

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

**INVESTIGATION OF KENTUCKY UTILITIES )  
COMPANY'S AND LOUISVILLE GAS & )  
ELECTRIC COMPANY'S RESPECTIVE NEED ) CASE NO. 2015-00194  
FOR AND COST OF MULTIPHASE LANDFILLS )  
AT THE TRIMBLE COUNTY AND GHENT )  
GENERATING STATIONS )**

**RESPONSE OF  
KENTUCKY UTILITIES COMPANY AND  
LOUISVILLE GAS AND ELECTRIC COMPANY**

**TO INFORMATION REQUESTED AT HEARING  
HELD ON SEPTEMBER 14 AND SEPTEMBER 15, 2015**

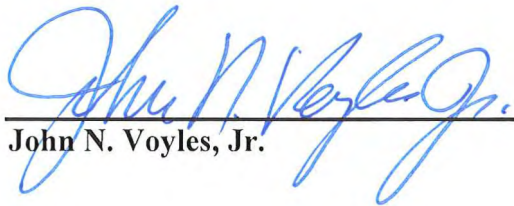
**CONFIDENTIAL INFORMATION REDACTED**

**FILED: SEPTEMBER 24, 2015**


VERIFICATION

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

The undersigned, **John N. Voyles, Jr.**, being duly sworn, deposes and says that he is the Vice President, Transmission and Generation Services for Louisville Gas and Electric Company and Kentucky Utilities Company and an employee of LG&E and KU Services Company, that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

  
\_\_\_\_\_  
John N. Voyles, Jr.

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 24<sup>th</sup> day of September 2015.

 (SEAL)  
\_\_\_\_\_  
Notary Public

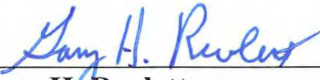
My Commission Expires:

**JUDY SCHOOLER**  
**Notary Public, State at Large, KY**  
~~My commission expires July 11, 2018~~  
**Notary ID # 512743**

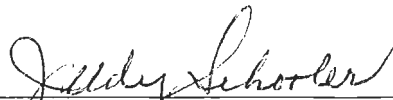
VERIFICATION

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

The undersigned, **Gary H. Revlett**, being duly sworn, deposes and says that he is Director – Environmental Affairs for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

  
\_\_\_\_\_  
Gary H. Revlett

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 24th day of September 2015.

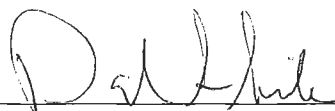
  
\_\_\_\_\_  
Notary Public (SEAL)

My Commission Expires:  
JUDY SCHOGLER  
Notary Public, State at Large, KY  
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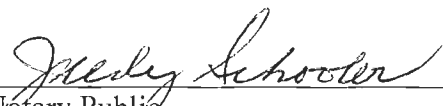
VERIFICATION

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

The undersigned, **David S. Sinclair**, being duly sworn, deposes and says that he is Vice President, Energy Supply and Analysis for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

  
\_\_\_\_\_  
**David S. Sinclair**

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 24<sup>th</sup> day of September 2015.

  
\_\_\_\_\_  
Notary Public (SEAL)

My Commission Expires:  
**JUDY SCHOOLER**  
**Notary Public, State at Large, KY**  
**My commission expires July 11, 2018**  
**Notary ID # 512743**

**KENTUCKY UTILITIES COMPANY  
LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at Hearing  
Held on September 14 and September 15, 2015**

**Case No. 2015-00194**

**Question No. 1**

**Witness: John N. Voyles**

- Q-1. Provide the cost of the Holcim barge-loading facility from the Companies' 2009 ECR Plan cases.
- A-1. The actual capital cost of the Holcim barge-loading facility included in the Companies' monthly ECR filings is \$8.9 million (net).

**KENTUCKY UTILITIES COMPANY  
LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at Hearing  
Held on September 14 and September 15, 2015**

**Case No. 2015-00194**

**Question No. 2**

**Witness: John N. Voyles**

- Q-2. Provide the initial cost estimate for the Ghent CCRT from KU's 2009 ECR case.
- A-2. The initial capital cost estimate for the Ghent CCRT from KU's 2009 ECR case was \$136.9 million. Refer to the highlighted items in the attached "Ghent Landfill Phase I" cost estimate. This estimate was provided as an attachment to a data response in the 2009 ECR case.

