

May 25, 2017

Mr. Dan O'Brien, Business Manager
Keystone Sanitary Landfill, Inc.
249 Dunham Drive
Dunmore, PA 18512-0249

Re: Second Environmental Assessment Review
Keystone Sanitary Landfill
Major Permit Modification – Phase III Site Development
Application No. 101247-A142
Dunmore and Throop Boroughs, Lackawanna County
APS#860390 AUTH#1057908

Dear Mr. O'Brien:

On March 20, 2014, the Department of Environmental Protection (DEP) received an application for the Phase III expansion of the Keystone Sanitary Landfill (KSL). The Local Municipality Involvement Process meeting was held on May 20, 2014. The application was found to be incomplete and a letter was issued on June 24, 2014. After receipt of additional information on September 9, 2014, October 2, 2014, October 27, 2014 and November 7, 2014, the application was found to be complete and officially accepted on December 17, 2014. The expansion area is to be located on 435 acres within the current permit boundary and involves expanding over and between existing fill areas. The application originally proposed to increase the height of the landfill by 165 feet. DEP reviewed the Form D – Environmental Assessment, Harms vs. Benefits Analysis, and portions of the application that were relevant to the evaluation of harms or benefits. On October 13, 2015, DEP issued a first Environmental Assessment review. KSL's response to this letter was received by DEP on May 17, 2016. The response included a significant reduction in the proposed final height of the expansion and a reduction in volume and design life. KSL has modified the project to lower the peak elevation to that of the previously permitted Phase II height. The majority of disposal would occur in the valley between the existing disposal areas. The revised proposal would increase the facility's disposal capacity by 134 million cubic yards and expand Keystone's life-span by approximately 44 years.

A public meeting was held on February 25, 2015 at the Dunmore High School, an open house was held on April 27, 2015 at the Dunmore Community Center, a second public meeting was held on June 15, 2015 at Mid Valley High School, and a public hearing was held on July 18, 2016 at Mid Valley High School. There has been public interest in the application and 841 comment letters have been received from 701 people/entities both for and against the landfill. A petition in favor of the landfill has been received as well.

The following comments are the result of DEP's second Environmental Assessment review of the application. These comments only relate to those items for which DEP is requesting more information or clarifying our position. This letter is not a final determination on any of the items identified in the Environmental Assessment review.

General Comments

Separation distance of subbase of liner system and Upper Aquifer System: 25 Pa Code §273.252 The bottom of the subbase of the liner system cannot be in contact with the seasonal high water or perched water table and at least eight feet shall be maintained between the bottom of the subbase of the liner system and the regional groundwater table in an unconfined aquifer. In a confined aquifer, at least eight feet shall be maintained between the bottom of the subbase of the liner system and the top of the confining layer. The upper aquifer system is influenced by a withdrawal well for the quarry operation. The *Hydrogeologic Assessment and Constant Rate Aquifer Test of Quarry Well No. 1* by KSL was conducted during the winter and may not be representative of conditions when water levels are higher. Therefore, the effect on the water level of the upper aquifer system when pumping of Quarry Well No. 1 ceases is unknown. There is the potential for the groundwater level to be in contact with the proposed subbase of the liner system. KSL should conduct a study of groundwater levels with the quarry well not in operation for a duration long enough to determine what the water levels will be and their distance from the proposed subbase of the liner system.

KSL response: A revised "Highest Water Table Map" and "Cross Sections" were provided showing the position of the regional groundwater table based on twelve months of consecutive water level readings across the site. In addition to water level readings from the monitoring wells associated with the site, water levels within the Quarry Well No. 1 from October 2012 – October 2015 were also reviewed and used to revise the "Highest Water Table Map." The data provided confirms that at least 8 feet is maintained between the bottom of the liner subbase system and the regional groundwater table.

DEP review: KSL is continuing to investigate groundwater levels and should provide updated information describing the results of this additional investigation.

Comments related to the Form D – Environmental Assessment

Form D, Section C – Wetlands: The Phase III expansion does not include areas that have not already been permitted or subject to a previous wetland study. The most recent study was conducted in 1995, it should be updated to reflect current site conditions.

