

ILLINOIS POLLUTION CONTROL BOARD
November 19, 1998

IN THE MATTER OF:)
)
AMENDMENTS TO REQUIREMENTS FOR) R97-29
LANDSCAPE WASTE COMPOST) (Rulemaking - Land)
FACILITIES, 35 ILL. ADM. CODE)
830.203, 831.107, AND 831.109(b)(3))

Adopted Rule. Final Order.

OPINION AND ORDER OF THE BOARD (by K. M. Hennessey):

In this proceeding, two citizens, Dr. Renuka Desai and Susan Garrett (proponents), asked the Board to require composting areas at certain landscape waste compost facilities to be located at least 1/2 mile from the property line of a hospital, school, athletic field, or public park. Proponents also asked the Board to require existing composting areas located within that setback distance to relocate. Proponents stated that the amendments were necessary because compost facilities release spores that pose risks to human health, particularly spores of the fungus *Aspergillus fumigatus* (*A. fumigatus*).

On June 17, 1998, the Board adopted a modified version of proponents' proposal for first notice. In its opinion and order at first notice, the Board acknowledged that responsible composting is environmentally beneficial and that composting has not been shown to increase risks to the general public. Furthermore, the fungus *A. fumigatus* is ubiquitous, and the concentration of *A. fumigatus* spores at approximately 500 feet from composting areas generally is not higher than the background concentration of *A. fumigatus*.

However, spores of *A. fumigatus* do pose a potential health threat to very young children and persons with asthma, cystic fibrosis, immunocompromised or immunosuppressed conditions, or bioaerosol allergies. *A. fumigatus* can cause allergic asthma, allergic bronchopulmonary aspergillosis, extrinsic allergic alveolitis, and invasive aspergillosis.

Therefore, as a precaution, and consistent with the recommendations of public health experts, the Board at first notice proposed to extend the 1/8 mile setback from residences that currently applies to composting areas to health care facilities, preschool and child care facilities, and primary and secondary school facilities. The Board proposed that this modified proposal apply only to facilities developed or expanded after January 1, 1999. The Board also proposed corresponding changes to requirements for permit applications.

On October 1, 1998, the Board adopted its opinion and order at second notice. At second notice, in response to testimony and public comments provided after the Board's opinion and order at first notice, the Board amended the proposed rules to clarify: (1) the facilities that would be protected by setbacks; (2) when setbacks would be determined; and (3) how setbacks would be measured.

In this final opinion and order, the Board adopts the rules proposed at second notice with minor modifications. The Board also discusses procedural matters; background for this rulemaking; and the Board's major findings at first and second notice. Readers seeking a more detailed discussion of issues that the Board decided at first or second notice should consult the Board's opinions and orders at first and second notice. See Amendments to Requirements for Landscape Waste Compost Facilities, 35 Ill. Adm. Code 830.203(c), 831.107, and 831.109(b)(3) (June 17, 1998), R97-29; Amendments to Requirements for Landscape Waste Compost Facilities (October 1, 1998), R97-29.

PROCEDURAL MATTERS

Proponents filed their proposal with the Board on May 6, 1997. On June 19, 1997, the Board accepted the proposal for hearing. Before first notice, the Board held two public hearings in this matter: the first, in Chicago, on September 8, 1997; and the second, in Springfield, on October 7, 1997. At the first hearing, the following witnesses testified: Susan Garrett, a resident of the City of Lake Forest and one of the proponents; Steven Handler, a resident of the City of Lake Forest; Gloria Loukas, a resident of the City of Lake Forest; Dr. Renuka Desai, a resident of the City of Lake Forest and one of the proponents; Jack Darin of the Sierra Club; William Holleman of the Illinois Citizen Action Public Education Committee; Earl Johnson of the Illinois Citizen Action Public Education Committee; Cheryl Doros, a resident of the City of Lake Forest; Peter Mueller, a resident of the City of Lake Forest; Edward Grskovich, a resident of the City of Lake Forest; Jacob Dumelle of the American Lung Association of Metropolitan Chicago; Mary Matthews, a resident of the City of Lake Forest; Scott Garrett, a resident of the City of Lake Forest; Joyce Munie of the Illinois Environmental Protection Agency; Elizabeth Harvey on behalf of Land and Lakes Company; Thomas Naatz, Director of Parks, Forestry, and Public Works for the City of Lake Forest; and Charles Pick of Organics Management Company.

At the second hearing, the following witnesses testified: Dr. Karen Strauss, on behalf of the City of Lake Forest; Dr. Shirley Baer, Joyce Munie, and Edwin Bakowski of the Illinois Environmental Protection Agency; Clyde Wakefield, Director of Public Works and Engineering for the City of Crystal Lake; Dr. Paul Walker of Illinois State University; and Andrew Quigley of the Solid Waste Agency of Lake County.

