



September 8, 2017

IESI PA Bethlehem Landfill
c/o Mr. Donald Hallock, District Landfill Manager
2335 Applebutter Road
Bethlehem, PA 18015-6004

Re: Major Permit Modification: Southeastern Realignment
IESI PA Bethlehem Landfill
Lower Saucon Township
Northampton County
Facility ID #100020
APS #870519 Auth #1072854

Dear Mr. Hallock:

Your application for a major permit modification for the Southeastern Realignment is hereby approved. This approval is based on the information in the application entitled "Southeastern Realignment" received by the Department on January 21, 2015. Supplemental information was received on the following dates: December 31, 2015, January 27, 2016, January 29, 2016, April 21, 2017, July 11, 2017, August 14, 2017, August 15, 2017, August 25, 2017, and August 30, 2017. The application was prepared by Martin and Martin, Inc.

Enclosed as part of this approval is a permit modification Form 13-A. Any conditions stated on the Form 13-A modifies and replaces permit conditions regarding your operating permit. All other items and conditions from your permit shall remain in force and effect.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa. C.S., Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in Braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If you have any questions concerning this permit modification, please contact me at (570) 826-2201.

Sincerely,



Roger Bellas
Environmental Program Manager
Waste Management Program

Enclosures

cc: Richard M. Bodner, P. E./Martin and Martin, Inc. (w/ enclosure)
Lehigh Valley Planning Commission (w/ enclosure)
Northampton County Council (w/ enclosure)
Lower Saucon Township (w/ enclosure)
Senator Lisa M. Boscola (w/ enclosure)
Representative Robert L. Freeman (w/ enclosure)
Representative Justin J. Simmons (w/ enclosure)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

FORM NO. 13-A
MODIFICATION TO SOLID WASTE DISPOSAL AND/OR PROCESSING PERMIT

Under the provisions of Act 97, the Solid Waste Management Act of July 7, 1980, Solid Waste Permit
Number 100020 issued on (date original permit was issued) June 20, 1990 to
(permittee) IESI PA Bethlehem Landfill Corporation
(address) 2335 Applebutter Road
Bethlehem, PA 18015

is hereby modified as follows:

1. This permit modification is being issued pursuant to the Pennsylvania Solid Waste Management Act of July 7, 1980, and the Municipal Waste Management Regulations effective September 14, 2002.
2. This permit modification authorizes additional waste capacity within the current permit boundary encompassing existing fill areas and a small portion of new disposal area in the southeast corner of the site. Approved activities include overtopping of waste in the existing Phases I and II, overtopping of waste in the existing Phases III and Phase IV, and construction of a new waste placement area (+/- 6.0 acres). Specifically:
 - Overtopping of existing waste will occur in approximately 29 acres of previously completed portions of Phase III and IV of the site which make up the western half of the landfill. These cells have liner systems that are compliant with current requirements and thus do not require any new liner.
 - Overtopping of existing waste will also occur in approximately 22.5 acres of the old landfill Phase I and II areas which make up the eastern half of the landfill. This area is not compliant with current regulations and therefore requires a new "piggyback" liner system, that will act as a cap for the old waste and a liner for the new waste.
 - Finally, the project includes placement of waste an approximately 6-acre area to the south and east of the existing Phase II area. This area has not previously had waste placed there and will require new liner construction.
 - The project also includes construction of approximately 880 linear feet of MSE wall for increased site capacity, disposal area access, and storm water / erosion / sediment control.

The total project covers approximately 57.5 acres.

3. This permit modification is based on information received in the permit application package received by the Department on January 21, 2015, entitled "Southeastern Realignment". Supplemental information was received on December 31, 2015, January 27, 2016, January 29, 2016, December 20, 2016, July 11, 2017, April 21, 2017, July 24, 2017, August 14, 2017, August 15, 2017, August 25, 2017 and August 30, 2017.

