

South Middleton Township
Development of a Yard Waste
Collection Program

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SWANA/PADEP Technical Assistance Program

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1.0 Introduction

South Middleton Township (Township) is located in the south central portion of Cumberland County. The Township has a population of 12,939 people (2000 census) and as such is a mandated municipality under Act 101. The Township has had a curbside collection recycling program since 1991 and has operated a compost site for the past six years. During the fall curbside/roadside collection of leaves is provided to its 4,470 households along the Township's 103 miles of roadways. Leaf, yard waste, brush and tree trimmings, and Christmas trees are also dropped off by residents at the Township's compost site.

2.0 Background

The Township wants to insure that its leaf and yard waste program is compliant with the requirements of Act 101. In particular the Township is interested in determining the most effective and efficient method to incorporate collection and processing of yard waste into its current leaf collection program.

It is the Township's intent to explore the potential for expanding its services to its residents by providing curbside services for the collection of yard waste to include garden residues, shrubbery/brush and tree trimmings and to process the material at their compost site. To accomplish the Township's goals, modification may be required at its processing site in order to process additional yard waste materials.

3.0 Site Assessment

A site inspection of the Compost facility was conducted in May 2003. The facility encompasses three acres and is surrounded by approximately fifteen acres of Township property. The predominant land use in the vicinity of the facility is agricultural. The site is designed to process leaves collected by the Township and yard waste and Christmas trees dropped off by residents.

The site is fenced and gated with chain link fencing. The three-acre site includes processing and storage areas for both leaves and yard waste e.g. brush and tree trimmings. Also located on the site are a storage trailer and a storm water basin, which is also used for process water.

Upon inspection the site appeared very well maintained. Compost material on site was formed into windrows. The compost material was uniform in size, dark in color and, based on ARI's observation, of a very good quality. A stockpile of large brush and tree trimmings (up to 8 inches in diameter) was stored on site awaiting the arrival of a grinder for processing into woodchips. The size of the site should afford ample processing and storage areas

for increased amounts of yard waste while still allowing for ease of operation of machinery. Based on the site inspection, interview with the site operator and environmental planner, and review of data and information the site is operated in a very efficient manner.

The Township has received an Act 101 Section 902 Grant award that will enable it to improve processing and also further safeguard the facility in the event of a fire. Monies received from the 902 grant will be used to drill an on-site well and install two frost-free hydrants. Water is essential to the compost process and in the event of a fire. The well will provide a needed constant reliable water source. Previously the on-site storm water retention basin was the only on-site water source. This source dried up during warm weather and froze in winter.

It is noteworthy that equipment used to process material (i.e.: windrow turner, and a grinder) is provided by the Cumberland County Solid Waste Authority (CCSWA.). The CCSWA provides the equipment under a cooperative program to a number of the county's municipalities. The CCSWA provides equipment on an as needed basis and municipalities pay a reasonable annual fee for equipment maintenance. The equipment was purchased with 902 grant funding assistance. The program is exemplary. It avoids duplicity of equipment purchases, storage and maintenance by numerous municipalities without any loss of efficiency of program operation for the co-op municipalities. The Authority conducts a training program for municipal equipment operators.

4.0 Current Collection Practices

Described below is the current curbside and drop-off program for leaf and yard waste.

4.1 Curbside/Roadside Collection

The Township currently provides both efficient and convenient leaf collection services to its residents. Collection is accomplished curbside/roadside by use of a dedicated rear loading trash compactor truck (compactor). A driver and two crewmembers collect the leaf waste and some small brush trimmings from the curbside/roadside. Residents place leaf waste in rigid containers or heavy plastic bags (not to exceed 40 lbs.). The container and/or plastic bags are emptied by crewmembers into the truck hopper and then left at the residential collection site.

