

**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 THE COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION  
DATED AUGUST 20, 2015**

**FILED: SEPTEMBER 3, 2015**

VERIFICATION

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

The undersigned, **Caryl M. Pfeiffer**, being duly sworn, deposes and says that she is Director – Corporate Fuels and By-Products for LG&E and KU Services Company, and that she has personal knowledge of the matters set forth in the responses for which she is identified as the witness, and the answers contained therein are true and correct to the best of her information, knowledge and belief.

*Caryl M. Pfeiffer*  
Caryl M. Pfeiffer

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 3rd day of September 2015.

*Judy Schooler* (SEAL)  
Notary Public

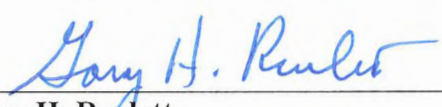
My Commission Expires:

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

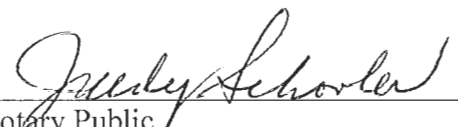
VERIFICATION

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 2nd day of September 2015.

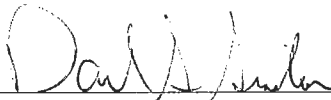
  
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Notary Public (SEAL)

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, **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 3rd day of September 2015.

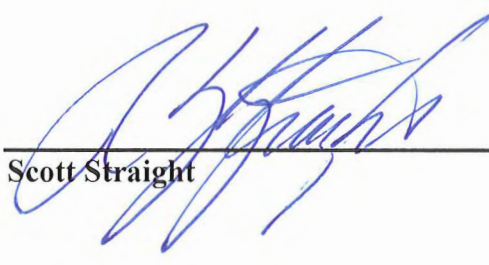
  
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**Notary Public, State at Large, KY**  
**My commission expires July 11, 2018**  
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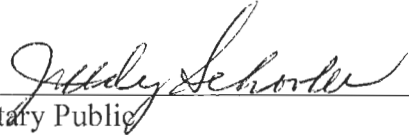
VERIFICATION

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

The undersigned, **Scott Straight**, being duly sworn, deposes and says that he is the Director of Project Engineering 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.

  
\_\_\_\_\_  
Scott Straight

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 1st day of September 2015.

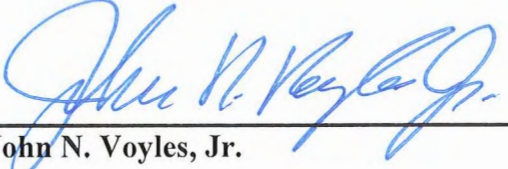
 (SEAL)  
\_\_\_\_\_  
Notary Public

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, **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 2nd 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 the Commission Staff's Second Request for Information  
Dated August 20, 2015**

**Case No. 2015-00194**

**Question No. 1**

**Witness: John N. Voyles / David S. Sinclair**

- Q-1. With the recent publication of the Environmental Protection Agency's Clean Power Plan ("CPP"), explain the expected impact of this rule on the Companies' Trimble County Generating Station ("Trimble County") and whether the Companies believe that an on-site landfill is still the more economical alternative in light of the CPP.
- A-1. Based on their review to date, the Companies continue to believe the on-site landfill is the least cost feasible alternative for the CCR materials from Trimble County Station in the light of the Clean Power Plan. Even prior to the release of the CCR Final Rule, considerations for the impact of CO<sub>2</sub> regulations were included in the analyses of the landfill need by the Companies and previously provided to the Commission staff in the Application for Declaratory Order and the response to PSC 1-18.

The Companies continue to review possible scenarios related to the release of the final rules for existing units under the Clean Power Plan. Until such time as the Commonwealth of Kentucky determines how it will respond in the development and submittal of a compliance plan, the exact impact on the Companies coal fleet, including Trimble County cannot be known with complete certainty.

More importantly, the two coal units at the Trimble County Station are the newest and among the most efficient coal units in the LG&E and KU generation fleet. Indeed, Trimble County 2 is a supercritical designed unit that produces over 20% less CO<sub>2</sub> per MWh than any other coal unit in the fleet. As such, the Companies anticipate the final rule is unlikely to have any significant impact on the operations of the Trimble County coal units.

