



September 27, 2016

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

Re: Second Environmental Assessment Review
IESI PA Bethlehem Landfill
Major Permit Modification – Southeastern Realignment
Application No. 100020-A151
APS# 870519 AUTH# 1072854
Lower Saucon Township, Northampton County

Dear Mr. Hallock:

On January 21, 2015, the Department of Environmental Protection (DEP) received an application for a major modification application for IESI PA Bethlehem Landfill's (IESI) Southeastern Realignment project. The expansion area 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. A Local Municipality Involvement Process meeting was held on March 11, 2015. The application was found to be complete and officially accepted on March 31, 2015. A public meeting was held on June 22, 2015 at Saucon Valley High School. There has been public interest in the application. DEP issued a first Environmental Assessment review letter on October 16, 2015. IESI submitted a response to the DEP's October 16, 2015 letter on December 31, 2015. The following comments are the result of DEP's second Environmental Assessment review of the application.

Environmental Assessment Harms vs. Benefits analysis required by §271.126-127

The IESI application is subject to the Environmental Assessment Process regulations and as such, the application included an analysis of the potential impact of the proposed facility on the environment, public health and public safety including a description of the known and potential harms of the proposed project and mitigation plans that explain how each known or potential harm will be mitigated and the extent to which any known or potential harms remain after mitigation. The application also included a description of the benefits of the proposed project. The following summarizes DEP's review of the Environmental Assessment Harms/Benefits Analysis of the IESI Southeastern Realignment application. The scope of this review is limited to harms and benefits of the Southeastern Realignment proposal and does not consider harms and benefits associated with the current landfill as permitted other than to the extent that past performance can be used as an indicator future performance.

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- P & R
- EA
- Engineer
- Solicitor
- Planner
- Landfill
- EMC
- Other *web*

General Comments
The application should be revised to include more detailed information on the sequencing of the cap removal, gas system removal and construction within Cells SE1-A, SE1-B, SE2-A and SE2-B.

IESI response: The removal of capping in previously filled areas was approved as a minor modification on July 17, 2013 and will remain the same for this project. Per Form K, the sequencing for the installation of the gas system beneath the "piggyback" area is included.

DEP review: The Southeastern Realignment application should be a standalone document and should not reference details included in past applications. In addition, the July 17, 2013 permit modification is only for removal of cap in a ½ acre area. This proposal is for removal of 26 acres. IESI should provide detailed information as to the sequencing of cap removal, gas system removal and construction within Cells CE1-A, SE1-B, SE2-A, AND SE2-B.

Comments related to the Form D – Environmental Assessment

1. **Exclusionary Criteria – Wetlands:** The proposed expansion area is within 300' of an exceptional value wetland. The application includes a letter from Roemer Ecological Services, Inc. stating the wetlands are not of Exceptional Value (EV). IESI has also provided the jurisdictional determination relative to the wetlands from the Army Corps of Engineers which finds that there "may be" waters of the United States on the subject project site. DEP considers these wetlands as EV since the East Branch of Saucon Creek has wild trout as per Pennsylvania Fish & Boat Commission. Wetlands that are hydraulically connected to a stream that is a tributary to a stream that supports wild trout are considered Exceptional Value.

2. **Form D, Section B - Scenic Rivers:**

Questions 11 and 12: The application does not take into consideration the volume control or water quality treatment requirements of Chapter 102. A volume control requirement is essential to mitigate the consequences of increased stormwater runoff. IESI should provide the post construction stormwater management (PCSM) Best Management Practices (BMPs) to mitigate potential volume and water quality impacts consistent with the requirements of DEP's Chapter 102 regulations. The PCSM plan must be accompanied with a schedule to install any post construction stormwater BMPs.

IESI response: The Southeastern Realignment proposes some reconfiguration of Basin #2; however, the design essentially keeps in place the basin berm, including the outlet structure and emergency spillway. The basin outlet locations are unchanged and remain in compliance with the applicable storm water management requirements. As shown in Form I, stormwater Basin #2 provides adequate detention volume to attenuate peak rates of discharge in accordance with the Saucon Creek Act 167 Plan, thereby, protecting downstream waterways and streams from accelerated erosion and flooding. A post construction stormwater management plan consistent with the requirements of Chapter 102, including BMPs has been prepared and was reviewed and approved by the township and county.

DEP review: DEP's Waterways and Wetlands program has reviewed the response to the first EA review letter and determined that IESI has not addressed 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, the volume reduction BMPs must be designed and 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 volume control and water quality requirements included in the proposed rulemaking and retained in the final-form rulemaking are necessary to maintain and protect natural hydrology including velocity, current, cross-section, runoff volume, infiltration volume and aquifer recharge volume. These requirements will sustain damaging bank full flows. The requirements 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. A volume control requirement is protective of water quality and also provides the benefits listed. IESI should provide the required post construction stormwater management BMPs to mitigate the volume of stormwater due to construction activities.