## GHENT LANDFILL (PHASE I)

Capital Expenditures (\$ million)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
<b>Property Acquisition</b>											
Disposal Site(s)	-	-	4.66	-	-	-	-	-	-	-	4.66
Overhead Electric Line(s)	-	-	0.03	-	-	-	-	-	-	-	0.03
Buffer Zones	-	-	-	-	2.37	-	-	-	-	-	2.37
<b>Higher End House Acquisition</b>											
Engineering, Permits and Fees, and Construction Documents	0.46	2.00	-	-	-	-	-	-	-	-	2.46
Stream and Wetland Mitigation	-	-	4.14	-	-	-	-	-	-	-	4.14
Ground Water Monitoring System	-	0.27	-	-	-	-	-	-	-	-	0.27
Transmission Line Relocation Design, Engineering, and Construction	-	-	-	-	0.82	-	-	-	-	-	0.82
CCWD Relocation	-	-	0.12	-	-	-	-	-	-	-	0.12
<b>Pump House Fly Ash and Bottom Ash Segregation</b>											
Dry Ash/Pyrites Handling System - Conveyor	-	0.72	-	-	-	-	-	-	-	-	0.72
Dry Gypsum Handling System	-	-	16.29	27.08	38.93	-	-	-	-	-	82.31
Gypsum Fines Project	-	-	7.79	15.96	13.05	-	-	-	-	-	36.80
<b>Initial Site Preparation</b>											
Clearing, Grubbing, and Site Preparation	-	-	-	0.62	0.65	0.69	-	-	-	-	1.96
Stripping and Stockpiling Soil	-	-	-	0.50	0.53	0.56	-	-	-	-	1.58
Hauling Topsoil - Phase 1 - 1.0 Mile Round Trip	-	-	-	0.19	0.20	0.21	-	-	-	-	0.59
Erosion and Sedimentation Controls	-	-	-	0.06	0.06	0.06	-	-	-	-	0.18
Sedimentation Pond	-	-	-	0.33	-	-	-	-	-	-	0.33
Collection Channels (Fabriform)	-	-	-	0.36	0.38	0.40	-	-	-	-	1.15
Diversion Channels (Riprap)	-	-	-	0.11	0.12	0.12	-	-	-	-	0.35
<b>Liner Subgrade Preparation</b>											
Scraping and Hauling - 0.25 Mile Round Trip	-	-	-	0.32	0.33	0.35	-	-	-	-	1.01
Excavating	-	-	-	0.15	0.16	0.17	-	-	-	-	0.49
Hauling Subgrade - Phase 1 - 1.0 Mile Round Trip	-	-	-	0.31	0.33	0.35	-	-	-	-	0.99
Spreading and Compacting Subgrade	-	-	-	0.49	0.52	0.55	-	-	-	-	1.57
Subgrade QA/QC	-	-	-	0.24	0.25	0.27	-	-	-	-	0.76
<b>Gypsum Dewatering Facility Earthwork</b>											
Excavating	-	-	-	0.73	-	-	-	-	-	-	0.73
Hauling Earth - 1.0 Mile Round Trip	-	-	-	1.53	-	-	-	-	-	-	1.53
Spreading and Compacting	-	-	-	1.21	-	-	-	-	-	-	1.21
Earthwork QA/QC	-	-	-	0.24	-	-	-	-	-	-	0.24

Attachment to Response to KIUC Question No. 1-4(a)

Page 1 of 3

Voyles

Attachment to Response to Question 2

Page 1 of 3

Voyles

## GHENT LANDFILL (PHASE I)

Capital Expenditures (\$ million)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
<b>Haul Roads</b>											
CCP Disposal On-Landfill Haul Road (60 Feet Wide)	-	-	-	-	0.61	0.05	0.05	0.05	0.05	0.06	0.87
CCP Disposal Off-Landfill Haul Road (60 Feet Wide)	-	-	-	0.30	1.03	-	-	-	-	-	1.33
<b>Liner</b>											
Landfill - Single Liner System	-	-	-	-	7.00	7.43	7.87	-	-	-	22.30
Liner System QA/QC	-	-	-	-	1.23	1.30	1.38	-	-	-	3.90
Leachate Collector Line	-	-	-	-	0.19	0.20	0.21	-	-	-	0.60
On-Landfill Leachate Trunk Line	-	-	-	-	0.08	0.08	0.09	-	-	-	0.25
Off-Landfill Leachate Trunk Line	-	-	-	-	0.07	-	-	-	-	-	0.07
Leachate Storage Pond	-	-	-	-	0.29	-	-	-	-	-	0.29
Leachate Pump House	-	-	-	-	0.09	-	-	-	-	-	0.09
Leachate Pipe Line	-	-	-	-	0.08	-	-	-	-	-	0.08
Underdrains - Trunk	-	-	-	-	0.17	0.18	0.19	-	-	-	0.54
Underdrains - Collector	-	-	-	-	0.11	0.12	0.12	-	-	-	0.35
<b>Cap</b>											
Intermediate Soil Cover	-	-	-	-	-	-	0.28	0.30	0.32	0.34	1.24
Cap System	-	-	-	-	-	-	0.22	0.23	0.25	0.26	0.96
Cap System QA/QC	-	-	-	-	-	-	0.03	0.03	0.03	0.03	0.12
<b>Total</b>	<b>0.46</b>	<b>3.72</b>	<b>40.73</b>	<b>57.01</b>	<b>69.65</b>	<b>13.10</b>	<b>10.44</b>	<b>0.62</b>	<b>0.65</b>	<b>0.69</b>	<b>197.07</b>
E.ON-US Overheads	0.02	0.13	1.43	2.00	2.44	0.46	0.37	0.02	0.02	0.02	6.90
<b>Total with Overheads</b>	<b>0.47</b>	<b>3.85</b>	<b>42.16</b>	<b>59.01</b>	<b>72.09</b>	<b>13.56</b>	<b>10.81</b>	<b>0.64</b>	<b>0.68</b>	<b>0.72</b>	<b>203.97</b>