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

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**Question No. 2**

**Witness: Gary H. Revlett**

- Q-2. Refer to the Companies' response to Commission Staff's Initial Request for Information to Kentucky Utilities Company and Louisville Gas & Electric Company ("Staff's First Request") , Item 1, at page 1 of 2. The Companies answer that one contingency plan can be to pursue agreements with Valley View's commercial landfill, which is permitted and designed to store coal combustion residuals ("CCR"). If Sterling Ventures, LLC ("Sterling Ventures"), were to successfully modify its existing permit to be able to store CCR, explain if the Valley View option would be explored and considered by the Companies.
- A-2. Should the Companies need to implement a contingency plan for CCR disposal, all viable options would be considered as a possible contingency. If the Sterling Ventures mine site had all necessary permits they would also be considered along with the Valley View Landfill option. The Companies would seek the least cost feasible contingency plan. Any such consideration would encompass not only the state of existence of Kentucky permits, but also whether the site would comply with the CCR Final Rule.



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

**Response to the Commission Staff's Second Request for Information  
Dated August 20, 2015**

**Case No. 2015-00194**

**Question No. 3**

**Witness: John N. Voyles / R. Scott Straight**

Q-3. Refer to the Companies' response to Staff's First Request, Item 4.c. Regarding Phase I Costs, CCRT, the revised estimate is \$233 million and refers to the response to Item 6.c. of Staff's First Request. Provide a break out of the costs listed in Item 6.c. of Staff's First Request as related to the \$233 million.

A-3.

Item	Description	Cost (gross \$M)
i.	Development of CCRT flow diagrams and general arrangements to include equipment redundancies typical of a utility operation which were not included in the 2009 conceptual estimate. The 2009 estimate included the assumption of utilizing a "Eurosilo" system for gypsum and fly ash that was later determined to be infeasible. After that option was eliminated, a more traditional gypsum drying and storage facility was chosen as the basis of future estimates.	77.5
ii.	In the 2009 estimate, it was assumed bottom ash and pyrites would continue to be sluiced to the BAP. The assumption was changed due to the proposed CCR Final Rule resulting in adding bottom ash treatment equipment which was anticipated to require future BAP closure.	32.3
iii.	Added conveyors for interconnection of equipment.	38.8
iv.	Added an electrical building, transformers, and switchgear.	17.0
v.	Final sizing of equipment and actual cost of equipment for Ghent CCRT was used for the revised estimates.	See item i.
vi.	Added platforms for maintenance and operational access to equipment as was determined necessary by the Ghent construction experience.	5.0

vii.	Added an elevator for fly ash silo equipment access.	1.0
viii.	Updated owners engineering cost to coincide with expected studies, permitting and engineering services.	2.4
ix.	Added paving and enclosures around buildings and under conveyors to mitigate CCR contact water impacts for updated water runoff requirements.	6.1
x.	Added a maintenance building to the CCRT facility.	2.9
xi.	Added a service water line to landfill for road watering dust control requirements.	0.9
xii.	Added mobile equipment for on-site CCR handling.	2.1
Total	Total delta (\$233.0M - \$47.1M)	185.9

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**Question No. 4**

**Witness: Gary H. Revlett**

- Q-4. Refer to the Companies' response to Staff's First Request, Item 4.d. The response states, "Thus, disposal of CCR in the Sterling Ventures mine would be regulated as a new CCR landfill even if it obtained all necessary state permits and some CCR were disposed of there by October 2015." State whether the requirements under the new federal CCR Rule would differ for the Sterling Ventures mine if CCR was disposed of in the mine prior to October 19, 2015, compared to CCR being disposed of in the mine after October 19, 2015. If so, explain the difference in the requirements.
- A-4. The CCR Final Rule does not become effective until October 19, 2015. Thus, before October 19, 2015, disposal of CCR waste at the Sterling Ventures mine site is only subject to Kentucky's environmental regulations because no federal requirements will be applicable until then. However, as a practical matter, the Companies are not in a position to start sending CCR from Trimble County Station to Sterling Ventures' mine before October 19, 2015.

Starting October 19, 2015, there will be two different sets of regulations governing the disposal and beneficial use/reuse of CCR materials. The Kentucky and federal regulations are significantly different, particularly with respect to landfill design requirements and the definition of beneficial use/reuse. Kentucky's special waste regulations do not have specific design requirements for CCR waste facilities and could be permitted as long as the landfill meets the Kentucky environmental performance standards. The new federal CCR regulations have numerous design and performance standards for new CCR landfills including requiring a double composite liner and leachate collection system.