IESI has stated that infiltration of the volume difference from the pre-construction to the post-construction conditions cannot be accomplished due to the fact that the landfill is a "hot spot" location and infiltration is prohibited as per Chapter 137 of the Lower Saucon Code. However, this "hot spot" has not been confirmed by DEP, thus, infiltration of the increase in stormwater volume must be mitigated through post construction stormwater management BMPs. IESI should provide all applicable calculations regarding the post construction stormwater management BMP's necessary to determine if the proposed construction will meet DEP's Chapter 102 Regulations.

The Post Construction Stormwater Management Report states that water quality has been achieved for the unnamed tributary to East Branch of Saucon Creek for the local ordinance (Chapter 137 of Lower Saucon Code); however, the application does not mention meeting DEP's Chapter 102 Regulations regarding water quality. IESI should provide the required post construction stormwater management BMPs, calculations, details, notations for construction and any other information necessary for construction, to show that water quality has been achieved for the site.

3. **Form D, Section C - Wetlands:**

Question 1: IESI should verify the reduction in wetlands through the Army Corps of Engineers jurisdictional determination process. IESI should determine if wetlands onsite are Exceptional Value.

IESI response: The application includes a letter from Roemer Ecological Services, Inc. stating the wetlands are not of Exceptional Value (EV). IESI has also provided the jurisdictional determination relative to the wetlands from the Army Corps of Engineers.

DEP review: The Army Corps of Engineers' jurisdictional determination finds that there "may be" waters of the United States on the subject project site. DEP considers these wetlands as Exceptional Value since the East Branch of Saucon Creek has wild trout as per Pennsylvania Fish & Boat Commission. As per Chapter 105, Section 105.17(1)(iii),

wetlands that are hydraulically connected to a stream that is a tributary to a stream that supports wild trout are considered Exceptional Value.

DEP's Waterways and Wetlands program has reviewed IESI's response to the first EA review letter and determined IESI has not fully addressed the reduction in size of the wetlands. IESI's response states, "As discussed in the letter from Roemer Ecological Services, the reduced size of the wetlands area is believed to relate entirely to the intervening installation of a public storage structure and the grading work done on that parcel and to the stream channel associated therewith." This response appears to identify the development of the public storage structures as the cause for the disparity in the two delineations; however, the response lacks detail into the areal impact and reduction of wetland resources. IESI needs to provide a comparison of the two delineations (in plan view) to show how the wetlands may be impacted by the public storage structures or other factors. Furthermore, any activities from 1991 through 2014 that have impacted the wetlands which may have contributed to a loss of the wetlands should also be further detailed in this analysis.

4. **Form D, Section J – Traffic:** IESI provided a traffic study and concluded that the proposed expansion will not increase vehicular trips; although there will be deficiencies in the design year 2025, these deficiencies are not due to the expansion of the landfill; rather, they are the result of the substantial nearby developments that are under construction. IESI should provide more detailed information on the trucks that will be hauling cover soil and construction materials to the site for the Southeastern Realignment project.

IESI response: A letter dated August 18, 2015 from Pennoni Associates projects 50 trucks will deliver cover soil an average of 6 days per month. Given the number of vehicles and duration of the deliveries of soils each month, coupled with the delayed timing and corresponding reduced traffic impacts associated with the Majestic and LVIP VII Developments, the additional soil trucks associated with the Southeastern Realignment project are not expected to impact the traffic route and study intersections.

DEP review: Pennoni Associates states that they are waiting for additional information on the Majestic Development schedule. It is not clear whether or not there is more traffic information to be evaluated. It is not appropriate to average out the 50 trucks received 6 days a month to 13 trucks a day as that is not how they arrive. IESI should describe how 50 trucks on the 6 days they are received will impact traffic.

5. **Form D, Section M – Air Quality Impact:**

Question 2 and 3: IESI did not describe the potential impacts from odors and dust. IESI should further evaluate the potential impacts from odors and dust. IESI does not describe any odor or dust control measures.

IESI response: The potential for odors and dust are discussed in Form G(A) of the application, and the Southeastern Realignment Plan Approval Application submitted to DEP's Bureau of Air Quality on July 8, 2015. The plan approval sets forth various

measures, subject to review and approval by DEP's Air Quality Group, to prevent, reduce and control emissions to the maximum degree possible. The terms and conditions of the plan approval will be binding on IESI, and will be incorporated into the site's Title V operating Permit No. 48-00037.

