LETTER OF TRANSMITTAL

Lower Saucon Township
3700 Old Philadelphia Pike
Bethlehem, PA 18015
610-865-3291
610-867-3580 fax
www.lowersaucontownship.org

Date: **January 14, 2016**

Re: **IESI Bethlehem Landfill**

FROM OFFICE OF:

- ☒ Manager
- ☐ Zoning
- ☐ Finance
- ☐ Public Works
- ☐ Other

TO OFFICE OF:

- ☒ Hanover Eng.
- ☒ Treadwell Law Office
- ☒ Boucher & James
- ☐ Manager
- ☒ Zoning
- ☐ Police Dept.
- ☐ Public Works
- ☐ Finance
- ☒ Tri-C
- ☐ LS Authority
- ☒ Landfill Cte.
- ☒ Other Rich Sichler, Chot Elliott

Attention: _____

REMARKS

Attached please find a copy of IESI's response comments to the Township's Technical Consultant Committee 12/14/15 Review regarding the Southeastern Realignment appliation.

INSTRUCTIONS:

- ☐ For approval
- ☐ For your use
- ☐ Other
- ☐ As requested
- ☒ Review & comment
- ☐ For your file
- ☐ Attachments

Leslie

cc: Council w/o attachment

martin and martin, incorporated

37 south main street • suite A • chambersburg, pennsylvania • 17201-2251

(717) 264-6759
(717) 264-7339 (fax)
www.martinandmartininc.com

January 11, 2016

Ms. Leslie Huhn, Acting Township Manager
Lower Saucon Township
3700 Old Philadelphia Pike
Bethlehem, PA 18015

RE: IESI Bethlehem Landfill
Southeastern Realignment
Technical Consultant Committee
Response to 12/14/15 Review
Our file: b/1162.3/SE/RLHanover121415

Dear Ms. Huhn:

We are in receipt of the December 14, 2015 review letter issued by Hanover Engineering Associates, Inc. on behalf of the Technical Consultant Committee with regard to the above-referenced project. Following are IESI's responses to each of the comments raised in the letter, highlighted in **BOLD** for ease of reference.

III. TECHNICAL CONSULTANT COMMITTEE REVIEW COMMENTS

A. GENERAL COMMENTS

1. Numerous citizen complaints of landfill odor have been received in the last two years.

   Refer to response C.1.a. Item 1 below.

2. The Bethlehem Renewable Energy Plant has been built. This facility uses landfill gas to generate electricity.

   Acknowledged. The Southeastern Realignment Project proposes no changes to the Bethlehem Renewable Energy Plant.

3. Leachate flows in one section of the leachate detection system is a concern, in terms of both quantity and quality.

   Refer to response C.1.a. Item 1 below.

4. The truck delivery of offsite soils was not proposed in traffic studies for the last Special Exception and major permit modification. The applicant is now committing to the use of offsite soils for the construction and capping of this expansion. This raises issues regarding the trucks that will be used to haul soils to the site, including: the number of trucks involved; the traffic routes they will be allowed to take; whether they will be required to go through the truck wash, etc.

   All traffic will be required to follow the same route as do the waste delivery vehicles; PA-412 to Shimersville Road to Applebutter Road. The traffic to the landfill, including the waste delivery, cover soil, and construction materials vehicles, will remain the same as has been on the traffic route over the past few years. Nevertheless, Pennoni Associates has reevaluated the traffic route as requested. (See Attachment A) Attachment A shall be provided to the Township to be added to Section 3 of the Land Development Plan Supporting Documents Binder as supplemental information.

5. The applicant is proposing to work on unlined sections of the original landfill. The applicant will be removing some of the existing Final Cover Soil and will be trenching through the existing Membrane Cap on a portion of the landfill that is closed. During this operation the limited exposure of old solid waste may result in the generation of leachate during precipitation. These areas were used as for solid waste disposal before liners and leachate collections system were required.

   As has been previously noted, there is no activity proposed in this Modification that has not already been approved by PA DEP and implemented by the Landfill. There is no proposal to trench through the existing membrane cap; membrane cap will be removed in areas of Phases I & II, leaving intact the underlying soil cover. The limited trenching through that soil cover into the old waste mass to install landfill gas transmission lines will be undertaken according to previously approved procedures as outlined in the NMCP and Cap Removal Procedure plans. All elements of the existing leachate management, including those in and adjacent to the Phase I & Phase II old waste areas, will remain in place and functional per this Application. We do not believe that there will be any accelerated leachate generation associated with this project.

6. The applicant is proposing major area where they will be placing waste over existing waste.

   As outlined within the project narrative the area of piggyback liner system over previously approved disposal areas is 22.5 acres of the +/-120 acre

existing permitted area of disposal. Placement of waste atop existing waste at the IESI Bethlehem Landfill was first completed as part of the Phase III expansion in the early 1990's. The proposed project is a continuation of this effort.

7. The elevation of the proposed landfill cap is higher than currently approved and this higher elevation is proposed to extend over a large section of the property.

   The Southeastern Realignment proposes to restore the peak elevation previously approved in 2003 as part of the Phase IV expansion while limiting peaks to this same previously approved elevation (725') within the piggyback area of the Southeastern Realignment.

B. SPECIFIC REVIEW COMMENTS FOR THE SPECIAL EXCEPTION APPLICATION

Attachment 1
Preliminary/Final Land Development Plan and Site Plan and Revised October 2015

Sheet 4 of 17 shows Existing Conditions but the southeastern area labelled as "Soil Stockpile Area" is not labeled accurately. This is the general area that was labelled "Potential Soil Stockpile Area" on previously approved plans, but we do not believe it was ever used.

The soil stockpile area as depicted on Plan Sheet 5 of 18 has not been developed to date as per the approved plans. Similarly, the elevations and contouring depicted on Sheet 5 of 18 represent current approved conditions. Thus, the "soil stockpile area", being an approved location, has been depicted on the plans as such. For clarity we have relabeled the soil stockpile as "Approved Soil Stockpile" as provided on the revised Land Development and Site Plans submitted to the Township on January 4, 2016.

Sheet 13 of 17 provides a "Landfill Time Line" it would be important for the applicant to provide information about the number of months scheduled between the end of the completion of filling of a cell and the installation of the final cap and resurface restoration. (See comments below regarding Closure).

Plan Sheet 14 of 18 has been revised to include a more detailed timeline between the completion of cell filling and installation of temporary and final cap systems as noted on the chart provided on Plan Sheet 14 of 18 in the revised Land Development and Site Plans submitted to the Township on January 4, 2016.

The main perimeter access road is shown in many areas to be constructed over top of the waste pack containing the Final Cap and Gas Collection System. This poses concerns including: (1) the ability the access road to distribute the truck loads in a manner that will achieve an acceptable weigh distribution into the waste pack; (2) differential settlement of the waste below the road creating potential for access road

failure and potential damage to the underlying cap system; (3) the sequencing of construction of the road as it relates to filling and Final Cap construction along these sections.

The access road currently serving IESI Bethlehem Landfill is constructed atop waste which has been capped and contains active gas collection systems. Upon development of the Southeastern Realignment, this situation will remain (road atop waste). In order to address any concerns with regard to loading, settlement and sequencing we offer the following:

1. **For stability and distribution of loading, additional subbase material totaling 18 inches in depth shall be utilized for roadway construction atop waste as detailed on Plan Sheet 14 of 18 of the revised Land Development Plans submitted on January 4, 2016 to the Township. Additionally, bi-axial geogrid as well as geotextile, shall be provided to provide structural support.**

2. **As noted above, the additional subbase along with geogrid will provide for the structural stability necessary to bridge any differential settlement. Additionally, the construction of the roadway would be staged to allow for an aggregate roadway when initial settlement of waste will occur. Prior to closure the access road would be paved as necessary in accordance with the detail provided on Plan Sheet 14 of 18 of the revised Land Development Plans submitted on January 4, 2016 to the Township.**

3. **Sequencing of the roadway construction and capping is provided on Plan Sheet 15 of 18 of the revised Land Development Plans submitted on January 4, 2016 to the Township.**

The road profiles shown on Sheet 13 of 17 indicate a road construction depth of at least 12 inches into the final two feet of cap soil cover material. Applicant should demonstrate how the road material meets the criteria of the required Final Cover and criteria for access and haul roads which are required to bear fully loaded truck weight without damage to the cap.

The Plans, Profile and Details associated with the access road have been revised to depict and propose the roadway section (subbase to final paving) to lie above the final cap system including the two feet of cap soil cover material. These details are provided on Plan Sheet 14 of 18 of the revised Land Development and Site Plans submitted on January 4, 2016.

Attachment 3
Narrative (November 2015 Section 2)

This narrative describes some of the relief the applicant is requesting from zoning ordinance provisions, but this may not be a complete list of the relief items that may be needed. A full review of the Zoning Ordinance and Subdivision and Land

Development Ordinance provisions is being conducted by the Township Planner and Engineer and it is recommended that the Zoning Hearing Board be provided with their comments.

The latest comments received associated with the review of the Land Development Plan and Site Plan were issued on December 15, 2015. Responses to each comment are provided in a response letter provided under separate cover dated January 4, 2016.

Additional the Township and IESI have entered into many agreements over the years. Provisions of these agreements should be reviewed for any impacts they may have on the current application. Specifically, IESI should describe how their proposal will comply with the restrictions in Section 3 of the Township-IESI agreement dated August 31, 2014.

See attached drawing dated 12-2015 entitled "Affirmative Covenant Area", which depicts the scope of the referenced restriction in the 2005 First Modification to Land Development Agreement associated with the relocation of the Maintenance Building, consistent with discussions with the Township Solicitor, as well as Township Council's motion of 12/12/15 regarding the same. (Attachment B)

Attachment 6
Environmental Protection Analysis

The Site Capacity Calculations are to be reviewed by the Township Planning Consultant.

Many other issues related to the protection of the environment are described in the IESI application to the PADEP for this proposed Major Permit Modification. Some of the comments from the Technical Consultant Committee on these other issues are included in this letter under the heading entitled: "C. - Other General Comments and Questions Regarding the Submitted Application"

No Response/no revision required.

Attachment 7
Traffic Impact Analysis (November 2015 Section 3)

The applicant reports that there will be an increase in the number of trucks as compared to prior approved conditions. This report was prepared by Pennoni Associates, dated August 18, 2015, and describes that during about 6 days per month an additional 50 trucks per day would be added to the normal truck traffic of approximately 172 trucks entering and leaving the site, (Approximately 30 %). It is reported that all trucks will access and leave the site by way of Applebutter Road west of the site.

The accident history, road and shoulder condition and safety signage along Applebutter Road from the site to Shimersville Road should be reviewed to determine the roads ability to carry this increased traffic. This is a PennDOT road and a large portion of the road is located in the City of Bethlehem.

Although a Solid Waste Disposal Traffic Control Plan is in place and implemented, it has been effective in making a reduction in overweight vehicles entering the site but has not eliminated them. IESI should consider additional controls to eliminate overweight vehicles.

See above response to comment III A 4.

Attachment 8
Neighborhood Protection Analysis

Subsection E of this attachment, entitled "Smoke, dust, etc." and Subsection J entitled "Other" refer to Neighborhood Protection issues that are also evaluated during the application being submitted to the PADEP for this expansion. Some of the Air Quality and PADEP Form D comments that the TCC has prepared for the Township's review of the application submitted to the PADEP include the following:

Air Quality Impact (PADEP Application Attachment 13)

This section of the report indicates that IESI will be amending their EPA air emission, Title V, operation permit. This section also indicates that IESI has submitted a request for "Air Plan approval."

This section includes the opinion of the consultant for IESI that "no adverse air impacts to the surrounding community are anticipated."

The fugitive dust emission estimates from vehicles do not appear to include all the trucks required to deliver daily, intermediate and final cover soil, sub-base and protective cover materials based on the capacity and number of trucks listed versus quantities of materials needed as presented in the various narratives, plan sheets and closure plan documents. The emissions estimate also accounts for only one bulldozer daily and no other earth moving equipment during this 5.5 year extensive operating/new construction/closure operation. Earth moving equipment has the highest dust emission factor of any of the other activities. As noted elsewhere in these comments, significantly more truck traffic will contribute to fugitive dust emissions, noise, and traffic increases, which have not been identified as harms or proposed to be mitigated.

The operations plan should identify more frequent SEM readings than required by PADEP. Trigger readings and immediate odor elimination requirements should be developed, to mitigate existing harms and future harms. The readings should be

documented and open for inspection by both the PA DEP and the Host Municipal Inspector. Requiring the continual on-site monitoring of emissions will also quickly identify the source area, and ensure that the problem is immediately corrected, instead of relying on continuous odor complaints and once-per-quarter surface emission monitoring.

Prevention of additional sources of air contaminants and odors released by (1) excavation into that old fill for gas system installation; and (2) re-excavation of over 315,000 cubic yards of waste relocated from Cell 4E should be addressed.

Accounting for all truck traffic and earth moving equipment during the life of the Southeastern Realignment Project, the tonnages of dust emissions from the site are below any thresholds that would impact air permitting. Form G(A) has been updated to include all dust related activities (See Attachment C)

Attachment 9
PADEP Major Permit Modification for the Southeast Realignment Form I (November 2015)

The Attachment describes the stormwater and soil erosion protections and facilities to be provided by IESI. A review of these documents is being provided by the Township Engineer, the LVPC and the PADEP, as part of the Land Development Plan reviews and the PADEP permitting process.

The TCC intends, however, to provide applicable review comments on these plans after the PADEP notifies the Township that the IESI Application is proceeding to the "Technical Review Phase". The PADEP is not yet reviewing these plans as the contents of the plans may change based upon the recent PADEP Environmental Assessment review. Any action on the Special Exception Application should be conditioned on the future review and adequacy of the controls proposed as reviewed and approved by the PADEP.

Acknowledged. The Form I which contains the Erosion and Sediment Control Plan as well as the Post Construction Stormwater Management Plan have been reviewed by Township Consultants as part of the Land Development Plan submission.

Attachment 12
Preparedness, Prevention and Contingency Plan (November, 2015 Section 6)

The PPC Plan included is for current activities, not proposed activities, and is outdated for current activities. The listed District Manager and Primary Emergency Coordinator responsible for plan implementation is no longer employed (Sam Donato). There are also references to "Landfill Manager" responsibilities, with no name identified.

The PPC Plan has been updated to list the current District Manager, Primary Emergency Coordinator and Landfill Manager. (See Attachment D) Attachment D shall be provided to the Township to replace previously submitted Section 6 of the Land Development Supporting Documents Binder.

The Special Exception Application should include a PPC Plan developed for the current and proposed operations. This would involve updating the PPC Plan Attachment #4 to include all listed controls related to cap removal activities, and include the new evacuation routes for the new proposed interior road locations.

Attachment #4 has been updated to address cap removal activities as well as excavation routes for new road locations. (See Attachment D) Attachment D shall be provided to the Township to replace previously submitted Section 6 of the Land Development Supporting Documents Binder.

The Procedures in Attachment #4 of the PPC Plan describe the controls IESI proposes to use during waste relocation, including controls for litter, dust, odor, noise, leachate and storm water impacts. Additional controls to prevent rainfall from infiltrating onto unlined refuse areas during the trenching operations should be included.

Waste relocation controls within Attachment #4 of the PPC Plan have been updated to prevent to the extent feasible the amount of rainfall infiltration in unlined areas. (See Attachment D) Attachment D shall be provided to the Township to replace previously submitted Section 6 of the Land Development Supporting Documents Binder.

There are important environmental and neighborhood protection measures in Attachment #4 of the PPC Plan that are not identified in the Form D PADEP major permit modification application as referenced in the Special Exception Application, (Attachment 8), Neighborhood Protection Analysis, narrative and Item J. The Neighborhood Protection Analysis should include an additional Item K on page 4, referencing the environmental and neighborhood protection procedures of an expanded Attachment #4 in PPC Plan. The updated procedures should also be incorporated into the PADEP permit application, as the effectiveness of environmental and neighborhood protection measures are dependent on these procedures being followed.

Also the following comments are noted:

Page 2 states that there is "an adequate quantity of onsite cover material". This is not accurate.
Page 7 and 10 the new management team should be listed.
Page 23 IESI should also list St. Lukes Hospital at Rt 33 and Freeemansburg Ave. if they accept emergency patients.
Page 25 IESI should provide more information on how storm water runoff damage onto to Riverside Drive and Applebutter Road can be minimized and if

mud or rocks are carried onto these roads, what emergency responses will be provided.
Page 27 any new revision should be listed.

Attachment 2-Evacuation Routes will need to be revised as work proceeds.
Page WRP-1 and page WRP-5 of this section describes what IESI intends to do if they find that Waste Relocation releases an odor. It would be helpful to know what experience other landfill operators have had with odor generation during Waste Relocation work.

Above outlined requested revisions have been made to the PPC Plan. (See Attachment D) Attachment D shall be provided to the Township to replace previously submitted Section 6 of the Land Development Supporting Documents Binder.

Attachment 13
PA Solid Waste Permit No. 100020

A height restriction is imposed by Section 20 of the PADEP Permit for Phase IV dated April 17, 2003 stating "IESI PA Bethlehem Landfill shall limit the height of Phase IV so that it is not visible by persons walking along any section of the Delaware and Lehigh Canal Towpath. This limitation shall only apply to Phase IV and if Phase IV becomes visible, the height of the Phase IV closure shall be limited to that elevation observed."

IESI acknowledges said height restriction imposed by Section 20 of the PaDEP Permit for Phase IV. Said restriction regarding "visibility" is only to the extent that the height of the Phase IV Expansion waste mound projects above the existing 50'-60' tall tree line of the forested ridge, and does not include any view through the trees during winter months or periods of diminished foliage. Supplemental information as provided to the Township, including line of sight plans as well as photographs, document no visibility of the proposed height from the towpath per said Permit condition.

Attachment 14
Erosion and Sedimentation Control Plans

These plans are to be reviewed by the PADEP.

Acknowledged.

Attachment 15
Landfill Closure Plan (November 2015 various documents)

The Life Expectancy and Sequence of Operations table in the Section 2 "Project Narrative" and the capping sequence shown on the plan sheet 15 of 17 do not include

a timeline of capping for each step. The number of acres capped over existing capped areas, as well as those acres of cap removed should be identified on a timeline, so that each season the number of acres capped increases as filling progresses.

Reference is also made to The Land Development and Grading Plans (sheets 8, 9, 10 and 13). There is no identification as to when the various cells will be capped, or when each Step of capping will be completed. The only significant increase in capped area over existing conditions appears to occur at the end of Step 6 of 7 capping steps. Existing capped areas are shown as 92.3 acres with an additional capped area after step 6 of 118.8 acres. The capped areas are interpreted to be final capped, not temporary caps. The Applicant should confirm that all capped areas shown are final caps. The Applicant should provide a defined cap completion schedule for each Step 1 through 7, and add the final capping schedule to the Cell Development Schedule on Sheet 13 of 17. Waiting until the final year or two to complete capping Steps 1 through 7 would allow a continued risk of a release of landfill gas thru the Intermediate Cover. It is recommended that capping be installed on a semi-annual or annual schedule on whichever cell or step is completed in that year on the schedule. According to the sequence shown this would result in capping an additional 6 to 17 acres per year over the five year life of the facility.

