

## Response to Comments

### LG&E Trimble County Generating Station Special Waste Landfill Application

#### AI 4054; Activity APE20140001

The Division of Waste Management (DWM) received an application for a new Special Waste Landfill on January 3, 2014. The first public notice was issued on January 30, 2014 with a thirty (30) day comment period. The second public notice was issued on August 11, 2016 with a thirty (30) day comment period and included information for a public hearing on August 30, 2016. The following is a brief description of the comments received and DWM's response.

#### 1<sup>st</sup> comment period

**Comment 1:** A commenter stated that, according to KRS 433.871-885 (the Kentucky Cave Protection Act), a sinkhole is a cave, and the sinkholes should be examined to see if they contain the same living organisms as were found in the cave.

**Response:** KRS 433.877 states that, "It shall be unlawful to remove, kill, harm, or otherwise disturb any naturally occurring organism found within any cave".

For naturally-occurring organisms to be covered under this statute, they must be found within a "cave". (Some organisms may be protected under one or more other statutes.)

Both sinkholes and caves are karst features, but a sinkhole is not a cave. A sinkhole is a closed depression on the surface of the earth that may or may not be connected to a cave.

KRS 433.871(1) defines "cave" as *"any naturally occurring void, cavity, recess, or system of interconnecting passages beneath the surface of the earth containing a black zone including natural subterranean water and drainage systems, but not including any mine, tunnel, aqueduct, or other man-made excavation, which is large enough to permit a person to enter. The term "cave" includes or is synonymous with cavern."*

In order for a sinkhole to be part of a cave under KRS 433.871(1), the sinkhole must be part of the subterranean drainage network connected to a cave, i.e., to a passage that is both large enough for a human to enter and that has a "black zone".

To date, the only known onsite karst feature that meets this definition of "cave" is Wentworth (or Lime) Cave. The cave and the sinkholes connected to it will be unaffected by construction or waste placement.

Biological surveys of the proposed landfill and surrounding areas have been conducted and reviewed by multiple state and federal agencies, both in the context of the review of the landfill application and other state and federal permit applications. The applicant will be required to meet all relevant statutes and regulations regarding the protection of wildlife.

The permit was not changed in response to this comment.

**Comment 2:** A commenter stated that the 100-foot buffer zone established in 401 KAR 45:130 is insufficient to protect neighbors from the permitted activity.

**Response:** KRS Chapter 224 requires the cabinet to adopt regulations for the management, processing, or disposal of wastes. A change in the buffer zone provision would require a regulatory change. The application proposing the landfill was reviewed pursuant to the current regulations.

The permit was not changed in response to this comment.

**Comment 3:** Several commenters cited the adverse effects the neighboring waste and construction activities were having and would continue to have on their health and property.

**Response:** The application meets the siting requirement established in 401 KAR 45:130, Section 1(4) which requires waste to not be placed within one hundred (100) feet of the property line. Further, the facility shall comply with the Environmental Performance Standards per 401 KAR 30:031.

The permit was not changed in response to this comment.

**Comment 4:** Several commenters stated that maples along Ogden Ridge Road were planted in 1865, and should have been sold to make pianos instead of being shredded by LG&E via road clearing.

**Response:** The Division of Waste Management does not have regulations that address this matter.

The permit was not changed in response to this comment.

**Comment 5:** A commenter stated that the coal combustion waste proposed to be disposed at this landfill contains toxic pollutants such as: arsenic, mercury, selenium, lead, cadmium, boron, bromides, nitrogen, phosphorus, and total dissolved solids. Other substances of concern include: antimony, chromium, molybdenum, and thallium. The commenter stated that these pollutants pose documented risks to the environment and also to human health, such as cancer.

**Response:** Coal combustion wastes do contain the constituents noted, and if released from the disposal facility, these constituents could present a hazard to human health and the environment.

However, if the facility is constructed and operated in accordance with the applicable statutes and administrative regulations, the permit, and the approved plans, and operated in conformance with the environmental performance standards of 401 KAR 30:031, hazards to human health and the environment will be minimized.

The permit was not changed as a result of this comment.

**Comment 6:** A commenter stated that the landfill permit fails to demonstrate that the engineering design will not pose a reasonable probability of adverse effects on human health or the environment as required by 401 KAR 30:031 and 401 KAR 45:110.

**Response:** The landfill will have a synthetic liner system consisting of a prepared subgrade, two feet of compacted soil layer with a minimum permeability of  $1 \times 10^{-7}$  cm/s, 60 mil linear low density polyethylene (LLDPE) geomembrane, twelve ounce per square yard cushion geotextile or 300 mil Geocomposite

drainage net, twelve inch leachate collection system, and a two feet protective cover. The synthetic liner system is far more robust than what is required in 401 KAR 45:110 and will protect human health and the environment by acting as a hydraulic barrier to prevent the migration of leachate into the groundwater. The applicant also performed a slope stability analysis that shows the landfill design is stable under seismic conditions.

The permit was not changed as a result of this comment.

**Comment 7:** A commenter expressed concern that the landfill design did not adequately meet the requirements of 45:110 to not pose a reasonable probability of adverse effects on human health or the environment due to the landfill being sited over karst terrain which would lead to contamination of groundwater and surface water. Further, siting the landfill on karst terrain was stated to be a violation of 401 KAR 45:130(3).

**Response:** Karst terrain is present at the site, mostly overlying the Saluda Dolomite and the Laurel Dolomite. The Saluda Dolomite is exposed on the side slopes of the valley, and the Laurel Dolomite is present in the upland interfluves.

Rock units below the Saluda Dolomite were determined to have very low porosity and permeability, with little or no groundwater flow except in the weathered, fractured upper bedrock. This is also the case for the Brassfield Limestone and Osgood Shale which overlie the Saluda.

Geologic investigation of the site (including dye tracing) has revealed that groundwater enters sinkholes and flows along fractures and karst conduits in the Saluda Dolomite and flows toward the center of the valley where it discharges through springs in the lower part of that formation. Available evidence indicates that groundwater in the Saluda has no known potential to flow into adjacent valleys to the north or south.

Monitoring the weathered, fractured upper bedrock and overlying unconsolidated material hydraulically downgradient of the disposal site should allow detection of any contaminant releases that have occurred below the base of the Laurel Dolomite. Moreover, corrective action of any such releases should be easily accomplished.

Groundwater flow above the base of the Laurel Dolomite (which is the uppermost bedrock unit in the upland areas) is not well understood as that in the underlying rocks. Because conduit and fracture flow have been documented in the Laurel, DWM has determined that dye tracing and/or monitoring of springs on adjacent properties is necessary before geological characterization of the areas overlying the Laurel Dolomite and the superjacent glacial drift can be considered complete.

As a result, the permit does not allow the mitigation of karst features, the placement of a liner system, or the subsequent placement of waste above the base of the Laurel Dolomite. In addition, no liner system or waste may be placed over the Laurel Dolomite unless the permittee submits to the DWM a groundwater monitoring plan for the Laurel Dolomite that the DWM finds acceptable. The groundwater monitoring plan would be a major permit modification and would be subject to public notice and comment.

