

# BANGOR BOROUGH AUTHORITY



## Multi-Municipal Site Evaluation/Permitting of a Yard Waste Composting Facility

### *Environmental Resources Associates*

706 MONROE STREET  
STROUDSBURG, PENNSYLVANIA 18360

CONSULTANTS IN ENVIRONMENTAL RESOURCE MANAGEMENT

ERA 

---

Printed on Recycled Paper

**SWANA/PADEP Technical Assistance Program**

## TABLE OF CONTENT

1.0 Executive Summary.....	1.0
2.0 Background .....	2.0
3.0 Overview and Current Situation.....	2.0
4.0 Site Evaluations.....	3.0
5.0 Site Selection.....	4.0
6.0 Permit Application.....	5.0
7.0 Project Development.....	6.0

### Attachments

Pennsylvania Department of Environmental Protection Act 101... Attachment A  
Leaf Waste Collection Requirements

Yard Waste Composting Facility Application..... Attachment B

## **1.0 Executive Summary**

Bangor Borough (Borough) is an Act 101 mandated municipality located in Northampton County. The Borough incorporated the Bangor Borough Authority (Authority) under the Pennsylvania Municipal Authorities Act. The Authority is responsible for the planning, implementation and administration of municipal waste and recycling programs.

The Authority requested technical assistance through the Recycling Technical Assistance Program. Environmental Resources Associates (ERA) was selected to provide pertinent regulatory requirements and consulting services to assist the Authority in establishing a leaf and yard waste program, specifically to site design and permit a multi-municipal leaf and yard waste compost facility consistent with the requirements of Act 101.

ERA and the Authority participated in several meetings with the Slate Belt Council of Government (COG) and its member municipalities to review options available and the potential benefits and challenges involved with developing a multi-municipal leaf and yard waste compost facility/program. A survey conducted by the Authority affirmed the member municipalities' support and several municipalities identified potential sites for developing a compost facility for consideration and evaluation.

ERA performed site inspections and preliminary desktop evaluations of data on four selected candidate sites proposed by the Authority and interested municipalities. Based on the evaluations and availability of the sites, one site was selected for detailed evaluation. The selected site for the compost facility is a 4.1-acre tract located in neighboring Upper Mount Bethel Township. The selected candidate site received a detailed was evaluated based on the PADEP "Guidelines for Yard Waste Composting Facilities" (Guidelines).

ERA subsequently developed the conceptual design for the compost facility and completed all forms and narratives required for submission under PADEP Guidelines and Regulations. The permit application was submitted on January 20, 2009 and is currently under DEP review.

The Authority/Borough and Township intend to develop an inter-municipal agreement for development and operation of the compost facility.

ERA recommends that the inter-municipal agreement:

Is crafted with great care; all functional and financial aspects of the project must be considered.

Clearly identify and succinctly define the roles, responsibilities and obligations of each participant (current and future).

ERA also recommends that an Act 101, Section 902 Grant Application be prepared to request financial assistance (if available) for site development, equipment and other eligible cost associated with the development of the multi-municipal compost facility/program.

## **2.0 Background**

Bangor Borough is a mandated municipality located in Northampton County. The Borough has a total area of 1.6 square miles, a population of 5,319 persons and 2,105 households (2000 census). The Borough incorporated the Bangor Borough Authority under the Pennsylvania Municipal Authorities Act. The Authority is responsible for the planning, implementation and administration of municipal waste and recycling programs.

The Authority provides curbside collection and proper disposition of the residential municipal waste and designated recyclables (aluminum and tin cans, glass bottles, newspapers, mixed paper, cardboard, and HDPE and PET plastic bottles) via contracted services with a private hauler.

Curbside collection of municipal waste and recyclables are provided by the contractor, twice each month on alternating weeks. The Authority's collection contract also provided for residential curbside collection of leaf and yard waste. Residents were required to purchase paper biodegradable leaf and yard waste collection bags. The thirty (30) gallon capacity biodegradable bags were sold at the Authority office in bundles of five (5) at a price of \$1.45 per bundle. No limit was set on number of bags per household per collection. Leaf and yard waste was collected only during the fall, October through December and therefore did not comply with the requirements of Act 101(see Attachment A).

The Authority requested technical assistance through the Recycling Technical Assistance Program. Environmental Resources Associates (ERA) was selected to provide pertinent regulatory requirements and consulting services to assist the Authority/Borough in establishing a leaf and yard waste program, specifically to site design and permit a leaf and yard waste compost facility consistent with the requirements of Act 101. The Authority's intent is to pursue a multi-municipal approach to develop a leaf and yard waste facility/program. This approach will avoid duplication of efforts, provide the benefits of economy of scale and enhance the prospects of receiving Act 101 Section 902 grant assistance (if available) essential for project development and implementation.

### **3.0 Overview and Current Situation**

ERA met with Authority and Borough representatives to develop a strategy and review the regulatory requirements for the establishment of a leaf and yard waste program and the development of a multi-municipal leaf and yard waste facility/program. Subsequently ERA and the Authority participated in several meetings with the Slate Belt Council of Government (COG) and its member municipalities (the Boroughs of Bangor, Pen Argyl, Portland, Roseta, and the Townships of Lower Mount Bethel, Upper Mount Bethel, Washington) to review options available for and the potential benefits and challenges involved with developing a multi-municipal leaf and yard waste compost facility/program. The Borough of Bangor is the only member of the COG that is a mandated municipality.

ERA arranged a tour of a nearby multi-municipal compost facility located in the Stroud Township, Monroe County for Authority and COG member municipalities. The tour presented an opportunity to gain insight relative to site development requirements and observe handling processing equipment and procedures. The tour was conducted by Mr. James Decker, Stroud Township Supervisor and compost facility manager. During the tour Mr. Decker addressed questions and concerns posed by the participants.

The Authority surveyed the COG member municipalities to determine their interest (if any) in participating in a multi-municipal leaf and yard waste program. Interested municipalities were also requested to indicate if they own any property (in the range of two to five acres) that they were willing to make available for consideration for development of a leaf and yard waste compost facility to service a multi-municipal program. The consensus of the municipalities surveyed was positive and several municipalities identified potential candidate sites for consideration and evaluation.

The Authority and Borough worked cooperatively to develop a leaf waste collection program to bring it into compliance with the requirements of Act 101. ERA participated in several meetings with Authority and Borough representatives to review leaf and yard waste collection practices, equipment needs and regulatory requirements (see Attachment A). ERA also provided examples of public education and information programs.

The Borough initiated a curbside collection program for leaf and yard waste in 2008 with an initial curbside collection in the spring followed by a fall collections during October through December. A drop-off site for leaf and yard waste was also established at the Borough's Memorial Park. Collection equipment necessary to provide collection services was funded in part by an Act 101 Section 902 Grant.