This type of collection is well suited to the Township given that its 4,470 households are spread over 103 miles of roadway transversing its 51.6 square mile area. Curbs are not the norm, only ± 10% of the Township has curbing, and many households are located off roadsides or at the end of long driveways. The Township is rural, containing numerous active farms and does not have a central area of dense population, therefore normal methods of curbside collection, e.g. leaf vacuum, street sweepers, etc. are not conducive to the Township's residential development patterns.

Collection services are provided throughout the month of November and into early December. Each house is serviced at a minimum of four times, often five times, during the collection period.

This method of collection operates efficiently for the Township and the number of collections makes it convenient for residents, although it may be slightly inconvenient for some residents to place leaf wastes in containers.

The Township collected approximately 1,400 cubic yards of leaf waste during both 2001 and 2002. The Township is a rural area and it is anticipated that a number of households in the Township use their leaf wastes for home composting, as mulch or incorporate them into their gardens.

4.2 Drop-Off

The Township's compost site is available to residents who wish to drop-off material i.e. leaves, yard waste, brush and tree trimmings (up to 8 inches in diameter) and Christmas trees. The site is open to Township residents on Tuesdays, Wednesdays, and Thursdays from 2:00 pm to 5:00 pm, and on Saturday from 8:00 am to 1:00 pm. During January it is closed on Wednesdays and February it is only open on Saturday.

The site is attended during the times it is open to the public and all incoming materials are inspected prior to acceptance. Rules and regulations governing use of the site, material accepted and scheduled operations are clearly posted at the site and printed copies are also available to residents.

The Township provides more than ample information and educational material to its residents through its quarterly newsletters, public notices, brochures and pamphlets relative to leaf waste collections and the drop-off site. A drop-off site location map is also available.

Participation in the drop-off program is high and is increasing yearly. In 2001, a total of 8000 cubic yards of material was collected and processed. This figure rose to 9,600 cubic yards in 2002. As would be expected, participation is highest in spring and fall; however, material constantly arrives during the summer and even winter months when Christmas trees are dropped off by residents.

The Township has done an excellent job in promoting the use of the drop-off program and makes it available at convenient times.

5.0 Compliance

The primary goals of the Township are (1) to comply fully with the requirements of Act 101 and (2) to provide additional opportunities for its residents to recycle yard waste and thereby increase waste diversion. The Township requested technical assistance to help in determining what program modifications, if any, is required for collection practices and processing to address these goals.

To confirm what the Township was required to do to fully comply with Act 101 PADEP representatives were contacted. (Mr. Todd Pejack, Municipal Waste Grants Coordinator, and Ms. Patti Olenick, Organics Recycling Coordinator). The existing Township program was described briefly and clarification was requested from both PADEP representatives as to what level of effort would be required to satisfy the letter and spirit of Act 101. Specifically clarification was requested regarding the terms included within the definition of leaf and yard waste as per Act 101.

“Leaf waste.” Leaves, garden residues, shrubbery and tree trimmings, and similar material, but not including grass clippings. The terms, “garden residues, shrubbery and tree trimmings, and similar materials” used in the definition are not further described or defined within Act 101. Both PADEP representatives acknowledged that questions have arisen, on a number of occasions, as to the precise definitions of the noted terms and they both agreed that common sense and physical abilities (collection and processing) should prevail.

The guidance provided by the Department was sage: the Township is responsible to collect the specified types of material in the size and amounts that can reasonably be accommodated by its personnel and equipment.

6.0 Materials Types and Preparation

Act 101 did not intend that municipalities provide services for the removal of tree trunks and large branches but rather normal seasonal trimmings and pruning generated from landscaping and gardening at residential properties.

The program must include the noted categories limited only by the Township’s ability to collect and process them. For example, garden trimmings might include trimmings from herbaceous plants and not fruit and/or vegetables. The Township is not permitted to accept fruits, vegetables or similar organics under its leaf and yard waste composting permit. Likewise shrubbery and tree trimmings must be restricted to a size and weight that can reasonably be handled by collection crews, the collection vehicle and the available processing equipment.