4. The permit modification application, as prepared by Martin and Martin, Inc., included the following documents:

- a. Letter of Transmittal dated January 21, 2015
- b. Table of Contents
- c. Form GIF
- d. Introduction
- e. Phase I Narrative
- f. Form A, Application for Municipal Waste Permit

Attachment

- A-1 Public Notification - Newspaper Display Advertisement
- A-2 Public Notification – Municipalities
- A-3 Public Notification – Contiguous Landowners

- g. Form B, Professional Certification
- h. Form B-1, Application for Certification
- i. Form C-1, Compliance History Certification
- j. Form HWC, Compliance History
- k. Form D, Exclusionary Area Criteria/Environmental Assessment Process for

(See Vol. 2) Municipal Waste Management Facilities

- l. Form 1, Facility Plan

Attachment

- 1-1 Facility Plan

- m. Form 7, Hydrogeologic Information – Supplemental Information

Attachment

- 7-1 Monitoring Well Decommissioning Plan
- 7-2 Groundwater Contours

- n. Form F, Soils Information – Phase I
- o. Form 3, Map Requirements – Phase II – Municipal Waste and Construction Demolition Waste Landfills
- p. Form G(A), Air Resources Protection – Dust Emissions Estimate and Control Plan
- q. Form G(B), Air Resources Protection – Dust Emissions Estimate and Control Plan
- r. Form I, Erosion and Sedimentation Control (See Vol. 3)
- s. Revisions to Form 14 (Operations Plan)-Cap Removal and Waste Relocation Plan, Updated NMCP, and Waste Exhumation Plan
- t. Form 24, Liner System – Phase II

- 24-1 Liner System Narrative
- 24-2 Technical Specifications
- 24-3 QA/QC Plan
- 24-4 Liner System Design
- 24-5 Leachate Detection/Collection and Protective Cover Design
- 24-6 Final Cover Design
- 24-7 Leachate/Geosynthetic Compatibility
- 24-8 Landfill Slope Stability, Settlement, Bearing Capacity Evaluation
- 24-9 MSE Berm Design and Stability Calculations

- u. Form 25, Leachate Management – Phase II

- v. Form K, Gas Management
 - w. Form 28, Closure
Revised Bonding Calculations
 - x. PPC Plan
5. The permittee shall submit a construction schedule ten (10) days prior to the commencement of construction. This schedule should be updated as needed to accurately reflect the progress of the construction activities.
 6. The permittee shall notify the Department upon commencement and completion of each phase of construction listed below. The completed phases of construction shall be certified using the Department's Form 37 – Certification of Facility Construction Activity submitted by a registered Professional engineer.
 7. The construction certification phases include the following:
 - a) Piggyback liner in Phase I and Phase II;
 - b) Construction of each section of MSE wall.
 - c) Construction of Southeast Lateral Extension area (+/-6.0 acres) that includes construction of a new liner system in the following construction segments:
 - i. Construction of subbase,
 - ii. Construction of liner and leachate detection zone,
 - iii. Construction of protective cover and leachate collection system.
 8. Provide to the Department, within 90 days of issuance of this permit modification, 2 copies of the final comprehensive application, including full sized drawings and revisions in their correct sections. Also, provide 1 reduced set of final drawings as part of this submission.
 9. The bond amount for your facility has increased to \$13,460,569.00. As part of your annual report provide an updated liability insurance policy and bond amount.
 10. The permittee shall provide in each annual report submitted, a breakdown of the approved benefits realized for this expansion along with a description addressing details for each. The approved benefits are as follows:
 - a) Recycling Drop-off Center.
 - b) Free year round white-goods disposal to the residents of Lower Saucon Township.
 - c) Benefits to Lower Saucon Township: Lower Saucon Township will continue to receive host benefit fees in the amount of \$4.84/Ton for municipal solid waste and \$7.01/Ton for residual waste.
 - d) Local Economic Benefit.
 - e) Direct Employment.
 11. To avoid potential impacts to *Myotis septentrionalis* and other tree roosting bats within the area all trees or dead snags greater than 5 inches in diameter at breast height that need to be harvested to facilitate the project shall be cut between November 1 and March 31.
 12. Provide to the Department, within 90 days of issuance of this permit modification, an updated Transportation Compliance Plan and an updated Nuisance Minimization and Control Plan to include the trucks hauling cover soil and construction materials.