Borough public works personnel use dump trucks and vacuum trucks for leaf waste collection. As an interim, measure leaf and yard waste is delivered to compost sites located in adjacent Monroe County, Pennsylvania. Currently the leaf and yard waste collected is being delivered to Scott Farms, a privately operated compost facility located to the west of the Borough in Saylorsburg and a municipal facility located to north in Stroud Township. Stroud Township is accepting and processing the Borough's leaf and yard waste as a courtesy, while the Authority pursues the development of the planned multi-municipal compost facility/program.

## **4.0 Site Evaluation**

Factors, which required careful consideration when selecting a potential compost facility site, include:

### Location

Location of a municipal yard waste composting facility is one of the prime considerations in the site selection process. Ideally, the sites should be centrally located. A central location minimizes travel distance for leaf collection vehicles and residents. The site should be easily accessible. The most convenient composting site location for many municipalities is in close proximity to the municipal office or maintenance building. Benefits of these locations often include enhanced security and cost savings for equipment and labor. Location must, however, be weighed against many other factors.

### Site Characteristics

**Slope and Topography** - A gentle slope, two to four percent, is preferred to prevent water from ponding on the site. Ponding water can result in anaerobic conditions and generate malodor or act as a breeding ground for mosquitoes. A gentle slope will also assist in the control of surface water run-off.

**Soils Characteristics** - Soil characteristics must be carefully evaluated. Soil types, percolation rates and depth to groundwater must be researched. A site's soils must be well drained to prevent ponding and assist in storm water run-off. A site's soils should have a structure that can support heavy vehicle use and have a depth to ground water of more than 3.3-feet, to prevent any potential for contamination of ground water.

### Proximity to Water Supply

Water is essential to the compost process; a nearby water source is required to

maintain proper moisture levels in windrows. In addition, water is important for safety (in the event of fire) and for seasonal dust suppression. The water source can be a well, hydrant, lake, pond, river, stream or a tanker truck.

#### Proximity to Residential Development and Sensitive Receptors

Sites located in close proximity to residential properties or sensitive receptors (schools, hospital, nursing homes, etc.) should be avoided to the extent possible. Noise from machinery, odor potential and visibility of the operation may be perceived as nuisances.

Existing mature trees and hedgerows bordering the site will be maintained and enhanced by additional plantings, to act as a visual and noise buffer.

#### Impacts

Timber removal, grubbing of brush and excavation work may be required to prepare a compost site. These activities can adversely affect the existing natural habitat and must be evaluated.

### **5.0 Site Selection**

Based on the factors outlined above, four sites were selected for a preliminary inspection and a desktop evaluation of data was conducted on each proposed compost site. The desktop evaluation indicated that the candidate sites presented challenges relative to meeting the established criteria for developing a leaf and yard waste compost facility. Based on the preliminary evaluation, one candidate site appeared to have the greatest potential for meeting PADEP Guidelines and successful development as a leaf and yard waste compost facility.

The selected candidate site is located in Upper Mount Bethel Township (Township) a neighboring municipality, approximately six miles east of the Borough. Upper Mount Bethel Township has a total area of 44.3 square miles, a population of 6,063 persons, 2,363 households and 139.7 persons per square mile (2000 census). It is noteworthy that the combined population and number of households of the Borough of Bangor and Upper Mount Bethel Township equal approximately thirty percent of the combined total population and households of the nine COG member municipalities (34,068 persons and 13,333 households).

The selected 4.1-acre tract site for the compost facility is located on a 61.46-acre parcel owned by the Township. The compost facility will provide a drop-off site area and is of sufficient size to accommodate the volumes of leaf and yard waste collected by the Borough, Township and other interested municipalities. The compost facility is located in an area that was previously operated as a sand

and gravel quarry and stock piles of gravel remain on site. The onsite stockpiles of gravel will be of great benefit providing a significant cost savings for site development and maintenance. The facility will be located adjacent to the Township's planned new administrative and maintenance complex thus providing additional benefits including, enhanced security, convenience and operations cost savings for equipment and labor.

The site was evaluated based on the above noted environmental, social and economic considerations and the limitations and requirements specified in the PADEP "Guidelines for Yard Waste Composting Facilities" (Guidelines), as noted below.

#### PADEP Guidelines Sitting Restrictions (Exclusionary Criteria)

"Yard Waste composting operations, including storage, composting, and curing, shall not occur in the following areas or the following distances, unless the operator takes special precautions and receives written authorization from the Department":

- a. In a 100-year flood plain.
- b. In or within 300-feet of an exceptional value wetland.
- c. In or within 100-feet of a wetland other than an exceptional value wetland.
- d. Within 100-feet of a sinkhole or area draining into a sinkhole.
- e. Within 300-feet measured horizontally from an occupied dwelling unless the owner has provided a written waiver consenting to the facility being closer than 300-feet.
- f. Within 50-feet of a property line, unless the operator demonstrates that only curing of compost is occurring within that distance.
- g. Within 300-feet of a water source.
- h. Within 3.3-feet of a regional groundwater water table.
- i. Within 100-feet of a perennial stream.

## **6.0 Permit Application**

ERA developed the conceptual design for the facility, completed all forms and narratives required under PADEP Guidelines and Regulations. ERA conducted a



site walkover with representatives of the PADEP, Borough, Upper Mount Bethel Township and the Authority and reviewed the compost facility permit application with Authority and Township representatives prior to submission. The compost facility permit application was submitted to PADEP on January 20, 2009. A copy of the application is included in Attachment B.

## **7.0 Project Development and Operation**

The Authority/Borough and Township intend to develop an inter-municipal agreement detailing requirements and obligations for participating municipalities. Inter-municipal agreements are authorized under Act 180. of July 12, 1972. Act 180 authorizes municipalities to enter into joint cooperation agreements with other municipalities in the exercise or the performance of their respective governmental functions, powers or responsibilities.

ERA recommends that the inter-municipal agreement:

- ☑ Is crafted with great care, all functional and financial aspects of the project must be considered.
- ☑ Clearly identify and succinctly define the roles, responsibilities and obligations of each participant (current and future).

ERA Also recommends that an Act 101, Section 902 Grant Application be prepared to request financial assistance (if available) for site development, equipment and other eligible cost associated with the development of the multi-municipal compost facility/program.

## **ATTACHMENT A**

### **PENNSYLVANIA'S ACT 101 LEAF WASTE COLLECTION REQUIREMENTS**

Act 101, Section 1501 (c) (1) (ii) and (iii), requires persons in mandated municipalities to separate leaf waste from other municipal waste generated at residential, commercial, municipal and institutional establishments. **“Leaf waste” is defined in the Act and its regulations as “leaves, garden residues, shrubbery and tree trimmings, and similar material, but not including grass clippings.”** Source separated leaf waste, as with other recyclable material, is to be collected at least once per month as set forth in Act 101 Section 1501(c) (2) and (3) and processed at PA, DEP-approved composting facilities.