Impacts on the neighborhood could be reduced by filling and closing cells on a continuous basis and filling and closing cells from west to east or from east to west--- so that larger areas could be finished and closed permanently.
The Section 7- Reclamation Plan appears to be the Phase IV Closure Plan Attachment 28-1 from a previous PADEP permit Application. It does not reflect closure of the proposed Southeastern Realignment Expansion. The Closure Plan should be updated to include all activities and areas of the new proposed expansion.

Plan Sheets 16 and 17 of 18 within the revised Land Development Plan set submitted to the Township on January 4, 2016 have been revised to depict "Temporary Cap", "Existing Cap" and "New Cap". All capping not listed as temporary is permanent cap. As shown within Steps 1 to 7 capping either temporary or permanent extends from west to east. Additionally, Plan Sheet 14 of 18 has been revised to include an updated Landfill Timeline Chart to include capping within the construction line of the Figure as noted.

C. OTHER GENERAL COMMENTS REGARDING THE SUBMITTED APPLICATION

During the review of the Form D and this first Environmental Assessment Process (EAP), as submitted to the PADEP by IESI on January 19, 2015, the following comments were developed. These comments do not constitute a full review of any of the technical aspects of this submission but are provided in a way of preliminary comments. These comments have been incorporated into this letter because a portion of the concerns raised in these comments may fall under the jurisdiction of the Special Exception review of the Zoning Hearing Board. As mentioned earlier, these are not verbatim copies of earlier comments. They have been modified to take into

account the information that IESI has provided in this Special Exception application since some of that new information has addressed earlier comments the TCC provided for the PADEP Phase 1 application.

1. *GIF (General Information Form):*

   a. *Samuel Donato - under client and site information. Mr. Donato is no longer employed by IESI to the Township's knowledge. The application and any future application supplements should be certified by the appropriate official, and new certification forms provided if Mr. Donato is no longer the IESI authorized contact, spokesperson or responsible official for this application, future application supplements, or for the proposed construction and performance of the design as submitted.*

   The application was properly certified by Sam Donato, who was the responsible official at the time of application. Future submissions will be certified by the current responsible official, on behalf of the company, IESI PA Bethlehem Landfill Corporation, a subsidiary of Progressive Waste Solutions LTD. PaDEP has been informed of all relevant changes to facility personnel, and an application update is not required.

   Item 1. Existing known environmental harms associated with landfill gas emissions have not been fully mitigated. Offsite odors continue to be a reported problem and concern. Documentation exists as to the numerous odor complaints received by IESI, the Township and PA DEP. The citing of excess methane emission readings by both IESI and PA DEP, and tracked by the Township since 2010 identify methane readings above regulatory limits in every Surface Emission Monitoring (SEM) event. PA DEP attributes these exceedances to lack of adequate cover (either in spot locations or area-wide) during current operations, and IESI then addresses the problem as required by the PA DEP. Lack of adequate cover in many areas of the site was also documented by PA DEP in a site inspection August 27, 2014. Although the documentation confirms known harms of odor and air emissions attributed to inadequate cover practices, IESI has not been issued any substantive penalty, and the issue is temporarily mitigated.. The monitoring of emissions on only a quarterly basis by IESI and about twice per year by PA DEP, does not determine if exceedances across the site are continuing between those testing periods. The odor and gas exceedance problems are considered known harms with a long duration of recorded occurrence, a high frequency documented by numerous parties and a high intensity as also reported and documented. Recently IESI has started to more aggressively control the escape of landfill gases and odor. They have received PADEP approval for the installation of an impervious temporary cap to supplement the intermediate soil cover.

   IESI currently implements air quality measures pursuant to applicable approvals, and as noted, implements corrective measures pursuant

thereto and consistent with PaDEP requirements. In addition, IESI implements the approved nuisance minimization and control plan and operational measures to reduce the potential for all nuisances, including odors. IESI has recently received approval to utilize two temporary cap options to better control gas and potential odors in portions of current and future temporarily inactive disposal areas. Further, as discussed above, specific measures are proposed to address the control of gas and the potential for odors related to the proposed cap removal and lining of the overlay area associated with the Southeastern Realignment project. Any remaining potential harms associated with odors and landfill gas, after taking into account the various control and mitigation measures are therefore adequately and appropriately described in the application for evaluation during the harms and benefits analysis.

The comment is incorrect in several aspects as it relates to surface emission monitoring. During the initial quarterly scan, any readings above the 500 ppm methane level result in corrective action by facility personnel—verified as permanently effective by additional monitoring performed in 10-day and 30-day intervals from the initial quarterly scan. Any points exceeding the 500 ppm limit are not "temporarily mitigated" nor is pa dep "directing actions" to perform temporary mitigation. They are permanently repaired and verified at least two separate times after repair prior to the next quarter's monitoring event—at which time the repairs are yet again re-verified. Second, as documented in PaDEP's efacts' website, the facility has not been issued even a single violation by the department's bureau of air quality, which is the PaDEP's bureau responsible for enforcing surface emission requirements, for any emission or odor related issue, during the five calendar years 2011-2015. In addition, both federal and state requirements allow three attempts at permanent repair over a 30-day period, and a 180-day period. All 3 of which must fail, before corrective action is required. At IESI Bethlehem landfill, every single monitored point during the last four quarterly events was either in compliance initially, or permanently repaired on the first attempt within 10-days of detection, and verified as corrected during the mandatory 10-day and 30-day follow-up monitoring events.

Another known potential environmental harm that has not been addressed prior to submission of this application, nor mitigated or proposed to be mitigated, is the presence of leachate in the detection zone of one or more Leachate Management Chambers originating from the Phase III lined area. This condition has been a documented concern of the Township since the Township first brought this to light in the year 2000. This potential harm could be associated with some type of breach in the primary liner system. Leachate flow from this one section of the landfill into one of the Leachate Management Chambers has increased in frequency (the flow is continuous), has been occurring since 2000, and has been exceeding the flow rate of 100

gallons per acre per day established by PADEP for triggering additional actions. PADEP is aware of this condition but has not yet required additional remedial action. The application calls for more waste placed in this currently closed and capped area of the landfill. The potential harm of additional leachate generated by these new Phase III activities and may result in even more leachate not being captured by the primary collection system has not been addressed.

The following represents a summary of the key conclusions regarding the dz-6, dz-7, and dz-8 (Phase III area) detection zone flows (dz) that have been investigated and evaluated in previous reports and re-reviewed recently .(1)

1. **The flows in dz-6 and dz-7 have been well below 100 g/ac/d for approximately 6 years as a result of the capping and other measures performed in 2008 and 2009. PaDEP requires an investigation when flows exceed 100 g/ac/d.**

2. **The increased pumping from the abatement wells beginning in 2006 has created a more effective groundwater trough downgradient of the Phase III area.**

3. **Water samples from the monitoring wells downgradient of the abatement well groundwater trough confirms compliance with municipal waste landfill groundwater abatement standards.**

4. **After the improvements to the toe drain in the area of dz-8 were completed on April 4, 2010 and May 8, 2011, the flow rates in dz-8 were reduced, which resulted in a proportional increase in the concentration of total dissolved solids in dz-8.**

5. **The elevated flow rates in dz-8 are from stormwater, not from leachate in the overlying lc-8 system.**

6. **There is no indication that the water quality in the wells downgradient of dz-8 has been adversely impacted by the flow in dz-8.**

7. **Bethlehem Landfill is continuing to manage dz flows in accordance with PaDEP regulations.**

8. **We also reference the 10/3/12 LST/DEP meeting at which DEP stated that the flow in the landfill's leachate detection zone is not a public health and safety issue, that it is common for municipal waste landfills to have flow in these zones, and that there is "zero risk" associated with this condition.**

b. *Page 7 of 7 – Final certification should be signed by an authorized representative of the applicant. Mr. Donato is no longer employed by IESI Bethlehem Landfill.*

The application was properly certified by Sam Donato, who was the responsible official at the time of application. Future submissions will be certified by the current responsible official, on behalf of the company, IESI PA Bethlehem Landfill Corporation, a subsidiary of Progressive Waste Solutions LTD. PaDEP has been informed of all relevant changes to facility personnel, and an application update is not required.

2. *Form A (Application for Municipal Waste Permit) – We recommend that the public notice be issued to every adjacent property owner. The Affidavit should be signed by a current authorized representative.*

   In compliance with regulatory requirements, the appropriate notification was sent, certified mail, to all adjacent property owners - see Attachment A-2 of Form A of the Southeastern Realignment application.

3. *Form B (Professional Certification) – The soil scientist certification has not been completed.*

   Because of the limited 'virgin' footprint associated with this project, there were no backhoe pits, etc associated with this modification, and all soil is being purchased from offsite sources. As such, IESI contends that the response "n/a" is appropriate for the Form B Soil Scientist entry.

4. *Form C-1 (Compliance History Certification) – The Compliance History Form HW-C of June 10, 2014 (referred to and not included) may name Mr. Samuel Donato within its contents. If that is the case, the HW-C should be updated to identify his replacement.*

   Mr. Donato was the landfill operations manager, and thus was appropriately included within the application documents submitted. Note that Form HW-C (or C-1) is submitted with the annual report for the landfill, and the next such form will name current personnel as required.

5. *Form F (Soil Information) – This section states that soil information is not applicable. If soils are to be imported, it is recommended that detailed soils information be provided.*

   Soils specifications are set forth in the department's Chapter 273 Municipal Solid Waste Regulations at 25 Pa Code §§ 273.232-234, and purchased soils will be required to meet these specifications.

6. *It is recommended that the Lower Saucon Municipal Authority provide review comments on proposed changes to the western edge of the landfill near the tower and waterline.*

   The western edge of the landfill is being returned to the conditions as were approved by the Township and PaDEP with the Phase IV Permit. No changes beyond those previously approved are being proposed.

7. *Emergency Response – It is recommended that IESI verify that the City of Bethlehem Fire Department will remain available to fight fires at the landfill. It is recommended that IESI allow access and cooperation with local Emergency and Fire response groups if they request opportunities for training.*

   Bethlehem landfill will verify that the city fire department will remain available, and that emergency training is provided.

8. *Industrial Waste Permitting – It is recommended that IESI verify that they will be able to continue utilizing the City of Bethlehem Waste Water Treatment Plant, and as a backup, the Allentown Waste Water Treatment Plant for Leachate Treatment.*

   IESI Bethlehem landfill will continue to utilize the city of Bethlehem POTW pursuant to the existing arrangements with the city, with Allentown as the back-up treatment facility. This documentation has been previously submitted.

9. *Air Quality Reviews – It is recommended that all Air Quality Permitting (for modifications and extensions of existing permits) be coordinated with the application process for this expansion.*

   The Air Plan Approval documents associated with the Southeastern Realignment project have been submitted to PaDEP and Lower Saucon Township.

12. *Mechanically Stabilized Earth (MSE) – It is recommended that IESI retain a Consulting Engineer to inspect the construction of the wall and provide a certification, upon its completion, that it has been constructed in accordance with certified design plans.*

    Third party inspection and certification by a registered engineer is required for all significant construction activities under the permit, which includes the MSE embankment. In addition to the design plans for the MSE embankment, the Construction Quality Assurance Plan included in Form 24 specifically sets forth the material and placement requirements for the construction and certification thereof.

13. Site Capacity:

It is stated in the application that there is no change to the existing Phase IV Operations Plan. However, changes in operations will include several items which are different than Phase IV. A detailed operations, construction and staging plan to identify the following items and sequence of activities was not provided, including:

- *Stockpiling of soils and construction materials – Soil stockpiling for daily and intermediate cover is indicated on the Erosion and Sedimentation Control Plans in the southeast corner where the new MSE wall is proposed. There are extremely limited remaining areas within the permit boundary that are unfilled. Sufficient non-capped or non-active areas of the site for stockpile of construction materials, including additional sub-base soils, protective layer stone, piping and liner materials area staging should be clearly demonstrated, especially with an aggressive construction, fill, cap and close plan of approximately 6 years total.*

  As indicated in the application, construction and cover soils will be purchased and delivered from approved off-site sources, in the same manner as has been done over the past few years of landfill operation. As has been the practice at the landfill, to the maximum extent practical, materials deliveries are sequenced to minimize on-site storage in favor of direct delivery to the point of use, reducing double handling and attendant fugitive emissions potential. Also, consistent with current and prior site construction practice, when materials need to be staged; this will take place on the existing landfill, again reducing vehicle and fugitive emissions potential.

- *The Phase IV permit does not allow any stockpiling of soils/materials on capped areas due to the potential for cap damage, as demonstrated during that previous permit expansion review. The existing capped areas with the existing gas collection systems that are to remain functional and intact until modified or replaced should be delineated on the site plans and protected from all potentially damaging haul road traffic and staging activities.*

  Consistent with the 2003 permit and as noted on LF-19, no soil is to be stockpiled on the top of capped areas prior to placing sacrificial geotextile or geomembrane atop final cap cover. Final capping is not deemed "final" until any stockpiled materials are removed, and the cap is evaluated for integrity.

- *The process of Final Cover soil removal of existing areas (proposed "piggyback" areas) should identify where and how the removed soil materials*

will be stored, staged, disposed or reused, without affecting existing capped areas.

Cap materials that are removed from existing areas will be discarded as waste into the active landfill area, rather than being staged and reused.

The plans and narratives do not clearly demonstrate the ability for the existing permitted area to support all existing and new activities associated with the expansion without harm to existing on-site systems, nor do they demonstrate how the new harms will be mitigated.

As noted above, the site has been implementing both materials storage/management and avoidance of harms to existing on-site systems for many years in the same manner as will be used during the construction of this phase of the project. These procedures are detailed on drawing LF-19.

OTHER COMMENTS ON ENVIRONMENTAL PROTECTION

4. *Parks (Attachment 4)*

This section describes that the project is located within one (1) mile of the Delaware and Lehigh National Heritage Corridor, a unit of the National Parks System. The report offers the opinion that the Corridor is "not impacted" by the proposed expansion and, further, that the mountain ridge obstructs the view of the Landfill and the proposed expansion from the parks and trails along the Lehigh River Corridor. It is recommended that this statement be verified by way of onsite observations using either a crane and flag or balloon raised to the elevation of the proposed cap at several locations along the cap and that observations be made from various locations along the Delaware and Lehigh National Heritage Corridor. During the review of the 2003 Permit Application, right angle cross-sections were provided to confirm "non-observation" but these cross-sections did not take into account views of the Landfill from angles either east or west of the location of the cross-section.

The proposed final contours of the Southeastern Realignment do not exceed the top elevation (725 feet above sea level) that was approved with the Phase IV permit in 2003. Nonetheless, IESI has performed an updated and expanded visual impact analysis in connection with the proposed Southeastern Realignment application. Specifically, lines of sight projections and photographs have been assembled to evaluate the potential visual impacts of the proposal from locations along the river corridor, from locations with Steel City, from a location in Freemansburg and from Applebutter Road at the east end of the landfill property.

As depicted in materials previously submitted, with excavator booms raised to the 725 and 717 elevations at the proposed high points of the project, the

lines of sight and photographs confirm that the landfill will not be visible from the north, above the existing tree line along the ridge, from these locations.

In summary the TCC provides the following comments:

The Community Impact Study prepared by the applicant and included in the November 2015, Land Development Plan Supporting Documentation notebook as Section 15 has a conclusion, on page 4 that the various studies and analyses provided by the applicant demonstrate that the proposed landfill expansion will ".....result in no negative impacts to the community". The TCC provides the responsive comment that the proposed landfill expansion will result in some negative impacts to the community as outlined in this letter and summarized below.

Refer to responses above associated with specific concerns/comments outlined.

Odors –
Past experience has indicated that landfill operations, especially those involving the exposure and relocation of existing waste have a risk of odor impact on the community. While IESI has recently proposed additional odor minimization and mitigation measures for their current operations (i.e. impervious membrane intermediate cover), the measures utilized since approximately 2012 (thru November 2015) have not been adequate to address the odor complaints from residential neighborhoods. The recently proposed impervious intermediate cover should help reduce landfill gas escape. It is recognized that IESI is proposing some additional specific measures to reduce the risk of odor at the locations of "Waste Relocation" (reference Section 6, the PPC Plan, attachment #4). However, it is recommended that specific information with regard to: (a) odor control during the removal of the intermediate cover in the western section of the landfill and the trenching thru the final membrane cap and work needed to prepare the existing capped area for the "waste on waste" operations, (b) odor control during the waste relocation process, (c) phasing and size of phases and (d) daily intermediate and final cover and capping-- be provided. All such additional information should be provided to the satisfaction of PADEP.

See responses above regarding the PPC Plan, the NMCP, the Cap Removal Procedure, etc.

It is also recommended that IESI provide information to confirm that their proposed expansion complies with applicable PADEP setback requirements from occupied dwellings and/or properties with occupied dwellings.
It is also recommended that IESI define limits on the number of months that they will be scheduling between the placement of the last level of intermediate cover

and the placement of the final membrane cap for each cell or phase and that this schedule be acceptable to PADEP.

The project complies with all applicable DEP setback requirements. As noted above, the scheduling of construction, operations, and capping has been clarified.

Noise – The noise associated with offsite truck traffic and onsite trucks and equipment will create a negative impact on the community. The potential for noise impacts on residents immediately to the southeast of the landfill has been identified in Neighborhood Protection Analysis (Attachment 8 and November 2015 Plan sheet 14 of 17). Although the analysis provided concludes that the noise impact will not exceed Township Regulations (Zoning Ord. 180-96), IESI should provide information to confirm that their proposed expansion complies with applicable PADEP setback requirements from occupied dwellings and/or properties with occupied dwellings. The applicant should identify whether the Permit and HMA limitations on "Hours of Operation" apply to all site activities, including construction and waste relocation operations. (The limit is 6AM to 6PM Monday thru Saturday)

The proposed Southeastern Realignment meets or exceeds the applicable PaDEP setback requirements from occupied dwellings and properties with occupied dwellings.

IESI acknowledges the "Hours of Operations" (6 a.m. to 6 p.m.) shall include waste relocation and construction as outlined in the Host Municipality Agreement and Permit.

Traffic – The increase in truck traffic and the increase in the number of years of truck traffic associated with this landfill will create a negative impact on the community. The hours of operation for construction material and cover soil trucks approaching and leaving the site, and the nuisance of this additional traffic should be identified and IESI should describe any measures they propose to mitigate the nuisance. The road capacity and safety conditions along Applebutter Road up to its intersection with Shimersville Road should be updated to address existing conditions and the proposed additional volume and additional years of heavy traffic. If road capacity and/or safety deficiencies are found IESI should describe any measures they would recommend to mitigate these deficiencies.

See previous responses regarding traffic.

In the event any questions arise concerning this correspondence please do not hesitate to contact this office at your convenience.

Very truly yours,
MARTIN AND MARTIN, INCORPORATED

Richard M. Bodner, P.E.

cc: Allen Schleyer, IESI
Vito Galante, IESI
Land Air Water Legal Solutions LLC
Christopher Della Pietra, Esq.