KSL response: A wetlands study on the entire Phase III area was completed on December 11, 2015 and January 22, 2016 by Thomas J. McLane & Associates, Inc. The study identified two areas of interest. Area of Interest #1 is the same area identified in 1995 and is already permitted to be infilled. Area of Interest #2 was classified as a saturated area incidental to construction rather than a wetland.

DEP review: While the study did indicate Area of Interest #2 would be best classified as a saturated area incidental to construction rather than a natural wetland, it also indicated DEP should be contacted to confirm this assessment. Part 7: Findings of the report states “potentially federal and/or state regulated “Waters of the United States” do exist within the project site and a meeting with the appropriate regulatory agencies should be initiated to determine whether the wetlands are regulated.” KSL should contact DEP’s Waterways & Wetlands Program for a determination regarding Area of Interest #2.

HARMS/BENEFITS REVIEW COMMENTS

(E) = Environmental, (SE) = Social & Economic

Harms

1. **Vectors/Birds: (E)** The potential for attraction of vectors and birds is a known potential harm of a landfill operation. Public comments indicate that there is a concern about birds that visit the landfill contaminating the Dunmore No. 1 reservoir.

Proposed mitigation: KSL’s vector controls include: compact and cover waste daily; limit the acceptance of wastewater sludge to certain times to limit attraction of insects; limit size of working face; maintain a compact working face to disrupt congregation of birds; use of decoys or noisemakers to limit attraction of birds; and retaining outside vector control professionals as needed. KSL indicates that they will utilize daily monitoring to determine if their current mitigation measures are adequate or if KSL needs to employ additional vector controls.

DEP review: DEP has observed populations of birds frequenting the landfill. In addition to gulls, DEP has received comment about black birds and turkey vultures also frequenting the landfill. DEP is aware that KSL has consulted with an outside professional regarding this issue and should provide more information.

PA American Water tests the Dunmore No. 1 reservoir periodically for the bacterial contaminants that would likely be caused by bird or other feces in the reservoir. PA American Water has not seen any results with the quality of the water in the Dunmore No. 1 reservoir that would suggest that there is a contamination problem.

KSL response: KSL has executed an agreement with the U.S. Department of Agriculture (USDA), APHS Wildlife Services, PA to control the bird population at the landfill and plan assistance, regarding wildlife conflicts and management issues, to residents of communities surrounding KSL. KSL will continue to contract with the USDA for the duration of the site life of Phase III.

DEP 2nd review: KSL's response included USDA's letter summarizing the activities conducted at KSL from April 2015 through March 2016. KSL should provide additional information/reports on the activities that have occurred under this program to date and propose additional measures.

2. **Overweight Vehicles: (SE)** The potential for overweight vehicles is a known potential harm of a landfill operation.

Proposed mitigation: KSL's Transportation Compliance and Vehicle Safety Action Plan includes a notification and warning, delay the driver, and a 60 day ban from the site for overweight vehicles/repeat offenders. Keystone tracks all overweight vehicles and provides this information to DEP.

DEP review: Based on DEP's review of KSL's records, KSL's mitigation has been effective at reducing the number of significantly overweight trucks that arrive at the site; however, there are still a number of trucks that are moderately overweight. KSL should propose additional measures to reduce the number of overweight trucks.

KSL response: KSL records weights and registration information on east waste hauling vehicle that exceeds 73,280 and combinations that exceeds 80,000 gross vehicle weights. In accordance with the plan, all weights are recorded and penalties issued as needed.

DEP 2nd review: KSL's mitigation has been effective at reducing the number of significantly overweight trucks that arrive at the site; however, there are still a number of trucks that are moderately overweight. KSL's response did not detail any additional mitigation, therefore, some harm related to overweight vehicles remains.

3. **Dirt/Mud: (E)** The potential for tracking dirt and mud off-site is a known potential harm of a landfill operation. Public comment indicates that use of water trucks to wash the roads does not eliminate the problem.

Proposed mitigation: KSL proposes current practices of using water trucks to wash down roadways of accumulated dirt and mud from waste hauling vehicles, inspections, focused site access roadway usage plan, on-site speed limit, water application during waste unloading (residual or construction and demolition waste) as needed. The KSL NMCP states "Keystone uses a 5000-gallon water truck on a continuous cycle to clean the site entrance road to ensure no mud or dirt leaves the site."