After the Board adopted its June 17, 1998 opinion and order at first notice, the Board held a public hearing in Chicago, Illinois on August 7, 1998. At the hearing, the following witnesses testified: Susan Garrett, a resident of Lake Forest and one of the proponents; Edwin Bakowski and Joyce Munie of the Illinois Environmental Protection Agency; Joy Hinz of Will County; Charles Pick of Organics Management Company; Dr. Renuka Desai, a resident of Lake Forest and one of the proponents; Jeffrey Geiss of CDT Landfill in Joliet, Illinois; and Susan Franzetti of Gardner, Carton & Douglas on behalf of the City of Lake Forest.

In addition, the Board received nine public comments after its opinion and order at first notice. Complete lists of exhibits entered into the record, and public comments filed with the Board, are attached to this opinion and order as Attachment 1 and Attachment 2, respectively.

The Board adopted its opinion and order at second notice on October 1, 1998. The Joint Committee on Administrative Rules (JCAR) requested a few minor changes to the rules proposed at second notice. These changes are not substantive and do not merit discussion. With these minor modifications, JCAR considered the rules at its November 17, 1998 meeting. JCAR issued a certificate of no objection.

BACKGROUND AND PROPOSAL

Proponents proposed that the Board amend the location standards for compost facilities that the Board adopted in 1994,¹ specifically 35 Ill. Adm. Code 830.203(c). Section 830.203(c) implements Section 39(m) of the Environmental Protection Act (Act), 415 ILCS 5/39(m) (1996), and currently provides as follows:

With the exception of on-farm landscape waste operations, all landscape waste compost facilities subject to this Part shall comply with the following:

* * *

- c) The composting area of the facility must be *located so as to minimize incompatibility with the character of the surrounding area, including at least a 200 foot setback from any residence, and in the case of a facility that is developed or the permitted composting area of which is expanded after November 17, 1991, the composting area shall be located at least 1/8 mile from the nearest residence (other than a residence located on the same property as the facility).* (Note: italicized language is from Section 39(m).)

The legislature defined “landscape waste,” “compost,” and “composting” in the Act, and the Board incorporated the same definitions into its rules. “Landscape waste” means:

all accumulations of grass or shrubbery cuttings, leaves, tree limbs and other materials accumulated as the result of the care of lawns, shrubbery, vines and trees. 415 ILCS 5/3.20 (1996).

“Compost” means:

the humus-like product of the process of composting waste, which may be used as a soil conditioner. 415 ILCS 5/3.69 (1996).

“Composting” means:

the biological treatment process by which microorganisms decompose the organic fraction of the waste, producing compost. 415 ILCS 5/3.70 (1996).

¹ See Regulation of Landscape Waste Compost Facilities 35 Ill. Adm. Code 830-832 (November 3, 1994), R93-29.

The location standards that the Board adopted in 1994 apply to the “composting areas” of “on-site facilities,” “on-site commercial facilities,” and permitted “landscape waste compost facilities.” Those location standards do not apply to “garden compost operations”² or “on-farm landscape waste compost facilities.” See 35 Ill. Adm. Code 830.102 (definitions), 830.104(a) (exemption for garden compost operations), and 830.201 (scope and applicability of Part 830).

Proponents proposed that the Board amend the location standards of 35 Ill. Adm. Code 830.203(c) by adding the language underlined below:

With the exception of on-farm landscape waste operations, all landscape waste compost facilities subject to this Part shall comply with the following:

* * *

- c) The composting area of the facility must be *located so as to minimize incompatibility with the character of the surrounding area, including at least a 200 foot setback from any residence, and in the case of a facility that is developed or the permitted composting area of which is expanded after November 17, 1991, the composting area shall be located at least 1/8 mile from the nearest residence (other than a residence located on the same property as the facility), and a minimum of 1/2 mile from the property line of a hospital, school, an athletic field and a public park. Existing composting operations that are located within 1/2 mile of the above-mentioned facilities shall be relocated to more than 1/2 mile within six months of the effective date of this regulation.*

Proponents maintained that these amendments are necessary because landscape waste compost facilities release spores into the air that pose risks to human health. The spores that cause proponents greatest concern are spores of the fungus *A. fumigatus*.

At first notice, the Board proposed to extend the existing 1/8 mile setback from residences to (1) health care facilities, (2) preschool and child care facilities and their associated recreational areas, and (3) primary and secondary schools and their associated recreational areas. The Board proposed that the new setback requirements apply only to facilities developed or expanded after January 1, 1999. The Board also proposed corresponding changes to requirements for permit applications. See Amendments to Requirements for Landscape Waste Compost Facilities (June 17, 1998), R97-29, slip op. at 41-46.

At second notice, in response to testimony and public comments, the Board clarified several aspects of the setback requirements. As proposed at second notice, the Board revised Section 830.203(c) to read as follows:

² “Garden compost operation” means “an operation which (1) has no more than 25 cubic yards of landscape waste, composting material or end-product compost on-site at any one time and (2) is not engaging in commercial activity.” 35 Ill. Adm. Code 830.102.

