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 FOR RECOVERY BY ENVIRONMENTAL SURCHARGE	**)** **)** **)** **)** **)** **)**	**CASE NO. 2016-00026**

KENTUCKY UTILITIES COMPANY

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

DATED APRIL 8, 2016

FILED: APRIL 20, 2016

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

Gary H. Revlett

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of April 2016.

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, **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 20th day of April 2016.

Notary Public (SEAL)

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

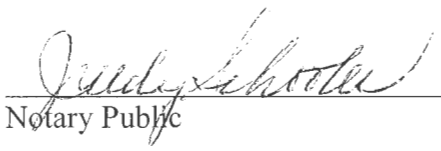
VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **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 20th day of April 2016.



(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, **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 20th day of April 2016.

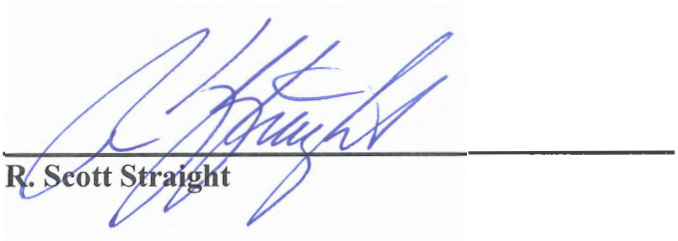
Notary Public (SEAL)

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, **R. 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.



R. Scott Straight

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of April 2016.

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

KENTUCKY UTILITIES COMPANY

Response to Attorney General's Supplemental Data Requests Dated April 8, 2016

Case No. 2016-00026

Question No. 1

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

Q-1. Regarding the discussion of Project 39, the closure of surface impoundments at the Green River, Tyrone, and Pineville stations as discussed in the Direct Testimony of Gary H. Revlett and in responses to numerous first round data requests[1] there appears to be a concern that current sump pump effluent from the plant could be subject to future ELG regulations.

a. Provide all studies, evaluations and analyzes, both internal and external, that have led KU to conclude there is a possibility that water from sump pumps at these facilities could become subject to ELG regulations.

b. If the water from sump pumps were subject to ELG regulations, provide the cost of complying with those regulations.

c. Has KU collected net salvage value in its depreciation rates for these facilities, and if so, what is the current balance?

d. Does KU propose to rehabilitate the plant sites? If so, when and how?

e. Does any such rehabilitation assume continuous operation of sump pumps?

A-1. a. There were no studies performed nor are they necessary to conclude water from sump pumps that is directed to impoundments prior to discharge would be classified as a wastewater discharge subject to ELG regulations. The new ELG regulations clearly apply to surface impoundments like those at Green River, Tyrone, and Pineville that contain fly ash and bottom ash materials. The preamble of the new ELG regulations issued by the EPA uses the term "legacy wastewater" to describe and classify the discharges from these existing surface impoundments (FR Vol. 80, No. 212 pg. 67854; November 3, 2015). As described in the preamble, legacy wastewater must continue to meet the previously promulgated ELG limitations. Thus, sump wastewater via these impoundments will continue to be considered as discharges from Steam Electric Power Generation subject to the 1982 ELG requirements. The ELG pollutant limitations that these discharges will be subject to are oil and grease, pH, and Total Suspended Solids (TSS). The discharges from surface impoundments are currently meeting these permit

[1] Among the responses was AG 1-13, PSC 1-22 and KIUC 1-1 and 1-2.

limitations. However, if the impoundments are not closed, it is likely that Kentucky will add metal limits associated with state water criteria standards with the next review and issuance of these facilities' Kentucky Pollutant Discharge Elimination System Permits. It is unknown if the impoundments will be able to achieve compliance without additional wastewater treatment.

b. In order to meet the state's water quality discharge criteria standards for metals in permitted wastewater discharges, water treatment systems would need to be engineered, constructed, and operated for the duration of the water discharge from the permitted facilities. Engineering has not been performed to develop estimates for these facilities that will need to account for the sump pump and rainfall loadings necessary to size the treatment systems.