Under the CCR Final Rule, an existing CCR landfill is defined as one that received CCR prior to and after October 19, 2015 or "has obtained the federal, state, and local approvals or permits necessary to begin physical construction and a continuous on-site physical construction program had begun prior to October 19, 2015 and receives CCR on or after October 19, 2015." This definition at 40 CFR 257.3 presupposes the facility is a landfill. Sterling Ventures does not have a Kentucky Division of Waste Management landfill permit. Rather, Sterling Ventures only has a registered permit by rule for beneficial reuse of gypsum (from Ghent only) and only for the first level of its mine. Thus, the Sterling

Ventures mine would not qualify as an existing landfill under the CCR Final Rule. EPA has made clear that for landfills, future sections or cells must comply with the requirements for new CCR landfills (see 80 Fed. Reg. at 21358). Even where state CCR landfill permits have been obtained (which is not the case with Sterling Ventures), EPA notes that “the equities lie in favor of considering a unit to be existing when there has been an irretrievable commitment of resources on the part of a facility. That has not occurred merely because permits have been obtained.... At this stage modifications to the design and construction of the unit are still feasible.” Id.; see also EPA’s July 8, 2015 FAQ responses at page 8 with respect to when a landfill cell is considered new versus existing.

With respect to beneficial use/reuse, the new federal definition or requirements are also significantly different from the state requirements. Under the new federal beneficial use requirements, prior to the use, the user of the material must demonstrate that the CCR material is chemically or physically encapsulated such as the use of fly ash in cement manufacturing or that it meets the four criteria described in Gary Revlett’s Direct Testimony. Under Kentucky’s definition, beneficial reuse has almost no requirements beyond the simple use of the material in accordance with Kentucky’s environmental performance standards. Kentucky’s current regulations have no requirements similar to the four criteria under the CCR Final Rule. Finally, Sterling’s offer does not qualify as beneficial use under the CCR Final Rule. It is nothing more than disposal.

The CCR Final Rule did not include a state implementation process, thus the federal requirements will remain separate, continue to be self-implementing and subject to citizen suits.

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LOUISVILLE GAS AND ELECTRIC COMPANY**

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**Case No. 2015-00194**

**Question No. 5**

**Witness: John N. Voyles / R. Scott Straight**

- Q-5. Refer to the table provided by the Companies in response to Staff's First Request, Item 6.d. Explain why the total amount for each of the two columns titled "Spend Through 6/30/15 (net \$M)" are not equal to each other.
- A-5. The table labeled "Categories of Spend" in the response was incorrectly labeled "(net \$M)" as this table contains gross values. The column should be labeled "Spend Through 6/30/2015 (gross \$M)". The corrected table is provided below.

**Overall Spend through June 30, 2015**

Note: All Categories of Spend are Sunk Costs

<b>TC Landfill Project</b>	<b>Spend Through 6/30/2015 (net \$M)</b>	<b>Categories of Spend</b>	<b>Spend Through 6/30/2015 (gross \$M)</b>
TC CCR Landfill Phase 1 KU	\$11.6	Fly Ash System	\$10.4
TC CCR Landfill Phase 1 LG&E	\$12.5	Engineering	\$6.8
Land KU	\$0.8	Permitting	\$4.6
Land LG&E	\$0.9	Fence	\$2.6
<b>Total</b>	<b>\$25.8</b>	Property Acquisition	\$2.3
		Overheads	\$2.3
		345 kV Tower	\$2.0
		Miscellaneous	\$1.9
		Road/Bridge	\$0.6
		Ash Line Extension	\$0.4
		Telecommunication Tower	\$0.3
		Helicopter Pad Relocation	\$0.2
			<b>\$34.4</b>

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

**Response to the Commission Staff's Second Request for Information  
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**Case No. 2015-00194**

**Question No. 6**

**Witness: Caryl M. Pfeiffer**

Q-6. Refer to the Companies' response to Staff's First Request, Item 6.g. Provide the length of the current contracts for beneficial reuse for the Ghent Station.

A-6. The Charah fly ash marketing contract expires December 31, 2017.