With regard to the siting of the landfill closer than 250 feet from karst features, the applicant has requested a variance pursuant to 401 KAR 30:020 Section 2. To mitigate potential hazards regarding structural stability, LG&E has proposed filling any karst features found during excavation. Springs will be dug out, filled with gravel, and linked to the underdrain system. Karst voids will be filled with cement

grout or concrete. DWM has determined that this approach provides adequate protection to human health and the environment in a manner consistent with the purpose of the applicable regulations and KRS Chapter 224.

The applicable statutes and administrative regulations, the approved plans, and the environmental performance standards of 401 KAR 30:031, have been deemed protective of human health and the environment. The permittee must comply with these requirements.

The permit condition in the draft permit was not changed as a result of this comment. It states, “Permit Modification: The total disposal area delineated in the APE20140001 application is 189 acres. Once construction is authorized, only 97 acres are authorized for construction as discussed in the application; see the additional information received on July 22, 2016 and July 25, 2016 for site drawings and a narrative. Once construction is authorized, only excavation and blasting activities are permitted above the base of the Laurel Dolomite; any other construction, i.e. structural fill or liner construction in the area above the base of the Laurel Dolomite requires further authorization from the Solid Waste Branch in the Division of Waste Management via a major permit modification application. The application shall include a groundwater monitoring plan that shall accurately characterize groundwater flow and flow systems in the Laurel Dolomite, which is the uppermost bedrock aquifer at the site. It shall also provide for the monitoring of the groundwater in the Laurel Dolomite for releases of contamination from the facility. [401 KAR 45:140 Section 2, 401 KAR 45:160 Section 2]”

However, for clarification purposes the following permit condition was added: “Permit Modification: Mitigation of karst features above the base of the Laurel Dolomite is not authorized and requires further authorization from the Solid Waste Branch in the Division of Waste Management. [401 KAR 45:140 Section 2, 401 KAR 45:160 Section 2]”

**Comment 8:** A commenter stated that the permit does not take into consideration the climatic conditions of the area, as required by 401 KAR 45:110. Specifically, the commenter mentioned the susceptibility of this area to high winds and even tornadoes.

**Response:** High winds and tornadoes are a possibility throughout Kentucky and the design regulations account for these occurrences. The application includes a plan addressing fugitive dust emissions. The facility is required to comply with the environmental performance standards pursuant to 401 KAR 30:031.

The permit was not changed in response to this comment.

**Comment 9:** Numerous comments were received regarding the suitability of the various waste streams for disposal in the landfill.

One commenter stated that the wastes proposed for disposal include 33,400,000 cubic yards of bottom ash, fly ash, flue gas desulfurization (FGD) wastes, and mill rejects, and that the testing used by LGE to characterize the waste (Total Metals, TCLP, or SPLP) is inappropriate to determine the “nonhazardous” nature of the waste over the long term or to characterize its long-term leaching potential.

The commenter further stated that as a result, LG&E and the Cabinet cannot demonstrate with any degree of confidence that the disposal facility has been properly designed to address the potential for leaching constituents of concern.

The commenter recommended the use of alternate tests, including the Synthetic Groundwater Leaching Procedure (SGLP), Leaching Environmental Assessment Framework (LEAF), and Kosson protocol tests.

**Response:** With regard to the necessity of some waste streams being determined “nonhazardous”, 40 CFR 261.4(b) (4) lists certain CCRs and associated wastes as exempt from hazardous waste classification. Among these are fly ash, bottom ash, flue gas desulfurization sludge, coal pile runoff, boiler cleaning solutions, boiler blowdown, process water treatment and demineralizer regeneration wastes, cooling tower blowdown, air heater and precipitator washes, effluents from floor and yard drains and sumps, and wastewater treatment sludge. As a consequence, no hazardous waste determination is required for these waste streams.

The analytical tests used were compatible with the applicable Kentucky Administrative Regulations; 401 KAR 30:010 incorporates EPA SW-846 test methods by reference. As a result, DWM has historically required SW-846 Test Methods.

None of the alternate tests mentioned by the commenter have been added to the SW-846 Compendium through the Federal Register process. The LEAF tests are mentioned by USEPA on the SW-846 website, but they are “SW-846 Validated Test Methods”, and not formally adopted.

In addition to the proposed waste streams that are also listed in 40 CFR 261.4(b) (4), the application proposes the disposal of mill rejects in the landfill. (The terms “mill rejects” and “pyrites” are often used interchangeably, although pyrites are a subset of mill rejects.)

Lastly, mill rejects do not meet the definition of coal combustion residuals under 40 CFR 257.53 nor do they meet the definition of special waste under KRS 224.50-760. As a result, it is the responsibility of the generator to make a waste determination on the mill rejects and then to dispose of them at an appropriately permitted facility.

The permit was changed to contain the revised permit condition:

Wastestreams: The permittee may dispose of coal combustion by-products generated by the Trimble County Generating Station. These by-products include bottom ash, fly ash, and flue gas desulphurization (FGD) gypsum; mill rejects (pyrites) are not authorized for disposal. Any new waste stream or source shall be approved by the Cabinet prior to accepting the waste. [401 KAR 45:040 Section 1(3)(o), 401 KAR 45:110 Section 3(7), KRS 224.50-760(1)(a)]

**Comment 10:** A commenter stated that, pursuant to 401 KAR 45:110(2), the high volume of ash to be placed in the landfill was a concern due to an unreasonable probability of adverse effects.

**Response:** The landfill design takes into the account the waste volume to be disposed of. Within the design are several analyses and models that are utilized to determine if the design is stable and adequate. The applicant has provided these and the Division concurs that the landfill design will protect human health and the environment.

The permit was not changed as a result of this comment.

**Comment 11:** A commenter said that the engineering design of the landfill was not adequate with respect to the hydrogeologic characteristics of the site including the quality, quantity, current use and direction of

the groundwater flow as required by 401 KAR 45:110(6). Therefore the design did not demonstrate there is no reasonable probability of adverse effects on human health or the environment as required by 401 KAR 30:031. Further, the permit application does not demonstrate that the engineering design is adequate to prevent adverse impacts to surface water or groundwater wells pursuant to 401 KAR 45:110(8). Water wells, livestock wells, and springs were all documented to exist within a few miles of the landfill site.

**Response:** The applicable statutes and administrative regulations, the approved plans, and the environmental performance standards of 401 KAR 30:031, have been deemed protective of human health and the environment. The permittee must comply with these requirements.

The permit was not changed in response to this comment.

**Comment 12:** A commenter expressed concern that the Surface Water Monitoring Plan did not require treatment of leachate before pumping it from the Leachate Pond to the Bottom Ash Pond or Gypsum Storage Pond, where it will then be stored, treated, or discharged. The commenter stated that KDWM should not authorize the untreated discharge of leachate to surface water.