## GHENT LANDFILL (PHASE I)

Operating & Maintenance Costs (\$)	2010	2011	2012	2013	2014	2015	2016	2017
Ground Water Sampling and Testing	14,045	14,888	15,781	16,728	17,731	18,795	19,923	21,118
Leachate Management	-	-	-	83,639	88,657	93,977	99,616	105,592
Surveying (As-builts)	16,292	17,270	-18,306	19,404	20,569	21,803	23,111	24,497
Pump House Fly Ash and Bottom Ash Segregation	75,843	80,394	85,217	-	-	-	-	-
Dry Ash/Pyrites Handling System - Conveyor	-	-	-	2,161,234	2,290,908	2,428,363	2,574,065	2,728,509
Dry Gypsum Handling System	-	-	-	682,495	723,445	766,851	812,863	861,634
Leachate Pump House	15,169	16,079	17,043	18,066	19,150	20,299	21,517	22,808
<b>Hauling Fly Ash and Bottom Ash to Landfill</b>								
Loading	-	-	-	1,338,226	1,418,519	1,503,630	1,593,848	1,689,479
Phase 1 - 2.25 Mile Round Trip	-	-	-	2,822,723	2,992,087	3,171,612	3,361,909	3,563,623
<b>Hauling Gypsum to Landfill</b>								
Loading	-	-	-	1,746,384	1,851,167	1,962,237	2,079,972	2,204,770
Phase 1 - 2.25 Mile Round Trip	-	-	-	3,997,156	4,236,986	4,491,205	4,760,677	5,046,318
Landfilling Fly Ash and Bottom Ash	-	-	-	2,408,806	2,553,334	2,706,534	2,868,927	3,041,062
Landfilling Gypsum	-	-	-	3,143,492	3,332,101	3,532,027	3,743,949	3,968,586
Ash/Gypsum Placement QA/QC	-	-	-	54,198	57,450	60,897	64,551	68,424
<b>Maintenance</b>								
Landfills	-	-	-	301,101	319,167	338,317	358,616	380,133
Haul Roads	-	-	-	53,529	56,741	60,145	63,754	67,579
Dust Control	-	-	-	156,126	165,494	175,424	185,949	197,106
<b>TOTAL</b>	<b>121,349</b>	<b>128,630</b>	<b>136,348</b>	<b>19,003,308</b>	<b>20,143,507</b>	<b>21,352,117</b>	<b>22,633,244</b>	<b>23,991,239</b>

**KENTUCKY UTILITIES COMPANY  
LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at Hearing  
Held on September 14 and September 15, 2015**

**Case No. 2015-00194**

**Question No. 3**

**Witness: John N. Voyles**

- Q-3. Provide the September 2015 budgeted figures for the Trimble County landfill by phase and category.
- A-3. The 2015 budgeted figures have essentially not changed. However, in the preparation of the 2016 Business Plan, the Companies modified the pace for installing the lining systems under each of the first two phases of the landfill. This reflects lessons learned from Ghent Phase I landfill experiences to avoid exposure to storm water runoff from significant rain events which can cause erosion of portions of the liner systems installed during the early years of each phase. In doing this, the costs have increased by \$22.4 million (net) for Phase I and \$7.5 million (net) for Phase II. The effect of escalation (4% annual) for this timing of expenditures accounts for \$26.5 million of the increase. The other \$3.4 million is attributed to scope refinement. In 2015 dollars, the total increase in cost is less than \$3 million.