The CertainTeed synthetic gypsum contract expires April 16, 2024, with the possibility of two five-year extensions.

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

**Response to the Commission Staff's Second Request for Information  
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**Case No. 2015-00194**

**Question No. 7**

**Witness: John N. Voyles / Gary H. Revlett**

- Q-7. Refer to the Companies' response to Staff's First Request, Item 14. Given that the Companies' respond that they believe that Sterling Ventures does not meet any of the beneficial use requirements based on the definition of beneficial use pursuant to 40 CFR 257.53, explain why the Environmental Protection Agency would bring into question and request a study into the validity of Sterling Ventures as a viable CCR storage alternative.
- A-7. The Companies cannot express EPA's reason for submitting the August 7, 2014 letter to Corp of Engineers beyond what is expressed in that letter. Among other questions raised by the EPA about the Alternative Analysis, the EPA letter suggested the analyses should have been more thorough for certain sites they identified (Sterling Ventures and Lee Bottom). The Companies submitted the December 2014 Supplement to Alternative Analysis that addressed the concerns raised by the EPA. Subsequently, after reviewing the Supplement to Alternatives Analysis, EPA Region 4 found "although [it] remain[s] concerned with the magnitude of proposed impacts to jurisdictional waters of the United States, we find that the information is generally responsive to the comments outlined in our comment letters."

Note that the EPA request for the inclusion of additional sites in the alternatives analysis, including Sterling Ventures' mine, was sent by EPA Region 4, and focused on possible alternatives that would lessen impacts to surface waters and wetlands under the Clean Water Act Section 404(b)(1) guidelines. EPA Region 4 stated in the August 7, 2014 letter that it "believes that opportunities to utilize the underground limestone mine to store CCR from the Trimble County Generating Station warrant careful consideration as a potentially feasible alternative." At that time, the CCR disposal rule and beneficial use requirements were still being developed by EPA's Office of Resource Conservation and Recovery, which has authority over solid wastes, in Washington, D.C.

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

**Response to the Commission Staff's Second Request for Information  
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**Case No. 2015-00194**

**Question No. 8**

**Witness: John N. Voyles**

- Q-8. Refer to page 10 of the Direct Testimony of John N. Voyles, Jr. ("Voyles Testimony"), at lines 10-21. Given that the new CCR regulation is self-implementing, confirm or deny that the Companies have the same risk for citizen suits under the Companies' on-site alternative.
- A-8. The Companies deny that the risk of a citizen suit is the same for the Companies under their on-site alternative. While non-compliance with the CCR Final Rule landfill standards in constructing or operating the on-site landfill would be subject to a citizen suit, the Companies have designed and will construct the landfills to comply with the new CCR landfill standards established by the CCR Final Rule and intend to operate it in compliance with those standards.

By contrast, Sterling Ventures has not designed its CCR disposal plan for its mine to comply with the CCR Final Rule requirements for a new CCR landfill. Rather, Sterling Ventures claims it would be exempt from all disposal standards under the CCR Final Rule under the "beneficial use" definition and exemption. The Companies strongly disagree with that position. See Testimony of Gary Revlett filed August 6, 2015. The Companies will not have the same degree of control over the disposition of CCR in the Sterling Ventures landfill that the Companies will have with their on-site alternative.

The Companies plan to comply with the CCR Final Rule standards for its on-site alternative while Sterling Ventures has expressly stated it will not need to comply with the landfill standards. Therefore, the Companies consider the citizen suit risk will be very high for Sterling Ventures' plan.

Additionally, the consequences of a successful citizen suit targeting Sterling Ventures' beneficial use claim would be much greater. The likely remedy would be an injunction precluding further disposal until and unless Sterling Ventures came into compliance with the design and operating standards for new CCR landfills (liners, leachate collection, monitoring, etc.). Compliance with those standards would substantially increase the cost of the Sterling Ventures alternative and would put at risk the capital expenditures for barge loading and unloading facilities and other support facilities that had been expended



at the time of such an injunction. An alternative disposal option would then need to be pursued.