c. Yes. See Exhibit JJS-3 of the direct testimony of John J. Spanos, Column (6) for the accumulated cost of removal reserves for these facilities.

d. KU has no current plans to rehabilitate the existing generating station equipment at the retired generating stations. KU does have plans to demolish these stations in the future.

e. See part d above. There are no plans to rehabilitate these facilities. The 2016 ECR Plan proposes to eliminate process-water discharges into and through the CCR impoundments' current permitted discharge. Only storm water runoff will be discharged after the impoundments are capped and closed, which runoff will be discharged under revised storm water discharge permits issued by the state. The remaining sump pump discharges will be incorporated into these permits at that time as separate discharges and will likely be subject to non-metal permit conditions for such discharges which typically include oil and grease, pH and TSS restrictions, managed through control systems (e.g. settlement volumes and skimmer equipment) for the duration of the discharges.

KENTUCKY UTILITIES COMPANY

Response to Attorney General's Supplemental Data Requests Dated April 8, 2016

Case No. 2016-00026

Question No. 2

Witness: John N. Voyles, Jr.

Q-2. Regarding the discussion of Project 39, the closure of surface impoundments at the Green River, Tyrone, and Pineville stations as discussed in the Direct Testimony of Gary H. Revlett and in responses to numerous first round data requests[2] there appears to be a recurring theme that delaying the closure would create a large cost increase later on.

a. Provide a management plan detailing how KU plans to prudently manage all of the projects proposed in the filings as well as project 39 within roughly the same timeframe.

b. Has KU concluded that it will have no lessons learned or experience gained from the surface impoundment closures at Ghent, Trimble County and Brown that could lead to cost savings for Project 39?

c. Will closing multiple surface impoundments at once, particularly when other utilities are trying to achieve the same regulatory compliance, inflate the bids of contractors and engineers for Project 39? Provide any and all analyses or studies KU has performed regarding this issue.

d. Explain any conclusions you have regarding any possible cost savings, both internal and external, resulting from performing this quantity of projects simultaneously. Provide any and all analyses or studies you have performed regarding this issue.

e. Please explain in detail how any engineering cost escalation for this project will be greater than inflation, the efficiency gained from knowledge of doing other surface impoundment projects, savings from leveling the work load of KU staff and opportunistic timing of contracts for engineering and construction when required CCR workload has been completed.

A-2. a. The Companies' Project Engineering Department is specifically dedicated and organized to manage these types of programs. This department, with the utilization of owners' engineering firms and qualified engineering, procurement, and construction (EPC) firms, has a successful history of managing large complex capital projects and programs at multiple Company sites. Recent examples of this include simultaneously managing the 2011 ECR Air Compliance Program with similar scopes at Brown,

[2] Ibid.

Ghent, Mill Creek, and Trimble County Generating Stations while also managing landfill and CCRT projects at Brown and Ghent. With these 2011 Plan projects progressing to completion in 2016, the Companies' Project Engineering Department is well positioned for transitioning to manage simultaneously the projects proposed in this proceeding. Importantly, Project Engineering has already been actively leading the conceptual development of the surface-impoundment-closure program.

b. No. By utilizing the Project Engineering department for managing compliance projects for the CCR Rule program, lessons learned will be applied across all projects during conceptual and detailed design, as well as the implementation phases of the program. The Companies' current plan is to start closure activities at the retired generating stations (Green River, Pineville, and Tyrone) prior to beginning closure activities in earnest at active generating stations (Brown, Ghent, Mill Creek and Trimble County). The size and cost of the projects at the retired generating stations is significantly less than the more complex projects at the active generating stations, so the Companies expect to gain the lessons learned from these facilities to benefit the larger closures at the active stations rather than delaying the inactive station closures until after the active station projects are completed. This has the potential to provide cost savings at the larger impoundments rather than using the larger project lessons learned to find cost savings on the smaller inactive ponds. Also, by starting at the retired generating stations it reduces KU's overall risk, as unforeseen construction delays and closures issues, should they be experienced, will not have the potential to affect generation.