13. The permittee shall plant and maintain vegetative screening along the southeast and eastern sides of the project footprint to provide visual screening from properties in the immediate vicinity and from Applebutter Road.
14. This permit modification authorizes the construction of one new monitoring well (BL-20D) and two new abatement wells (AB-1R and AB-2R) to replace one monitoring well (inactive monitoring well MP-3) and two abatement wells (AB-1 and AB-2) which will be decommissioned during construction activities. The Department has the following requirements concerning the above abatement and monitoring well:
 - a. A schedule outlining the timeline for wells (either abatement or monitoring/water level-only wells) that will be installed shall be provided to the Department in advance of well installation to allow Department staff to observe the work.
 - b. Once the new monitoring and abatement wells have been installed, a Form 37 construction certification for the new wells using their formal well designation names shall be submitted. The Form 37(s) will be certified by a Professional Geologist and/or a Professional Engineer that is licensed to practice in Pennsylvania. All ancillary information related to the new wells will be provided along with the Form 37(s) including well construction logs and any soil/bedrock logs generated during installation.
 - c. Once the new monitoring and abatement wells have been installed, the wells shall be sampled at least once for the standard suite of analyses at the site, as baseline/background conditions, prior to the placement of waste.
 - d. Prior to decommissioning any wells associated with construction activities, the permittee shall provide the Department with a specific plan detailing how they intend to decommission these wells. The wells are not to be decommissioned until the Department has reviewed and approved the proposed well decommissioning plan. The Department must be provided with adequate advanced notice of the date the permittee intends to decommission these wells.
 - e. Once decommissioning work is completed at any particular location, a well decommissioning form will be submitted to the Department that details the decommissioning activities performed at a given location.
15. Provide to the Department, within 90 days of issuance of this permit modification an updated Groundwater Sampling and Analysis Plan (GW SAP) for the site as a separate, stand-alone document. Once approved by the Department, at least one copy of the updated GW SAP shall be kept on the site at all times. The GW SAP shall be reviewed on an annual basis. Any and all modifications to the GW SAP shall be submitted to the Department for review before implementation of said GW SAP modifications. The updated GW SAP shall include but not be limited to the following:
 - a. A description of the current sampling protocol used for each well that is part of the current monitoring network, including Form 18 and Form 6, or the construction log for each applicable monitoring point. If dedicated equipment is used at a monitoring point, this information should be included.
 - b. A description of the proposed sampling protocol for any and all new monitoring points.
 - c. Specific chemical analyses performed at each monitoring point which is currently part of the monitoring network. Additionally, it shall include proposed chemical analyses for any and all new monitoring points.
 - d. Analytical methods currently used to analyze groundwater samples at the site.
 - e. Quality control/quality assurance protocol for groundwater sampling.

f. Site map with current and proposed monitoring points identified.

This modification shall be attached to the existing Solid Waste Permit described above and shall become a part thereof effective on (date)

September 8, 2017

A handwritten signature in black ink, appearing to read "John A. Allen", is written over a horizontal line.

**FOR THE DEPARTMENT OF ENVIRONMENTAL
PROTECTION**

Comment-Response Document

**IESI PA Bethlehem Landfill
Southeastern Realignment
Permit No. 100020
Lower Saucon Township, Northampton County
April 13, 2016 Public Hearing**

Prepared by:
Pa. Department of Environmental Protection
Northeast Regional Office
Waste Management – Facilities Section

September 2017



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PROJECT DESCRIPTION

The IESI PA Bethlehem Landfill (IESI) is comprised of an existing 201-acre landfill located off Applebutter Road in Lower Saucon Township, Northampton County. The area in the immediate vicinity of the landfill is generally rural with a more densely populated area to the northwest and an industrial area to the southwest. The Lehigh River is located approximately ¼ mile to the north. On January 21, 2015, the Department of Environmental Protection (DEP) received a major modification application for IESI's Southeastern Realignment project. The proposed project is to be located within the current permit boundary and involves expanding over existing fill areas and a small portion of new disposal area in the southeast corner of the site.