DEP review: It is DEP's observation that dirt and mud is not prevented from leaving the site by the current mitigation measures. KSL's mitigation, rather than preventing the tracking of dirt and mud off-site is to wash it from the roads once it has been tracked off-site. DEP has received comment about the dirt and mud on local roads. For these reasons, KSL should propose mitigation measures that will prevent the tracking of dirt and mud off-site. Dust is addressed below under Air Quality impacts.

KSL response: Water trucks are used on interior roadways, transport vehicle transition areas and Dunham Drive. In 2015, KSL completed a bituminous pavement project in the vehicle hauling transition area. Also, a minor permit modification was approved in 2015 for a new site entrance and to expand the vehicle hauling transition and staging area. The paved transition area serves as an inspection location where all transport vehicles entering or exiting KSL, on which dirt and mud is observed, are directed to a location to be cleaned by a portable power washing unit. These additional mitigation measures ensure that dirt and mud does not leave the KSL site and accumulate on the public roadway system. KSL has acquired a new more efficient sweeper truck for use in the bituminous areas of the site, on Dunham Drive and on adjacent public streets used as an access roadway to KSL upon a request from the Borough of Dunmore.

DEP 2nd review: The new site entrance and expanded transition area work has been completed and the construction certification was approved on October 5, 2016. The additional mitigation measures appear to be effective most of the time; however, during wet or adverse weather DEP has observed mud being tracked off site to varying degrees. Once the mud dries on the roadways the potential for dust is greater. KSL should propose additional measures to keep tracked material from reaching Dunham Drive.

4. **Air Quality: (E)** KSL has identified migration of particulate matter and methane gas as a potential harm. Public comment indicates that air quality is an important issue to those in the vicinity of the landfill.

Proposed mitigation: KSL's proposed mitigation includes continued expansion of the landfill gas control system, final liner capping within one year of any pad or segments of any pad achieving final elevation, use of water trucks to control dust, enforce site speed limit, and to apply water to certain residual wastes or construction and demolition waste to minimize dust. KSL is actively seeking to beneficially use all methane gas generated on site.

DEP review: The proposed mitigation does not define or address potential migration of particulate matter from the landfill operation or how that potential may change with the height of the landfill. The PA Department of Health and Agency for Toxic Substances and Disease Registry (ATSDR) are in the process of conducting a study that may identify if particulates are currently migrating from the landfill operation. KSL should evaluate the potential for off-site migration of particulate matter from the working face of the landfill.

KSL should quantify the air emissions from the leachate lagoon and determine any increase in air emissions from additional leachate production from the proposed Phase III expansion.

KSL response: KSL conducted dispersion modeling which demonstrated that there is minimal to no impact on the ground level concentrations of fugitive particulate matter emission and odor emissions associated with changing the elevation of the working face of the landfill. An increase of .20 tons per year (tpy) of volatile organic compounds (VOCs) and 0.25 tpy of hazardous air pollutants (HAPs) were estimated from the lagoon.

DEP 2nd review: Air quality will be addressed further during the technical review and during review of the Air Quality Plan Approval application. Also, as a result of the ongoing evaluation by the PADOH and ATSDR, current air quality conditions in the vicinity of the landfill are being evaluated. This information will be helpful in determining if the KSL's operation could potentially be affecting the local ambient air quality.

5. **Groundwater Impacts: (E)** KSL has identified groundwater impacts as a potential harm. Public comment indicates that groundwater impacts are a concern of those living in the vicinity of the landfill.

Current Impacts Observed in MW-15: Currently there are impacts seen in MW-15, which is a well that monitors a low volume of drainage in the Dunmore #3 coal vein. The parameters that are elevated in this well indicate that there may have been a release of treated leachate.

Proposed mitigation: The Phase III expansion will be a double lined landfill that will contain waste and waste constituents within the landfill. KSL states that they have 6 up gradient and 27 down gradient monitoring wells that show that the liner system is effective at preventing release of contaminants into the groundwater. KSL will continue to pretreat leachate from the landfill prior to discharge to the Scranton Sewer Authority for final treatment. KSL is in the process of replacing their leachate treatment plant with a new facility capable of treating 150,000 gallons per day to the effluent limits required by the Scranton Sewer Authority. KSL states they will promptly install their liner cap system in a phased approach which will aid in reducing the potential development of leachate.