c. Currently, KU has issued conceptual and detailed design (engineering) contracts for all active and retired generation stations and based on discussions with other utilities, KU is either at or slightly ahead of those utilities related to design, thus providing an opportunity to realize potential cost savings and reduced risk as posed in the question. Closing multiple impoundments at once, while other utilities are performing similar work, has the potential to affect the overall costs for closure activities across the board. However, by working multiple sites at the same time, KU has the ability to attract larger contractors to the area that have experience working on impoundments filled with CCR materials. By starting the closure process as planned, KU will be positioned to better choose a contractor(s) with CCR experience. KU is currently evaluating the option of packaging the Brown, Pineville, and Tyrone closure construction into one package. This packaging has already been done for the conceptual and detailed design award. KU has not performed any analyses or studies to assess the impact of other utilities performing similar projects contemporaneously with its projects.

d. As stated above, the Company has experience from the 2011 Plan demonstrating the capability to manage simultaneous projects at multiple locations and achieve cost efficiencies. No studies have been performed by KU.

e. KU has utilized a 4 percent escalation rate for all large earthwork projects (landfills & ash ponds) over the last several years. This escalation factor is warranted to address the volatility of oil prices. Earthwork is highly mechanized and requires large quantities of fuel oil for the transportation and placement of CCR material,

transportation of off-site materials needed for closure and for the closure lining material itself. Pricing for geotextile products (FML, GCL, Filterfabric, etc.) are also directly related to oil prices. In addition to oil prices, the availability of equipment in the latter years of the project is a potential concern when additional utilities start closing impoundments. Based on KU's history with large earthwork projects, 4 percent escalation has been reasonable and in some cases lower than actual experienced short-term escalation caused by other market conditions (e.g., the Ohio River bridges projects).

KENTUCKY UTILITIES COMPANY

Response to Attorney General's Supplemental Data Requests Dated April 8, 2016

Case No. 2016-00026

Question No. 3

Witness: Charles R. Schram

Q-3. Regarding Project 37 as discussed in Exhibit CRS-2 please provide the following:

a. Explain why a 30 year project life was assumed.

b. Provide and explain the discount rate used in the PVRR analysis in tables 4, 5 and 6.

A-3. a. Revenue requirements for the alternatives evaluated in Table 4 on page 8 of Exhibit CRS-2 were computed over 30 years to determine which alternative is least-cost over a long-term analysis period; 30 years is the analysis period the Companies typically use for long-term evaluations. The alternatives were also evaluated based on costs incurred through 2021 (see Table 5 and Table 6). After the proposed alternative was determined to be the least-cost alternative for complying with the MATS Rule, this alternative was evaluated along with the other Ghent projects based on costs incurred through 2021 to demonstrate that the proposed projects were least cost – even if the Ghent units were retired at the end of 2021.

b. The discount rate used in the Companies' analyses is 6.51% (see Table 15 on page 16 of Exhibit CRS-2). The discount rate is the Companies' after-tax weighted average cost of capital and is computed as follows:

Revenue Requirements Discount Rate = Return on Equity * Equity % + Return on Debt * Debt % * (1 – Tax Rate).

KENTUCKY UTILITIES COMPANY

Response to Attorney General's Supplemental Data Requests Dated April 8, 2016

Case No. 2016-00026

Question No. 4

Witness: Charles R. Schram / R. Scott Straight

Q-4. Regarding Project 38 as discussed in Exhibit CRS-2 please provide a detailed explanation of the following statement on p. 9: "The option to use PAC or coal and FGD additives will enable the Companies' [sic] to have greater control over where mercury is captured – either in the unit's fly ash or gypsum."