Overtopping of existing waste will occur in approximately 29 acres of previously completed portions of Phase III and IV of the site which make up the western half of the landfill. These cells have liner systems that are compliant with current requirements and thus do not require any new liner. Overtopping of existing waste will also occur in approximately 22.5 acres of the old landfill Phase I and II areas which make up the eastern half of the landfill. This area is not compliant with current regulations and therefore requires a new "piggyback" liner system, that will act as a cap for the old waste and a liner for the new waste. Horizontal gas collection and header pipes will be installed under the "piggyback" liner system to capture any landfill gas being generated from the old waste. Finally, the project includes placement of waste on an approximately 6-acre area to the south and east of the existing Phase II area. This area has not previously had waste placed there and will require new liner construction. The total project covers approximately 57.5 acres. The project will not increase the daily maximum and quarterly average waste acceptance rates for the landfill. IESI has indicated that the expanded landfill will allow the landfill to continue operating for at least an additional 5 years.

A public hearing regarding the Southeastern Realignment application was held on April 13, 2016. The Municipal Waste regulations require DEP to prepare a summary of the written and oral comments submitted at a public hearing and provide responses to the comments. This Comment-Response Document summarizes public comments received by DEP, including public comments received at the April 13, 2016 Public Hearing and provides DEP's responses to those comments.

LIST OF COMMENTERS

1. Charles Elliott
Attorney, Lower Saucon Township
2. Susan Severn
Citizen
3. Gene Boyer
Citizen
4. Donna Louder
Citizen
5. Russ Setton
Citizen
6. Ron Horiszny
Citizen
7. Matthew McClarin
Citizen
8. Priscilla deLeon
Citizen
9. Jim Birdsall
Engineer, Lower Saucon Township

COMMENTS AND RESPONSES

1. Stormwater Control

Comment: Riverside Drive has been washed out many times. Also, there is concern regarding the long-term maintenance of the stormwater swales particularly after the landfill is closed.

1. **Response:** IESI prepared and submitted stormwater management plans and post closure plans with the application and DEP determined these plans have been designed adequately. The application addresses the volume increases that may be encountered as a result of the proposed landfill expansion. A volume control requirement is essential to mitigate the consequences of increased stormwater runoff. To accomplish this, volume reduction BMPs were designed and will be implemented to protect stream channel morphology; maintain groundwater recharge; prevent downstream increases in flooding and replicate the natural hydrology onsite before development to the greatest extent possible

The proposed volume control and water quality BMPs maintain and protect natural hydrology including velocity, current, cross-section, runoff volume, infiltration volume and aquifer recharge volume. These BMPs will also help prevent increases in peak runoff rates for larger events (2-year-100 year) on both a site-by-site and watershed basis.

2. Visual Impacts to the Delaware and Lehigh National Heritage Corridor

Comment: DEP should evaluate visual impacts of the project to the Delaware and Lehigh National Heritage Corridor and consider a permit condition such as the one contained in the 2003 modification for the Phase IV expansion.

Response: The final contours of the Southeastern Realignment do not exceed the top elevation (725' MSL) that was approved with the Phase IV permit in 2003. IESI provided an updated and expanded visual impact analysis with the current application. This information confirms that the landfill will not be visible above the existing tree line along the ridge from the tow path locations.

3. Odors

Comment: DEP should ensure that there are adequate odor controls and measures taken to prevent off site malodors. The Odor Control Plan should be provided for review; should be as specific as possible and should include all the inspection, testing, reporting, mitigation methods and timing as described by IESI in many different supporting documents.

Response: Adjustments and operational controls implemented at the site since 2015 have minimized odors at the landfill. DEP's experience based on inspections and oversight is that, following the enhancements of the landfill gas collection system implemented since 2015, IESI generally operates in compliance and has effective mitigation measures in place to control odors. IESI's Odor Control Plan is included with the application and DEP determined the plan is adequate and contains all the appropriate information.

4. Health Study

Comment: DEP should consider the results of the health study conducted by the PA Department of Health.