The Companies' Business Plan is typically finalized in the fourth quarter annually and the draft 2016 Business Plan includes the following budgeted figures for the Trimble County landfill project:

<b>Category (\$ million Net)</b>	<b>Phase I</b>		<b>Phase II</b>	<b>Phase III</b>	<b>Phase IV</b>	<b>Total All</b>
	<b>Landfill</b>	<b>CCRT</b>	<b>Landfill</b>	<b>Landfill</b>	<b>Landfill</b>	
2015 Estimate <sup>1</sup>	\$148.1	173.8	\$60.4	\$70.7	\$48.5	\$501.5
2016 Business Plan	\$168.0	176.3	\$67.9	\$70.7	\$48.5	\$531.4
Delta	\$19.9	\$2.5	\$7.5	\$0	\$0	\$29.9

Note 1: February 2015 estimate shown in the table on page 13 of the Companies' Application in Case No. 2015-00156.

**KENTUCKY UTILITIES COMPANY  
LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at Hearing  
Held on September 14 and September 15, 2015**

**Case No. 2015-00194**

**Question No. 4**

**Witness: John N. Voyles**

- Q-4. Provide a reconciliation of the February 2015 Trimble County Phase I landfill capital cost estimate shown in the table on page 13 of the Companies' application in Case No. 2015-00156 (\$321.9 million) and the February 2015 Analysis capital cost estimate for Trimble County Phase I landfill capital cost estimate shown in the second table of the Companies' response to PSC 1-17(a) (\$254 million).
- A-4. Please see the table below. The Phase I landfill capital cost estimate shown in the table on page 13 of the Companies' application is expressed in nominal dollars and includes costs spent prior to 2014. The Phase I landfill cost estimate in the second table of the Companies' response to PSC 1-17(a) is expressed in 2014 dollars and excludes costs spent prior to 2014 as well as contingency costs in 2021. As discussed in the response to PSC 1-17(a), with the exception of the last landfill phase, contingency costs for the current landfill phase were assumed to be spent immediately prior to the need for the subsequent landfill phase and therefore reported as part of the subsequent landfill phase. The comparable values are highlighted in the table below. The sum of nominal costs between 2014 and 2020 is \$280.4 million. Assuming a 4% capital escalation rate, this total equates to \$254.1 million in 2014 dollars.

<b>Basis for Phase I Landfill Capital Cost Estimate on Page 13 of Application (Reflecting Companies' 75% Share; \$Nominal)</b>										
	<b>Already Spent</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>Total</b>
Phase 1 Landfill	13.3	2.9	5.1	44.0	37.7	22.8	0.7	0.7	21.0	148.1
CCRT	7.2	0.0	20.2	79.8	43.6	22.9				173.8
<b>Total</b>	<b>20.5</b>	<b>2.9</b>	<b>25.3</b>	<b>123.8</b>	<b>81.3</b>	<b>45.7</b>	<b>0.7</b>	<b>0.7</b>	<b>21.0</b>	<b>321.9</b>
<b>Basis for Phase I Landfill Capital Cost Estimate in Second Table of PSC 1-17(a) (Reflecting Companies 75% Share; \$2014*)</b>										
		<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Total</b>	
Phase 1 Landfill		2.9	4.9	40.7	33.5	19.5	0.6	0.5	102.6	
CCRT		0.0	19.4	73.8	38.8	19.6			151.6	
<b>Total</b>		<b>2.9</b>	<b>24.3</b>	<b>114.4</b>	<b>72.3</b>	<b>39.1</b>	<b>0.6</b>	<b>0.5</b>	<b>254.1</b>	

\*Derivation of costs in 2014 dollars utilizes 4% capital escalation rate.

**KENTUCKY UTILITIES COMPANY  
LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at Hearing  
Held on September 14 and September 15, 2015**

**Case No. 2015-00194**

**Question No. 5**

**Witness: Gary H. Revlett**

- Q-5. Provide a copy of the state beneficial reuse regulation.
- A-5. The definition of beneficial reuse is provided in 401 KAR 45:010 (See attached). The permitting or approval requirements are found in 401 KAR 45:060 and 45:070 (See attached).

**401 KAR 45:010. Definitions for 401 KAR Chapter 45.**

RELATES TO: KRS 224.01-010, 224.50-760

STATUTORY AUTHORITY: KRS 224.10-100(30), 224.40-305, 224.50-760(1)(d)

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100(30) authorizes the cabinet to promulgate administrative regulations not inconsistent with the provisions of law administered by the cabinet. KRS 224.40-305 requires persons who establish, construct, operate, maintain or permit the use of a waste site or facility to obtain a permit, pursuant to administrative regulations adopted by the cabinet. KRS 224.50-760(1)(d) authorizes the cabinet to promulgate administrative regulations for the management of special wastes. This administrative regulation establishes definitions for 401 KAR Chapter 45, concerning the management of special wastes and the training and certification of operators of special waste sites or facilities.