A-4. The option to use (a) PAC or (b) coal and FGD additives will enable the Companies to have greater control over where mercury is captured – either in the unit's fly ash or gypsum. If PAC is used for mercury control, mercury will primarily be captured in the unit's baghouse and removed with the fly ash. If coal and FGD additives are used, mercury will primarily be captured in the unit's wet scrubber and removed with the gypsum. The ability to control where mercury is captured will support KU's beneficial use initiatives for coal combustion residuals.

KENTUCKY UTILITIES COMPANY

Response to Attorney General's Supplemental Data Requests Dated April 8, 2016

Case No. 2016-00026

Question No. 5

Witness: R. Scott Straight

Q-5. Regarding the response to PSC first data request question 34 and the proposed use of organo-sulfide and halogenated liquid chemicals:

a. What hazards does the use of these chemicals add to the plant?

b. Are these chemicals toxic?

c. Do these chemicals represent additional safety concerns and if so what are they?

d. Are these chemicals hazardous and do they require special spill and disposal procedures?

A-5. a. Organo-Sulfide: See attached. This chemical must not come into contact with any of the chemicals included in the 8034 Plus Safety Data Sheet (SDS) Section 10. Harmful gasses may be released. However, no storage, piping, or injection locations will be near any of the chemicals listed.

Halogenated Liquid: If injected in large quantities, the halogenated liquid could react and condense into hydrogen bromide which can be corrosive. However, the injection rates at all locations will be very low and it is not anticipated that any corrosion of downstream equipment will result from injection.

b. Organo-Sulfide: See the attachment provided in part a. Acute oral and dermal toxicity are included in the SDS Section 11. In the event of ingestion or inhalation, medical attention should be sought if symptoms occur. The note to physician is to treat symptoms.

Halogenated Liquid: See attached. Acute oral and dermal toxicity are included in the 7895 SDS Section 11. In the event of ingestion or inhalation, medical attention should be sought if symptoms occur. The note to physician is to treat symptoms.

c. Organo-Sulfide: This chemical can cause eye irritation. Proper use of Personal Protective Equipment (PPE) is required when handling the injection equipment. All locations that have the potential for the chemical to come into contact with eyes will

have eyewash or safety shower stations. See the attachment provided in part a. for more detailed information and precautionary information.

Halogenated Liquid: This chemical can cause skin irritation and serious eye irritation. Proper use of PPE is required when handling the injection equipment. All locations that have the potential for close contact with the chemical will have eyewash and safety shower stations. See the attachment provided in part b. for more detailed information and precautionary information.

d. Organo-Sulfide: See the attachment provided in part a. This chemical could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 SCR 261. Spill procedures are included in the SDS Section 6. Disposal procedures are included in the attached SDS Section 13. All bulk storage tanks will be placed in secondary spill containment.

Halogenated Liquid: See the attachment provided in part b. This chemical is not a hazardous waste as defined by the RCRA 40 SCR 261. Spill procedures are included in the SDS Section 6. Disposal procedures are included in the attached SDS Section 13. All bulk storage tanks will be placed in secondary spill containment.

NALCO
An Ecolab Company

SAFETY DATA SHEET

MERCONTROL® 8034 PLUS

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	MERCONTROL® 8034 PLUS
Other means of identification	:	Not applicable.
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630)305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	12/12/2014

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Eye irritation : Category 2B

GHS Label element

Signal Word : Warning

Hazard Statements : Causes eye irritation.

Precautionary Statements : **Prevention:**
Wash skin thoroughly after handling.
Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Sodium Sulphide	1313-82-2	0.1 - 1

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse with plenty of water. Get medical attention if symptoms occur.

In case of skin contact : Wash off with soap and plenty of water. Get medical attention if symptoms occur.

If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.
If inhaled	:	Get medical attention if symptoms occur.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders.Use personal protective equipment as required.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Wash hands thoroughly after handling. Use only with adequate ventilation.
Conditions for safe storage	:	Do not store near acids. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers. The

original condition of the product is recovered upon thawing. If product freezes, thaw and mix before using.

Suitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.
Unsuitable material	:	not determinednot determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection	:	Safety glasses
Hand protection	:	Wear protective gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	No personal respiratory protective equipment normally required.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	clear
Odour	:	Sulfurous
Flash point	:	> 93.3 °C
pH	:	12.0 - 13.2, 100 %
Odour Threshold	:	no data available
Melting point/freezing point	:	FREEZING POINT: -10 °C
Initial boiling point and boiling range	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available

Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	1.145 - 1.175 (25.0 °C)
Density	:	9.5 - 9.8 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition temperature	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
VOC	:	no data available

Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Extremes of temperature
Incompatible materials	:	Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors. May release CS2 or hydrogen sulfide on contact with acids.
Hazardous decomposition products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes eye irritation.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Irritation
Skin contact	:	No symptoms known or expected.
Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.

Toxicity

Product

Acute oral toxicity	:	LD50 rat: > 2,000 mg/kg Test substance: Product
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	Acute toxicity estimate : > 5,000 mg/kg
Skin corrosion/irritation	:	Result: No skin irritation Test substance:Product
Serious eye damage/eye irritation	:	Species: rabbit Result: Mild eye irritation Method: OECD Test Guideline 405 GLP: yes Test substance: Product
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	Not mutagenic in Ames Test.
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	Harmful to aquatic life.

Product

Toxicity to fish	:	LC50 Cyprinodon variegatus (sheepshead minnow): 1,824

mg/l
Exposure time: 96 hrs
Test substance: Similar (more concentrated) Product
Test Type: Static

LC50 Inland Silverside: 3,122 mg/l
Exposure time: 96 h
Test substance: Product
Test Type: Static

NOEC Inland Silverside: 1,250 mg/l
Exposure time: 96 h
Test substance: Product
Test Type: Static

LC50 Oncorhynchus mykiss (rainbow trout): 211 mg/l
Exposure time: 96 h
Test substance: Product
Test Type: Static

NOEC Oncorhynchus mykiss (rainbow trout): 125 mg/l
Exposure time: 96 h
Test substance: Product
Test Type: Static

LC50 Pimephales promelas (fathead minnow): 636 mg/l
Exposure time: 96 h
Test substance: Product
Test Type: Static

NOEC Pimephales promelas (fathead minnow): 375 mg/l
Exposure time: 96 h
Test substance: Product
Test Type: Static

Toxicity to daphnia and other aquatic invertebrates : LC50 Ceriodaphnia dubia: 328 mg/l
Exposure time: 48 h
Test substance: Product
Test Type: Static

NOEC Ceriodaphnia dubia: 188 mg/l
Exposure time: 48 h
Test substance: Product
Test Type: Static

LC50 Mysid Shrimp (Mysidopsis bahia): 174 mg/l
Exposure time: 96 h
Test substance: Product
Test Type: Static

NOEC Mysid Shrimp (Mysidopsis bahia): 125 mg/l
Exposure time: 96 h
Test substance: Product
Test Type: Static

Toxicity to algae : EC50 Green Algae (Pseudokirchneriella subcapitata, previously Selenastrum capricornutum): 10.2 mg/l
Exposure time: 96 h
Test substance: Product Tested in Soft Water

IC50 Green Algae (Pseudokirchneriella subcapitata, previously Selenastrum capricornutum): 9.7 mg/l
Exposure time: 96 h
Test substance: Product Tested in Soft Water

NOEC Green Algae (Pseudokirchneriella subcapitata, previously Selenastrum capricornutum): 5 mg/l
Exposure time: 96 h
Test substance: Product Tested in Soft Water

Toxicity to fish (Chronic toxicity) : LOEC: > 200 mg/l
Exposure time: 7 d
Species: Fathead Minnow
Test substance: Product

NOEC: 200 mg/l
Exposure time: 7 d
Species: Fathead Minnow
Test substance: Product