DEP review: MW-15A groundwater issues began in August 2002 with increases in the indicator parameters. Assessment was required in July 2003. Cracks in the treatment plant's concrete floor were identified as a likely source. During the investigation, it was discovered that during process tank/equipment repairs tank(s) were drained to the floor and material was allowed to flow to the floor drains within the building. Repairs were made around the tank base, although cracks remain in the building. Interior soil samples, dye tracing (no determination), drain line televising and smoke testing investigations were also performed in this phase. In subsequent years, additional or new potential sources occurred; clogged/broken sewer with overflowing manhole (December 2004), leachate outbreak on the down ditch from Tabor (June 2005), manhole

overflow in 2010. The lagoon liner was patched in 2007 and replaced in 2010. Tank leakage continued to occur sporadically. The 2011 record rainfall and 2012 hurricane event were thought to increase flushing with the soil overburden; however, increases continued to be shown. KSL is continuing to investigate possible causes and the extent of the groundwater impacts. KSL needs to describe the historic/ongoing problems with the leachate management system (groundwater impacts to MW-15A) and KSL's ongoing mitigation efforts.

KSL Response: Several investigative efforts and remedial measures have been taken by KSL over the past 13 years to find and arrest the source of the MW-15A variants. KSL's most recent remediation measure is to reconstruct the lagoon liner system to address liner, pipe and/or boot leakage.

DEP 2nd review: KSL is currently obtaining additional information, including the construction of 3 additional downgradient monitoring wells, to determine the extent of contamination associated with the historic/ongoing problems with the leachate management system (groundwater impacts to MW-15A) and should provide an update regarding this issue.

Excess Leachate Generation: Recent events involving a leachate conveyance system manhole overflow, the need to add temporary leachate storage and the need to haul leachate off site to be treated has made it apparent that KSL has an issue with either excess leachate generation or stormwater infiltration into the leachate conveyance system.

DEP 2nd Review: KSL needs to identify and address the root cause of the excess leachate flow at the site and propose mitigation.

Leachate Generation from the Keystone/Dunmore Area: KSL is not proposing to remove all the waste in the unlined Keystone/Dunmore area. Although approximately 8 million tons is to be removed, approximately 2 million cubic yards of waste will remain in pits of unknown depth. The potential for unknown waste constituents to cause ground water contamination with the compaction of this waste and construction of Phase III on top of it will not be eliminated. KSL should define the potential for leachate to be expelled from the remaining waste and address how they will mitigate the potential for contamination of groundwater.

KSL response: To address leachate from the remaining waste in the Keystone/Dunmore area, KSL will utilize mine drainage interceptor wells to collect and treat mine drainage before leaving the property. During excavation of waste in this area KSL will manage surface water runoff, progress in an upgradient manner and limit the size of the active area.

DEP 2nd review: KSL has recently undertaken some investigative work to determine if the integrity of the Keystone/Dunmore area cap is contributing to the excess leachate flows observed on site. KSL should evaluate what, if any, impact the results of this investigation has on its plan to insure the potential for leachate from waste left in place in this area does not adversely affect the groundwater.

Benefits

1. **Environmental Education:** (SE) KSL has identified, as an Environmental benefit, that they propose to prepare an on-site education program to inform school students of the role a modern landfill plays in protecting the environment. This program will be developed and conducted by Lackawanna College Environmental Program faculty. KSL will also contribute \$100,000 annually to Lackawanna College through a partnership agreement with the college to support, enhance, and provide scholarships for its Environmental Education Program.

DEP review: DEP believes this is more appropriately characterized as a Social and Economic Benefit. KSL should provide more information regarding the partnership with Lackawanna College, correspondence from school districts that KSL intends to target, details on the program, contracts, and other information for these education programs so that DEP can evaluate this proposed benefit.

KSL response: KSL revised the scope of this benefit and is now proposing a partnership with Keystone College instead of Lackawanna College. KSL will provide Keystone College with \$100,000 annually to reimburse the college for all the financial costs associated with the Environmental Education and Academic Program. The objective of the program is to expand and enhance Keystone College's program offerings on environmental resource management and stewardship to K-12 children in Northeast Pennsylvania. The program would focus, but not be limited to, the environmental aspects of the design and operation of a Municipal Solid Waste Disposal Facility. This partnership will allow for the opportunity for "real life" observations and experiences. KSL has agreed to make available their consultants, as appropriate, to assist with in-school presentations and student field experiences.