Response: The PA Department of Health's health consultation recommended that local air emission sources implement robust engineering controls to reduce air emissions; to continue oversight, permit enforcement and timely nuisance odor response; and to continue monitoring of groundwater. The recommendations are currently implemented at IESI and will continue. Specifically, IESI has completed the installation of many acres of temporary cap and additional gas collection devices since the sampling was conducted for the health consultation. DEP staff inspect the landfill regularly and review data collected by the landfill including groundwater monitoring data.

5. Dirt and Dust

Comment: Impacts to off-site air quality from air born dirt and dust is a concern.

Response: DEP's experience based on inspections and oversight is that IESI generally operates in compliance and has effective mitigation measures in place to control dust.

6. Traffic

Comment: Increase in traffic associated with the project is a concern. The information presented in the application related to the number of trucks associated with the project is not clear. The PA Department of Transportation (PennDOT) should be involved in the review.

Response: IESI provided, at DEP's request, clarification regarding how the additional trucks from the project will impact traffic. Based on DEP's inspections and review of records, IESI's mitigation of truck safety and traffic impacts is generally effective. There will be some traffic impacts associated with the project; however, DEP determined in its harms/benefits analysis that the benefits of the project clearly outweigh any remaining harms related to the project. In addition to evaluating current and projected traffic volumes and potential impacts IESI also evaluated the accident history and roadway curves/signage adequacy along the haul route. This information was forwarded to the PennDOT and PennDOT concurred with the evaluation.

7. Exposure of Old Waste

Comment: It is recommended that an outside firm be present while IESI is working in the old landfill Phase I and II areas. There is a concern related to digging into/exposing old waste.

Response: Aside from installation of horizontal landfill gas collectors or headers in the old landfill areas, the old waste will not be exposed. IESI proposed a detailed Cap Removal Plan detailing the procedures for completing the work in this area. DEP determined a requirement for a third party to be on site during this phase is not required.

Comment: DEP should require IESI to take additional steps to minimize the probability that unlined areas, where the cap is proposed to be removed and additional liner system constructed, would be exposed to rainfall. Such steps should include the use of a temporary synthetic, impervious cover to be placed over uncapped areas during rain events.

Response: The old waste will not be exposed during cap removal. Furthermore, IESI's plan involves limiting the area of cap removal to that which can be managed within a day or two and the landfill will have daily cover material available for use as needed.

8. Visual Impacts

Comment: The landfill is not aesthetically pleasing. Also, there are concerns with IESI's information (lines of site, distances, height).

Response: The scope of DEP's review is limited to the Southeastern Realignment project. Visual impacts associated with the current landfill were addressed during previous applications. IESI performed an updated and expanded visual impact analysis in connection with the Southeastern Realignment project. IESI has proposed adequate mitigation to address visual impacts associated with the Southeastern Realignment project. There will still be some limited visual impacts to those in the immediate vicinity of the landfill; however, DEP determined in its harms/benefits analysis that the benefits of the project clearly outweigh any remaining harms related to the project. Regarding concerns about the actual height of the project, the final contours of the Southeastern Realignment do not exceed the top elevation (725' MSL). The use of equipment while working at this top elevation required IESI to apply for a higher elevation with the Federal Aviation Administration (FAA). Any potential additional visual impacts associated with this equipment would be temporary and minimal.

9. Landfill Operations

Comment: DEP should define landfill activities and provide a list of what landfill activities are.

Response: Landfill activities are all those activities that take place related to the construction and operation of the facility. The facility includes land affected during the lifetime of operations including, but not limited to, areas where disposal or processing activities actually occur, support facilities, borrow areas, offices, equipment sheds, air and water pollution control and treatment systems, access roads, associated onsite and contiguous collection, transportation and storage facilities, closure and post closure care and maintenance activities and other activities in which the natural land surface has been disturbed as a result of or incidental to operation of the facility. Activities include, but are not limited to, construction, operation, monitoring, repair and closure of disposal areas; landfill gas collection systems; groundwater monitoring systems; and leachate collection, storage and treatment systems.