LOEC: 100 mg/l
Exposure time: 7 d
Species: Fathead Minnow
Test substance: Product

NOEC: 50 mg/l
Exposure time: 7 d
Species: Fathead Minnow
Test substance: Product

EC25 / IC25: 81.2 mg/l
Exposure time: 7 d
Species: Fathead Minnow
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 25 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia
Test substance: Product

LOEC: > 25 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia
Test substance: Product

NOEC: 6.3 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia
Test substance: Product

LOEC: 13 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia
Test substance: Product

EC25 / IC25: 5.2 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia
Test substance: Product

Persistence and degradability

Total Organic Carbon (TOC) : 82,000 mg/l

Chemical Oxygen Demand (COD): 530,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
5 d	1,690 mg/l	Product

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	10 - 30%
Soil	:	70 - 90%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste:	:	D002
Disposal methods	:	The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Section: 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

TOXIC SUBSTANCES CONTROL ACT (TSCA)
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)
This product contains substance(s) which are not listed on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

AUSTRALIA
This product contains substance(s) which are not in compliance with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS) and may require additional review.

CHINA
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

EUROPE
The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

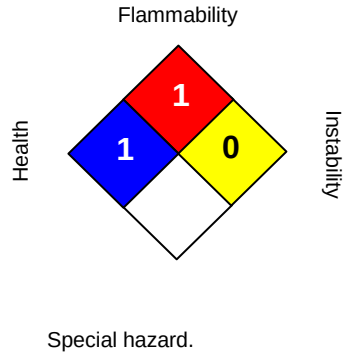
JAPAN
This product contains substance(s) which are not in compliance with the Law Regulating the Manufacture and Importation Of Chemical Substances and are not listed on the Existing and New Chemical Substances list (ENCS).

KOREA
All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

PHILIPPINES
This product contains substance(s) which are not in compliance with the Republic Act 6969 (RA 6969) and may require additional review.

Section: 16. OTHER INFORMATION

NFPA:



Special hazard.

HMIS III:

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	12/12/2014
Version Number	:	1.1
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
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NALCO
An Ecolab Company

SAFETY DATA SHEET

MERCONTROL® 7895

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	MERCONTROL® 7895
Other means of identification	:	Not applicable.
Recommended use	:	Mercury Control
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630)305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	11/18/2014

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Skin irritation	:	Category 2
Eye irritation	:	Category 2A

GHS Label element

Hazard pictograms :

Signal Word	:	Warning
Hazard Statements	:	Causes skin irritation. Causes serious eye irritation.
Precautionary Statements	:	**Prevention:** Wash skin thoroughly after handling. Wear eye protection/face protection. Wear protective gloves. **Response:** IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.
Other hazards	:	None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

SAFETY DATA SHEET

MERCONTROL® 7895

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
Calcium Bromide	7789-41-5	30 - 60

Section: 4. FIRST AID MEASURES

In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.
In case of skin contact	:	Wash off immediately with plenty of water. Use a mild soap if available. Get medical attention if irritation develops and persists.
If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.
If inhaled	:	Get medical attention if symptoms occur.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders.Use personal protective equipment as required.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Carbon oxides
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid contact with skin and eyes. Wash hands thoroughly after handling. Use only with adequate ventilation.
Conditions for safe storage	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
Suitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: Shipping and long term storage compatibility with construction materials can vary; we therefore recommend that compatibility is tested prior to use.
Unsuitable material	:	not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection	:	Safety glasses with side-shields
Hand protection	:	Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	No personal respiratory protective equipment normally required.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	Light yellow Amber
Odour	:	no data available
Flash point	:	does not flash
pH	:	7.5

Odour Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	127.7 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	Not applicable.
Relative vapour density	:	no data available
Relative density	:	1.69
Density	:	14 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition temperature	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
VOC	:	no data available

Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	None known.
Incompatible materials	:	Strong acids Strong oxidizing agents
Hazardous decomposition products	:	Hydrogen bromide Bromine

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Causes serious eye irritation.
Skin	:	Causes skin irritation.
Ingestion	:	Health injuries are not known or expected under normal use.

Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	Redness, Pain, Irritation
Skin contact	:	Redness, Irritation
Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.

Toxicity

Product

Acute oral toxicity	:	rat: 2,210 mg/kg Test substance: Active Substance
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	no data available
Skin corrosion/irritation	:	Result: Skin irritation
Serious eye damage/eye irritation	:	Result: Eye irritation
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	This product has no known ecotoxicological effects.

Product

Toxicity to fish	:	LC50 Guppy: 538 mg/l Exposure time: 96 hrs

Test substance: Similar Product

LC50 Rainbow Trout: > 1,000 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

LC50 Fathead Minnow: > 1,000 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

LC50 Inland Silverside: > 5,000.000 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

Product

Toxicity to daphnia and other aquatic invertebrates : LC50 Daphnia magna: > 1,000 mg/l
Exposure time: 48 hrs
Test substance: Similar Product

LC50 Mysid Shrimp (Mysidopsis bahia): 1,827.000 mg/l
Exposure time: 96 hrs
Test substance: Similar Product

Persistence and degradability

Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	30 - 50%
Soil	:	50 - 70%

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name	:	PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Air transport (IATA)

Proper shipping name	:	PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Sea transport (IMDG/IMO)

Proper shipping name	:	PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Section: 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards	:	Acute Health Hazard
SARA 302	:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313	:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

TOXIC SUBSTANCES CONTROL ACT (TSCA)
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)
The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

AUSTRALIA
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

CHINA
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

EUROPE
The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

JAPAN
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

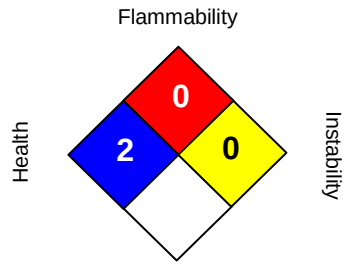
KOREA
All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

NEW ZEALAND
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

PHILIPPINES
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

Section: 16. OTHER INFORMATION

NFPA:



Special hazard.

HMIS III:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 11/18/2014
Version Number : 1.1

SAFETY DATA SHEET

MERCONTROL® 7895

Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
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KENTUCKY UTILITIES COMPANY

Response to Attorney General's Supplemental Data Requests Dated April 8, 2016

Case No. 2016-00026

Question No. 6

Witness: John N. Voyles, Jr.

Q-6. Referring to the discussion in JNV-6 and Project 40 please explain the following:

a. As described in Section 2 of the report it appears that once ATB1 is reactivated in 2017 that ATB2 is no longer needed. Given that, if ATB2 were merely monitored by groundwater monitoring wells ("GMWs") and a problem was identified, isn't it true that the Ghent units will not need to be shut down while ATB2 is closed?

b. Why would ATB2 need to be closed immediately after ATB1 is reactivated? What is the advantage?

c. Are there other ways the project could be extended without undue risk that the Ghent units could be shut down? Wouldn't this allow for a more complete plan to be formulated?

A-6. a. The Attorney General's assumption is correct when looking at individual impoundments by themselves. If ATB #2 were evaluated as a standalone project, closure of this impoundment could be tied to a groundwater exceedance. However, when evaluating the closure options for all of the Ghent impoundments, the least-cost closure of ATB #2 is tied to the closure of the Gypsum Stack. To maintain operation of the generating units, ATB #1 requires reactivation to accept effluent flows that currently go to ATB #2 and the Gypsum Stack. Once ATB #1 is reactivated and receiving all the station's effluent flows, closure of the Gypsum Stack can begin. Closure of the Gypsum Stack includes excavation and hauling of CCR from the Gypsum Stack and unloading of the CCR within ATB #2. Final placement and compaction of the CCR material within the footprint of ATB #2 are considered closure activities and included in the ATB #2 cost estimates. By beneficially using the CCR material within the Gypsum Stack to close ATB #2, KU has significantly minimized the cost for closure activities at Ghent by minimizing the need to purchase additional land for virgin material borrow sources, the added cost for the longer off-site haul distances, and the impact of using over the road trucks on local roads. Based on KU's experience, the cost of trucking virgin soil to the site is at minimum twice as much as beneficially using on-site CCR material. In addition to being the least cost closure method, early closure of the Gypsum Stack is required as additional space is needed to construct process-water systems. Available space is limited at Ghent and by closing