DEP 2nd review: DEP considers this is a Social and Economic benefit for the life of the KSL.

2. **Goods and Services:** (SE) KSL has identified, as a Social and Economic benefit that they have secured equipment, materials and services from numerous local vendors to assist in the operation of KSL. According to KSL, through approval of the Phase III permit modification, the following are the major goods and services that will be purchased from local/regional vendors to support the continued operation of the landfill.

Fuel/Oil/Lubricants: KSL utilizes fuel, oil and lubricants on a regular basis in order to operate their fleet of heavy equipment. KSL purchases off-road diesel fuel, oils and lubricants from local and regional vendors which amounted to \$5,348,971 in 2013. KSL estimates that they will purchase a total of \$53,489,710 of fuel, oils and lubricants from local and regional vendors over the initial 10 year permit of Phase III, and \$248,727,152 over the life of the expansion.

Machinery, Equipment, Services, Rentals, and Maintenance: KSL procures their heavy equipment from local and regional equipment vendors due to their ability to provide prompt response for maintenance and repairs. In 2013, KSL expended \$11,991,287 to purchase goods and services from suppliers and dealers that are local to KSL. Using the 2013 amount, KSL estimates that they would expend \$119,912,870 over the initial 10 year permit of Phase III and \$557,594,846 over the life of the expansion.

Miscellaneous Goods and Services: KSL also purchased an additional \$7,896,086 of miscellaneous goods and services from vendors within 75 miles of the site. Utility payments amounted to \$592,965. The economic benefits associated with these expenses, during the initial 10 year permit amount to \$367,767,999 for miscellaneous goods and \$27,572,873 for utility payments.

DEP review: KSL used a 75 mile radius when quantifying this benefit. KSL should define the local expenditures, more specifically within the communities surrounding the landfill that would not occur without the Phase III expansion. The area should be focused on municipalities that were invited to the Local Municipality Process meeting. DEP does not have enough information to determine that utility payments are a benefit as they could include the cost of mitigation measures. KSL should provide more details on these suggested benefits of the Phase III expansion.

KSL response: KSL classified the economic data into five zones in relation to the proximity to the landfill. The majority of the benefits are to the communities within 25 miles of the landfill.

DEP 2nd review: The purchasing of goods and services from local vendor is a Social and Economic benefit of for the life of the KSL; however, the total amount is uncertain because KSL is not necessarily spending the same amount each year.

3. **Continued Employment:** (SE) KSL identified, as a Social and Economic benefit, that the landfill provides 145 jobs to address the administrative, operational, construction and maintenance aspects associated with the operation of Phase III.

DEP review: The continued employment of 145 workers will be considered to be a Social and Economic benefit of the project. KSL should better define and quantify this benefit.

KSL response: KSL classified the employees and their wages by location into five zones in relation to the proximity to the landfill. KSL also noted that the majority of their employees have been continuously employed by KSL for over three years and that KSL anticipates no reduction in its workforce over the next ten years.

DEP 2nd review: KSL needs to better define the jobs that amount to 145 workers (i.e., full time, part time, or seasonal; and whether they are contractors or directly employed by KSL, etc.).

4. **Tax Revenue:** KSL identified, as a Social and Economic benefit, that through continued operation of KSL, additional tax revenues will be generated. The direct payroll and sales taxes paid in 2013, by KSL amount to \$1,162,700. Therefore, that translates to \$11,627,000 and \$54,065,550 of tax revenue over the initial 10 year and life of the Phase III expansion. During 2013, KSL paid \$162,513 in municipal, county and school district real estate taxes. During the initial 10-year permit life, the amount to those entities will total \$1,625,130 and \$7,556,855 over the life of Phase III. KSL suggests that elimination of this tax revenue will result in higher taxes on citizens and property owners.