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

**Response to the Commission Staff's Second Request for Information  
Dated August 20, 2015**

**Case No. 2015-00194**

**Question No. 9**

**Witness: John N. Voyles / Caryl M. Pfeiffer**

- Q-9. Refer to pages 12-13 of the Voyles Testimony. Provide a copy of the letter sent by the President of Sterling Ventures to W. G. Gilbert, Jr., Senior Fuels and Transportation Administration for the Companies on February 19, 2013.
- A-9. The information requested to be provided is considered to be confidential and proprietary and is being filed under seal pursuant to a Petition for Confidential Protection.

Please see the attachment that contains the letter requested and accompanying limestone bids for Ghent and Trimble County Stations.

# Attachment Confidential

The entire attachment is  
Confidential and  
provided separately  
under seal.

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

**Response to the Commission Staff's Second Request for Information  
Dated August 20, 2015**

**Case No. 2015-00194**

**Question No. 10**

**Witness: John N. Voyles / Gary H. Revlett**

Q-10. Refer to page 18 of the Voyles Testimony, at lines 14-15. Explain what other practicable grounds, other than cost, led the Companies to conclude that the Sterling Ventures alternative was not practicable.

A-10. In accordance with Commission precedent and Kentucky case law, the Companies have considered both cost and feasibility<sup>1</sup> in determining how to manage CCR produced at the Ghent and Trimble County Stations. In other words, the Companies had to consider the feasibility or practicality of an alternative. The Supplement to Alternative Analysis identified a number of logistical risks in Section III C (See discussion on pages 28 through 33 of 183 in the Sterling Ventures Complaint Exhibit P). In this case, the Sterling Ventures offer to place CCR in its mine is infeasible and impractical for numerous yet basic reasons:

- Sterling Ventures lacks the technical, financial and managerial expertise to operate the proposed off-site disposal facility.
- The Sterling Ventures offer does not qualify as beneficial use under the CCR Final Rule and Sterling Ventures has been clear that, absent beneficial use, it is unwilling to operate as a CCR Landfill as defined under the CCR Final Rule. Moreover, the additional costs of complying with the CCR Final Rule at Sterling's mine would be very high due to the need for liners and other design requirements for new CCR landfills.
- Sterling Ventures has stated that if its offer is not beneficial use under the CCR Final Rule, it would transport CCR for up to three years to a beneficial use qualifying facility. A three-year period is not nearly enough time for the

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<sup>1</sup>*Kentucky Utilities Co. v. Kentucky Public Service Commission*, 390 S.W.2d 168, 175 (Ky. 1965); *In re the Matter of: Joint Application Of Louisville Gas And Electric Company And Kentucky Utilities Company For Certificates Of Public Convenience And Necessity For The Construction Of A Combined Cycle Combustion Turbine At The Green River Generating Station And A Solar Photovoltaic Facility At The E.W. Brown Generating Station*, Case No. 2014-00002, December 19, 2014 Order, p. 10.

Companies to investigate, plan, get necessary approvals and permits, construct, and implement an alternate solution.

- The Sterling Ventures offer is fraught with CCR transportation and handling logistics. Mr. Gardner states that it would require 168 truck trips per day, 6 days per week, up to 16 hours per day, for 52 weeks per year to haul CCR (uncompacted) from the Warsaw barge facility to its mine. This enormous amount of hauling would be on a route that passes by a high school with the attendant school traffic (including school buses) and has state-recognized horse and buggy traffic. Of course, in any schedule that busy, interruptions will occur. When they do, Sterling Ventures will have to place the CCR in a staging phase, yet Sterling Ventures has offered nothing in the way of how it will manage such staging or that it has considered the environmental effects and requirements associated with such staging.
- Sterling Ventures' offer is premised on its claim that Sterling Ventures has adequate storage space both now and in the coming 37 years to handle the amount of CCR that will be produced. However, Sterling Ventures' claims of current and future capacity are overstated, and, in fact, Sterling Ventures does not and will not have adequate storage space at its current mining rates.
- Sterling Ventures has no contractual obligations owed to it that allow for the sale of limestone at levels that would be required to create adequate mine void space to dispose of the Companies' CCR over any period of time.
- Sterling Ventures' offer is conceptual and unstudied in that Sterling Ventures has not even considered, much less applied for and obtained the various permits it may have to obtain. For example, Sterling Ventures would have to obtain a Clean Water Act 404 permit for barge facilities and various other environmental and material handling permits.
- Sterling Ventures has offered nothing in the way of how it would manage the significant fugitive dust problems that will arise as a result of barge loading, barging, barge unloading, trucking, staging, and placing CCR in the Sterling Ventures mine.
- As recently as August 6, 2015, Sterling Ventures still has no concrete plan for how it would move CCR into its mine voids. Sterling Ventures "envisions" one of three methods which is a clear indication of the ill-considered nature of its offer.
- Sterling Ventures has refused to provide any information that would allow the Companies to assess Sterling Ventures' financial viability or the economic marketability of its limestone reserves. Without that, neither the Companies nor the Commission can have any assurance that Sterling Ventures or its mine will be

in existence even a year from now – much less for the 37 years of disposal the on-site landfills will provide.