the Gypsum Stack early it will provide a minimum of 40-acres that can be used for process ponds and/or water treatment facilities.

b. See the response to part a.

c. At this time, KU does not see an option that could extend the project without undue risk to the Ghent units while meeting the requirements of the CCR Rule.

KENTUCKY UTILITIES COMPANY

Response to Attorney General's Supplemental Data Requests Dated April 8, 2016

Case No. 2016-00026

Question No. 7

Witness: John N. Voyles, Jr.

Q-7. Referring to the statement on Page 3 of 38 of Exhibit JNV-7, during the discussion of the BAP and Gypsum Storage Pond at the Trimble County Generation Station (Section 2.2) the following statement was made: "… This accumulated water will need to be removed in order to close this ponds [sic]. Costs associated with development of this approach and implementation of the approach are not included in this project or cost estimate. …"

a. What does this statement mean?

b. What costs are not considered or estimated?

A-7. a-b. Dewatering of the impoundment is included as a line item in the costs estimates for the BAP and Gypsum Storage Pond (see pages 2 and 5 in Attachment 2 of Exhibit JNV-7). As discussed further in Section 2.2 of that attachment, costs have been included to dewater the pond but the cost of treatment has not been included. Currently, discharge of water from the BAP is prohibited by the 1982 ELG Regulations as incorporated into the Trimble County KPDES permit as a zero discharge impoundment. KU is currently working with regulators to determine if the excess water can be discharged via conventional methods though a permit modification. At the same time, KU is evaluating changes to the station's operations to minimize the process-water flows to the BAP. If water treatment, thermal evaporation, packages systems, or extraordinary means are required, the costs are currently unknown due to the variability of the system(s) required to treat process-water volumes of up to 1 million gallons per day. In the event treatment is required, KU will update the Commission on the scope and cost of this activity.

KENTUCKY UTILITIES COMPANY

Response to Attorney General's Supplemental Data Requests Dated April 8, 2016

Case No. 2016-00026

Question No. 8

Witness: John N. Voyles, Jr.

Q-8. Georgia Power Company ("GPC") recently announced[3] that it will be closing 29 ash ponds in the next ten years at an approximate cost of $1 billion. Given that the total number of KU's impoundments are significantly fewer than GPC's, does KU still maintain that its proposals as outlined in the application are still least-cost?

A-8. Yes. GPC indicated that closing 29 impoundments at 11 coal-fired facilities will cost more than $1 billion. Based on the referenced article, KU is unable to determine key estimating factors such as the size, location, current remaining storage capacity, complexity of closure, etc. of the 29 impoundments. As indicated by GPC, ash pond closures are "site-specific and involve complex processes," so it is not possible to compare the two compliance programs without knowing all the details of GPC's plan.[4] In addition, GPC indicated it would close a dozen impoundments within two years, which is significantly faster that KU's proposed closure plan, and likely affects costs.

It is important to also note that it is unclear whether GPC's costs in the cited article include new process-water systems related costs. When looking at KU's combined surface impoundment closure total cost of $648.7 million, $423.2 million is for closure of surface impoundments and $225.5 million is for constructing new process-water systems.

[3] http://www.utilitydive.com/news/georgia-power-to-close-half-of-its-coal-ash-ponds-in-2-years/416598/

[4] http://www.prnewswire.com/news-releases/closure-preparation-activities-underway-at-all-29-georgia-power-ash-ponds-300242708.html.