-days)	
Removal / transport of contaminated materials / wastes (sample wipes, rinsate, filters, etc.) to a treatment / disposal facility	Two weeks (10-days)	
Conduct final site inspection, and prepare and submit Closure Certification Report to DEP	Three weeks (15-days)	
TOTAL CLOSURE TIME: 15-weeks and 1-day	**CLOSURE COMPLETION DATE: Mid- to Late August 2032**	

7.5 Closure Cost Estimate

The closure cost estimate for the Lighting Resources Facility has been prepared based on the following worst-case conditions:

- Maximum Facility storage volumes for materials,
- Materials will be transferred off-site to a third party reclamation, treatment, recycling, or disposal facility,
- No salvage value for decommissioned structures or equipment,
- Materials with potential economic value are assumed to have zero dollar value, and
- Decommissioning, decontamination, and sampling / testing will be performed by a third party consultant.

The closure cost estimate is adjusted annually for inflation using DEP's inflation factors. Further, the closure cost estimate is amended whenever there are changes in operating plans or Facility design that may affect the closure plan. The closure cost estimate is provided on **Table 7-3** on the following pages. The cost estimate electronic spreadsheet file with backup data is also provided in **Appendix F** (includes Excel spreadsheet file on USB Flash Drive and service provider pricing sheets).

7.6 Financial Assurance Mechanism

The financial assurance that has been established for the closure of the Facility is a Trust Fund Agreement (DEP Form # 62-730.900(4)(e)). A copy of the financial assurance form is provided in **Appendix G**. During the life of the Facility, the financial assurance is revised / updated in accordance with permit modifications or changes in the closure cost estimate. Post-closure care is not included in the closure cost estimate since no wastes or waste residues will remain at the Facility after the closure activities are completed.

7.7 Closure Certification

Final closure of the Facility will be certified by the operator and a third party professional engineer registered in the State of Florida. The closure certification will be submitted within 60 days of completion of closure activities. The third party engineer will be present during critical points of the closure and subsequent to completing closure activities for a final site inspection.

The third party engineer will prepare a closure certification report for submittal to DEP. The certification report will contain the following documentation:

- Volume of waste and waste residue removed;
- Written description of the method of waste handling and transport;
- Copies of waste manifests, shipping papers, or bills of lading for the off-site treatment, recycling, or disposal of materials (i.e., wastes, waste residues, recoverable materials) removed from the site during closure;
- Written description of the decontamination, and sampling and testing methods used, including handling methods (i.e., containers, preservatives, ice chests, and chain of custody forms);
- Complete documentation of analytical test results;
- Written chronological summary of closure activities and associated costs;
- Photographic documentation of closure activities;
- Written description of field tests performed, methods and results;
- Daily field logs; and
- Plan drawings of sample locations and areas remediated pursuant to closure activities.