- Sterling Ventures has placed great reliance on communications that it has had with employees of the Kentucky Solid Waste Branch for the concept that state officials believe CCR could be placed at the Sterling Ventures mine, but communications from the Commissioner of the Kentucky Department for Environmental Protection has stated that, at this time, his department takes no position on that issue.
- Sterling Ventures has no experience in handling, locating, placing, transporting, and managing CCR, which is different than handling limestone aggregate.

The Companies will be filing rebuttal testimony no later than September 10, 2015. To the extent the list above needs to be supplemented at that time, the Companies will do so.

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

**Response to the Commission Staff's Second Request for Information  
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**Case No. 2015-00194**

**Question No. 11**

**Witness: John N. Voyles / R. Scott Straight**

- Q-11. Refer to page 23 of the Voyles Testimony, lines 12-16, which state that the Companies informed Sterling Ventures in December 2011 that its offers may have merit in deferring later phases of the Ghent landfill. State whether the Companies plan to pursue this option. If not, explain
- A-11. No. The Companies do not plan to pursue this option at this time. As previously stated by the Companies, the option to store gypsum material produced at Ghent in Sterling Venture's mine was not then, and is not now, the least-cost option available; therefore, the Companies will continue to utilize the least-cost option which is to store CCR in the onsite landfill constructed at Ghent. As previously stated, Sterling Ventures' offers may have merit in deferring later phases of the Ghent landfill.

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

**Response to the Commission Staff’s Second Request for Information  
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**Case No. 2015-00194**

**Question No. 12**

**Witness: John N. Voyles / R. Scott Straight**

- Q-12. Refer to page 25 of the Voyles Testimony regarding the need for short-term storage facilities.
- a. Fully describe the short-term storage facilities that are incorporated into the Companies' Coal Combustion Residual Treatment ("CCRT") facilities.
  - b. Explain why the Companies' CCRT facilities at Ghent and Trimble County would not be sufficient to accommodate interruption to off-site disposal options, including those offered by Sterling Ventures.
- A-12. a. The Trimble County CCRT facilities will include the following short-term storage facilities (new and existing) which were designed to account for short term storage in case of on-site equipment malfunction/maintenance, act as a surge point during operations or transfer point based for the selected disposal option of utilizing the pipe conveyor or trucking.

<b>TC Facility</b>	<b>Description</b>	<b>Storage Capacity</b>
Fly Ash Silos (new)	Provides temporary storage of dry fly ash before it is conditioned with water and placed on the pipe conveyor. Two (2) concrete silos each designed to store 4,000 tons of dry fly ash. (Reference SV 1-9 “Dry Fly Ash – two new intermediate storage silos”.)	4 days
Gypsum Storage Enclosure (new)	Provides temporary storage of dewatered gypsum before it is reclaimed and placed on the pipe conveyor. One (1) building designed to store 12,000 tons of gypsum. (Reference SV 1-9 “Gypsum”)	3 days
Unit 1 Bottom Ash Bunker (new)	Provides temporary storage of bottom ash before it is reclaimed and placed on the pipe conveyor. One (1) concrete bunker designed to store 600 tons of bottom ash. (Reference SV 1-9 “Bottom Ash – equipment similar to Unit 2”.)	3 days