The Township must clearly define the type of material that it can and will collect. For example, shrubbery and tree trimmings not to exceed X inches in diameter and Y feet in length and garden residue consisting of hedge and brush trimmings and pruning are not to include fruits or vegetables, weeds or green plants. Fruits, vegetables, weeds and green plants have the potential to attract vermin and vectors and/or cause odor problems. The Township must be explicit or unacceptable waste materials will be set out for collection.

Materials can be collected in loose form e.g. piles at the curb or other designated area; placed in bags (plastic or paper), placed in rigid containers or bundled to a specific size and weight. If plastic bags are used the bags must be emptied by the collection crew following the same procedure used for leaves.

It is recommended that brush trimmings and branches be bundled with twine or cotton string. The bundles should not exceed 3 or 4 feet. Larger bundles would be extremely difficult to load and to compact. A maximum size of 4 feet is suggested. Forty pounds is a good maximum weight for bundles and this would be consistent with the existing leaf collection bag/container specifications.

Tree trimmings accepted should be no larger than 1 1/2 to 2 inches in diameter for ease of handling and processing. Lengths should also be specified for safety and ease of handling. It is suggested that trimmings not exceed 4 feet in length. Tree trimmings can be stacked alongside other yard waste materials to be collected.

7.0 Collection Options

Described below are options available to the Township for collection of yard waste other than leaves, i.e. garden residues, shrubbery and tree trimmings.

7.1 Curbside Collection

Few options are available for the curbside collection of garden residues, shrubbery and tree trimmings. This is due to the limited types of collection equipment that can be used for the efficient collection of these materials. The Township's compactor truck is perhaps best suited for this type of collection due to ease of loading for crew members and the large quantity of material that can be collected as a result of compaction.

Specialized compactors which auto load containers or bags are also available. Automated compactors have the ability to load large carts, 60gal. to 90gal. These carts are equipped with wheels for the convenience of residents. Only a driver is required for collection. The driver controls a mechanical clamp mounted on the vehicle's side that secures the cart and tips the contents into the collection chamber of the truck's body, which is subsequently compacted. Some models have armatures that are capable of reaching over obstacles such as cars to pick up containers or bags. The trucks also have a large capacity usually in excess of 20 cu. yd.

These systems are expensive, ranging from approximately \$110,000.00 to \$150,000.00 and most require the purchase of specialized carts, an additional capital outlay. The system is highly efficient particularly in densely populated areas where houses are in close proximity and containers are placed in relatively the same area (at the curb) for collection.

Dump trucks are also used for collection of yard waste. Manually loading yard waste on a dump truck is difficult and strenuous. Also due to the limited capacity of these vehicles, they do not provide for efficient collection, i.e. numerous trips to offload materials at the compost site will add to the collection cost in time and money.

The use of a chipper to grind material at the point of collection is also an option, however, based on safety and liability issues, the Township does not wish to consider this alternative.

It is recommended that the Township continue the use of its compactor, which is suited to its collection needs and will avoid the need for extensive capital outlay for new collection equipment.

8.0 Quantity of Material

The amount of leaf and yard waste available in a municipality's waste stream can vary greatly based on numerous factors: generation rates seem to be as unique as the various municipalities. There is limited information or data available on the amount of yard waste in the waste stream. Case studies that provide characterization data on a number of municipalities and/or counties are dated. Each study's results reflect differences in the types and amounts of material available some ranging in orders of magnitude. Some municipalities report that they generate more yard waste than leaf waste and visa versa.

Rural communities tend to generate less yard waste than suburban or urban communities. This is not to say that rural properties are not as well landscaped or well kept but rather that the material does not find its way into the waste stream. As previously noted in rural communities, back yard composting is often practiced, garden residues are incorporated into the garden in the fall, pruning wastes and trimmings are piled on the property for habitat improvement and hard wood trimmings are used for kindling and fuel. Brush and soft woods (pine, hemlock) is often disposed of by burning although, open burning without a permit is in violation of State Law (Act 97) and Township ordinances.