**Response:** KDWM does not regulate the discharge of wastewater to surface water. Discharges resulting from the operation of a generating unit and associated waste disposal facilities is regulated federally pursuant to 40 CFR Part 423 and by the Kentucky Division of Water pursuant to 401 KAR Chapters 5 and 10.

The permit was not changed in response to this comment.

**Comment 13:** A commenter stated that the closure and post-closure plans for the landfill must address the site's unique characteristics, particularly assessing the structural integrity of a landfill placed over karst terrain. The commenter stated that the plan should include a geotechnical assessment at each of the three phases of the landfill in order to guarantee long term stability. Further, a geotechnical inspection should occur annually during post-closure.

**Response:** To mitigate potential hazards regarding structural stability, LG&E has proposed filling any karst features found during excavation. Springs will be dug out, filled with gravel, and linked to the underdrain system. Karst voids will be filled with cement grout or concrete. DWM has determined that this approach provides adequate protection to health and the environment in a manner consistent with the purpose of the applicable regulations and KRS Chapter 224.

The applicable statutes and administrative regulations, the approved plans, and the environmental performance standards of 401 KAR 30:031 have been deemed protective of human health and the environment. The permittee must comply with these requirements.

The permit was not changed in response to this comment.

**Comment 14:** A commenter stated that the post-closure surface water and groundwater monitoring should be conducted for a period of at least 30 years due to the fact that peak exposures from coal ash ponds are projected to occur 78 to 105 years after a pond beings operation.

**Response:** 401 KAR 45:110, Section 5(5) states the landfill shall be maintained under its postclosure plan for a minimum of five (5) years in a manner that complies with 401 KAR 30:031. The timeline may be

extended beyond the five (5) years if the facility pursuant to 401 KAR 45:160 is conducting groundwater assessment or corrective action.

The permit was not changed as a result of this comment.

**Comment 15:** A commenter stated that due to the numerous unreasonable risks to human health and the environment, the landfill application should be denied and alternative disposal locations that would not present such risks should be examined.

**Response:** The landfill is designed and constructed to minimize the possibility of releases of contaminants into the groundwater and surface water. The facility will be required to comply with the environmental performance standards of 401 KAR 30:031. Further, groundwater and surface water will be monitored in accordance with all applicable regulations in order to determine whether a release of contaminants has occurred. In the unlikely event of a contaminant release, the permittee will be required to perform corrective measures as needed to ensure the protection of human health and the environment. The Chapter 45 regulations for special waste facilities do not require the permittee to explore alternate disposal locations.

The permit was not changed in response to this comment.

## **2<sup>nd</sup> comment period**

**Comment 16:** A commenter stated that the proposed landfill enables LG&E/KU to continue to spew pollutants (i.e. CO<sub>2</sub>) into the atmosphere at the cost of the health of Kentucky residents and the environment.

**Response:** Pursuant to 401 KAR 30:031, Section 9(2), no facility shall violate applicable air pollution requirements. The Division for Air Quality regulates this matter pursuant to KRS Chapter 224, Subchapter 20 and the administrative regulations promulgated pursuant thereto.

The permit was not changed in response to this comment.

**Comment 17:** A commenter stated that the permit should not be granted until other methods of producing power at the Trimble County Generating Station have been fully investigated.

**Response:** The Division (Division) of Waste Management does not have regulatory authority over this matter. The Division reviews applications that are submitted and makes a determination based on the authority pursuant to KRS Chapter 224 and the administrative regulations promulgated pursuant thereto.

The permit was not changed in response to this comment.

**Comment 18:** A commenter stated that the application should be denied due to close proximity to a residential neighborhood and the possibility of water contamination, noise, inconvenience, and sulfur odors.

**Response:** The application meets the siting requirement established in 401 KAR 45:130, Section 1(4) which requires waste to not be placed within one hundred (100) feet of the property line. Further, the facility shall comply with the Environmental Performance Standards per 401 KAR 30:031 and shall monitor groundwater in accordance with 401 KAR 45:160.

The permit was not changed in response to this comment.

**Comment 19:** Several commenters stated the application should be denied due to the possibility of windborne ash being spread to nearby properties.

**Response:** Pursuant to 401 KAR 30:031, Section 9(2), no facility shall violate applicable air pollution requirements. The Division for Air Quality regulates this matter pursuant to KRS Chapter 224, Subchapter 20 and the administrative regulations promulgated pursuant thereto.

The permit was not changed in response to this comment.

**Comment 20:** A commenter stated that the application should be denied due to damage to area roads from heavy trucks, and dirt and mud littering area roadways.

**Response:** A permittee shall not to violate the Environmental Performance Standards of 401 KAR 30:031, Section 11 which states that “No waste site or facility shall result in a public nuisance because of blowing litter, debris, or other waste or material.”

The permit was changed to add this permit condition:

Operation: The owner or operator shall remove debris, mud, and waste from vehicles before leaving the site. In addition, the owner or operator shall remove the landfill debris, mud, and waste from off-site roadways generated by the landfill. [401 KAR 30:031 Section 11]

**Comment 21:** A commenter stated that the application should be denied due to changes in traffic flow due to the increased number and slower speed of heavy trucks.

**Response:** In considering whether to allow or deny the permit for a landfill of this type, the Division of Waste Management may only consider matters over which it has regulatory authority. In this case, the factors which can be taken into consideration for permitting decisions do not include traffic. The Kentucky Transportation Cabinet has regulatory authority in this area.

The permit was not changed in response to this comment.

**Comment 22:** Several commenters stated the application should be denied due to a request for an improper variance regarding geological characterization of groundwater flow and groundwater monitoring above the base of the Laurel Dolomite.

**Response:** The DWM disagrees that the variance requests in the application and their approval in the draft permit represent a violation of 401 KAR 30:020. Groundwater flow above the base of the Laurel Dolomite (which is the uppermost bedrock unit in the upland areas) is not well understood as that in the underlying rocks. Because conduit and fracture flow have been documented in the Laurel, DWM has determined that dye tracing and/or monitoring of springs on adjacent properties is necessary before geological characterization of the areas overlying the Laurel Dolomite and the superjacent glacial drift can be considered complete.

As a result, the permit does not allow the mitigation of karst features, the placement of a liner system, or the subsequent placement of waste above the base of the Laurel Dolomite. In addition, no liner system or waste may be placed over the Laurel Dolomite unless the permittee submits to the DWM a groundwater



monitoring plan for the Laurel Dolomite that the DWM finds acceptable. The groundwater monitoring plan would be a major permit modification and would be subject to public notice and comment.

The permit was not changed in response to this comment.

**Comment 23:** Several commenters stated the “piece-mealing” of the landfill project would allow the permittee to skirt the regulatory process, leading to unacceptable harm to the environment.

**Response:** Pursuant to 401 KAR 45:110, the owner or operator of a special waste landfill must operate the facility in accordance with the requirements of KRS Chapter 224, requirements of Chapter 45, and the conditions of the special waste landfill permit. The special waste landfill permit incorporates all approved applications and plans as stated on the permit in the following manner: “No deviation from the plans and specifications submitted with your application or any condition specified herein is allowed, unless authorized in writing from the Division”. Also the special waste landfill permit states that “Violation of the terms and conditions specified herein may render this permit null and void”.

