

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF KENTUCKY UTILITIES)	
COMPANY FOR CERTIFICATES OF PUBLIC)	
CONVENIENCE AND NECESSITY AND)	
APPROVAL OF ITS 2016 COMPLIANCE PLAN)	CASE NO. 2016-00026
FOR RECOVERY BY ENVIRONMENTAL)	
SURCHARGE)	

KENTUCKY UTILITIES COMPANY

**RESPONSE TO THE
ATTORNEY GENERAL'S (AG)
INITIAL DATA REQUESTS**

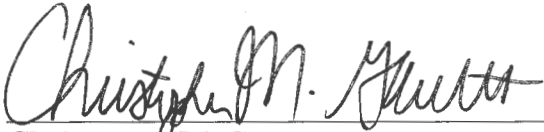
DATED MARCH 11, 2016

FILED: MARCH 24, 2016

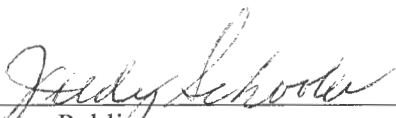
VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Christopher M. Garrett**, being duly sworn, deposes and says that he is Director – Rates 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.


Christopher M. Garrett

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 24th day of March 2016.

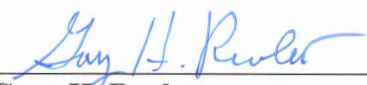

Notary Public (SEAL)

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

VERIFICATION

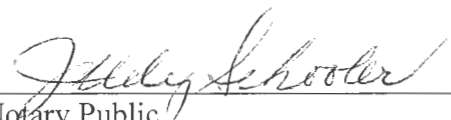
COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

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 March 2016.



Notary Public (SEAL)


My Commission Expires:

JUDY SCHOOLER
Notary Public, State at Large, KY
~~My commission expires July 11, 2016~~
Notary ID # 512743

VERIFICATION

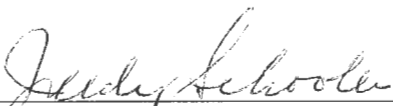
COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Charles R. Schram**, being duly sworn, deposes and says that he is Director – Energy Planning, Analysis and Forecasting 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.



Charles R. Schram

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 24th day of March 2016.



Notary Public (SEAL)

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
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KENTUCKY UTILITIES COMPANY

Response to Attorney General's Initial Data Requests Dated March 11, 2016

Case No. 2016-00026

Question No. 1

Witness: John N. Voyles, Jr. / Gary H. Revlett

- Q-1. How will KU know where to install groundwater monitoring wells ("GMWs"), and how many?
- A-1. The new EPA Coal Combustion Residuals Rule ("CCR Rule") requires KU to develop groundwater monitoring plans. These plans will identify the number, location and depth of groundwater monitoring wells required under the CCR Rule. These groundwater monitoring plans must be reviewed and certified by a Professional Engineer. KU has hired two geotechnical engineering firms to design individual groundwater monitoring plans for the various surface impoundments and landfills at the KU sites. The number and location of monitoring wells necessary for each plant's regulated units will be determined by these engineering consultants and will be site specific.

KENTUCKY UTILITIES COMPANY

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Question No. 2

Witness: John N. Voyles, Jr. / Gary H. Revlett

- Q-2. Reference the Voyles testimony, p. 8. After the GMWs are installed and the eight (8) independent samples are taken, in the event the testing results of the samples show coal combustion residuals ("CCR") constituent readings in excess of the limits established in the EPA's Coal Combustion Residuals Rule ("CCR Rule"), is there any possibility that KU will have to undertake more extensive measures in order to trace the source of the pollutants and in order to take remediative measures?
- a. If so, what would or could those more extensive measures involve?
- A-2. Based on the CCR Rule, impoundment closure is the first step in the process along with 30-years of post-closure care. During the post-closure care additional remediation could be required by KYDWM.
- a. Under the CCR Rule, closure is the only remedial option for existing unlined surface impoundments that exceed the CCR groundwater standards. However, if the groundwater monitoring results for any landfill or surface impoundment with a CCR liner system exceed the groundwater standards, a number of remedial options are available under the CCR Rule. Options include additional measures, such as, supplementary monitoring wells to pinpoint the source and then various engineering solutions to stop the source of groundwater contamination.