Landfill sampling programs have been conducted to determine municipal waste characterization/composition. These studies are usually conducted on a countywide or regional basis and generally fail to take into consideration material currently being diverted from the waste stream by existing programs. They also do not specifically address individual communities and inherently have a number of other variables that impact the results. They are, however, often the best data available relative to the breakdown of the municipal waste stream into its various components.

PADEP has recently concluded a statewide municipal solid waste (MSW) characterization/composition study. The study included Cumberland County as part of the 15 county regions "Southcentral Region." A copy of the "Composition Detail for Residential Waste Southcentral Region," Table 7, is included in Attachment A.

Table 7 is broken down into three municipal categories: urban, suburban, and rural. Estimates for individual components of the waste stream are provided for each. The leaf/yard waste (exclusive of grass clippings) estimate for rural municipalities in the Southcentral Region is 3.2% (by weight) of the MSW generated (urban communities 4.2% and suburban 5.2%). Considering the amount of material being collected currently by the Township's curbside and drop-off

programs, the estimate appears low and not considered representative of the Township. Based on the reported material collected in the Township it is estimated that 377 lbs/person were collected in 2002.

Data provided to CCSWA by a number of its municipalities as exhibited in Table 1 below varies widely relative to the amount of leaf and yard waste collected.

Table 1

Leaf & Yard Waste Collection 2002

	2000 Census Data	2002 Yard & Leaf Waste	2002 Per Capita
<u>Municipality</u>	<u>Population</u>	<u>Tons per year</u>	<u>Lbs. per year</u>
Camp Hill Borough	7,636	2,393.0	600
East Pennsboro Township	18,254	785.7	85
Hampden Township	24,135	1,193.0	98
New Cumberland Borough	7,349	612.0	166
Upper Allen Township	15,338	809.6	106
South Middleton Township	12,939	2,411.0	377

Providing a reasonable estimate of the amount of yard waste that is generated and would be potentially captured by the Township with a curbside/roadside program is not possible. Based on the existing data and the variables involved with such a projection e.g. amount of remaining material in waste stream, willingness of residents to prepare yard waste for collection, value of convenience factor for drop-off, etc., the accuracy of any estimate would be at best questionable. Based on observation of the material on site and discussions with the Township’s personnel, a large portion of the material dropped off would not be included in a yard waste collection program. A significant amount of material accepted at the site is large and bulky tree trimmings (up to 8 inches in diameter) large trimming from brush/shrubbery or the whole plants (minus roots) and Christmas trees. Given the large volume of yard waste collected at the drop-off site 9,600 cu. yd. annually and the type and size of material, it is reasonable to assume that the waste may be from limited land clearing or landscaping. The estimated per capita generation rate for yard waste is 330 pounds per year.

The fact that residents are used to the convenience of the drop-off site will also be a factor to be considered relative to collection volumes.

- The drop-off site is available to residents on a regularly scheduled basis (note Section 4.2).

- Relatively little material preparation is required “load and unload.” No cutting to length or bundling, and size of material is not as restrictive (2 inches vs. 8 inches)
- There is no immediacy. The pruning/trimming must be done prior to collection day.
- One only needs the use of a pickup truck – not exactly a rare commodity in the Township.

Given the above-noted conveniences it can be anticipated that many residents may continue to use the drop-off site in addition to or in lieu of curbside collection.

9.0 Program Parameters

Absent an estimate for the amount of yard waste available in the Township’s waste stream and what percentage that could be effectively captured, it is recommended that the Township conduct a pilot program.