The permit was not changed in response to this comment.

**Comment 24:** Several commenters stated the application should be denied because, while the permittee does not intend to construct above the Laurel Dolomite with this application, the overland transportation of coal waste via conveyor without complete containment will result in contamination all along the route, including the Laurel Dolomite ground and groundwater.

**Response:** A permittee shall not violate the Environmental Performance Standards of 401 KAR 30:031, which prohibit the discharge of pollutants into the waters of the Commonwealth or contamination of an underground drinking water source.

The permit was not changed in response to this comment.

**Comment 25:** Several commenters stated the “piece-mealing” of the landfill project will result in increased cost to Kentucky electric rate-payers.

**Response:** The Division of Waste Management does not have regulatory authority over this matter. The Public Service Commission is the primary regulatory agency concerning electricity rates.

The permit was not changed in response to this comment.

**Comment 26:** A commenter stated that more layers of buffer between the waste and ground are needed.

**Response:** The applicant has proposed a synthetic liner system. This system is a highly impermeable layer that will act as a hydraulic barrier to prevent the migration of leachate into the environment.

The permit was not changed in response to this comment.

**Comment 27:** A commenter stated that remaining adjoining property owners to the site should be bought out by the applicant, at a price commensurate to that paid to previous landowners.

**Response:** The Division of Waste Management does not have regulatory authority over this matter. A contract or offer to purchase property is between the seller and potential buyer.

The permit was not changed in response to this comment.

**Comment 28:** A commenter stated that LG&E/KU must be required to adhere fully to all safety standards for surface- and groundwater, soil, karst, dolomite, and human and animal safety, with full monitoring, testing, and accountability to DWM and other relevant local, state, and federal agencies.

**Response:** The applicable statutes and administrative regulations, the approved plans, and the environmental performance standards of 401 KAR 30:031, have been deemed protective of human health and the environment. The permittee must comply with these requirements.

The permit was not changed in response to this comment.

**Comment 29:** A commenter stated that LG&E/KU must not disturb any marked or unmarked graves on current or future project land, nor otherwise disturb any part of the Mt. Pleasant Methodist Church through blasting or equipment use on LG&E/KU property or church adjacent roadways.

**Response:** The draft permit contains the provision that the landfill construction activities shall not commence until receipt of concurrence from the Kentucky Heritage Council regarding cultural and historic resources. Additional information may be found in Attachment 16 of the permit application.

The permit was not changed in response to this comment.

**Comment 30:** A commenter stated that because the landfill sits on karst topography, it is too risky.

**Response:** The landfill will have a synthetic liner system. The synthetic liner system is far more robust than what is required in 401 KAR 45:110 and will protect human health and the environment by acting as a hydraulic barrier to prevent the migration of leachate into the environment. Also, the groundwater beneath the landfill liner system will be monitored to detect groundwater contamination.

The permit was not changed as a result of this comment

**Comment 31:** A commenter stated that the draft permit contains too many contingencies.

**Response:** The draft permit contains provisions that the landfill construction activities shall not commence until receipt and DWM approval of the required provisions.

The permit was not changed as a result of this comment.

**Comment 32:** A commenter stated that the applicant should not be allowed to perform blasting above the Laurel Dolomite.

**Response:** The permit authorizes excavation and blasting activities above the base of the Laurel Dolomite. Groundwater flow above the base of the Laurel Dolomite (which is the uppermost bedrock unit in the upland areas) is not well understood as that in the underlying rocks. Because conduit and fracture flow have been documented in the Laurel, DWM has determined that dye tracing and/or monitoring of springs on adjacent properties is necessary before geological characterization of the areas overlying the Laurel Dolomite and the superjacent glacial drift can be considered complete.

As a result, the permit does not allow the mitigation of karst features, the placement of a liner system, or the subsequent placement of waste above the base of the Laurel Dolomite. In addition, no liner system or waste may be placed over the Laurel Dolomite unless the permittee submits to the DWM a groundwater

monitoring plan for the Laurel Dolomite that the DWM finds acceptable. The groundwater monitoring plan would be a major permit modification and would be subject to public notice and comment.

The applicable statutes and administrative regulations, the approved plans, and the environmental performance standards of 401 KAR 30:031, have been deemed protective of human health and the environment.

The permit was not changed in response to this comment.

**Comment 33:** A commenter questioned how a variance can be introduced as a modification on an application for which a permit has never been issued.

**Response:** The process for requesting a variance is in 401 KAR 30:020. The requirement that a permit must already be issued is not a requirement of 401 KAR 30:020.

The permit was not changed in response to this comment.

**Comment 34:** A commenter stated that the cap system proposed was insufficient to prevent rain infiltration and root penetration.

**Response:** The cap system will consist of minimum twelve inches of compacted cohesive soil overlaid by twelve inches of vegetative soil. The cap system will consist of a 25% slope that will encourage runoff and not infiltration. Surface water collection channels, sedimentation basin, and other erosion control measures will be utilized to manage surface water runoff and minimize erosion. Limiting erosion rills will also limit infiltration through the cap system. The application closure plan is consistent with 401 KAR 45:110 Section 5.

The permit was not changed as a result of this comment.

**Comment 35:** A commenter expressed concern that the permit application lacked an adequate characterization of the Laurel Dolomite aquifer system pursuant to the requirements of 401 KAR 45:110, Section 1; 401 KAR 45:160, Section 7(2) and 401 KAR 45:160. The commenter concluded that the permit could not therefore be issued. The commenter further expressed concern that the proposed permit condition allowing excavation and blasting at the site would alter the groundwater characteristics and therefore this permit condition should not allowed prior to an adequate groundwater characterization. The presence of springs at the site indicated a karst aquifer which would be particularly vulnerable to collapse, plugging, and contamination from subgrade preparation activities.

**Response:** Groundwater flow above the base of the Laurel Dolomite (which is the uppermost bedrock unit in the upland areas) is not as well-understood as that in the underlying rocks. Because conduit and fracture flow have been documented in the Laurel, DWM has determined that dye tracing and/or monitoring of springs on adjacent properties is necessary before geological characterization of areas overlying the Laurel Dolomite and superjacent glacial drift can be considered complete.

As a result, the permit does not allow the mitigation of karst features, the placement of a liner system, or the subsequent placement of waste above the base of the Laurel Dolomite. In addition, no liner system or waste may be placed over the Laurel Dolomite unless the permittee submits to the DWM a groundwater monitoring plan for the Laurel Dolomite that the DWM finds acceptable. The groundwater monitoring plan would be a major permit modification and would be subject to public notice and comment.