Attachment "A"

Pennoni Associates
Letter Dated January 11, 2016
Supplementing Traffic Analysis

2041 Avenue C
Suite 100
Bethlehem, PA 18017
T: 610-231-0600
F: 610-231-2033

www.pennoni.com

January 11, 2016

Mr. Rick Bodner, P.E.
Martin & Martin, Inc.
37 S. Main Street
Chambersburg, PA 17201

RE: Traffic Impact Evaluation
IESI Bethlehem Landfill Southeastern Realignment

Dear Rick:

In response to your request related to certain traffic comments received from Lower Saucon Township, the following traffic impact evaluation has been completed to determine if the roadway system surrounding the IESI Bethlehem Landfill is adequate to accommodate the additional truck traffic associated with construction and the importation of soil cover and construction materials over the life of the IESI Bethlehem Landfill Southeastern Realignment. As you have confirmed with representatives of the Bethlehem Landfill, although the Realignment project will not increase the Average or Maximum Permitted Daily Tonnage and as such will not increase vehicular trips associated with waste disposal trucks, additional truck traffic associated with construction and the importation of soil cover and construction materials will generally occur on a daily basis over the life of the IESI Bethlehem Landfill Southeastern Realignment. The additional truck traffic associated with construction and soil cover is assumed to begin in 2018 and continue through 2024 (the project's longevity). Attached please find the projected truck documentation provided by the Bethlehem Landfill which shows the projected quarterly truck volume, as well as the projected average volumes per day and per hour.

Project Description

IESI PA Bethlehem Landfill Corporation proposes to extend the life of the existing IESI Bethlehem Landfill by approximately 5.5 years with the Southeastern Realignment project. The IESI Bethlehem Landfill is situated on a tract of land on the northern side of Applebutter Road (SR 2012), east of Shimersville Road (SR 2014), in Lower Saucon Township, Northampton County. The Southeastern Realignment project will provide additional disposal capacity within the current permit limits. However, it will not increase the Average or Maximum Daily Tonnage (currently 1375 tons and 1800 tons respectively). By maintaining the average and maximum tonnage, the vehicle trips associated with waste disposal trucks to and from the site are expected to remain the same. The landfill is currently open and receives waste from 7 AM to 4 PM weekday, 7 AM to noon Saturday and is closed on Sunday. Construction and operations activities, including the importation of soil cover and construction materials, are permitted to occur between 6:00 am and 6:00 pm daily. Only construction and soil cover trucks will travel to and from the landfill from 4:00 PM to 6:00 PM. Access to the site will be provided via the existing full access driveway on Applebutter Road (SR 2012). No new access locations are proposed. The construction and soil cover trucks will travel the same route as the waste disposal trucks and therefore will not impact adjacent roadways outside the original study area and previously studied intersections.

Background

In 2013, an increase in daily tonnage was investigated at the existing IESI Bethlehem Landfill. A traffic impact study was conducted to determine the impact of an increase of the Maximum Daily Tonnage (2200 tons) in the design year of 2025 (10 years from opening according to Chapter 11 of Publication 46). This equated to an additional 29 trips or 15 vehicles (1 vehicle = 2 trips) projected in the AM peak hour and 17 trips or 9 vehicles projected in the PM peak hour. It is important to note that to be conservative, the number of trucks on the

highest day (maximum daily tonnage) was used in the analysis, not the average daily tonnage. This provided a worst case scenario since on other days the truck volumes would be less.

Manual traffic turning movement counts were conducted in 2011 for the weekday AM and weekday PM peak periods between 7:00 AM and 9:00 AM and between 3:00 PM and 6:00 PM and yielded an AM peak hour beginning at 7:15 AM and a PM peak hour beginning at 5:00 PM at all study intersections, except at the site driveway. At the site driveway on Applebutter Road, the AM peak hour begins at 7:00 AM and the PM peak hour begins at 2:45 PM. Please note that the PM peak hour of the roadway network occurred after the landfill was closed. A growth rate of 1.57% (Growth Factors for September 2012 to July 2013), compounded for 4 years and 14 years was used to calculate future traffic for the opening (2015) and design year (2025). Two other developments, Majestic and LVIP VII, were also included in the analysis. Majestic was anticipated to be at full capacity in 2025 and LVIP VII was anticipated to be at 90% capacity in 2025. If the sites develop at a slower rate than anticipated, there would be additional capacity on the study roadways. Roadway improvements to widen SR 0412 from the I-78 Ramp intersections through the Shimersville Road (SR 2014) intersection have recently been completed by PennDOT.

The results of this study showed that the additional traffic from the previously investigated tonnage increase could be accommodated without intersection level of service drops at each study intersection with the exception of Applebutter Road (SR 2012) and Shimmersville Road (SR 2014) where the overall level of service was projected to drop from a LOS D to a LOS F during the 2025 PM peak hour analysis. It was determined that the only way to mitigate the deficient levels of service would be to signalize this intersection; however, the minor street (Applebutter Road) traffic volumes were too low to satisfy signal warrants for the 2015 or the 2025 analyses. A roundabout was also considered for this intersection however there are constructability issues associated with the geographic constraints of the nearby stream. It is important to note that this LOS drop was almost exclusively attributed to the additional traffic of nearby developments and occurred during the PM peak commuter hour between the hours of 5:00 – 6:00 PM when the landfill is closed to waste disposal trucks.

The total existing AM and PM Peak Hour IESI Bethlehem Landfill trips associated with waste disposal trucks were compared to the total AM and PM Peak Hour Majestic and LVIP VII generated trips and indicated that the Bethlehem Landfill trips account for less than 1% of the traffic expected to be generated by the proposed developments in the vicinity. The anticipated deficiencies determined in the design year 2025 are not due to the extension of the IESI Bethlehem Landfill; rather, they are a result of the substantial nearby developments, Majestic and LVIP VII, which are under construction.

Evaluation

Although the Southeastern Realignment of the landfill will not increase the Average or Maximum Permitted Daily Tonnage and as such will not increase vehicular trips associated with waste disposal trucks, additional truck traffic associated with construction and the importation of soil cover and construction materials will occur on a daily basis over the life of the IESI Bethlehem Landfill Southeastern Realignment project. The attached projected truck documentation provided by the Bethlehem Landfill indicates that the worst case total number of new trips per hour is 12 trips or 6 vehicles (3 months in the summer of 2020). This assumes an even distribution of trips throughout the 12 hour day. The average projected number of new trips per hour over the 7 years is 6 trips or 3 vehicles. It can be seen that the worst case trips associated with construction and the importation of soil cover and construction materials are less (average trips are substantially less) than the previously anticipated additional trips associated with waste disposal trucks when an increase in daily tonnage was investigated in the original study. In addition to the trips being less, the current growth rate provided by PennDOT for an urban, non-interstate roadway is 1.42% ("Growth Factors for August 2015 to July 2016") which is less than what was used in the original study. Also, the projected life of the IESI Bethlehem Landfill Southeastern Realignment will expire

in 2024 rather than 2025 used in the original study. This will reduce the design year volumes and as a result, reduce the impact on the surrounding network from the impacts found in the original study. Furthermore, the impacts of the original study will only be realized if Majestic is operating at full capacity and LVIP VII is operating at 90% capacity in 2025.

Conclusion

Without conducting new manual turning movement counts at the study intersections and updating the traffic impact study, it can be seen that the additional truck traffic (an average of 6 trips or 3 vehicles per hour) associated with construction and the importation of soil cover and construction materials over the 7 years will have little to no impact on the traffic route and study intersections during the AM and PM peak hour periods. The volume of traffic generated by the Bethlehem Landfill is negligible to the roadway system with an average of 1 trip every 10 minutes during the AM and PM peak hours. This minor volume of traffic could be experienced on a specific day as a result of fluctuation in one of the many warehouses proposed with the nearby developments with or without the landfill. The worst impact, 12 trips or 6 vehicles per hour, will only occur over a 3-month period during the summer months of 2020.

The Southeastern Realignment is projected to span the period from 2018 and into 2024 at the permitted daily waste volumes. As currently planned, the landfill will no longer be in operation after 2024. If the associated site life extends beyond this period, then the volumes of waste actually received would be less than the designed volumes, and the traffic impacts would likewise have been reduced.

If you have any questions or would like to discuss our evaluation in more detail, please do not hesitate to contact me.

Sincerely,

PENNONI ASSOCIATES INC.

Earl W. Armitage III

Earl Armitage III, P.E.
Senior Traffic Engineer

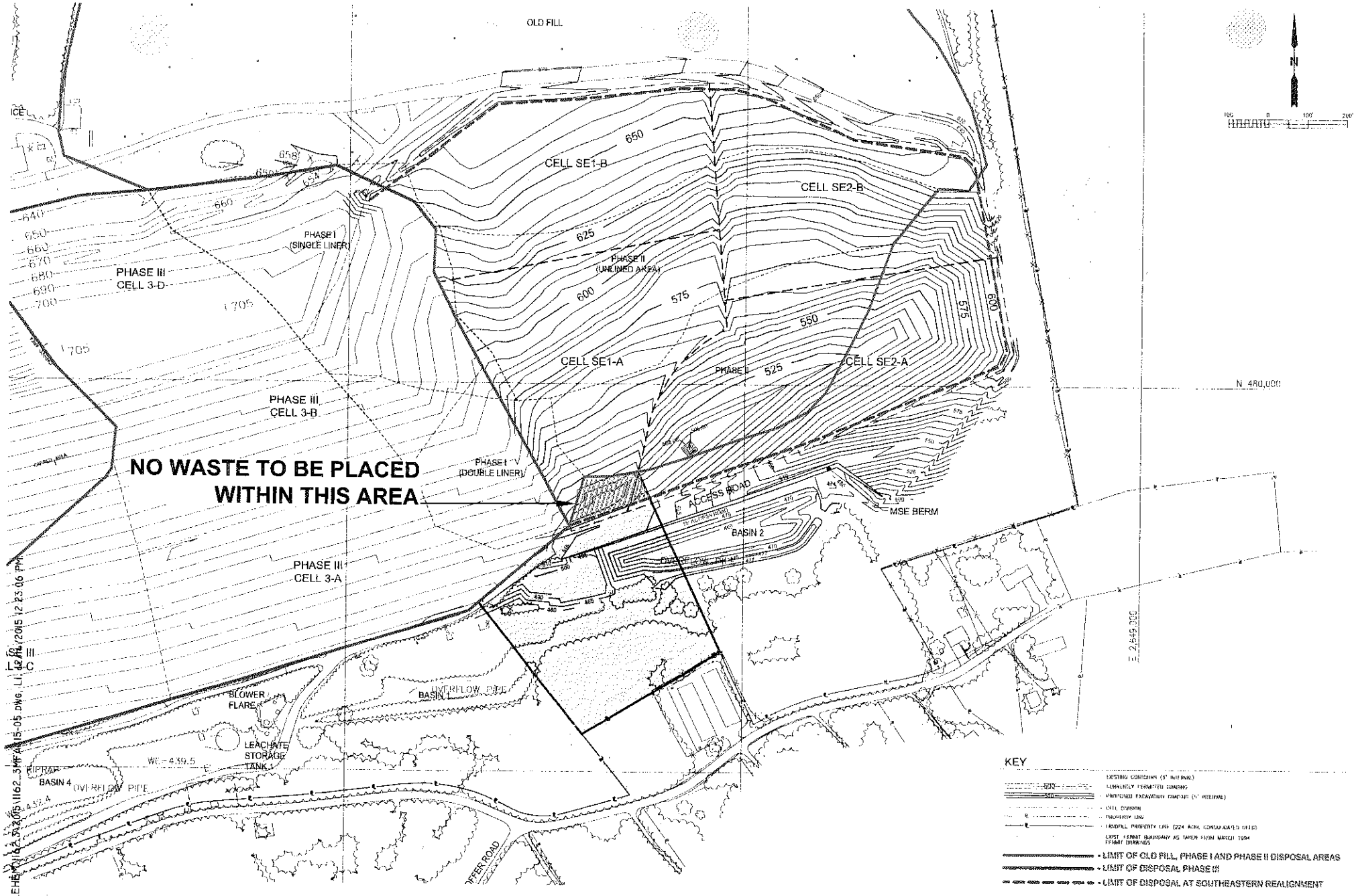
BETHLEHEM LANDFILL
SOUTHEASTERN REALIGNMENT
PROJECTED TRUCK COUNT - IMPORTATION OF CONSTRUCTION AND SOIL MATERIALS

DAYS / WEEK TRUCKS RUN 6 Mon-Sat
DAYS / QUARTER TRUCKS RUN 78
HOURS / DAY TRUCKS RUN 12 6AM-6PM

YEAR	QUARTER	# OF TRUCKS	# OF TRUCKS / DAY	(12 hour day) # OF TRUCKS / HOUR	(12 hour day) TOTAL # OF TRIPS / HOUR
2018	1ST	1,948	25	2	4
	2ND	3,731	48	4	8
	3RD	3,002	38	3	6
	4TH	1,948	25	2	4
2019	1ST	1,794	23	2	4
	2ND	2,126	27	2	5
	3RD	4,205	54	4	9
	4TH	4,455	57	5	9
2020	1ST	3,987	51	4	8
	2ND	3,987	51	4	8
	3RD	5,809	74	6	12
	4TH	2,027	26	2	4
2021	1ST	1,334	17	1	3
	2ND	1,636	21	2	3
	3RD	3,091	40	3	7
	4TH	2,186	28	2	5
2022	1ST	4,255	54	5	9
	2ND	3,478	44	4	7
	3RD	2,339	30	2	5
	4TH	1,908	24	2	4
2023	1ST	1,334	17	1	3
	2ND	1,334	17	1	3
	3RD	2,967	38	3	6
	4TH	2,967	38	3	6
2024	1ST	0	0	0	0
	2ND	0	0	0	0
	3RD	1,544	20	2	3
	4TH	1,544	20	2	3
			averages	3	6

Attachment "B"

Affirmative Covenant Area Plan



KEY

- EXISTING CONTOURS (5' INTERVAL)
- CURRENTLY PERMITTED GRADING
- PROPOSED EXCAVATION GRADING (5' INTERVAL)
- CELL DIVISION
- PROPERTY LINE
- LANDFILL PROPERTY LINE (224 ACRE CONSOLIDATED SITE)
- LIMIT OF OLD FILL, PHASE I AND PHASE II DISPOSAL AREAS
- LIMIT OF DISPOSAL PHASE III
- LIMIT OF DISPOSAL AT SOUTHEASTERN REALIGNMENT
- Area Covered by Affirmative Covenant Contained in 8/31/05 First Modification to Land Development Agreement - IESI PA Bethlehem Landfill Phase IV ("Affirmative Covenant Area")
- No Waste To Be Placed Within This Area

Affirmative Covenant Area

DATE: 12-2015

martin and martin incorporated
phone: (717) 264-6769 · 37 south main street · suite A · chambersburg, pennsylvania 17201

LOWER SAUCON TWP. NORTHAMPTON CO.

IESI PA Bethlehem Landfill Corp.
A Progressive Waste Solutions Company

D:\DWG\BETHLEHEM\2015\1162_3\FA15-05 DWG, LI, 12/11/2015 12:23:06 PM

Attachment "C"

Revised Form G(A)
Air Resources Protection

2540-FM-BWM0391a 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
DEP USE ONLY
Date Received

FORM G (A)
AIR RESOURCES PROTECTION
DUST EMISSIONS ESTIMATE AND CONTROL PLAN

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form G(A), reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General Reference: Pa Code 121.7, 123.1(c), 123.2, 131.2, 131.3, 273.217, 277.217, 279.218, 281.217, 288.217, 289.227, 293.218, 295.217, 297.218

CHECK TYPE OF FACILITY and whether ☐ NEW or ☒ EXISTING / EXPANSION Facility

Municipal (☒) / Residual (☐) Waste Landfill

Construction/Demolition Waste Landfill..... ☐ If existing: Permit # 100020

Composting Facility..... ☐

Demonstration Facility..... ☐ Proposed Waste through put in tons/day 1,375

Incinerator or Resource Recovery Facility ..... ☐ Proposed operating schedule:

Other Municipal (☐) / Residual (☐) Waste Processing Facility 312 (OD) days/yr Mon.-Fri.: 6 to 6

Facility (Describe) _____ Sat.-Sun.: 6 to 6

Total: 3,744 (OH) (hr./yr.)

INSTRUCTIONS/APPLICABILITY: The purpose of this form is to obtain information necessary to determine whether the proposed facility will be operated in such a manner as to prevent particulate matter emitted from the facility from causing air pollution or causing an exceedance of ambient standards and to determine if dust prevention measures comply with applicable operational standards.

I. Unpaved/Paved Road Particulate Emissions Potential

Vehicle Type	Vehicle Wt. Unloaded (ton)	Vehicle Wt. Loaded (ton)	No. of Wheels	Unpaved (lb./VMT)		Paved (lb./VMT)	
				E_{in}	E_{out}	E_{in}	E_{out}
Transfer	19.06	40	18	10.02	4.87	0.26	0.15
Dump Trucks (large)	23.7	40	14	8.83	6.12	0.26	0.18
High Capacity	19.53	29.63	12	6.63	4.95	0.21	0.15
Front Loader							
Light Weight	17.32	28.22	12	6.41	4.55	0.20	0.14
Rear Loader	12.5	32.5	10	6.46	3.31	0.22	0.11
Dump Trucks (small)	10	12	6	2.49	2.19	0.11	0.10
In Plant Trucks	1.6	2	4	0.58	0.50	0.03	0.03

$$Unpaved\ Road:\ E_{in/out} = 5.9K\left(\frac{s}{12}\right)\left(\frac{S_{in/out}}{30}\right)\left(\frac{W_{in/out}}{3}\right)^{0.7}\left(\frac{w}{4}\right)^{0.5}\left(\frac{365-P}{365}\right) lb./VMT$$

$$Paved\ Road:\ E_{in/out} = .077I\left(\frac{4}{n}\right)\left(\frac{s}{10}\right)\left(\frac{L}{1000}\right)\left(\frac{W_{in/out}}{3}\right)^{0.7} lb./VMT$$

Where:

E_{in} = Emission factor loaded trucks in (lb./VMT)

E_{out} = Emission factor unloaded trucks out (lb./VMT)

K = Particle size multiplier - 1 (total); 0.8 (TSP); 0.36 (PM-10)

VMT = Vehicle mile traveled

Surface Material:

s = Mean silt content

Gravel	=	5%
Limestone	=	10%
Dirt	=	28%
Other	=	7.3 % (Explain) Assume 90% gravel/10%dirt (0.9)(0.05)+(0.1)(0.28) = 7.3%

S_{in} = Mean vehicle speed in (10 MPH); S_{out} = Mean vehicle speed out (10 MPH)

W = Number of wheels

W_{in} = Vehicle weight loaded (tons); W_{out} = vehicle weight unloaded (tons)

P = Number of days/yr with at least .01 inches of precipitation per day = 130 days

n = number of paved traffic lanes

I = Industrial augmentation factor = [7.0 (paved to unpaved); 3.5 (unpaved shoulders); Other (explain) _____]

L = Surface dust loading (lb./mile) = 53 lb./mile

UPR = Total length of unpaved roads 4,830 ft. or 0.91 miles

PR = Total length of paved roads 6,000 ft. or 1.14 miles

Vehicle Type	Trucks/ Yr (A)	UPR (mile) (B)	PR (mile) (C)	Unpaved (lb./VMT)		Paved (lb./VMT)		Total Dust (lb./yr)			
								Unpaved		Paved	
				E_{in} (D)	E_{out} (E)	E_{in} (F)	E_{out} (G)	in (AxBxD) (lb./yr)	out (AxBxE) (lb./yr)	in (AxCxF) (lb./yr)	out (AxCxG) (lb./yr)
Transfer	11,915	0.91	1.14	10.02	4.87	0.26	0.15	108,643	52,804	3,532	2,037
Dump Trucks (large)	10,133	0.91	1.14	8.83	6.12	0.26	0.18	81,422	56,433	3,003	2,079
High Capacity	1,375	0.91	1.14	6.63	4.95	0.21	0.15	8,296	6,194	263	188
Front Loader											
Light Weight	9,462	0.91	1.14	6.41	4.55	0.20	0.14	55,193	39,177	2,157	1,510
Rear Loader	3,600	0.91	1.14	6.46	3.31	0.22	0.11	21,163	10,844	903	451
Dump Trucks (small)	875	0.91	1.14	2.49	2.19	0.11	0.10	1,983	1,744	110	100
In Plant Vehicles	1,750	0.91	1.14	0.58	0.50	0.03	0.03	924	796	60	60
Other											
						TOTAL:		277,624	167,992	10,028	6,425
								(h)	(i)	(j)	(k)

Total potential dust emissions from roads ((h+i+j+k) x (1 ton/2,000 lb))= 231 (T) t/yr

II. Construction/Operation Particlate Emissions Potential

Note: General emission factors are given in the following calculations. Should site specific factors be used, please provide reference.