Comment: Throughout the expansion process IESI will be jumping around, leaving parts of the west open while they move over to the east. IESI should complete and cap areas as they go.

Response: DEP has determined IESI's filling and capping schedule for the project is satisfactory and does not involve leaving areas partially or temporarily capped for unnecessarily long periods of time.

Comment: The Final Cap schedule, not just the sequencing, for each of the seven closure stages should be provided. DEP should ensure that the proposed capping sequence is followed, such that no more than 25% of the surface area is uncapped at any time.

Response: IESI provided the timeframe for capping associated with each cell/phase. DEP believes the capping sequence should be an adequate minimization of uncapped areas.

Comment: An updated Operations Plan for the site, Form 12R, was not submitted with the application. The application states that daily operations will not change. IESI submitted a new Cap Removal and Waste Relocation Plan and an updated PPC Plan. These plans address daily operations and a new and updated Form 12R should be prepared specific to this application and incorporating these additional protections.

Response: Form 12R is DEP's operations plan form for residual waste facilities. The municipal waste operations plan form is Form 14. IESI did provide revisions to their existing Form 14 with the application. The Cap Removal and Waste Relocation Plan was submitted as part of the application and does not necessarily have to be somehow part of/attached to the Form 14. The PPC Plan is associated with a separate form, Form L.

Comment: The permit should have a condition that at no time should more than three acres be under intermediate cover without an established vegetative cover that complies with DEP's vegetation stabilization requirements.

Response: 25 Pa Code §273.233 addresses intermediate cover and slopes and DEP does not believe there is reason to require IESI to go above and beyond the regulation.

10. Leachate

Comment: Leachate is not under control in the LMC8 and LMC7 areas. The area that will be overtopped will have additional weight which could compromise the area under the landfill and impact the leachate protection zone.

Response: IESI is managing current flows in accordance with DEP Regulations and has proposed adequate mitigation measures to minimize and control leachate. A network of groundwater monitoring wells is utilized to evaluate whether the current landfill operations are impacting groundwater. Based on this groundwater monitoring, there is no evidence that IESI's current municipal waste landfill operation is impacting groundwater. IESI is taking additional measures relative to the elevated flow in the leachate detection zone. These measures include periodic cleaning of the anchor trench drains and recalibrating the flow measurement devices. Furthermore, as part of the Southeastern Realignment liner construction, possible stormwater intrusion into the eastern side of the Phase III leachate detection zone will be eliminated by the welding of the new liner systems to the Phase III systems. The project was evaluated using engineering principles to ensure the additional weight in the areas to be overtopped will not have adverse impacts to the integrity of the liner and leachate systems.

11. Landfill Gas Management

Comment: The applicant and DEP should consider whether the single flare and associated blowers at their current location is sufficient to adequately handle gas collection from the expansion.

Response: Based on the modeling results, it is expected that the maximum site wide LFG generation rate (including the existing landfill disposal areas and the Southeastern Realignment modification) will occur in 2023, and will be approximately 4,537 cfm (assuming 50 percent methane content). Note that the modeling results include a safety factor to be conservative. After 2023, the LFG generation rate is expected to decline as the organic fraction in the MSW is depleted.

The existing enclosed ground flare has a design capacity of 4,000 cfm. Given the results of the modeling, total gas flows may eventually exceed the capacity of the landfill's flare (based on the modeling results, it is estimated the flare has sufficient capacity to handle LFG flow through 2023). In accordance with its Title V operating permit, the landfill will update its LFG forecast on an annual basis. If the annual forecast indicates that the existing flare does not have sufficient capacity to control the collected LFG, the landfill will submit for PADEP approval (via plan approval, if needed) and install additional control or treatment devices in accordance with the BAT criteria.

Comment: Surface monitoring of landfill gases has identified high levels of methane that are escaping to the air. There are ongoing exceedances and several repeat exceedance locations.

Response: The site is in compliance with all applicable regulations and requirements relative to the monitoring and control of landfill gas. Enhancements were made to the landfill gas collection system since 2015 and the Southeastern Realignment project will further expand the system.