DEP review: The mitigation measures should be included as part of the response to this section. The application should be a standalone document and not reference other applications or approvals.

HARMS/BENEFITS REVIEW COMMENTS

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

Harms

1. **Truck Safety and Traffic Impacts: (SE)** IESI has identified truck safety and traffic impacts as a potential harm.

Proposed Mitigation: IESI evaluated current and projected traffic volumes and potential impacts pursuant to PennDOT's regulations and guidance. Based on this evaluation, IESI has concluded that there are no adverse traffic impacts associated with the proposed project. IESI has implemented a variety of measures to minimize and mitigate known and potential harms related to truck safety, vehicle related nuisances and traffic impacts. These mitigation measures are outlined in the Transportation Compliance Plan (TCP) and/or Nuisance Minimization and Control Plan (NMCP).

DEP Review: Proper implementation of the TCP and NMCP could mitigate these potential harms. IESI should provide more detailed information on the trucks that will be hauling cover soil and construction materials to the site for the Southeastern Realignment project and provide an evaluation of the effectiveness of the TCP and NMCP in relation to truck safety and traffic impacts.

IESI response: A letter dated August 18, 2015 from Pennoni Associates provides more detailed information on the trucks that will be hauling cover soil and construction materials to the site for the Southeastern Realignment project.

DEP 2nd review: Pennoni Associates states that they are waiting for additional information on the Majestic Development schedule. It is not clear whether or not there is more traffic information to be evaluated. It is not appropriate to average out the 50 trucks received 6 days a month to 13 trucks a day as that is not how they arrive. IESI should describe how 50 trucks on the 6 days they are received will impact traffic. IESI should describe how they ensure that these trucks do not arrive overweight.

2. **Nuisances – Leachate: (E)** The generation of leachate and the potential for groundwater contamination is a known potential harm of a landfill operation. Public comment indicates additional leachate generation in unlined areas of the landfill during exposure of old waste and for additional leachate flow in the detection zone of the Phase III area is also a concern.

Proposed Mitigation: IESI undertakes numerous measures to minimize and control potential nuisances associated with the operation of a solid waste disposal facility. These mitigation measures include: use of a liner system, leachate management system, groundwater monitoring system and groundwater abatement system.

DEP Review: Leachate generation is a known harm of landfill operations. IESI should propose additional mitigation to address the potential for additional leachate generation in the unlined areas of the landfill during exposure of old waste and for additional leachate flow in the detection zone of the Phase III area.

IESI response: Aside from the installation of the horizontal collectors or headers in the Old Landfill Areas, the intermediate cover beneath the Old Cap will remain in place; thus old waste will not be exposed. IESI does not expect additional leachate generation during exposure of old waste as the approved procedures for removing the old cap limit the potential for exposure during rain events. In the event that rainfall enters the work area during installation of the "piggyback" liner system, the Southeastern Realignment design maintains and preserves the existing leachate collection system in the older landfill areas. The groundwater abatement system south of the southeastern realignment area (as well as the Phase III and IV areas) will also continue to capture groundwater flowing from beneath the site, including any additional leachate which may result from said construction activity. For the same reasons discussed above, IESI does not expect additional flow in the detection zone of the Phase III area. Flow in this detection zone has been investigated and evaluated in previous reports and re-reviewed recently, concluding with the determination that IESI is continuing to manage current flows in accordance with DEP Regulations.

DEP 2nd review: DEP is aware that IESI is conducting further evaluation regarding leachate flow in the detection zone. DEP believes this information may be useful in addressing this potential harm.

3. **Air Contaminants and Odors Generated during Exposure of Old Waste: (E)** Public comment indicates there is a concern that the potential for off-site air contaminants and odors will increase as a result of IESI's proposal to remove approximately 26 acres of cap from previously closed areas of the landfill thereby exposing old waste to the atmosphere.

Proposed mitigation: IESI has not identified this as a potential harm or proposed mitigation measures.

DEP review: DEP has evaluated this harm and agrees there is an increased potential for generating odors during the removal of cap from closed areas of the landfill. IESI has measures in place to minimize and control odors from the landfill; however, IESI should provide detailed information on what additional measures will be undertaken if off-site air contaminants and odors become an issue during cap removal.

IESI response: The cap removal procedures that were approved in the minor modification dated July 17, 2013 will remain in place. Aside from installation of

horizontal collectors or headers in the old landfill areas, the old waste will not be exposed. If odors are detected, the waste surface will be sprayed with an odor reactant chemical and/or covered with a spray-on alternate daily cover material such as Posi-Shell to control gas emissions. The materials and equipment required for either of these techniques will be positioned near the active work area so that they can be deployed rapidly.