A. Total potential dust emissions from topsoil removal/daily cover:
$6x10^{-5}$ (tons of dust emissions/tons of topsoil removed or covered) X
$[(\text{tons topsoil removed/yr})_{avg.} + (\text{tons topsoil daily cover/yr})_{avg.}]$

(6 x 10^-5) x (12,000 + 58,500) = 4.23 t/yr

B. Total potential dust emissions from dozers onsite:
$1.6x10^{-2}$ (tons of dust emissions/dozer hr) X $[(\#\text{dozers})_{avg.}$ X
$(\text{hr/day dozer opr})_{avg.}$ X OD]

(1.6 x 10^-2) x (1 x 9 x 312) = 44.93 t/yr

C. Overburden drilling potential dust emissions:
$7.5x10^{-4}$ (tons of dust emissions/hole drilled) X $(\text{holes drilled/yr})_{avg.}$

(7.5 x 10^-4) x 1,000 = 0.75 t/yr

D. Blasting potential dust emissions:
$6x10^{-4}$ (tons of dust emissions/tons of overburden removed) X
$(\text{tons/yr of overburden removed})_{avg.}$

No Blasting = 0 t/yr

E. Overburden removal potential dust emissions:
$1.85x10^{-5}$ (tons of dust emissions/tons of overburden removed) X
$(\text{tons/yr of overburden removed})_{avg.}$

(1.85 x 10^-5) x 127,900 = 2.37 t/yr

F. Overburden truck dumping potential dust emissions:
$4.0x10^{-6}$ (tons of dust emissions/tons of overburden dumped) X
$(\text{tons/yr of overburden dumped})_{avg.}$

(4.0 x 10^-6) x 127,900 = 0.51 t/yr

G. Road maintenance potential dust emissions:
$1.6x10^{-2}$ (tons of dust emissions/dozer hour opr.) X $[(\text{hr/day road maintenance})_{avg.}$ X OD]

(1.6 x 10^-2) x (11 x 312) = 54.9 t/yr

H. Total: 108 t/yr (H)

III. Summary of Potential/Actual Total Dust, & PM-10 Emissions

Total potential dust emissions = T + H = 339 t/yr (M)

Total potential PM-10 emissions = 0.36 X M = 122 t/yr (N)

Total actual dust emissions = 0.5 X M = 169.5 t/yr (O)

Total actual PM-10 dust emissions = 0.5 X N = 61 t/yr (P)

IV. Stationary Sources Standards

1. Will the proposed solid waste facility dust emissions be visible off the permit boundary?

☐ Yes ☒ No

2. Are any stationary sources of air contamination other than landfill gas emissions [see Form G (B)] subject to the new source performance standards of 25 PA Code Chapter 122 planned for this proposed facility?

☐ Yes ☒ No

Describe source(s) _____

If "yes", what is the air quality application # _____

3. Will the proposed facility accept asbestos waste subject to national standard for hazardous air pollutants adopted under 25 PA. Code Chapter 124? ☐ Yes ☒ No

If yes, describe compliance with Chapter 124.

4. Is the proposed facility subject to any other national standard for hazardous air pollutants?

☐ Yes ☒ No

Identify pollutant(s) _____

V. Entrance Roads, Access Roads, and Parking Areas

Describe plans for monitoring, maintaining and cleaning all entrance roads, access roads, and parking areas. This plan must effectively control the dust and particulate emissions calculated in Parts I-III above. The use of waste oil for dust suppression is prohibited.

a. For each paved parking lot/area, paved facility haul road, the required paved access roadways from public highway to the facility, and public highways, describe the method and frequency of road cleaning and/or maintenance.

As described in the air resources protection section of the written Plan of Operation, a power sweeper and/or water truck will be used to clean paved areas to control fugitive dust. The sweeper and/or water truck will be used as necessary to keep dust accumulation to a minimum at the following locations:

- Parking lot areas
- The access roadway
- The haul roads.

b. For the shoulders of: paved parking lot/areas; paved facility haul roads; the required paved access roadways from public highways to the facility; and public highways, describe the extent of application and frequency of water or other chemical dust suppressants to reduce fugitive dusts. Application of dust suppressants or water on public highway shoulders must be completed for a distance of 500 feet in both directions from the facility. Identify any road maintenance agreements with the local municipality or PennDOT.

The water truck will be used to apply water to the paved and unpaved parking lots, paved and unpaved haul roads and access roads including shoulders, and other dust generating areas as necessary to minimize dusty conditions.

c. For unpaved parking lot areas, and unpaved access roads near unloading areas, describe the application and frequency of use of water or other chemical dust suppressants to reduce fugitive dust emissions.

The water truck will be used to apply water to the paved and unpaved parking lots, paved and unpaved haul roads and access roads including shoulders, and other dust generating areas as necessary to minimize dusty conditions.

d. Describe how vehicles which transport waste or earth into the facility, will be cleaned before exiting the site.

Tire/Truck Wash used as needed

e. State the roadway speed limit for the proposed facility, and include the locations and size specifications of speed limit signs.

10 miles per hour. Signs on access road per PADEP requirements.

f. Will all trucks entering and leaving the facility be covered? ☒ Yes ☐ No

If no, explain why a cover is not needed to prevent fugitive dust emissions from becoming airborne.

VI. Records Keeping

Describe the records to be kept at the site to insure that the plan discussed in Item IV (2) above is being implemented. These records must include, at a minimum, the following:

a. for paved roads and parking areas:

   i. daily log of time and location of any vacuum sweeping conducted,

   ii. log explaining the reasons any required vacuum sweeping was not performed.

b. for unpaved roads and shoulders of paved roads:

   i. daily log of time and location of treated areas,

   ii. identification of dust suppressants,

   iii. daily log of the dilution ratios of the dust suppressants and dilutent used if chemical suppressants are used, and

   iv. purchase records of the chemical suppressants, if used.

c. Quarterly reports of the above records must be submitted to this Department upon request.

FORM G(A)

Form 2540-FM-BWM0391a, Rev. 6/2005

Bethlehem Landfill (Permit No. 100020)

April 2014

VI. RECORDS KEEPING

a. Paved Road and Parking Areas
   i. A daily log of time and location of the use of the power sweeper shall be maintained.
   ii. The daily log shall explain reasons why the power sweeper and/or water truck were not used.

b. Unpaved Roads and Shoulders
   i. A daily log of the time and location of water application or other treatment
   ii. The identification of any dust suppressants shall be provided in the log.
   iii. The log shall indicate the dilution rations of dust suppressants and dilutent used if chemical suppressants are used.
   iv. The log will include records of purchasing chemical suppressants

c. On a quarterly basis, these reports will be submitted to the Department upon request.

Attachment "D"

Updated PPC Plan
December 2015

IESI PA BETHLEHEM LANDFILL CORPORATION
A DIVISION OF

PROGRESSIVE WASTE SOLUTIONS

PREPAREDNESS, PREVENTION AND CONTINGENCY PLAN (PPC PLAN)

UPDATE: DECEMBER 2015

IESI PA BETHLEHEM LANDFILL CORPORATION

PREPAREDNESS, PREVENTION AND CONTINGENCY PLAN (PPC PLAN) UPDATE 2015

This letter serves as notification that IESI Bethlehem Landfill's PPC Plan has been reviewed and there are personnel changes that are listed in the Chain of Command. Allen Schleyer is District Manager and Mike Sheldon is Site Supervisor.

This document was prepared in accordance with the PA Solid Waste Management Act and the PA Clean Streams Law. If you have any questions in regard to the information provided feel free to contact Allen Schleyer, PA District Manager.

Allen Schleyer – District Manager

Allen Schleyer Date: 12-29-15

TBD – Compliance Manager

_____ Date: _____

Officer Certification

This is to certify that I have personally examined this report and am familiar with the information submitted in it and all attached documents. I am aware of all of the requirements for this report and facility. To the best of my knowledge, information and belief, the information submitted is true, accurate, and complete.

Name of Officer Allen Schleyer

Signature Allen Schleyer

Title District Manager

Date 12-29-15

IESI PA BETHLEHEM LANDFILL CORPORATION

PREPAREDNESS, PREVENTION AND CONTINGENCY PLAN

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IESI PA BETHLEHEM LANDFILL CORPORATION

PREPAREDNESS, PREVENTION AND CONTINGENCY PLAN

A. FACILITY DESCRIPTION

1. Description of Activity

The Bethlehem Landfill disposal facility is an existing, permitted, double-lined landfill located on Applebutter Road in Lower Saucon Township, Northampton County, Pennsylvania. The total property on which the facility is located encompasses approximately 206 acres, of which approximately 184 acres has been permitted by the Pennsylvania Department of Environmental Protection between 1986 and 2003.

The Bethlehem Landfill was formerly owned and operated by the City of Bethlehem. It began operating on 31 acres in 1941. It was sold to Eastern Environmental Services, Inc., Mt. Laurel, New Jersey, on July 18, 1998. On April 1, 1999, Waste Management, Inc., acquired the facility from Eastern Environmental Services. IESI Corporation acquired the landfill on July 1, 1999.

Phase I, the first lined area, was used from August 1986 to December 1989. One 6-acre cell is single-lined and the other 4-acre cell is double-lined. Phase II, consisting of approximately 14 acres, began operations in December 1989. A 5.6-acre cell is double-lined and an 8.3-acre cell is unlined and was used for relocation of previously disposed waste from older portions of the site. Phase III, consisting of approximately 33.4 acres, began operations in October 1994. Phase IV, the facilities most recently approved disposal area began to accept waste in July 2003.

A ground water abatement system consisting of 11 wells was installed in 1995 to mitigate the migration of leachate from previously unlined disposal operations at the site. Water levels and pumping rates are recorded and maintained on file in the office. The facility also has a landfill gas management system consisting of extraction wells located throughout the intermediate and capped area of the landfill and an enclosed ground flare. The capped disposal area is maintained under negative pressure to provide odor controls and significantly reduce the potential for hazards from methane generated by the decomposition of the MSW. Currently the Bethlehem Renewable Energy (BRE) facility located in the south west corner of the permitted site is operating a five (5) megawatt electrical generating plant using landfill gas as a power source. BRE operates under a separate PPC Plan on file at the Office.

Leachate and abatement well ground water is conveyed through a sewer line to the City of Bethlehem Wastewater Treatment Plant approximately 1.5 miles west of the site. The landfill has a back-up agreement with the City of Allentown, which would allow hauling to their treatment plant in the event that the Bethlehem plant is unavailable. This back-up arrangement has not been used thus far. A 390,000-gallon glass-lined storage tank and an approximately 750,000 gallon double lined impoundment is also available for emergency storage of leachate if necessary.

The facility is located within 4 miles of the Bethlehem/Hellertown Exit off of Interstate 78 and has an adequate quantity of suitable on-site cover material; IESI Bethlehem Landfill is constructed to comply with the EPA subtitle D standards. Following filling to design elevations, final cover, complete with geo-membrane capping, will be placed and the final slopes will be re-vegetated.

In order to control discharge of storm water to the adjacent areas, the entire facility has a storm water management plan design which collects all sediment-laden runoff from the landfill and conveys it to one of five sedimentation basins and four sedimentation traps prior to discharge to its natural drainage ways. The discharges from the basins are sampled semi-annually following significant rainfall events.

All of the improvements necessary to comply with the permit are in place and, as the site grows, additional lined cells or pads, access roads, storm water channels, etc., will be added to the operation.

Attachment #1 is a site location map on a clip from the 7 1/2 minute USGS maps in the vicinity.

Surface Water Management

The IESI Bethlehem Landfill incorporates a storm water management system that isolates the disposal areas from rainfall to reduce leachate generation and prevent contamination of surface water. This system is designed to collect runoff by the use of contoured land surfaces, collection pipes, stormwater channels, and swales to direct surface runoff to sedimentation basins prior to discharge to provide detention time to allow sedimentation of soil particles. At the present time the facility has 5 functional gravity discharge sedimentation basins, and four sedimentation traps which are shown on the general site plan included in Attachment #2. All of the sedimentation basins are constructed to discharge on the south side of the site and discharge to an unnamed tributary to the East Branch of the Saucon Creek. A portion of the site, which was part of the original landfill area, is already capped and re-vegetated and drains off toward the north toward the Lehigh River. The four sedimentation traps control runoff in the northern direction. The capping system, which is already in place on the original landfill area, Phases I, II, III and a portion of Phase IV, consists of a synthetic liner, and 2' of soil with vegetative cover to significantly reduce leachate generation. As the current Phase IV permit disposal areas reach final elevation, those sections will also be capped similarly.

Landfill Gas Monitoring Program

During development of the pads, gas collection wells are constructed to facilitate the removal of landfill gases. The IESI Bethlehem Landfill operates an active gas extraction system, which mechanically draws gases via a blower system out of the landfill through the wells. Gas extraction points include drilled wells and horizontal collectors and other odor control locations such as clean-out pipes.

Landfill gas is collected and routed to either the Bethlehem Renewable Energy (BRE) facility and/or the permanent ground flare system where the gases are burned. The flare is now primarily used as a back-up control source to the BRE facility.

The IESI Bethlehem Landfill also incorporates a system of gas monitoring probes that surround the landfill. These probes are monitored quarterly to monitor for off-site gas migration. If necessary, remedial actions will be implemented promptly.

Ground Water Monitoring Program

The IESI Bethlehem Landfill administers a ground water monitoring system. This system incorporates 46 monitoring points consisting of 31 monitoring wells, 11 ground water abatement wells, and 2 surface water points. Locations of the monitoring points are shown in the engineering design plans, which are kept at the site. Well locations were selected so that upgradient and downgradient water quality could be monitored. The location of the monitoring wells, well construction and number of wells installed were approved by PADEP prior to installation. Samples are obtained from these monitoring points and are analyzed quarterly.

Radioactive Material Monitoring Program

IESI Bethlehem Landfill maintains radiation monitoring equipment that scans each load of waste that enters the scale for radioactive material. This program is in accordance with the site's Radioactive Monitoring Plan that was approved PADEP in April 2003 and updated February 2012.

Waste Acceptance and Handling

Vehicles hauling solid waste to the facility must follow the procedures and practices described in this section to ensure that the type of waste materials accepted at the facility and the manner in which waste materials are handled is carefully monitored and controlled.

Upon arrival at the facility, the gross vehicle weight (the weight of the vehicle and its contents) is measured after the vehicle has been properly stabilized on the scale. Once the gross weight is determined, the vehicle proceeds to the landfill tipping area to unload its contents. After unloading, vehicles proceed back to the scale house and weighed again prior to exiting the facility to determine the weight of the contents, which were unloaded. The net weight difference is determined for recordkeeping and billing purposes.

Prior to tipping their load at the landfill area, each solid waste transporter informs the weighmaster of the origin and type of waste being hauled. If the waste is a residual waste, municipal-like residual waste, or special handling waste, such as virgin petroleum-contaminated soils (FC-1 waste) or friable asbestos-containing waste, the driver is required to provide a manifest signed by the generator. The weighmaster verifies that the form has been completed properly and that the waste type listed is one of the acceptable waste categories. All residual waste must have prior PADEP approval before disposal.

After making these determinations, the weighmaster also signs the manifest form and allows the transporter to proceed to the landfill tipping area. The landfill equipment operator/spotter visually inspects the contents of each load of solid waste, as it is unloaded. If the equipment operator/spotter observes that the contents may be unacceptable waste, the operator/spotter will check with the weighmaster by radio. If the waste is not acceptable, the operator/spotter will reject the load and follow IESI's Waste Rejection Procedure found in Attachment #5.

Whenever there is a question regarding the classification or acceptability of any material, the weighmaster is directed to check with the compliance manager and/or landfill manager before allowing the load to proceed to the working face.

If after consulting with the landfill manager and/or compliance manager it is determined that the material is unacceptable for disposal at IESI Bethlehem Landfill, please refer to Attachment #4. This attachment describes how to proceed with unacceptable loads.

2. Description of Existing Emergency Response Plans

This Plan supersedes previous PPC Plans to conform to current report format requirements, indicate the change of ownership, and be consistent with current operating procedures. This updated PPC Plan will also be implemented in conjunction with the SPCC Plan for petroleum product spills.

3. Material and Waste Inventory Wastes

Leachate is the primary waste generated on-site. Leachate is collected through a network of leachate collection pipes located in each disposal cell. Leachate conveyance to the Bethlehem WWTP is either by gravity drain or through a pumping station to the sewer system. The collection pipes outside of the landfill liner system are double-walled to provide for secondary containment. Ground water pumped from the 11 abatement wells is discharged into the leachate collection system. The leachate piping passes through leachate management chambers at various locations on the site. The wastewater exits the landfill and is conveyed part way by gravity and the rest of the way in a force main along Applebutter Road to the City of Bethlehem Wastewater Treatment Plant.

The landfill generates gases from the normal decomposition of the waste, which has been placed into the lined disposal areas of the facility. This gas consists primarily of methane and carbon dioxide. Trace components consist of hydrogen sulfide and other gases, which lend the gas its characteristic odor. The gas is extracted from the decaying waste by the gas collection system and is used as a fuel source for the BRE facility or burned in the on-site flare station. Condensate collected in the gas collection system is pumped into the leachate collection system.

Waste oil and antifreeze are generated by the equipment maintenance activities. Both are placed into containers labeled "waste oil or used anti-freeze" and stored at the maintenance garage. Waste oil is used as a fuel source for the maintenance building heater or taken off-site for recycling. Used anti-freeze is also collected by an off-site recycling facility. Spent parts cleaner is also collected by an off-site recycling facility.

General maintenance and office wastes are collected and deposited at the landfill working face.

Materials

Landfill equipment is fueled by an outside contractor and by the on-site fuel tanker truck (3,000 gallon capacity). A 500 gallon above ground diesel storage tank supplies fuel to the generators also located on the east side of the maintenance building. A 500 gallon gasoline tank also located on the east side of the maintenance shop is used to fuel company vehicles.

In the event of fuel spillage, absorbent materials are available on the fuel truck and in the maintenance building to absorb as much of the fuel as possible and prevent the spread of the spill. Each AST tank has a double wall secondary containment capable of containing 110% of the tank's capacity. The tanker truck is parked on an HDPE constructed pad to provide containment in the event of a leak. Concrete jersey barriers and bollards are strategically placed around the fuel storage tanks to prevent accidental contact from equipment pulling up to refuel.