Unit 2 Bottom Ash Bunker (existing)	Provides temporary storage of Unit 2 bottom ash before it is reclaimed and placed on the pipe conveyor. One (1) concrete bunker designed to store 700 tons of bottom ash. (Reference SV 1-9 “Bottom Ash – three-walled concrete bunker”.)	3-4 days
1200T Fly Ash Silo	Provides a transfer point and/or temporary storage of dry fly ash before it is sent to the BAP (sluiced via slurry tank), 5000T (dry in route to barge loading) or fully enclosed “tanker-type trucks” (dry beneficial use contract). (Reference SV 1-9 “Dry Fly Ash – intermediate storage silo”.)	1 day
5000T Fly Ash Silo (existing)	Provides transfer point and temporary storage of dry fly ash before it is sent to the barge loading. (Reference SV 1-9 “Dry Fly Ash – intermediate storage silo”.) Note: With the CCRT project the 5000T will be connected to the new Fly Ash Silos.	5 days

The Ghent CCRT facilities include the following short-term storage facilities which were designed to account for short term storage in case of on-site equipment malfunction/maintenance, act as a surge point during operations or transfer point based for the selected disposal option of utilizing the pipe conveyor or trucking.

Ghent Facility	Description	Storage Capacity
Fly Ash Silos	Provides temporary storage of dry fly ash before it is conditioned with water and placed on the pipe conveyor. Two (2) concrete silos each designed to store 4,500 tons of dry fly ash.	3 days
Fly Ash Marketing Silo	Provides temporary storage of dry fly ash before it is loaded into trucks for offsite beneficial use applications. One (1) concrete silo designed to store 1,000 tons of dry fly ash.	<1 day
Gypsum Storage Enclosure	Provides temporary storage of dewatered gypsum before it is reclaimed and placed on the pipe conveyor. One (1) building designed to store 19,000 tons of gypsum.	3-4 days
Bottom Ash Bunkers	Provides temporary storage of bottom ash before it is reclaimed and placed on the pipe conveyor. Three (3) concrete bunkers each designed to store 1,500 tons of bottom ash.	6 days

- b. The storage capacities listed above were not designed to account for additional delays that will occur for off-site disposal, but rather account only for on-site operational upset conditions, maintenance activities and time required during transfers of systems. Coal units at Ghent and Trimble County Stations operate every day of the year and CCR is continually produced. Utilizing the capacities listed above for off-

site transport or handling interruptions significantly reduces the operational and maintenance flexibility deemed necessary for these Stations. Additionally, if these capacity margins were utilized for off-site interruptions, the maximum duration could not exceed the minimum time listed, which is only three days. Utilizing this three day period would leave the Stations with zero capacities for on-site upset conditions or needed periods of maintenance. On page 10 of the direct testimony of Mr. Walters, lines 14 and 15, he describes a previous one month shutdown of the mine which clearly suggests a longer temporary storage capacity must be considered. While Ghent currently has the on-site landfill for managing longer interruptions, Trimble County does not, and the Ghent landfill is not currently permitted to take Trimble County CCRs.

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

**Response to the Commission Staff's Second Request for Information  
Dated August 20, 2015**

**Case No. 2015-00194**

**Question No. 13**

**Witness: John N. Voyles**

- Q-13. Refer to Sterling Ventures' Response to Data Request of Kentucky Utilities Company and Louisville Gas and Electric Company, Item 38. Also refer to page 30 of the Voyles Testimony, at lines 5-6.
- a. Explain in detail why the Companies disagree with Sterling Ventures' three-year time period to construct a landfill or to find an alternative disposal site if it was determined that disposal would not be beneficial use at the Sterling Ventures site under the EPA's CCR Rule.
  - b. Explain what time period the Companies believe would be adequate.
- A-13. a. Sterling Ventures' three-year time period presumes the Companies would have in-hand a valid CPCN, KDWM permits, and any other necessary permits to construct the alternate disposal facility – all in the event that the Sterling mine becomes unavailable for further disposal of CCR from Trimble County Station due to a court ruling that the placement of CCR is not beneficial use under the CCR Final Rule or if the mine otherwise closes or is inaccessible. That presumption is unsupported.

The more likely scenario is that the Companies would not possess a CPCN or required permits for construction of the proposed landfill if the Companies proceeded to pursue disposal at the Sterling Ventures mine (after construction of the necessary infrastructure) and then a court ruled that CCR placed in the mine was not beneficial use or the mine otherwise closed. Accordingly, in the event the Sterling Ventures mine became unavailable after CCR disposal there commenced, the Companies would likely need to pursue again necessary permits and approvals for a new disposal alternative, which would likely take several years in addition to the lead time for construction of a landfill. The Sterling Ventures response also appears to presume that another site which is permitted to dispose of CCR is available with space to accept the materials at the time needed for the three year interim period. That presumption is also speculative. Having said all of that, if certificates and permits have been granted for the current Trimble County Station landfill site and are still valid, then 3 years would likely be adequate for the construction alone.