DEP review: Payroll/employment totals include payroll taxes and goods and services include sales taxes. Property taxes are paid by any land owner and with or without the expansion KSL would have to pay property taxes based on the value of the acreage of property that KSL owns. KSL should provide information that quantifies the value of the KSL property with and without the Phase III expansion. Only the increased tax revenue caused by the Phase III expansion may be considered as a benefit.

KSL response: KSL clarified the estimated property tax revenue for the Phase III Site Development is approximately \$6,927,605.

DEP 2nd review: The increased tax revenue associate with the Phase III expansion will be considered a Social and Economic benefit for the life of the project.

5. **Regional Waste Disposal Services:** (SE) KSL identified, as a Social and Economic benefit that waste disposal volume in Northeastern Pennsylvania will be dramatically reduced or eliminated within the next 5 years. KSL estimates that the transportation costs associated with having to transfer waste and send it to a disposal facility further away will amount to \$8,662,425 more per year.

DEP review: DEP does not agree that there will be a shortage of disposal capacity in the next 5 years. Additional capacity in and of itself is not considered to be a benefit. There has been no demonstration of the need for additional waste capacity in the region. Locations of alternate disposal and hauling operations, the need to transfer waste to more distant facilities, or how the additional cost to Lackawanna and surrounding counties was calculated should the expansion not be approved have not been identified. Records do indicate that KSL currently accepts significant amounts of waste from the counties in the vicinity of the landfill, and that the counties have entered into binding contracts with

KSL. KSL should identify if they are required to reserve capacity for waste from the counties with which it has been designated in the county solid waste management plans. In order for this to be considered to be a benefit, KSL must demonstrate that an actual hardship to the local community, considering alternatives to eliminate any hardships, will exist if the Phase III expansion is not permitted.

KSL response: The cessation of disposal at KSL will deprive residents, municipalities and businesses of the price and service competition that currently exists. KSL must reserve capacity, during their operating life, for Dunmore and Throop Boroughs, the City of Scranton and the Scranton Sewer Authority.

DEP 2nd review: DEP maintains the position stated in the 1st Review. The benefit of reserving capacity for Dunmore and Throop Boroughs is discussed below under Benefits from Host Agreements. While KSL also reserves capacity of the City of Scranton and the Scranton Sewer Authority it's not clear that an actual hardship will exist if the Phase III expansion is not permitted.

6. **Relocation of Keystone/Dunmore Waste:** KSL has identified, as an Environmental benefit, that they will relocate 8.8 million tons of waste from the unlined Keystone/Dunmore portion of the landfill to lined waste disposal areas associated with the Phase III permit modification project. KSL considers this to be a significant and long term benefit to assist in minimizing the uncontrolled releases of leachate from the waste mass present at KSL to the northern anthracite mine pool.

DEP review: The relocation of waste from the Keystone/Dunmore site was previously approved by DEP as a separate permit modification for this waste to be placed in the active Phase II disposal area. As such, the relocation of this waste is not a benefit of the Phase III expansion.

KSL response: If this activity is not to be considered a benefit resulting from approval of the Phase III Site Development, it should be considered a mitigation measure against the harm and/or potential harm to groundwater quality.

DEP 2nd review: While DEP does not consider this a benefit of the Phase III project, DEP acknowledges the removal of waste from the unlined Keystone/Dunmore area is a mitigation measure against the harm and/or potential harm to groundwater quality. DEP's comments regarding groundwater impacts and KSL's mitigation measures are discussed further in the harms section of this review.

7. **Continuation of ISO 14001:** KSL has identified, as an Environmental benefit, that their ISO 14001 certification reinforces the company's commitment to its Environmental Management System (EMS) and thereby its commitment to preventing pollution, meeting its legal and other regulatory requirements. By maintaining this certification, KSL states that it has guided their EMS by reducing the potential for environmental problems through maximizing awareness among the employees, developing environmentally sound work instructions and establishing emergency preparedness and response. Some

documented accomplishments of the KSL EMS are: an increase in the waste compaction rate which leads to an increase in airspace utilization, a reduction in water consumption for the operation, and a mitigation of off-site odor concerns. Through approval of the Phase III permit modification, KSL will continue to maintain and implement their ISO 14001 environmental management system during the active operation of the Phase III area.