Section 1. Definitions. (1) "Beneficial reuse" means the use or reuse of special wastes, other than solids, residues and precipitate separated from or created in sewage from humans, households, or commercial establishments by the processes of a wastewater treatment plant which are subject to the provisions of 401 KAR 45:100, in a manner that complies with the environmental performance standards of 401 KAR 30:031 and all other applicable requirements of 401 KAR Chapter 45.

(2) "Certified operator" means a special waste site or facility operator who holds a valid certificate upon the successful completion of an approved training course and examination. The categories of certified operator shall be: composting operator, interim operator, landfarming operator, and landfill operator.

(3) "Closure" is defined by KRS 224.01-010(4).

(4) "Coal combustion by-products" means special waste including fly ash, bottom ash, and scrubber sludge residues produced by coal-fired electrical generating units. This waste does not include residues of refuse derived fuels such as municipal waste, tires, and solvents.

(5) "Composting" means the process by which biological decomposition of organic special waste is carried out under controlled aerobic conditions, and which stabilizes the organic fraction into a material that can easily and safely be stored, handled, and used in an environmentally acceptable manner. Composting may include a process that creates an anaerobic zone within the composting material. Composting does not include simple exposure of special waste under uncontrolled conditions resulting in natural decay.

(6) "Composting operator" means a certified operator who is the individual responsible for ensuring compliance with all permit conditions at a composting facility and who is reasonably available to the facility during operations.

(7) "Construction permit" means a formal permit issued by the cabinet to an owner or operator of a special waste site or facility that authorizes the owner or operator to commence site preparation prior to the disposal or management of special waste.

(8) "Construction/operation permit" means a formal permit issued by the cabinet to an owner or operator of a special waste site or facility that authorizes the owner or operator to accept special waste for disposal or management. This permit is issued only after the construction of the site or facility has been certified as complete by the cabinet and the necessary financial assurance has been executed.

(9) "Formal permit" means a permit for special waste landfills, landfarming operations, and composting operations issued by the cabinet after review of the designated application form and completion by the applicant of the requirements of this chapter.

(10) "Horizontal expansion" means any increase in the capacity of a special waste landfill that expands the waste boundary of the landfill beyond the original waste boundaries contained in the approved permit application.

(11) "Interim operator" means a person who assumes the position of a special waste site or facility operator in the absence of a designated certified operator. An interim operator may be a person who has not completed training that is required for a certified operator.

(12) "Landfarming facility" means a special waste site or facility for land application of sludges or other special waste by any method for purposes of disposal. It can be on any piece or pieces of land, subject to approval, and may improve the physical and chemical qualities of the land for agricultural purposes, but does not alter the topography of the application area as revealed by contours and will not disturb the soil below three (3) feet from the surface.

(13) "Landfarming operator" means a certified operator who is the individual responsible for ensuring compliance with all permit conditions at a landfarming site or facility and who is reasonably available to the site or facility during operations.

(14) "Landfill operator" means a certified operator who is the individual with primary responsibility for management and operation of a special waste landfill to assure compliance with all permit conditions and is reasonably available to the site or facility during operations.

(15) "Postclosure" means the routine care, maintenance, and monitoring of a special waste site or facility following closure of the facility.

(16) "Special waste" is defined by KRS 224.50-760(1)(a).

(17) "Special waste site or facility" means any land, real property, appurtenance, building, structure, or installation where special waste is managed, processed, beneficially reused, or disposed.

Section 2. Acronyms and Abbreviations. The acronyms and abbreviations used in this chapter are listed in Table 1.

C.F.R.	Code of Federal Regulations
EPA	Environmental Protection Agency
FDIC	Federal Deposit Insurance Corporation
FSLIC	Federal Savings and Loan Insurance Corporation
KAR	Kentucky Administrative Regulations
KPDES	Kentucky Pollutant Discharge Elimination System
KRS	Kentucky Revised Statutes
NCUA	National Credit Union Administration
NPDES	National Pollutant Discharge Elimination System
PCB	Polychlorinated Biphenyls
POTW	Publicly Owned Treatment Works
U.S.C.	United States Code
USDA	United States Department of Agriculture
USGS	United States Geological Survey

(18 Ky.R. 3076; Am. 3432; 19 Ky.R. 22; eff. 6-24-92; 32 Ky.R. 1472; 1885; eff. 5-5-2006.)