KENTUCKY UTILITIES COMPANY

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Question No. 3

Witness: Gary H. Revlett

- Q-3. Will there have to be a separate groundwater monitoring system for each impoundment? Please explain.
- A-3. Not necessarily. It is possible two or more surface impoundments could be grouped together and sampled as a set, particularly if they are adjacent. However, if groundwater contamination from the set of existing surface impoundments is found to exceed the standards, then all the impoundments within the set must close. KU may group some impoundments together at a site because of their close proximity to each other, but those evaluations and final determinations will be included in the development of the groundwater monitoring plans.

KENTUCKY UTILITIES COMPANY

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Case No. 2016-00026

Question No. 4

Witness: John N. Voyles, Jr. / Gary H. Revlett

- Q-4. Reference the Voyles testimony generally, and in particular at p. 8 regarding the CCR Rule operational standards and requirements pertaining to location requirements. At p. 8, he states the company is still evaluating whether the CCR Rule's location restrictions will affect any of the company's CCR facilities.
- a. In what manner could the location requirements affect any CCR facilities? Please discuss the potential implications.
- A-4. a. The CCR Rule specified location restrictions to ensure landfills and surface impoundments are appropriately sited. These include restrictions related to placement above the uppermost aquifer, in wetlands, in fault areas, in seismic impact zones and in unstable areas. Like the groundwater triggering event, the CCR Rule mandates if a facility fails a location restriction it must cease receiving CCR materials and non-CCR waste streams and start the closure process within six months. As described in the direct testimony of Mr. Revlett, the Companies anticipate groundwater monitoring will likely trigger the closure of the CCR impoundments. The rule requires closure as a result of the failure of any one of the triggers. If an impoundment has not triggered closure due the groundwater monitoring, closure could still be triggered by the location restrictions. As the compliance date for assessments of groundwater impacts precedes the location restrictions, the Companies have focused the initial efforts on those assessments first. As stated on pages 8 and 9 of the Voyles testimony, if closure is not triggered by other requirements, the Companies will complete the location restriction assessments prior to the 2018 compliance date.

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Question No. 5

Witness: John N. Voyles, Jr.

- Q-5. Regarding the closure of the surface impoundments, for each impoundment is closure the least-cost alternative, or is it merely "economical?" Please explain.
- A-5. The proposed closures are the lowest-reasonable-cost methods to comply with the CCR Rule on a station-by-station basis, not an impoundment-by-impoundment basis. For example, the Company might propose to incur added expense to clean-close an impoundment because beneficially using the CCR materials to the extent feasible from that impoundment to help cap and close another impoundment at the same station would produce net benefits relative to capping and closing both impoundments using other virgin fill materials.¹ Also, "economical" is intended to be synonymous with "lowest-reasonable-cost." See also the response to PSC 1-17.

¹ See, e.g., Voyles Testimony at 23 lines 17-21.

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Question No. 6

Witness: Gary H. Revlett

- Q-6. Does the CCR Rule provide any extensions of compliance deadlines? If so, on what basis or bases?
- A-6. The CCR Rule only offers extensions for the timeframe to finish closure of a CCR unit. For landfills, up to two one-year extensions may be requested. For surface impoundments less than 40 acres, a single two-year extension may be requested. For impoundments greater than 40 acres, up to five two-year extensions may be requested. Factors which could support an extension request include (but are not limited to): climate/weather complications, excessive dewatering time, geology or terrain issues, and permitting delays with state agencies.

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Question No. 7

Witness: Gary H. Revlett

- Q-7. Reference the Revlett testimony, p. 19, lines 5-9. If a “triggering” event occurs requiring the “initiation” of closure of a CCR surface impoundment, how much time does the CCR Rule allow for the actual closure of that impoundment?
- A-7. If a triggering event occurs, KU has six months to cease placing CCR materials and non-CCR waste streams in the impoundment and start the closure process. The closure process must be completed in five years.