The permit condition in the draft permit was not changed as a result of this comment. It states, “Permit Modification: The total disposal area delineated in the APE20140001 application is 189 acres. Once construction is authorized, only 97 acres are authorized for construction as discussed in the application; see the additional information received on July 22, 2016 and July 25, 2016 for site drawings and a narrative. Once construction is authorized, only excavation and blasting activities are permitted above the base of the Laurel Dolomite; any other construction, i.e. structural fill or liner construction in the area above the base of the Laurel Dolomite requires further authorization from the Solid Waste Branch in the Division of Waste Management via a major permit modification application. The application shall include a groundwater monitoring plan that shall accurately characterize groundwater flow and flow systems in the Laurel Dolomite, which is the uppermost bedrock aquifer at the site. It shall also provide for the monitoring of the groundwater in the Laurel Dolomite for releases of contamination from the facility. [401 KAR 45:140 Section 2, 401 KAR 45:160 Section 2]”

However, for clarification purposes the following permit condition was added: “Permit Modification: Mitigation of karst features above the base of the Laurel Dolomite is not authorized and requires further authorization from the Solid Waste Branch in the Division of Waste Management. [401 KAR 45:140 Section 2, 401 KAR 45:160 Section 2]”

**Comment 36:** A commenter stated that siting the landfill over karst features is a violation of 401 KAR 45:130, Section 1(3). The commenter stated that site investigations indicated the presence of 106 sinkholes. The commenter further stated that a variance from this regulatory requirement was unlikely to meet the variance provisions of 401 KAR 30:020, Section 2 as far as being “insignificant as a potential hazard to public health or the environment”. The commenter stated that the permittee should be required to comply with the regulatory requirement of not placing waste within 250 feet of a sinkhole.

**Response:** The applicant has requested a variance from the karst feature offset provision of 401 KAR 45:130, Section 1(3). DWM has determined that if the relevant karst features are filled as proposed, the practice would be “insignificant as a potential hazard to public health or the environment” pursuant to 401 KAR 30:020, Section 2.

Further, please see the response to Comment 7.

**Comment 37:** A commenter stated that the Cabinet lacks authority to grant a variance from the buffer zone requirements of 401 KAR 45:130, Section 1.

**Response:** The process, including limitations, for requesting a variance is in 401 KAR 30:020.

The permit was not changed in response to this comment.

**Comment 38:** A commenter stated that both the National Academies of Science and the EPA have documented the contamination of groundwater and surface water by leached constituents of coal ash. The EPA recognized 24 proven damage cases and 39 “potential” damage cases.

**Response:** These damage cases are primarily facilities constructed without a bottom liner system or a cap. The proposed landfill will be required to construct a bottom liner and cap system which will greatly reduce the probability of environmental contamination. As indicated in the responses to other comments, the facility will be required to have a groundwater monitoring system to further protect against contamination from the site.

The permit was not changed in response to this comment.

**Comment 39:** Multiple commenters stated that the Cabinet does not have the authority to issue a conditional permit allowing the siting of the landfill prior to receiving a water quality certification pursuant to 401 KAR Chapter 10. The commenter stated that the water quality certification must be completed prior to permit issuance in order to demonstrate compliance with the requirements of 401 KAR 45:130 and 401 KAR 30:031.

**Response:** The water quality certification was issued on October 24, 2016. A copy of the cover letter has been incorporated into the administrative record by the Solid Waste Branch for the Special Waste Landfill.

The permit was changed removing the provision below:

“Construction: The landfill construction activities shall not commence in the permit boundary area designated in application APE20140001 until 1) receipt of the Water Quality Certification (certification) from the Division of Water, and 2) the certification is submitted to and accepted by the Solid Waste Branch in the Division of Waste Management. [401 KAR 45:140 Section 2]”

**Comment 40:** A commenter stated that the groundwater monitoring plan fails to provide a monitoring system capable of accurately analyzing the groundwater quality and flow. The commenter further explained that the proposed groundwater monitoring plan was better suited to granular groundwater systems and not the karstic system present at the site. The commenter provided technical comments stating that tracer investigations and the use of springs would augment groundwater monitoring in karst environments.

**Response:** Karst terrain is present at the site, mostly overlying the Saluda Dolomite and the Laurel Dolomite. The Saluda Dolomite is exposed on the side slopes of the valley, and the Laurel Dolomite is present in the upland interfluves.

Rock units below the Saluda Dolomite were determined to have very low porosity and permeability, with little or no groundwater flow except in the weathered, fractured upper bedrock. This is also the case for the Brassfield Limestone and Osgood Shale which overlie the Saluda.

Geologic investigation of the site (including dye tracing) has revealed that groundwater enters sinkholes and flows along fractures and karst conduits in the Saluda Dolomite and flows toward the center of the valley where it discharges through springs in the lower part of that formation. Available evidence indicates that groundwater in the Saluda has no known potential to flow into adjacent valleys to the north or south.

Monitoring the weathered, fractured upper bedrock and overlying unconsolidated material hydraulically downgradient of the disposal site should allow detection of any contaminant releases that have occurred below the base of the Laurel Dolomite. Moreover, corrective action of any such releases should be easily accomplished.

Groundwater flow above the base of the Laurel Dolomite (which is the uppermost bedrock unit in the upland areas) is not as well-understood as that in the underlying rocks. Because conduit and fracture flow have been documented in the Laurel, DWM has determined that dye tracing and/or monitoring of springs on adjacent properties is necessary before geological characterization of areas overlying the Laurel

Dolomite and superjacent glacial drift can be considered complete. As a result, the permit does not allow the mitigation of karst features, the placement of a liner system, or the subsequent placement of waste above the base of the Laurel Dolomite. In addition, no liner system or waste may be placed over the Laurel Dolomite unless the permittee submits to the DWM a groundwater monitoring plan for the Laurel Dolomite that the DWM finds acceptable. The groundwater monitoring plan would be a major permit modification and would be subject to public notice and comment.

The permit condition in the draft permit was not changed as a result of this comment. It states, “Permit Modification: The total disposal area delineated in the APE20140001 application is 189 acres. Once construction is authorized, only 97 acres are authorized for construction as discussed in the application; see the additional information received on July 22, 2016 and July 25, 2016 for site drawings and a narrative. Once construction is authorized, only excavation and blasting activities are permitted above the base of the Laurel Dolomite; any other construction, i.e. structural fill or liner construction in the area above the base of the Laurel Dolomite requires further authorization from the Solid Waste Branch in the Division of Waste Management via a major permit modification application. The application shall include a groundwater monitoring plan that shall accurately characterize groundwater flow and flow systems in the Laurel Dolomite, which is the uppermost bedrock aquifer at the site. It shall also provide for the monitoring of the groundwater in the Laurel Dolomite for releases of contamination from the facility. [401 KAR 45:140 Section 2, 401 KAR 45:160 Section 2]”

However, for clarification purposes the following permit condition was added: “Permit Modification: Mitigation of karst features above the base of the Laurel Dolomite is not authorized and requires further authorization from the Solid Waste Branch in the Division of Waste Management. [401 KAR 45:140 Section 2, 401 KAR 45:160 Section 2]”

**Comment 41:** A commenter stated that the application does not adequately address harmful impacts from siting the landfill in a karst area situated hydrogeologically above the Safe Drinking Water Act wellhead protection area of the Trimble County Water District.