Comment: When five or more landfill odor complaints are reported to the landfill in a single day, or one or more odor complaints are reported in each of three consecutive weeks, DEP should require a full surface emissions monitoring event to be conducted within five days of that circumstance. The results of the monitoring should be transmitted to the Township and DEP within 24 hours of the monitoring event. If an exceedance of the methane concentration limit of 500 ppm occur at any point, DEP protocol shall be followed to make all repairs immediately, and confirmed by 10-day and 30-day follow-up testing.

Response: DEP and IESI have protocols in place to address odor complaints. Because off-site odors can occur for different reasons, decisions on specific actions to take in response to odor complaints are made on a case by case basis rather than automatically requiring certain actions based on a certain number of complaints.

12. Closure/Post Closure Plan

Comment: The post closure plan should be the strictest ruling that could possibly be put into place to protect the future of the township.

Response: DEP has reviewed IESI's post closure plans and determined they are adequate.

Comment: An updated Closure Plan was not submitted. The previous Closure Plan contains closure dates and other details that are inconsistent with the current application and need to be revised.

Response: An updated closure plan was received on April 21, 2017.

Comment: IESI has submitted written information to the Township stating a landfill employee will be onsite daily during the entire post closure period. This commitment should be included in an updated Closure Plan.

Response: IESI does not need to include this commitment in the Closure Plan as there is no regulatory requirement for IESI to have a landfill employee onsite daily during the entire post closure period.

Comment: Bonding costs should include reimbursement to the Township for ongoing Township inspections during the post closure period.

Response: The Township would still be eligible for reimbursement of host inspector costs through Act 101 during the closure/post closure period; therefore, including these costs in the bond is not necessary.

Comment: The Closure Plan should address aspects of closure, decontamination and removal of the Bethlehem Renewable Energy (BRE) gas collection plant and the conveyance lines from the landfill. The Closure Plan should also describe and provide security for the actions that must be taken to secure the piping system and facilities to remove the safety risks and environmental damage risks that would result from the facility shutdown and separation of the BRE facility from the IESI piping. The potential for the migration of gases along old pipe lines and inconsistent operations of the plant are concerns that should be addressed.

Response: The BRE gas collection plant is not owned and operated by IESI and is permitted under separate waste and air quality permits. BRE would be responsible for the closure, decontamination and removal of the plant; therefore, it is not necessary to include this in IESI's Closure Plan. The landfill gas collection system is already designed to route gas to the flare as necessary if BRE is not operating whether it be temporarily or permanently.

Comment: The Closure Plan narrative should address how the final stage closure of Cell 4E will occur. According to the final closure sequencing, closure of the final stage calls for excavation of over 315,000 cubic yards of waste from Cell 4E, while bringing in additional substantial fill to meet required slopes and grades. The application does not identify when, where or how the excavated waste will be disposed, since all other stages will be capped up to that point.

Response: The construction of Cell 4-E, including the exhumation of some of the refuse placed therein and the placement of soil fill, is not a closure item, but rather a part of the construction of the lined landfill. The 315,000 cubic yards is accounted for in the net capacity of the project per the table in Form 1 and on drawing LF-64. The refuse will be exhumed as a part of the operation of the cells to the east (primarily Cell SE-2B), and the compacted soil will be placed as a part of Cell 4-E construction.

13. Stability

Comment: There is a concern there could be a slide like the one that occurred at Chrin Landfill. Also, there is a concern whether the mechanically stabilized earth (MSE) wall is adequate.

Response: The landfill is designed using detailed engineering to ensure it is safe and stable.

14. Waste Types

Comment: There is no information about the materials that are going into the landfill.

Response: IESI is a municipal waste landfill and as such, primarily accepts municipal waste. Paperwork detailing the wastes accepted at IESI (such as applications, annual reports and Form U's) are all available for review at the DEP office.

15. Support

Comment: IESI is a well-run, conscientious company and they are a benefit for the region, community and township. The expansion will keep them in business and in turn help the citizens of Lower Saucon Township.

Response: The benefits of the landfill were evaluated during the Environmental Assessment review. DEP determined the benefits of the Southeastern Realignment project outweigh any remaining harms of the project.