**401 KAR 45:060. Special waste permit-by-rule.**

RELATES TO: KRS 224.01, 224.10, 224.40, 224.46, 224.50, 224.99

STATUTORY AUTHORITY: KRS 224.10-100, 224.40-305, 224.50-760

NECESSITY, FUNCTION, AND CONFORMITY: KRS Chapter 224 requires the cabinet to adopt administrative regulations for the management, processing, and disposal of wastes. KRS 224.40-305 requires persons who establish, conduct, operate, maintain or permit the use of a waste site or facility to obtain a permit. This chapter establishes the permitting standards for special waste sites or facilities, and the standards applicable to all special waste sites or facilities. This administrative regulation sets forth the requirements for a special waste permit-by-rule.

Section 1. Permit-by-rule. Notwithstanding any other provision of this chapter, the following special waste sites or facilities shall be deemed to have a permit without the owner or operator having made application or registration with the cabinet, provided the operation is a practice common to the industry, is not in violation of 401 KAR 30:031, and does not present a threat or potential threat to human health or the environment:

- (1) Oil production brine pits and gas and oil drilling mud pits, during the active life of the pit, if the pit is subject to 401 KAR 5:090;
- (2) Temporary storage of special waste in piles;
- (3) Injection wells used for disposal of special waste subject to 401 KAR 5:090 or in compliance with an underground injection control permit issued by the U.S. EPA;
- (4) Surface mining impoundments and other special waste surface impoundments in substantial compliance with KPDES permits;
- (5) Surface impoundments that treat domestic sewage and that do not contain any industrial wastewater, or are publicly owned treatment works for the treatment of domestic sewage, if the facility is in compliance with the KPDES or NPDES permit;
- (6) Disposal of coal combustion fly ash, bottom ash, and scrubber sludge in an active mining operation, if the owner or operator of the mining operation:
  - (a) Has a mining permit issued under KRS Chapter 350 that includes the disposal of special waste; and
  - (b) Complies with the conditions of the mining permit; and
- (7) Beneficial reuse of coal combustion by-products as an ingredient or substitute ingredient in the manufacturing of products, including but not limited to, cement, concrete, paint, and plastics; antiskid material; highway base course; structural fill; blasting grit; roofing granules; and mine stabilization and reclamation material; provided that:
  - (a) The utilization of coal combustion by-products does not result in the creation of a nuisance condition;
  - (b) Erosion and sediment control measures consistent with sound engineering practices are undertaken;
  - (c) The use is not within 100 feet of existing streams, 300 feet of existing drinking water wells, or floodplains or wetlands, unless permission has been obtained from the appropriate regulatory agency;
  - (d) The generator characterizes the nonhazardous nature of the coal combustion by-products; and
  - (e) The generator submits to the cabinet an annual report that identifies the type and amount of waste released for reuse; the name and address of each recipient of waste; and the specific use, if known, each recipient made of the waste.

Section 2. Noncompliances. (1) The cabinet may take any appropriate enforcement actions, including corrective action or revocation, if a special waste permit-by-rule site or facility is not operating in substantial compliance with Section 1 of this administrative regulation.

(2) The cabinet may, at its discretion, require the owner or operator of a special waste permit-by-rule site or facility to upgrade the permit to a registered permit-by-rule to ensure that the requirements of this chapter and the environmental performance standards of 401 KAR 30:031 are met. (18 Ky.R. 3089; Am. 3437; eff. 6-24-92.)

**401 KAR 45:070. Special waste registered permit-by-rule.**

RELATES TO: KRS 224.01-010, 224.50-760

STATUTORY AUTHORITY: KRS 224.10-100(30), 224.10-100, 224.40-305, 224.50-760(1)(d)

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100(30) authorizes the cabinet to promulgate administrative regulations not inconsistent with the provisions of law administered by the cabinet. KRS 224.50-760(1)(d) authorizes the cabinet to promulgate administrative regulations for the management of special wastes. KRS 224.40-305 requires persons who establish, construct, operate, maintain or permit the use of a waste site or facility to obtain a permit, pursuant to administrative regulations adopted by the cabinet. This administrative regulation establishes requirements for a special waste registered permit-by-rule.

Section 1. Registered Permit-by-rule. (1) A person engaged in the following activities shall be required to register with the cabinet:

- (a) Sludge giveaway in accordance with Section 8 of 401 KAR 45:100;
- (b) Beneficial reuse of special waste not specified in Section 1(7) of 401 KAR 45:060; and
- (c) Facilities that treat and store processed special waste for distribution under Section 10 of 401 KAR 45:100.

(2) Special waste registered permit-by-rule sites or facilities shall not store, treat, reuse, or dispose of special waste without first submitting a registration to the cabinet and receiving acknowledgement, in writing, by the cabinet of acceptance of the registration in accordance with Section 2 of this administrative regulation.