Five-gallon gasoline containers for small gasoline engines are stored in the maintenance shop within a ventilated flammable materials storage cabinet. Miscellaneous cleaners and maintenance products are also stored in the maintenance shop and in the office building. Bulk storage of hydraulic oil, lubrication oil, transmission oil is stored in 275 gallon tank and antifreeze in a <250 gallon container with secondary containment are located in the maintenance shop for routine vehicle maintenance. A welding torch with an oxygen tank and an acetylene tank is also kept in the maintenance shop. The quantities of the cleaners and maintenance products are minimal that if leakage does occur it will be contained within the shop or office, where cleanup is easily accomplished. Should a leak occur, absorbent material is immediately placed on any oil or fuel spills. After the spill is absorbed, the spent absorbent shall be disposed within the landfill working area subject to the IESI Bethlehem Landfill Waste Acceptance and Classification Plan requirements. There are no floor drains in the maintenance shop.

4. Pollution Incident History

IESI Bethlehem Landfill maintains a complete file of on site incidents that may affect operations or the environment.

5. Implementation Schedule for Plan Elements Not Currently in Place

Future elements for the PPC Plan will be implemented as soon as practical when the need arises.

B. IMPLEMENTATION OF CONTINGENCY PLAN/NOTIFICATION & RESPONSE

1. Organizational Structure of Facility for Implementation

District Manager - Responsible for implementation of provisions of the PPC Plan.

Compliance Manager - Assists District Manager in implementation of PPC Plan and performs revision of the Plan and assures accuracy of Plan.

Operations Manager – Assists the District Manager in implementation of the PPC Plan.

In the case of an emergency, the District Manager shall immediately implement the applicable provisions of this plan. During an emergency, the District Manager shall assess the actual and potential hazards to public health and safety, public welfare and the environment that are occurring or may occur. During this evaluation, steps will be taken to help mitigate and or prevent fires, spills or other hazards from occurring, recurring or spreading to other solid waste at the facility. These measures may include, where applicable, stopping operations, collecting and containing released materials or wastes, and removing or isolating containers. For the purpose of this section, the term "emergency" includes fire, spills or other events that threaten public health and safety, public welfare or the environment and personal injury.

If the effect of the incident has extended or is likely to extend off-site and requies an emergency response team or if aid is required from outside agencies to mitigate the incident, the State and County Emergency Response Agencies, National Response Center and the PA Department of Environmental Protection will be notified immediately and advised of the following information:

(a) Name of the person reporting the incident and telephone number where that person can be reached;

(b) name, address and permit number of the installation;

(c) date, time and location of the incident;

(d) a brief description of the incident, nature and quantity of materials or wastes involved, extent of any injuries, and possible hazards to public health, welfare and the environment that exist or may occur;

(e) the nature of injuries, if applicable, and;

(f) procedures implemented to alleviate the emergency.

As noted above, the District Manager shall contact (if required) the Pennsylvania Emergency Response Commission (PERC), the Northampton County Emergency Management Agency (NCEMA), the PA Department of Environmental Protection (PADEP) and the National Response Center (NRC). The Pennsylvania Emergency Management Agency (PEMA) and the Northampton County Emergency Management Agency are the operational agencies, respectively.

In the event of a storm water incident that causes a breech in a designed storm water control and impacts the surrounding area or obstructs public roadways; contact emergency clean-up crew and notify the PADEP Water Management Program.

2. Facility Emergency Coordinators

The following individuals are available on-site or on-call with the authority to implement emergency response procedures:

a. PrimaryEmergency Coordinator:
DistrictManager
Allen Schleyer
IESI PA Bethlehem Landfill Corp.
2335 Applebutter Rd.
Bethlehem, PA 18015
Work: 610-317-3200
Mobile: 484-357-3135
610-360-0470

b. Second Emergency Coordinator
Mike Sheldon
IESI PA Bethlehem Landfill Corp.
2335 Applebutter Road
Bethlehem, PA 18015
Work: 610-317-3200
Mobile: 484-357-2479

The emergency coordinators listed above are reachable at the landfill office during operating hours or through their mobile phone numbers during non-operating hours. The chain of command will be properly updated when new personnel fill these positions.

3. Duties and Responsibilities of the Coordinator

The Emergency Coordinator or authorized IESI Bethlehem Landfill employee will contact the following agencies as appropriate in the case of an emergency:

Agency/Personnel	Telephone Number
Police – Fire – Ambulance Emergency	911
Pennsylvania Emergency Management Agency (PEMA)	1-800-372-7362
Northampton County Emergency Management Agency	610-759-2600
National Response Center	800-424-8802
CHEMTREC	800-424-9300
TEEM Environmental	800-890-7745
Stericycle	866-783-7422 or 610-286-6996
PADEP Wilkes-Barre Regional Office	570-826-2516 or 2511
PADEP Bethlehem District Office	610-861-2070
Lower Saucon Township	610-865-3291
EPA 24 Hour Number	215-597-9898

PA Fish Commission	717-626-0228
PA State Police - Bethlehem	610-861-2026
Mobile Dredging & Pumping	800-635-9689
Joe Latona Contractor	570-883-7300
Bethlehem Sewage Treatment Plant	610-865-7168
Lehigh County Authority – Ind. Pretreatment	610-395-9782 610-390-9855
Rapid Response Inc.	877-460-1038
PEPCO – Bethlehem Renewable Energy	484-651-3822 / 410-274-9520
Kline's Services	717-898-8158
Best Line Equipment Rental – generator/pumps Schoenersville Rd, Bethlehem, PA	484-223-3814
Emergency System Services – generators Quakertown, PA	215-536-4973
Deifenderfer Electric Co.	610-434-9595 888-288-7291

The emergency response procedures and remedial activities will be administered and directed by the Emergency Coordinator assigned by the appropriate agency.

If the facility stops operations in response to a fire, explosion, emission, or discharge, the Emergency Coordinator must ensure that adequate monitoring is conducted for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

Immediately after an emergency, the Emergency Coordinator, with PADEP approval, must provide for treating, storing, or disposing of residues, contaminated soil, etc. from an emission discharge, fire, or explosion at the installation. Public responders and facility personnel, under the direction of the Emergency Coordinator shall take remedial measures as required to address the situation.

The Emergency Coordinator must ensure that in the affected areas on the installation, no material or waste incompatible with the emitted or discharged residue is processed, stored, treated, or disposed of until cleanup procedures are completed; and all emergency equipment listed in the plan is cleaned and fit for its intended use before operations are resumed.

Within 5 working days of the incident, the installation must submit a written report on the incident to the PADEP, Lower Saucon Township and the City of Bethlehem Wastewater Treatment Facility of the effect if the incident has extended or is likely to extend off-site or if aid is required from outside agencies to mitigate the incident. The report must include the following:

a. name, address and telephone number of person filing the report;

b. name, address and telephone number of the installation;

c. the date, time and location of the incident;

d. a detailed description of the incident;

e. a description of type and quantity of materials involved;

f. an assessment of any contamination of land, water or air that has occurred due to the incident;

g. estimated quantity and disposition of recovered materials or waste that resulted from the incident;

h. and a description of what actions the installation intends to take to prevent a similar occurrence in the future.

4. Chain of Command

Allen Schleyer – District Manager

Mike Shelden – Operations Manager

C. SPILL/LEAK PREVENTION AND RESPONSE

1. Pre-Release Planning

There are five main areas at the IESI Bethlehem Landfill where potential spills and/or leaks may occur. These areas are: the equipment storage/maintenance garage area, landfill working pad, landfill side slopes, gas flare station, and leachate piping system including leachate management chambers. These areas are shown on Attachment #2.

Equipment Storage/Maintenance Garage Area

Spills that could occur in the equipment storage area would be of a relatively minor volume, primarily associated with small equipment leaks or spills and would be handled as outlined in the Housekeeping Program section of this Plan. A spill in this area would be immediately contained using the proper absorbent materials to prevent during precipitation could result in some spilled liquid being carried off by storm water. Materials would be of relatively low toxicity and would be in the form of oil or fuels.

Pollutants carried by storm water would flow to Sedimentation Trap A where containment can be effected.

Landfill Working Pad

Most spills that could occur on the working pad would also be of minor volume and would be handled as above. However, the potential exists for a significant amount of fuel to be released from the pad equipment or from hauling vehicles. Absorbent material is available to absorb the fuel and an attempt will be made to collect leakage in containers before it contacts the ground.

It is possible that an unpermitted waste could be received in a mixed municipal or approved residual waste load. In general, the Weighmaster and/or Compliance Manager at the scalehouse will turn unapproved waste away from the site upon review. However, if unapproved waste is tipped onto the working area of the landfill, with few exceptions, it will be loaded back into the hauling vehicle for removal from the site by the hauler. The procedure for how to handle unacceptable waste is addressed in Attachment #4.

Spills on the working face are managed to be contained within the landfill and collected in the leachate collection system.

Landfill Side Slopes

The development of a leachate seep in the exterior side slope of the landfill is another potential source of leakage. Daily inspections are performed on the landfill to identify and remediate seeps to prevent off-pad migration (see Inspection/Monitoring section of this Plan). Leachate seeps identified during inspections are excavated and backfilled with coarse stone or aggregate to provide drainage back into the leachate collection system. Removed overburden will be placed in the active working face of the landfill.

Leachate Piping System and Leachate Management Chambers

All off-pad leachate piping is contained in 100 mil (minimum) HDPE piping providing secondary containment. This provides a means for insuring the piping system's integrity. The leachate piping system passes through leachate management chambers where valves, junctions, meters, and sediment traps are located. Leakage from any of those structures will be contained within the chamber until it can be properly removed and reintroduced into the leachate collection system. An emergency leachate storage tank and lined impoundment are located adjacent to LMC-10. In the event the City of Bethlehem's Wastewater treatment plant cannot accept leachate for disposal, the entire leachate flow can be diverted with a valve in LMC-9 into the emergency storage tank. This tank has a capacity of about 390,000 gallons. Additional emergency leachate storage was built to expand the emergency storage capacity by another 775,000 gallons. Total emergency leachate storage capacity is 1,165,000 gallons. IESI also has a contract with Allentown Wastewater Treatment Plant as an emergency back-up disposal site.

Gas Flare Station

The gas flare station burns landfill gas collected at the site to prevent the migration of gas and the associated odors from the site. The gas flare has an automated control system which monitors flare temperature, gas flow rate, methane concentration, and oxygen concentration on a continuous basis. If any of the parameters are outside normal operating range, the system automatically shuts down the flare, turns off the blowers drawing gas from the landfill, and closes the main valve between the landfill collection system and the flare. A flare shutdown will prompt the auto dialer to call personnel that will respond to the flare outage to troubleshoot for repairs and re-light the flare. The flare has a paper recorder chart and data logger to record flow, temperature etc. Offsite migration of gas through the air is monitored by routine inspections around the landfill perimeter.

2. Material Compatibility

The IESI Bethlehem Landfill utilizes HDPE liner and pipe for the collection and conveyance of leachate. HDPE is chosen for its high strength, toughness, seam strength and, most importantly, its chemical resistance. Municipal and residual wastes are accepted for disposal after the wastes are determined to be compatible in accordance with the Landfill's Form R requirements. Residual waste is accepted for disposal only after approval from the PADEP.

3. Inspection and Monitoring Program

Inspection and monitoring of a landfill site is an extremely important aspect of a well-run facility. The effort spent implementing a comprehensive inspection and monitoring program will undoubtedly be worthy of the time spent, as many potential and detrimental conditions will be prevented.

LANDFILL INSPECTIONS

The site has implemented a comprehensive landfill inspection and monitoring program to ensure the integrity of the landfill liner system, leachate collection and treatment system and daily operational procedures. Daily inspections of the landfill facility include, but are not limited to:

1. Proper waste acceptance and inspection procedures. These are promulgated in the Landfill's Waste Acceptance and Classification Plan and are performed by a review/approval process, at the scalehouse and active working face.

2. Daily pad operations inspections, which include waste quantities, cover load count, trash cell size, unauthorized waste, operating pad equipment, pad litter, and pad condition.

3. Daily facility inspections which include the abatement wells, leachate management chambers, presence of leachate seeps, erosion control, litter, road maintenance, and truck wash operations and gas flare.

4. Capital projects and contractors.

5. Equipment maintenance, which includes operating time, fluids and specific parts and operating systems on each piece of equipment.

6. Visual inspection of site haul roads for accessibility, potential hazard areas, and erosion.

Weekly inspections include, but are not limited to:

1. Facility inspections, which include presence of leachate seeps, erosion control, litter, sedimentation basins, cap and final cover and site safety inspection.

2. Scale inspection includes the scale deck, load cells, and scale foundation.

FLARE STATION/BLOWER INSPECTIONS

Inspections of the flare system operations are conducted during normal work hours and are as follows:

1. Daily inspections are performed in relation to weather conditions, site conditions, gas piping system, blower and flare system.

2. Blower and motor bearing lubrication is checked and performed by an outside contractor as needed based on the number of hours of operation of those components of the flare.

3. Flame arresters are inspected and cleaned on an annual or as needed basis by an outside contractor.

Documentation is maintained on inspections. Any deficiencies identified in facility operations are corrected as soon as practical.

An operator who is thoroughly familiar with all items and areas to be inspected performs inspections of the landfill areas and equipment.

Inspection of the gas flare station is performed by the Compliance Manager and by an outside contractor.

As needed, the District Manager reviews site operations and completed inspection sheets with the staff and revises the PPC Plan as necessary.

The landfill buffer area contains monitoring wells and gas monitoring stations located around the perimeter of the landfill. The ground water monitoring wells are sampled quarterly to determine the local ground water quality. Quarterly gas monitoring is performed at perimeter gas monitoring wells to identify any off-pad migration. Surface emission monitoring is performed quarterly on all capped and intermediate cover sections of the landfill to check cap and cover integrity.

All monitoring wells are kept locked at all times and are maintained in good condition. The monitoring wells are inspected once each month for maintenance. The area around the wells is kept free of vegetation, litter, or debris to ensure that the wells can be inspected and are readily accessible.

After heavy rains a post rain event inspection will be conducted to evaluate the erosion and sedimentation controls. Post stormwater inspections are completed using the Inspection Form exhibited in Attachment #6. After hours inspections occur as deemed necessary.

Preventative Maintenance

The operating personnel perform daily visual inspection of the equipment and perform all daily or routine maintenance activities including, but not limited to, lubrication, track cleaning and replacement of air filter elements. The Site Mechanic keeps a complete checklist and daily log of all daily maintenance and adjustment activities. Daily "walk around" inspections are critical in detecting or preventing maintenance problems and potential safety hazards.

The mechanic performs routine inspections, oil changes, adjustments, and most scheduled maintenance and repair services. An outside contractor may perform special repairs and service.

The Compliance Manager and outside contractors perform comprehensive preventative maintenance programs to insure the integrity of all aspects of the ground water abatement system, leachate collection system, gas flare and ancillary equipment. This program incorporates the following:

a. Periodic inspections of identified equipment and systems;

b. Periodic testing of equipment and systems (such as routine calibration of environmental monitoring equipment);

c. Appropriate adjustment, repair, or replacement of parts and;

d. Complete record keeping of the preventative maintenance activities, inspection and test results, calibration dates, repairs, replacements, and adjustments to the applicable equipment and systems.

5. Housekeeping Program

As was noted under the Inspection and Monitoring section, authorized personnel inspect berms, lines, valves, basins, and other structures for structural adequacy, and evaluate overall site operations and revise this plan as necessary.

In the equipment storage area and Maintenance Garage, oil or fuel spills are covered immediately with absorbent material. After the spill is absorbed, the spent absorbent is placed within the landfill working area subject to landfill's disposal criteria. Prior to disposal of the absorbent, any such waste is stored, if necessary, and its compatibility with the liner determined prior to disposal.

In order to maintain a good housekeeping program certain activities and practices are carried out on a regular basis to reduce the possibility of accidental spills and safety hazards to facility

personnel: neat and orderly storage of chemicals; prompt removal of small spillage; regular refuse pickup and disposal; maintenance of dry, clean floors. and maintian open walkways, pathways, or roads.

6. Security

Security procedures are employed at the installation to prevent accidental or intentional entry into the site that could result in a violation of PADEP regulations, or injury to persons include the following:

a. Facility informational sign promulgating the name, address, telephone number, and operating hours of the installation;

b. Lockable gate at the facility entrance road during off hours;

c. Fencing around the entire installation;

d. Locks on the buildings, monitor wells and abatement well sheds;

e. Site lighting.

7. External Factor Planning

Certain external factors will have some impact on the operations. Heavy rains will cause excessive runoff. Five sedimentation basins are in place to control runoff from active areas. Stormwater control channels and pipes are used to divert storm water to the basins. Heavy rains will not affect the normal receipt of waste or cause related operational problems. After heavy rains a post rain event inspection will be conducted to evaluate the erosion and sedimentation controls.
In the case of a power outage, the Phase III leachate collection and conveyance system will continue to operate because it is a gravity system, Phase IV areas have a sump containment that is requires pumping. During extended periods of power outages; control panels for the Phase IV pumping stations are retrofitted with a main power disconnect and portable generator connector located in the SE corner of the office parking lot to ensure that leachate can be removed from the disposal cell. The ground water abatement wells will stop pumping. However, this should not affect the potential for offsite migration of contaminated ground water since ground water levels will not change significantly even without pump operations during the period of a few hours or even a day or two, which would be typical for a power outage. The gas flare system would shut down, and the main header valve would automatically close, which would prevent discharge of unburned gases from the gas collection system during the duration of the power outage. The autodialer would call out to inform the listed personnel of the power outage. During extended periods of power outages; a generator would be rented that has the capacity to power the flare.

Heavy snows will greatly reduce the amount of waste disposed at the site and also temporarily limits the movement of equipment and personnel around the site. However, the landfill possesses the necessary heavy equipment needed to clear heavy snow from operating areas. This activity begins as soon as operators are able to arrive at the site. Heavy snows will not affect other operations.

Strikes are not a factor in emergency planning. Employees are not union.

8. Health, Safety and Employee Training

In order to protect the health and safety of operating personnel, the safety standards specified in this section are observed.

a. First Aid. The Landfill Manager or designate is responsible for informing all employees of the facility's first aid procedures. First aid kits are located and maintained in the main office, scalehouse, maintenance garage, and on the maintenance service truck.

b. Clothing. All operating personnel at the active areas of the landfill operation wear protective clothing and equipment. Operating personnel are issued a hard hat, protective clothing, foot protection, gloves, safety glasses, ear protection, respiratory protection (fitted) as applicable, and rain gear. The operating personnel are expected to wear protective clothing and shoes at all times on-site. Safety equipment (glasses, hard hat, and orange vest) is worn within the limits of the active disposal areas, except in the cab of the operating equipment. Ear protection and respiratory protection (dust masks) may be required when operating heavy equipment without a cab or when working around heavy equipment or dusty conditions for extended periods. Personnel are trained in proper use of any personal protective equipment. This is performed initially for each employee followed by annual refreshers.

c. Accident Records. A report is prepared by the appropriate supervisor for each significant mishap that occurs on the landfill site involving personal injury requiring medical attention to personnel or visitors and/or damage to equipment or facilities.

The accident records are maintained on a permanent basis in the Safety Manager's office to determine responsibility for accidents, to dispose of any claims, and to identify conditions that cause accidents.

d. Safety Training. All of the administrative and operating personnel are adequately trained in the operations of a sanitary landfill. The training is sufficient to ensure that the facility personnel are able to respond effectively to emergencies. IESI's Corporate Safety Manager and staff are responsible for developing and implementing a comprehensive safety program.