Act 101 mandated municipalities with programs that collect leaves only in the fall are not in compliance with the Act. Mandated municipalities desiring to establish leaf waste collection programs in compliance with Act 101 must, as a minimum:

1. Require by ordinance that leaf waste consisting of leaves, garden residues, shrubbery and tree trimmings, and other similar material are targeted for collection from residences and commercial, municipal and institutional establishments: and
2. **Establish a scheduled day, at least once per month, when leaf waste is collected from residences; or**
3. **Establish a scheduled day, not less than twice per year and preferably in the spring and fall, when leaf waste is collected from residences, and facilitate a drop-off location or other collection alternative approved by PA DEP that allows persons in the municipality to deposit leaf waste for the purposes of composting or mulching at least once per month. The leaf waste drop-off location may be located in a neighboring municipality or at a private sector establishment provided that an agreement is in place to utilize that location and the municipality keeps residents and commercial, municipal and institutional establishments informed of the option at least once every six months.**
4. Ensure that commercial, institutional and municipal establishments generating leaf waste have collection service.

Municipalities are encouraged to manage source separated Christmas trees as leaf waste for processing at a PA DEP-approved composting facility.

**ATTACHMENT B**

**YARD WASTE  
COMPOSTING FACILITY  
APPLICATION**

*Environmental Resources Associates*

706 MONROE STREET  
STROUDSBURG, PENNSYLVANIA 18360

CONSULTANTS IN ENVIRONMENTAL RESOURCE MANAGEMENT

ERA



---

*Printed on Recycled Paper*

# **TABLE OF CONTENT**

## **Yard Waste Composting Facility Application.....Section 1.**

### **Attachments**

Site Plan.....	Attachment A
Siting Restrictions.....	Attachment B
Nuisance Control Plan.....	Attachment C
Topographic Map.....	Attachment D
Proof of Ownership.....	Attachment E
Operations Packet.....	Attachment F

### **Figures**

Figure 1.....	Draft Facility Sign
---------------	---------------------

## **Yard Waste Composting Facility Application.....Section 2.**

Contingency Plan for Emergency Procedures

**SECTION 1**

**YARD WASTE  
COMPOSTING FACILITY**

**APPLICATION**

**Commonwealth of Pennsylvania  
Department of Environmental Protection  
Bureau of Land Recycling and Waste Management**

**Yard Waste Composting Facility Application Form**

Please familiarize yourself with the Pennsylvania Department of Environmental Protection GUIDELINES FOR YARD WASTE COMPOSTING FACILITIES prior to filling out this form.

1. Operator (Name & Mailing Address)  
**Upper Mount Bethel Township, Northampton County, PA**  
**387 Ye Olde Highway**  
**Mount Bethel, PA 18343-5220**  
**Telephone Number- (570) 897-6127**
  
2. Name of Facility - **Upper Mount Bethel Township Compost Facility**  
Contact Person - **Maureen L. Sterner**  
Contact Telephone- **(570) 897-6127**  
Property Owner - **Upper Mount Bethel Township**  
Street Address of Facility – **113 Million Dollar Highway**  
State - **Pennsylvania** Zip Code - **18343**  
City-Boro-Twp - **Upper Mount Bethel Township**  
County - **Northampton, County**  
  
Sponsoring Municipality (where applicable) - **Upper Mount Bethel Township**  
  
Attach a United States Geological Survey 7.5 minute topographic map identifying the yard waste composting facility site boundaries outlined on it.  
**See Attachment D**  
  
Provide proof the operator has the legal right to enter the land and perform the approved activities: **See Attachment E**
  
3. The proposed composting method: **Windrow (open air)**  
Total acres of the composting facility: **4.1- acres**  
The maximum quantity of yard waste and composted materials to be on the site at any one time: **12,300-cubic yards**  
Yard waste in cubic yards: **Included in leaf waste estimate**  
Finished compost in cubic yards: **7,000-cubic yards**
  
4. Prepare and include in this application a general site plan\* for the facility which illustrates the location of the following items:

*Access roads in relation to the nearest public and private roads, wells, and property lines*

*Tipping area*

*Gate location*

*Surface water controls, erosion and sedimentation controls*

*Processing area including location, orientation, and size of compost piles or windrows*

*Curing or storage areas*

*North arrow*

*Scale of drawing*

5. Please address the following items: (attach additional sheets if necessary)

Provide a complete list of source(s) of yard waste to be received.

- The main source of yard waste to be received at the proposed facility is generated from residential properties located in Upper Mount Bethel Township (Township) and Bangor Borough (Borough). In addition consideration will be given to permit residents from neighboring municipalities (under a cooperative agreement) to bring their yard waste and brush to the drop-off location.**

Describe how the yard waste will be collected and received at the facility.

- The Township will also collect leaf and yard waste at its drop off area that will be open to the public twice each week during peak leaf season and on a scheduled (to be determined) basis thereafter. Yard waste generated from the Township's municipal projects and spring clean-up days will be delivered to the site, in bulk, via municipal trucks. The Borough will collect leaf and yard waste curbside (via vacuum systems) and at drop off sites during the spring and fall and deliver materials to the compost site in bulk, via municipal trucks.**

Describe the method for inspecting incoming yard waste and for removal of unacceptable material. Yard waste collected at the curb is inspected prior to being placed in the compost site.

- Municipal personnel will not collect any leaf and yard waste that includes unacceptable materials or contaminants. Residents will be instructed to remove any unacceptable materials or contaminants from their yard waste prior to placing them at the curb. Yard waste received at the Township's drop-off site and at the Borough's drop-off sites will be subject to inspection by municipal personnel.**

**All loads of incoming leaf/yard waste delivered by the Township or Borough and/or any material delivered by residents will be inspected during off-loading to ensure quality control. Any off-specification**

material identified during an inspection will be culled by facility personnel and either rejected and sent back with the person attempting to deliver same or placed in an onsite container. Bags delivered will be opened and the contents inspected. Unacceptable material (if any) will be removed, placed in an on-site container for subsequent disposal.

Describe the windrow construction methods including equipment to be used.

- Leaf collection trucks delivering materials to the compost site will unload in the approximate location where a windrow is to be formed. Leaf waste delivered will be inspected for contaminants. A backhoe with a one cubic yard bucket will form windrows in semi-circular shapes, during initial operations. A slight indentation will be made at the top of the windrow to allow for rainfall retention thus reducing the potential need of adding water to maintain optimum conditions for active composting.

The Township (with Act 101 Grant assistance) plans to purchase a front-end loader, 500-gallon (trailer mounted) water tank, windrow turner to turn the windrows more efficiently, a wood chipper/grinder, security camera system and security fencing.

Equipment proposed for use at the compost facility includes:

- ✓ One backhoe/loader, with a bucket
- ✓ One windrow turner
- ✓ One 500-gallon water trailer
- ✓ One wood chipper/grinder
- ✓ Two digital thermometers

Describe the windrow size:

- Initial windrow dimensions will be 16' wide x 8' high x varying lengths.