Section 2. Registration Procedure for Registered Permit-by-rule. (1) Persons required to obtain a registered permit-by-rule shall complete and submit the following information:

- (a) "Registered Permit-by-rule for Sludge Giveaway" DEP 7059D (November 2005);
- (b) "Registered Permit-by-rule for Beneficial Reuse" DEP 7059F (November 2005); or
- (c) "Registered Permit-by-rule for Storage and Treatment of Processed Special Waste" DEP 7059G (November 2005).

(2) The owner or operator shall submit any additional information necessary to ensure compliance with this administrative regulation to the cabinet upon request.

(3) After submission of the appropriate registration form, the cabinet shall review the registration form. If the cabinet determines upon examination of the registration form that it fails to include all of the required information or that the registration form fails to provide the engineering, geological, or scientific information necessary to determine that the registered permit-by-rule site or facility will comply with 401 KAR 30:031, the cabinet shall notify the owner or operator that the registration form is deficient and the owner or operator shall submit the information requested by the cabinet.

(4) Owners or operators of a registered permit-by-rule site or facility may begin operation of the site or facility when the cabinet acknowledges in writing receipt of a complete registration and the cabinet determines the operation complies with the environmental performance standards of 401 KAR 30:031.

Section 3. Operation During a Registered Permit-by-rule. (1) A site or facility operating under a registered permit-by-rule, except as provided in Section 4 of this administrative regulation, shall not:

- (a) Store, treat, reuse, or dispose of special waste not specified in the registration form; or
- (b) Exceed the design capacities specified in the administrative registration form.

(2) The owner or operator of a registered permit-by-rule site or facility shall comply at all times with 401 KAR 30:031, 401 KAR 45:140, and this administrative regulation.

(3) The owner or operator of a registered permit-by-rule site or facility shall comply with the applicable provisions of 401 KAR 45:100.

Section 4. Changes To a Registered Permit-by-rule. (1) The owner or operator of a registered permit-by-rule site or facility shall submit a revised registration form identifying new types of special waste to be stored, treated, reused, or disposed at the registered permit-by-rule site or facility if the special waste type was not previously identified in the registration form.

(2) The owner or operator shall submit a revised registration form prior to increases in the design capacity of processes used at a site or facility.

(3) The owner or operator shall submit a revised registration form prior to changes in the processes for the storage, treatment, reuse, or disposal of special waste or use of additional processes.

(4) The owner or operator shall submit a revised registration form prior to changes in owners or operators of the site or facility.

(5) Changes listed in subsections (1) to (4) of this section shall not be implemented until the cabinet acknowledges in writing receipt of a complete revised registration form.

(6) If the revised registration form fails to provide the engineering, geological, or scientific information necessary to determine that the registered permit-by-rule site or facility will comply with 401 KAR 30:031, the cabinet shall notify the owner or operator that the revised registration form is deficient, and the owner or operator shall submit the information requested by the cabinet.

Section 5. Noncompliances. The cabinet may take any appropriate enforcement actions, including corrective action or revocation, if a special waste registered permit-by-rule site or facility is not operating in compliance with this administrative regulation.

Section 6. Incorporation by Reference. (1) The following material is incorporated by reference:

- (a) "Registered Permit-by-rule for Sludge Giveaway" DEP 7059D (November 2005);
- (b) "Registered Permit-by-rule for Beneficial Reuse" DEP 7059F (November 2005); or
- (c) "Registered Permit-by-rule for Storage and Treatment of Processed Special Waste" DEP 7059G (November 2005).

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Waste Management, 14 Reilly Road, Frankfort, Kentucky 40601, (502) 564-6716, Monday through Friday, 8 a.m. to 4:30 p.m., eastern time, excluding state holidays. (18 Ky.R. 3090; Am. 3438; 19 Ky.R. 23; eff. 6-24-92; 32 Ky.R. 1474; 1886; eff. 5-5-2006.)

**KENTUCKY UTILITIES COMPANY  
LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at Hearing  
Held on September 14 and September 15, 2015**

**Case No. 2015-00194**

**Question No. 6**

**Witness: Gary H. Revlett**

- Q-6. State whether the Companies have any beneficial reuse permits.
- A-6. The Companies have one registered beneficial reuse permit-by-rule. The LG&E Cane Run facility has a permit for the use of poz-o-tec (fly ash and FGD lime slurry mixture) for closure of the coal-ash pond.



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**Response to Information Requested at Hearing  
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**Case No. 2015-00194**

**Question No. 7**

**CONFIDENTIAL INFORMATION REDACTED**

**Witness: David S. Sinclair**

- Q-7. Does the Base Year Cost of the Trimble County CCRT shown in cell E6 of page 7 of Sterling Ventures' Exhibit 14 ( [REDACTED] ) include the CCR transport capital cost? Provide a breakdown of the capital cost shown in that cell.
- A-7. Yes. This capital cost assumption was used in the Companies' February 2015 analysis and includes the cost of the CCR treatment facility and pipe conveyor. The cost of the haul road ( [REDACTED] in 2013 dollars) is not included. Please see the following table. The information requested is considered to be confidential and proprietary and is subject to a pending Petition for Confidential Protection.