Safety rules and procedures are prepared in written form, and distributed to each employee. This program includes monthly safety meetings to educate and refresh employee awareness in all areas. This monthly structured safety plan was developed to provide uniform training nationally to educate employees on landfill safety related topics.

The elements of the program are contained in the IESI Bethlehem Landfill Written Hazard Communication Program as well as the Bethlehem Safety and Compliance Red Binder monthly safety training program.

D. COUNTERMEASURES

1. Countermeasures To Be Taken by Facility

In the event of a gas release from the gas flare station the following countermeasures are taken:

a. Gas feed to the station will be stopped, if practical and necessary (the automatic control system is designed to shut down the flare and close the main header valve.);

b. Thorough inspection of the equipment will be performed to determine the cause of the release;

c. Immediate repair of the faulty or damaged equipment.

In the event of a leachate spill to the environment the following countermeasures are taken:

a. Locate and stop the source of spill, if possible;

b. Contact the Emergency Coordinator or highest available authority on the chain of command;

c. Contain the spill with the use of soil by loaders or dozers, if possible, or any absorbents that may be available;

d. The use of outside vendors for clean-up and waste removal, as noted in Section D.2, may be necessary.

e. Notify the proper authorities as described in the List of Agencies to be Notified

In the event of a leachate spill within a leachate management chamber, the following countermeasures are taken:

a. Shut off the leachate flow upstream of the affected LMC;

b. Remove the leachate from the LMC into the landfill's tank truck or other mobile tank. The leachate may be reintroduced into the conveyance system at a downstream, unaffected location or transported either to the leachate storage tank on the site or directly to the City of Bethlehem Sewage Treatment Plant or City of Allentown Sewage Treatment Plant, which is the back-up leachate disposal facility;

c. Drain the piping needing repair and perform the necessary repair;

In the case of a leak in the leachate conveyance pipe, the following countermeasures are taken:

a. Shut off the leachate flow upstream of the leak;

b. Mobilize equipment for containment, if necessary, utilizing the facility's equipment or outside contractors as necessary;

c. Drain the piping needing repair and perform the necessary repairs;

d. Excavate any contaminated soil and arrange for their removal and disposal within the active disposal area of the landfill, if available, or other approved disposal facility;

e. Backfill any excavated areas with clean soils.

In the event that leachate cannot be conveyed to the Bethlehem Wastewater Treatment Plant due to problems with the conveyance system or plant, the following countermeasures are implemented:

a. The valves in LMC-9 and LMC-10 are adjusted to close the main valve which releases leachate to the downstream conveyance system and open the valve which diverts flow into the storage tank;

b. The valve on the drain line from the storm water inlet within the tank's containment area is closed so rainwater is contained within the containment area rather than being discharged to the storm sewer as occurs under normal conditions;

c. Unless the conveyance or treatment constraint is known to be a short-term limitation, a liquid waste hauler will be contacted and arrangements made for hauling leachate to the Allentown Wastewater Treatment Plant with which the landfill has a backup disposal agreement.

In the event that unknown wastes are encountered during excavation for construction of new landfill cells, DEP Wilkes-Barre Regional Office will be notified (570-826-2516) within 24 hours. The Waste Relocation Plan included in Attachment #5 will be utilized. A Waste Sampling Plan will be prepared, if necessary, to assess the characteristics of the suspect material and determine an appropriate means of disposal. The Waste Sampling Plan prepared in August 1999 in connection with the discovery of suspect wastes during excavation for Cell 3-D will be utilized as a guide.

In the event of fires at general or specific locations, the following procedure should be used as a guide, but in each case, best judgment should be used:

General Fire Procedures

a. The employee who discovers the fire should immediately notify the Emergency Coordinator as to the location and type of fire emergency;

b. The Emergency Coordinator should ensure that all other personnel are notified of the fire using the two-way communication system;

c. The Emergency Coordinator should notify the emergency agencies through 911, and communicate the following information:

- Location of fire,
- Type of fire,
- Name of caller, and
- Phone number used to call.

d. The Emergency Coordinator should notify all other persons, in order of the Chain of Command, of all pertinent information regarding the fire;

e. The Emergency Coordinator should see that the scalehouse personnel stop all waste vehicles from entering the landfill area until otherwise notified and maintain access around the scale for ingress of emergency vehicles.

Specific Fire Procedures

1. Fire in a Refuse Vehicle:

   a. Follow above general fire procedures;

   b. Attempt to remove the vehicle from open refuse area. Have the vehicle proceed to the nearest designated hot load area, and have the driver eject the load. At the hot load area, located adjacent to the working face, water from the on-site tank truck and stockpiled area shall be applied to the burning debris to control and contain the fire until the fire company arrives;

   c. If the vehicle, not the refuse, is on fire and if the driver must evacuate the vehicle, a judgment should be made as to whether it is possible to control the fire until the fire company arrives. If not, the immediate area surrounding the burning vehicle should be evacuated.

2. Fire at the Working Face

   a. Remove all vehicles from the working face;

   b. With available dry chemical extinguishers, attempt to suppress the fire, then proceed to dig out burning refuse with available heavy equipment;

   c. Push (dig) burning refuse onto an isolated area with cover material, spread out, and use either water, dry chemical fire extinguishers, or cover material to extinguish the fire;

   d. If the fire is large, move the burning material out of the daily operating area and onto covered areas for containment. This can be accomplished with available equipment and extra cover material;

e. If necessary, portable pumps may be used to convey water from the existing sediment basins or the stream located south of the basins to the fire areas. The water can be mixed with dirt or cover material and used to extinguish the fire. One of the major problems in all refuse fires is re-flaring of smoldering fires. To prevent this, completely dig the smoldering refuse out of the landfill, mix with dirt, spread onto a covered area, and saturate with water.

3. Fire at the Public Drop Off Center

a. Follow general fire procedures;

b. If a fire in a rolloff container occurs, the fire should be at least partially extinguished by water or dry chemical extinguisher before moving the container to the hot load area. Once the material is dumped at the hot load area, the fire can be completely extinguished;

c. If a fire occurs in a vehicle at the convenience center, follow instructions outlined in Fire in a Refuse Vehicle.

4. Fire in a Building

a. Follow general fire procedures;

b. Sound the fire alarm, if one exists. Evacuate the building and account for personnel;

c. Notify the fire department. If the fire is small, and smoke inhalation is not a concern, attempt to extinguish the fire with a nearby fire extinguisher.

2. Countermeasures To Be Undertaken By Contractors

The IESI Bethlehem Landfill can immediately notify the following outside contractors. For emergency liquid trucking and other emergency response work services, the IESI Bethlehem Landfill contacts CHEMTREC and/or TEEM Environmental of Old Forge, PA, Rapid Response Inc. Northampton, PA an environmental response contractor. Liquid trucking is also provided by Mobile Dredging & Pumping and/or Kline's Services. In the event that an infectious wastestream was found intermixed in a waste stream Stericycle would be contacted for clean-up transportation and disposal.

Joe Latona Contractor	570 -883-7300
TEEM Environmental	800-890-7745
Mobile Dredging & Pumping	800-635-9689
Stericycle	866-783-7422

Rapid Response Inc.	877-460-1038
Kline's Services	717-898-8158

3. Evacuation Plan for Facility Personnel

In the event of an emergency necessitating evacuation of the site, the Emergency Coordinator sounds a verbal alarm over the two-way radio system. All employees meet at a specified location, which will usually be in the stone parking area on the site immediately west of the main gate.

If wind direction does not allow it, a different location will be specified over the radio. Once assembly has occurred, a roll call shall be taken to insure that everyone has safely left the site. In such an emergency, the police and fire company shall also be notified through the 911 systems. The evacuation routes are specified on the facility maps in Attachment # 2.

4. Emergency Equipment

The following list of emergency equipment will be maintained at the site:

EQUIPMENT DESCRIPTION	LOCATION	INTENDED USE
Absorbent Materials	Fuel Truck and Maintenance Shop	Fuel Spill Cleanup
Air Compressor	Maintenance Shop	--
PPE – TYVEK coveralls	Office – Maintenance Shop	PPE
Hard hat	Office – Maintenance Shop	PPE
Bulldozer	Maintenance Shop/work face	Excavation
Camera	Office	Photos of emergency situation
Chain saw	Maintenance Shop	Emergency clearing
Fire Extinguishers	All equipment, Office, Maintenance Shop	Fire Extinguishing
First Aid Supplies	Maintenance Shop, Office, Scale, Maintenance Truck	First Aid
Fuel Supply (Diesel)	Outside Maintenance Shop	Diesel Fuel
Gloves	Office – Maintenance Shop	Hand Protection
Jacks	Maintenance Shop	Lift equipment
Lighting equipment, portable	Maintenance Shop or Fill Area	Light
Phones – Portable	District, Landfill & Compliance Manager	Emergency Notification
Phone System	Office, Scalehouse, Maintenance Shop	Emergency Notification
Radio	Equipment, Scalehouse, Office, Maintenance Shop	Communication
Dust mask	Office - Maintenance	Dust
Submersible Pump	Maintenance Shop	Pump water
Tank truck	Maintenance Area	Transport water/dust control
Tool box	Maintenance Shop	Tools
Water Truck	Maintenance Shop	Fire, Dust Control
Welding/cutting equipment	Maintenance Shop	Welding/Cutting

E. EMERGENCY SPILL CONTROL NETWORK

1. Arrangements with Local Emergency Response Agencies and Hospitals

The list of local emergency response agencies and hospitals is included in the following section.

2. Notification Lists

A complete list of agencies and phone numbers has been developed in the case of an emergency or spill. This list is described below.

The nearest hospital is St. Luke's Hospital, 801 Ostrum Street, Bethlehem, PA, located approximately 6 miles from the landfill. The phone number at the hospital is (610) 954-4000. Their emergency unit is available 7 days a week, 24 hours a day. The emergency phone number at the hospital is (610) 954-4500. Additionally, St. Lukes' Anderson Campus is an option. Their address is: 1872 St. Luke's Blvd., Easton, PA 18045. Phone number is 1-866-STLukes.

Directions to St. Luke's Hospital
(from the Landfill)

Turn right onto Applebutter Road
At stop sign, turn left onto Shimersville Road
At next stop sign, turn right onto Route 412
Follow Route 412 through Bethlehem
Continue on Route 412 until you reach Route 378
Proceed straight across Route 378 at the traffic light
Continue on Delaware Avenue for approximately 1 mile
Turn right onto St. Luke's Place Road
Hospital is straight ahead on Ostrum Street

In case of fire, personal injury, or leachate release to the environment, the following entities shall be contacted:

Fire, Police, and Ambulance (for emergencies)
911

City of Bethlehem Public Works (Sewage, Water)
Emergency Service: (610) 865-7074
Nights/Weekends/Holidays: (610) 865-7074

Northampton County Emergency Management Agency
(610) 759-2600

City of Bethlehem Wastewater Treatment Plant
(610) 865-7168

Agencies to be notified immediately by telephone under the following conditions:

In the event of solid waste fire, leachate release to the environment, or other emergency dealing with solid waste or the gas flare system:

DEP Bureau of Waste Management Wilkes-Barre Regional Office	(570) 826-2516 or (570) 826-2511
DEP Bureau of Waste Management Bethlehem District Office	(610) 861-2070

In the event of a leachate release to the environment or any emergency that causes or has the potential to cause ground or surface water contamination or release of sediment due to erosion and sedimentation control failure:

DEP Bureau of Waste Management Wilkes-Barre Regional Office	(570) 826-2516 or (570) 826-2511
U.S. Environmental Protection Agency Region III 165 Arch Street Philadelphia, PA 19106	(215) 597-9825

In the event of actual or potential contamination of surface waters:

PA Fish Commission Southeastern Regional Office PO Box 8 Elm, PA 17521	(717) 626-0228

In the event of a hazardous waste spill:

National Response Center Washington, DC	(800) 424-8802

Petroleum spills would also prompt implementation of the SPCC Plan and the notification procedures detailed within that plan.

3. Downstream Notification Requirement For Storage Tanks

The 390,000-gallon leachate storage tank was constructed with a berm and underlying synthetic liner for secondary containment purposes. In the event of an overfill of the tank an overflow pipe was installed to discharge directly to a 750,000 gallon lined leachate lagoon next ot he tank. The secondary

containment is sufficient for controlling a spill should the leachate storage tank fail. For this reason it is not necessary to provide a downstream notification list.

F. STORM WATER MANAGEMENT PRACTICES

The IESI Bethlehem Landfill incorporates a storm water management system that isolates the active landfill working face from run-on and surface water drainage to reduce leachate generation and prevent contamination of surface water. This system is designed to divert surface water away from the landfill by the use of contoured land surfaces, collection pipes, stormwater channels and swales and to retain this water in five sedimentation basins prior to discharge.

Rainwater falling on the active portions of the landfill will infiltrate into the leachate collection system of the landfill. This will then be conveyed to the Bethlehem Wastewater Treatment Plant. Rainwater, which may contact the waste, does not flow to the storm water collection system.

The Landfill design also incorporates a final capping system consisting of a synthetic liner and drainage layer plus two feet of vegetative soil on the surface of each completed pad to significantly reduce leachate generation.

Post storm water inspections are conducted using the Inspection Form exhibited in Attachment #6.

G. SEDIMENT AND EROSION PREVENTION

Any area of the landfill property undergoing development is subject to potential erosion of soil. When a new pad area is initially excavated and/or prepared, soil may be exposed for an extended period prior to construction of the liner system and elimination of potential erosion. The final step in preparation of the soil base is compaction which significantly reduces erosion. In addition, silt fencing and staked hay or straw bales are placed along the toe of slopes, in temporary drainage swales and around drainage pipe and catch basin inlets.

Portions of the landfill where waste is actively being placed are subject to potential erosion. As waste is placed it is covered with six inches of soil at the end of each day. Since this cover material changes on a daily basis, effective erosion control is difficult. Eroded soil is primarily prevented from leaving the confines of the active area by the local contours. Side slopes of the active areas, which will not receive additional cover for some time, are seeded and covered with mulch to stabilize the area. Swales between active areas and areas with intermediate soil cover are formed into rip-rap channels to divert run-off away from the active portions.

Closed portions of the landfill are constructed using synthetic cap with a final 24 inches of soil cover. This is stabilized from erosion by producing a final vegetation cover. If erosion develops before vegetation becomes established, the damage is repaired and revegetated. Slopes are benched at regular intervals to form a drain swale that allows water to flow to a series of down drains. Run-off from the side slopes and the down drains is conveyed by swales covered with rip-rap. These swales channel water to sedimentation basins.

Soil is always exposed to run-off. IESI uses portable erosion & sedimentation controls such as silt fencing. As an additional control measure, the entire area drains to Sedimentation Basins. These basins capture all run-off from the borrow areas and allow silt to settle out prior to discharge of the water through the stand pipe.

In the unlikely event that mud or rocks are carried to adjacent roads from a large storm event, the landfill will contact the township, PennDOT officials and mobilize a clean-up crew immediately.

H. ADDITIONAL REQUIREMENTS FOR SARA III, SECTION 313 FACILITIES

This facility possesses chemicals regulated by SARA Title III, Section 313 and files annual reports as required.

I. CERTIFICATION FOR NON-STORM WATER DISCHARGES

This certifies that the IESI Bethlehem Landfill does not discharge non-storm waters to the storm water collection and discharge system. The landfill can verify the above based on the configuration of the leachate collection system and storm water management pipes, channels, and basins. The discharge from each of the five sedimentation basins is sampled semi-annually with the results reported to PADEP

The only non-storm water discharge is from the leachate collection system. Leachate generated on site is conveyed to the City of Bethlehem WWTP.

J. CONFINED SPACE ENTRY

Because there is occasionally a need for personnel to enter confined spaces such as manholes or leachate management chambers, a confined space entry program has been developed by the landfill. The procedure is followed whenever someone enters a confined space on IESI Bethlehem Landfill property. Certified outside contractors are used for all confined space entry work, IESI employees are instructed to not enter any confined space or structure not designed for human occupancy.

K. Revisions to the Plan

June 2008:
1. Inclusion of the PEPCO Bethlehem Renewable Energy Facility information.
2. Update to site conditions; office and scale relocation. New Attachment #2
3. Name and phone change for Safety/TCO; Jared Stevulak to Keith Overcash.
4. Add Rapid Response Inc. to emergency list.

Feb. 2010.
1. Update emergency equipment type and location
2. Update Material Inventory

June 2010
1. Add Stericycle to the emergency contact list
2. Add Joe Latona Contractor for emergency contact for heavy equipment
3. Update material storage capacity

Feb. 2012
1. Eliminate reference to Basin #7
2. Remove reference to Site Supervisor Gene Bonomo
3. Update facility site information
4. Add Kline's Services

Dec. 2012
1. Include Post Storm water Inspection and Inspection Form
2. Add emergency procedures to pump Phase IV pumping stations
3. Add Bestline Services – generator and pump rentals
4. Add Emergency Systems Services – Generator rental services.
5. Add Diefenderfer Electric – electric services

May 2015
1. Delete S. Donato, as Landfill Manager add Lee Zimmerman
2. Delete K. Overcash, Safety Manager replace with M. Shelden, Operations Manager
3. Minor edits for clarification

Dec. 2015
1. Delete Lee Zimmerman as District Manager add Allen Schleyer
2. Added Cap Removal to Attachment 4
3. Added Trenching to Attachment 4
4. Added St. Luke's Anderson Campus
5. Added Road Clean-up.

a. PrimaryEmergency Coordinator:
DistrictManager
Allen Schleyer
IESI PA Bethlehem Landfill Corp.
2335 Applebutter Rd.
Bethlehem, PA 18015
Work: 610-317-3200
Mobile: 484-357-3135
610-360-0470

b. Second Emergency Coordinator
Mike Sheldon
IESI PA Bethlehem Landfill Corp.
2335 Applebutter Road
Bethlehem, PA 18015
Work: 610-317-3200
Mobile: 484-357-2479

The emergency coordinators listed above are reachable at the landfill office during operating hours or through their mobile phone numbers during non-operating hours. The chain of command will be properly updated when new personnel fill these positions.

3. Duties and Responsibilities of the Coordinator

The Emergency Coordinator or authorized IESI Bethlehem Landfill employee will contact the following agencies as appropriate in the case of an emergency:

Agency/Personnel	Telephone Number
Police – Fire – Ambulance Emergency	911
Pennsylvania Emergency Management Agency (PEMA)	1-800-372-7362
Northampton County Emergency Management Agency	610-759-2600
National Response Center	800-424-8802
CHEMTREC	800-424-9300
TEEM Environmental	800-890-7745
Stericycle	866-783-7422 or 610-286-6996
PADEP Wilkes-Barre Regional Office	570-826-2516 or 2511
PADEP Bethlehem District Office	610-861-2070
Lower Saucon Township	610-865-3291
EPA 24 Hour Number	215-597-9898

PA Fish Commission	717-626-0228
PA State Police - Bethlehem	610-861-2026
Mobile Dredging & Pumping	800-635-9689
Joe Latona Contractor	570-883-7300
Bethlehem Sewage Treatment Plant	610-865-7168
Lehigh County Authority – Ind. Pretreatment	610-395-9782 610-390-9855
Rapid Response Inc.	877-460-1038
PEPCO – Bethlehem Renewable Energy	484-651-3822 / 410-274-9520
Kline's Services	717-898-8158
Best Line Equipment Rental – generator/pumps Schoenersville Rd, Bethlehem, PA	484-223-3814
Emergency System Services – generators Quakertown, PA	215-536-4973
Deifenderfer Electric Co.	610-434-9595 888-288-7291

The emergency response procedures and remedial activities will be administered and directed by the Emergency Coordinator assigned by the appropriate agency.