Describe the source of supplemental water, which will be used to maintain optimal 40% to 60% moisture content of compost piles or windrows.

- Pond adjacent to site.

Indicate the frequency of windrow turning:

- Turning of windrows will occur on a weekly basis initially (first two months) and once per month, thereafter. Based on monitoring results the windrows may be turned more frequently to maintain optimum environmental conditions for the compost process.

Indicate the temperature range to be maintained:



- ☑ **A range of 90 to 140-degrees Fahrenheit will be maintained during active composting. Long stemmed thermometers will be used to monitor temperature.**

Indicate the method of windrow turning:

- ☑ **A backhoe/loader will be used initially to form windrows. The backhoe bucket will lift the organic material and allow it to cascade back into the windrow several times. This type of windrow formation provides for optimum mixing and loose deposition of material, enhancing porosity and increasing airflow.**
- ☑ **When acquired, a windrow turner will be used to turn windrows following initial windrow formation, further accelerating the composting process.**

Describe the method for determining turning frequency.

- ☑ **Turning frequency will be based on maintaining the optimum environment for microbial activity/accelerated decomposition. All windrows will be monitored on a regular basis once a week for the first month, then once a month (at a minimum) thereafter. The inspection will include checking temperature at fifty-foot linear intervals. Long stem (four-foot) digital thermometers will be used to monitor windrow temperatures. Windrows will be turned when the temperatures drop below 90 or exceed 140-degrees Fahrenheit.**

**The key indicator for establishing turning frequency will be internal windrow temperature. Windrows will be turned to maintain temperatures in the lower active (thermophilic) range (90 to 140-degrees Fahrenheit). The thermophilic temperature range should be reached within two weeks to a month after initial windrow formation. Once the inner core of the windrow exceeds 140-degrees, the windrow will be turned. If the temperature of the windrow drops below 90-degrees, the windrow will likewise be turned to add oxygen and increase microbial activity. Once the temperature drops below 90-degrees and turning the windrow does not result in an increase in temperature, the compost will be moved to a curing area or allowed to cure in place for 30 to 90-days.**

**Windrow moisture content will also be monitored. Squeezing a handful of the composting material is a generally accepted method of determining moisture content; if a few drops of water are shed, the moisture level is sufficient. Should appreciably more water be shed, when the material is squeezed, the windrow's moisture content is too high and turning is required to aerate it and prevent anaerobic conditions from establishing.**

Describe the approximate duration of the composting cycle:

- 120 to 180-days (Note Previous Section)**

Describe the Composting Process:

- Open-air aerated windrow processing technology will be employed for the composting leaf and yard waste. Materials will be formed into parabolic shaped windrows of approximately 8' high X 16' wide X various lengths.**

**To minimize handling incoming loads of materials (leaf and yard waste) will be off-loaded where the windrows are to be formed. Facility personnel will inspect material during off-loading and windrow formation. Materials that are unacceptable will be removed and disposed of properly.**

**Windrows will be constructed on gravel improved surfaces to promote aeration and accommodate heavy equipment use. The windrows will be constructed parallel to slope with a backhoe/loader. The windrows will be arranged in pairs allowing a space of at least 8-feet but not more than 10-feet between them. A clearance of 20-feet will be maintained around the windrow pairs for ease of access of equipment.**

**Once windrows are initially formed by the backhoe/loader, it is planned that a windrow turner will be acquired to turn and aerate the piles. The backhoe/loader will be used to turn and aerate the piles until a windrow turner is acquired. Loads of wet leaves will be turned as soon as practical to prevent anaerobic conditioning from forming.**

**The windrow turner's rotating flail will not only aerate the pile but it will also chop the leaves into smaller pieces thus increasing the surface area available to microbes and accelerating the composting process. A reduction in pile size will also occur as a result of initial turnings and microbial activity allowing the pairs of windrows to be combined to form one, having similar dimensions to the initial parent windrows.**

**Windrows will be constructed in sections, i.e. as leaves are delivered. The individual sections will be monitored to insure active composting is maintained.**

**Temperature, being the prime indicator of microbial activity, will be monitored at prescribed intervals along the windrow using long stem digital thermometers. The windrow or section of windrow will be turned if the temperature varies from the thermophilic range (90° to 140° F).**

During the composting process windrows will be built in sections. Records will be maintained on each section. Eventually, through turning and mixing the windrow will be homogenized and should uniformly degrade.

The total composting time is dependent on a number of variables primarily temperature, moisture, and oxygen content. The time period for turning the windrows will be adjusted as required, based on monitoring results. Monitoring will be done once monthly (at a minimum) to insure proper moisture and temperature ranges are maintained. Monitoring results will be recorded on Monitoring Log Sheets.

A moisture content of approximately 50% will be maintained during composting. The moisture content will be checked periodically using a moisture meter and the “squeeze test”. A handful of material from within the windrow will be squeezed; if a few drops of water are generated the windrow can be assumed to contain the proper range of moisture 40% to 60%. Deviance from this range will require turning of the windrow. Turning is done to aerate and dry pile to prevent anaerobic conditions. The windrow will be turned as necessary to assist moisture loss and if available dry material will be added. If the material is too dry, water will be added gradually during the turning process until the desired range is met.

Composting and curing will be judged complete whether compost pile temperatures decrease to near ambient and remains there for 3 to 4-weeks. Finished compost will be stored in place or combined with other finished windrows until distribution.

Records of incoming organic materials as well as finished products (compost and potentially mulch) will be maintained.

Upper Mount Bethel Township will:

- Prepare post and maintain signage to identify the compost facility and inform the public of its operations, consistent with the requirements of the Guidelines for Yard Waste Composting Facilities.
- Work cooperatively with the County Conservation District in the development and installation (if required) of surface water and erosion and sedimentation control measures which may be required (if any). A meeting with the County Conservation District will be held to seek advice and guidance on developing suitable surface water controls (if any) that meet the requirements of 25 PA Code Chapter 102, Erosion Control. An E&S Plan will be developed (if required) and a copy of the County Conservation District approved plan will be submitted to the Department.

Describe the curing period for compost:

- 30 to 90-days (Note Previous Section)**

Indicate the time required for storage and distribution:

- 0 to 90-days**

Indicate the total time required for composting operation:

- 130 tom 300-days (Depending on how aggressively the material is processed.)**

Describe the marketing and distribution plan for the finished compost product.

- After compost product is used at Township and Borough properties, marketing will be directed at residential properties. Considering the residents are the ones providing the materials and subsidizing program costs via tax dollars, it is only fair that residents be provided the first opportunity to receive/purchase compost. Commercial sale of product will be pursued for any remaining surplus material. The distribution of the product will be by truckload as well as in smaller amounts.**

**All compost products will be distributed from the Township's facility so that it can be effectively and efficiently managed.**

Describe the residue disposal plan and identify the disposal or processing site(s) to be used.