- b. Based on the Companies' experience in permitting and constructing landfills, the process has taken over four years (Ghent CPCN granted in 2009 and in service in 2014; Brown CPCN granted in 2011 and expected to be in service late 2015; and Trimble County's second permit location submitted in 2014 with expected in service date in 2018).

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

**Response to the Commission Staff's Second Request for Information  
Dated August 20, 2015**

**Case No. 2015-00194**

**Question No. 14**

**Witness: John N. Voyles / Gary H. Revlett**

- Q-14. Refer to page 29 of the Voyles Testimony, which states "Sterling Ventures seems to presume the requisite permits and authority to construct would still be viable at some future point in time." List the various expirations of the permits and authority the Companies must obtain.
- A-14. The most crucial permits for the Trimble County Landfill construction have requirements with varying expirations and are as follows:
- Kentucky Division of Waste Management Landfill permit - usually requires construction to begin on Phase I within five years.
  - Corps of Engineers 404 Permit - usually require initiation of construction activities within one year of the permit but a request can be made to extend that out to a second year. The typical 404 individual permit for this type of project is required to complete the impacts to Waters of the U.S. within three years of permit issuance. A one year extension is routinely granted if requested before the permit expires.
  - Kentucky Division of Water 401 Water Quality Certificate – for construction of large projects such as a landfill is usually extended to coincide with the 404 permit and can be negotiated as a permit condition.
  - Kentucky Department of Transportation Permit for the construction of a bridge over Highway 1838 was issued on February 16, 2015 and construction is scheduled to be complete in January 2017.

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

**Response to the Commission Staff's Second Request for Information  
Dated August 20, 2015**

**Case No. 2015-00194**

**Question No. 15**

**Witness: David S. Sinclair**

- Q-15. Refer to page 6 of the Pre-filed Direct Testimony of John W. Walters, Jr. ("Walters Testimony") filed on behalf of Sterling Ventures lines 10-14. Provide a response to Mr. Walters' criticism that the Companies' did not eliminate the \$53 million of gypsum-specific capital costs in the present value revenue requirement ("PVRR") of the Sterling Ventures proposal when comparing the proposal to the Ghent landfill project.
- A-15. In Sterling Ventures' January 2012 offer to store gypsum from the Ghent Station in the Sterling Ventures mine, they asserted that the Companies could save \$53 million in capital expenditures by continuing to operate the Ghent gypsum stack after the new landfill was commissioned (see item 4 in the "Assumptions in Ghent Project 30 PVRR Analysis" section of attachment H to Sterling Ventures' Formal Complaint). This assertion is incorrect. Now that the new landfill is complete, the Companies have begun the planning process to close the gypsum stack, as was assumed in the Companies' analysis of the alternatives (see the summary of this analysis at page 1 provided as an attachment to SV 1-17c).

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

**Response to the Commission Staff's Second Request for Information  
Dated August 20, 2015**

**Case No. 2015-00194**

**Question No. 16**

**Witness: David S. Sinclair**

- Q-16. Refer to page 17 of the Walters Testimony.
- a. Refer to lines 6-7. Explain why the Companies used 30 years in the PVRR comparative analysis rather than the life of the landfill.
  - b. Refer to lines 20-22. Explain how the initial level of assumed beneficial reuse tonnage was determined and how its decline in subsequent years was determined.
- A-16. a. The Companies have used a 30-year analysis term in CPCN analyses for more than 20 years. In a comparative PVRR analysis, 30 years of revenue requirements is sufficient for properly balancing the near-term and long-term implications of a present-day decision. In addition, given the uncertainty that particularly exists beyond a 30-year planning horizon, the use of a longer analysis period generally does not add material value to distinguishing between alternatives.
- b. Mr. Walters' assertions about declining beneficial use assumptions are incorrect. In the May 2015 analysis and the analysis provided in response to PSC 1-18, the Companies evaluated two beneficial use or reuse scenarios: zero for the entire time period and 265,000 tons per year for the entire time period (which approximates recent levels of beneficial use or reuse).