Due to the limited types of materials, size restrictions, required preparations, and the fact that every household may not have a need for the service, it is assumed that one collection per household will suffice and that the collection can be accomplished in one week (5 working days) as in the case with leaf collection. Yard waste can be placed in the compactor and larger trimmings 1-½ inches to 2 inches in the pickup truck, which normally accompanies the collection crew.

During its initial year of collection, two pilot collections are suggested; one collection in the fall and one in the spring.

Alternatively, the Township could accept requests for collection services from individual households prior to the pilot collections. Collection services would be provided only to those residents who request them. Details about the collection and the collection period must be well publicized. Given the rural nature of the Township and the alternate uses for yard waste, this type of a program should be considered particularly for the fall collection, which tends to produce significantly less material than spring.

Although collection by reservation will require someone to take and log the requests, it provides the Township with the number of collections required during the designated period. If relatively few residents require collection, time to collect the material would be reduced, providing cost savings.

A similar program could be carried out in the spring when demand will be potentially greater. Knowing in advance the number of collections required will allow the Township to calculate the number of days to complete the collection efforts. The information gained during the pilot program will enable the Township to determine the extent of efforts that can reasonably be expected in future years.

The tub and horizontal grinder available through the county will easily and efficiently process additional material. With the Township's nine or more parks and residential demand for wood chip/mulch product, marketing of mulch and compost material should not present a problem.

10.0 Education/Outreach

A comprehensive education/outreach campaign should be initiated well in advance (6-8 weeks) of the planned yard waste collection. Considering the Township's current outreach program's success the education program will not present a significant challenge. Lead-time for a reservation program is suggested to be eight weeks or more.

It is recommended that the Township develop a calendar for collection of leaf and yard waste. Leaf collection should be scheduled separate from yard waste collection. The calendar should clearly note the weeks when leaf collection will take place in the fall and when a yard waste collection will occur. The Township may also wish to provide collection of Christmas trees in early January.

Since each house will only be provided one pickup the schedule should, to the extent practical, provide the dates that various sections of the Township will be collected.

If a reservation program is planned, a period of time prior to collection for making a pickup request must be specified.

Accompanying the calendar should be a clear and easy to understand list of the types of material and size of material to be accepted and a concise description of required preparation. Providing examples of materials that will not be accepted are also suggested: leave no room for misunderstanding! It is also recommended that the Township make a clear statement that the drop-off facility will remain available and can be used as an alternative option to curbside or in addition to curbside collection.

The media should be alerted of this new service at public meetings and through press releases. A sign or banner placed on the side of the collection vehicle during leaf collections would serve as a reminder of the program's timing.

11.0 Program Cost

The Township estimates the cost per collection for the current leaf collection is approximately \$3,500.00. This cost includes equipment operation and maintenance and manpower for 5 working days. This equates to approximately \$.78 per household per collection. The cost for one spring and one fall yard waste collection would be approximately \$1.56 per household per year. This cost does not include processing which will be predicated on the amount of material collected.

The cost for Education/Outreach is estimated at \$5,000.00 for preparation of a calendar/brochure, banners and posters. These costs are eligible for funding under Act Section 902 grants.

12.0 Emergency Plan (Preparedness Prevention and Contingency Plan)

Due to the extent of processing of wood wastes a Preparedness Prevention and Contingency Plan (PPC) has been prepared for the compost site. The PPC plan is accompanying this report.

13.0 Recommendations

It is recommended that South Middleton Township:

- Initiate a pilot program for the curbside collection of yard waste.
- Conduct two collections for pilot program one during the fall and one in spring.
- Continue the operation of its current drop-off program for yard waste. The drop-off program will save on collection cost and result in higher diversion rates through continued use by residents.
- Consider a collection program by reservation.
- Develop specific education and outreach materials for yard waste collection.
- Specify the types and sizes of material it will collect and their preparation requirements in education/information materials.
- Apply for an Act 101 Section 902 Grant to fund education/outreach costs.
- Continue the use of its existing collection equipment.