- The Township will dispose of all composting residuals and/or contaminants in accordance with the Northampton County Solid Waste Management Plan at the WMI Grand Central Landfill in Pen Argyle , PA.**

Describe the plan for emergency response (fire, police, etc.).

- Personnel working at the site will use a cellular phone and/or radios in the event of emergency to contact emergency services. Both the police and fire departments will be briefed as to the compost sites layout and standard operating procedures and receive a copy of the facility's Contingency Plan for Emergency Procedures.**

Outline the public information and education program (attach samples of literature if available).

- The Township and Borough will develop a public education/outreach campaign. The campaign will include announcements at public meetings, public service announcements, display advertisements in**

local newspapers and an informational brochure. The brochure will provide program details and encourage participation.

**Figure 1**

**Draft Compost Facility Sign Layout**



# **ATTACHMENT A**

## **BASE MAP**

# **ATTACHMENT B**

## **SITING RESTRICTIONS**

## SITING RESTRICTIONS FOR YARD WASTE COMPOSTING

### OPERATIONS

The Upper Mount Bethel Township compost facility will be located at 113 Million Dollar Highway, Mount Bethel, 18343 in Northampton County, Pennsylvania (see Attachment D). The compost facility will not store or cure compost or compost leaf and yard waste in the following areas:

**a. In a 100-year flood plain.**

The planned compost facility is to be located in an area, above the flood plain. The facility will not store or cure compost or compost leaf and yard waste within the 100-year flood plain.

**b. In or within 300 feet of an exceptional value wetland.**

The "National Wetlands Inventory Map" does not identify any exceptional wetland within 300-feet from the compost site boundaries.

**c. In or within 100 feet of a wetland other than an exceptional value wetland.**

No active composting will take place within 100-feet of the wetland.

**d. Within 100 feet of a sinkhole or area draining into a sinkhole.**

No karsts geologic features are located on the proposed site (based on review of Northampton County Soil Survey) and there is no drainage into a sinkhole within 100-feet of the compost site boundaries.

**e. Within 300 feet measured horizontally from an occupied dwelling unless the owner has provided a written waiver consenting to the facility being closer than 300 feet.**

The compost facility boundaries are in excess of 300-feet measured horizontally from occupied dwellings.

**f. Within 50 feet of a property line, unless the operator demonstrates that only curing of compost is occurring within that distance.**

Processing will not occur within 50-feet of any property line.



**g. Within 300 feet of a water source.**

No well or other water source exists within 300-feet of the compost facility site.

**h. Within 3.3 feet of a regional groundwater water table.**

As noted above the site has previously been disturbed, filled and developed. The compost facility is located in an area which has a distance greater than 3.3-feet between the surface and the regional groundwater table.

**i. Within 100 feet of a perennial stream.**

No perennial streams are located within 100-feet of the site.

# **ATTACHMENT C**

## **NUISANCE CONTROL PLAN**

## **NUISANCE CONTROL PLAN**

The facility will be gated and the gate locked when the site is not in operation, as a security measure.

All site operations will be monitored on a regular basis. Any situation noted that might attract and harbor or cause breeding of vectors or vermin will be addressed as quickly as possible on a case-by-case basis.

Odor is a primary concern for composting operations. Malodors are usually associated with anaerobic conditions: excessive temperatures, excessive water, etc. Monitoring and quick response to problems will minimize the potential occurrence of any odor causing conditions.

All windrows will be monitored on a regular basis once a week for the first month, then once a month (at a minimum) thereafter. The inspection will include checking temperature at fifty-foot linear intervals. Long stem (four-foot) digital thermometers will be used to monitor windrow temperatures. Windrows will be turned when the temperatures drop below 90 or exceed 140-degrees Fahrenheit. Monitoring and quick response to any malodor (turning the windrow and/or adding dry organics) will minimize the potential occurrence of any odor causing conditions.

During inspections of the windrows any unacceptable material noted will be manually removed for proper disposal.

The time, date, results of, and name of person conducting inspections will be recorded in written documentation (inspection/monitoring logs).

Records of windrow monitoring, incoming organic materials as well as outgoing finished products (compost and mulch) will be maintained and a trouble shooting guide will be on site for quick reference (see Attachment F).

The windrows will be constructed on gravel improved surfaces running parallel to the slope to promote proper drainage and prevent ponding. Any ponding of water observed on site will be subjected to immediate corrective actions. These actions may include: adding fill material, re-grading the area or modifying drainage patterns.

Through the elimination of standing water the regular turning of windrows and heat generated by the compost process breeding of vermin and insects is inhibited. Regular monitoring of the compost will also be accomplished.

Noise from operating equipment should not present a problem given the location of the site, the limited work effort required to manage the relatively small volume

of organic materials. Existing trees, hedgerows and vegetation will act as a noise and visual barrier.

Dust generated by access roads or by processing machinery will be suppressed by use of a water trailer (if required).

Upper Mount Bethel Township will operate the compost site in a professional manner. The safety and well being of its employees, the public and the environment are of the utmost concern. The operations will be monitored daily and any safety hazards or public complaints will be dealt with expeditiously.

Any litter generated by site activities or deliveries will be policed by facility personnel.

# **ATTACHMENT D**

## **TOPOGRAPHIC MAP**

# **ATTACHMENT E**

## **PROOF OF OWNERSHIP**

# **ATTACHMENT F**

## **OPERATIONS PACKET**

# OPERATIONS PACKET

***TROUBLE SHOOTING GUIDE***

**MONITORING LOGS**

**FEEDSTOCK & PRODUCT LOGS**



# TROUBLE SHOOTING GUIDE

<i>Situation</i>	<i>Probable Cause</i>	<i>Solution</i>
<b>Low temperature in windrow</b>	Moisture content low (cannot squeeze water from material)	Turn windrow add water while turning
	Insufficient air flow	Turn windrow to aerate
	Size of windrow too small	Combine with another windrow or add material
<b>Mosquitoes</b>	Mosquitoes breeding in ponding water	Re-grade/fill depressions
<b>High temperature in windrow</b>	Low oxygen content	Turn windrow to aerate
	Compacted material (1)	Turn windrow to loosen material and to aerate
<b>Odor</b>	Anaerobic condition excess moisture	Turn windrow to aerate
	Too much grass	Add leaves to adjust C: N ratio and turn pile
	Compacted material (1)	Turn windrow to loosen material and to aerate
	Ponding of water	Re-grade/fill depressions

(1) Material received (leaves or grass) which is compacted should be shred or mixed to loosen/separate prior to windrow formation.

# UPPER MOUNT BETHEL TOWNSHIP WINDROW MONITORING LOG

DATE:	TIME:	AIR TEMP: (°F) (°C)
NAME:	WEATHER CONDITIONS: (RAIN, SUNNY, ECT.)	