DEP 2nd review: The July 17, 2013 permit modification was for removal of ½ acre of cap, this proposal is for 26 acres. Cap removal procedures specific to the proposed project should be included in this application.

4. **Visual Impacts: (SE)** Public comments indicate visibility of the landfill from the Delaware and Lehigh Canal Towpath, homes and the park in Steel City is a concern.

Proposed mitigation: IESI has not identified this as a potential harm or proposed mitigation measures.

DEP review: DEP has evaluated this harm and agrees that there is a potential for visual impact with the increase in landfill height. IESI should define this potential harm and propose appropriate mitigation measures.

IESI response: IESI has performed an updated and expanded visual impact analysis in connection with the proposed southeastern realignment application.

DEP 2nd review: It appears from IESI's visual analysis that the proposed expansion will have a visual impact on homes and traffic in the immediate vicinity of the landfill. Therefore mitigation measures are required.

Benefits

1. **Local Benefits Attributable to Payroll Payments: (SE)** IESI has identified that the project will result in direct employment for a number of area residents and indirect employment through locally purchased supplies and services. The economic benefits attributed to payroll taxes associated with the Southeastern Realignment project is approximately \$715,000 per year, and will contribute over the 5.5 year extended site life.

DEP Review: Indirect employment is not considered a benefit of the project. The continued employment of landfill employees will be considered to be a Social and Economic benefit of the project. IESI should better define and quantify this benefit.

IESI response: IESI contends that indirect employment is a properly quantified and generally accepted economic concept and as such remains a benefit of the project.

DEP 2nd review: In its first review, DEP was looking for the direct employment benefit to be better defined. In order to consider direct employment as a benefit, the description must be concrete and particularized. Unless IESI can define the direct employment benefit specifically, DEP will not consider this as a benefit. Unless IESI can show that

without the expansion, there will be indirectly employed individuals that will be unemployed; DEP cannot consider this as a benefit.

2. **Maximizing Use of Current Disposal Area: (E)** IESI has identified, as an Environmental benefit, the extended operating life of an existing, permitted municipal waste landfill, allowing for continued provision of all of the environmental services which the site provides by maximizing use of the current disposal area without the need to create or improve existing public and private infrastructure.

DEP Review: Maximizing the disposal capacity within the currently permitted area is not a benefit. It is an action that avoids or minimizes the extent of the environmental and social and economic harms. 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.

IESI response: IESI disagrees with DEP's position, and contends that maximizing the use of the existing landfill area is not an activity or mechanism to reduce or prevent harm, but a beneficial and environmentally conservative approach to utilizing air space above the permitted contours of the existing landfill, while avoiding the use of virgin natural resources or constructing new infrastructure to accommodate the waste disposal needs of the community and region.

DEP 2nd review: IESI would have to definitively show that without the expansion, that there would have to be a new landfill constructed using virgin natural resources to accommodate the disposal needs of the community or region.

3. **Beneficial Use of Landfill Gas: (E)** IESI has identified, as an Environmental benefit, that they provide landfill gas to a third party for generation of electricity for public consumption.

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 Southeastern Realignment project.

IESI response: IESI disagrees with DEP's position. The assertion in the guidance document that generation of electricity from landfill gas is simply mitigation of a harm is based on a determination by a former DEP secretary and is unsupported on the facts, has no basis in law and is contrary to the case law cited by DEP.

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

4. **Contributions: (SE)** IESI has identified, as a Social and Economic benefit that they support many community activities in a variety of ways, including through direct financial support to civic clubs, libraries, and other local institutions. The landfill also

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donates to a variety of local charities and supports their fund raising events, such as the local Fire Department, American Cancer Society fund drive, and Community Earth Day events. In addition, the facility provides ten (10) \$1,000 environmental scholarships each year to students from area high schools towards their college education.

DEP Review: Charitable contributions and scholarships are not considered to be benefits of the Southeastern Realignment project. [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)]

IESI response: IESI contends that the referenced cases are distinguishable as the charitable contributions and scholarships proposed by IESI in connection with the application and contingent upon approval of the proposed southeastern realignment project and rely upon the revenue from the proposed project to fund the continuation of these benefits.

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

The Department is requesting IESI to provide a revised application within 90 days. IESI 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
Environmental Program Manager
Waste Management Program

cc: Martin and Martin, Incorporated
Lehigh Valley Planning Commission
Northampton County Council
Lower Saucon Township
Senator Lisa M. Boscola
Representative Robert L. Freeman
Representative Justin J. Simmons