Attachment A

Table 7

Southcentral Region Composition

Table 7 is available upon request or on the PADEP web-site www.dep.state.pa.us

ATTACHMENT B

Education / Outreach

Public Education/Outreach

Implementation of a comprehensive education and outreach campaign will help insure the program is successful initially and over the long run. The following are suggested components for developing an education and information program that will gain public interest and increase enthusiasm and support. The components are applicable to recycling and/or leaf and yard waste composting programs.

- Place an ad in a paper of general circulation providing details of the program and its merits, suggest this be done twice per year. If a new program is to be initiated place at least one ad 30 days prior to initiation.
- Prepare and distribute news releases and public service announcements to the local media. Provide program details, program kick off date and importance of the program e.g.: waste stream reduction, saving on disposal fees, saving/reuse of valuable resource, reduction of dependence on disposal facilities and, of course, it's the law (for mandatory programs).
- Develop a slogan e.g.: send your leaves to a mulch better place; recycle today for a better tomorrow. Slogans help with program identity and purpose.
- Develop a logo representing the program that will be readily identifiable. The logo can act as a constant reminder (particularly if its placed on a refrigerator magnet or calendar).
- Prepare an instructional flier, door hanger or brochure, one that is eye catching and to the point: (i.e.: who, what, where, when and why). The flier, door hanger or brochure could be distributed by volunteers or sent with a newsletter, utility or tax bills to save on mailings. Additional brochures (and posters) should be placed in public buildings, churches, schools and local businesses.
- A banner or banners can help publicize the start of a new program, or reinforce an existing program. A banner could be used as a reminder prior to the beginning of leaf and yard waste collection. A banner could also be used for recycling re-enforcement (e.g.: a reminder used annually for Earth Day and other events). The banner(s) can be used repeatedly season after season.
- Distribute promotional items that encourage participation, (e.g.: a refrigerator magnet collection calendar, pencils or other items made from recycled materials). Items that are seen or used regularly will act as a constant reminder.

- Preparation of a recycling display outlining the programs benefits, charting participation and avoided cost of disposal, etc. The display should be prominently placed in public building and used at various civic and school events.
- Incentives for participation, reward households or business for participation. Award a prize or a certificate or recognition.
- Encourage and assist schools in integrating recycling/composting into their curriculum. School students can be constant reminders to adults regarding the benefits of recycling and composting. Children are often the most persistent educators of adults.

ATTACHMENT C

PPC Plan

South Middleton Township

PREPARDNESS PREVENTION

AND

CONTINGENCY PLAN

A. DESCRIPTION OF FACILITY/OPERATION

A. 1 General Description of Activity

South Middleton Township (Township) has developed a leaf and yard waste compost facility. The site is located on a three-acre parcel in South Middleton Township, Cumberland County. The project did (not) require additional zoning approval. The project is designed to process leaf and yard waste collected in South Middleton Township.

The leaf and yard waste operation occupies a three-acre site located within a fifteen-acre parcel owned by the Township. Materials accepted for processing are leaves, and yard waste as per Department "Guidelines for Yard Waste Composting Facilities".

The leaf waste is composted aerobically using open-air windrow technology and mechanized equipment to promote, accelerate and enhance decomposition; yard waste is processed into wood chips by mechanical grinders.

All loads of incoming material are inspected prior to and during off-loading to ensure that only leaf and yard waste is accepted. Any material not meeting specifications is culled by Township personnel who then properly dispose of the material.

Any plastic bags delivered by residents are immediately opened and their contents emptied and inspected. The plastic bags are returned to the resident.

Leaves are formed into new windrows or incorporated into existing windrows by a front-end loader. Turning of windrows is accomplished with a windrow turner. Windrows are monitored to ensure the physical requirements of the compost process are met. Temperature is the prime indicator of the process. Temperature is monitored to maintain the thermophilic (active) 113° - 140°F range. If a windrow falls below or rises above the range, it is turned. Once a windrow reaches a stabilized state (temperature does not increase when the windrow is turned) it is placed in a curing pile.