3e) The composting area of the facility must be *located so as to minimize incompatibility with the character of the surrounding area, including at least a 200 foot setback from any residence, and in the case of a facility that is developed or the permitted composting area of which is expanded after November 17, 1991, the composting area shall be located at least 1/8 mile from the nearest residence (other than a residence located on the same property as the facility).* (Section 39(m) of the Act-) In addition, in the case of a facility that is developed or the permitted composting area of which is expanded after January 1, 1999, the composting area shall be located at least 1/8 mile from the property line of each of the following:

- A) Facilities that primarily serve to house or treat people that are immunocompromised or immunosuppressed, such as cancer or AIDS patients; people with asthma, cystic fibrosis, or bioaerosol allergies; or children under the age of one year;
- B) Primary and secondary schools and adjacent areas that the school uses for recreation; and
- C) Any facility for child care licensed under Section 3 of the Child Care Act of 1969, 225 ILCS 10/3; preschools; and adjacent areas that the facility or preschool uses for recreation.

The Board also added a new subsection (b) to Section 830.203 to address when setbacks are to be measured:

A facility's compliance with the location standards set forth in subsection (a) of this section shall be determined at the time described below:

- 1) For a facility that is required to obtain a permit under Section 21(d) of the Act, at the time that a complete permit application for a new or expanded facility is filed with the Agency under 35 Ill. Adm. Code 832; or
- 2) For a facility that is not required to obtain a permit under Section 21(d) of the Act, at the time that construction of the new or expanded facility begins.

In addition, the Board made corresponding changes to permit application requirements. See Amendments to Requirements for Landscape Waste Compost Facilities (October 1, 1998), R97-29, slip op. at 23-29.

DISCUSSION

Summary of Board Findings at First Notice

At first notice, the Board made the following findings:

1. The fungus *A. fumigatus* is ubiquitous. While responsible composting is environmentally beneficial, composting generates elevated levels of *A. fumigatus*. Airborne *A. fumigatus* spores from compost facilities may occur at levels above its background concentration in nearby, downwind, off-site areas.
2. *A. fumigatus* spores pose little, if any, health threat to healthy individuals in the general public. No relationship between exposure to certain levels of *A. fumigatus* spores and adverse health effects (*i.e.*, a “dose-response relationship”) has been demonstrated. However, spores of *A. fumigatus* do pose a potential health threat to persons with asthma, cystic fibrosis, immunocompromised or immunosuppressed conditions, or bioaerosol allergies. Very young children are also potentially at greater risk because their immune systems are immature. In these sensitive groups, *A. fumigatus* can cause allergic asthma, allergic bronchopulmonary aspergillosis, extrinsic allergic alveolitis, and invasive aspergillosis.
3. While operating standards can minimize the off-site distribution of *A. fumigatus* spores, it appears that even good management practices at compost facilities do not necessarily prevent downwind *A. fumigatus* spore concentrations from being above background levels in nearby, off-site areas. Generally, the concentration of *A. fumigatus* spores falls to background within approximately 500 feet of a composting area.
4. As a precaution, and consistent with the recommendations of public health experts, composting areas developed or expanded after January 1, 1999 should be set back from the following facilities: (a) health care facilities; (b) primary and secondary schools and their associated recreational areas; and (c) preschool and child care facilities and their associated recreational areas.
5. The Board found that the current 1/8 mile (660 feet) setback for residences should be extended to these other facilities. The Board proposed corresponding changes to requirements for permit applications.
6. Since the additional setback requirements would be imposed as a matter of prudence in the face of a potential health threat, and in light of the potential economic costs of relocating or closing existing compost facilities, the Board proposed to apply the new setback requirements only to composting areas developed or expanded after January 1, 1999.

Summary of Board Findings at Second Notice

At the public hearing and in the public comments filed after the Board adopted its opinion and order at first notice, participants in this rulemaking raised several issues. These issues were: the Board's authority to adopt the proposed rules; the advisability of the proposed rules generally; the technical feasibility and economic reasonableness of the proposed rules; the application of the proposed rules to existing compost facilities; how the proposed rules would apply in various situations; and the facilities that would be protected.

The Board reviewed the testimony and comments and concluded first, that the Board has the power to adopt the proposed rules; second, that the proposed rules are technically feasible and economically reasonable; and third, that the proposed rules should not be applied to existing compost facilities. Based on the testimony and comments, the Board also revised the proposal adopted at first notice as follows:

1. The Board added a provision to clarify when and how the proposed setbacks are to be measured. For a facility that is required to have a permit under Section 21(d) of the Act, the facility's compliance with the location standards is determined at the time a complete permit application for a new or expanded facility is filed with the Agency. For a facility that is not required to obtain such a permit, compliance with the location standards is determined at the time construction of the new or expanded facility begins. Measurements to determine setback compliance are made from the edge of the composting area to the property line of the protected facilities.
2. The Board deleted "health care facilities" from the regulation and substituted a narrower description of the types of health care facilities that the regulation covers. Specifically, the Board replaced "health care facilities" with "facilities that primarily serve to house or treat people that are immunocompromised or immunosuppressed, such as cancer or AIDS patients; people with asthma, cystic fibrosis, or bioaerosol allergies; or children under the age of one year."
3. The Board deleted "child care facilities" and substituted a more precise term. Specifically, the Board replaced "child care facilities" with "any facility for child care licensed under Section 3 of the Child Care Act of 1969, 225 ILCS 10/3."
4. The Board deleted "associated recreational areas" and substituted a more precise term. The proposed rules at first notice extended the setbacks to "primary and secondary schools and their associated recreational areas" and to "preschool and child care facilities and their associated recreational areas." The Board agreed that the term "associated recreational areas" may be difficult to interpret, especially in those cases in which a school uses an arena or field that it does not own or is not adjacent to the school. Accordingly, the Board deleted "associated recreational areas" and substituted "adjacent areas that the [facility] uses for recreation."

CONCLUSION

The Board finds that the proposed amendments are economically reasonable and technically feasible and adopts them as a final rule.

ORDER

The Board adopts as a final rule the following amendments to 35 Ill. Adm. Code 830 and 831. The Board directs the Clerk of the Board to file the following revised proposal with the Secretary of State for publication as a final rule.

TITLE 35: ENVIRONMENTAL PROTECTION
 SUBTITLE G: WASTE DISPOSAL
 CHAPTER I: POLLUTION CONTROL BOARD
 SUBCHAPTER i: SOLID WASTE AND SPECIAL WASTE HAULING

PART 830
 STANDARDS FOR COMPOST FACILITIES

SUBPART A: GENERAL PROVISIONS

Section	
830.101	Purpose, Scope and Applicability
830.102	Definitions
830.103	Incorporations by Reference
830.104	Exempt Operations and Activities
830.105	Permit-Exempt Facilities and Activities
830.106	On-Farm Landscape Waste Compost Facility
830.107	Compliance Dates
830.108	Severability

SUBPART B: STANDARDS FOR OWNERS AND OPERATORS OF LANDSCAPE
 WASTE COMPOST FACILITIES

Section	
830.201	Scope and Applicability
830.202	Minimum Performance Standards and Reporting Requirements for Landscape Waste Compost Facilities
830.203	Location Standards for Landscape Waste Compost Facilities
830.204	Additional Stormwater and Landscape Waste Leachate Controls at Permitted Landscape Waste Compost Facilities
830.205	Additional Operating Standards for Permitted Landscape Waste Compost Facilities
830.206	Operating Plan for Permitted Landscape Waste Compost Facilities
830.207	Salvaging at Permitted Landscape Waste Compost Facilities

830.208	Access Control at Permitted Landscape Waste Compost Facilities
830.209	Load Checking at Permitted Landscape Waste Compost Facilities
830.210	Personnel Training for Permitted Landscape Waste Compost Facilities
830.211	Recordkeeping for Permitted Landscape Waste Compost Facilities
830.212	Contingency Plan for Permitted Landscape Waste Compost Facilities
830.213	Closure Plan for Permitted Landscape Waste Compost Facilities

SUBPART E: QUALITY OF END-PRODUCT COMPOST

Section	
830.501	Scope and Applicability
830.502	Compost Classes
830.503	Performance Standards for General Use Compost
830.504	Testing Requirements for End-Product Compost Derived from Landscape Waste
830.507	Sampling Methods
830.508	Off-Specification Compost

SUBPART F: FINANCIAL ASSURANCE

Section	
830.601	Scope and Applicability
830.602	Financial Assurance Plan
830.603	Written Cost Estimate
830.604	Financial Assurance Fund
830.605	Financial Assurance Mechanism
830.606	Financial Assurance Certification
Appendix A	Early Detection and Groundwater Monitoring Program
Appendix B	Performance Test Methods
Table A	Inorganic Concentration Limits for General Use Compost
Table B	Sampling and Handling Requirements
Table C	Seed Germination Record Sheet

AUTHORITY: Implementing Sections 5, 21, 22.33, 22.34, 22.35 and 39 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/5, 21, 22.33, 22.34, 22.35, 27 and 39].

SOURCE: Adopted at 18 Ill. Reg. 17017, effective November 15, 1994; amended in R97-29 at 22 Ill. Reg. _____, effective _____.

BOARD NOTE: This Part implements the Illinois Environmental Protection Act as of July 1, 1994.

NOTE: In this Part, unless the context clearly indicates otherwise, superscript numbers or letters are denoted by parentheses; subscript are denoted by brackets.