WINDROW NUMBER	TEMPERATURE Measurement Points (every 50'ft, 100' ft ect.)	TEMPERATURE (°F) (°C)														
1)																
2)																
3)																
4)																
5)																
6)																
7)																
8)																
9)																
10)																
11)																
12)																
13)																
14)																
15)																
16)																
17)																

✓ Moisture (squeeze test) -  Requires  Excessive  Adequate

✓ Odor -  None  Faint  Strong

Site Observations: (ponding of water, mosquitoes, ect.) and corrective actions: -----  
-----  
-----

**UPPER MOUNT BETHEL**

**TOWNSHIP**

**Compost Facility**



**FEEDSTOCK and PRODUCT**  
**LOG**

# UPPER MOUNT BETHEL TOWNSHIP- FEEDSTOCK and PRODUCT LOG

Month -

Year- 2008

Feed/Pro	Vehicle ____ Type____ Cu. Yd.____				Vehicle ____ Type____ Cu. Yd.____				Vehicle ____ Type____ Cu. Yd.____				Vehicle ____ Type____ Cu. Yd.____				Vehicle ____ Type____ Cu. Yd.____				T O T A L			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)				
	Date																							
1																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
13																								
14																								
15																								
16																								
17																								
18																								
19																								
20																								
21																								
22																								
23																								
24																								
25																								
26																								
27																								
28																								
29																								
30																								
31																								
<b>Total</b>																								

Vehicle - (M) Municipal, (R) Resident, (C) Commercial  
 Type - (P) Pickup, (D) Dump, (T) Trailer, (O) Other  
 Feedstock - (F)  
 Product - (P)

Leaves - (1)  
 Yard Waste - (2)  
 Woodchips - (3)  
 Compost - (4)

**SECTION 2**

**UPPER MOUNT BETHEL TOWNSHIP  
COMPOST FACILITY**

**CONTINGENCY PLAN FOR  
EMERGENCY PROCEDURE**

*Upper Mount Bethel*  
*Township*

**COMPOST FACILITY  
PREPAREDNESS  
PREVENTION  
AND  
CONTINGENCY PLAN**

## **A. DESCRIPTION OF FACILITY/OPERATION**

### **A. 1 General Description of Activity**

Upper Mount Bethel Township (Township) will develop and operate a leaf and yard waste compost facility (facility) to service their municipally, Bangor Borough and potentially other neighboring municipalities.

The compost facility will be located adjacent to the Township planned new administrative and maintenance facility located in Upper Mount Bethel Township, Northampton County, Pennsylvania (see Attachment D). The project will not require additional zoning approval.

The facility will occupy an area of approximately 4.1-acres of a 61.46-acre parcel. Materials accepted for composting will be leaves and yard waste as per PADEP "Guidelines for Yard Waste Composting Facilities". Tree and brush trimmings are also planned to be ground/processed into wood chips/mulch. The facility will be limited to accepting and processing a maximum of 12,300-cubic yards of organic materials.

Leaf and yard waste will be composted aerobically using open-air windrow technology and specialized equipment to promote, accelerate and enhance decomposition. Potentially a chipper and a grinder will process tree trimmings and yard waste into wood chips/mulch.

The Township will collect materials from Township projects and deliver same to the facility, municipal residents will also deliver leaf and yard waste to a drop-off facility on designated days during specified hours. The Borough of Bangor will collect leaves at curbside (during the fall and spring) using vacuum equipment and at drop-off locations. The Borough will then deliver them directly to the Township's compost facility. Neighboring municipalities may also (by inter-municipal agreement) deliver leaf waste to the compost facility.

Leaf waste and yard waste will be composted aerobically using open-air windrow technology and mechanized equipment to accelerate and enhance decomposition. Potentially a mechanical chipper and/or grinder will process tree trimmings and yard waste into wood chips.

All collection vehicles delivering loads of leaves and yard waste will be visually inspected by compost facility employees prior to and during off-loading to ensure quality control. Any material not meeting specifications will be culled and properly disposed of by the compost facility personnel.

If any residents deliver plastic bags to the drop-off or compost facility their contents will immediately be emptied and inspected. Bags will be returned to the resident, as will any unacceptable material.

Leaves and yard wastes will be formed into new windrows or incorporated into existing windrows. Formation and turning of windrows will be accomplished initially using a backhoe/loader equipped with a one (1) cubic yard bucket. Turning the windrows is eventually planned to be accomplished by a mechanized windrow turner.

Windrows will be regularly monitored to ensure the physical requirements of the compost process are met. Temperature is the prime indicator of the composting process. Temperature will be monitored, using long stem thermometers, to insure that the windrows are maintaining thermophilic or active range (optimal temperature range 90 to 140-degrees Fahrenheit). If the internal temperature of a windrow falls below or rises above this thermophilic range, it will be turned. Once a windrow reaches a stabilized state, (temperature does not increase when the windrow is turned) it will be placed in a curing pile or allowed to cure in place.

The Township will use the compost and mulch produced at the compost facility for landscaping of municipal properties, and the remainder distributed to the public.

## **A2. Description of Existing Emergency Response Plan**

The facility is new and therefore has no existing emergency plan.

## **A3. Material and Waste Inventory**

Due to the simplicity of the composting process, and the thorough inspection of incoming materials, receipt of ancillary and/or unacceptable waste materials will be minimal. There is no current plan to store or maintain fuel or chemicals at the compost facility site. Only the fuel, motor oil and fluids contained in processing machinery will be on the site.

## **A4. Pollution Incident History**

Upper Mount Bethel Township purchased sixteen parcels of property within or adjoining a quadrangle-shaped site, bordered by Million Dollar Highway on the south, Jacoby Creek Road on the east, Boulder Drive on the north and Audubon Drive on the west in Upper Mt. Bethel Township, Northampton County, Pennsylvania. Together the parcels comprise approximately 295 acres.

Approximately one-half of the property is woodland, the remainder is land that was cleared for a sand and gravel mining/quarry operation. The Site was classified by the PADEP as a "Non-Coal Surface Mine." An asphalt plant was constructed on a portion of the quarry site in 1988 and operated until it was dismantled in 1996.

There are two structures inside the fenced quarry site, a two-story office building and a combination office/lab and vehicle maintenance garage building that served the quarrying and asphalt operation.



Although the section of the quarry site proposed for the compost facility has no apparent pollution history, other areas have a pollution incident history. The following reports identifying and addressing these incidents have been prepared, submitted to and reviewed by the Department. The pollution concerns and corresponding remediation efforts detailed in the assessments and reports are associated with the areas previously occupied by the aforementioned asphalt plant, its appurtenant storage tanks and material stockpiles. The items and areas of concern were located down gradient and southwest of the proposed compost facility site.

Phase I Environmental Assessment, dated June 1996, prepared for Eastern Industries, Inc. [EII] by Earth Resource Engineering Group, Inc. [ERG].

Phase II Environmental Site Investigation Report, dated July 1996, prepared for EII by ERG.

Site Investigation and Remedial Activity Report, dated December 1996, prepared for EII by ERG.

Phase I Environmental Assessment, dated April 2007 prepared for Upper Mount Bethel Township by Viridian Inc., Environmental Consultants.