If the facility stops operations in response to a fire, explosion, emission, or discharge, the Emergency Coordinator must ensure that adequate monitoring is conducted for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

Immediately after an emergency, the Emergency Coordinator, with PADEP approval, must provide for treating, storing, or disposing of residues, contaminated soil, etc. from an emission discharge, fire, or explosion at the installation. Public responders and facility personnel, under the direction of the Emergency Coordinator shall take remedial measures as required to address the situation.

The Emergency Coordinator must ensure that in the affected areas on the installation, no material or waste incompatible with the emitted or discharged residue is processed, stored, treated, or disposed of until cleanup procedures are completed; and all emergency equipment listed in the plan is cleaned and fit for its intended use before operations are resumed.

Within 5 working days of the incident, the installation must submit a written report on the incident to the PADEP, Lower Saucon Township and the City of Bethlehem Wastewater Treatment Facility of the effect if the incident has extended or is likely to extend off-site or if aid is required from outside agencies to mitigate the incident. The report must include the following:

a. name, address and telephone number of person filing the report;

b. name, address and telephone number of the installation;

c. the date, time and location of the incident;

d. a detailed description of the incident;

e. a description of type and quantity of materials involved;

f. an assessment of any contamination of land, water or air that has occurred due to the incident;

g. estimated quantity and disposition of recovered materials or waste that resulted from the incident;

h. and a description of what actions the installation intends to take to prevent a similar occurrence in the future.

4. Chain of Command

Allen Schleyer – District Manager

Mike Shelden – Operations Manager

C. SPILL/LEAK PREVENTION AND RESPONSE

1. Pre-Release Planning

There are five main areas at the IESI Bethlehem Landfill where potential spills and/or leaks may occur. These areas are: the equipment storage/maintenance garage area, landfill working pad, landfill side slopes, gas flare station, and leachate piping system including leachate management chambers. These areas are shown on Attachment #2.

Equipment Storage/Maintenance Garage Area

Spills that could occur in the equipment storage area would be of a relatively minor volume, primarily associated with small equipment leaks or spills and would be handled as outlined in the Housekeeping Program section of this Plan. A spill in this area would be immediately contained using the proper absorbent materials to prevent during precipitation could result in some spilled liquid being carried off by storm water. Materials would be of relatively low toxicity and would be in the form of oil or fuels.

Within 5 working days of the incident, the installation must submit a written report on the incident to the PADEP, Lower Saucon Township and the City of Bethlehem Wastewater Treatment Facility of the effect if the incident has extended or is likely to extend off-site or if aid is required from outside agencies to mitigate the incident. The report must include the following:

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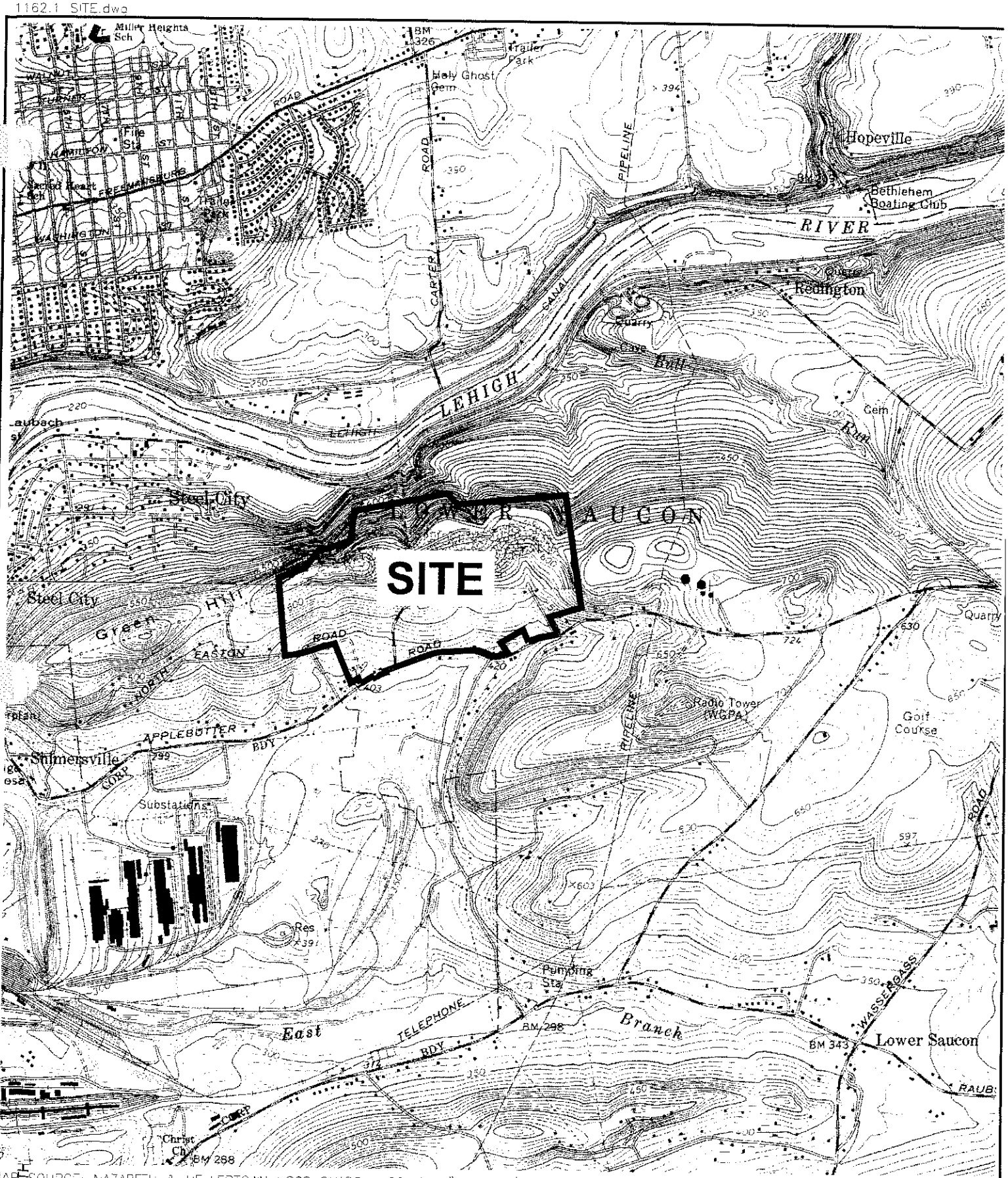
PREPAREDNESS, PREVENTION AND CONTINGENCY PLAN
(PPC PLAN)

ATTACHMENT #1

SITE LOCATION MAP

IESI PA BETHLEHEM LANDFILL CORPORATION
NORTHAMPTON COUNTY, PENNSYLVANIA

1162.1 SITE.dwg



MAP SOURCE: NAZARETH & HELLERTOWN USGS QUADS SCALE: 1" = 2000'

\\Autocad04\L

martin and martin incorporated
37 south main street • suite A
chambersburg, pennsylvania 17201
phone: (717) 264-6759

SITE MAP

LOWER SAUCON TWP NORTHAMPTON CO.

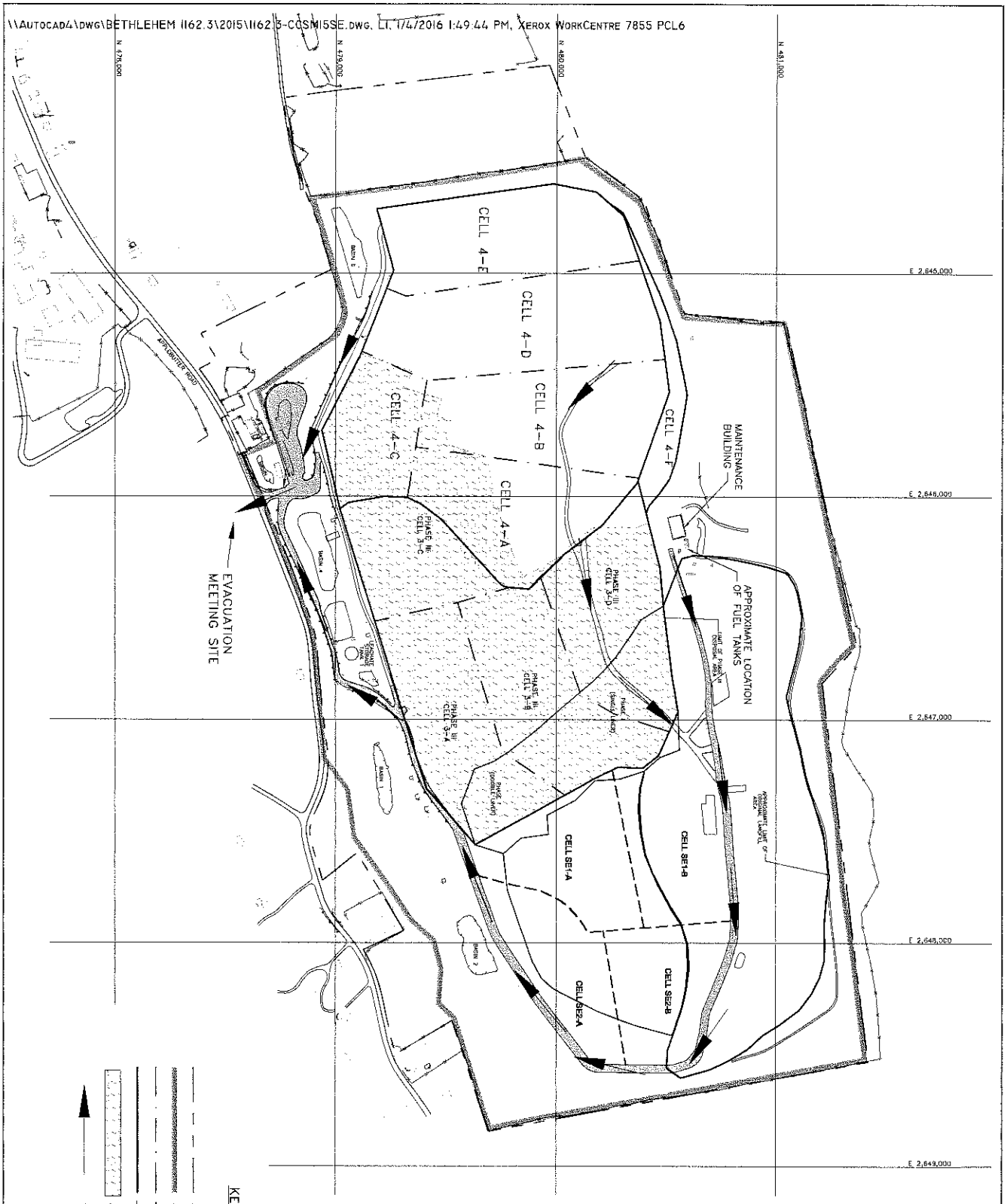
PA Bethlehem Landfill Corp.
2335 Applebutter Road Bethlehem, Pennsylvania 18015

PREPAREDNESS, PREVENTION AND CONTINGENCY PLAN
(PPC PLAN)

ATTACHMENT #2

GENERAL SITE PLAN
EVACUATION ROUTE

IESI PA BETHLEHEM LANDFILL CORPORATION
NORTHAMPTON COUNTY, PENNSYLVANIA



martin and martin incorporated
phone: (717) 264-6759
37 south main street • suite A
chambersburg, pennsylvania 17201

SHEET TITLE
LANDFILL SITE MAP (PPC PLAN)
SER

LOWER SAUCON TWP. NORTHAMPTON CO

PA Bethlehem Landfill Corp.
A Progressive Waste Solutions Company
PENNSYLVANIA

NO.	REVISION	DATE

SEAL

PROJ NO 1162.3 | DWN BY MSH/JTF | SCALE 1" = 200' | DATE DEC. 2015 | DRAWING NO 1

CADD FILE 1162.3-CCSM15SE.dwg

SSAL BY MSH | CHK BY RMB

200' 0' 200' 400'

PREPAREDNESS, PREVENTION AND CONTINGENCY PLAN
(PPC PLAN)

ATTACHMENT #3

MATERIAL INVENTORY

IESI PA BETHLEHEM LANDFILL CORPORATION
NORTHAMPTON COUNTY, PENNSYLVANIA

IESI
Bethlehem Landfill

Attachment #3
Material Inventory List

CHEMICAL NAME	CONTAINER TYPE	STORAGE LOCATION	MAX. VOLUME ON-SITE
Antifreeze	245 gallon	Maintenance Bldg.	245 gal
Transmission Fluid	275 gallon	Maintenance Bldg.	275 gal
Motor Oil	275 gallon	Maintenance Bldg.	275 gal
Hydraulic Oil	275 gallon	Maintenance Bldg.	275gal
Castrol Parts Cleaner	55 gallon	Maintenance Bldg.	55 gal
Motor Oil (diesel)	55 gallon	Maintenance Bldg.	55 gal
Hydraulic Fluid (Volvo)	55 gallon	Maintenance Bldg.	55 gal
Lube Oil (varius)	5 gallon pail	Maintenance Bldg.	25 gal
Gear Lube (grease)	55 gallon	Maintenance Bldg.	55 gal
Acetylene	gas bottle (1)	Maintenance Bldg.	2 bottles
Oxygen	gas bottle (2)	Maintenance Bldg.	2 bottles
Paints	Spray can - gallon	Maintenance Bldg.	Flam Cabinet 10 gal
Argon/CO2	gas bottle (1)	Maintenance Bldg.	1 bottle
Various Cleaners	<16 oz spray cans	Maintenance Bldg.	25 cans/ Cabinet
Waste Oil	1,000 gallon	Outside Maintenance Bldg.	Heater fuel 1,000 gallons
Propane	20 lb tank	Maintenance Bldg.	20 lb tank
Diesel Fuel	300 gallon	Outside Maint. Bldg.	Gen. Fuel 300 gallons
Gasoline	500 gallon	Outside Maint. Bldg.	500 gallons
Diesel Fuel (fuel truck)	3,000 gallon	Outside Maint. Bldg.	3,000 gallons
Used Anti-freeze	245 gallon	Outside Maintenance Bldg.	245 gallon
Cleaners	spray cans - gallons	Maint. Building	shelving
Nitrogen	90 lb gas bottle	Flare	5 (90 LB) & 2 (35LB)
Propane	300 lb gas bottle	Flare	1 (300 lb) and 1 (90 lb)
Bearing Oil	1 gallon	Flare	1 gallon
Landfill Deodorizer	55 gallon	Maintenance Bldg.	55 gallon

ATTACHMENT #4

WASTE RELOCATIOIN PLAN

IESI PA BETHLEHEM LANDFILL CORPORATION
NORTHAMPTON COUNTY, PENNSYLVANIA

ATTACHMENT 4

IESI BETHLEHEM LANDFILL

Waste Relocation Procedures

PART 1 - GENERAL PROCEDURES

LITTER CONTROL

The necessary litter fences will be constructed and placed to ensure positive control of litter from the excavated refuse. The excavated area litter should not be a problem during the trucking or pushing of refuse. It should have the consistency of a mulch rather than freshly disposed of trash. Should the consistency change, the appropriate action will be taken. Litter will be removed from the fences weekly, or more frequently as necessary.

DUST CONTROL

During dry, dusty periods of the year, and at any time when required, a water truck will be utilized to apply water to any areas which are generating dust.

ODOR MANAGEMENT

Whenever possible, waste relocation operations will be carried out in the period from October 15 to April 15. This should help minimize odor problems in 2 ways; first, the cooler weather appears to reduce odors; secondly, the exposed refuse will be covered with soil and or tarps to contain odors. If, during other time frames, and at any time, odors do become a problem, odor suppressants, lime or other controls will be applied. Odors will be monitored by daily "odor checks" at the working face and the site perimeter by landfill personnel. If any odors are detected at or near the site perimeter, the landfill shall immediately address it, indicating in the log the location and the steps taken to control the odors. Any such occurrences shall be noted in the landfill's daily operations log.

CAP REMOVAL

Under the supervision of the CQA Inspector, personnel will expose the cap liner system at the perimeter of the cap where it will be cut/removed. The cap will be cut and the edge covered and marked for future cap tie-in or removal efforts. The cover soils will be removed for use in landfill activities. The cap liner system will then be removed from the area, which area will be limited to that which can be managed within a day or two. Intermediate cover beneath the membrane will remain in place. The landfill will have a water truck capable of spraying odor

control liquids as needed to control odors. The landfill gas system will remain operational during the cap removal and placement of the new "piggyback" liner system.

NOISE

The relocation of trash will be generally limited to the operating hours of the facility per the permit, and will be consistent with the landfill ordinance of Lower Saucon Township. The noise associated with this activity will be consistent with other operations on site.

LEACHATE MANAGEMENT

The leachate pockets or seeps found during the trash removal and relocation to the lined pads will be handled through the site's leachate collection system. Precautions will be taken to ensure that no leachate will flow or migrate from the working area. IESI Bethlehem Landfill or its contractors will use the equipment on site to ensure there is no migration. If necessary to contain leachate, a pit or sump will be dug at the active face of each relocation area, from which leachate will be pumped into a tank truck for hauling to the leachate collection system. The pit will either be a concrete sump or be membrane lined, as may be necessary.

TRENCHING

Excavations (trenching) required to abandon/add gas wells will be done one at a time to prevent infiltration of rainfall.

STORMWATER MANAGEMENT

The stormwater runoff will be diverted around the working face of all pads and refuse removal areas under construction. Precautions will be taken to ensure there is not runoff from areas outside the working area infiltrating into exposed trash.

TRAFFIC

Waste relocation procedures will proceed by the hauling of refuse from the relocation areas to the lined pads. This traffic will not be directed to the scale area, nor will it utilize the access roads or public roads. Therefore, traffic should not be a problem at the site. In order to accommodate the additional volume of activity at the working face, an additional compactor, and truck for delivery of cover material may be utilized.

SCHEDULE OF RELOCATION

The schedule for relocation of the old trash will coincide with the earthwork schedule necessary to prepare subsequent pads for construction.

PART 2 - EXECUTION

2.01 HEALTH AND SAFETY REQUIREMENTS

A. Project personnel shall become thoroughly familiar with and follow the Waste Relocation Plan.

B. The Project Manager for the projects will be IESI Bethlehem Landfill.

C. Project management will be the responsibility of the Project Manager. The Project Manager will coordinate and manage all major activities. Day to day activities will be coordinated and managed as directed by the Project Manager. The CONTRACTOR should be in constant communication with the Project Manager.

D. The CONTRACTOR will work closely with the Project Manager to assure that all work is carried out in the safest manner possible. The CONTRACTOR will be responsible for assuring the overall implementation and enforcement of the plan, air monitoring, accident or incident investigation/reporting, contractor/employee compliance, and similar activities.

E. The CONTRACTOR and his workers must be knowledgeable about hazards to which they may be exposed during this project, as required by the OSHA Hazard Communication (HAZ-COM) Standards and the OSHA Hazardous Waste Operations and Emergency Response Standard. All OSHA, and other applicable regulations shall be followed by CONTRACTOR.