**Response:** The Trimble County Water District production wells are located at Wise’s Landing, in Pleistocene outwash sand and gravel. No direct hydrogeologic connection is known to exist between the landfill site and the subject production wells, which are approximately two miles from the landfill. If the landfill is constructed below the base of the Laurel Dolomite, any release of contaminants could be mitigated prior to the affected groundwater reaching the outwash aquifer.

The permit was not changed in response to this comment.

**Comment 42:** A commenter stated that the permit should clearly incorporate by reference the detailed construction drawings, plans, specifications, and QA/QC measures for the subgrade, soil liner, geosynthetic liner, leachate collection system, and upper layer such that a deviation from these would require a permit modification.

**Response:** The special waste landfill permit incorporates all approved applications and plans as stated on the permit in the following manner: “No deviation from the plans and specifications submitted with your application or any condition specified herein is allowed, unless authorized in writing from the Division”. Pursuant to 401 KAR 45:140, any permit noncompliance constitutes a violation of the appropriate Kentucky Revised Statute and is grounds for enforcement action that may result in revocation, modification, or denial of a permit application. Also, the permit may be modified or revoked for just

cause. Deviation from the permit is also a deviation from the approved applications and plans, thus the permittee shall apply for a permit modification or be in violation.

The permit was not changed as a result of this comment.

**Comment 43:** A commenter stated that the permit should specify an action leakage rate such that leachate collection above a numerical standard (e.g. gals/acre/day) warns of a potential breach in one or more of the containment systems, requiring an investigation and possibly corrective measures.

**Response:** The function of the synthetic liner is to prevent leachate leaks into the environment. The applicant will also be monitoring the liner underdrain system for leaks. Chapter 45 regulations do not require an action leakage rate determination. Once a leak has been detected, either through the groundwater or underdrain monitoring system; the permittee must take corrective action measures.

The permit was not changed as a result of this comment.

**Comment 44:** A commenter stated that the permit should require a minimum 5 days advance notice to KDWM representatives prior to installation of key containment system components so that on-site observation and inspection can be carried out.

**Response:** The applicant has agreed (as stated in the Construction Quality Control Plan) to inform the Division two days in advance of the final inspection to occur at each stage liner and cap construction such that a representative can attend. A final inspection is only required pursuant to 401 KAR 45:140 to determine that the facility was built according to the permit, therefore the applicant is going beyond the regulations to accommodate the Division.

The permit was not changed as a result of this comment.

**Comment 45:** A commenter stated that the proposed polyethylene (LLDPE) geomembrane liner has been insufficiently scientifically proven to prevent degradation over long time periods (> 25 years) to prevent pollutants from leaching into soil and groundwater. The commenter cited a study that showed LLDPE geomembrane exposed to UV-fluorescent radiation at 70°C for 25,000 hours showed signs of degradation. Commenter further stated a liner failure would violate 401 KAR 30:031(5).

**Response:** The Division agrees that a geomembrane liner exposed to UV radiation over a period of time will deteriorate. However, the geomembrane will be used as a bottom liner cover by waste and not exposed to UV radiation. Therefore, the geomembrane liner will not deteriorate and allow pollutants to leach into the soil and groundwater.

The permit was not changed as a result of this comment.

**Comment 46:** Several commenters stated that the proposed permit does not meet the requirements of RCRA Subtitle D to prohibit the siting of landfills in unstable areas (i.e. karst including sinkholes and caves) unless an engineering demonstration is made that the unit is safe as designed. The application fails to include the breadth of groundwater monitoring required under Subtitle D.

**Response:** The Federal government recently promulgated regulations for the siting and operation of coal combustion facilities under 40 CFR 257 Subpart D. This regulation provides opportunities for any person who believes the facility is not being operated in compliance with 40 CFR 257 to file a citizen suit under

the Resource Conservation and Recovery Act. . The DWM is charged with enforcing state special waste regulations for the permitting and operation of the proposed facility.

The permit was not changed in response to this comment.

**Comment 47:** A commenter challenged that the proposed landfill will be unable to comply with 401 KAR 30:031(4)(1), based upon existing information available regarding coal combustion residuals.

**Response:** KDWM does not regulate the discharge of wastewater to surface water. Discharges resulting from the operation of a generating unit and associated waste disposal facilities is regulated federally pursuant to 40 CFR Part 423 and by the Kentucky Division of Water pursuant to 401 KAR Chapters 5 and 10.

The permit was not changed in response to this comment.

**Comment 48:** A commenter stated that while the new application proposes to leave the area known as the “Lime/Wentworth Cave” feature without direct impact, the area directly surrounding the feature has been proposed for impacts, which could subsequently cause harm to the feature. Impacts could damage known karst systems and groundwater flows, violating 401 KAR 30:031(13), prohibiting “contamination of karst terrain”.

**Response:** It is the responsibility of the permittee to comply with 401 KAR 30:031 Section 13 and KRS 433.871-885 (the Kentucky Cave Protection Act).

The permit was not changed in response to this comment.

**Comment 49:** A commenter stated that the DWM must follow new RCRA Subtitle D coal ash requirements promulgated April 17, 2015 prior to permitting this landfill. Specifically, the commenter stated that the following location restrictions were not being met: disposal within five feet of the uppermost aquifer, disposal in wetlands, and disposal in unstable areas (karst areas). The comment stated that the permit should not be issued unless DWM evaluates it with respect to the Federal regulations for design criteria, operating criteria, groundwater monitoring and corrective action, closure and post-closure care, and recordkeeping and notice requirements.

**Response:** Any person who believes the facility is not being operated in compliance with 40 CFR 257 may file a citizen suit. The DWM is charged with enforcing state regulations for the permitting and operation of the proposed facility.

With the signing into law of the Water Infrastructure Improvements for the Nation Act, states may submit documentation to the Environmental Protection Agency (EPA) of a permit program for regulation by the state of coal combustion residual (CCR) units. Upon approval by the EPA, states may enforce the provisions of 40 CFR 257 with regard to CCR units. If the EPA does not approve a state’s program or the state does not submit documentation for approval by the EPA, the act provides for a permitting program and enforcement by the EPA of provisions of 40 CFR 257.

The permit was not changed in response to this comment.

**Comment 50:** A commenter stated that the DWM should require the permittee to evaluate alternatives to the proposed landfill such as: offsite options accessed via barge delivery, alternatives that would



minimize the footprint of the applicants preferred onsite alternative, beneficial reuse alternatives, and establishing a single site for multiple coal fired power plants to dispose of ash with fewer environmental impacts and less risk of groundwater contamination.

**Response:** The Division (Division) of Waste Management does not have regulatory authority over this matter. The Division reviews applications that are submitted and makes a determination based on the authority pursuant to KRS Chapter 224 and the administrative regulations promulgated pursuant thereto.

The permit was not changed in response to this comment.

**Comment 51:** A commenter asked if there were plans to receive ash at the McBride Barge Company facility from anywhere else to bring to the proposed landfill. The commenter further expressed concern that ash would be released into the Ohio River and cause cancer.