As noted above the final Phase I Environmental Assessment (Assessment), dated April, 2007 was commissioned by the Township. The Assessment was conducted as part of the Township's due diligence efforts, prior to purchase of the 295-acre property.

Currently the Township is completing a redevelopment plan for the subject property. Initial redevelopment plans include renovation of existing buildings to provide much needed space for Township functions to include offices, equipment storage and maintenance and material storage areas. The plan also includes the development of the leaf and yard waste facility.

## **A5. Implementation Schedule**

Operations personnel will be trained to follow procedures set forth in this PPC Plan and best composting practices.

## **B. Description of How Plan is Implemented by Organization**

### **B1. Organizational Structure for Implementation of the PPC Plan**

In the event that an emergency occurs at the facility site, it will be the responsibility of any on-site staff to immediately notify the facility operator, who will be a designated second level or Secondary Emergency Coordinator (SEC). It is the responsibility of the SEC to immediately notify the first level or Primary Emergency Coordinator (PEC) of the emergency and to implement all measures

of the PPC Plan. During the absence of the PEC, it is the responsibility of the (SEC) to both coordinate emergency activities and to assure submission of the written Incident Report to the DEP as required under this Plan.

The PPC Committee will consist of, Mr. William Godshalk who will serve, as the PEC and, Ms. Lindsey Manzi as SEC. It will be the duty and responsibility of the PPC Committee to meet annually (at a minimum) to: review and identify materials and wastes handled, identify potential hazards (if any), establish and review material and waste handling/storage procedures, accident reporting procedures; and visual inspection programs. The PPC Committee will also review any past incidents and the counter-measures utilized to assess effectiveness. In addition, the PPC Committee will be responsible for coordinating and establishing training and educational programs for personnel; and, periodic review, evaluation and improvement of the PPC Plan. The Committee will review any new regulations, equipment, or process changes and incorporate any needed changes into the PPC Plan. If the PPC Plan is updated, copies will be provided to the DEP and made available to emergency response agencies/contacts.

## **B2. List of Emergency Coordinators**

<b><u>Primary:</u></b>	<b><u>William Godshalk</u></b>
Home Address:	<u>623 Washington Street</u> <u>Portland, PA 18351</u>
Home Telephone:	<u>(570)-897-5412</u>
Business Address:	<u>387 Ye Olde Highway</u> <u>P.O. Box 520</u> <u>Mt. Bethel, PA 18343-5220</u>
Business Telephone:	<u>(570)-897-6127, ext. 24</u>
Cell Phone:	<u>(570)-656-7055</u>
<b><u>Secondary:</u></b>	<b><u>Lindsey Manzi</u></b>
Home Address:	<u>493 Slateford Road</u> <u>Mt. Bethel, PA 18343</u>
Home Telephone:	<u>(570)-897-5654</u>
Business Address:	<u>387 Ye Olde Highway</u> <u>P.O. Box 520</u> <u>Mt. Bethel, PA 18343-5220</u>
Business Telephone:	<u>(570) 897-6127 ext. 25</u>

### **B3. Duties and Responsibilities of the Primary Emergency Coordinator**

Among other duties and responsibilities of the PEC is routine inspection of the site to ensure that neat and orderly operation is maintained and to assure that walkways, areas between windrows, storage areas, operations areas, and roadways remain accessible and free of extraneous items which might otherwise clutter and hinder operational safety and efficiency. During an actual or imminent emergency, the PEC will ensure adequate space is provided for unobstructed movement of emergency personnel and equipment to all portions of the site. The PEC also will ensure that all agencies listed in Section E will be offered a copy of the PPC Plan.

Although the materials processed and produced at the facility will be not considered of a nature that would pose severe environmental consequences, even if mismanaged, it is recognized that it is the responsibility of the PEC to minimize any deleterious effect to personnel and the environment caused by an incident at the site.

True emergency scenarios can realistically be limited to those involving fire. During an emergency, operations at the site would be discontinued. All delivery/shipment of materials would be halted. Access would remain open to allow for movement of emergency response personnel and equipment. A 500-gallon water tank trailer and nearby pond will be used as a first response in the event of a fire at the compost operation, pending arrival of the fire company.

In an imminent or actual emergency, the PEC must immediately:

1. Notify all on-site personnel,
2. Identify the character, exact source, amount and a real extent of the fire,
3. Concurrently assess the actual and potential hazards to the public health and safety, public welfare and the environment that have resulted or may result from the fire. This assessment will consider both direct and indirect effects of the fire.

The PEC must assess possible hazards to human health or the environment that may result from a fire. The assessment will consider both direct and indirect effects.

If the PEC determines that the facility has a situation, which would threaten human health or the environment, he will immediately notify the applicable local authorities, indicating if evacuation of local areas is advisable. Additionally, he/she will immediately notify the Department by telephone at (570)-826-2516 and the National Response Center at 800-424-8802 and report the following:

1. Name of the person reporting the incident;
2. Name and address of the operation;
3. Telephone number where the person reporting the incident can be reached;
4. Date, time and location of the incident;
5. A brief description of the incident, nature of the materials or wastes involved, extent of any injuries and possible hazards to human health or the environment;
6. The estimated quantity of the materials or wastes involved;
7. The extent of contamination of land, water, or air, if known;
8. Existence of dangers to public health and safety, public welfare, and the environment;
9. Nature of injuries, if any; and
10. Parts of the PPC Plan being implemented to alleviate the emergency.

During an emergency, the Primary and/or Secondary Emergency Coordinator will take all reasonable measures necessary to ensure that fire does not occur, re-occur or spread. These measures shall include, where applicable, stopping all operations and isolating the problem area.

If the facility ceases operation in response to a fire, the SEC (operator) will ensure that adequate monitoring is conducted for excessive temperatures wherever appropriate.

**After an emergency, the SEC shall:**

- a. Clean up the affected areas,
- b. Treat, store, or dispose of recovered materials, in a manner approved by the Department (testing of the affected area may be prevent processing or storage of compost materials in the area affected by the emergency until the area has been cleaned up and the Department has inspected and approved the cleanup.

**Within 15 days after the incident, the PEC will submit a written report on the incident to the Department. The report will include the following:**

1. Name, address, and telephone number of the individual filing the report;
2. Name, address, and telephone number of the facility;
3. Date, time, and location of the incident;
4. A brief description of the circumstances causing the incident;

5. A description and estimate of the quantity, by weight or volume, of materials or wastes involved;
6. An assessment of any contamination of land, water or air that has occurred due to the incident;
7. Estimated quantity and disposition of recovered materials or wastes and
8. Actions that will be taken to prevent a similar future occurrence.