SUBPART B: STANDARDS FOR OWNERS AND OPERATORS OF LANDSCAPE
WASTE COMPOST FACILITIES

Section 830.203 Location Standards for Landscape Waste Compost Facilities

- a) With the exception of on-farm landscape waste operations, all landscape waste compost facilities subject to this Part shall comply with the following:
- 1a) The composting area of the facility must include *a setback of at least 200 feet from the nearest potable water supply well.* (Section 39(m) of the Act-)
 - 2b) The composting area of the facility must be *located outside the boundary of the 10-year floodplain or the site shall be floodproofed.* (Section 39(m) of the Act-)
 - 3e) The composting area of the facility must be *located so as to minimize incompatibility with the character of the surrounding area, including at least a 200 foot setback from any residence, and in the case of a facility that is developed or the permitted composting area of which is expanded after November 17, 1991, the composting area shall be located at least 1/8 mile from the nearest residence (other than a residence located on the same property as the facility).* (Section 39(m) of the Act-) In addition, in the case of a facility that is developed or the permitted composting area of which is expanded after January 1, 1999, the composting area shall be located at least 1/8 mile from the property line of each of the following:
 - A) Facilities that primarily serve to house or treat people that are immunocompromised or immunosuppressed, such as cancer or AIDS patients; people with asthma, cystic fibrosis, or bioaerosol allergies; or children under the age of one year;
 - B) Primary and secondary schools and adjacent areas that the school uses for recreation; and
 - C) Any facility for child care licensed under Section 3 of the Child Care Act of 1969 [225 ILCS 10/3]; preschools; and adjacent areas that the facility or preschool uses for recreation.
 - 4d) If, at the time the facility permit application is deemed complete by the Agency pursuant to 35 Ill. Adm. Code 832, the composting area of the facility is located within 1/4 mile of the nearest off-site residence or within 1/2 mile of the nearest platted subdivision containing a residence,

or if more than 10 residences are located within 1/2 mile of the boundaries of the facility, in order to minimize incompatibility with the character of the surrounding area, landscape waste must be processed by the end of the operating day on which the landscape waste is received into windrows, other piles or a contained composting system providing proper conditions for composting.

- 5e) The composting area of the facility must be designed *to prevent any compost material from being placed within 5 feet of the water table, to adequately control runoff from the site, and to collect and manage any landscape waste leachate that is generated on the site.* (Section 39(m) of the Act-) Compliance with the water table distance requirement may be demonstrated by either of the following means:
- A1) Using published water table maps or other published documentation to establish the location of the water table in relation to site elevation; or
 - B2) Actual measuring of the water table elevation at least once per month for three consecutive months.
- 6f) The facility must meet all requirements under the Wild and Scenic Rivers Act (16 USCU.S.C. 1271 et seq.).
- 7g) The facility must not restrict the flow of a 100-year flood, result in washout of landscape waste from a 100-year flood, or reduce the temporary water storage capacity of the 100-year floodplain, unless measures are undertaken to provide alternative storage capacity, such as lagoons, holding tanks, or provision of drainage around structures at the facility.
- 8h) The facility must not be located in any area where it may pose a threat of harm or destruction to the features for which:
- A1) An irreplaceable historic or archaeological site has been listed pursuant to the National Historic Preservation Act (16 USCU.S.C. 470 et seq.) or the Illinois Historic Preservation Act [20 ILCS 3410];
 - B2) A natural landmark has been designated by the National Park Service or the Illinois State Historic Preservation Office; or
 - C3) A natural area has been designated as a Dedicated Illinois Nature Preserve pursuant to the Illinois Natural Areas Preservation Act [525 ILCS 30].

9i) The facility must not be located in any area where it may jeopardize the continued existence of any designated endangered species, result in the destruction or adverse modification of the critical habitat for such species, or cause or contribute to the taking of any endangered or threatened species of plant, fish or wildlife listed pursuant to the Endangered Species Act (16 ~~USCU.S.C.~~ 1531 et. seq.); or the Illinois Endangered Species Protection Act [520 ILCS 10].

b) A facility’s compliance with the location standards set forth in subsection (a) of this Section shall be determined at the time described below:

1) For a facility that is required to obtain a permit under Section 21(d) of the Act, at the time that a complete permit application for a new or expanded facility is filed with the Agency under 35 Ill. Adm. Code 832;
or

2) For a facility that is not required to obtain a permit under Section 21(d) of the Act, at the time that construction of the new or expanded facility begins.

(Source: Amended at 22 Ill. Reg. _____, effective
_____)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER i: SOLID WASTE AND SPECIAL WASTE HAULING

PART 831
INFORMATION TO BE SUBMITTED IN A COMPOST FACILITY PERMIT
APPLICATION

SUBPART A: GENERAL INFORMATION REQUIRED FOR ALL COMPOST
FACILITIES

Section	
831.101	Scope and Applicability
831.102	Severability
831.103	Certification by Professional Engineer
831.104	Application Fees
831.105	Required Signatures
831.106	Site Identification
831.107	Site Location Map
831.108	Site Plan Map

831.109	Narrative Description of the Facility
831.110	Legal Description
831.111	Proof of Land Ownership and Certification
831.112	Closure Plan
831.113	Financial Assurance
831.114	Operator-Initiated Modification of an Approved Permit
831.115	Modification to Obtain Operating Authorization
831.116	Permit Renewal

AUTHORITY: Implementing Sections 5, 21, 22.33, 22.34, 22.35 and 39 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/5, 21, 22.33, 22.34, 22.35, 27 and 39].