**Response:** The application proposes to only receive waste generated from the Trimble County Generating Station. Any new wastestream or source shall be approved by the Cabinet prior to the facility accepting the waste.

The permit was not changed in response to this comment.

**Comment 52:** A commenter expressed concern that construction of the landfill would affect a church and various homes that are located not far from the facility. The commenter suggested the properties of those people should be bought by the permittee or that they should be otherwise reimbursed for their loss of property values.

**Response:** The application meets the siting requirement established in 401 KAR 45:130, Section 1(4) which requires waste to not be placed within one hundred (100) feet of the property line. Further, the facility shall comply with the Environmental Performance Standards per 401 KAR 30:031. The Division of Waste Management does not have regulatory authority over the matter of property values.

The permit was not changed in response to this comment.

**Comment 53:** A commenter asked why the process was taking so long because it had affected her plans to finish construction on her house.

**Response:** It is typical for it to take a year or several years to complete the permitting application process for a new Solid Waste or Special Waste Landfill site or facility or horizontal expansion of an existing facility. The application consists of several volumes and the process requires multiple public notices, meetings and/or hearings.

The permit was not changed in response to this comment.

**Comment 54:** A commenter stated that the when coal ash ponds were originally constructed the clay liners were thought to be sufficient and now those liners have been found to be leaking at ponds around the United States. The commenter expressed concern that the new liners that may be good enough either and that they need to be researched more.

**Response:** Clay soil has electrostatic surface charges that attract and hold ions. Cation-exchange capacity (CEC) is the number of exchangeable cations per dry weight that a soil is capable of holding and available for exchange with the soil water solution, in this case leachate. Low permeability clay liners were

designed partly using CEC to measure the capacity to protect groundwater from contamination. Groundwater contamination occurs when the clay liner has depleted all of its CEC. Landfills with synthetic liners are considered a dual contained system because the synthetic geomembrane liner shields the clay liner from the contaminants contained in leachate. The synthetic geomembrane liner collects and transports the leachate through a collection system not allowing the leachate to come into contact with the clay liner. However, if there is a leak in the synthetic geomembrane liner then the low permeability clay soil will slow the transport of contaminants using its CEC to bind them.

The permit was not changed in response to this comment.

**Comment 55:** A commenter said that the landfill would be right on top of Henry and Trimble counties water supplies and that the landfill would poison the people in both counties.

**Response:** As part of the application, the applicant must show any surface water intake and discharge structures, natural gas lines, sewer lines, and water lines within the waste and property boundary. None of these structures are within the waste area. No surface water intake is located within a mile of the facility. The closest water lines are located inside the Wentworth and Ogden Ridge Roads' easements, which are at least 100 feet outside the waste footprint.

The permit was not changed in response to this comment.

**Comment 56:** A commenter stated that she had seen videos where ash blew onto people's houses and cars. She asked about negative health effects on people's lungs when the ash was blowing around in the air.

**Response:** Pursuant to 401 KAR 30:031, Section 9(2), no facility shall violate applicable air pollution requirements. The Division for Air Quality regulates this matter pursuant to KRS Chapter 224, Subchapter 20 and the administrative regulations promulgated pursuant thereto.

The permit was not changed in response to this comment.

**Comment 57:** A commenter stated that the landfill would have a negative effect on a stream that had been formerly designated a high quality stream.

**Response:** The proposed project will affect 87,254 linear feet of streams, 2.6 acres of wetlands and 0.5 acres of open water ponds, and will have direct impacts on a watershed drained by an unnamed tributary to Corn Creek that has been documented as having high water quality and a diverse biological community, reflected by an "excellent" Macroinvertebrate Bioassessment Index (MBI) rating. LG&E contractors determined that conditions in the streams proposed to be impacted by the landfill scored higher on the MBI than the stream in the ravine to the north, which has been designated an Exceptional Water of the Commonwealth, an Outstanding State Resource Water and is included in the Commonwealth's biological reference reach network. In March 2013, the Kentucky Division of Water resampled the streams proposed to be impacted and confirmed that the stream's biological community ranked as "excellent" according to the MBI.

However, KDWM does not regulate impacts to streams; this responsibility lies with the US Army Corps of Engineers and the Kentucky Division of Water.

The permit was not changed in response to this comment.

**Comment 58:** A commenter said that the draft permit failed to comply with the new subtitle D federal regulations effective October, 2015 for various reasons. The commenter stated that the draft permit does not provide for public reporting of monitoring and corrective action documents, as required by the federal rule.

**Response:** Any person who believes the facility is not being operated in compliance with 40 CFR 257 may file a citizen suit. The DWM is charged with enforcing state regulations for the permitting and operation of the proposed facility. Those regulations require the permittee to submit groundwater monitoring assessment reports and groundwater monitoring corrective actions plans if groundwater contamination is suspected. The assessment and corrective action process does include public notice and opportunity for public comment.

Any person may request copies of the groundwater data through the Kentucky Open Records Act by sending an email to [DEP.KORA@ky.gov](mailto:DEP.KORA@ky.gov).

The permit was not changed in response to this comment.

**Comment 59:** A commenter reported that EPA region 4 recommended on August 7, 2014 that because the landfill may result in adverse impacts on aquatic resources, the project as proposed should be denied.

**Response:** The draft permit contains the provision that the landfill construction activities shall not commence until receipt of concurrence from the Kentucky Department for Fish and Wildlife Resources and the U.S. Army Corps of Engineers. Additional information may be found in Attachments 17 and 18 of the permit application.

The permit was not changed in response to this comment.

**Comment 60:** A commenter asked how the community would be notified if there was a request to enlarge the disposal area or to change the permit to allow receipt of ash from additional area.

**Response:** 401 KAR 45:050, Section 1 outlines the necessity for public notice procedures for a new special waste landfill or a horizontal expansion (new waste disposal area) of a special waste landfill. This section does not include the provision for a notice if a modification is proposed by the applicant to allow receipt of waste from a different source. However, per 401 KAR 45:050, Section 1(2), a notice is required if the Cabinet determines that a significant degree of public interest exists with respect to an application or modification.

If a notice is issued, 401 KAR 45:050, Section 4(1) states a notice shall be published in a daily or weekly major local newspaper of general circulation where the proposed site or facility is located. Further, 401 KAR 45:050, Section 4(8)(b) requires the landowners of all adjacent and abutting properties shall be delivered a notice.

The permit was not changed in response to this comment.

**Comment 61:** A commenter stated that she was told that there would be monitoring wells installed on the properties of the people who lived on Ogden Ridge, but wanted to know why the draft permit and application do not require the installation of monitoring wells on these sites.