Yard waste is composed primarily of tree, brush and hedge trimmings. These materials are processed into mulch using grinders, vertical and tub variety. The mulch is stored on site. Mulch piles are monitored for temperature to prevent spontaneous combustion.

The Township collects leaves curbside during the fall of the year for delivery to the compost site. The Township following storm events and maintenance projects delivers yard waste, consisting primarily of tree trimmings, to the compost site. Residents also deliver leaf and yard waste and Christmas trees to the site.

The compost and mulch produced at the facility are distributed to the public and used by the Township for landscaping of municipal properties.

A2. Description of Existing Emergency Response Plan

The Township's current emergency plan does not specifically address the compost site.

A3. Material and Waste Inventory

Due to the simplicity of the composting process, and the thorough inspection of incoming materials, ancillary materials and waste materials are minimal. There is no storage of fuels or chemicals at the compost site. Only the fuel, motor oil and fluids contained in on-site machinery will be on the site.

A4. Pollution Incident History

This is a relatively new facility and has no previous history of any pollution incidents.

A5. Implementation Schedule

Operations personnel are 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 situation occurs at the facility site, it will be the responsibility of any on-site staff to immediately notify Ronald Gilbert, Operator, who will be a

designated second level or Secondary Emergency Coordinator. It is the responsibility of the Secondary Emergency Coordinator to immediately notify the first level or Primary Emergency Coordinator, Ronald Smith, Road master, of the emergency situation and to implement all measures of the PPC Plan. During the absence of the Primary Emergency Coordinator (PEC), it is the responsibility of the Secondary Emergency Coordinator (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 Ronald Smith, Road master, as the PEC and Ronald Gilbert, Operator, as SEC. It will be the duty and responsibility of the PEC 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 Committee will also review any past incidents and the countermeasures 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 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 given to the Department and made available to emergency response agencies/contacts.

B2. List of Emergency Coordinators

Primary: Ronald Smith, Road master

Home Address: 406 High Mountain Road
Shippensburg, PA 17257

Home Telephone: (717) 530-1072

Business Address: South Middleton Township
520 Park Drive
Boiling Springs, PA 17007

Business Telephone: (717) 258-5324

Secondary: Ronald Gilbert, Operator

Home Address: 50 Bonnybrook Road, Lot #33
Carlisle, PA 17013

Home Telephone: (717) 249-1563

Business Address: South Middleton Township
520 Park Drive
Boiling Springs, PA 17007

Business Telephone: (717) 258-5324

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, operational areas, maneuvering 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 areas of the site. The PEC also will ensure that all agencies listed in Section E are offered a copy of the PPC Plan.

Although the materials processed and produced at the facility are not considered of a nature, which 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. The on site water sources (well and retention basin) will be used as a first response to a fire at the compost operation,

pending arrival of the fire company. Whenever there is an imminent or actual emergency situation, the PEC must immediately:

1. Notify all on-site personnel,
2. Identify the character, exact source, amount and a real extent of the fire; and
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 area is advisable. Additionally, he will immediately notify the Department by telephone at (717) 657-4588 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 area,
- b. Treat, store, or dispose of recovered materials, in a manner approved by the Department (testing of the affected area may be necessary); and
- c. Prevent processing or storage of compostables in the area affected by the emergency until the area has been cleaned up and the Department has inspected and approved the cleanup.

The Primary and/or Secondary Emergency Coordinator will ensure that no leaf/yard waste is processed or stored in the affected area, until cleanup procedures are completed and that all emergency equipment listed in the PPC Plan is cleaned and fit for

its intended use before operations are resumed. The PEC will review and document the effectiveness of the emergency planning and control measures.