BOARD NOTE: This Part implements the Illinois Environmental Protection Act as of July 1, 1994.

SOURCE: Adopted at 18 Ill. Reg. 16942, effective November 30, 1994; amended in R97-29 at 22 Ill. Reg. _____, effective _____.

SUBPART A: GENERAL INFORMATION REQUIRED FOR ALL COMPOST FACILITIES

Section 831.107 Site Location Map

All permit applications shall contain a site location map on the most recent United States Geological Survey ("USGS") quadrangle of the area from the 7 1/2 minute series (topographic), or on such other map whose scale clearly shows the following information:

- a) The permit area and all adjacent property, extending at least 1/2 mile beyond the boundary of the facility;
- b) The prevailing wind direction;
- c) All rivers designated for protection under the Wild and Scenic Rivers Act (16 ~~USC~~U.S.C. 127 et seq.);
- d) The limits of all 10-year floodplains;
- e) All natural areas designated as a Dedicated Illinois Nature Preserve pursuant to the Illinois Natural Areas Preservation Act [525 ILCS 30];
- f) All historic and archaeological sites designated by the National Historic Preservation Act (16 ~~USC~~U.S.C. 470 et seq.) and the Illinois Historic Preservation Act [20 ILCS 3410];

- g) All areas identified as a critical habitat pursuant to the Endangered Species Act (16 ~~USCU.S.C.~~ 1531 et seq.) and the Illinois Endangered Species Protection Act [520 ILCS 10];
- h) All main service corridors, transportation routes, and access roads to the facility;
- i) All residences and areas in which people congregate within 1/2 mile of the facility boundaries;
- j) The locations of all on-site potable water supply wells and all potable water supply wells within 1/8 mile of the boundaries of the facility; ~~and~~
- k) The types of land use for the properties immediately adjacent to the facility (i.e., residential, commercial, industrial, agricultural, etc.). This must include any zoning classifications of these properties and the location (and function) of all buildings within 1/2 mile of the facility; and-
- l) In the case of a facility that is developed or the permitted composting area of which is expanded after January 1, 1999, all of the following, the property line of which is within 1/8 mile of the nearest edge of the composting area:
 - 1) Facilities that primarily serve to house or treat people that are immunocompromised or immunosuppressed, such as cancer or AIDS patients; people with asthma, cystic fibrosis, or bioaerosol allergies; or children under the age of one year;
 - 2) Primary and secondary schools and adjacent areas that the school uses for recreation; and
 - 3) Any facility for child care licensed under Section 3 of the Child Care Act of 1969 [225 ILCS 10/3]; preschools; and adjacent areas that the facility or preschool uses for recreation.

(Source: Amended at 22 Ill. Reg. _____, effective _____)

Section 831.109 Narrative Description of the Facility

The permit application must contain a written description of the facility with supporting documentation describing the procedures and plans that will be used at the facility to comply with the requirements of this Part and any other applicable Parts of 35 Ill. Adm. Code: Chapter I. Such description must include, but not be limited to, the following information:

- a) An estimate of the maximum annual volume and peak daily volume of landscape waste the facility will be able to process;
- b) Proof of the following:
 - 1) *The facility includes a setback of at least 200 feet from the nearest potable water supply well;*
 - 2) *The facility is located outside the boundary of the 10-year floodplain or the site will be floodproofed;*
 - 3) *The facility is located so as to minimize incompatibility with the character of the surrounding area, including at least a 200 foot setback from any residence and in the case of a facility that is developed or the permitted composting area of which is expanded after November 17, 1991 the composting area is located at least 1/8 mile from the nearest residence (other than a residence located on the same property as the facility). In addition, in the case of a facility that is developed or the permitted composting area of which is expanded after January 1, 1999, the composting area is located at least 1/8 mile from the property line of each of the following:*
 - A) Facilities that primarily serve to house or treat people that are immunocompromised or immunosuppressed, such as cancer or AIDS patients; people with asthma, cystic fibrosis, or bioaerosol allergies; or children under the age of one year;
 - B) Primary and secondary schools and adjacent areas that the school uses for recreation; and
 - C) Any facility for child care licensed under Section 3 of the Child Care Act of 1969 [225 ILCS 10/3]; preschools; and adjacent areas that the facility or preschool uses for recreation; and
 - 4) *The design of the facility will prevent any compost material from being placed within 5 feet of the water table, will adequately control runoff from the site, and will collect and manage any leachate that is generated on the site (Section 39(m) of the Act);*
- c) An operating plan, satisfying the requirements set forth in 35 Ill. Adm. Code 830.206;
- d) An early detection or groundwater monitoring system design, in accordance with 35 Ill. Adm. Code 830.Appendix A, if required pursuant to 35 Ill. Adm. Code 830.205(b)(1)(A)(iii) or 830.205(b)(2)(A)(iii);