<b>Cost Item</b>	<b>February 2015 Cost (\$2013; 100% of Project Costs)</b>
CCR Treatment Facility	[REDACTED]
CCR Pipe Conveyor	[REDACTED]
Total	[REDACTED]

**KENTUCKY UTILITIES COMPANY  
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**Response to Information Requested at Hearing  
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**Case No. 2015-00194**

**Question No. 8**

**CONFIDENTIAL INFORMATION REDACTED**

**Witness: David S. Sinclair**

- Q-8. Reconcile the capital costs shown in cells E70 and E71 of page 2 of Sterling Ventures' Exhibit 15 ( [REDACTED] and [REDACTED], respectively) with the capital cost shown in cell E130 of page 8 of Sterling Ventures' Exhibit 14 ( [REDACTED] ).
- A-8. The values in Sterling Ventures' Exhibit 14 are taken from the Companies' February 2015 analysis and reflect 100% of project costs. The value in Sterling Ventures' Exhibit 15 is taken from the Companies' May 2015 analysis and reflects the Companies' 75% share of project costs. This explains the majority of the difference in the referenced values. In the May 2015 analysis, the timing of CCR treatment and pipe conveyor costs was modified slightly and the portion of the total allocated to the pipe conveyor was updated based on a cost estimate from the Companies' Owner's Engineer Burns & McDonnell. Please see the following table. The information requested is considered to be confidential and proprietary and is subject to a pending Petition for Confidential Protection. Also see the response to Question No. 9.

<b>Cost Item</b>	<b>February 2015 Cost (\$2013; 100% of Project Costs)</b>	<b>February 2015 Cost (\$2013; 75% of Project Costs)</b>	<b>May 2015 Cost (\$2013; 75% of Project Costs)</b>
CCR Treatment Facility	[REDACTED]	[REDACTED]	[REDACTED]
CCR Pipe Conveyor	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]

**KENTUCKY UTILITIES COMPANY  
LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at Hearing  
Held on September 14 and September 15, 2015**

**Case No. 2015-00194**

**Question No. 9**

**Witness: David S. Sinclair**

- Q-9. Provide the source of, and support for, the capital cost of the CCR Pipe Conveyor shown in Table 3 on page 9 of the Sinclair Rebuttal Testimony.
- A-9. This cost estimate was developed by the Companies' Owner's Engineer Burns & McDonnell. The following table contains derivation of the cost.

<b>Description</b>	<b>Man Hours</b>	<b>Labor Cost</b>	<b>Material Cost</b>	<b>Subcontract Cost</b>	<b>Equipment Rent Cost</b>	<b>Total Cost</b>
Supply - Pipe Conveyor	0	\$0	\$13,572,849	\$0	\$0	\$13,572,849
Construct - Pipe Conveyor	74,354	\$4,341,140	\$0	\$0	\$1,115,310	\$5,456,450
Pipe Conveyor Total (gross, 100%)						\$19,029,299
Pipe Conveyor Total (net, 75%)						\$14,271,974

The table below shows how the net pipe conveyor cost was allocated to years and how the annual costs were converted to 2013 dollars for Table 3 on page 9 of the Sinclair Rebuttal Testimony.

**CCR Pipe Conveyor Costs - May 2015 Analysis (\$Millions; Reflecting the Companies' 75% Share)**

	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Total</b>
\$Nominal	0.0	11.7	2.3	0.3	14.3
\$2013*	0.0	10.4	2.0	0.2	12.6

\*Derivation of costs in 2013 dollars utilizes 4% capital escalation rate.

**KENTUCKY UTILITIES COMPANY  
LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Information Requested at Hearing  
Held on September 14 and September 15, 2015**

**Case No. 2015-00194**

**Question No. 10**

**Witness: David S. Sinclair**

- Q-10. Provide the value to Sterling Ventures of a contract with the Companies to dispose of all of the CCR from the Trimble County Generating Station.
- A-10. Assuming current levels of beneficial use and Sterling Ventures' proposed tipping fee in the Warsaw option, the nominal value of a 30-year contract ranges from \$288 million to \$303 million depending on generation levels. With no beneficial use, the nominal value of a 30-year contract ranges from \$441 million to \$456 million. These values reflect the Sterling Ventures tipping fee only (escalated at 3% per year) and exclude any costs associated with transporting CCR to Sterling Ventures' mine.