#### **B4. Chain of Command**

**Primary:**                      **William Godshalk**

Home Address:            623 Washington Street  
Portland, PA 18351

Home Telephone:        (570)-897-5412

Business Address:      387 Ye Olde Highway  
P.O. Box 520  
Mt. Bethel, PA 18343-5220

Business Telephone:   (570)-897-6127, ext. 24

Cell Phone:                (570)-656-7055

**Secondary:**                      **Lindsey Manzi**

Home Address:            493 Slateford Road  
Mt. Bethel, PA 18343

Home Telephone:        (570)-897-5654

Business Address:      387 Ye Olde Highway  
P.O. Box 520  
Mt. Bethel PA 18343-5220

Business Telephone:   (570) 897-6127 ext. 25

### **C. SPILL LEAK PREVENTION AND RESPONSE**

#### **C1. Pre-Release Planning**

The Township compost facility has been designed to minimize the potential for risk to the environment, the public and operational personnel. All operational personnel will be properly trained in their duties and responsibilities prior to functioning without direct supervision.

The compost operation requires a very limited number of materials, which have potential to cause significant harm to personnel or the environment if spilled. Only fuel (diesel) motor oil and other fluids used in operating machinery will be on site.

Leaves and yard waste accepted at the site will contain limited amounts of moisture and should not present a problem. In the event of a spill or leak of fuel or machinery fluids, clean-up efforts will be initiated immediately. Clean-up will consist of using a front end loader to collect the majority of solids, shovels and buckets will be used to collect the remnants and any minimal amounts of moisture will be collected with absorbent material (readily available at the Township Maintenance Building).

## **C2. Material Compatibility**

The composting process does not involve the use of materials that are corrosive or reactive.

## **C3. Inspection and Monitoring Program**

All composting windrows will be monitored on a regular basis (every other week for the first month, then once a month thereafter). The inspection will include checking temperature at fifty-foot linear intervals. Long stem (four-foot) digital thermometers will be used to monitor windrow temperatures. Windrows will be turned when temperatures drop below 90 or exceed 140-degrees Fahrenheit.

Water content is also monitored, using moisture meters and adjusted as necessary to maintain a moisture level of approximately 50%.

During inspection of windrows any unacceptable material noted will be manually removed and disposed of properly. The time, date, results of, and name of person conducting these inspections will be recorded in written documentation (monitoring logs).

Windrows composed of wood chips (mulch) will be monitored for temperature on a weekly basis. Compost and mulch windrows will be visually inspected daily, when the facility is operating.

Emergency equipment consists of ten-pound A/B/C fire extinguishers located at the maintenance building, and one five-pound A/B/C extinguisher located on (all) mobile processing equipment. Routine inspection/maintenance of all fire extinguishers is conducted annually.

## **C4. Preventative Maintenance**

Preventative maintenance is conducted on all operating equipment, both as presented through the manufacturers' recommendations and as revealed to be

necessary through a routine inspection program. Repairs will be instituted as soon as operationally practical when a component failure or impending failure is detected. All preventive maintenance will be recorded and filed for each individual piece of equipment.

#### **C5. Housekeeping Program**

A conscious effort will continually be made to assure walkways, pathways, operational areas, maneuvering areas and roadways remain accessible and free of any items which might otherwise clutter and hinder operational safety and efficiency. Site personnel will routinely gather and properly dispose of any litter found on the site. The site will be monitored for proper drainage; if any ponding is evident, corrective measures will be taken. Any spillage, diesel fuel, motor oil, etc., will be immediately absorbed, the absorbent material will be placed in buckets and disposed of properly. All mechanical equipment used at the compost site will regularly be washed down. Any spillage of material will be dealt with in accordance with measures as prescribed within this Plan.

#### **C6. Security**

Security for the compost will be effectively provided through traffic restricting gates. Entrance and exit gates will be locked whenever the facility is not operating. The site will also be completely fenced with chain link fencing. Signs at the entrance gate and surrounding the site will provide trespass notice to all unauthorized personnel. Anyone visiting the site must do so during operating hours.

#### **C7. External Factors**

- A power outage will have little effect on operations, as equipment will be operating with diesel fuel.
- The site is located above the 100-year flood plain; therefore, flooding of the operation is not anticipated.
- Snowstorms should have minimal effect since the windrows will not require turning nearly as often as in other seasons. The Township will conduct normal plowing of snow, to maintain site access.

#### **C8. Employee Training Program**

Employees will be trained by the emergency coordinators to understand their particular responsibilities with respect to preventive maintenance and safety. All employees will be made aware of the location of emergency equipment (telephones, fire extinguishers, etc.) and emergency procedures. On-going training will include periodic safety/emergency response meetings. Such meetings will be held on an annual basis, at a minimum. All new operations personnel will receive initial training by the established operations staff. The

Emergency Coordinators will regularly review the Township operational, safety and maintenance procedures to ensure requirements will be met.

**D. COUNTERMEASURE**

**D1. Countermeasures to be undertaken by the operations**

**D2. Countermeasures to be undertaken by Contractors**

***(Note: Section D1 and D2 were determined not required due to the nature of the operation.)***

**D3. Internal and External Communications or Alarm Systems**

Due to the open-air nature of the operation, an internal communications system is not practical or necessary. External communication will be by two-way radios or cell.

**D4. Evacuation Plan for Installation Personnel**

Due to the nature of the operation, site evacuation is extremely unlikely. However, should such a situation arise, it will be the responsibility of the on-site emergency coordinator to advise all unnecessary personnel to leave the site. An elaborate alarm system is considered unwarranted. Evacuation of the area will proceed via the site access roadways.

**D5. Emergency Equipment**

In an attempt to maintain a ready posture for any emergency, which might occur at the site, the following emergency equipment will be maintained on site or at the maintenance building. The equipment will be readily available and maintained to be operational at all times:

Description (Location),	Intended Use,	Capabilities
Portable Fire Extinguishers (1), (2)	Small Fires,	5 # lb. and 8#lb Type A/B/C
First Aid Kit (2)	Cuts/Burns,	
Eye Wash (2)	Eye Irritants	
Location Index: (1) Carried on Equipment, (2) Maintenance Bldg.		



## **E. EMERGENCY SPILL CONTROL NETWORK**

### **E1. Arrangements with Local Emergency Response Agencies and**

A Township representative will contact the State Police, fire department and hospital. The contacted entity will: be advised of the facility, given a description of the operations, to include identification of materials managed, and identification of possible types of injury to be encountered.

Additionally, the contacted agencies will be offered a follow-up meeting and/or site visit to better familiarize them with the site and its operations and offered a copy of the PPC Plan.

Due to the nature of the operations, special provisions beyond those noted herein will be not considered necessary.

### **E2. List of Agencies to be Notified**

Dept. of Environmental Resources	570-826-2516
National Response Center	800-424-7362
County EMS Center	911 or (610)-330-2200
Police Department	911 or (610)-759-6106
Mt. Bethel Fire Department	911 or (570)-897-6767
Chief Bill Williams cell phone	570-335-0177
North Bangor Fire Department	911 or (610)-588-0614
Chief Dave Constable cell phone	610-972-2792
Hospital	911 or (610)-250-400