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
8. A description of what actions will be taken to prevent a similar future occurrence

B4. Chain of Command

Primary: Ronald Smith

Home Address: 406 High Mountain Road

Shippensburg, PA 17257

Home Telephone: (717) 530-1072

Business Address: South Middleton Township

520 Park Drive

Boiling Springs, PA 17007

Business Telephone: (717) 258-5324

Secondary: Ronald Gilbert

Home Address: 50 Bonnybrook Road Lot #33

Carlisle, PA 17013

Home Telephone: (717) 249-1563

Business Address: South Middleton Township

520 Park Drive

Boiling Springs, PA 17007

Business Telephone: (717) 258-5324

C1. External Factors

The South Middleton 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.

Leaf and yard waste, which will be accepted at the site, will contain limited amount of moisture. In the event of a spill or leak, 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 nearby Township storage trailer).

C2. Material Compatibility

The leaf/yard waste process does not involve the use of materials that are either corrosive or reactive.

C3. Inspection and Monitoring Program

All composting windrows are monitored on a regular basis (weekly for first

month, then monthly thereafter). The inspection includes checking temperature at 50-foot linear intervals with long stem thermometer. (four feet) Windrows are turned when temperatures exceed 140 degrees Fahrenheit. Water content is also checked and adjusted as necessary to maintain a moisture level of approximately 50%. Windrows are inspected for any non-compostables, which are manually removed and disposed of. The time, date, results of, and name of person conducting these inspections will be recorded in written documentation. (Monitoring log sheets)

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

Emergency equipment consists of a minimum of two 5-pound A/B/C fire extinguishers; one located on mobile processing equipment and the second in the storage trailer. Routine inspection/maintenance of all fire extinguishers is conducted annually. Note: A fire hydrant will also be installed on site.

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 are instituted as soon as operationally practical when a component failure or impending failure is detected. Some of the parts and supplies that is required for routine preventive maintenance is kept on site. All preventive maintenance is 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 routinely gather and properly dispose of any litter found on the site. The site is monitored for proper drainage; if any ponding is evident corrective measures are taken. Any spillage, diesel fuel, motor oil, etc., will be immediately absorbed, the absorbent material placed in buckets and properly disposed of. All mechanical equipment at the operations receives a regular wash down. Any spillage of material is dealt with in accordance with measures as prescribed within this Plan.

C6. Security

Security for the composting site is effectively provided through a traffic-restricting gate and chain link fencing of the site's perimeter.

A common entrance and exit gate located at the access road to the site is secured and locked whenever the facility is not operating. Signs at the entrance gate and surrounding the site provide trespass notice to all unauthorized personnel. Anyone visiting the site must do so during operating hours when personnel are on site.

C7. External Factors

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

C8. Employee Training Program

Employees are trained by the emergency coordinators to understand their particular responsibilities with respect to preventive maintenance and safety. All employees are 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 are being met.

D. COUNTERMEASURES

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 operations, an internal communications system is not practical or necessary. External communication by on site cell phones.

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 roadway.

D5. Emergency Equipment

In an attempt to maintain a ready posture for an emergency situation, which might occur at the site, the following emergency equipment will be maintained on site. 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# Type A/B/C
First Aid Kit (2)	Cuts/Burns,	
Eye Wash (2)	Eye Irritants	
Location Index: (1) Carried on Equipment, (2) Storage Trailer		

E. EMERGENCY SPILL CONTROL NETWORK

E1. Arrangements with Local Emergency Response Agencies and Hospitals

A South Middleton Township representative will contact local police department, fire department, and the 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 process and they will be offered a copy of the PPC Plan.

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

E2. List of Agencies to be Notified

PA Dept. of Environmental Resources	717- 657-4588
National Response Center	1-800-424-7362
County Control Center	911 or (717) 243-4121
PA State Police	911 or (717) 249-2121
Middleton Township Fire Co. Fire Department	911 or (717) 258-6440
Carlisle Regional Medical Center	911 or (717) 249-1212