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Question No. 8

Witness: Gary H. Revlett

- Q-8. Has the company already made the decision to close all surface impoundments even prior to the construction of test wells and the eight (8) independent groundwater samplings? If so why? Is the company's decision based in part on any assumptions?
- A-8. Yes, KU believes it is prudent to prepare for impoundment closures prior to the installation of monitoring wells and assessment of monitoring data. At this time, KU has assumed all CCR impoundment facilities will trigger closure based on future groundwater samplings. Due to the short timeframe to initiate and close a facility, i.e., within five years after a triggering event, KU has to develop a plan that would allow closure of the impoundments without jeopardizing generation. At each station, the CCR impoundments are a critical part of generation. To make sure generation is not impacted, the sequencing of impoundment closure must start before the anticipated triggering event at critical facilities, while closure at other facilities will begin after a triggering event.

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Question No. 9

Witness: John N. Voyles, Jr.

- Q-9. Will CCRT facilities, such as are being or have been constructed at Trimble and Ghent stations, be required at each of Mill Creek and Brown? If not, why not?
- A-9. Yes, a CCRT system is necessary to facilitate dry handling of the CCR materials for placement into CCR Rule compliant dry landfill or for beneficial use. A CCRT system is currently being commissioned at Brown and will be fully operational in the second quarter of 2016. Mill Creek has a dry landfill in service for gypsum and fly ash placement. Plans for Mill Creek bottom ash dewatering are included in this 2016 Plan.

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Question No. 10

Witness: Charles R. Schram

- Q-10. When completed, will Project 37 at Ghent Unit 2 provide the companies with more flexibility of dispatch? Could it enhance opportunities for off-system sales?
- A-10. Project 37 is needed to support reliability for native load customers by ensuring the availability of Ghent Unit 2, a 493 MW (net summer capacity) baseload unit. The Companies do not expect any material increase in off-system sales. To the extent that any increase in off-system sales occurs, 75 percent of the off-system sales contribution would be assigned to customers and 25 percent would be assigned to the Companies' shareholders.

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Question No. 11

Witness: Charles R. Schram

- Q-11. When completed, will or could Ghent Projects 37 and 38 enable KU to earn more SO₂ and/or any other emissions allowances? If so, what does the company intend to do with the allowances?
- A-11. The Clean Air Act does not provide for an increase in allowances for this type of project. Projects 37 and 38 would result in the emission of about 5,600 less tons of SO₂ annually (compared to KU's current total annual SO₂ emissions of about 15,000 tons). KU would surrender fewer allowances as a result of lower SO₂ emissions and would continue to monitor the status of the allowance bank.

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Question No. 12

Witness: Gary H. Revlett

Q-12. Could Project 37 and/or Project 38 trigger an EPA New Source Review? Please explain.

A-12. Additional potential emissions from Project 37 that could be applicable to evaluation of New Source Review are estimated to be well below significant emission levels of concern, and therefore are not an issue. Increase of potential emissions as a result of Project 38 relative to New Source Review are non-existent, and therefore are not an issue.

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Question No. 13

Witness: Gary H. Revlett

- Q-13. With regard to Project 39 (the closure of surface ash impoundments at each of Tyrone, Green River and Pineville), provide citations to the KDWM regulations, rulings and/or state special waste landfill permits upon which the company believes the KDWM will rely in ordering the closure of these facilities. Please provide copies of any and all such citations.
- a. Is the closure of these facilities required as a matter of law, or does the company “reasonably anticipate” they will require closure, as Mr. Voyles states on pp. 25-26 of his testimony?
 - b. If the Commission approves closure of these facilities, is it possible it would still have to comply with the EPA’s ELG² Rule? If so, what types of measures would have to be employed?
- A-13. See Mr. Revlett’s Direct Testimony at pages 21-22. Also see KU’s responses to PSC 1-22 and KIUC 1-1 and 1-2.
- a. See Mr. Revlett’s Direct Testimony at pages 21-22. Also see KU’s responses to PSC 1-22 and KIUC 1-1 and 1-2.
 - b. Based on KU’s understanding of ELG and KU’s current knowledge of the impoundments that are the subject of Project 39, KU does not believe the recently enacted ELG would apply after closure of those impoundments.

² Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category.

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Question No. 14

Witness: John N. Voyles, Jr.

- Q-14. Regarding Green River station's three (3) impoundments, please confirm in which pond(s) the company proposes to utilize the clean close method.
- a. Please confirm that the clean close method involves removing the ash from the impoundments.
 - b. What does the company propose to do with that ash after it is removed?
 - c. Would it be more cost-effective to dewater, regrade the ash, then cap it?
- A-14. KU plans to clean close the Green River SO₂ pond.
- a. The clean close method does involve removing the CCR materials from the impoundment. KU's plan also includes removal of approximately one additional foot of soils.
 - b. CCR materials will be removed from the SO₂ pond and will be beneficially used to extent feasible as fill material in closure of the Main Pond and ATB #2 to regrade the ash surface for storm water run-on and run-off control.
 - c. Beneficially using CCR materials to the extent feasible is lower cost than utilizing all virgin material for capping and closing impoundments under the CCR Rule. While regrading ash in a single impoundment is possible to facilitate closure, the total cost of closure of all three impoundments at Green River is optimized by clean closing the SO₂ pond.

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Question No. 15

Witness: John N. Voyles, Jr.

- Q-15. Are there any other impoundments at other stations for which the company proposes using the clean close method? If so, please identify them and the reasons for choosing that method.
- A-15. Yes, the Companies currently plan to clean close the gypsum stack and two associated surface impoundments at Ghent,³ as well as, four of the small impoundments at Mill Creek as described in the Companies' response to AG Question No. 10 to LG&E. As the on-going engineering efforts proceed, the Companies will continue evaluating impoundments at other stations to determine the best compliance option.

³ See Exhibit JNV-6 (Ghent CCR Management Facilities Plan).

KENTUCKY UTILITIES COMPANY

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Question No. 16

Witness: John N. Voyles, Jr.

Q-16. Once the surface impoundments are closed, will they be above the flood plains at their respective locations?

A-16. Yes, the cap system will be above the flood plain.

KENTUCKY UTILITIES COMPANY

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Question No. 17

Witness: John N. Voyles, Jr.

Q-17. With regard to any CCR Rule-compliant landfills, will they be located above the flood plains at their respective locations?

A-17. Yes.

KENTUCKY UTILITIES COMPANY

Response to Attorney General's Initial Data Requests Dated March 11, 2016

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Question No. 18

Witness: Gary H. Revlett

- Q-18. Reference the Revlett testimony, p. 18, beginning at line 14 through p. 19, line 3. Regarding the groundwater samples discussed in this passage, are the statistical thresholds referenced those utilized in the CCR Rule?
- A-18. Yes, the statistical thresholds mentioned in this portion of Gary Revlett's direct testimony are referencing the CCR Rule groundwater standards that are based on a statistically significant increase above background concentrations.

KENTUCKY UTILITIES COMPANY

Response to Attorney General's Initial Data Requests Dated March 11, 2016

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Question No. 19

Witness: Christopher M. Garrett

Q-19. Please explain what effect, if any, bonus depreciation rules will have on the depreciation costs associated with this filing. Does the company plan to file for bonus depreciation treatment, and if not, why not?

A-19. In December 2015, the "Protecting Americans from Tax Hikes Act of 2015" was passed into law. The new law extends the 50% bonus tax depreciation rate to the years 2015-17 and then phases the bonus tax depreciation rate down to 40% for 2018 and 30% for 2019. KU plans to elect to take bonus tax depreciation on the capital projects included in the filing (excluding CCR closure costs) as they are expected to be placed into service by December 31, 2019. KU will recognize a deferred tax liability for the excess of tax depreciation over book depreciation, which results in the lowering of the ECR rate base.

CCR closure costs are deductible when paid for income tax purposes.