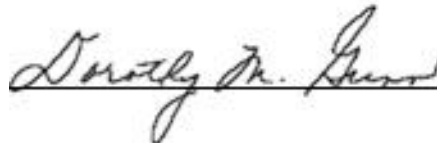
- e) A contingency plan, satisfying the requirements set forth in 35 Ill. Adm. Code 830.212;
- f) Specification of the operating hours of the facility;
- g) The types of landscape waste that are proposed to be received by the facility;
- h) Descriptions of the storage areas (including their capacities) that will be used to stage the waste before windrowing, to store bulking agent(s) or additives and to store the end-product compost; and
- i) Description of personnel training procedures, satisfying the requirements of 35 Ill. Adm. Code 830.210.

(Source: Amended at 22 Ill. Reg. _____, effective
_____)

IT IS SO ORDERED.

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1996)) provides for the appeal of final Board orders to the Illinois Appellate Court within 35 days of service of this order. Illinois Supreme Court Rule 335 establishes such filing requirements. See 172 Ill. 2d R. 335; see also 35 Ill. Adm. Code 101.246, Motions for Reconsideration.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 19th day of November 1998 by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board

ATTACHMENT 1

EXHIBITS R97-29

Exh. 1: Prefiled testimony of Susan Garrett.

Exh. 2: Additional testimony of Susan Garrett.

Exh. 3: Prefiled testimony of Steven Handler.

Exh. 4: Additional testimony of Steven Handler.

Exh. 5: Prefiled testimony of Gloria Loukas.

Exh. 6: Prefiled testimony of Renuka Desai.

Exh. 7: Prefiled testimony of Jack Darin of the Sierra Club.

Exh. 8: Prefiled testimony of William Holleman of the Illinois Citizen Action Public Education Committee.

Exh. 9: Prefiled testimony of Earl Johnson of the Illinois Citizen Action Public Education Committee.

Exh. 10: Prefiled testimony of Cheryl Doros.

Exh. 11: Prefiled testimony of Peter Mueller.

Exh. 12: Prefiled testimony of Edward Grskovich.

Exh. 13: Prefiled testimony of Jacob Dumelle of the American Lung Association of Metropolitan Chicago.

Exh. 14: Prefiled testimony of Mary Matthews and two lung diagrams.

Exh. 15: Prefiled testimony of Scott Garrett.

Exh. 16: NIOSH Alert, "Request for Assistance in Preventing Organic Dust Toxic Syndrome."

Exh. 17: *Curriculum Vitae* of Stephen Charles Edberg.

Exh. 18: Proponents' binder of miscellaneous materials forwarded to various persons and responses received from various persons, including persons in the health field.

Exh. 19-A: National Institute of Allergy and Infectious Disease, "Asthma and Allergy Statistics," February 1996.

Exh. 19-B: "Data Watch, The case for managing asthma care."

Exh. 19-C: "An Economic Evaluation of Asthma in the United States," Weiss, Gergen, and Hodgson, March 26, 1992.

Exh. 20: Letter of August 30, 1994, from Rita Messing of the Minnesota Department of Health to Jerry Johnson.

Exh. 21-A: Letter of August 7, 1997, from John Lumpkin of the Illinois Department of Public Health to Susan Garrett and Renuka Desai.

Exh. 21-B: Letter of July 8, 1997, from Clinton Mudgett of the Illinois Department of Public Health to Renuka Desai.

Exh. 22: Letter of July 25, 1997, from Colin Thacker of the Lake County Health Department to Renuka Desai.

Exh. 23: "Allergic Bronchopulmonary Aspergillosis from a Contaminated Dump Site," Kramer, Kurup, and Fink.

Exh. 24: "Locally invasive pulmonary aspergillosis occurring in a gardener: an occupational hazard?," Zuk, King, Zakhour, and Delaney, 1989.

Exh. 25-A: "Hypersensitivity pneumonitis from residential composting: residential composter's lung," Brown, Masood, Couser, and Patterson, January 1995.

Exh. 25-B: "Hypersensitivity pneumonitis due to *Aspergillus fumigatus* in compost," Vincken and Roels.

Exh. 26-A: "Comparisons of Organic Dust Exposures in Agricultural Occupations and Waste Processing Industries," Clark, 1986.

Exh. 26-B: "Organic Dust Exposure From Compost Handling: Response of an Animal Model," Frazer, Jones, Petsonk, Kullman, Barger, Afshari, Jones, and Castranova, 1993.

Exh. 26-C: "Organic Dust Exposures From Compost Handling: Case Presentation and Respiratory Exposure Assessment," Weber, Kullman, Petsonk, Jones, Olenchock, Sorenson, Parker, Marcelo-Baciu, Frazer, and Castranova, 1993.