**Response:** DWM informed the commenter that the groundwater at the site would be monitored for releases of contaminants pursuant to 401 KAR 45:160. This monitoring will include areas on Ogden Ridge. However, groundwater can be monitored using wells, springs, or both, depending on site-specific geological conditions. For sites with documented conduit and fracture flow (as is present in the Laurel Dolomite in the upland areas of the landfill site), spring monitoring may be preferable to monitoring wells. Presently, groundwater flow above the base of the Laurel Dolomite (which is the uppermost bedrock unit in the upland areas and underlies Ogden Ridge Road to the south of the proposed landfill) is not as well-understood as that in the underlying rocks. Because conduit and fracture flow have been documented in the Laurel, DWM has determined that dye tracing and/or monitoring of springs on adjacent properties is necessary before geological characterization of areas overlying the Laurel Dolomite and superjacent glacial drift can be considered complete.

As a result, the permit does not allow the mitigation of karst features, the placement of a liner system, or the subsequent placement of waste above the base of the Laurel Dolomite. In addition, no liner system or waste may be placed over the Laurel Dolomite unless the permittee submits to the DWM a groundwater monitoring plan for the Laurel Dolomite that the DWM finds acceptable. The groundwater monitoring plan would be a major permit modification and would be subject to public notice and comment.

The permit was not changed in response to this comment.

**Comment 62:** A commenter expressed concern that property he bought near the landfill for hunting would no longer be good for that purpose due to the construction of the landfill nor could it be sold because it would not be worth much money anymore.

**Response:** In considering whether to approve or deny the permit for a landfill of this type, the DWM may only consider matters over which it has regulatory authority. The DWM does not have regulatory authority to resolve disputes concerning alleged property damage.

The permit was not changed in response to this comment.

**Comment 63:** A commenter expressed dissatisfaction that if the permit was previously stopped due to concern over endangered species in the caves, it didn't make sense that the permit could not be stopped due to concerns over effects like cancer on human life.

**Response:** Under KRS 433.877, "It shall be unlawful to remove, kill, harm, or otherwise disturb any naturally occurring organism found within any cave". Clearly, the destruction of Wentworth Cave that was proposed in the former application would have violated this statute. DWM cannot authorize the violation of a statute in a permit, so the application was denied.

The present application has been reviewed pursuant to the applicable statutes and regulations with regard to human health and the environment, and has been deemed acceptable with the restrictions imposed in the construction permit.

The permit was not changed in response to this comment.

**Comment 64:** A commenter asked that either the landfill be moved or the local residents be relocated.

**Response:** The Division of Waste Management does not have regulatory authority to relocate residents or require the applicant to submit an application for a new landfill for a different site or facility. The

application meets the siting requirement established in 401 KAR 45:130, Section 1(4) which requires waste to not be placed within one hundred (100) feet of the property line. Further, the facility shall comply with the Environmental Performance Standards per 401 KAR 30:031.

The permit was not changed in response to this comment.

**Comment 65:** A commenter expressed concern that the noise from explosives used in blasting would have negative health effects on people who live near the landfill, particularly those with post-traumatic stress disorder.

**Response:** The Division (Division) of Waste Management does not have regulatory authority over this matter. The Division reviews applications that are submitted and makes a determination based on the authority pursuant to KRS Chapter 224 and the administrative regulations promulgated pursuant thereto. Pursuant to 401 KAR 45:030, the applicant must comply with all state laws, including those that govern this matter.

The permit was not changed in response to this comment.

**Comment 66:** A commenter expressed worry that the blasting at the landfill would affect the foundation of his house.

**Response:** The Division of Waste Management (Division) does not have regulatory authority over this matter. The Division reviews applications that are submitted and makes a determination based on the authority pursuant to KRS Chapter 224 and the administrative regulations promulgated pursuant thereto. Pursuant to 401 KAR 45:030, the applicant must comply with all state laws, including those that govern this matter. As stated in Attachment 27, if blasting is required, a blasting plan will be submitted to the Division for review and approval prior to commencing construction.

The permit was not changed in response to this comment.

**Comment 67:** A commenter expressed concern about the expansion of the landfill beyond the approved 97 acres and stated that when the permittee asked for a vertical modification at Cane Run in 2003 there was no public hearing and the modification was approved.

**Response:** 401 KAR 45:050 specifies the permit actions which require public information procedures. The cabinet may also require public information procedures upon determination that significant public interest exists.

The permit was not changed in response to this comment.

**Comment 68:** A commenter asked whether ash would be transported from the river to the landfill via a conveyor belt or over the roads.

**Response:** Ash will be transported from the power generation plant to the landfill via an enclosed conveyor belt system. No transportation activities will occur off of LG&E/KU property other than crossing over KY 1838.

The permit was not changed in response to this comment.

**Comment 69:** A commenter asked what a registered permit by rule was and whether it met Subtitle D requirements.

**Response:** A registered permit-by-rule is a class of permit. Regulations define it as follows: “This is a category of waste site or facility permit for certain special waste management practices listed in 401 KAR 45:070 that are deemed to have a permit without further action by the cabinet upon acknowledgement by the cabinet of a complete registration by the owner or operator.” A registered permit-by-rule shall comply with all applicable state regulations. Special waste registered permit-by-rule facilities include sludge giveaways, beneficial reuses of special waste not specified in 401 KAR 45:060, Section 1(7), and facilities that store or treat special waste for distribution under Section 10 of 401 KAR 45:100. The owner or operator of a facility subject to the Federal Regulations of 40 CFR 257 Subtitle D shall comply with those regulations as well.

The permit was not changed in response to this comment.

**Comment 70:** A commenter stated that the liner of the landfill would not be sufficient to contain odor and gas and that the polyethylene would degrade over time allowing moisture to permeate.

**Response:** This facility will only dispose of non-putrescible wastes. These wastes, especially when comingled, produce no odor or gas emissions. The Division agrees that a geomembrane liner will degrade over time if exposed to UV radiation. However, the polyethylene geomembrane liner will be covered by waste and not exposed to UV radiation. Therefore, the polyethylene geomembrane liner will not photo-degrade and allow pollutants to leach into the soil and groundwater.

The permit was not changed in response to this comment.

**Comment 71:** A commenter stated that the proposed landfill was unlikely to comply with the requirements of Section 404(b)(1) guidelines, given the water-averse nature of landfilling special wastes and the existence of practicable alternatives. Further, the alteration or filling or intermittent streams was unlikely to meet numerical water quality standards.

**Response:** The US Army Corps of Engineers (USACE) determines if this site meets Section 404(b)(1) guidelines. Construction cannot commence until issuance of a USACE permit.

The permit was not changed in response to this comment.

**Comment 72:** A commenter expressed concern that constituents present in the waste streams would decompose and produce sulfuric acid which would find its way into the groundwater and be dangerous to local landowners.

**Response:** The proposed synthetic liner and leachate collection systems exceed the requirements of 401 KAR 45:110 and should prevent leachate releases to groundwater and surface water.

Groundwater and surface water will both be monitored, and corrective action is required for releases of contaminants per 401 KAR 45:160.

Moreover, leachate will be collected and treated in accordance with all applicable statutes and regulations.

Discharges resulting from the operation of a generating unit and associated waste disposal facilities is regulated federally pursuant to 40 CFR Part 423 and by the Kentucky Division of Water pursuant to 401 KAR Chapters 5 and 10.

The permit was not changed in response to this comment.

-- The End --