DEP review: Although DEP believes that this certification is beneficial to maintaining compliance and ensuring mitigation of environmental impacts from the operation of the landfill are either prevented or minimized, the certification is not a result of the Phase III project nor does it bring about any benefits from the expansion. DEP's Technical Guidance Document No. 254-2100-101 states that an activity or mechanism which reduces or prevents harm created by the facility does not amount to a benefit.

KSL response: The continuation of the ISO 14001 Environmental Management System for the site life of the Phase III expansion should be considered a benefit or in the alternative significant mitigation measure against harms or potential harms.

DEP 2nd review: While DEP does not consider this a benefit of the Phase III project, DEP acknowledges KSL's ISO 14001 Environmental Management System is a significant mitigation measure against harms and potential harms.

8. **Beneficial use of Methane Gas:** KSL has identified, as an Environmental benefit, that they are in active discussions with PEI Power Corporation and CB&I Government Solutions, Inc. regarding increasing their beneficial use of the methane gas generated at KSL. Both entities are presently processing methane gas generated at KSL for the purpose of electricity generation. Similar discussions have been conducted with a consortium of Commonwealth Energy Group, LLC, and ET Environmental Corporation to convert all current and future methane gas generated for beneficial use purposes. The end use and products being contemplated include conversion of gas for electrical energy, insertion into the UGI natural gas distribution system for general public or point source consumption and/or processing into compressed natural gas fuel for equipment and vehicle/trucks. KSL quantified this benefit by considering that 64,500 homes could be supplied with electric energy or the production of over 40 million gallons of alternate energy fuels per year when the peak methane gas is generated. KSL has not concluded all the required contracts and agreements, but is agreeable to the inclusion in a Phase III permit modification a condition that would require methane gas beneficial use agreements to be in place no later than 2 years from the date of permit issuance.

DEP review: Landfills are required to control gas that is generated by operation of their facilities. DEP's Technical Guidance Document No. 254-2100-101 states that an activity or mechanism which reduces or prevents harm created by the facility does not amount to a benefit. Beneficial reuse of landfill gas is mitigation of gas that is created by the landfill and an expected business practice and as such is not considered to be a benefit of the Phase III Expansion.

KSL response: The beneficial use of landfill gas has economic advantages including infrastructure construction, employment and increasing annual production of renewable green energy. KSL requests DEP reconsider the beneficial use of landfill gas as a benefit and/or the activities required to implement same should be considered as a mitigation measure against the harm or potential harms associated with odors and/or harmful air quality emissions.

DEP 2nd review: While DEP does not consider this a benefit of the Phase III project, DEP acknowledges the beneficial use of landfill gas is mitigation against the harm or potential harm associated with odors and/or harmful air quality emissions. Any direct economic benefits should already be accounted for in other sections such as Good and Services and Continued Employment.

9. **Management of Drill Cuttings and Drilling Fluids from Shale Gas Development:** KSL has identified, as an Environmental benefit, the management of drill cuttings and fluids. Nearly all drill cuttings generated during Marcellus Shale development are disposed in landfills. KSL's ability to separate the solids from the drilling fluids and return the processed fluids for reuse has a positive environmental effect on the ground and surface waters of the Commonwealth. Since the commencement of the centrifuge separation process in 2013, KSL has reclaimed 4,830,000 gallons of water and returned this volume to the well fields for drilling operations. The Phase III permit modification issuance will guarantee the long term continuation of this activity.

DEP review: The processing of drilling fluids by KSL is not dependent on the operation of the landfill and is not dependent upon the Phase III expansion. KSL provides a disposal option for the Marcellus gas industry, however, the management of these waste streams is not considered to be a benefit of the Phase III expansion.

KSL response: The management of drill cuttings and drilling fluids should be considered a benefit because there are a limited number of disposal sites in Northeastern Pennsylvania permitted to provide this service. If KSL terminates disposal operations within the next five years, the cost to properly solidify and dispose of these materials will increase due to additional hauling costs and lack of competition.

DEP 2nd review: As stated in DEP's first review, the processing of drilling fluids is not a benefit of the Phase III expansion. Regarding the disposal of drill cuttings, waste disposal volume in Northeastern Pennsylvania and the transportation costs associated with having to transfer waste and send it to a disposal facility further away is already addressed in the Regional Waste Disposal Services section below.