Exh. 27: “Respiratory pathophysiologic responses, Effect of environmental molds on risk of death from asthma during the pollen season,” Targonski, Persky, and Ramekrishnan.

Exh. 28: “Medical Issues related to Municipal Waste Composting,” Johanning, Olmsted, and Yang.

Exh. 29 reserved by hearing officer.

Exh. 30: Prefiled testimony of Joyce Munie of the Illinois Environmental Protection Agency.

Exh. 31: Prefiled testimony of Elizabeth Harvey on behalf of Land and Lakes Company.

Exh. 32: Prefiled testimony of Thomas Naatz and two color maps (one map entitled “Aspergillosis Cases by Zip Code Primary or Secondary Diagnosis 1993 Cases per 100,000 Population” and the other map entitled “Allergic Alveolitis Cases by Zip Code Primary or Secondary Diagnosis 1993 Cases per 100,000 Population”) from a report entitled “Environmental Characterization of Bio-Aerosol Emissions from the DK Recycling Systems, Inc. Composting Facility in Lake Forest, Illinois,” dated April 15, 1996, which is included with Mr. Naatz’s prefiled testimony.

Exh. 33: Prefiled testimony of Charles Pick.

Exh. 34: Prefiled testimony of Karen Strauss.

Exh. 35: *Curriculum Vitae* of Karen Strauss.

Exh. 36: Prefiled testimony of Shirley Baer of the Illinois Environmental Protection Agency.

Exh. 37: “Asthma Mortality and Hospitalization Among Children and Young Adults—United States, 1980-1993,” May 22/29, 1996.

Exh. 38: “Environmental Risk Factors of Childhood Asthma in Urban Centers,” Malveaux and Fletcher-Vincent, September 1995.

Exh. 39: “Observations on Asthma,” Bates, September 1995.

Exh. 40: “Guidelines for the Diagnosis and Management of Asthma, National Heart, Lung, and Blood Institute, National Asthma Education Program, Expert Panel Report,” September 1991.

Exh. 41: Illinois Environmental Protection Agency’s “Comparison of Landscape Waste Standards.”

Exh. 42: Comments of the City of Crystal Lake.

Exh. 43: Comments of Paul Walker and Timothy Kelley of Illinois State University.

Exh. 44 reserved by hearing officer.

Exh. 45: Comments of Andrew Quigley of the Solid Waste Agency of Lake County, Illinois.

Exh. 46: July 30, 1998 letter from Edwin C. Bakowski of the Illinois Environmental Protection Agency requesting public comment in R97-29 and attached the June 30, 1998 hearing officer order in R97-29 and the Board's June 17, 1998 opinion and order at first notice in R97-29.

Exh. 47: List of addresses to which the Illinois Environmental Protection Agency mailed the documents that comprise Exh. 46 (see above) in R97-29.

ATTACHMENT 2PUBLIC COMMENTS R97-29

- PC 1 Comments of Robert Gillespie of DK Recycling Systems, Inc.
- PC 2 Comments of the City of Lake Forest
- PC 3 Comments of Lauren Beth Gash, State Representative
- PC 4 Comments of the City of Crystal Lake
- PC 5 Comments of the Chicago Recycling Coalition
- PC 6 Comments of the Lake County Conservation Alliance
- PC 7 Comments of the City of Evanston
- PC 8 Comments of Lois Grimm
- PC 9 Comments of Waste Management
- PC 10 Comments of the City of Elgin
- PC 11 Comments of Mark Teegen
- PC 12 Comments of Proponents
- PC 13 Comments of Proponents
- PC 14 Comments of Eliot Epstein, Ph.D., of E&A Environmental Consultants, Inc.
- PC 15 Comments of the Town of Normal
- PC 16 Comments of Cathy Mueller
- PC 17 Comments of Franklin Pease
- PC 18 Comments of Barbara Zimmerman
- PC 19 Comments of Carolyn Schaper
- PC 20 Comments of Keith and Libby Leman
- PC 21 Comments of the Illinois Composting Council
- PC 22 Comments of Gloria Loukas
- PC 23 Comments of Will County Land Use Department, Waste Services Division
- PC 24 Comments of the National Solid Wastes Management Association, Illinois Chapter
- PC 25 Comments of Land and Lakes Company
- PC 26 Comments of the City of Lake Forest with Karen Strauss' Supplemental Information
- PC 27 Comments of the Illinois Environmental Protection Agency
- PC 28 Comments of Dr. Paul Walker to the Illinois Composting Council
- PC 29 Comments of the City of Elgin
- PC 30 Comments of the City of Peoria
- PC 31 Comments of the City of Crystal Lake
- PC 32 Comments of the Illinois Environmental Protection Agency
- PC 33 City of Lake Forest's Comments on the Proposed Rule (First Notice)
- PC 34 Supplemental Comments of the National Solid Wastes Management Association (NSWMA), Illinois Chapter
- PC 35 Public Comments of Land and Lakes Company
- PC 36 Comments of Waste Management, Inc.