F. All on-site personnel, if required to wear respirators, will be fit tested and instructed in the proper use, cleaning, storage and limitations of their respirators.

G. All CONTRACTOR's personnel shall adhere to the safety practices for their respective specialties. Workers shall also exercise caution when working in adverse weather, on rough or slippery terrain, when operating on or around machinery and when vision and mobility are impaired due to the use of protective gear. The integrity of protective clothing shall be maintained and workers shall realize the increased difficulty in communicating when wearing a respirator (if its use is necessary). The following shall also be noted:

1. In unknown situations, always assume the worst and plan responses accordingly.

2. Use the buddy system; establish and maintain communication by use of hand signals, radios or other means as necessary.

3. Minimize contact with excavated or other potentially hazardous materials or liquids. Do not place equipment on tanks, drums or on the ground. Never sit or climb on tanks, drums or other vessels and containers.

4. Use disposable protective items when possible to minimize risks during work.

5. Smoking, eating and drinking are not allowed after entering the work zone and before personal decontamination.

6. Work breaks should be planned to prevent stress related accidents, fatigue or hot/cold environments.

7. Workers shall review and follow all site specific rules such as those dealing with the use of personal safety equipment (safety glasses), the use of climbing devices (ladders), sign in/sign out procedures, access, etc.

8. Conflicting situations between work requirements and safety procedures must be resolved by the CONTRACTOR and OWNER.

9. Unauthorized breaches of specified safety protocol will not be allowed. Personnel unwilling to comply with established safety procedures will not be allowed to continue to work at the site.

10. Be observant of the surroundings and also of others. Extra precautions are necessary when using protective gear due to reduced vision and hearing.

11. Use of contact lenses by workers are not allowed during any activities.

12. The wearing of a respirator will require the removal of all facial hair except small mustaches that are within the sealing surface of the respirator.

13. Changes in contingency plans will be posted to notify all personnel of any modifications to safety protocol related to changing site conditions.

14. When in doubt, withdrawal and re-assessment is the preferred course of action when encountering any potentially hazardous situation.

15. Be aware that chemical contaminants may mimic or enhance symptoms of other illnesses or intoxication.

16. The CONTRACTOR will maintain a daily log of meetings, facts, incidents, data, etc. relating to the project. Records will remain at the site during the duration of the project.

17. Observance of applicable OSHA, EPA and general good safety, health and specific equipment use practices is mandatory.

H. It is anticipated that all work will be performed using Level D personnel protective equipment as described below. Level D personnel protective equipment consists of the following unless otherwise recommended by the CONTRACTOR and approved by the OWNER.

1. Coveralls (disposable coveralls may be desirable);
2. Safety boots or substantial shoes/boots (as applicable);
3. Safety glass or goggles;
4. Hard hat and,
5. Work gloves

2.02 ODOR CONTROL

A. In the decomposition of solid waste, gases are produced creating possible pungent odors when exposed to the ambient air. The CONTRACTOR shall maintain safe working conditions in the presence of the gases and minimize odors migrating off-site which will cause public concern. Odor control from the project is critical.

B. The CONTRACTOR shall employ methods of odor control that must include, but not be limited to, the following:

1. Minimize the exposed area of refuse during relocation operations;
2. Apply cover (tarps, foam, and appropriate thickness of cover material, etc.) over any exposed trash at the end of each day and during project delays;
3. The use of odor suppressants. At least two "foggers" or equivalent (e.g. sprayer on arm of trackhoe) must be provided by the CONTRACTOR. The foggers must be strategically placed and used as directed by the OWNER.
4. The placement of lime on odor producing areas.

C. Based on previous projects, all soil needed for cover should be available from the relocation area by the stripping/re-use procedure. Any additional soil material needed must be taken from the soil stockpile as directed by the OWNER.

2.03 LEACHATE/STORMWATER MANAGEMENT

A. In general, the CONTRACTOR shall:

1. Collect all leachate in the refuse excavation area in such a manner as not to endanger public health, property or any portion of the work under construction or completed. The collected leachate must be pumped and/or

transported to the tie-in point provided by the OWNER. Stormwater must be routed to the appropriate Sediment Basin.

2. The CONTRACTOR must provide and maintain pumps, sumps, suction and suitable discharge lines, temporary storage and other dewatering system components necessary to convey leachate away from any excavation, as approved by OWNER.

3. Prior to beginning refuse relocation excavation activities, make visual observations or utilize survey data to establish a method of routing stormwater from the work areas to the Sediment Basin and containing leachate within to be reviewed for approval by the OWNER. Earthen dikes may be constructed surrounding the work area, and located to minimize the area inside the dikes, thus reducing potential leachate generation. The area immediately outside the dike will be sloped away from the dike to direct stormwater away from exposed refuse to the site stormwater management system and appropriate Sediment Basin.

4. Maintain, at all times, proper and effective sedimentation and erosion control around the Refuse Excavation Area and the Soil Stockpile Area as approved by State and Local Authorities. This shall include, but not be limited to placement of silt fencing and/or other means of silt retention during construction, containment of all excavations and stockpiles, directing, and channeling of all stormwater to Sediment Basins, and all other methods to prevent silty run-off from reaching a receiving water course.

2.04 LITTER CONTROL

A. The uncovering of the existing refuse may cause litter to be blown away from the working area. The CONTRACTOR shall use litter fences and/or windscreens downwind of the immediate work area to contain blowing litter for pick-up and disposal.

B. A temporary cover shall be placed over exposed waste to prevent blowing litter as well as minimize odors. As indicated previously, cover (tarps, foam, an appropriate thickness of cover material, etc.) shall minimally be placed over all exposed waste at the end of each operating day.

C. Litter may also be scattered during on site transportation of the refuse to the new landfill Pad(s). If this does occur, the CONTRACTOR shall construct additional litter fences or cover the loads. The CONTRACTOR will be responsible for continuously policing the roadway to control litter.

D. Any refuse which is blown, tracked, etc. away from the working area must be collected by the CONTRACTOR by the end of each day and disposed in the active Pad(s) or another location approved by the OWNER.

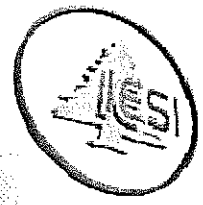
2.05 "SUSPECT" MATERIAL ENCOUNTERED DURING REFUSE EXCAVATION

A. Due to the inherent nature of excavating old refuse, the CONTRACTOR shall be constantly aware of the potential for encountering, not only leachate, but special wastes termed "suspect" materials which may need special consideration for handling and disposal. "Suspect" materials may include, but not be limited to, containers or drums (crushed or whole), liquids or leachate, strange-shaped or typically industrially generated items, uncommon odors, significant levels of volatile organic compounds (VOC's) detected by instrumentation, soil uncommon to a sanitary landfill, powders, or material that looks like it could be an asbestos containing material (e.g., transit board, asbestos roofing or shingles, or pipe lagging).

B. If the CONTRACTOR unearths "suspect" material, appropriate personal protective equipment must be utilized assuming the worst case scenario. The OWNER's representative shall be notified immediately. The OWNER will notify the PADEP Wilkes-Barre Regional Office within 24 hours.

C. Upon encountering "suspect" material, the area in question shall be initially assessed by the OWNER. If the area is large, it may be cordoned off and prepared for on site sampling. Dikes shall be formed around the area as appropriate to prevent infiltration of leachate of contamination of other fill by the "suspect" material. If the area is small, isolated and in the way of progress, the material shall be placed in a container for further evaluation and sampling.

D. "Suspect" materials will be evaluated and handled as necessary. The CONTRACTOR may be directed to place "suspect" wastes in the appropriate containers or cordon off the area. Sampling, testing and evaluating the "suspect" material may be performed by the OWNER. If the "suspect" materials must be disposed off-site, the transportation and disposal costs will be the responsibility of the OWNER. If the "suspect" material may be disposed of on-site, the CONTRACTOR will relocate the waste in accordance with these Technical Specifications. No additional compensation will be paid for material disposed on-site.



PA Bethlehem Landfill
2335 Applebutter Road
Bethlehem, PA 18015-6004

INCIDENT REPORT

DATE: _____ COMPANY: _____

TIME: _____ DRIVER: _____

LOCATION OF INCIDENT: _____

_____

DESCRIPTION OF INCIDENT:

_____

_____

_____

_____

_____

_____

_____

_____

FOLLOW UP ACTION TAKEN: _____

_____

_____

_____

COMMENTS: _____

_____

_____

PERSON REPORTING: _____ TITLE: _____

SITE MANAGER REVIEW: _____

DRIVER SIGNATURE: _____

PREPAREDNESS, PREVENTION AND CONTINGENCY PLAN
(PPC PLAN)

ATTACHMENT #5

WASTE REJECTION PROCEDURES

IESI PA BETHLEHEM LANDFILL CORPORATION
NORTHAMPTON COUNTY, PENNSYLVANIA

ATTACHMENT 5

IESI BETHLEHEM LANDFILL

Waste Rejection Procedure

PART 1 - GENERAL PROCEDURES

SCALEHOUSE

The first area that waste screening takes place once a load comes on site is at the scalehouse. The scale attendant is responsible for checking with the driver of each load to find out what the load consists of. If the material consists of asbestos, residual waste or contaminated soil a manifest is required to be given to the scale house prior to disposal. In addition outside of the scale house is an observation deck that is used to visually screen the load.

If after reviewing the manifest and visually inspecting the load, it is determined that the waste is unacceptable for disposal, the compliance manager and/or landfill manager need to be contacted immediately.

LANDFILL WORKING FACE

The equipment operators and spotters routinely observe the waste as it is dumped from the transporters truck onto the floor of the working face. If the equipment operator or spotter observes waste that is unacceptable for disposal at the facility they will not cover the waste and immediately contact the scalehouse and the landfill manager and/or compliance manager.

Considering that the material has most probably been unloaded by the time it is found unacceptable at the working face alternative measures must be followed. The material must remain segregated from the rest of the incoming trash and proper disposal of the material must be arranged for.

PART 2 – REPORTING

Upon spotting unacceptable waste the scale attendant, equipment operator or spotter is to immediately notify the compliance manager and/or landfill manager. After which a waste rejection form needs to be completed and the event needs to be noted on the daily operation log. The generator, DEP and Township are also to be immediately contacted by telephone to alert them to the unacceptable waste.

After cleanup an incident report needs to be submitted to the DEP and Lower Saucon Township following the procedures noted in the notification procedure of the PPC Plan.

PART 3 – CLEANUP

If an unacceptable wastestream is found after the load has been deposited onto the floor of the working face a cleanup effort will need to take place. An example of this type of situation would be a municipal waste load that has unloaded and an equipment operator spots red biohazard bags present amongst the waste. The load is to be visually inspected, not handled to prevent injury. The hauler will be retained onsite to find out who the generator of the material is. Once the generator is found they will be immediately contacted.

Once this material is deposited onto the working face of the landfill site personnel will take responsibility to ensure that the material is properly handled during the cleanup effort. The material will be segregated from the rest of the waste and the proper personnel will be contacted to handle the material. For example if this material is determined to be a hazardous waste then an environmental cleanup contractor needs to be contacted and if it is an infectious waste then a licensed infectious waste hauler needs to be contacted. Please see the notification list in Section B.3. of the PPC Plan.

WASTE ACCEPTANCE CRITERIA
IESI BETHLEHEM LANDFILL

Type of Analysis	Parameter		Maximum Value	Basis
SW 846, Method 1010 or 1020	CHARACTERISTIC OF IGNITABILITY		Non-Ignitable (>140F)	1
SW 846, METHOD 1110	CHARACTERISTIC OF CORROSIVITY		3.5<pH<12.5	1
REACTIVE SULFIDE	CHARACTERISTIC OF REACTIVITY		<500mg H2S/kg (EPA Action Level)	1
REACTIVE CYANIDE	CHARACTERISTIC OF REACTIVITY		<250 mg HCN/kg (EPA Action Level	1
TCLP	CHARACTERISTIC OF TOXICITY			
	Metals			
	Arsenic	< or =	3.75 mg/l	4
	Barium	< or =	75.0 mg/l	4
	Cadmium	< or =	0.75 mg/l	4
	Chromium	< or =	3.75 mg/l	4
	Lead	< or =	3.75 mg/l	4
	Mercury	< or =	0.10 mg/l	3
	Selenium	< or =	0.75 mg/l	4
	Silver	<	3.75 mg/l	4
	Volatile Organics			
	Benzene	< or =	0.375 mg/l	4
	Carbon tetrachloride	< or =	0.375 mg/l	4
	Chloroform	< or =	4.5 mg/l	4
	1,2-Dichloroethane	< or =	0.375 mg/l	4
	1,1-Dichloroethylene	< or =	0.525 mg/l	4
	Methyl ethyl ketone	< or =	150.0 mg/l	4
	Pyridine	< or =	3.75 mg/l	4
	Tetrachloroethylene	< or =	0.525 mg/l	4
	Trichloroethylene	< or =	0.375 mg/l	4
	Vinyl chloride	< or =	0.15 mg/l	4
	Chlorobenzene	< or =	75.0 mg/l	4
	Semi-Volatile Organics			
	Cresol	< or =	150.0 mg/l	5
	o-Cresol	< or =	150.0 mg/l	4
	m-Cresol	< or =	150.0 mg/l	4
	p-Cresol	< or =	150.0 mg/l	4
	1,4-Dichlorobenzene	< or =	5.625 mg/l	4
	2,4-Dinitrotoluene	< or =	0.0975 mg/l	4
	Hexachlorobenzene	< or =	0.0975 mg/l	4
	Hexachloro-1,3-butadiene	< or =	0.375 mg/l	4
	Hexachloroethane	< or =	2.25 mg/l	4
	Nitrobenzene	< or =	1.5 mg/l	4
	Pentachlorophenol	< or =	75.0 mg/l	4
	2,4,5-Trichlorophenol	< or =	300.0 mg/l	4
	2,4,6-Trichlorophenol	< or =	1.5 mg/l	4
	Herbicides/Pesticides			
	Chlordane	< or =	0.0225 mg/l	4
	Endrin	< or =	0.015 mg/l	4
	Heptachlor	< or =	0.006 mg/l	4
	Lindane	< or =	0.3 mg/l	4
	Methoxychlor	< or =	7.5 mg/l	4
	Toxaphene	< or =	0.375 mg/l	4
	2,4-D	< or =	7.5 mg/l	4
	2,4,5-TP (Silvex)	< or =	0.75 mg/l	4

WASTE ACCEPTANCE CRITERIA
IESI BETHLEHEM LANDFILL

Type of Analysis	Parameter		Maximum Value	Basis
TCLP	**NON-CHARACTERISTIC METALS**			
	Aluminum	<	10,000 mg/l	2
	Antimony	< or =	50 mg/l	6
	Beryllium	< or =	0.50 mg/l	6
	Boron	<	10,000 mg/l	2
	Copper	<	103.5 mg/l	3
	Iron	< or =	10,000 mg/l	2
	Manganese	< or =	10,000 mg/l	2
	Molybdenum	< or =	10,000 mg/l	2
	Nickel	<	113 mg/l	3
	Tin	<	10,000 mg/l	2
	Titanium	<	10,000 mg/l	2
	Thallium	< or =	10 mg/l	6
	Zinc	<	74 mg/l	3
TCLP	**NON-CHARACTERISTIC HYDROCARBONS**			
	Aromatic Halogenated	<	1,000 mg/l	2 (I)
	Aliphatic Halogenated	<	1,000 mg/l	2 (I)
	Aromatic	<	10,000 mg/l	2 (I)
	Aliphatic	<	10,000 mg/l	2 (I)
ASTM WATER LEACHING PROCEDURE	**MISCELLANEOUS**			
	Ammonia-Nitrogen	<	10,000 mg/l	2
	COD	<	30,000 mg/l	3 (II)
	Cyanide	<	32.5 mg/l	3
	Fluoride	<	10,000 mg/l	2
	Oil and Grease	<	10,000 mg/l	2
	Total Petroleum Hydrocarbons	<	10,000 mg/l	2
	Chloride	<	10,000 mg/l	2
	TOX	< or =	1,000 mg/l	6 (III)
	Nitrate	<	10,000 mg/l	2
	Nitrite	<	10,000 mg/l	2
	Sulfate	<	10,000 mg/l	2
	pH	<	3.3<pH<12.5	1
TOTAL ANALYSIS	**MISCELLANEOUS**			
	Total Solids (Lower Limit)	> or =	20.00%	Regulation
	Total Dissolved Solids		No Limit	7
	Total Volatile Solids		No Limit	7
	Free Liquids		No Free Liquids	Regulation
	PCBs (VII)	<	50 mg/kg (RCRA LIMIT)	1
	Oil and Grease	< or =	10,000 mg/kg	6 (IV)
	Total Petroleum Hydrocarbons	< or =	10,000 mg/kg	6 (IV)
	Total Phenols	< or =	10,000 mg/kg	6 (IV)
	BTEX			
	Benzene	< or =	7.50 mg/kg	4 (V)
	Toluene	< or =	10,000 mg/kg	6 (IV)
	Ethyl Benzene	< or =	10,000 mg/kg	6 (IV)
	Xylene	< or =	10,000 mg/kg	6 (IV)
	OTHER			
ASTM WATER LEACHING PROCEDURE MISCELLANEOUS	Total Solids / BOD-5	<	No Limit / 15,000 mg/l	7 / 3 (II)
	Volatile and Semivolatile Organics (vi)	<	15,000 mg/l	2 (I)
	Acids and Bases (vi)	<	10,000 mg/l	2 (I)
	Strong Oxidizers (vi)	<	10,000 mg/l	2 (I)
	Metals, Salts, Nutrients	<	10,000 mg/l	2 (I)
	Products and Various Substances (vi)	<	10,000 mg/l	2 (I)

PREPAREDNESS, PREVENTION AND CONTINGENCY PLAN
(PPC PLAN)

ATTACHMENT #6

POST STORM WATER INSPECTION FORM

IESI PA BETHLEHEM LANDFILL CORPORATION
NORTHAMPTON COUNTY, PENNSYLVANIA

BETHLEHEM LANDFILL
POST RAIN EVENT INSPECTION

DATE: _____ Estimated Rainfall: _____

INSPECTOR: _____

ROAD MAINTENANCE

ROAD	MAINTENANCE NEEDED			REPAIRS NEEDED
	WATERED	SWEPT	WASHED	
Loop @ scale area				
Paved Entrance				
Haul road to notch				
Applebutter Road				
Perimeter Berm				

LEACHATE SEEPS	PRESENT		SEEP DESCRIPTION SCHEDULE FOR REPAIRS
	YES	NO	
1. West slope			
2. South Slope			
3. North Slope			

NOTES: ANY LEACHATE SEEP FLOWING OFF THE LANDFILL MUST BE CORRECTED IMMEDIATELY.

EROSION Slopes/Benches	EROSION		TRASH EXPOSED		DISCHARGE ISSUES	DESCRIPTION SCHEDULED REPAIRS
	YES	NO	YES	NO		
1. North Slope- By Shop						
2. North Slope - Cell 4F						
3. South Slope - East of Flare						
4. South Slope- West of Flare						
5. West Slope						
6						
7						
8						

BASINS, PIPES & CHANNELS	EROSION		Accumulated Sediment		DISCHARGE ISSUES	DESCRIPTION SCHEDULED REPAIRS
	YES	NO	YES	NO		
Basin 1						
Basin 2						
Basin 3						
Basin 4						
Basin 6						