10. **Local University/College Scholarships:** KSL identified, as a Social and Economic benefit, that they will contribute \$10,000 per year to each of the institutions of higher education in Lackawanna County, the University of Scranton, Penn State University (Scranton Campus), Marywood University, Lackawanna College, Keystone College, and Johnson College. These contributions are to be dedicated to scholarships based on need.

Preference is to be given to students residing in Dunmore and Throop Boroughs, and secondarily to those enrolled in environmental, social services, teaching and/or health related fields. The value of these amounts to \$600,000 over the initial permit term and \$2,760,000 over the active life of Phase III.

DEP review: Scholarships are considered to be charitable contributions and as such are not considered to be benefits of the Phase III expansion. [Berks County v. Department of Environmental Protection, 894 A.2d 183(Pa. Cmwlth. 2006). Eagle Environmental II, L. P. v. Department of Environmental Protection, 884 A.2d 867(Pa. 2005)]

KSL response: KSL believes this financial assistance is a benefit to the quality of life, environmental enhancement, educational and employment opportunities for the residents of Dunmore and Throop Boroughs. The financial benefits will accrue if the Phase III expansion moves forward, thus the benefit is directly tied to the operations of the Phase III expansion. KSL requests the financial contribution be reconsidered as a social and environmental benefit.

DEP 2nd review: DEP maintains the position stated in the 1st Review.

11. **Dunmore Senior Citizens Center:** KSL identified, as a Social and Economic benefit, that they will extend their current contribution of \$100,000 per year to the Dunmore Senior Citizens Center for the active life of Phase III. This amounts to \$1,000,000 over the initial permit term and \$4,600,000 over the life of Phase III.

DEP review: Charitable contributions and as such are not considered to be benefits of the Phase III expansion. [Berks County v. Department of Environmental Protection, 894 A.2d 183(Pa. Cmwlth. 2006). Eagle Environmental II, L. P. v. Department of Environmental Protection, 884 A.2d 867(Pa. 2005)]

KSL response: KSL believes this financial assistance is a benefit to the quality of life, environmental enhancement, educational and employment opportunities for the residents of Dunmore and Throop Boroughs. The financial benefits will accrue if the Phase III expansion moves forward, thus the benefit is directly tied to the operations of the Phase III expansion. KSL requests the financial contribution be reconsidered as a social and environmental benefit.

DEP 2nd review: DEP maintains the position stated in the 1st Review.

12. **Throop Borough Environmental Fund:** KSL identified, as a Social and Economic benefit, that they will establish a fund, in the amount of \$60,000 annually to pay for environmental, social services, recreational, educational and cultural programs offered by Throop Borough. The funds will be released by KSL upon Throop Borough's submission of the scope of the activity to be implemented. KSL will provide DEP on an annual basis a copy of the program undertaken. This amounts to \$600,000 over the 10 year permit term or \$2,760,000 over the life of Phase III.

DEP review: Charitable contributions and as such are not considered to be benefits of the Phase III expansion. [Berks County v. Department of Environmental Protection, 894 A.2d 183(Pa. Cmwlth. 2006). Eagle Environmental II, L. P. v. Department of Environmental Protection, 884 A.2d 867(Pa. 2005)]

KSL response: KSL believes this financial assistance is a benefit to the quality of life, environmental enhancement, educational and employment opportunities for the residents of Dunmore and Throop Boroughs. The financial benefits will accrue if the Phase III expansion moves forward, thus the benefit is directly tied to the operations of the Phase III expansion. KSL requests the financial contribution be reconsidered as a social and environmental benefit.

DEP 2nd review: DEP maintains the position stated in the 1st Review.

The Department is requesting KSL to provide a revised application within 90 days. KSL should include additional information as identified and clarify any issues that it feels the Department does not view correctly. If you have any questions, please contact me at the above referenced address or telephone number.

Sincerely,



Roger Bellas

For: David F. Matcho, P.E.
Environmental Engineer Manager
Waste Management Program

cc: Labella Associates
Lackawanna County Regional Planning Commission
Lackawanna County Commissioners
Dunmore Borough
Throop Borough
Senator Robert P. Casey, Jr.
Congressman Matt Cartwright
Senator John Blake
Representative Kevin Haggerty
Representative Marty Flynn
Representative Sid Michaels Kavulich