16. Township Comments

Comment: Lower Saucon Township submitted written comments to DEP and these comments should be considered during the review of the application.

Response: All comments raised by Lower Saucon Township throughout the application review process were addressed.

17. Wetlands

Comment: The current water quality regulatory status of the Saucon Creek and its tributaries should be confirmed, and consideration given to evaluating the potential for site activities and disturbance to further diminish the wetlands, if it is not obvious that there will be no impact.

Response: The project is not expected to impact the wetlands. The wetlands identified in the application have been determined to be exceptional value. The exclusionary criteria

regarding exceptional value wetlands does not apply to areas that were previously permitted, such as in this case.

18. Impact on Habitat for Long Ear Bat

Comment: Will IESI harvest all trees or dead snags greater than 5 inches in diameter at a breast height between November 1st and March 31st, as recommended?

Response: The need to harvest all trees or dead snags greater than 5 inches in diameter at a breast height between November 1st and March 31st has been included as condition of the permit.

19. Township Land Use Approval

Comment: Special Exception and Land Development Plan approval must be obtained from the Township for this expansion.

Response: IESI obtained all required Township approvals.

20. Cap Removal and Waste Relocation Plan

Comment: The final document should have page numbers with the date on every page.

Response: DEP is satisfied with the format of the submitted document.

Comment: In order for the document to be enforceable by DEP, it should become an integral component of the Operation Plan or as part of the Nuisance Minimization and Control Plan.

Response: IESI must operate in accordance with their application. A Cap Removal and Waste Relocation Plan specific to this project has been submitted as part of the application and therefore must be adhered to by IESI and is enforceable by DEP.

Comment: Immediate reporting to DEP and the Township should be provided for all H₂S test results exceeding the action threshold proposed.

Response: This action threshold is solely to initiate actions to be taken by IESI on site. The Proposed action level of 30 ppb is well below the acute health based comparison value (cv) used by ATSDR of 69 ppb and the ACGIH STEL standard of 5 ppm. A notification of an exceedance of this conservative, on site, action level is not warranted.

Comment: Correspondence with DEP, the Host Municipal Inspector, the Township, or citizens regarding air quality problems or concerns should be directed to both the Air Quality and Waste Management programs.

Response: Regardless of whether individual copies are provided to each program, DEP works closely between all programs to direct and share correspondence appropriately.

Comment: The Cap Removal and Waste Relocation Plan should be submitted to the Title V Permit section to be included in the Plan Approval application and the Waste Management Major Permit Modification Application.

Response: A Cap Removal and Waste Relocation Plan specific to this project was submitted and reviewed as part of the Waste Management Major Permit Modification Application. The Air Quality Plan Approval application did not require submittal of this plan.

21. Coordination with other DEP Air Quality Program

Comment: DEP's Air Quality program should review any air quality aspects of the municipal waste application to ensure the proposed operations and odor control procedures mimic what is in that facility's Title V permit. DEP should provide permit coordination with the Air Quality program during the review of the application.

Response: DEP's Waste Management program consults and coordinates with the Air Quality program during landfill permit application reviews. The information contained in both the municipal waste application and air quality application have been reviewed to ensure the project meets applicable regulations.

Comment: What is the status of the Title V Permit Plan Approval submitted for this expansion.

Response: The Plan Approval is being issued concurrently with the waste program application approval.

22. PPC Plan

Comment: IESI should update its PPC Plan to include its proposed operations within the Southeastern Realignment, including updating its Attachment #4 with all listed controls related to cap removal activities and new evacuation routes for new interior road locations.

Response: DEP received the updated PPC Plan on August 30, 2017. The Plan contains updated Attachment #4 and new evacuation routes for the expansion area.

bcc: WM File thru Roger Bellas (pdf also)
D. Ritter/email pdf
D. Matcho/T. McGurk/E. Bloxham/email pdf
A. Faulch/email pdf
R. Malizia/email pdf
S. French/email pdf

RB:ag
WP: W1-0070.doc
H(Ashare)P: 9/8/17; T(9/8/17)